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# How to select a quality management system: 7 key elements for successful implementation

## Introduction

In many organizations today, implementing a software-based quality management system (QMS) is a strategic priority for operational excellence.

As demand for QMS solutions grows, so does the vendor landscape, complicating decisions over which choice will ensure a successful implementation and facilitate mission-critical quality initiatives. Despite the consultants, committees and months of work involved in software selection, research shows 71% of software rollouts fail, are late or are over budget.

Even more shocking is the fact that nearly 4 in 10 major software purchases end up as "shelfware" that's purchased but never implemented, according to Gartner.

To help you avoid implementation failure, this paper outlines seven key considerations in selecting a QMS software solution, exploring elements such as:

- Features to look for as you gather your requirements
- Common mistakes and pitfalls to avoid during the evaluation process
- Tips for choosing a vendor and QMS that will unlock quality opportunities and deliver exceptional results

# Flexibility: optimizing processes for operational excellence

A top cause of implementation failure is the inability of the software to adapt to an organization's existing processes and workflows Operational excellence also demands a QMS flexible enough to change as processes continue to evolve in the future.

Software vendors often build systems with certain elements, like workflows and forms, hardcoded, so the software is easier to mass-produce. For the end user, however, this makes customization difficult without investing substantial time, cost and effort. Essentially, you're forced to adapt your processes to the software, when it should be the other way around.

Spending years fine-tuning your workflows only to have to change them to fit software restrictions represents a serious hit to efficiency. Ultimately, the cost of changing operations can easily outweigh the cost of the software itself—one major reason why it can end up as shelfware.

**Selection tips**

Don't compromise on your needs. Find a solution that's truly flexible and allows you to configure best practices into:

- Workflows
- Forms
- Fields
- Reports
- Business rules
- Visual branding elements

Configuration should be easy for non-technical administrators, allowing users to create drag-and-drop workflows without programming expertise. What you want is a QMS that lets you visualize, streamline and share critical processes, accommodating internal workflows to improve efficiency overall.

**Technical considerations**

It's not always possible to evaluate flexibility with a single demo. Ask the vendor to go deeper, configuring the system around some existing processes as proof of concept. You want to find out:

- How quickly you can configure the software by creating different paths in a workflow, adding new form sections or defining parallel sub-processes
- Whether you have unlimited configuration options, or whether the flexibility is limited to a certain number of choices
- How many customers have been able to implement the vendor's system without code-level customizations

# Web-based vs. Web-enabled: eliminating inefficiencies

Understanding whether a QMS is web-based or simply web-enabled provides a key distinction in selecting a solution that's engineered for impact. What's the difference between the two?

- Web-based software allows users to access all forms, workflows and applications—including administration—through a web browser

- Web-enabled software may use third-party tools or middleware to mimic a web-based experience, but still requires installation on every computer

### Selection tips

Web-enabled software vendors often sacrifice functionality in favor of taking products to market faster. The systems might look good during a demo but are ultimately inflexible and can create inefficiencies. Plus, middleware often costs extra, so you're essentially paying for two separate systems.

### Technical considerations

Web-enabling platforms includes tools like Citrix, Adobe Forms, Java Applets and Macromedia Flash. Each one is a proprietary tool, meaning software vendors are reliant on another company's technology to make their system work.

What should you know as you evaluate these types of solutions?

- Any changes or discontinuation of the tools can impact your software's ability to work

- Some systems work over the internet but allow merely read-only access

- Data doesn't always live in a centralized database, instead residing within attachments, which limits querying and reporting capabilities

# Look and feel: customizing your QMS for user acceptance

One element not to overlook is the flexibility to brand the QMS with your own organization's look and feel. If the look and feel of the software is completely foreign to your employees, they're much less likely to actually use the solution.

It may seem trivial, but user acceptance is key to QMS implementation success and energizes your team to leverage the software to solve your most pressing quality problems.

### Selection tips

You should be able to change colors, logos, fonts and general layout within QMS navigation tools, forms and reports. Aligning the visual side of the QMS with company branding or legacy systems promotes higher rates of user adoption, reducing the risk of implementation failure.

Make sure you have a well-defined set of user interface requirements that the system can meet without extensive development. Vendors should be able to demonstrate this type of flexibility and control without the need to customize the software.

### Technical considerations

Look for a system that provides direct access to the user interface or presentation layer using standard web page design tools, without the need for coding. You should also be able to change the layout without affecting software functionality.

