

# Getting Management Support for Process Improvement

Watts S. Humphrey



Over the years, I have often been asked about how to get management support for process improvement. Typically, engineers want to use better software methods but they have found that their management either doesn't care about the methods they use or, worse yet, even discourages them from trying to improve the way they work. In addressing this subject, I have decided to break it into two parts. The first part, which I covered in the June 1999 issue of *SEI Interactive*, concerns disciplined work: what it is, and what it takes to do it. In this column I address the problem of getting management support for process improvement.

## Obtaining Broad Management Support

Perhaps the biggest problem in starting an improvement effort is getting management support. The first and most important step is to get senior management backing. Without support from the very top, it is generally impossible to make significant changes. Next, however, you will need active involvement from all the appropriate managers, particularly those managers who directly supervise the work to be impacted by the change.

The reason for broad management support is that significant improvement programs generally involve substantial changes in the way people work. If you don't change the engineers' working practices, you can change the organizational structure and all its procedures, but nothing much will really change. Thus, to have a substantial impact on an organization's performance, you must change the way the engineers actually work. While this is possible, it is very difficult, and it requires the support of all levels of management. Senior managers must establish goals and adjust reward systems. Intermediate managers need to provide funding and change priorities. And most important, the working-level managers must make the engineers available for training, support process development, and monitor the engineers' work to make sure they follow the improved practices. So, how do you get this kind of support? To address this question, we discuss three issues:

1. Why do you want to make changes?
2. Which managers do you need support from?
3. Why should those managers support you?

## **Why do you want to make changes?**

Since you are reading this column, you are probably interested in making process changes, and these changes are undoubtedly in the way your organization develops or maintains software. This means you are probably talking about some kind of process improvement, like getting a Capability Maturity Model® (CMM)® program underway or introducing the Personal Software Process<sup>SM</sup> (PSP<sup>SM</sup>) and Team Software Process<sup>SM</sup> (TSP<sup>SM</sup>). Whatever the approach, you will be changing the way software work is done.

The first question to address is: why? That is, why do you want to improve the software process, why should management support you in improving the software process, and why should the organization care about how software is developed? These are tough questions, but they are the very first questions managers will ask. You need to be able to answer these questions, and depending on which managers you talk to, they will ask these questions differently. This leads us to the next question.

## **Which managers do you need support from?**

Depending on the size of your organization, there could be many management levels. Typically, the manager from whom most of us need support is the manager immediately above us. While there are lots of levels to discuss, let me assume that this immediate manager runs a project or a department. Unless you are in a very small organization, this manager probably works for some higher-level manager, and this higher-level manager probably works for some manager at an even higher level. Up there somewhere there should be a senior-level manager or executive who is concerned with the overall business, how it performs now, and how it will perform in the future. This senior manager is concerned with where the business stands competitively, how new technology will impact its products and services, and the changing needs of its customers.

The reason the manager's level is important to you is that improvement programs focus on long-term issues that are the principal concern of senior-level executives. Unless the managers below the executive level are specifically charged with working on process improvement, most of them will view improvement efforts as a distraction at best or, at worst, as a drain on critical resources.

The reason for this negative view is that process improvement deals with the overall performance of an organization. It concerns competitive capabilities, long-term cost effectiveness, development cycle-time improvement, and customer satisfaction. These are strategic issues that generally only concern the most senior executives. Even in the departments, laboratories, or divisions of large corporations, the performance measures for division general managers, laboratory directors, and department managers are invariably concerned with immediate short-term results: delivering products on time, managing tight budgets, or responding to customer-related crises.

While these issues are critically important, and they often spell the difference between organizational failure and success, a total concentration on these topics will not change the way organizations perform. If the organization is not cost competitive, or if it produces lower quality or less attractive products, a focus on current performance will not improve the situation. The immediate problems may be fixed and the burning issues resolved, but the organization will continue working pretty much as it always has. It will thus continue producing essentially the same results and generating essentially the same problems and issues. This brings us to the definition of insanity: doing the same thing over and over and expecting a different result.

Generally, only the managers who think strategically will support a process-improvement program. These are usually managers who have broad business responsibilities and are measured by total organizational performance. They probably have multiple functions reporting to them, like product development, marketing, manufacturing, and service.

Even senior managers, however, do not always think strategically. Most organizations, after all, are owned by stockholders who are interested in the stock price. And since the stock price is heavily influenced by quarterly financial results, even the most senior managers cannot afford to ignore short-term financial performance. Unfortunately, many of these managers don't worry about much else.

### **Why should this manager support you?**

Now we get to the critical question: Why should any manager support you? In general terms, there are three reasons why managers might be willing to support you:

1. What you want to do supports their current job objectives.
2. What you want to do will make them look good to their immediate and higher-level managers.
3. What you want to do is so clearly right that they are willing to support you in spite of its impact on their immediate performance measures.

