

# Eight Planning Strategies for Delivering Quality Projects

Lee Alan Peters, PE, FASCE, PETERS & company Project Management and Engineering Inc.

## Introduction

Project Managers have learned to quickly get into the project and to bury themselves in work. Brute human effort is the key to project success. Attention to detail at a minute level is the key learning by many project managers. This behavior has produced results, recognition, and reward for these project managers. Poor Planning has also produced catastrophic failure. Projects started without planning are vulnerable to failure. Problems are found by doing, by collision, by stomping on the landmines; rather than by seeing, by anticipating. These sightless project doers do not perform risk assessment, contingency planning, methods analysis or war-gaming. The project team hammers out the project on the forge of unplanned performance! Executives enable this addition to adrenaline by stressing early starts and instant measurable progress. Beware, once a project is started, the opportunity to change the project is lost. The project team becomes firefighters not fire preventors.

These same co-dependent executives get comfort from scheduling software. They fervently believe there is a plan because there is a printout. The project manager can now plan the work in detail. No one realizes software provides nothing for planning the project strategy, tactics or for the allocation of resources. We can plan the nitty-gritty perfectly and miss planning the management, the materials flow, the leadership, and stakeholder relationships. Coach Knight said, "It is not the will to win that counts, rather it is the will to prepare to win that makes winners." How do we change? How do we plan the work and the technology of the work? When do we plan the tools and then the methods? We plan the crew now but where will we plan the teamwork? How can we shout, as Paul Revere, "There is a Plan!!! There is a Plan!!!"?

Rigorous planning the plan dramatically improves project quality. Higher-quality results are produced more rapidly. Effort is not wasted doing work that does not contribute to the result or by being less productive. Project scope is contained because it is well defined—up front. Stakeholders are happier because the project team is attentive to each relationship and committed to exceeding their expectations.

Planning is paramount importance to success of all projects. Yet, doing a work breakdown structure only scratches the surface of project planning. Here are eight planning strategies to ensure a project is properly planned. These techniques have been tested on

actual construction projects, in partnering sessions, in training, on Olympic-sized events, and in product development. Powerful, simple, and useful.

- Strategy One: Learn to slice a project from different planning perspectives to ensure thorough and complete project preparation. Identify all elements to be planned from Strategic, Tactical, Operational, and Task/Tools levels of project impact.
- Strategy Two: Walk the project by time. Look for key events, challenges, and decision points. Turn around and walk the Terrain—walk the geography of the project. Finally, walk the project by technology or types of work and subcontractors.
- Strategy Three: Start Issue logs for assumptions, definitions, information, opportunities, risks, imperatives, decisions, and resolution. Organize the current issues, use the categories to generate additional issues, and then maintain these logs throughout the project.
- Strategy Four: Look for key Methods. Simply work until a single Method integrates Resources (Materials, Supervision, Crew, Tools & Equipment, Information, Duration, Effort). There will be half a dozen controlling Methods in a project. Examine and plan these carefully.
- Strategy Five: Consolidate Resources and write management plans for each Resource.
- Strategy Six: Write Control Plans (Results, Scope, Performance, Risk, Reliability, Relationships, Learning, Time, Cost, and Quality). We think we understand controlling projects but without planning, we create controls that are impossible to use.
- Strategy Seven: Conduct scenario-war gaming and contingency planning using both box and time-line methods.

## Exhibit 1

### Performance by Impact—STOTT

- Strategic— Impact on the entire project. Duration may be months.
- Tactical – Impact on one phase. Duration may be weeks.
- Operational— Impact on one activity or operation. Duration may be days.
- Task/Tools – Impact on one type of work. Duration may be hours or minutes

## Exhibit 2

### Perception

Three umpires were involved in a heated discussion of what they considered to be strikes and balls.

"Well, it's easy, guys. I call 'em as they are: If it's a strike, I call it a Strike; if it's a ball, I call it a Ball!"

"Wait a minute! I see it different! I call 'em the way I see 'em. If I see a strike, I call a Strike and if I see a ball, I call a Ball!"

"You are both wrong! They ain't nothin' till I call 'em. It's just a baseball that got thrown until I holler 'Strike' or 'Ball!'"



## Exhibit 3

### Issues by Category

- Assumptions— What are not facts that we are treating as facts and how does that impact the project?
- Threats – What can go wrong? What is the impact? What is the probability?
- Opportunities— What are the opportunities in the project for developing people and the organization? What are the opportunities to significantly improve the success of the project?
- Decisions – What is needed when? What decisions have already been made?
- Imperatives— What must we do very well to ensure project success?
- Definitions – What are the operational definitions (glossary) for this project?
- Information (Known and Unknown) – What do we not know? What do we know and how?
- Resolution – What requires detailed analysis and planning using 'box' and 'time slice' techniques?

• Strategy Eight: Develop project policy, project management processes, and project procedures.

With good plans, the challenge becomes controlling and managing risk—keeping the project beast within the boundaries of the plan. Memorize this—for every one minute we spend in planning, we save six minutes in execution. Planning increases the speed of the work—planned execution is a fraction of unplanned. Improve the quality of project work; deliver projects and products with record customer satisfaction.

