

## Three proven steps for reducing IT quality costs.

*Secrets to exceeding business expectations at lower costs under challenging conditions*

High-quality software applications are critical to running most businesses today. Poor application quality can lead to downtime, lost sales, missed marketplace deadlines and other business problems that you can't afford to deal with. Development teams often scramble to boost application quality after their software has been built. As automakers learned in the 1980s, it's far less costly to build a high-quality car from the start than to have to fix problems later. IBM has developed three steps to help you produce high-quality software—while simultaneously lowering IT costs.

### 1. Automate to improve testing efficiency and reduce costs

An automated solution can help your team test software more thoroughly and more quickly. Manually testing your software applications can result in late releases or inconsistent test results. Ad hoc processes for managing your testing efforts can't ensure the kind of quality you need. By automating your more labor-intensive testing tasks, you can avoid introducing errors into previously tested code. The potential payoffs include higher quality and faster time to market—for less money.

### 2. Avoid wasteful spending by building the right solution from the start

Rework is much more costly than building the right solution from the start. To avoid wasteful spending, you need an effective process for defining, capturing, prioritizing and managing changes to your requirements. A requirements management process that traces requirements throughout the development lifecycle can help ensure that IT focuses on high-priority requirements first, so you can deliver what the marketplace is demanding—faster.

### 3. Cost-effectively tighten Web security to guard against the high costs of data theft

Your company could potentially spend more than USD200 *per record stolen*<sup>1</sup> to clean up the aftermath of data theft. Plus, you could face heavy fines if you fail to meet compliance regulations. Yet many companies fail to secure their Web applications. By using an automated scanning solution to identify security risks in your Web applications or by outsourcing your Web security, you can cost-effectively protect your company from possible data theft—and the high costs that can result from it.

#### How IBM can help

IBM offers an integrated quality management solution that includes software, services, processes and leading practices designed to help you deliver high-quality software applications while reducing your IT costs. The solution enables you to identify and address defects at the earliest stage in the software delivery lifecycle, and to incorporate testing seamlessly into your software delivery process, so you can correct application issues long before your software is released—when defects are less expensive to fix.

## The value of an integrated solution

Maintaining multiple, nonintegrated products leads to duplicate infrastructure investments, multiple repositories and incompatibilities that can stymie productivity. IBM offers an integrated set of solutions to better support your business objectives, keep track of stakeholder requirements and stay within your budget. IBM's quality management solution leverages the IBM Jazz™ common, open integration architecture to foster collaboration and minimize software delivery costs. Select the right product or set of products to help you achieve your business objectives.

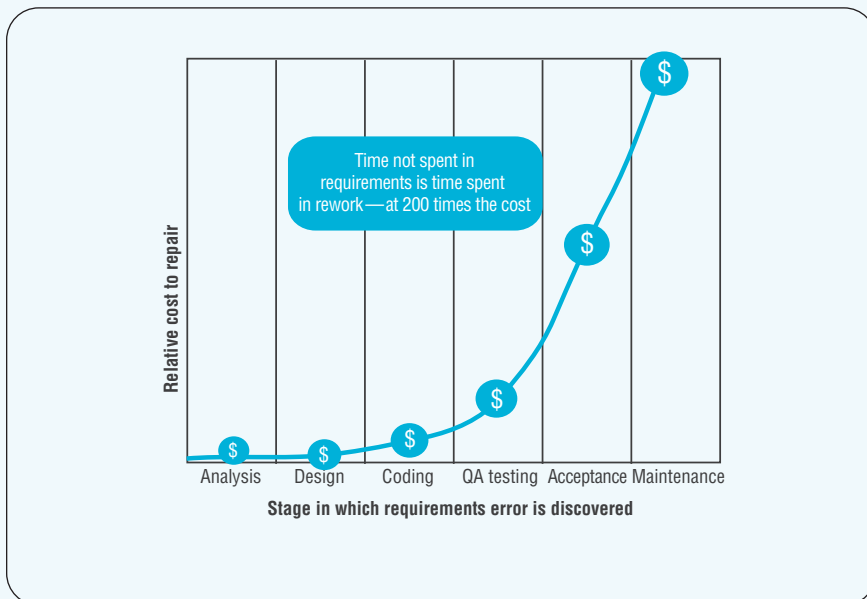
- IBM Rational® Quality Manager software for centralized test management through collaborative application lifecycle management (ALM) for test planning, workflow control, tracking and traceability, and metrics reporting
- IBM Rational Test Lab Manager software for integrating the management and deployment of test environments within the software lifecycle
- IBM Rational Functional Tester software for automating functional and regression testing
- IBM Rational Performance Tester software for identifying performance problems and diagnosing their causes
- IBM Rational Requirements Composer software for effective requirements management
- IBM Rational AppScan® software for performing vulnerability testing. Depending on your needs, you can use the IBM Rational AppScan Express™ version or avoid up-front costs with IBM Rational AppScan OnDemand, a software-as-a-service (SaaS) offering
- IBM Rational PurifyPlus™ software for performing dynamic analysis
- IBM Rational Software Analyzer software for performing static analysis and code quality reviews to identify and address defects earlier in the software development lifecycle

### For more information

To learn more, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/software/rational/offerings/quality](http://ibm.com/software/rational/offerings/quality)

Getting software right the first time can have a significant payoff. Catching requirements errors late in the development cycle can cost up to 200 times the amount it would have cost to catch them earlier.<sup>2</sup>



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1 Thomas Claburn, "Data Loss Costing Companies \$6.6 Million Per Breach," *InformationWeek*, February 3, 2009.  
2 Michael Lundblad and Moshe Cohen, *Software quality optimization: balancing business transformation and risk*, IBM, March 2009.