



Chapter IX

Project Execution and Control

If you can't measure it, you can't manage it.

(Peter Drucker)

In fairy tales and traditional romance movies, the story ended when the prince found his soul mate, married her, and rode off with her into the sunset. The ending caption said: "They lived happily ever after." Well, we know that real life is not quite that simple; after the marriage comes the most difficult (and, one hopes, interesting) part. Similarly, a great project contract and plan is of little consequence without constant monitoring and control. Once the project is planned and underway, the project manager cannot simply ride away and assume that everything will go according to plan.

To insure success, many project matters need to be monitored; if a matter deviates from the plan, then some form of control must be exerted to bring the situation back in line with the plan. In this chapter I discuss the many matters that need to be monitored for IT projects, how best to monitor each matter, and what type of control actions may be appropriate for each.

The Control Process

The basic control process used in project management is the same process used in most engineering and business systems. It is based on the definition and establishment of key measures, and those measurements are then compared to some desired values or standards to formulate algebraic formulas, usually called metrics. If the difference

between the measurement and the desired value exceeds some threshold, then corrective action (feedback) of some type is invoked, and the degree of corrective action may be a function of the size of the difference (and/or the integration [accumulation] or differentiation [rate] thereof). The measurements may be of process outputs or of the process itself, and the measurement level may be process-related (generally, how things are being done) or product-related (generally, what things are being built). This is illustrated in Figure 9.1.

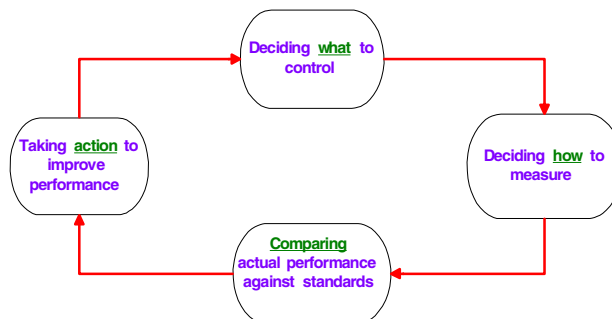
The project control processes go on during the execution of the project. The execution of the project is carried out primarily by the project team members, and the control of the project is carried out primarily by the project manager. PMI defines several processes that support the overall process of project execution (PMI, 2000), that is, activities that should be taking place while the team does it work:

- Information dissemination (i.e., reporting)
- Team development
- Scope verification
- Quality assurance
- Procurement activities (solicitation, source selection, contract administration)

The Software Engineering Institute's (SEI; www.sei.cmu.edu/cmm) CMM also implies necessary practices (Level 2) for project tracking and oversight:

- Are the project's actual results compared with estimates in the plans?
- Is corrective action taken when actual results differ significantly from the plan?
- Are changes agreed on by all affected parties?
- Does the project follow a written policy for tracking and control of activities?
- Is someone assigned specific responsibilities for tracking work products and activities?

Figure 9.1. The control process



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