

Six Surprising Findings...

...From Test Team Assessments



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Six Surprises From Test Assessment

- *Life is a box of chocolates. You never know what you'll get.* – Winston Groom, *Forrest Gump*
- One of RBCS' main services is test assessment
 - Review documents
 - Analyze metrics
 - Interview stakeholders and participants
- We've performed assessments around the world and learned a lot from these clients
- Some of these things might surprise you
- The following slides show six surprising findings from test assessments
 - General observation
 - Some examples



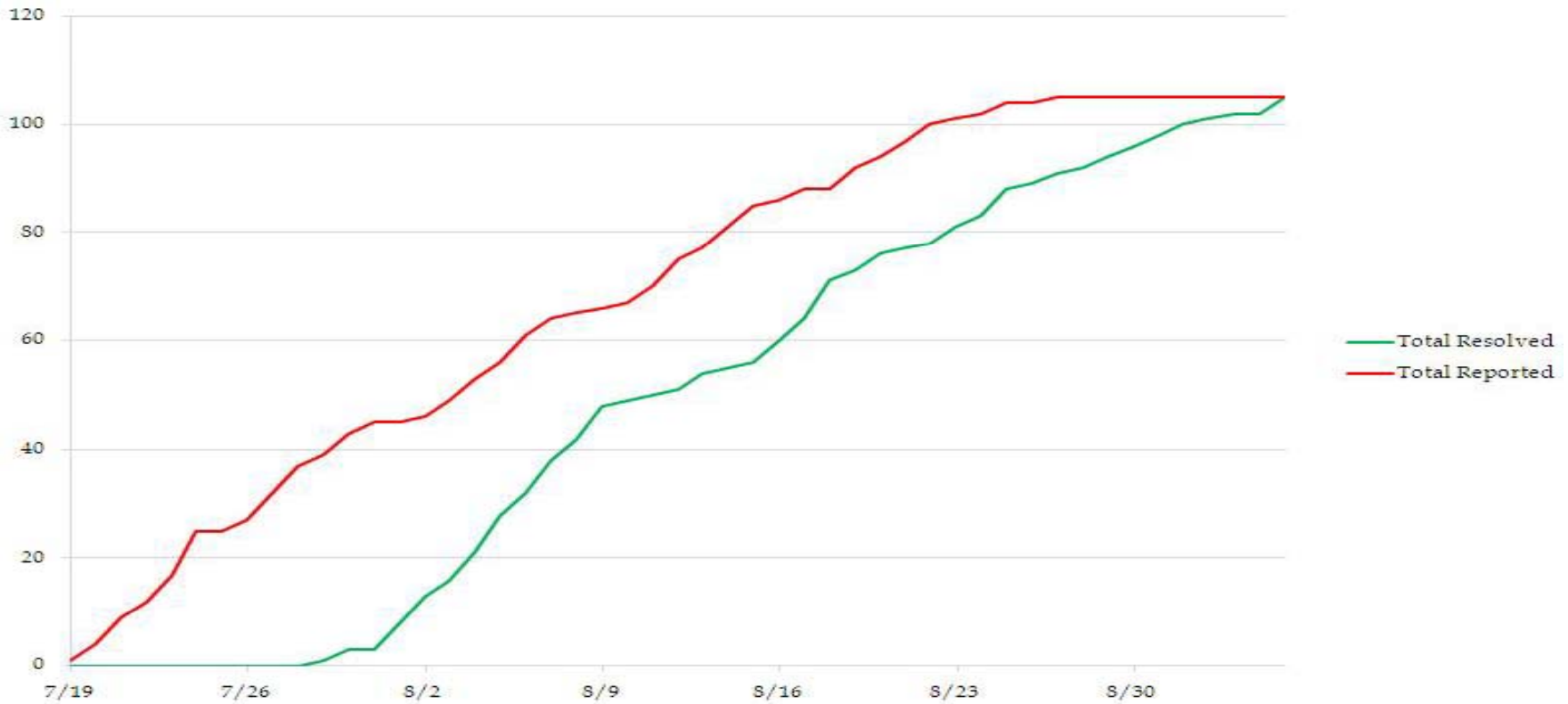
Metrics Without Insight

- ✚ *Truth, n. An ingenious compound of desirability and appearance. – Ambrose Bierce, The Devil's Dictionary*
- ✚ A surprising number of our clients have lots of metrics, but can't derive meaningful insight from those metrics
- ✚ So, they make critical decisions with incomplete data
- ✚ For example, based on financial considerations, when should testing conclude?
- ✚ There is an answer to that question – more on that later – but most organizations can't answer it with data



Are We Ready to Ship?

