Is Testing a Waste of Time?

Practical Reasons for Testing You Should Know

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Introduction

- Is software testing a waste of time?
- One bomb-thrower even said, "Testing is dead"
- Testing tends to get short-changed in schedules, budgets, and staffing
- Maybe it's just not a very high priority?
- That may be true for some organizations, but it's not a smart way to think about testing
- Done properly, testing serves important objectives and provides clear benefits
- What is the case for testing?
- Let's take a look…

Testing's Not Quite Dead Yet

- For something that's dead or a waste of time, there's sure a lot of people doing it and a lot of money spent on it
- Research firm Forrester estimates $50B annual spending on testing
- Assuming $100K cost per tester-year, that's half a million testers
- Since $100K is probably too high (esp. with outsourcing), 500K is a low estimate

Dead Collector: Bring out yer dead!
[A large man appears with a (seemingly) dead man over his shoulder]
Large Man: Here's one.
Dead Collector: Nine pence.
"Dead" Man: I'm not dead.
Dead Collector: What?
Large Man: Nothing. *[hands the collector his money]* There's your nine pence.
"Dead" Man: I'm not dead!
Dead Collector: 'Ere, he says he's not dead.
Large Man: Yes he is.
"Dead" Man: I'm not.
Dead Collector: He isn't.
Large Man: Well, he will be soon, he's very ill.
"Dead" Man: I'm getting better.
-- A scene from *Monty Python and the Holy Grail*

But Testing's Not Exactly a High Priority

- But Gartner estimates $4T annual spending on IT
- If Forrester and Gartner are both about right, only $1 out of $80 is spent on testing
- Our own experience with clients shows 10-25% of IT budgets lost on costs of external failure
- So, about $400B is wasted on failure in IT, with only 1/8th that amount spent to avoid that waste
- Hmmm…where's the disconnect?

Who Should *Value Testing?*

- Maybe testers don't effectively connect what we do with those who should value testing?
- Consider the business and technical stakeholders
- Stakeholders have an interest in…
  - Testing activities
  - Testing work products
  - System quality
- Stakeholder's interest can be direct or indirect
- If stakeholders don't value testing (enough), then…
  - You're not doing it right
  - Or you're not delivering the value of doing it
  - Or you're not showing them the value delivered
- Let's examine the values testing can deliver and the stakeholders who care about them…

Important Bugs

- Value: finding defects that are fixed prior to release
- Can be quantified through cost of quality
- Stakeholders: developers, development leads, development managers, database architects, system architects, designers, marketing, business analysts, senior management, product managers, project sponsors, project managers, technical support, customer support, help desk staff, and users
- Caveats
  - This typical value of testing is often over-emphasized
  - In the hands of unprofessional people, defect reports can be use to drive a wedge between testers and other stakeholders

Deferred Bugs

- Value: finding defects that are known prior to release, especially if workarounds or other mitigation options are provided
- Can be quantified in terms of saved support time
- Stakeholders: especially technical support, customer support, help desk staff, marketing, product managers, and users, but to a lesser extent developers, development leads, development managers, database architects, system architects, designers, business analysts, senior management, project sponsors, and project managers
- Caveat: if too many important bugs are missed (low DDE[critical]), then this value will be seen as a poor consolation prize

Reducing Risk

- Value: reducing quality risk to an acceptable level prior to release
- Can be quantified based on insurance value, but usually best to leave it qualitative
- Stakeholders: especially marketing, product managers, project sponsors, project managers, users, and senior management, but also developers, development leads, development managers, database architects, system architects, designers, marketing, business analysts, technical support, customer support, and help desk staff
- Caveats: proper risk-based testing (e.g., via PRAM) is required to fully achieve, make visible

Information

- Value: delivering credible, timely, accurate, information on project, process, and product status, at the appropriate level of detail and appropriate to the audience
- Usually not quantified
- Stakeholders: especially senior management, product managers, project sponsors, marketing, project managers, and development managers, but also developers, development leads, database architects, system architects, designers, business analysts, technical support, customer support, and help desk staff
- Caveats:
  - Too much information (frequency or detail) is as much of a problem as too little
  - Most defect and test management tools have poor canned reports
  - Psychological factors affect the ability to deliver information

Reputation

- Value: contributing to the company's improved reputation for product or service quality
- Usually not quantified
- Stakeholders: all employees and users
- Caveats
  - Be careful not to take full responsibility for quality
  - Don't let others abdicate their role in quality (e.g., "let the testers worry about the bugs")
  - Ensure you won't be blamed when some defects inevitably escape

Release Support

- Value: good testing, including early testing (e.g., reviews) and risk-based testing, helps lead to smoother and more-predictable releases
- A qualitative value primarily
- Stakeholders: especially development managers, marketing senior management, product managers, project sponsors, and project managers
- Caveats: careful to keep the focus on early and efficient defect removal, not just sticking to deadlines even if quality is lousy

Confidence

- Value: building confidence in the product
- A qualitative value primarily
- Stakeholders: especially development managers, marketing, senior management, product managers, project sponsors, project managers, users, technical support, customer support, and help desk staff
- Caveats
  - Avoid building false confidence
  - People must be confident in the testing before the testing can build confidence in the product

