



Ensuring Quality Project Delivery: The QA Project Relationship

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Bio – Elise Hudson

- 25+ years in IT
 - Infrastructure
 - Software
 - Security
 - Government, Private, NGO
- 15+ years in Project Management
- PMO Manager at NES
 - Project Managers
 - Business Analysts
 - Quality Assurance
- PMP
- CSP, CSM

One Thing To Keep In Mind

- ▶ Quality *seems* like a lot of work
- ▶ Not everything has to be documented like a novel
- ▶ Just ask the questions
- ▶ Make sure everyone is on the same page about the answers

Topics

- ▶ Understanding Quality
- ▶ Inserting Quality into the Project Process at Every Phase
- ▶ Waterfall v. Agile
- ▶ Specific Processes, Documents, Metrics for Quality

Understanding Quality

- ▶ PMBOK v6 Section 8.2 - “Manage Quality”
- ▶ Quality Management
 - ▶ Requirements/Scope Realization
 - ▶ KPIs and Cost/Benefit Realization (including all rework)
 - ▶ FURPS (Grady & Caswell 1987 – HP)
 - ▶ Functionality
 - ▶ Usability
 - ▶ Reliability
 - ▶ Performance
 - ▶ Supportability
 - ▶ Defining Processes & Metrics that Ensure these Realizations

Deciding What Quality Means

- Cost/Benefit understanding for implementing quality
 - Costs of Quality
 - Labor
 - Tools
 - Timeline
 - Risks of Lack of Quality
 - Visibility of Problems
 - Loss of Confidence by Users/Clients/Consumers
- **IMPORTANT** to make sure level of Quality is agreed by stakeholders and management **BEFORE** projects/work begins (part of Charter)

Waterfall – Quality in Each Phase

Initiation

- Determine general quality expectations in Project Charter
 - Include this in initial estimates for cost, labor, schedule
- Understand important aspects of project that determine quality needs
 - Build a cost/benefit argument for how quality is approached
- Considerations
 - Internal v. External
 - Financial/Monetary
 - Regulatory
 - Security/Sensitivity of Information
 - Risk to organization if failure happens
- Plan for time/cost to build Quality Management Plan/Requirements

Planning

- ▶ “Quality planning should be performed in parallel with other planning activities.” – PMBOK Section 8.1
- ▶ Quality Management Plan (aka Test Strategy) is an INPUT to the Project Plan
 - ▶ Quality must fully understand the requirements/solutions AND stakeholder expectations
 - ▶ What will be included in quality examination (how)
 - ▶ What tools and metrics will be used
 - ▶ Define boundaries of failure (entrance/exit criteria – including ORR)
 - ▶ Roles and responsibilities of quality activities
 - ▶ Processes for evaluating quality
 - ▶ Recording variances to quality limits
 - ▶ Process for repairing quality variances and retesting

Planning (continued)

- Consider the following Quality Activities:
 - Reviewing requirements and solution with QA team
 - Reviewing Quality Plan with entire project team – set quality expectations
 - Quality/Test Design (including traceability matrix analysis)
 - Quality/Test Execution
 - Problem/Defect Management Activities
 - Time to Fix Problems/Defects
 - Time to Retest Problems/Defects
 - User Testing/Evaluation
 - User Test Design
 - Time for Defect Management/Retest with User Found Issues/Defects
 - Building Automated Testing Assets
 - Building Regression and Smoke Tests
 - Input into ORR or Go/No-Go Evaluations
 - Time to gather and evaluate metrics/data

Planning (Other Considerations)

- ▶ Quality Activities must take into consideration:
 - ▶ Releases/Phases
 - ▶ Release Management Plans
 - ▶ Environment Management Plans
 - ▶ Change Management Controls/Approvals/Notifications
 - ▶ Unit Testing Activities from Development Teams
 - ▶ Willingness of end users/stakeholders to participate in quality activities
 - ▶ Maturity of team related to quality activities
- ▶ Risky to assume a standard % of development is enough for Quality

Execution & Monitoring

- Quality Dashboards
- Quality as part of Status Reports and Stoplight Assessments
- Ensure Quality resources know project processes
 - Escalation/Communication Plans
 - Risk/Issue registers and processes
 - Are part of regular team meetings
 - Have a voice/vote with the rest of the team (even if offshore)
- Are involved as early as possible

Closing

- Lessons Learned
 - Review Quality/Defect Results and Metrics
 - Deep Dive into Major Issues that Arose
 - Review Defect/Issue Leakage from DEV-QA-UAT-PROD
 - Evaluate how to get better coverage for future quality efforts
- Quality – Operations Handoff
 - Regression & Smoke Test Sets
 - Test Results
 - Metrics

AGILE QUALITY

Sprint 0 – Before Sprint Planning

- Ensure everyone is on same page about level of testing and quality evaluation – the content of the Test Strategy must be understood across team
- Roles and Responsibilities are clear
 - Especially for non-cross-functional team members
 - Especially for non-co-located team members

Sprint Planning

- ▶ Decide what acceptable levels of defects are before deployment
 - ▶ i.e. No > P2 defects, only business accepted < P3 defects (having NO defects may not be reasonable)
- ▶ Define how the following activities will be tracked
 - ▶ Architecture/Solutioning
 - ▶ Level setting of solution with team before development begins
 - ▶ Test Design
 - ▶ BDD/TDD approach
 - ▶ Regression and Smoke Tests
 - ▶ Test Execution
 - ▶ Defect Management
 - ▶ Defect Repair & Retest (do NOT let this snowball)
 - ▶ Technical Debt Elimination
 - ▶ End User Testing/Sprint Review Details
 - ▶ Environment Creation
 - ▶ Change Management/Code Drops
- ▶ Make sure all these activities are included in estimations (points or hours)

Sprint Execution

- ▶ Identify Impediments/Issues with Process Early (don't wait for retrospective)
- ▶ Make sure QA and DEV are talking often
- ▶ Keep an eye on QA metrics
 - ▶ Defect aging
 - ▶ Defect clusters (developer, QA analyst, application, module, etc.)
- ▶ Quality – Operations Handoff
 - ▶ Regression & Smoke Test Sets
 - ▶ Automation Suites
 - ▶ Test Results
 - ▶ Training for Support

Sprint Retrospective

- ▶ Review Test Metrics
 - ▶ Defect Leakage DEV-QA-UAT-PROD
- ▶ Review Roles & Responsibilities
- ▶ Operational Handoff (include ops in Retrospective)

Questions?

Contact Info

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