# Reporting: making sense of your data

Reporting and analytics are critical capabilities of any automated QMS. Without the ability to access data easily, you'll find it difficult to get the information you need to transform insight into action. Users will have to manually filter data or export results to an external system, a time-consuming effort that limits effectiveness.

For many vendors, reporting is an afterthought that involves third-party tools with limited QMS integration. A more robust QMS will have reporting tools embedded in the software, allowing you to pull data across the system for actionable insights.

**Selection tips**

Reporting is a driving factor in getting the right information to your team to improve quality. Start with a list of the types of searches and reports you need to make sure the vendor's solution provides those capabilities. Built-in best practices to look for include:

- Search depth: The QMS should go beyond high-level searches, allowing you to search multiple criteria, within records and within attachments embedded in records. When dealing with thousands of records, Google-style searching is a critical capability.
- Reporting ease and flexibility: Management often needs reports quickly, so look for a system that makes it easy to create and share customized reports. Look for features like drag-and-drop charts, drill-down reporting and the ability to display real-time data on dashboards. You should also be able to create report templates and scheduled reports.

**Technical considerations**

Make sure the QMS has its own reporting tool or seamless integration with your existing tools. This element is important because:

- It eliminates jumping back and forth among different applications, so you can find all your data in one place
- You'll be better able to identify and track high-level trends, metrics and leading indicators
- Outsourcing reporting to a third party (e.g., Cognos, Crystal Reports) may require paying for a separate license while creating a steeper learning curve

One simple test for integration is whether you can go directly from a graph to the quality records represented in the chart with a few clicks. What you want is a QMS that lets you spend less time finding and crunching data, and more time focusing on what the data is actually telling you.

# Integration: breaking down information silos

Most organizations today understand that operational excellence requires breaking down information silos and departmental barriers. From production to financial to quality systems, collaborating and sharing information enterprise-wide is key to uncovering process gaps and maximizing the business value of a QMS.

Can the QMS can integrate with any system in your organization? QMS integration is a best practice for optimizing processes, minimizing downtime and resolving quality issues faster.

### Selection tips

Some vendors claim their solutions are integrated, when in reality the software only does basic lookups. This eliminates some degree of data duplication but doesn't go far enough. True integration means the ability to both pull data from external systems as well as push data back to them. For example, you should be able to pull manufacturing data from production systems and send data back related to non-conformance issues, cost of quality and more.



### Technical considerations

Your QMS should have a robust integration layer built in. Simple database tables that bridge the gap aren't always effective, and you want to avoid housing data in a temporary table repository as a workaround.

Ask vendors about standards-based application programming interfaces (APIs) to pull data in and update records in other systems. You'll also want to look at systems you already have (e.g., SAP, Oracle, etc.) to investigate whether the QMS has APIs to connect seamlessly with them.

# Scalability: taking quality enterprise-wide

If your organization has multiple facilities, you want a QMS capable of scaling across multiple sites easily. Individual sites need the flexibility to design workflows and processes that address their quality issues, while company leadership needs the ability to monitor high-level performance.

It's also important to consider how you plan to scale in the future. Even if it's not an immediate need, the ability to expand your QMS to other facilities, suppliers and customers makes a huge difference in overall value.

**Selection tips**

A truly scalable system is more than just technically capable of handling additional users. Scalability of administration is equally important and can be expensive to fix later.

Some vendors claim their systems are scalable but can't prove any real experience scaling across large organizations. Ask for references from customers who have scaled their QMS systems to a level similar to your business look for elements such as:

- Ability to delegate administration to different levels in the organization
- Location-based administration that goes beyond managing user groups to include location-specific configurations and data filtering
- Experience with technological and localization issues, process standardization and compiling data from multiple sites

**Technical considerations**

Many facilities want to keep their individual processes, while corporate wants to standardize data for enterprise reporting. Implementing and administering a system at this level requires database integration, application integration and more to make the system consistent enterprise-wide.

Vendors will often do extensive custom development to integrate data or implement ad-hoc workarounds for multi-site deployments such as:

- Creating repository tables
- Replicating databases periodically
- Manually exporting and importing site data into a roll-up database

While these steps may get the job done, they fall short in terms of real-time collaboration and visibility. Instead, look for a system that:

- Uses location, user and keyword profiles to standardize system elements at the enterprise level

- Lets you configure workflows, forms and reports by location, so each site can customize their processes

- Stores data centrally while letting individual sites access their data and processes

Focus on these elements, and you'll have the ability to collect live data across all your facilities for a truly visible, enterprise-wide QMS.

