

To Test or Not to Test ...

There are No Easy Answers

Session Leader

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NCOAUG
February 28, 2005
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ORACLE CERTIFIED
PARTNER



Introduction



Introductions / Experiences

- 30 years of Supply Chain and Manufacturing Experience in numerous industries, APICS Certified
- 20+ yrs experience in IT, including ERP implementation and development
- Work on numerous systems varying in size
- 5+ yrs experience methodology development (Oracle Applications, SAP, PeopleSoft, JD Edwards, Siebel)

TurnKey Solutions

Turnkey Solutions is a leading national provider of test automation platform products, best-practice methodology consulting and training, project outsourcing, and consulting resources for the Software Testing and QA marketplaces. Founded in 1991, Turnkey Solutions has helped companies worldwide lower costs and increase ROI, while improving their processes and quality.

Audience Profile

- User or Support Team
- Functional or Technical
- Current Platform and O/S
- Database Version
- Installation Release
- Current Applications Release
- Currencies
- Language(s)
- Implementation or Upgrade

Some Customer Pain Points

We have to pull people out of the business to test- there's never a good time for this

Takes too many man-hours to do complete testing!!

Functionality Outages are out of control!!

We don't have time to test everything!

We have to roll patches back out a lot

We're basically picking our battles, crossing our fingers and hoping for the best

Life with Oracle Applications

37%

of major projects are completed on time and 47% on budget

Meta

50%

of overall ERP projects get rolled back

Gartner

65%

of production problems are the result of patches

Yankee Group

The Need for Testing

- Applications cannot be fully tested by Oracle and have a high bug rate
- Is time consuming and expensive to perform manual regression testing
- End users typically perform testing – They already have a full time job!
- Aggressive dates and limited resources end up with poorly tested software
- The results range from annoying to devastating

Complexity of Applications

■ Increased Modules, Functionality, and Features

◆ Release 10.7	40 products
◆ Release 11.0.x	50 products
◆ :	
◆ Release 11.5.5	161 products
◆ Release 11.5.6	175 products
◆ Release 11.5.7	179 products
◆ Release 11.5.8	191 products
◆ Release 11.5.9	197 products
◆ Release 11.5.10	209 products

Bleeding Edge? – Objects

“Stub” applications, performance improvements, additional functionality continuously appearing with each major patch release

- 11.5.5/6 – ~ 200,000 database objects
- 11.5.7 – ~ 240,000 database objects
- 11.5.8 – > 280,000 database objects
- 11.5.9 – > 310,000 database objects
- 11.5.10 – ~ 270,000 database objects

Note: metrics from Vision instances

Bleeding Edge? – Bug Fixes

More stable functionality (technical and applications) continuously appearing with each major patch release

- 11.5.5/6 – ~ 20,000 bug fixes
- 11.5.7 – ~ 40,000 bug fixes
- 11.5.8 – > 60,000 bug fixes
- 11.5.9 – > 100,000 bug fixes
- 11.5.10 – > 180,000 bug fixes

Add Patching ...

*Patching Oracle Applications
adds even more complexity
and increased need for
testing ...*

11/ Patch Realities

- CD Bundle (50+ CDs)
 - ◆ Entire Applications Release
- Maintenance Pack
 - ◆ Entire Code Set Release for All Application Modules
 - ◆ No Technology Patches Included
 - ◆ Lots of Pre/Post Tasks, VERY Long-Running
 - ◆ Will break ... period
- Consolidated Update Patch –Family Pack
 - ◆ All Product Modules' Mini-packs for the Specific Family
 - ◆ Lots of Pre/Post Tasks, VERY Long-Running
- Product Mini-Pack
 - ◆ Entire Release for Specific Application Modules
 - ◆ Not all module mini-packs are available
- One-Off Bug Patch (High Priority)
 - ◆ Fixes Specific Issue, No Regression Testing

Proactive Patching – Timing

What timing works for your organization?

- Monthly? Probably too aggressive for *any* organization
- Quarterly? A good strategy; reasonably timely
- Semi-annually? Probably the longest interval that's acceptable
- Annually? Too long; amount of change you can expect makes it a daunting task!

What should you do?

Develop a proactive patching strategy – Patches will NOT GO AWAY! And they are essential to the health of your systems!

- Determine your timing
- Incorporate sufficient testing
- Manage the change
- Leverage easily implemented new features

The Need for Test Automation

The Need:

- Patches are not tested and have a high bug rate
- Is time consuming and expensive to perform manual regression testing
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Gartner Study – Manual 17%, Automate > 65%

Test Management Requirements

Test all critical processes – technical and functional

- Develop a library of test cases for your organization
- Consider automated testing tools