Total Defects Reported and Resolved



Can you name at least four reasons why the answer is, “We need more information before we can decide?” Think about it a bit...more later

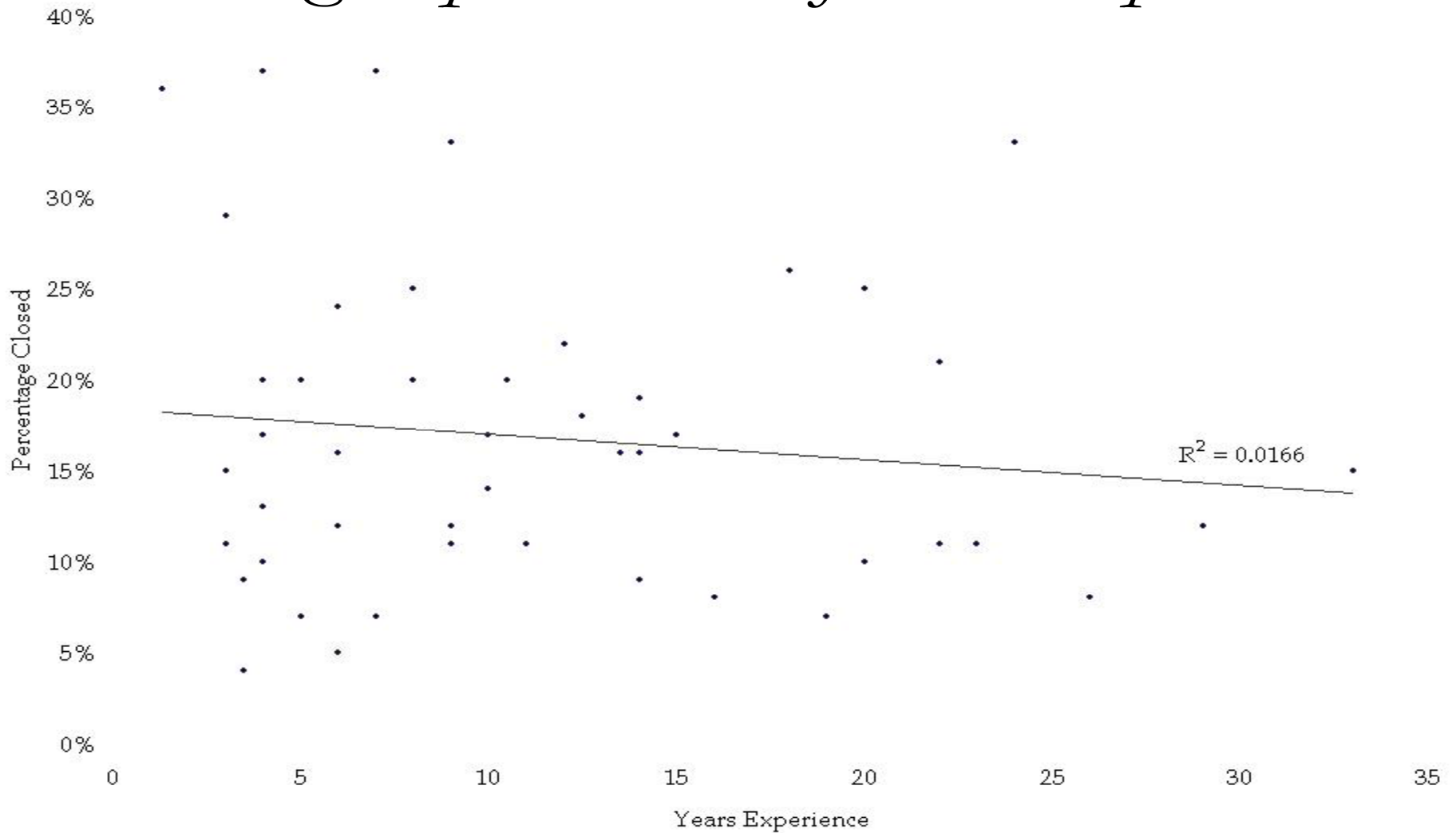


Even Smart People Jump to Conclusions

- ❖ *For every complex problem there is an answer that is clear, simple – and wrong. – H.L. Mencken*
- ❖ People often want one simple, obvious explanation of an outcome or problem
- ❖ This problem is compounded by the previous one, the lack of data
- ❖ Frequently we hear a hypothesis during interviews, and it is often accepted as obvious wisdom by people at the company – without any objective proof



“Bad Bug Reports Arise from Inexperience”





