Making Significant Improvements Using Senior Management

By Neil Potter and Mary Sakry

Since 1988 we have helped companies improve their performance, quality, and cost. Over that time, there have been a few critical improvements that we have seen organizations make to accelerate change. One of these is changing how the senior manager engages with the organization.

A typical example of this change is in one organization we have worked with over the past 10 years. When we first met them, life among the group was chaotic. Deadlines were chronically late, product quality was poor, acceptance tests failed, and management was drawn into numerous fires.

The senior manager of the group had had enough and was determined to move the organization to higher ground. He had witnessed previous improvement programs come and go and concluded that unless he was directly involved in program performance, nothing was going to change long term.

It was decided that each project would have a monthly review with the senior manager to discuss status and future plans. A series of questions was developed that represented the essential practices that projects must perform to manage their work. Each month, the project team would present how they were performing the practices. Progress was checked and corrective actions were tracked to closure. Improvement was expected each subsequent month and no backsliding was allowed. There was no escape for any project.

As a result, all projects became healthy within nine months, characterized by fewer defects, fewer surprises and commitments being met. For the last decade, these reviews have been monthly for large or high-risk projects and bi-monthly for small or low-risk projects. The content of the reviews has changed over time, based on the specific phase each project is in, new best practices that have been adopted by the group (e.g., from CMMI Levels 2 and 3), and lessons learned from completed projects.

The questions are also treated as the policies of the organization. That is, each project must perform these practices, but they can vary how they are implemented. For example, a project manager must estimate effort, but could accomplish this by using a team-based technique, historical data or a predictive model. Since the policies and the questions are one and the same, the policies have continual visibility.

Below is an example set of these project review questions. They happen to map to the topics outlined in CMMI Maturity Level 2, but could have easily been derived from other sources. Refine these questions based on what your organization considers important and use them in a project review to promote long-term health.

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Process Area Name	Good Health Practices
For each project it is assumed that:	
Requirements Management (REQM)	• Current requirements are documented and are up-to-date. • Requirement priorities are set (not everything is #1). • Traceability exists to parent requirements, code, test cases, maybe to design. • Requirements change process is used to manage requests. • All stakeholders and decision makers have been identified (including customers, development, support). • Schedule, estimates, requirements and resources are consistent with each other.
Project Planning (PP)	• Estimates of size and effort exist. • Over commitment is quantified and agreed to (e.g., #people-days needed - #people-days available for each unique resource). • Development schedule exists and contains: – Dependencies external to the project. – Shared resources [<=32 hrs total per week per resource (80% of 5 days)]. – Phase gate milestones. Risk list (what could go wrong) is up-to-date, and is: – Reviewed by practitioners for completeness. – Agreed to by all stakeholders.
Project Monitoring and Control (PMC)	• Schedule status is known weekly. • Risk list (revised) is current and contains only *potential* issues. • Effort (hours at work per week) and cost expended is known. • Size is tracked indicating change in workload. • Stakeholders (including customers) are explicitly aware of the project's risks. • Issues are tracked to closure.
Measurement and Analysis (MA)	• Measurement objectives are clear (e.g., schedule, cost, quality). • Progress is tracked towards objectives, using defined metrics. • Objectives are reset after each significant re-plan.
Process and Product Quality Assurance (PPQA)	• Phase gates are audited. • Work products are checked objectively for errors. • Management has visibility into processes not being followed (via audit reports). Additional checks (related to, but outside PPQA scope): • Product test plans cover requirements and user needs. • Test phase is delayed when earlier milestones are late.
Configuration Management (CM)	• Each project has a CM plan, stating how it will: – Select / setup a CM system for artifact control. – Manage changes (evaluate, track, implement, communicate). – Allocate resource time needed to perform CM. – Validate the changes/files for each build.
Supplier Agreement Management (SAM)	• Contracts with suppliers are current. • Execution performance of each supplier is known. • Early reviews of supplier processes and work products have been performed.