Assessments

Topics

- Assessment Objectives

- Assessment Criteria

- Assessment Process

- Assessment Results and Presentation

- Cost/Benefit Trade-offs

- Assessment Approach matched with Quality Philosophy

Assessments

- Metrics and feedback on process effectiveness

- Identify improvement opportunities, transfer learnings

Assessment Objectives

- Determine whether criteria are being met: quality practices being followed

- Generate compliance metrics

- Identify opportunities for improvement

- Identify good practices and strengths to be maintained

- Transfer of learnings: identify and propagate "best practices," suggestions from outside

- Assessees also get a chance to "step back and take a look at what they are doing"

Assessments

- Exercises where someone comes in to assess actual practices against some quality criteria:
  - Assess compliance to standards such as ISO 9000
  - Assess against model (such as CMM, Malcolm-Baldrige)
  - Assess against goals (extent to which practices achieve quality goals)
    - More flexible
    - Requires more competence from assessors
    - Does not standardize practices
  - Assess based on results
    - Ultimate in goal-orientation
    - But results not totally under control of engineers
    - Good results do not guarantee good practices (heavily influenced by external factors)

- May be internal or external assessment, formal or informal

Assessment Criteria

- May be very high-level objectives
- Organization only needs to demonstrate that their practices are good enough to achieve the objectives
    - For example, "Project progress is tracked against plans, and lack of adequate progress causes appropriate actions to be taken"
- Provides a lot of flexibility in finding the right ways to achieve objectives
- More dependent on assessor's judgment
- Sometimes, even the objectives may not be relevant!
    - For example, project is a long-term "opportunity project" that is run in background mode with few deadlines
- May be very specific in terms of practices
- Specifying practices makes assessment easier
    - For example, "Project has GANTT charts showing the plan, progress is tracked every week, and replanning done if more than 2 weeks late"
    - Much more likely that practices will be mismatched to situation needs and become burdensome

Assessment Process

- Assessment scheduled, assessors selected
- Project prepares data for assessment
    - Project artifacts, evidence of practices
    - Documents describing project goals, practices/processes
    - Possibility of manufacturing (false) evidence!
- Assessors go through data, come up with questions and areas to examine further
- "Site visit" – assessors interact with project staff, ask questions about practices, obtain clarifications, perform cross-checks (between evidence and what people say)
- Assessors discuss, develop, and present conclusions, including recommendations for improvement

Evidence

- Assessments tend to look for evidence (documentation)
  - The greater the emphasis on documented evidence, the greater the burden of preparing for assessment, and the weight of processes
- Add subjective inputs (interviews with people involved to ask about practices and effectiveness)
  - Can do more of this with self-assessment, where goals are clearly formative
    - Doers are most familiar with problems, and often, the ones most interested in fixing them
    - Improves ownership of goals

Evaluation

- Correlate all the data, from multiple assessors and from different sources

- May use results as additional inputs on effectiveness

Presenting Results

- Constructive focus

- Strengths and opportunities for improvement, not weaknesses

- Keeping ownership of results with people doing the job

- Most assessments are primarily formative

Value of Assessments

- Compliance: Make sure processes are followed
- Education: Engineers become familiar with goals and practices, sends message about quality focus
- Standardize practices
- Identification of strengths to sustain, weaknesses to improve
- 2-way cross-fertilization of good practices
  - Assessors typically from other projects / organizations
  - (Internal vs. external assessment)
- Generates metrics/certificates that provide evaluative information

Cost of Assessments

- Effort for assessment preparation is often significant

- Engineers' and assessors' time

- May lead to additional project activities that are conducted solely for assessments such as making sure evidence exists, filling holes that assessors consider important but project staff would not prioritize

- Possibility of externalizing excellence

  - Internal compass of excellence vs. satisfying external evaluators
    - For example, exams and grades!

Assessment Approach Selection: Matching to Culture

- Hierarchical organizations may prefer process/practices orientation: standardized practices, goal ownership with manager, requires minimal maturity from engineers

- TQM-style approach expects goal ownership with engineers, local optimization of practices, high maturity levels from engineers, needs goal-oriented assessment

- If assessment is mismatched with execution style, will become less meaningful exercise, also detract from culture

- Possibility of losing internal compass of excellence

Conclusion

- Assessments provide in-depth understanding of process quality
  - Areas to preserve/enhance, areas to improve
- Assessments "force" the organization to think carefully and deeply about their process
  - Is the benefit worth the (non-trivial) cost?
- Organization's quality culture approach should align with how assessments are done and how results are used