You Can Over-automate

- *The answer to the ultimate question of life, the universe, and everything is 42 – Douglas Adams, The Hitchhiker's Guide to the Universe*
- Asking a computer what the meaning of life is doesn't make much sense
- Asking a computer to run non-automatable tests doesn't make much sense either
- Run of thumb: If a test requires frequent tester intervention to run or to interpret its results, it's not automatable



Examples of Over-automation

- ❖ Focusing on 100% regression test suite automation for a database query tool
- ❖ Serious quality risks remained unaddressed in areas of usability, installation, and configuration
- ❖ Trying to automate compability testing
- ❖ The tests required attention every 30-60 minutes to start a new software install



Blended Is Better

- ❊ *Put the lime in the coconut, then you feel better* – Harry Nilsson, *Coconut*
- ❊ Ineffective test teams often inflexibly stuck on one test strategy or tactic
 - ❑ 100% test automation
 - ❑ Purely reactive testing (exploratory)
- ❊ The most effective test teams use blended strategies and tactics



Blended Versus Straight

- One client that adopted an exploratory testing strategy to blend (~20%) with an analytical strategy
 - Defect detection effectiveness before blending 92%
 - Defect detection effectiveness after blending 95%
- Another client that used a similar blend had a defect detection effectiveness of 94%, which has gone up as they continue to fine-tune their strategies



Some Test Teams Do Get Respect

- ❖ *I get no respect* – Rodney Dangerfield, late comedian
- ❖ Some testers and test teams feel like Rodney
- ❖ Often, that's a result of not having a clearly defined mission with success criteria
- ❖ Test teams with clearly defined missions and success criteria are often valued



Praise for a Test Team

- Quotes from project stakeholders (not testers) about one particularly effective test team
 - QA gives me an increased comfort level and confidence.
 - The QA Team provides broad knowledge that crosses organizational boundaries.
 - The QA and UAT testing period and process provide a central reference point, coordinating the various projects.
 - QA...prevents problems rather than just detecting them.
 - QA helps me pass the ["CIO test"] because, if something bad were to happen in Production, I could honestly say I had done everything I could.
 - QA provides useful, timely, credible information that helps guide the project.
 - Bad news from QA is handled effectively, and they have a good knowledge of the big picture.
- This kind of success doesn't happen by accident, but I do believe it is possible for most test organization



*Testing Is **Not** a Cost Center*

- *If you think education is expensive, try ignorance.* – Derek Bok, former President of Harvard
- Tester's paraphrase: If you think testing is expensive, try shipping untested software
- Quick poll: How many of you know how much testing saved your company last year?
- Roughly one third of RBCS assessment clients don't know and can't get the data to determine the answer



Examples of Testing ROI

- Here are some return on investment numbers for a few clients who *could* calculate their team's return on investment
 - Industrial control systems: 1475%
 - Banking software: 3500%
 - Consumer electronics: 333%
 - Internet appliance: 866%
- If you're wondering how we did this, see my article, "Testing ROI: What IT Managers Should Know," on the Basic Library page of www.rbc-us.com



Answer to Earlier Question

- ⊕ Based on financial considerations, when should testing conclude?
- ⊕ Marginal cost of a bug in testing: the cost, taking into account all factors, of testing until another bug is found
- ⊕ Average cost of a bug in production: the total cost of production failures, divided by the number of bugs found in production
- ⊕ When the marginal cost of a bug in testing reaches the average cost of a bug in production, testing should conclude
- ⊕ This rule takes into account *only* financial considerations



Answer to Earlier Question

- Some reasons why we need more information on the ship decision
 - Don't know if test effort was constant over time
 - Don't know if all the planned tests were run
 - Don't know what risks were addressed and what risks weren't addressed
 - Don't know what requirements and design specification elements were covered
 - Don't know how many defects were "resolved" by deferral
- A balanced scorecard should be used to assess test project status, not a single chart



Questions?

- So, these are some of my favorite surprises
- Any questions?
- Any favorite surprises that you've had when working on a test team?
- If you're interested in more information on our assessment services, please contact me at info@rbc-us.com
- Thanks for your attention!



To Contact RBCS

For over a dozen years, RBCS has delivered services in consulting, outsourcing and training for software and hardware testing. Employing the industry's most experienced and recognized consultants, RBCS conducts product testing, builds and improves testing groups and hires testing staff for hundreds of clients worldwide. Ranging from Fortune 20 companies to start-ups, RBCS clients save time and money through improved product development, decreased tech support calls, improved corporate reputation and more. To learn more about RBCS, visit www.rbcs-us.com.

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