

# QRA Fast Facts: Test

## Lack of Test Case Management Hinders Quality

Low adoption of test case management exposes organizations to compliance risks and cost overruns.

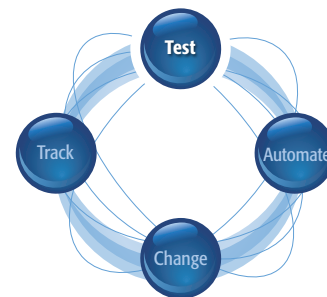
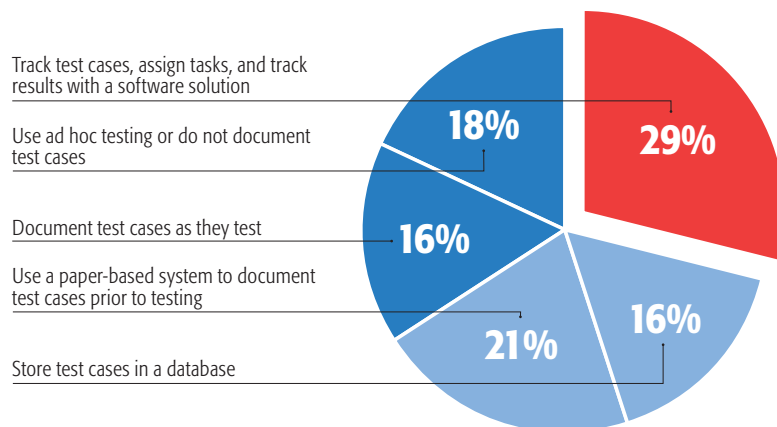
### Survey Results

Seapine Software recently released the quality-ready assessment (QRA). The QRA is a high-level evaluation tool that helps development organizations measure the state of their quality readiness. To date, nearly 1,000 individuals have completed the survey.

According to the QRA, while developers have embraced ALM tools, QA departments are lagging behind. Only 29 percent of organizations use an application specifically designed to manage software testing.

Fifty-five percent of organizations use inefficient methods to manage their testing. Eighteen percent perform ad hoc testing, and another 16 percent document tests as they go. Twenty-one percent document tests in advance but use a paper-based system.

### How organizations manage testing



### Test Case Management

- 75% of the time, organizations either cannot analyze test failures or must manually compile test data.
- 34% of organizations either do not write test cases in advance or do not document them at all.
- 35% of organizations use ineffective methods for communicating test failures (verbal, paper, email).

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Establishing quality goals, testing, and reporting on progress are essential to producing a quality product on time, time after time.

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How often does your organization complete development on time and on budget?

Always	4.5%
95%-99% of the time	7.3%
90%-94% of the time	9.6%
75%-89% of the time	22.0%
Less than 75% of the time	34.2%
Never	7.3%
Don't Know	15.3%

More than one-third of organizations use inefficient processes to communicate failures

Communicate failures verbally to the development team	10%
Use a paper-based system to capture failures	4%
Email failures to the development team	21%
Manually enter failures into an issue management solution	51%
Automatically enter failures into an integrated issue management solution and push them into the issue management workflow.	14%

## Seapine Analysis

The results suggest that test case management is still in its infancy. While developers have used change and defect management applications for years, QA departments are just now moving to electronic tracking systems.

## Delivering Software on Time is Still an Issue

According to the QRA, 34 percent of companies complete their application development on time and on budget less than 75 percent of the time.

Ad hoc test case management makes it difficult, if not impossible, to determine the state of the testing effort. Organizations cannot quickly view which tests are complete and which still need to be run. As a result, they must guess about completion dates and deadlines, which increases the likelihood of shipping late.

## Manual Processes Contribute to Missed Deadlines

Thirty-five percent of companies use extremely ineffective methods for communicating test failures (verbal, paper, email) and do not store failures in a single location.

When it is time to analyze failures, organizations either cannot analyze the test failures or they must compile the data manually 75 percent of the time. Manual processes cost time and productivity.

The QRA results also indicate that a majority of organizations cannot easily leverage historical data to improve their testing process.

## Using an Application Designed for Test Case Management Improves Productivity

Organizations that implement a commercial test case management solution have a clear advantage over their competition. With test cases and test results stored in a test case management application, organizations can determine the testing status at a moment's notice.

The accumulated historical data also helps organizations effectively plan their future testing efforts. They can make informed decisions about what to test.

## Testing leads to continuous improvement and higher quality.

They can spot trends in test results and recognize problem areas of code. With this information, organizations can learn from previous experiences and create more realistic deadlines.

### Integrated Test Case Management and Issue Tracking Significantly Increases Efficiency

Even in organizations that use test case management, test data and defects may be scattered across multiple systems. QA stores tests in one system and development stores defects in another.