### **Getting help from a senior manager**

The relative importance of these reasons changes, depending on where the manager resides in the management chain. At the very top are the managers who are most likely to focus on long-term performance. This means that they will often support process improvement for all three reasons. Thus, if you can show that process improvement will have a significant long-term benefit, you will likely get support. You can generally accomplish this by showing how similar improvements have benefited other organizations or, better yet, how they have benefited other parts of your own organization.

For the CMM, for example, show how improvements in CMM level have improved the performance of other software organizations. Also, show where your organization stands compared with other organizations in your industry. For the PSP and TSP, you could show data on quality, productivity, or employee turnover and how such changes could impact your organization.

If you can get the attention of a senior manager, and if you have your facts straight, the odds are you can get this manager to seriously consider the subject of process improvement. Frequently this is when you might get an outside expert to give a talk or to do an assessment. While you may have to settle for a small initial step, the key is to get some action taken. Once you can get the ball rolling, it is usually easier to keep it in motion.

If the manager you are dealing with is not at the senior executive level but one level lower, this manager is probably not measured on strategic issues. Such managers would know, however, that their immediate manager had such a measure. Thus, your manager is not likely to be motivated by reason 1 but might be persuaded to support you for reason 2. Thus, by proposing something that will make him or her look good to higher-level managers, this manager will personally benefit while also helping you to get the improvement ball rolling. What you want to ask for from this manager is help in taking the improvement story upstairs.

### **Getting help at the first management level**

Finally, the most common problem is dealing with a manager who is fairly far down in the organization. This manager not only is not measured on strategic issues, but his or her immediate manager is not either. This means that strategic objectives are not likely to be very compelling. At this point, you only have two choices:

- Convince this manager that the improvement is a strategic necessity for the organization.
- Show how the improvement effort can help to address immediate short-term concerns.

While the latter is often the approach you must take, it has a built-in trap. The reason is that if improvement is aimed at solving a short-term problem, as soon as the short-term pain is relieved, the need for improvement is gone. This is like taking aspirin for a splitting headache. If the headache is indeed a transient problem, that would be appropriate. If the pain is the first symptom of a stroke or a brain tumor, however, the delay could be fatal. While promptly taking an aspirin may usually be helpful for a stroke, you had better also see a doctor right away.

In the software process, the problems in most organizations are more like strokes and brain tumors than they are like headaches. While you may have no choice but to sell the improvement effort as a short-term solution, try to move to strategic issues as soon as you can get the attention of someone upstairs.

The next questions concern making the strategic case for improvements, making the tactical case, and moving from a tactically based to a strategically based improvement program. These will be topics of future columns.

## **Acknowledgements**

In writing papers and columns, I make a practice of asking associates to review early drafts. For this column, I particularly appreciate the helpful comments and suggestions of Dan Burton, Jean-Marc Heneman, Julia Mullaney, and Bill Peterson.

## **An Invitation to Readers**

In these columns, I discuss software issues and the impact of quality and process on engineers and their organizations. I am, however, most interested in addressing issues you feel are important. So please drop me a note with your comments, questions, or suggestions. I will read your notes and consider them when I plan future columns.

Thanks for your attention and please stay tuned in.

## **About the Author**

Watts S. Humphrey founded the Software Process Program at the SEI. He is a fellow of the institute and is a research scientist on its staff. From 1959 to 1986, he was associated with IBM Corporation, where he was director of programming quality and process. His publications include many technical papers and six books. His most recent books are: *Managing the Software Process* (1989), *A Discipline for Software Engineering* (1995), *Managing Technical People* (1996), and *Introduction to the Personal Software Process<sup>SM</sup>* (1997). He holds five U.S. patents. He is a member of the Association for Computing Machinery, a fellow of the Institute for Electrical and Electronics Engineers, and a past member of the Malcolm Baldrige National Quality Award Board of Examiners. He holds a BS in physics from the University of Chicago, an MS in physics from the Illinois Institute of Technology, and an MBA from the University of Chicago.

---

Copyright © 1999 by Carnegie Mellon University

The Software Engineering Institute (SEI) is a federally funded research and development center sponsored by the U.S. Department of Defense and operated by Carnegie Mellon University.

<sup>SM</sup> Architecture Tradeoff Analysis Method, ATAM, CMM Integration, CMMI, IDEAL, Interim Profile, Personal Software Process, PSP, SCE, Simplex, Team Software Process, and TSP are service marks of Carnegie Mellon University.

® Capability Maturity Model, Capability Maturity Modeling, CERT, CERT Coordination Center, and CMM are registered in the U.S. Patent and Trademark Office.