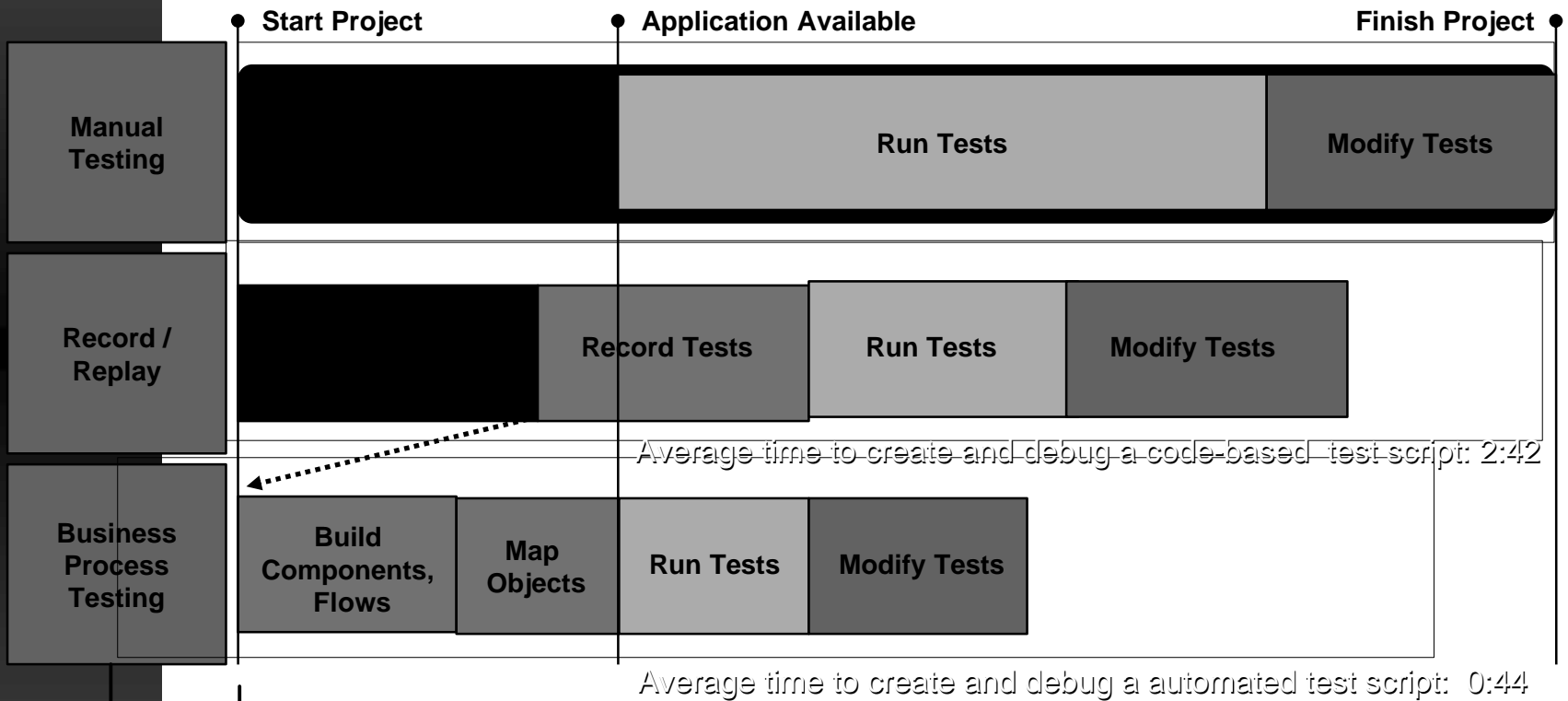
Pareto's 80/20 Rule Abounds

- Most installs require 80% testing
- Most companies perform < 20% testing
- Manual testing can only cover 20% testing
- Automated testing covers up to 80%
- Automated testing can take approximately 20% of manual testing time

Automation History

- Previous testing tools use a recorder and script language to create and execute scripts
- Tools have been too technical for SMEs to use: Technical coding skills required
- Have had to acquire new headcount or consultants to automate tests = EXPENSIVE
- Time consuming to create and maintain automated scripts
- Automated Scripts could not be started until code was available
- One change can break dozens to hundreds of scripts

Manual versus Automatic



Challenges for Test Automation

Non Technical Subject Matter Experts

Studies show 80% of Non Technical Subject Matter Experts deploy Manual Testing

IT Applications must be Stable to Automate

Existing Test solutions require the application to be available in a stable form. This occurs late in the dev cycle

Test Documentation is Separate from Test Automation

Building manual tests is a separate effort from building automated scripts. This duplicates work.

