

# 10 Signs You've Outgrown Your Requirements Management Tool

Seapine Software recently surveyed a sample of its customers about how they manage project requirements. Surprisingly, 73% of the survey respondents indicated they were still using Microsoft Office applications, such as Excel, Word, and Outlook, to manage requirements. Less surprising was that 100% of respondents were interested in a better solution.

Small teams may be able to get away with using Microsoft Office applications to manage requirements for simple projects. As teams grow or project complexities increase, communication issues and inefficiencies creep into managing requirements.

The negative impact of managing requirements with the wrong tools can be measured in real-world losses, such as missed deadlines, blown budgets, poor quality, unmet customer expectations, lost reputations, and bad employee morale. A flexible requirements management solution that adapts to your growing needs helps you avoid these potential project killers.

From our experience, project managers and development teams begin to experience a number of pain points when they outgrow their requirements management tool. So how do you know when it's time to upgrade to a dedicated requirements management solution?

## Here are the 10 signs you should be aware of. Are any of them familiar?

1. You have to manually merge changes because only one person can work on a requirements document at a time.
2. The latest version of the requirements document is on the project manager's hard drive. She's in a meeting.
3. Some days it seems like all you do is review documents. Reviews take too long because you don't have an easy way to tell what changed since the last time you read the document.

4. Stakeholders and customers complain that the finished product is not what they wanted. You wonder if they even read the requirements.
5. Customers find bugs in a new feature because testers had old information about how the feature was supposed to work.
6. Development implemented a new feature, but it was no longer in scope for the release. The release date is slipping because there's not enough time to implement the must-have features.
7. You gave up on requirements traceability. It takes too long to maintain the relationships in a spreadsheet and the information is always out of date anyway.
8. You spend lots of time writing emails to clarify how things should work, but these details don't seem to make it out of your inbox and into your requirements.
9. You can't track related information, like diagrams, models, videos, presentations, and older documents.
10. It takes most of the day to gather data and prepare requirements status information.

If any of these situations seem familiar, your projects have already been negatively affected and it's time to start looking for a dedicated requirements management solution.

## Adopting a Requirements Management Solution

You no longer have to be hampered by the limitations of using a spreadsheet or word processing document to manage requirements. A number of professional requirements management tools that offer a range of features and functions are available. But, how do you know which one is right for you?

The right solution should support and simplify your existing requirements management process and reduce your risk of project failure. It should also enable you to perform team-based collaboration, control change, provide traceability, automate workflows, and better manage other critical aspects of your process.

Following are the key tasks that a requirements management solution should help you with, so you can deliver quality software on time, on budget, and to specification.

### Centralize, Organize, and Customize requirements Data

General purpose tools are cumbersome and time-consuming when used to organize and maintain the flow of complex and multi-faceted requirements information. Your requirements management solution should make it easy to organize and effectively manage information in a centralized location. This enables team members and stakeholders to work from a single, accessible source of truth for all requirements data.

You should also be able to manage a virtually unlimited number of requirements in a hierarchical fashion (in a folder structure) using drag-and-drop functionality for fast and easy positioning of documents in the hierarchy. Additional capabilities to look for include the ability to organize requirements by certain criteria, such as by release, by functional area, by project, and by team.

You'll also want to make sure your solution is completely configurable to fit your terminology, methodology, and industry regulations. You should be able to create custom fields to capture the information you need to properly define, evaluate, and prioritize your requirements.

*Almost 70 percent of the companies surveyed set themselves up for both project failure and significantly higher IT cost due to poor requirements practices.*

IAG Consulting

2008 Business Analysis Benchmark Report

## Facilitate Collaboration

The importance of collaboration in requirements management cannot be over-emphasized. The timely communication between project management, development, sales, customers, and other groups ensures team members stay up to date on the status of requirements and each other's tasks. It also guarantees that all project team members stay in agreement on precisely what requirements need to be delivered and by when. At the same time, it keeps team members informed when requirements change, why they changed, whether they are justified, and if the changes are budgeted for.

To aid collaboration, you'll want a requirements management solution that:

- Centralizes requirements management
- Facilitates requirements reviews
- Automates assignments and email notifications for review and approval requests
- Tracks email conversations and adds them to the requirement they are sent from

When your requirements management tool includes the right collaboration capabilities, you solve complex problems faster, create new software products sooner, and consistently complete projects on time and within budget.

*By enabling collaboration, you break down the barriers to communication imposed by distance, time, and team size. Development teams are better connected and work together more effectively.*

## Control Change

Changes can come from any stakeholder at any time and for any reason. Your organization needs to be flexible to respond to evolving changes. An inability to effectively manage changes to requirements can result in missed schedules, costly rework, buggy or not-as-specified software, and loss of revenue.

Your requirements management solution should enable you to:

- Control official requirement document versions with a comprehensive audit trail and change history
- Handle changes made across the set of documents in a consistent manner
- Know who changed a requirement and when
- Determine the impact of a requirement change and how it affects other requirements and related items
- Compare changes between document baselines

A good requirements management solution can help you control change in an efficient and systematic way.

*Projects can succeed or fail based on how you manage requirements throughout the project lifecycle. It's important that the continuously evolving baseline of requirements be managed effectively.*

### Provide End-to-End Traceability

Traceability is an essential activity in requirements management. It allows you to track the life of a requirement and provides forward and backward traceability between associated requirements. It also allows you to answer the who, why, what, how, and when of a requirements change.