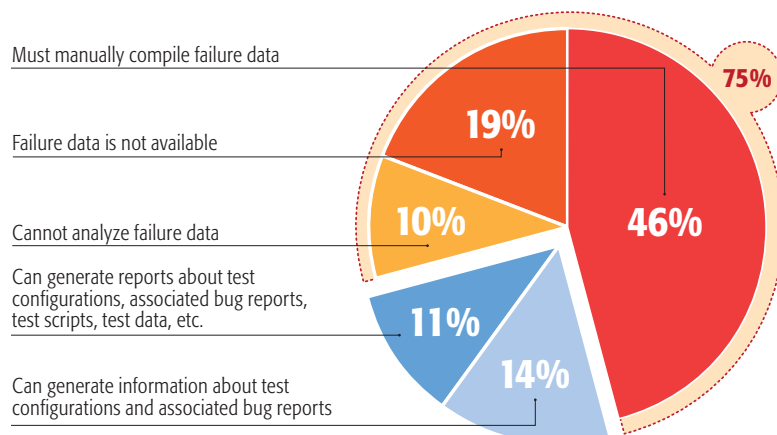
Data is siloed within the teams. The testers and developers may know about the outcomes of a test because they discussed it, but the information is not available to the rest of the group or management.

The QRA revealed that over half of organizations manually enter test results into their issue tracking systems. While test results are more transparent, these organizations duplicate work and introduce delays between performing the tests and reporting the results.

With an integrated system, failures are automatically entered into the defect tracking system and linked to the test cases that produced them. Anyone can track test cases and see the defects related to them. The reverse is also true. Team members can see which tests need to run when a specific defect is fixed or enhancement is implemented.

This transparency improves the organization's ability to deliver quality software on time and on budget.

### The majority of organizations cannot analyze failures or must compile data manually



### More than one-half of organizations enter failure information manually

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## Recommended Actions

Test case management is vital to improving software quality. However, few organizations have implemented an electronic system to manage their testing effort. Development and QA organizations that adopt test case management and integrate it with issue tracking will be more efficient and productive.

### Developer

**Evaluate your communication with QA** Can you review defects and the test cases that uncovered them from a single location? Understanding the connection between defects and test cases can save you time verifying and fixing defects.

If test cases are stored in one location and defects in another, discuss consolidating the information into a single system.

**Determine how many different programs you use to do your job** Do you have to open another application to check out files or to enter defects?

If the tools you use to manage change do not integrate with your IDE, investigate a new change management solution.

### QA Analyst

**Evaluate your current testing process** If you do not write tests in advance but document them as you go, you run the risk of overlooking critical areas. If you cannot tell who is testing which areas, you could be performing duplicate work. These issues indicate that you need to investigate electronic tracking solutions.

**Rate your ability to repeat tests from one release to another** You should have a test suite that contains the tests you run for every release. This suite is the baseline for future testing efforts.

If you have to manually gather tests from previous releases to start testing for a new one, you need to investigate a central test repository.

**Identify manual processes** Do you have to update test cases for different configurations or enter test failures manually?

Automatically generating tests for different configurations saves time. Using an application that automatically creates a defect from a test case failure saves time and ensures that developers have the information they need to reproduce and fix the issue.

### Team Lead

**Evaluate your test coverage** Can you ensure that all areas of your software are tested from one release to another without manually gathering test plans and test cases from testers? If you cannot quickly determine test coverage, then you should investigate a test case management solution.

**Consider your reporting capabilities** Delivering on time depends on your ability to determine the work remaining and the time required to complete it. If you cannot easily generate reports on the status of testing, you risk missing deadlines and running over budget.

### Executive

**Evaluate your post-release issues** Defects found by customers are a preventable cost. They are also exponentially more expensive to fix than those found early in the development process.

A system designed for test case management allows you to make sure you have the proper coverage. This reduces the number of bugs released to customers and saves money.

**Consider your compliance risks** If there is an issue with your software, can you prove that you took every testing precaution to prevent it? When you create a fix, is there an audit trail that shows the steps you took to ensure quality software?

A robust test case management system protects you from risks, improves compliance, and increases accountability.

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## About Seapine Software

With over 8,500 customers worldwide, Seapine Software is the leading provider of quality-centric application lifecycle management solutions. Headquartered in Mason, Ohio, and with offices in Europe and Asia-Pacific, Seapine solutions help companies reliably and efficiently develop quality software applications. Seapine's products support best practices, integrate into all popular development environments, and run on Microsoft Windows®, Linux®, Sun Solaris®, and Apple Macintosh® platforms.

## Contact

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