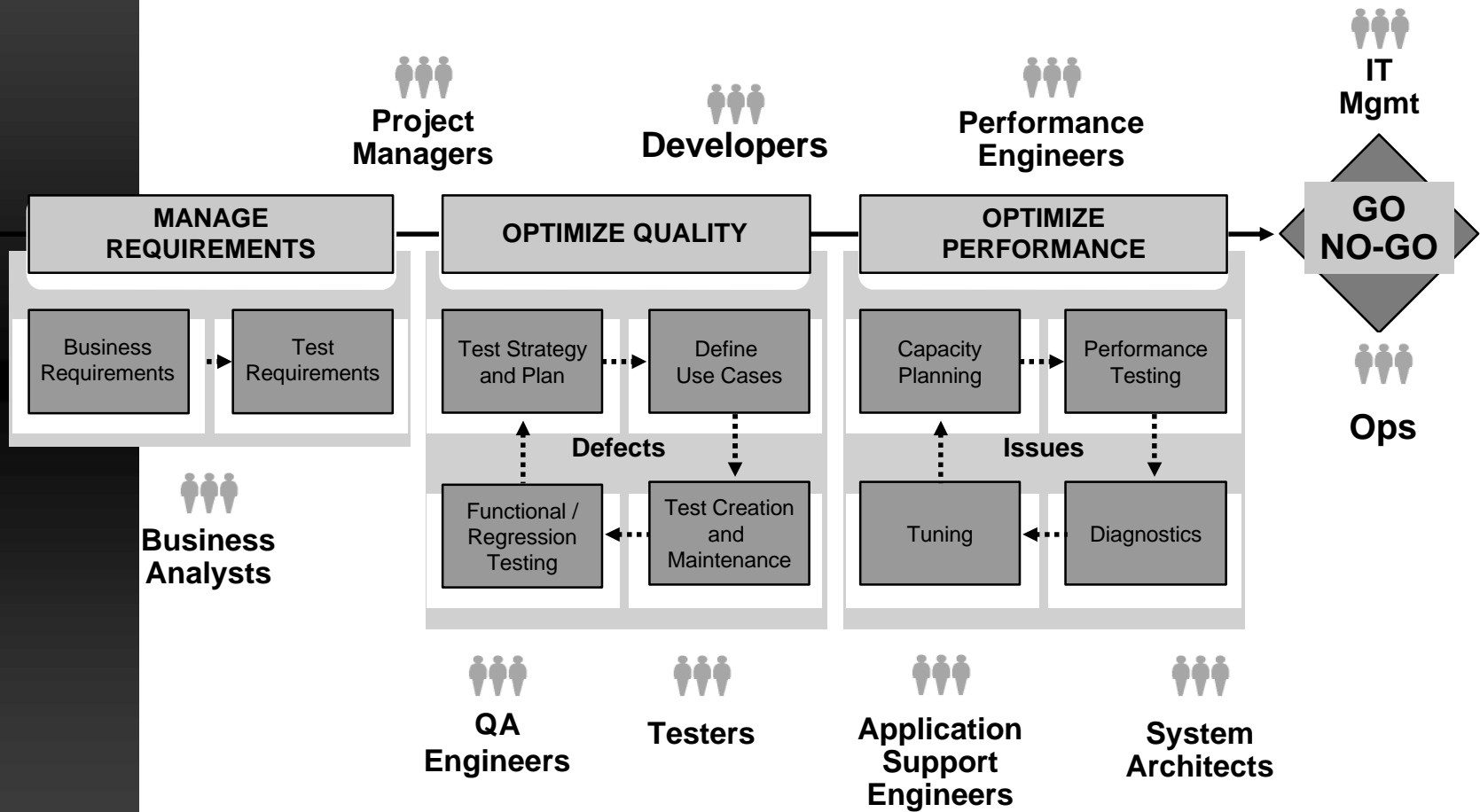
Cost of Test Maintenance is High

Quality Assurance teams expend a huge effort maintaining automated and manual test assets.

Cost of Missed Defects is Large

Applications have become mission critical for modern corporations. The Cost of a missed defect is huge.

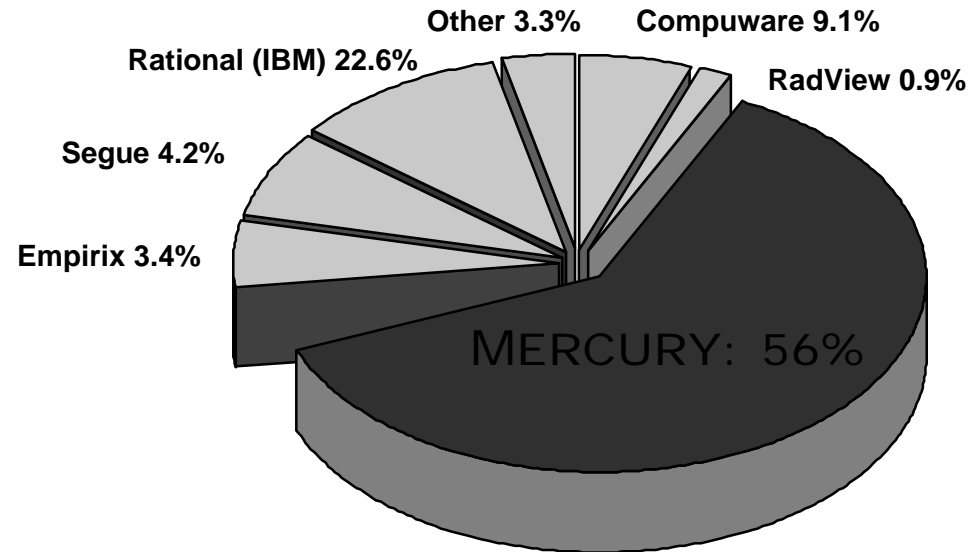
Understanding Quality Assurance



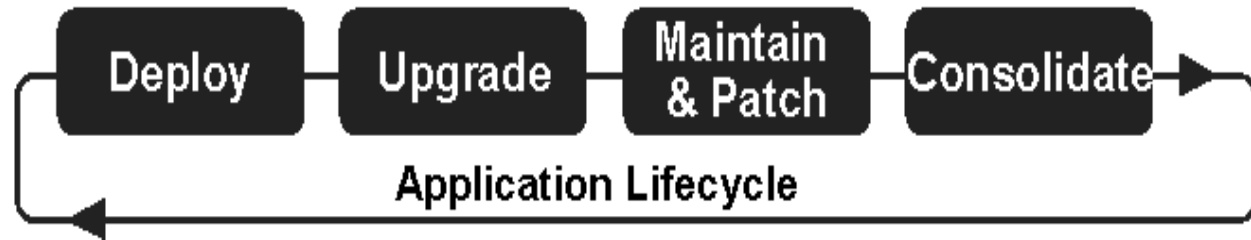
Who's Doing Something About It?

Distributed ASQ Market:

Source: IDC 2003



Traditional Automation For Oracle Testing



- Each customer must setup and build a testing process and methodology
- Maintenance is a challenge; simple Form changes can break multiple scripts
- Documentation needed for Sarbanes Oxley and other governance initiatives is a separate effort
- Tools require technical expertise, limiting Subject Matter Expert involvement

