



# Process Improvement: Plan for Success

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*Publisher*



Discipline is no fun—I consider day planners self-inflicted torture. My idea of a good day is to wake up with no plan and accomplish more than humanly thought possible. The work would be intuitively discovered as the day progressed. Creativity and spontaneity would be enhanced, and routine, repetitive activities would be minimized. Each day would be a fresh and exhilarating experience filled with learning, personal growth, and development. The variations would be unlimited, and the success would be phenomenal.

But if you believe the last 40 years of development data, this dream is not achievable for most software projects. Yet we are still largely living in a dream world where we think software can be built by pure “artists” who arrive at river’s edge with no plans, and through sheer talent can turn a pile of scrap iron into a decent bridge. However, I have learned from unfortunate personal experience that almost all significant human achievements require more than just talent and creativity. Decades of data prove it: Even the best

software artists do better work when they start with a foundation of planning, preparation, and discipline.

This issue of *CROSSTALK* addresses software process improvement. Development models like the Capability Maturity Model may not be as easy to apply as the random search for truth, but they help apply the discipline necessary to create complex software systems.

Real process improvement is not easy, and anyone who believes otherwise has either never tried it or has never helped make an improvement of lasting significance. Learning better techniques and technologies is only the beginning—there are many human aspects to work through as you try to fund the improvements, sell all the players on them, and then follow up until the changes are institutionalized.

The expertise to navigate through these challenges is available, and over the years the Software Technology Support Center has acquired much experience in helping others adopt proven processes and technologies. We know that to adopt a new process, you must first create a strong process improvement infrastructure.

First, you need an initial assessment to know your strengths and weaknesses so your senior managers can scope the improvement effort. Only with this knowledge can you customize an infrastructure for process improvement. We have had success with plans tailored according to the Software Engineering Institute’s IDEAL model. This includes formation of a Management Steering Group, which helps you develop a charter and vision and to establish a clear match to organizational goals and objectives.

You will then need to establish functioning change agents (such as Software Engineering Process Groups) and implementation teams (such as Process Action Teams) who know their roles, responsibilities, charters, and action plans. They will be much more effective if they receive the right formal and informal training.

Without a strong process improvement infrastructure, it may be impossible to institutionalize superior processes and technologies. If you do not have such an infrastructure in place, do not hesitate to get the help you need to build one. Process improvement is paying dividends for those with the discipline to do it right. ♦



## Acquisition Managers Get What They Pay For

Your July issue contained a letter to the editor from Joe Saur of Fort Monroe, Va. It is interesting that in acquisition management the “developer” (usually the contractor) is still referred to as the enemy. He also refers to the IV&V (independent validation and verification) group as “experienced developers” (are we to consider developers here as the enemy, also?) hired to search through the “horse dung (documents).”

As a contractor, I run across this mindset every time I go to a military installation. It is a sad state of working affairs to continue to make references to developers or even internal IV&V team members in this way. And if the developers are search-

ing through the horse dung to find the intent, the fault probably rests with how the contract was awarded. You get what you pay for. If you pay for horse dung, expect to receive horse dung. It sounds like Saur is and has been constantly on the receiving end of work not produced by a company assessed at least CMM (Capability Maturity Model) Level 3, and they are probably not ISO (International Organization for Standardization) registered. Most of the companies the government does business with do not meet either criterion. And usually, these companies are able to bid their services at a much lower rate than one that makes the investment in its people and processes to do the job

right. Therefore, I recommend to Mr. Saur that he reassess his idea of who is the enemy and pro-actively eliminate the problem before a contract is awarded by basing award on technical capability and desired output and not the lowest cost.

As a final note, most of the experienced developers (IV&V team members) I’ve dealt with have had less than five years experience, with most being in the one- to two-year range. Remember that they are a part of the equation, too. In this analogy then, the IV&V members are not the Apache but instead are the Apache wannabes.

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