

Satisfying Test Stakeholders

Test Team Success by Delivering True Value



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Satisfying Test Stakeholders

- Teams that deliver real value to their stakeholders succeed
- Key questions:
 - What is it about testing, done really well, that provides long-term satisfaction to the stakeholders?
 - Who are the stakeholders and what do they want from testing?
 - What are the external and internal forms of value delivery in testing that truly satisfy?
 - How can testers and test managers build testing organizations that provide this satisfaction over the long term?
 - How can testers create elegance, effectiveness, efficiency, and even delight for ourselves and our stakeholders in our work?
- Let's see if we can find some answers...



Internal and External Test Stakeholders

- **Fellow testers**
- **Test leads and managers**
- **Development teams**
- **Database and system architects**
- **Marketing and business analysts**
- **Project managers**
- **Technical support**
- **Sales staff**
- **Executives**
- **Company shareholders**
- **Officials and voters**
- **Regulators**
- **Users**
- **Vendors**
- **Customers and sponsors**
- **Public and society**



Stakeholders and Their Interests

- ❖ Each stakeholders has some interest in testing
- ❖ Most want testing and the project to succeed
- ❖ Some stakeholders are neutral
- ❖ Rarely, stakeholders are inimical (“anti-stakeholders”)
- ❖ You must identify stakeholders and their interests to deliver stakeholder value



Stakeholder Objectives and Expectations

- Each stakeholder has test objectives and expectations which they want done effectively, efficiently, and elegantly
- We need to work with stakeholders to articulate and define these objectives and expectations
- Effectiveness: satisfying objectives and expectations
- Efficiency: maximizes value delivered for resources invested
- Elegance: achieving effectiveness and efficiency in a graceful, well-executed fashion



Avoiding Divergence and Conflicts

- Some testers gauge their effectiveness in terms of finding bugs, even if unlikely and unimportant
- Some test managers measure and reward testers based on bug counts
- Other managers do not appreciate a one-dimensional outlook
- They see bug-obsessed testing as antagonistic, disruptive, and obstructive
- Conflict results, most intensely during test execution
- The product often goes into production late, with more bugs than necessary, and a residue of bitterness and resentment between testers and others
- Avoid these scenarios by establishing a consensus about what constitutes effective, efficient, and elegant testing across all stakeholder objectives and expectations



External Objectives

- ✚ Suppose test stakeholders identify a few test objectives, including finding bugs, especially important bugs
- ✚ Let's measure externally-visible effectiveness and efficiency
- ✚ What percentage of the bugs delivered to us do we find?
- ✚ Do we find a higher percentage of the important bugs?
- ✚ What is our cost per bug found and fixed during testing compared to the cost of a failure in production?
- ✚ For each of these questions, we can devise a metric



Bugs Finding Effectiveness

- ✚ We can look at the percentage of bugs found
- ✚ A typical number is 85%, though some teams do much better

$$DDP = \frac{\text{bugs detected}}{\text{bugs present}}$$

$$DDP(\text{for testing}) = \frac{\text{test bugs}}{\text{test bugs} + \text{production bugs}}$$



Bug Finding Focus

- ❖ We should find more of the important bugs than we do of the less important bugs
- ❖ Most teams do not achieve this unless they use risk based testing

DDP (all bugs) < DDP (critical bugs)



Bug Finding Efficiency

- Compare the cost of field failures with the cost of testing
- Most test organizations pay for themselves many times over

$$ACTB = \frac{\text{cost of detection} + \text{cost of internal failure}}{\text{test bugs}}$$

$$ACPB = \frac{\text{cost of external failure}}{\text{production bugs}}$$

$$\text{Test ROI} = \frac{(\text{ACPB} - \text{ACTB}) \times \text{test bugs}}{\text{cost of detection}}$$



Establishing Metrics

- Establish metrics for effectiveness and efficiency and goals for those metrics.
- Understand the objectives and expectations of stakeholders
- How would you know if you're achieving?
- Define metrics that measure effective and efficiency, and define goals for those metrics
- Establish an ethic of elegance, in terms of graceful work, a service-oriented outlook, and a focus on what matters



Internal Objectives

- Suppose that your team spends a lot of time doing manual regression testing
- Since manual regression testing is tedious, expensive, error-prone, slow, and morale-sapping, you might decide to use automation
- Let's measure internally-visible effectiveness and efficiency
- What percentage of regression tests have we automated?
- What percentage of regression-related quality risks do we cover?
- How much more quickly can we run our automated regression tests?
- For each of these questions, devise a metric



Extent of Automation

- ❖ We should measure the extent to which we've automated regression testing
- ❖ The goal might be less than 100%

$$RTA = \frac{\text{automated regression tests}}{\text{manual regression tests} + \text{automated regression tests}}$$



Automation Coverage

- ❖ Test automation should preserve or lower the level of regression risk
- ❖ As you automate more tests, the regression risk coverage should stay constant or (better) increase

$$RRC = \frac{\text{regression risks coverage}}{\text{regression risks identified}}$$



Automation Acceleration

- ⊕ Automated regression tests should make regression test execution quicker
- ⊕ You want to measure the time savings realized to achieve the same level of regression risk

$$ART = \frac{\text{manual duration} - \text{automated duration}}{\text{manual duration}}$$



Conclusion

- ✚ Testing has many stakeholders, and test teams should establish, measure, and satisfy reasonable objectives and expectations for testing with those stakeholders
- ✚ The journey consists of four steps:
 1. Know your stakeholders
 2. Know their objectives and expectations for testing
 3. Establish metrics and targets for stakeholder objectives and expectations (external)
 4. Establish metrics and targets for testing objectives and expectations (internal)
- ✚ Senior test managers who work through this process with their teams will deliver real testing value in their organizations



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