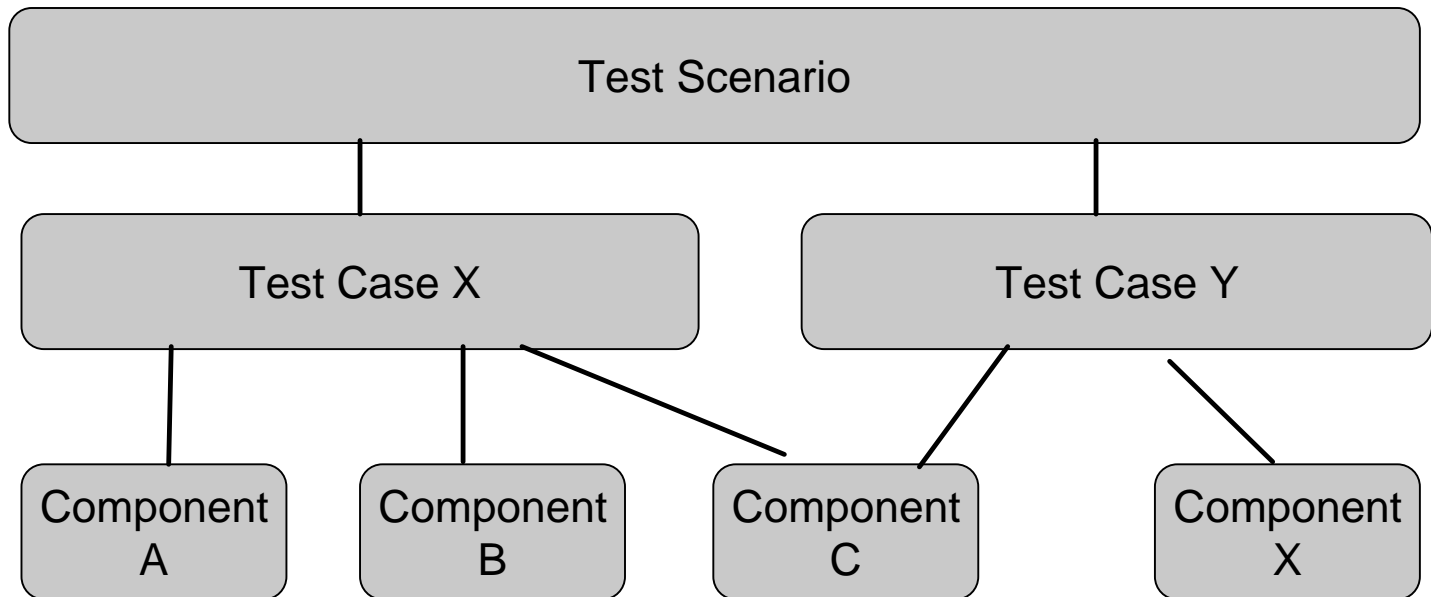
Benefits of a 'Framework'

- Average time to create and debug a code-based test script: 2:42
- Average time to create and debug a framework-based test script: 0:44
- Heavy use of expensive technical coders greatly reduced – work shifted to SMEs
- Typical payback cycle for 2nd generation test automation: 12-18 months
- Typical payback for framework-based test automation: 3 months or a single upgrade

Business Analyst vs. Expert

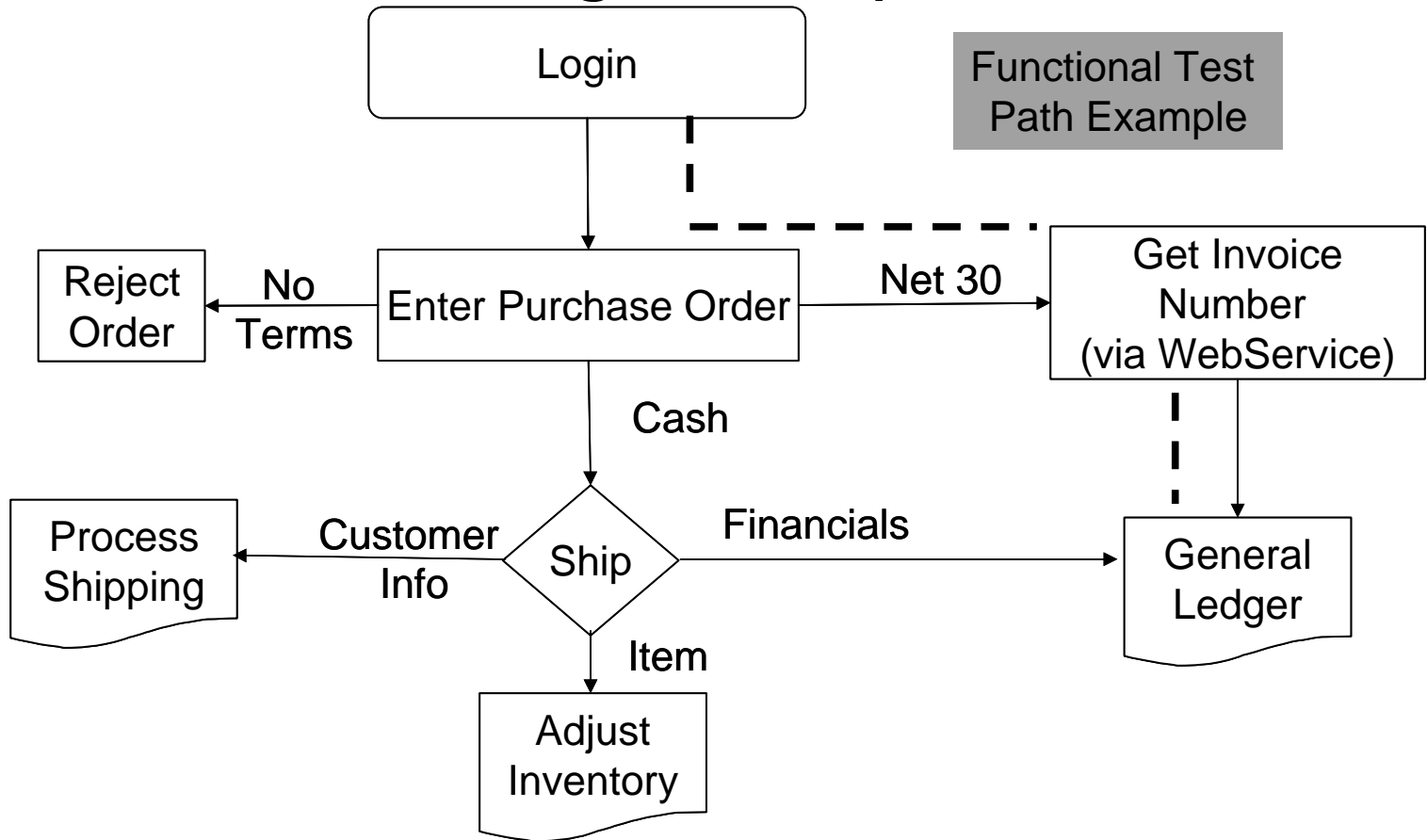
- Eliminates procedural coding: SMEs can create and maintain their own test automation scripts
- Keywords can be selected and scripts created during system design: Extends the testing effort over the entire SDLC
- Much faster to code and maintain scripts (x4)
- Test case design and automation effort reduced to one step
- Coder-to-SME ratio increased to between 1-6 and 1-8
- Increases adoption rate by making it easier for SMEs to implement test automation

