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Management Practices for Quality Products

Management practices leading to the delivery of quality products are affected first and foremost by the responsibilities associated with the roles of the managers in an organization. By this I mean those responsibilities should be pushed further down into the organization to have an affect on the plans and the quality of the products delivered.

Redefining management means that it can no longer come from just the top of an organization. Current senior managers of programs and projects must extend the focus of being a manager down to the working level of a project. Each engineer becomes a manager of the work done. In teams, these manager-type engineers come together to plan the work given to them by the senior managers. This will result in a team plan based upon recent experience and historical data. This type of team environment produces plans that are both aggressive and realistic. Plans are granular so that progress will be tracked in hours and days versus classic plans that are tracked in weeks and months.

With this low-level management structure in place, senior managers can become better leaders. They are better equipped to support and protect their teams. For example, when new requirement changes come along, senior managers go to their team of manager-engineers, get estimates, and then go back to customers with choices based upon data.

Quality means different things to various individuals. Fundamentally, quality is about delivering products to the customer that meet their functional needs. Beneath that, the product delivered must be maintainable, reliable, and useable. To achieve these quality requirements, projects must manage the mistakes made while the product is developed. When quality is managed poorly—or not at all—the results include schedules that blow up and related major cost overruns for funding used to pay for additional time spent working and reworking the product.

Years ago when I began doing process improvement, I established a milestone for success. It was when I observed management asking about quality every time they asked about cost and schedule. What I have come to realize through the realization of spreading the definition of management down into the teams, is that this has already happened. Engineers have also taken on roles of management as they plan and track their work. Senior managers have become better leaders as they have allowed management responsibilities to move down into the teams doing the work. They better understand the quality and look for it in the products delivered as well as in the processes used.

Based upon the management approach of teams managing their own work comes the question of what really makes quality happen. Product teams and the managers above them are first given the understanding that people who do the work will make mistakes. Simply put, managing quality means managing mistakes. This happens when those mistakes are discovered and corrected as soon as possible. Earlier attention to product quality by itself dramatically contributes to cost control and staying on schedule. Increasing the number of places for removing mistakes and doing so earlier in the process allows teams to plan their work in a way that supports the delivery of the highest quality products on cost and within schedule.

What I have described here are some parts of the approach we have applied at NAVAIR. It is based upon the original work of Watts Humphrey and SEI. It is known as the Team Software Process. We have used this approach with many software teams and non-software teams with great success.

The old saying, "Better-faster-cheaper, pick any two," does not hold up when better management practices and attention to quality are applied. You can have all three when you enable the teams doing the work to manage themselves in a domain of planning based upon data, tracking product tasks with data, and early detection of mistakes so that quality products are delivered on budget and on schedule.

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