6 IT PROJECT TOOLS

Over the last ten years, there has been a proliferation of software to assist in the management of IT projects and IT operational processes. New software has been introduced to support all phases of the System Development Lifecycle (SDLC). Although these tools can and do provide much needed support for the application development process, it is important to remember that the tools are there to support the SDLC process, not to provide the process. As the Gartner Group emphasizes, "Methodology before Technology – technology changes frequently, solid methodologies are flexible, adaptable and age well."

Implementing automation into the SDLC process is a serious commitment. Without a clear understanding of what it will take to be successful, from the fiscal commitment to the resource commitment, the software becomes shelfware.

There are a number of concerns regarding automation in the SDLC, including selecting the right tool for the job and lack of management support for the automated tool that is chosen. Because the use of automated tools in the SDLC process is a relatively new and expanding area, it often does not gain the attention it deserves until something goes wrong. Many agencies lack effective automation architecture and the specialized competencies required to implement and use the automated tools. Adding new tools requires new skills, training, and expenditures for the software and equipment, all of which drain existing resources.

It is important, therefore, to address several key factors in the automation of the SDLC, including:

◆ Senior management support
◆ Adequate resources with appropriate skills
◆ Clear and effective ownership and integration of technology with SDLC processes
◆ Proper training
◆ Performance Measures

6.1   TOOL SELECTION

Selecting the correct software to assist in the SDLC process is the key to its effectiveness. Purchasing and implementing the correct tool for the job is as important in application development as it is in building a house. Defining the requirements and functionality that the tool is expected to provide is similar to working with the architect in the design of a new building. After the building has been designed and agreed upon, you have a better understanding of what tools to use. Using 10 laborers with shovels is one way to dig a foundation. Bringing in a worker with a backhoe would be considered an automated way to dig the foundation. For a house, a bulldozer would be appropriate, for a doghouse, it would be considered overkill. With so many tools on the market and so many companies buying each other out and coming up with new ideas, it is important to accurately define what is to be accomplished with the software.

When implementing automated solutions, keep it simple. If the tool gets in the way, people won't use it. The tool should be integrated into existing work processes for Customer support and documentation. Then purchasing software ensures that a definite business need has been defined.

There are many different types of automated software that sound good, but will using them make the development faster or the quality of the software better? The best idea is to start small and build on successes.

When purchasing a tool, continue to refine and prioritize requirements based on the initial round of investigation. Quiz the vendors and read the literature, and narrow the list to no more than three options. To evaluate the finalists, develop a list of real tasks that the tool would be required to perform and have someone who will be an actual user of the tool perform the hands-on analysis. Other evaluation steps would be to find the local user group and attend a meeting, determine the extent of the on-line community for the tool and consider the stability of the vendor (how long have they been in business?). Once the selection has been made, a plan should be developed for introducing the tool. Make sure that training is available for the users and that the effects of the change are considered. (from *Making the Right Choice–A "How To" Guide to Choosing Tools* by Elisabeth Hendrikson, www.qualitytree.com. Automated Testing Conference, Boston, MA. August 2001.)

Six key ingredients to help avoid the chance that the tool will become shelfware:

■ evaluate,

■ implement and deploy well,

■ use wisely,

■ overcome problems, and

■ reap the benefits!

Implementing an Automated Regression Test Suite by Lloyd Roden, Grove Consultants Automated Testing Conference, Boston, MA. August 2001.

There are many tools, suites and packages to choose from. Some tools are specific to the type of job you require, some tools address all aspects of a particular phase in an SDLC, and then there are tools that are comprehensive for an SDLC and are packaged as a suite. If the need has been thoroughly identified, it is easier to determine the level of tool to analyze. It will be helpful to visualize the phases of the lifecycle and the deliverables in order to determine which tool is required.

Some tools available are packaged to provide functionality for both business and data modeling. For example, within System Requirements Analysis it is possible that both a business modeling tool, and a data modeling tool may be required. Tools that can help capture information, perform modeling, and generate test scripts can be especially helpful in keeping data in one repository, and for tracking how it is processed.

To summarize, the Project Manager should determine if there are any tools that will assist the Project Team in their SDLC efforts. It is important to note, however, that many tools, and especially tool suites, may require a change in the way work is performed, which may or may not be beneficial. The final measure of a tool is how well it assists the Project Team in accomplishing the goals of the project. Knowing which tools provide which service will allow you to select the right tool for the job!