When selecting a requirements management solution, be sure it includes traceability features that allow you to:

- Establish traceable relationships between requirements
- Generate test cases from requirements
- Link requirements to test cases, test runs, and test results
- Link requirements to feature requests, issues, and change requests
- Automatically generate traceability matrices
- Conduct coverage analysis to view relationships between related items, such as comparing which requirements have test cases linked to them

Requirements traceability is essential to delivering a quality product. It enables you to trace requirements throughout the development lifecycle to reduce ambiguity, increase project success, and save time and money.

### Automate Workflows

Industry sources indicate that implementing a professional requirements management solution with an integrated workflow can increase project completion by 25-40 percent over ad-hoc or manual processes. Workflow capabilities can help your development organization enforce and automate requirements management and ensure the desired process flows and procedures are followed and used properly.

Here are some points to consider when reviewing workflow capabilities:

- Can you quickly and easily configure workflows to meet your unique requirements management needs?
- Can the tool provide an up-to-date status of requirements?
- Can the tool automate the requirements review and approval process?
- Can you assign requirements to one or more users depending on the state of a requirement?
- Can you automatically escalate requirements and requirements documents after a specific period of time has passed or when an event has not occurred?

A powerful workflow engine can drive your requirements management process exactly the way you want it, allowing you to assign resources as needed.

*The automation of workflows can help remove uncertainty from your requirements management process and make it more efficient—saving you time and avoiding confusion. It helps you reinforce processes and expedites the flow of information.*

### Enforce Regulatory Compliance

You can manage regulatory compliance manually, or you can turn to automated methods that enable you to effectively enforce internal policies governed by regulations, such as 21 CFR Part 11 and Sarbanes-Oxley. The time and effort involved in manual compliance management makes automated methods the best alternative, especially for large organizations in heavily

regulated industries. By taking the necessary steps to ensure compliance mandates are established and managed consistently, you can steer swiftly through threats of security breaches, regulatory glitches, and failed audits.

Automated methods work by taking your security policies and procedures and implementing them into control points. For example, your requirements management solution should enable you to:

- Create customizable workflows to implement and manage business processes that meet regulatory standards
- Maintain an audit log that records the complete trail of changes made to requirements
- Require and support electronic signatures for strict control over modified requirements
- Monitor and log unusual activity, such as access attempts to data
- Manage your day-to-day compliance issues without the need for administrative support from IT staff

By using the right requirements management solution to automate your regulatory compliance efforts, you can streamline your compliance management process, enforce governance, and reduce risk.

*Implementing strict controls in your requirements management process, such as customizable workflows, audit trail logs, and electronic signatures, can help mitigate risk in your application development efforts.*

### Implement Security Measures

With numerous team members, many times in different offices in different cities, involved in a project, the need for security has never been more important. Your requirements management solution should provide many levels of security to ensure the integrity of your data and protect your intellectual property.

The key features you should look for when controlling access to confidential development information include:

- Client/server security through proven encryption technology
- Role-based security to fully control data access permissions to users and groups
- Centralized account information to simplify account administration
- Strict password enforcement
- Single sign-on capabilities to minimize the management of multiple passwords and increase security
- And, those same features mentioned in the Enforce Regulatory Compliance section, such as electronic signatures, audit trail logging, and monitoring unusual activity

By choosing a requirements management solution that includes many levels of security, your organization can facilitate and enforce secure data sharing across teams.

### Generate Detailed Reports

The data gathering and reporting process for today's complex projects can be overwhelming, making it important to automate these tasks to help streamline project management. This allows project managers to remain focused on decision-making and not on gathering data and compiling reports. Be sure the reporting capabilities in the solution you select make it easy to stay on top of requirements management.

Your requirements management solution should enable you to:

- Generate a variety of reports, such as list, detail, distribution, and trend reports and charts
- Integrate with external reporting tools for cross-project reports and other options
- Capture a snapshot of your requirements to compare document versions
- Restrict user and group access to specific reports
- Export data to other reporting tools

Your tool's reporting capabilities provide the basis to establish, measure, and analyze key performance metrics to drive the requirements management process. By efficiently capturing, analyzing, and generating information from multiple sources, you can measure progress and make better project management decisions throughout the development lifecycle.

*Instant access to reports provides you with real-time visibility into your requirements management process and current software development lifecycle.*

### Integrate with Other Applications

Another important factor to consider is the integration with other application lifecycle management tools, such as issue management, test case management, source code management, and automated testing tools. Your requirements management solution should effectively link requirements with every downstream development work product. For example, linking requirements with issues, test cases, and software assets provides end-to-end traceability of development artifacts.

You may also want your requirements management solution to share information with other applications through a variety of open interfaces. Make sure your solution supports your unique database needs. Solutions that operate with an ODBC-accessible database engine and make data accessible to external applications provide the best results.

Because many requirements are captured in Microsoft Word documents, you'll want to be able to easily import and export those documents. Finally, make sure your requirements management solution offers cross-platform client/server support. This gives you the flexibility to deploy your requirements management solution on the desired platform, enabling your team to access project information and manage requirements from any location.

### Summary

Moving from a Microsoft Office tool, such as Excel, Word, or Outlook, to a dedicated requirements management solution will streamline your requirements management process and make it more structured and efficient. Select a solution that can capably manage change and includes features that will enhance collaboration, automate workflows, provide end-to-end traceability, and generate detailed analytics and reports. Your requirements management solution should save you time, eliminate stress, and reduce risk. Once you've implemented a dedicated requirements management solution, you'll never go back to using general purpose tools again.

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