"Plans are Worthless", says famous general and former President of the U. S.

There are a lot of similarities between fighting wars and managing projects. For instance, take this old military aphorism: *"No plan survives contact with the enemy."* It was probably this maxim that General Dwight D. Eisenhower had in mind when he noted: *"In war, before the battle is joined, plans are everything. But once the shooting begins, plans are worthless."*

For those of us who are engaged in projects, as well as those engaged in battle, there are several very important messages in these sayings. Recognizing that *"No plan survives contact with the enemy,"* military planners must consider the potential of various undesirable scenarios. Likewise, project managers cannot blindly proceed with "the plan", assuming that all of the conditions upon which the plan was based will exist throughout the execution of that plan.

Does this mean that plans are not necessary? Of course not! But this does say that the plans are basically a proposed, preferred strategy for reaching the objectives under the most likely (expected) conditions. It is a proper starting point for getting the job done.

I play an awful lot of tennis (awfully). Every time that I hit the ball to my opponent, I quickly consider the range of most likely returns and place myself in the approximate center of possible returns. But I don't plant my feet in that spot and count on my opponent to hit the ball directly back to me. Rather I stand lightly on the soles of my feet, ready to adjust my position to intercept the ball where it is returned.

This strategy is monumental to playing winning tennis. A similar approach is essential to successful projects.

Message #1: Account for all risks

If we are wise, we don't go into battle with the expectations of the enemy playing into our hands. With projects, if we are wise, we don't march ahead blindly assuming that everything will go as planned. An important component of a good offense is a good defense. In projects, this defense takes the form of the ***Risk Analysis***.

There are several ways to address risk issues. One is to recognize that there is no such thing as an "exact estimate". Most estimates are really a range of values, whether they be time estimates, cost estimates, effort estimates, and so on. By expressing these values as a range, we are more likely to recognize and evaluate the "risk" aspects of the work. Would we treat an estimate of 3,5,20 (optimistic, most likely, pessimistic, in days) differently than an estimate of 4,5,6, or a single estimate of 5? In the former, there is a defined risk of a delay equal to three times the most likely duration. Does this warrant a mitigation

plan? Do we ask, "what can happen to make the task 20 days, and what can we do to minimize or counteract this undesirable occurrence?"

Another approach to risk analysis is to identify and quantify all risks of possible consequence. This requires identification of not only highly probable risk incidents, but also high impact incidents. When a potential risk is appraised, we note both the likelihood of the risk occurrence, and the magnitude of the effect of that occurrence. For example, there was only the slightest chance of the Titanic to lose a battle with an iceberg. But the impact (whoops! poor choice of words) of that event was certainly unacceptable.

Message #2: Be prepared to alter plans and modify strategies

Identifying and quantifying risk is only part of the process. The next step is to develop risk mitigation plans. If the risk item occurs, what is the backup strategy or the way out? And, how do we know that it is time to alter course, and when will we be checking on progress so as to consider mitigation?

For every strategic initiative, there will be a plan, and a risk evaluation. We identify what can go wrong, and offer possible remedies, long before Murphy comes along to cause trouble. Mitigation may include back-up plans. It may involve an outlay of money for the back-up actions, just to be prepared. This is a judgement call. If the potential risk is a threat to project success, then some mitigation expense may be justified.

There is usually a deadline for making changes in course. We need to identify the time when the effort should be evaluated, and plan to evaluate that effort in time to make timely changes.

Message #3: Evaluate the progress against plans and objectives

How do we know that we have strayed from the planned course? A common method is to take periodic measurements of actual progress and expenditures. When we have spent more money than was in the budget, or when we have passed the contract project completion date and the job isn't finished, we are forced to face the obvious fact that we are in trouble. But, by this time, there usually isn't much that we can do about it.

A better way is to monitor actual progress against the planned progress and actual costs against the budget for the work that has actually been accomplished to date. This process is called "Earned Value Analysis". It is gaining in popularity in all types of projects and is supported by most PM software. By measuring and monitoring schedule variance and cost variance on a structured, periodic basis, we can observe performance trends and get an early warning of parts of the project slipping into danger.

Battle-proven Features in PS8

Moving from the message to the actual battlefield, I have to confess that there are several features in Sciforma's PS8 that are extremely useful in addressing these issues.

For support of risk evaluation, there is the PERT mode, where three time estimates can be established for each task. What is special about the PS8 approach to the PERT analysis is the ability to apply user-defined weight factors to each of the three time estimate categories. You may choose to bias the estimates on the conservative or optimistic side. Furthermore, you can input the three estimates, for information, but use only the *most likely* value for computations. This is done by using a weight factor of "0-1-0" with the "1" being applied to the *most likely* value.

For modifying strategies, there is the ability to "experiment" with alternate solutions and then to back out of the changes (using the undo feature). Also, as in most programs, there is the ability to maintain alternate versions of the project plan.

For evaluating progress against the plan, there is a very comprehensive "earned value analysis" capability in PS8. Schedule and cost variances may be evaluated at any level, providing early warnings of things not going according to plan. Without the use of earned value techniques, we are likely to have lost the battle (and maybe the entire war) before we become aware that we are in trouble.

For evaluating progress against the objectives, we have the unique PC-Objectives module in Sciforma's Project Communicator software. Used in conjunction with PS8, it is possible to evaluate project performance against a published set of objectives.

Was the General Wrong!

Sorry Ike--plans are definitely not worthless. But his statement is otherwise right on the mark. What is wrong is to etch our plans in stone and to expect that things will go according to plan. What is wrong is to not make plans for the unexpected. What is wrong is to be caught by "the unexpected" when an honest evaluation would have disclosed such possibilities. We have the power and the obligation to evaluate risk, prepare for risk mitigation, and to evaluate performance pursuant to modifying plans and strategies so as to meet project objectives.

Editor's Note: Many of the subjects that are mentioned in this paper have been covered in detail by the author, in other papers that have been published on this website. See "Risk is a four-letter Word" and "Measuring the Value of Work Accomplishment". These subjects are also discussed in detail in Mr. Levine's new book "Practical Project Management – Tips, Tactics, and Tools", John Wiley & Sons, June 2002.

Harvey A. Levine, with 38 years of service to the project management industry, is founder of **The Project Knowledge Group**, a consulting firm specializing in PM training, PM software selection, evaluation & implementation, and PM using microcomputers.

He has implemented or enhanced the project management capabilities of numerous firms, often combined with the selection or implementation of computerized project management tools. Mr. Levine is considered the leading consultant to the project management software industry and is recognized as the leading expert in tools for project management.

He has been an Adjunct Professor of Project Management at Rensselaer Polytechnic Institute and Boston University. And has conducted numerous project management public seminars for ASCE, AMA, IBM, and PMI.

Mr. Levine is the author of the book "Project Management using Microcomputers", and has been published extensively in other books, periodicals and videos.

Mr. Levine is a past president of the Project Management Institute and the recipient of *PMI's 1989 Distinguished Contribution to Project Management* award. Recently, he was recently elected as a *Fellow of PMI*.

Mr. Levine has offices in Saratoga Springs, NY and San Diego, CA and can be contacted via e-mail at: LevineHarv@cs.com