



“ We were particularly influenced by the product’s ease-of-use, the seamless integration with Brava! Enterprise for electronic viewing and mark up of engineering drawings, and the ability to use the system to securely collaborate with our clients, contractors and suppliers. We spent almost two years evaluating other solutions before we found the right solution in Document Locator. ”

**Greg Gould**  
Chief Technical Officer  
Burns & McDonnell

### Document management system has Burns & McDonnell Engineering collaborating across the enterprise and beyond

Founded in 1898, Burns & McDonnell Engineering is an engineering, construction, environmental, and consulting solutions firm with offices worldwide and more than 2,200 employee-owners. The firm has won numerous industry awards for delivering solutions in areas such as aviation, environmental studies, solid and hazardous waste, power generation, energy transmission and distribution, industrial and process plants, transportation, defense facilities, healthcare, and water/wastewater. Services include architectural design, business and management consulting, environmental permitting, and program management.

### Business outgrows collaboration and record-keeping

As a \$400M+ company with a history of rapid growth, Burns & McDonnell constantly faces the need to improve business processes. With ten independent business units, 22 worldwide offices, and hundreds of active projects, Burns & McDonnell knew that real-time collaboration was critical to continued success, but found existing processes and tools becoming increasingly inefficient. Within each business unit, it had become difficult to manage without automating more of the existing processes. Because business units were so focused on meeting customer needs and managing their rapid growth, they paid less attention to collaborating across the company.

Worse, the need for collaboration with clients, partners, vendors, and contractors was growing geometrically with the number of projects.

The engineering design process was also under stress—especially around vendor design submittals requiring the markup, review, and approval of vendors’ engineering drawings.



**Customer:** Burns & McDonnell

**Industry:** Engineering

**Web Site:** [www.burnsmcd.com](http://www.burnsmcd.com)

#### Critical Issue

How to improve collaboration and automation among business groups, clients, partners, and vendors for processes like vendor submittals and change orders as the company quickly grows.

#### Solution

A document management system that eliminates days of document handling time and saves thousands of work hours using workflows, notifications, approvals, version control, and remote access.

#### Software and Services

Document Locator

Automated Workflow Module

Automated Email Rules Module

WebTools Module

ScanStation Module

Microsoft SharePoint Connector

Brava! Enterprise Markup Module

Finally, risk mitigation required that Burns & McDonnell ensure the capture, archiving, and auditing of every relevant document, regardless of the document's source.

## The two-year search for a solution

Burns & McDonnell knew they needed a very flexible collaboration solution to support their business diversity. The solution needed to securely manage every type of document in the organization, automate document workflow to improve business processes, and integrate with existing business and engineering applications.

Over a two-year period, Burns & McDonnell investigated a number of potential solutions. Every solution failed to meet requirements either because it lacked flexibility, required substantial customization, was too hard to support, or was difficult to learn and use. Finally, Burns & McDonnell found and purchased Document Locator.

Greg Gould, Chief Technical Officer, identified three key reasons for the decision. Most important was ease-of-use, with Document Locator being "like adding additional functionality on top of the familiar file server." Second, Document Locator easily had the lowest total cost of ownership. Third, Document Locator was seamlessly integrated with Brava! Enterprise – a Web-based document viewing and markup tool. This integration was a key component of Burns & McDonnell's vision for vendor collaboration because it supported and helped automate notification, markup, submittal, and approval of documents within the security of Document Locator.

## Taming vendor design submittals

Burns & McDonnell decided to tackle the most urgent business problem first: the vendor document review process common to all engineering firms. On a large project

like a power plant, an engineering firm may rely on hundreds of outside vendors to collaborate on the design. A single project might have 20,000 external design documents. When acting as the lead designer, Burns & McDonnell is responsible for ensuring that thousands of components meet specifications for correct integration and operation.

At Burns & McDonnell, the Energy business unit was dealing with a large volume of vendor submittals. The existing process required 10 document control specialists to log incoming submittals, and sometimes it took six of the 14-day review period to log and route documents for engineering review. In addition to the cost of the 10 specialists, this delay also created a large potential risk for Burns & McDonnell because incorrect designs could lead to project delays, failure to meet customer requirements, or even to potentially catastrophic failures.

Using Document Locator, the new process shifts document logging responsibility to the vendors. Now, vendors enter document metadata into a standard submittal form and submit the package through the Document Locator Web interface. Upon receipt of the package, Document Locator extracts the metadata from the submittal form to automatically verify and import each document into the correct repository folder within the project document structure. Document Locator then uses the submittal metadata to initiate an automated workflow notifying the responsible engineer that a document has been submitted for review and approval.

## Results: improve efficiency, reduce risk, control costs, manage better

The results are measurable and dramatic. Vendor submittal notification times have decreased from six days to a few minutes, substantially reducing risk and improving the efficiency of the engineering staff. The automated submittal process eliminates

manual errors because the approval process uses validated information furnished directly in the vendor's submittal package. The few remaining document control specialists focus on optimizing the process, while issues are quickly identified and corrected by management, who now access real-time document workflow status through Document Locator reporting. Burns & McDonnell expects to achieve substantial ROI by saving thousands of work hours from just this one application of Document Locator.

Burns & McDonnell has ongoing projects to extend similar Document Locator benefits across all of their functional and business units, expanding direct collaboration with their partners, vendors, contractors, and project owners using Document Locator as a central repository and automation tool.

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