Business Process Testing

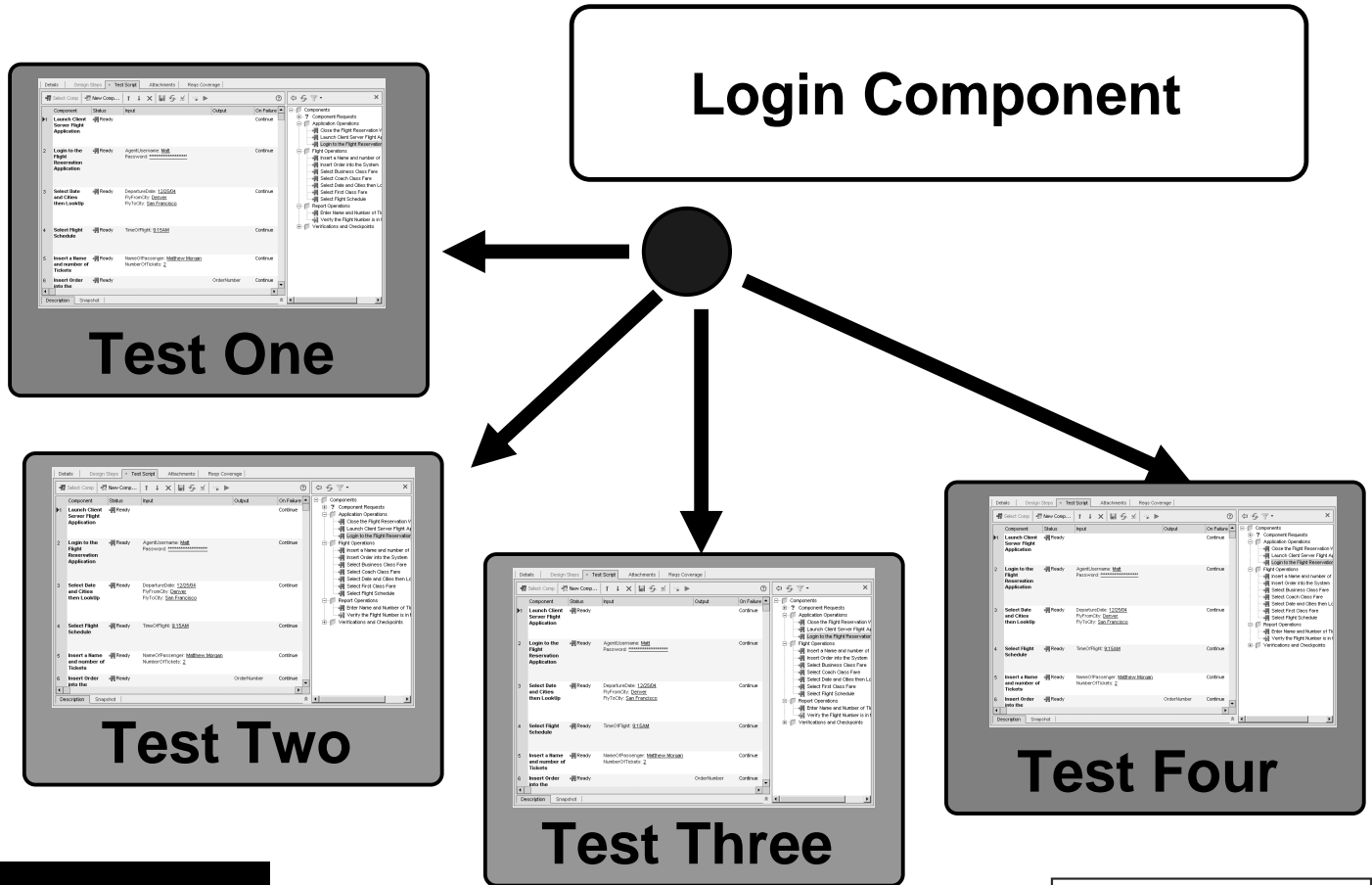


Business Process Validation

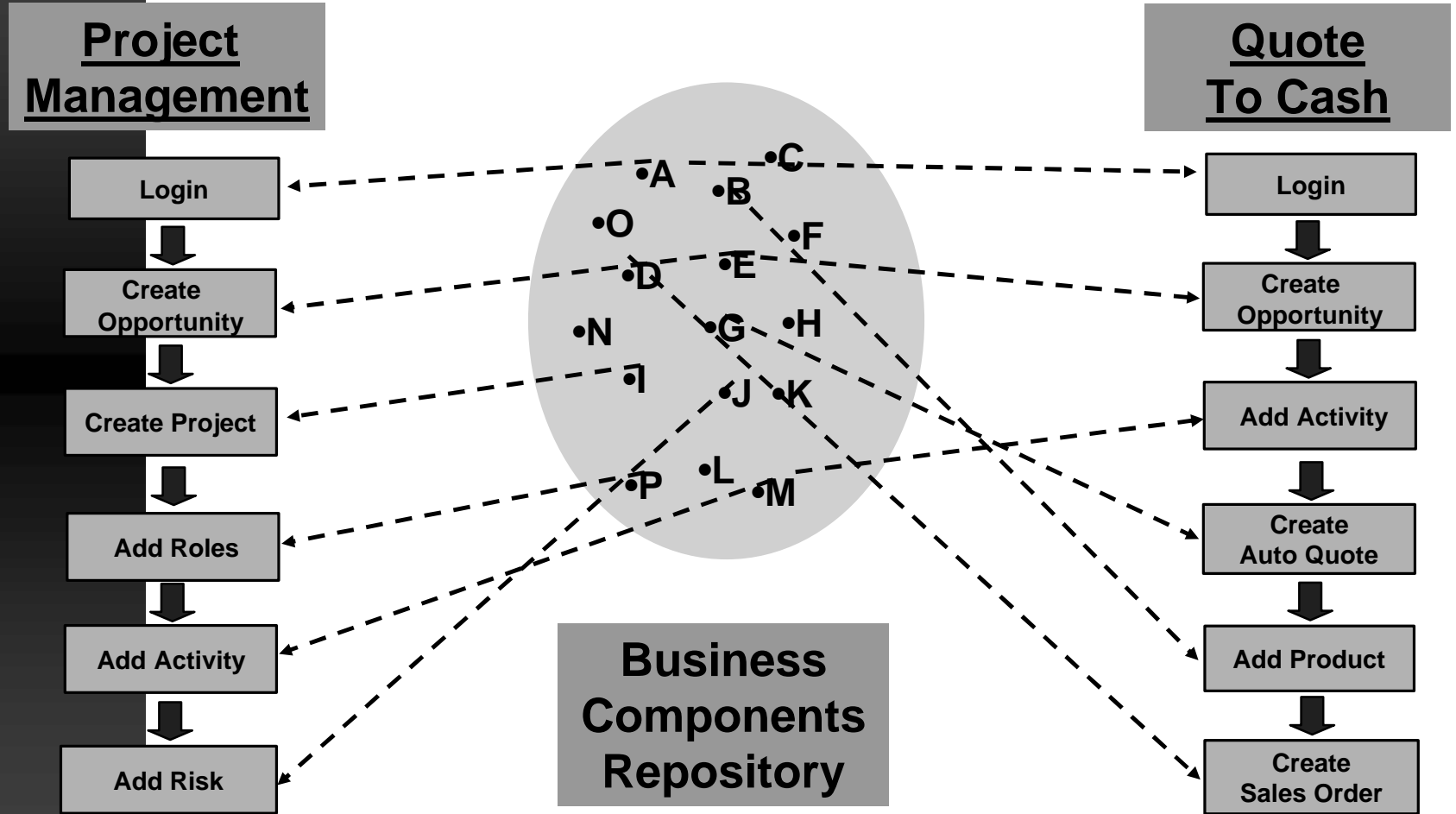
Understanding "Components"



