Using Rational Processes in Projects

Introduction

Managing projects against goals, budgets, and time restrictions are some of the ways that many organizations accomplish work. Implementing and using a project management methodology (like Kepner-Tregoe's Project Management) is the best way to increase your chances of success. You will find many opportunities to apply the rational processes you have learned in this workshop to the many issues that arise throughout the project's lifecycle.

The following tables contain suggestions for using the rational processes to improve your projects.

Situation Appraisal

When...	Use Situation Appraisal to...	Because...
Defining the project	Record why you need to complete the project.	This will help you identify what needs to be accomplished during your project.
	Record your project topic or statement and then list threats and opportunities for the project.	This will clarify what questions you should ask before you start the planning process.
Planning the project	Separate and clarify the issues that arise during the planning phase.	This will help you better understand the issues you'll face, and what needs to be done about them.
	Set priority by using Current Impact, Future Impact, and Time Frame.	This will help you determine where to use limited resources in your project.
Implementing the project	Maintain an "open" Situation Appraisal on issues that arise and are resolved during the life of the project.	This will help you keep track of issues, due dates, and responsibilities, and help you prepare status reports and a closeout report at the end of the project.
	Address specific issues that might arise due to unforeseen circumstances (*ad hoc* use of SA).	This will help you understand how the scope of your project might need to change and to prioritize your resources and modify your project accordingly.

Decision Analysis

When...	Use Decision Analysis to...	Because...
Deciding which projects to work on	Determine which projects to work on. Your objectives should include the anticipated results of the project, as well as resource and other restrictions you face.	Many times, organizations handle too many projects with too few resources. This leads to competition for resources and projects that come in late and over budget. Use Decision Analysis to focus your resources by selecting those projects that will have the greatest benefit for the organization.
	Determine whether or not to proceed after you've outlined the time, cost, and scope of the project. Compare the objectives versus risks and adverse consequences to make the decision.	Decision Analysis provides a rational and logical method for deciding whether the project is worth the investment.
Beginning to plan the project	Select a project manager.	Selecting a project manager based on a clear set of objectives will help ensure that you have identified the best person to lead the project.
	Design an approach for managing and/or organizing project work.	Keeping track of project issues and their resolution is one key to a successful project. Deciding on a common-and effective-method for tracking this information before the project begins will go a long way towards ensuring a smoothly organized project.
Planning the project	Make decisions about the many issues that arise during the planning of a project like selection of capital equipment that will be used during the project, or decisions on how many and what kind of human resources you'll need. Many times, just clarifying a Decision Statement or listing objectives will be enough to reveal the best choice.	Using a rational approach prior to beginning a project may save you time and resources once the project is underway.
Implementing the project	Help with unexpected decisions or problems that need solutions.	Each project is filled with decisions, many of which will impact the success of the project. Using a rational approach and keeping track of your decision making will increase your chances for success.

Potential Problem Analysis

When...	Use Potential Problem Analysis to...	Because...
Planning the project	Identify potential problems that could affect the project's success. Review the elements at the lowest level of the work breakdown structure that will be managed (called work packages). Identify those that are: • On the critical path • Require several people • Involve new or unproven technology • Rely on the use of scarce resources • Depend on the completion of several other work packages After completing the Potential Problem Analysis, be sure to revise the project plan to incorporate the actions from the analysis. In addition, you may want to use Decision Analysis to select which preventive actions and contingent actions to use.	The success of your project will depend on your ability to anticipate potential problems and plan the actions to minimize their effects.
Implementing the project	Think about potential problems before taking an action. Quickly ask "What could go wrong when we...?" "What could cause it?" "How can we prevent it?" "How can we minimize the impact?" "What will tell us it has happened?" When you have the answers to these questions, adjust your action accordingly.	The success of your project depends on how well it is implemented. During the implementation phase you will undoubtedly need to take actions that you did not anticipate. Quick application of "PPA thinking" will help avoid problems.

Potential Opportunity Analysis

When...	Use Potential Opportunity Analysis to...	Because...
Planning the project	Identify potential opportunities that could maximize the project's success. Review the pieces of the project plan at the lowest level of the work breakdown structure that will be managed (these are called work packages). Identify those that: • Are on the critical path • Have the most experienced people • Have more resources than needed • Could finish in significantly less time than allocated • Have a history of success Look for potential opportunities in these work packages. After completing the Potential Opportunity Analysis, be sure to revise the project plan to incorporate the actions from the analysis.	A failure to capitalize on opportunities can be the difference between a good project and a great one. In addition, planning ahead will help you take advantage of areas in the project that go better than expected. This may allow you to transfer resources to areas that are critical to the success of the project.

Problem Analysis

When...	Use Problem Analysis to...	Because...
During implementation to…		
Assess issues with task or project time	Find the cause of timing deviations	Timing over-runs can be costly to dependent tasks as well as to the overall project. Understanding the cause so an effective fix can be implemented can avoid additional waste and minimize negative effects. Note: Problem Analysis can also be used to find the cause of positive deviations, which can speed future parts of this or other projects.
Assess issues with task or project cost	Find the cause of cost deviations	Similar to timing deviations, but with respect to costs.
Assess issues with deliverable performance	Find the cause of deviations between expected outputs and what was actually produced	Deliverables that do not meet technical or practical expectations can cost the project in time, resources (for rework) and schedule. This is also known as 'use of PA for QA' within projects.
Assess issues with resource performance	Find the cause of human performance deviations	Solving human performance deficiencies can be a difficult task because the analysis focuses on people (and the emotions and opinions they bring with them), rather than inanimate systems and objects. Solving 'people problems' requires a laser-like focus on the facts and may need to use other approaches that focus on elements other than the individual (like performance expectations, signal to perform, and the work environment).
Closeout the project	Find the cause of deviations that happened during the project	It will be helpful for future projects to understand the cause of deviations, which will help to avoid wasting time and resources in future projects.

Summary

Many organizations count on projects to complete work and implement changes. With the planning and implementation of projects, however, come scores of issues that need to be resolved, documented, and tracked. Situation Appraisal can help you define the project and provide a means for you to update the issues that need resolution. Decision Analysis can help make critical project decisions over resources or capital. Potential Problem Analysis can serve as a critical tool in diagnosing and planning for problems. Potential Opportunity Analysis can help you ensure that you do not miss golden opportunities for things to go better than expected. Problem Analysis can help you resolve gaps in project performance.