Legal and Regulatory

- Value: satisfying legal or regulatory requirements, reducing the likelihood of lawsuits, or otherwise reducing legal liability and related risks
- Stakeholders: especially development managers, marketing, senior management, product managers, project sponsors, project managers, users, technical support, customer support, and help desk staff
- Caveats
  - Carefully analyze how to address the legal and regulatory risks through testing
  - Escalate any risks you can't address
  - Mission-critical and safety-critical apps have special concerns here

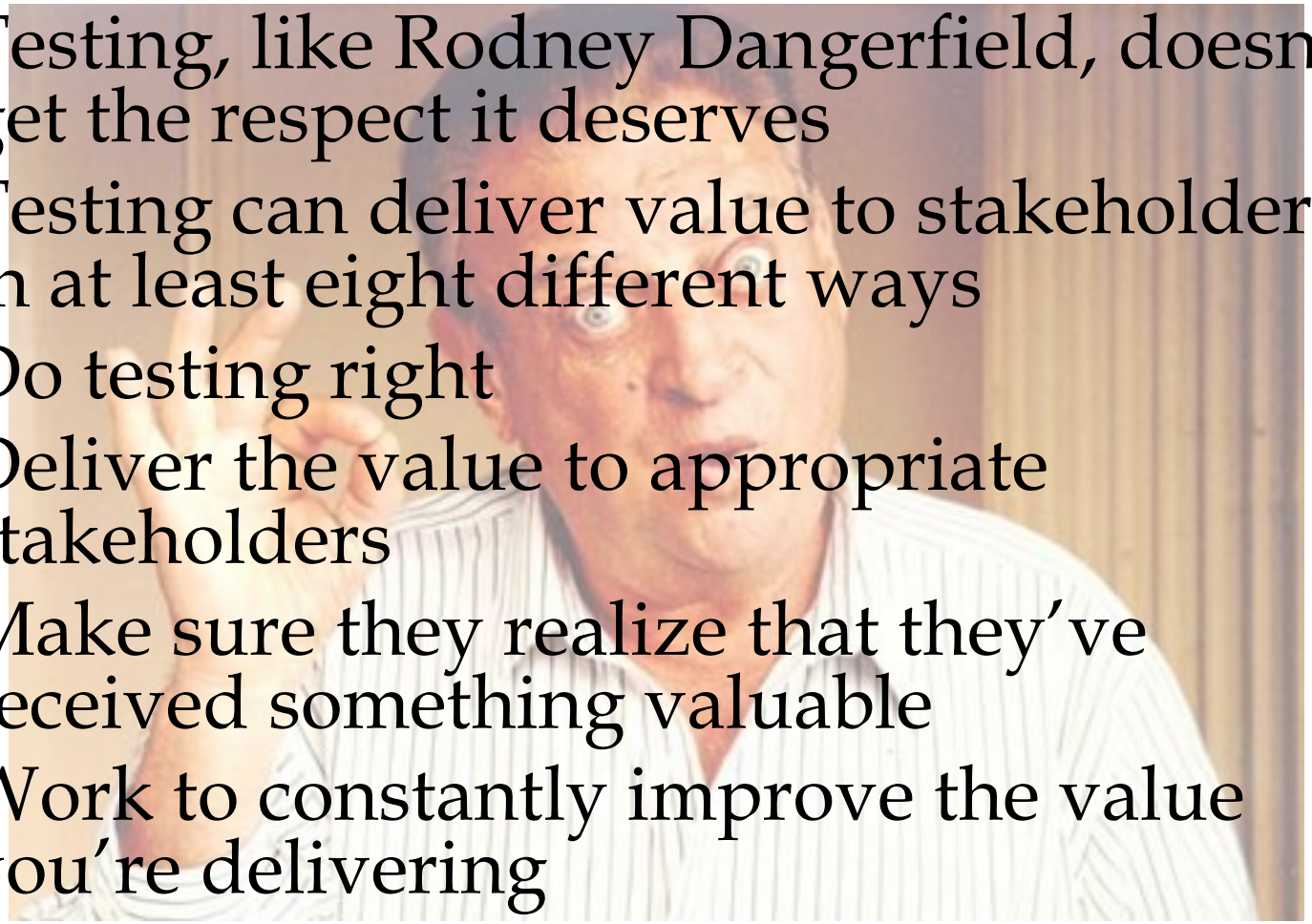
Problems Associated with Insufficient Testing

- So, we've looked at some testing values
- How about problems when testing is undervalued?
  - Increased costs
  - Low customer satisfaction
  - Schedule delays
  - Rework
  - Increased risk
  - Low morale

Testing and Quality Management

- Testing and quality
  - Tests give confidence where they find few bugs
  - Passing tests reduce the level of quality risk
  - Failing tests provide a chance to improve quality
  - The test set gives an assessment of quality
- Testing must focus on the important quality characteristics
- Testing, quality, and quality improvement
  - Ideally, testing is part of a larger quality strategy
  - Defect root cause analysis can support quality improvements

Conclusions



- Testing, like Rodney Dangerfield, doesn't get the respect it deserves
- Testing can deliver value to stakeholders in at least eight different ways
- Do testing right
- Deliver the value to appropriate stakeholders
- Make sure they realize that they've received something valuable
- Work to constantly improve the value you're delivering

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For almost twenty years, RBCS has delivered consulting, outsourcing and training services for software and hardware testing and quality. 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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