Reduced Test Maintenance via Centralized Components



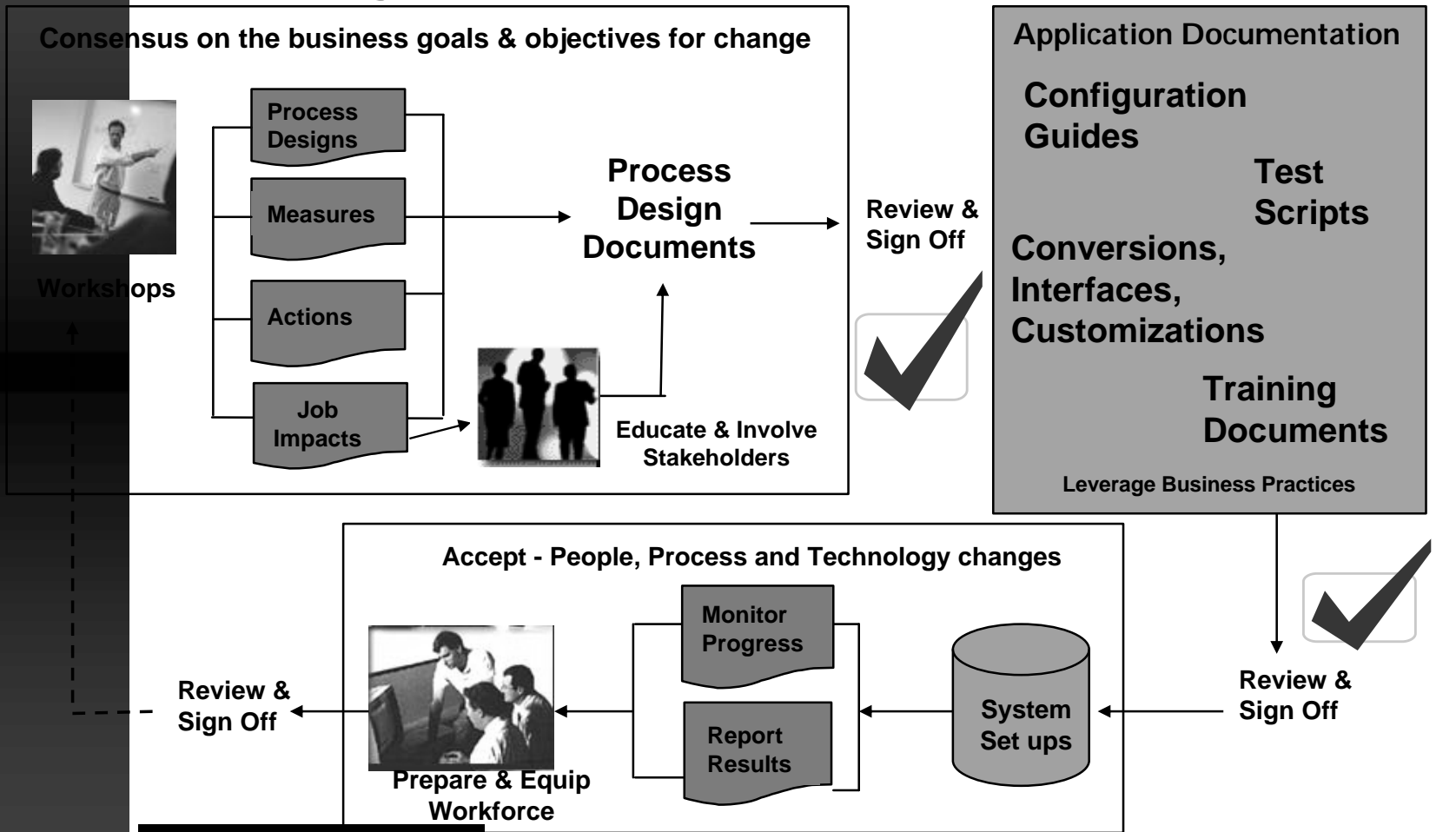
Component Reusability



Levels of Testing

- Unit – Form Level
- Functional – Module
