Improving the Agility of Your Process

Leveraging On Current Quality Practices

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Company Background

• Leader in providing innovative telecommunication technology
• Long history of high quality standards and exceptional performance
• 2000+ employees across multiple Software Development Business Units
• 110+ products and 125+ MLOC
• Assessed at CMM® Level 5 and TL/ISO 9001 registered

Customer Satisfaction is our # 1 Priority
Telcordia Quality Management System Structure

Corporate Policy

Tier 1
Corporate

Tier 2
Standard Methodologies

Tier 3
Local Procedures

Thin, common sense, standard methodology for the entire organization (QMO)

Do what makes sense locally (Value what has worked)
Tailoring and creativity encouraged

1. Do what is right for the business
2. Do not over-engineer
3. Maintain ease-of-use
Demonstrating Agility

• Former Quality Framework
• Catalyst for Change
• Formulating a New Process Framework
  – Method of Feedback
  – Considerations and Analysis of Alternatives
• Areas of Change
  – Code Inspection
  – Metrics Analysis and Reporting
  – The Quality Audit Process
• Summary
Adapting to Changing Business Environment

• Drivers
  – Shrinking market, less spending in telco industry
  – Growing focus on open interfaces, easy integration
  – Expansion in market segments and locales

• Infrastructure changes
  – Need to formalize investment justifications
    • Milestones to evaluate strategic fit
  – Need to produce quickly … with high quality
    • Compressed timeframe, smaller products
  – Need support from process

• Focus is back on product-level development
  – Test of process agility!
Listening for clues: Demand for a Leaner machine

- Listened to users
- User feedback
  - Direct web-based user feedback/questions/requests
  - Quality Exchange forums
  - Quality coaches
  - Quality audit findings
  - Key Learnings, QUIPs
- TQMT
  - Partners with SEPG
  - Evolve the QMO in response to BU concerns

Sign of the times: Need to apply solution practices to product level

... product-focus is back!
Analyze Areas for Agility

• Findings on efficiency
  – Cut down processes that don’t make business sense in new approach
  – How can these subprocesses be improved?
  – Reasoned argument for redefining process

• Agile methodologies considered
  Where to adapt, where not to compromise
  Local implementations possible
  ✓ Iterative cycle, condensed timeframe
  ✓ Emphasis on customer involvement
  ✓ Thorough validation during development
  – Pair programming? On-site customer? Concurrence?
  – Less emphasis on documentation? Thin process
  – Refactoring? Complex system issues
  – Less measures? Collective code ownership? Metaphors?
The Case for Efficiency: Code Inspection

• Historically not always effective
  – Is the requirement for 100% code inspection effective?
  – Various interpretations of compliance and workarounds

• How to achieve balance
  – Types of code that need code inspection
  – Team empowerment
  – Testing as more effective validation?

• What’s not necessary?
  What works best for the team?
Less is More: Metrics Analysis and Reporting

• What do managers want?
  – More analysis along with reports
  – Top 10 worst offenders
  – Patterns (at different levels)
  – More organization-level summaries

• Optimize our Metrics process
  – Which metrics matter most?
  – Dashboard style reporting

• Leverage new process on existing ones
  ✓ Enhanced Weighted Lateness
  ✓ Web-based collection & presentation
  ✓ Improve training on use of metrics, schedule tools
Process Support: Quality Audits

• What to do with audit findings
  – Analyze the worst process variations
  – Search for patterns for improvement opportunities
  – Are audit metrics driving the wrong behavior?
    • Eliminate presentation of audit grades/color results

• Keep an open mind when teams find a better way
  – View this in relationship with the business objectives
  – Is it really a noncompliance? Is there a reasoned argument for redefining process?

• Current process evolved to be more proactive, supportive
Summary: Leverage on Existing Process

• CMMI: Do what makes sense to business objective
  – Strategic framework for quality assurance, not a target
  – Higher maturity levels give capabilities to align with business objectives and to optimize and adapt to business changes

• Adapt: Question when to give in, when to include wisely
  – Build on existing process
  – Expect some measured benefits in experimenting
  – Learn from your mistakes and move on

• Allow for agility in your process
  – Listen for feedback, cut excess process
  – May be doing less, but better
  – Structure your process to allow for agility
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