



Improving the Agility of Your Process

Leveraging On Current Quality Practices

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Company Background

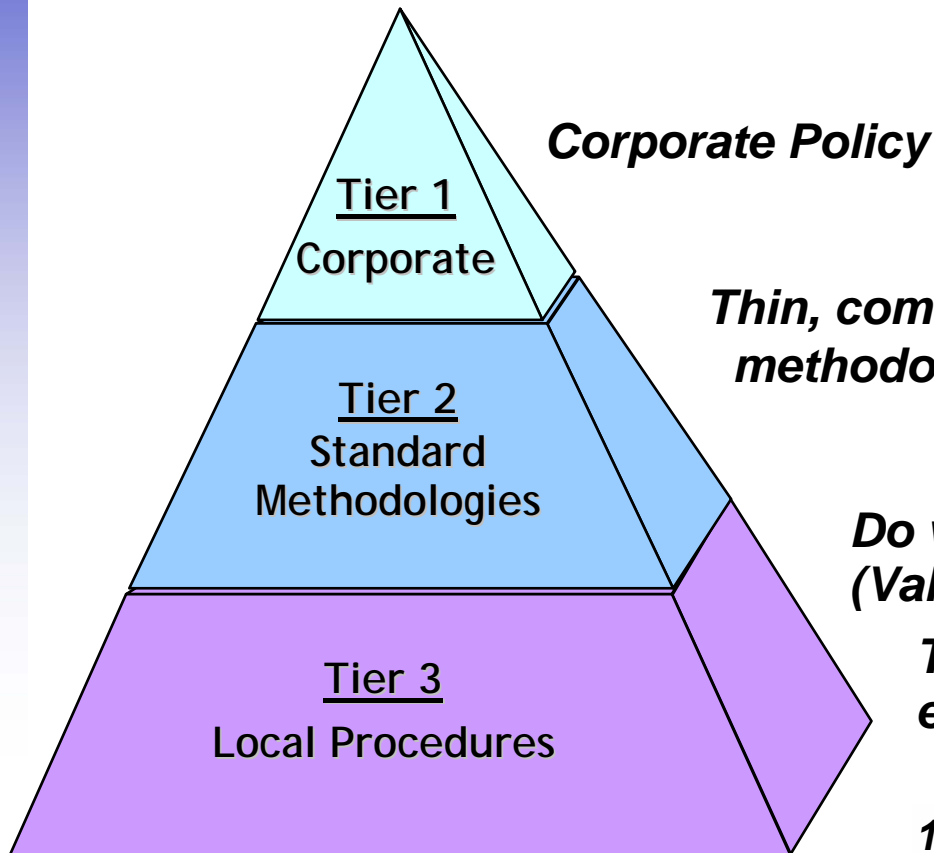
- Leader in providing innovative telecommunication technology
- Long history of high quality standards and exceptional performance
- 2000+ employees across multiple Software Development Business Units
- 110+ products and 125+ MLOC
- Assessed at CMM® Level 5 and TL/ISO 9001 registered

(R) CMM and Capability Maturity Model are registered in the U.S. Patent and Trademark Office.

(SM) CMMI is a service mark of Carnegie Mellon University.

**Customer
Satisfaction
is our
1 Priority**

Telcordia Quality Management System Structure



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

Former Process: Solution Focus

Unified management and accountability
Common interface/behaviors
Seamless integration
Solution drives the component/service development

Define

- Define the Engagement
- Initiate the Engagement

Plan

- Plan the Engagement
- Formalize the Engagement

Implement

- Manage the Development
- Develop the Software
- Integrate the Solution
- Test the Solution (Internal)

Realize

- Test the Solution (External)
- Deploy the Solution

Care

- Support the Solution

Product
Focus



Solution
Focus

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? Concurrency?
 - Less emphasis on documentation? Thin process
 - Refactoring? Complex system issues
 - Less measures? Collective code ownership? Metaphors?



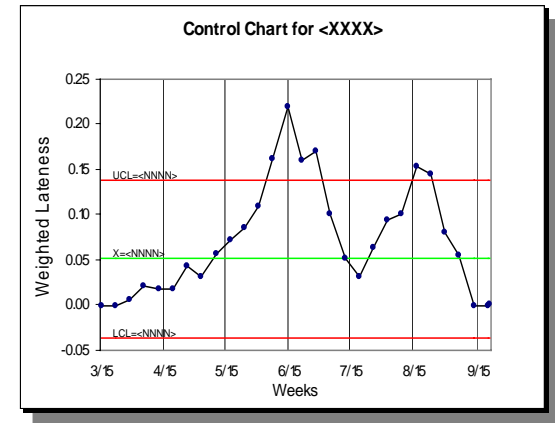
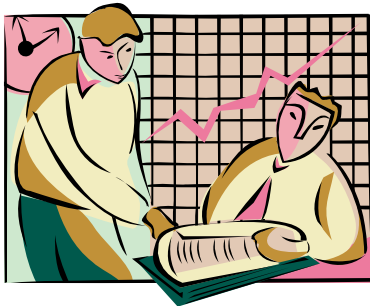
The Case for Efficiency: Code Inspection

- 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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