- Regression – Business Process
- Performance – Transactions
- Load – Data stress
- System – Integrated

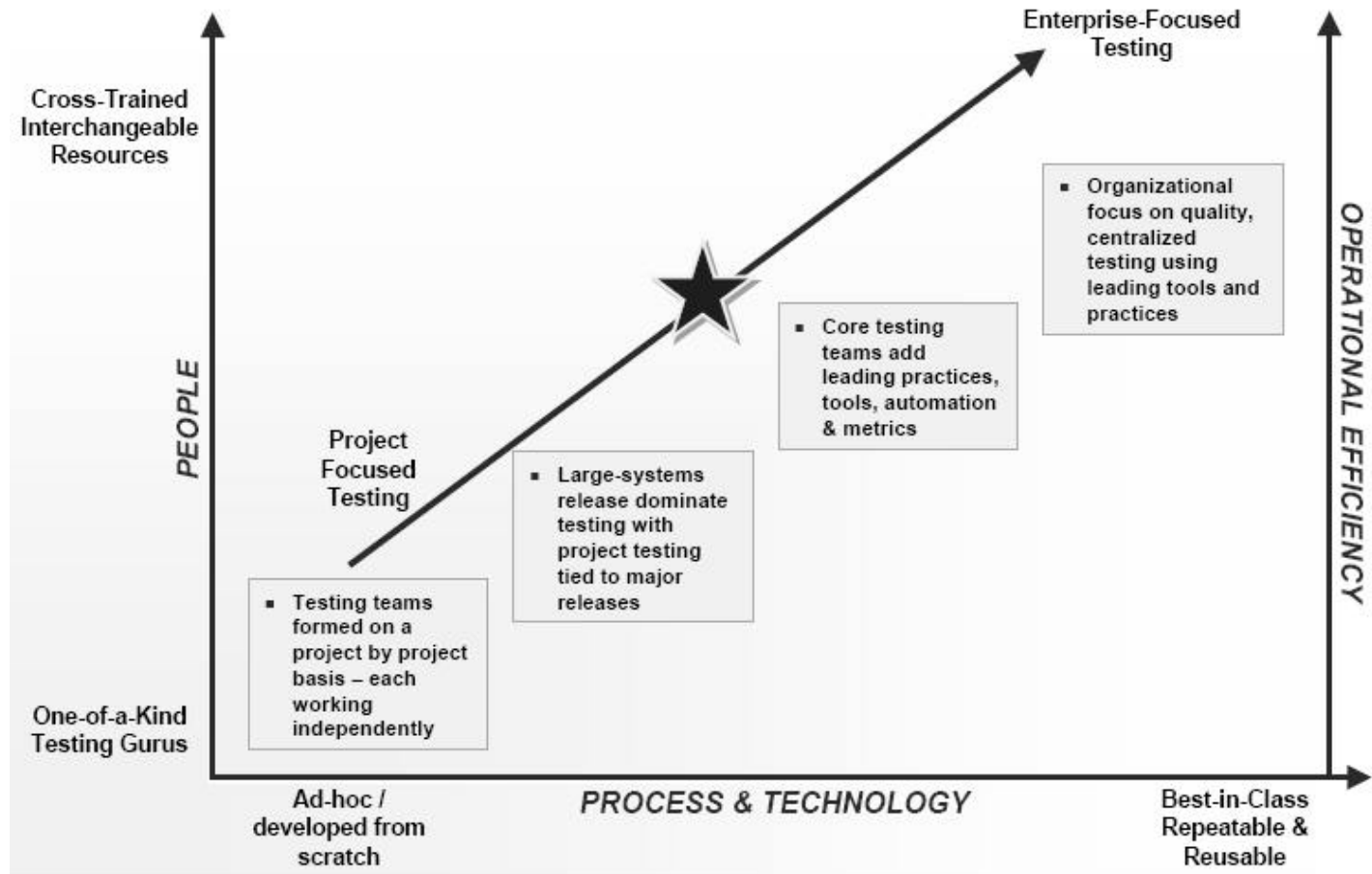
Change Management Integrated Into Testing Events



