

Quality Program Office

First Time Quality Proposal



The Drive for Quality

- *Quality is not an act, it is a habit.*
 - Aristotle
- *Almost all quality improvement comes via simplification of design, manufacturing... layout, processes, and procedures.*
 - Tom Peters
- *Quality management has just become too important to leave to chance.*

Good things only happen when planned; bad things happen on their own

Why spend all this time finding, fixing and fighting when you could have prevented the problem in the first place?"

-- Philip Crosby

- Quality comes from internal actions, not external decisions
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What is a Quality Program Organization (QPO)

- QPO
 - Central organization responsible for quality planning, quality assurance and quality improvements focusing on product, tools, services and methods to achieve more consistent quality across the organization – *focus on process*
 - Identifies and defines quality standards, guidelines, methodologies, measures and metrics to achieve more consistent quality
- QPO vs. QE Responsibilities
 - Quality Engineering is a quality control function that involves planned and systematic evaluation (i.e., testing) necessary to provide confidence that the developed product satisfies the identified use cases and requirements e.g., focus on finding defects in specific deliverables; not meeting the identified requirements – *focus on product*

What is a Quality Program Organization (QPO)

- PMO
 - Central coordinating and management organization to standardize project and program management policies, processes and methods to manage and report on the portfolio of products and engineering projects (e.g., releases)
 - Monitors and reports on release and project activities, problems and requirements to executive management as a strategic tool in keeping implementers and decision makers moving toward consistent, business- or mission-focused goals and objectives
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The need for a Quality Program Office

- Current State Summary

- Product quality as experienced through quality, utility/effectiveness and reliability of the product is continuing to be more important in competitive and brand differentiation
- Majority of customers tend to wait for the first maintenance release (or eeb bundle) to deploy products which may delay the realization of revenue
- High volume and constant set of escalations and EEBs in high traffic areas
- Product groups use different sets of decision criteria to assess product quality and readiness prior to shipment making it difficult to assess the true quality and effectiveness
- Release metrics are not updated with each release to reflect user-experience with prior releases i.e., continuous improvement
- Challenges in defining an effective set of leading indicators for in-process and future releases
- Continued importance, emphasis and visibility of customer satisfaction, via NPS, in success of business and product objectives

- Envision End State

- Customers can deploy a high quality dot zero release of all our products with high confidence without requiring post release patches
- Lower escalations, eeb's and maintenance releases
- Lower the Cost of Quality (CoQ) through preventative measures and actions
- Higher customer satisfaction

Quality Program Office

- Charter:
 - Enable Engineering, across product organizations, to achieve and sustain first time quality of software engineering through focus on the software factory, processes and practices
- Methodology
 - Cross-product and discipline team
 - Engage with product Engineering teams and individuals to identify quality improvement ideas, areas, projects,
 - Act early, act small via micro project definition and execution across multiple team members
 - Drive prevention over inspection via plan, design, develop (vs.. Tested in)
 - Establish, measure and report key performance indicators (KPIs)
- Responsibilities
 - Proactive focus on improving the quality of both the software engineering process and the resulting products
 - Act as a quality initiative/project catalyst and planner within the organization
 - Identify and drive continuous improvement initiatives and programs across Engineering organization
 - Establish quality standards, goals, metrics and reporting methods to monitor program status and achievement leveraging accepted industry standards e.g., SQFD/House of Quality, Lean Engineering, CMMI, ISO Quality
 - Achieve success for our customers' investment by reducing implementation, product simplification and upgrade risks
 - Manage NPS program including: assessments, corrective actions and reporting
 - Conduct quality audits; product and process reviews to identify corrective actions/ lessons learnt as a feedback loop

Quality Program Office Objectives

- Identify and remove inefficient non-value add SDLC processes and steps
- Continuous improvement of product quality
- Review, reinforce and establish product quality measures and metrics
- Identify and predict quality and customer satisfaction through the use of leading quality indicators
- Create organization Center of Excellence (CoE) best practices
- Continue improvement in build, tools and integration process to increase product quality and efficiency of the software factory
- Drive Customer Satisfaction

Execution

- Enable Micro Projects:
 - Drive down overarching objectives into micro projects
 - Small granular, executable changes at the individual level thru empowerment
 - E.g., drive via Kaizen events, Muda Blitzes, PDCA, CI projects, RCAs, etc.
 - Everything done at the lowest level contributes to the larger goal
 - Each person/team is always is expected to contribute
 - Monitor and track each contribution
- Quality Program Office will:
 - Identify, enable, promote, support and drive quality change
 - Institutionalize best practices
 - Create and modify processes and tools to be applicable Engineering wide
 - Monitor, Lead, and track quality initiatives
 - Communicate progress through the organization
 - Set objectives infrastructure for next set of quality initiatives

Quality Program Office

Defining a set of Leading Quality Indicators

- Leading indicators serve as a tool for regular quality assessment of the organization, development deliverables, processes and tools - *assessing the team performance not just the team's deliverables*
- Identified, defined and standardized measures and reporting metrics for
- Aids leadership by providing insight into potential future states to allow management to take action before problems are realized regarding:
 - Release and project status and risk assessment
 - Assessment of process effectiveness and impacts
 - Necessary interventions and actions to avoid rework and wasted effort
 - Delivering value to customers and end users
- Example Indicators
 - Number of PCOs; new, re-scoped, rescheduled feature projects
 - Requirement trends; growth, rate of change (i.e., from planned), complexity, completeness...
 - Number of internal Etracks discovered; number corrected and deferred
 - Release and Project Fit2test status and trends
 - Resource effectiveness; volatility, skills, availability (dev vs. eeb)...
 - QE Test readiness, completion and retest
 - Number of validated and missed requirements
 - Release and project Decision Gate status and trends
 - External Stakeholder Review Findings and Quality “Escapes”; e.g., customer use case reviews, UI walkthroughs, SE rotations, F24h, ICERs, etc.
 - Type and severity of escalations and need for corrective actions (e.g., eeb)

Thank you