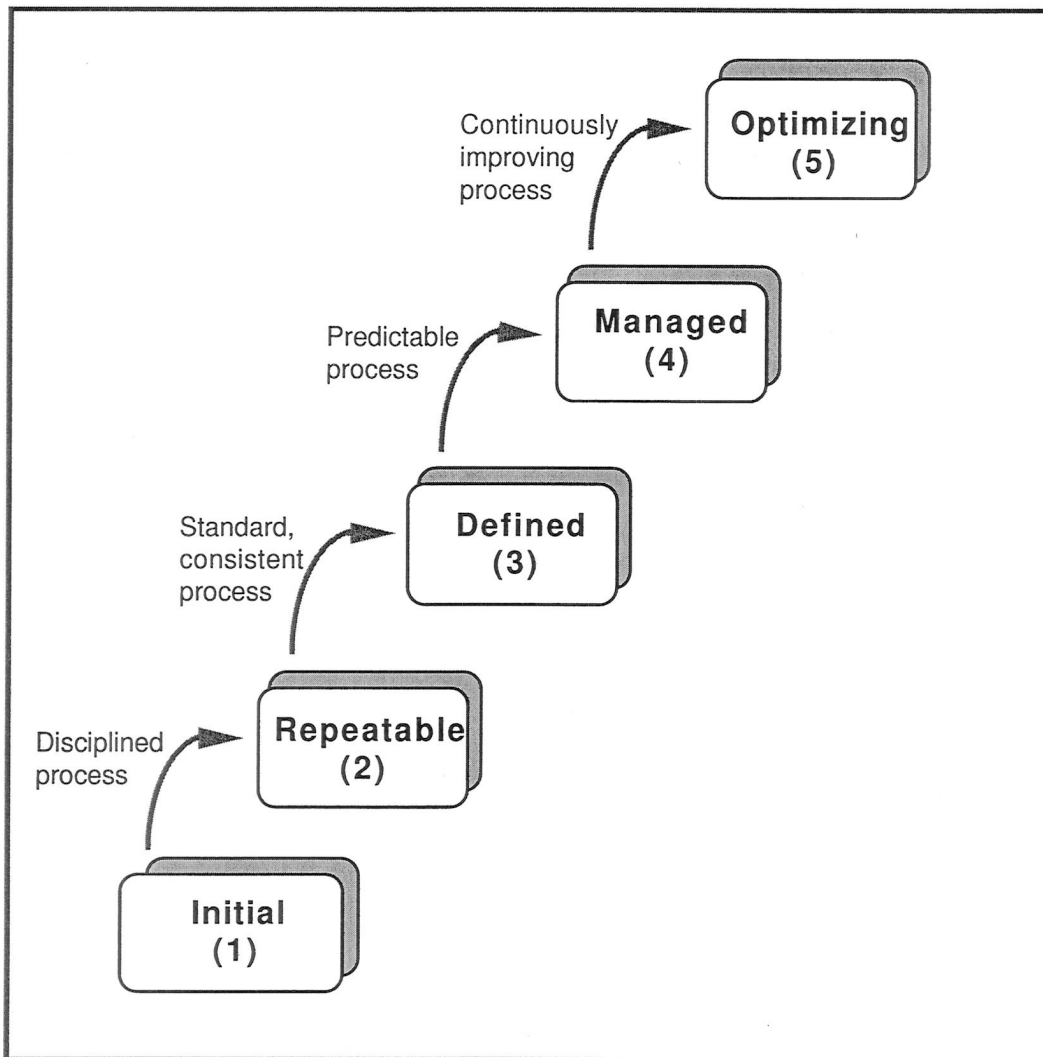Figure 2.1   The Five Levels of Software Process Maturity

The following characterizations of the five maturity levels highlight the primary process changes made at each level:

1) Initial   The software process is characterized as ad hoc, and occasionally even chaotic. Few processes are defined, and success depends on individual effort.

2) Repeatable   Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on projects with similar applications.

3) Defined   The software process for both management and engineering activities is documented, standardized, and integrated into a standard software process for the organization. All projects use an approved, tailored version of the organization's standard software process for developing and maintaining software.

4) Managed   Detailed measures of the software process and product quality are collected. Both the software process and products are quantitatively understood and controlled.

5) Optimizing   Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.