Test Events

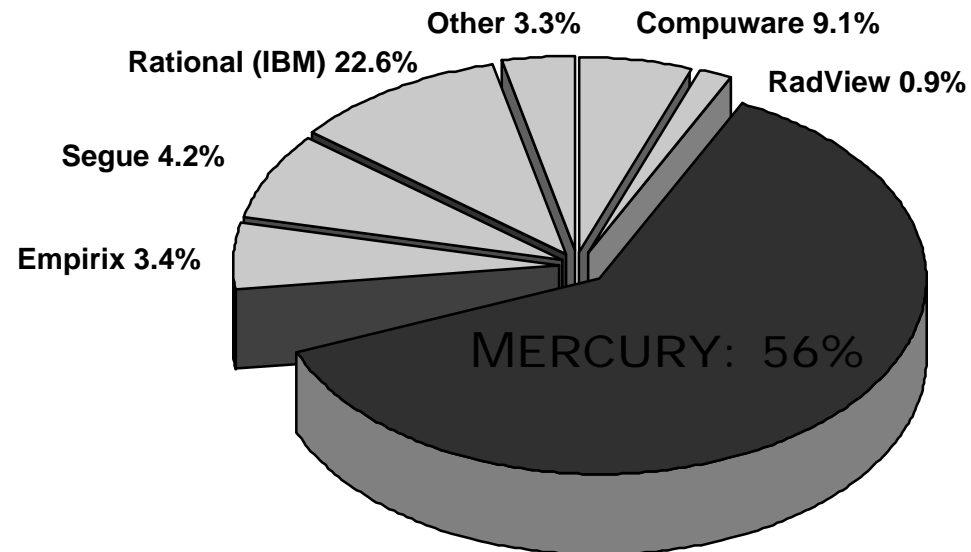
- Proof of Concept
- Conference Room Pilot
- User Acceptance Test
- Automated System Test

Business Process Testing



Tools for Testing

Distributed ASQ Market:



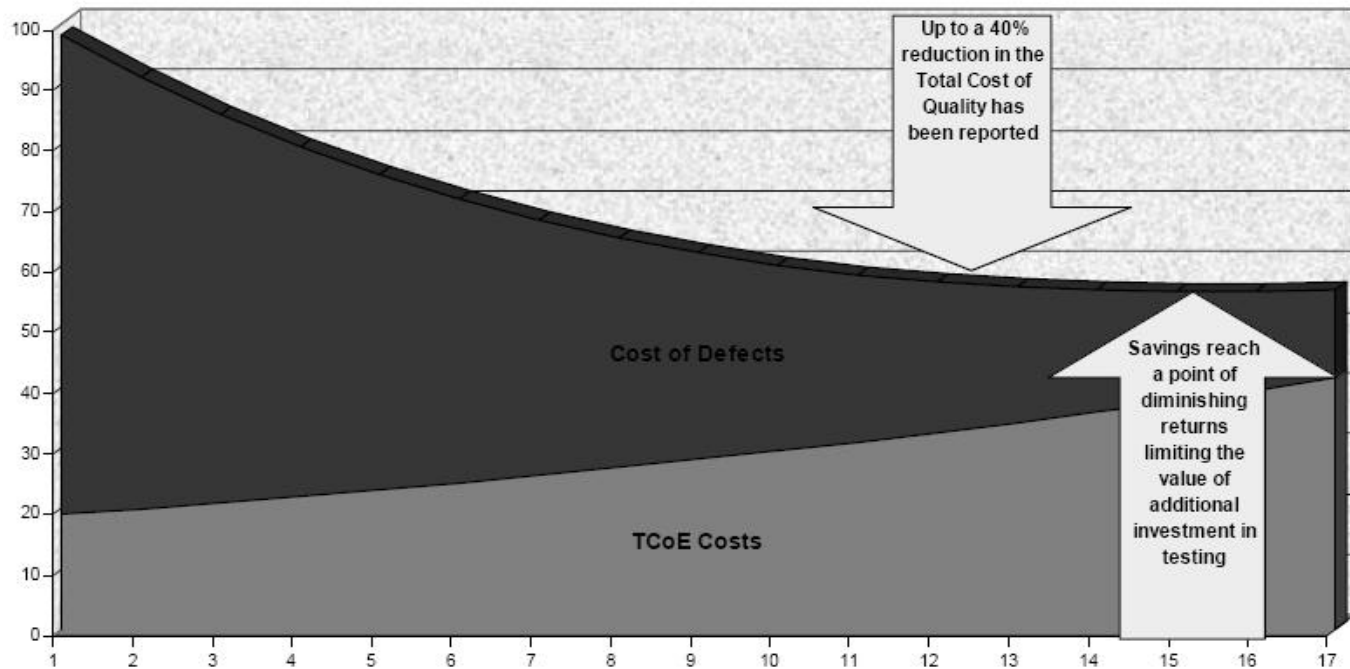
“Mercury is the dominant player in the Automated Testing Space.”
Source: Gartner 2003

Cost of Testing

- Cost of Manual Testing - 7200 person hours
\$360,000
- Cost of Creating Automating Testing (25% of testing time)
 - ◆ Number of hours required to create scripts x30 = 1800 hours
 - ◆ Average Loaded Rate @\$50/hour \$ 90,000
- Total Benefit to Year One Savings \$ 270,000
 - ◆ Year One Cost to Implement Quality Center for ten module \$ 250,000
- Return of Investment for Automated Testing Savings
 - ◆ Year One Savings \$270,000 -250,000 \$ 20,000

Five Year Benefit = 1,350,000 - Total Costs \$450,000 = \$900,000

Investment of Testing



Success Stories



- "Having the Business Process Testing Accelerator for Oracle 11i is like having an extra team of developers dedicated to the testing team, which saves time and money from a personnel management perspective and speeds time to deployment for our applications."

John Reading, Director of Oracle Applications, Graebel Corporation

Quantum.

- "Using the Business Process Testing Accelerator for Oracle we were able to setup an automated end-to-end testing solution for our Oracle Financials General Ledger process in one day. Doing this on our own would have taken us weeks if not months."

Marty Hunt, Sr. Director of Enterprise Applications, Quantum Corporation

Thank you!

Testing will not go away!

KISS



Keep It Simple and SupportableSM

If you have any questions or comments please contact us:

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For free Release 11i Tools please visit our website at:

www.solutionbeacon.com