# The end user experience:
# understanding user needs

Software selection teams typically consist of managers or directors in IT, quality, operations and more. End users—the ones who may be impacted most by the software—aren't usually involved in the final decision.

**The result**

Once the software is implemented, end users are lost. The QMS doesn't look or feel right. It requires significant adjustment of processes and getting used to the new system. The learning curve is too steep, delaying adoption or even causing people to reject the system altogether.

Part of the problem is that many software vendors don't come from your industry and instead come from a technology background. Because vendors don't understand the user experience, you end up with a technologically advanced system that's decidedly un-user friendly.

**Selection tips**

Make sure your selection process takes into account the user's experience. From look and feel to training time, design and process flexibility, you want to consider every element from your team's perspective.

If you want the software to empower your users and unleash their energy towards solving quality problems, it needs to accommodate their needs and workflows. Look for highly configurable applications that mean less busywork for users and greater freedom to focus on what really matters.

**Technical considerations**

Implementing a system that matches what you currently have or other familiar systems (like Google) can make users more productive. The system should also have back-end tools to customize the look and feel of the QMS, including simple style sheets and configurable layouts.

You also want to consider the background of your software vendors. Have they ever set foot on the shop floor, interacted with typical end users or worked with the very processes they develop? Vendors that come from a quality and compliance background will have a better understanding of your needs—and those of your users.

# Key takeaways

Some QMS vendors focus on a specific niche, while others are more generic. Most solutions have similar features, but selecting the right one often comes down to one requirement: what's best for advancing process excellence in your business.

As you navigate the proliferating landscape of QMS solutions and vendors, you'll want to keep certain features top of mind:

- **Flexibility:** Beware of so-called flexible systems that are limited in their depth of configuration options. Have the vendor configure a few sample workflows and forms for your business process.

- **Web-based vs. web-enabled:** Watch out for web-enabled systems that use third-party middleware, which can make accessing data difficult and drive up costs.

- **Look and feel:** Look for a system that can match your company branding without programming, so users are more comfortable and productive with the system.

- **Reporting:** Avoid systems that use third-party tools for reporting. Make sure your QMS can generate the reports you need, so you can easily visualize data, identify trends and transform insight into action.

- **Integration:** Software that can integrate multiple systems and departments dramatically improves process excellence. Look for a QMS that can push and pull data for real-time communication and ask the vendor how the software can link multiple systems.

- **Scalability:** The ability to scale your QMS to multiple facilities, suppliers and even customers is a mission-critical feature. Avoid vendors with complicated workarounds to sync data. Look for a central location for managing sites, admin rights and processes, where facilities can customize workflows yet corporate can still get the big-picture view of the data that it requires.

- **End user experience:** End user productivity is key to implementation success. In addition to matching the look and feel you need, vendors should understand your business and have a background in your industry.

The considerations discussed here should help as you build a list of requirements for your QMS selection. Don't be afraid to ask vendors for proof of concept demonstrations and be willing to ask tough questions. These steps will help mitigate the risk of a bad investment, ensure a successful implementation and give you the power to turn your quality program into a powerful business advantage.

# Best practices for selecting B2B software

This paper explores considerations for enterprise QMS selection, but it's important to understand generic best practices around choosing a software vendor.

**Do your research:** Identify top vendors in the market, the various technologies each offers as well as typical software modules. Doing your homework means you can speak to vendors with more authority and expertise.

**Don't overthink the RFP:** A successful request for proposal (RFP) process isn't about creating an extensive feature list. It's about solving a business need and helping differentiate vendors. Center your RFP on your challenges and let vendors explain how their product can solve them.

**Keep your shortlist short:** Involving more than three or four vendors can push out your timeline unnecessarily. Limit your shortlist, having your team conduct research and evaluate information from case studies, research analysts and peers. Also consider the overall fit and customer service, since a good vendor relationship goes a long way.

**Control the evaluation process:** Make sure you're the one driving the evaluation. Don't let vendors center the conversation on flashy features that may not relate to your business—keep it focused on your needs. Beware of any last-minute deals from vendors afraid of losing your business, as sacrificing functionality for price is a losing game.

**Don't let politics get in the way:** Avoid subjective opinions when reviewing vendors, whether they arise from personality conflicts, prior experiences or internal politics. Keep vendor rankings objective and focused on the software's capabilities.

## About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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