### Strategy One—STOTT

Learn to slice a project from different planning perspectives to ensure thorough and complete project preparation. Identify all elements to be planned from Strategic, Tactical, Operational, and Task/Tools levels of project impact.

This has three different approaches. The first is to list elements to be planned under each level of impact. Each level of impact is an

independent list. The second is to break each item down by level of impact. For each strategic item, elements would be identified at each TOTT level. This is a work breakdown. The third is to list issues by impact that need resolution. Issues are softer from project elements. These are lists by STOTT requiring resolution.

This has been potent in looking at shutdowns and turnarounds in general. A plan for planning. A powerful before action planning strategy.

### Strategy Two—Time, Territory, Technology

Walk the project by time. Look for key events, challenges, and decision points. Turn around and walk the Terrain—walk the geography of the project. Finally, walk the project by technology or types of work and subcontractors.

Each time the project is traversed wearing different eyes on each trip, very different issues, concerns, and planning steps are become visible.

## Exhibit 4

### Methods Integrate

- |                     |                |
|---------------------|----------------|
| ■ Crew              | ■ Duration     |
| ■ Supervision       | ■ Effort       |
| ■ Tools & Equipment | ■ Productivity |
| ■ Materials         | ■ Money        |
| ■ Information       |                |

## Exhibit 5

### Resource Management

- |            |           |
|------------|-----------|
| ■ Specify  | ■ Store   |
| ■ Estimate | ■ Equip   |
| ■ Procure  | ■ Deploy  |
| ■ Expedite | ■ Recover |
| ■ Receive  | ■ Salvage |

At times we walk the project by territory led by the Design Professionals, then by technology led by each subcontractor, then by time led by the GC.

We have used this approach in partnering workshops to get sides talking about the project and sharing information and concerns. The sequence is important. Territory opens people up as they walk the project; the issues of the subcontractors and the different types of work come next. Last, after talking about the work are people ready to talk about when the work is to occur and in what sequence. Keep in mind that many times this is the first time the players have looked at the plans or specifications. Construction companies routinely send someone to go build the project and they are lucky if they have a set of plans or specifications.

### Strategy Three—Categories of Issues

Start Issue logs for assumptions, definitions, information, opportunities, risks, imperatives, decisions, and resolution. Organize the current issues, use the categories to generate additional issues, and then maintain these logs throughout the project.

Again two approaches: This first is to categorize existing issues; the second is to make a log for each category. Categories can be expanded and contracted.

In a recent kick-off session for developing a product, the team worked on one category and one issue: decisions and a contingency plan.

### Strategy Four—Methods

Look for key Methods. Simply work until a single Method integrates Resources (Materials, Supervision, Crew, Tools and Equipment, Information, Duration, Effort). There will be half-dozen controlling Methods in a project. Examine and plan these carefully.

This is the nitty-gritty of projects. Many project managers never get to this level leaving methods up to the workers or subcontractors. I challenge that assumption. Methods can make or break any project. Workers do not have all the information or facts to make

## Exhibit 6

### Control Plans

- |               |                 |
|---------------|-----------------|
| ■ Results     | ■ Relationships |
| ■ Scope       | ■ Learning      |
| ■ Performance | ■ Time          |
| ■ Risk        | ■ Cost          |
| ■ Reliability | ■ Quality       |

informed decisions. They may perform the same task several times to absolutely eliminate risk while the project can tolerate risk to achieve speed or time to market. Five percent of the methods will be crucial. These need to be identified and studied.

Let me say that again, half-dozen methods will determine the total duration of a project. They need to be studied in detail. For example, consider the floor-to-floor construction of a cast-in-place 26-story office building.

### Strategy Five—Resource Management

Consolidate Resources and write management plans for each Resource (Supervision, Crew, Tools and Equipment, Materials, Information, Duration, Effort). The Resource process is the same. As you think about the resource, bells ring, lights to off, rockets glare. The whole project changes as you look at each type of resource. The next breakdown level also rings bells. Take concrete forms—the form (plywood or preformed), the labor, the re-steel, the steel ties, the tie tool, the iron worker, the scaffold, the concrete, the pump, the form quality, the form ties, etc. Each itemized material forces thought. It is too easy to say—that is the subcontractor's problem.

As you project plan, do you think about the access and egress of the concrete pump, the concrete truck? Most likely! What about the steel wire ties? Probably not! Should you?

My experience with thick stock pumps has the wrong base plate template, the bolts in the wrong positions with the right template, the suction on the wrong side, the wrong impeller, the wrong motor, welding rod dropped into the suction side, and gland water not turned on. Think of all the “whys” that have to be asked to fix the quality in this material process.

### Strategy Six—Control Plans

Write Control Plans (Results, Scope, Performance, Risk, Reliability, Relationships, Learning, Time, Cost, and Quality). We think we understand controlling projects but without planning, we create controls that are impossible use. Can you live inside the control? Can you become the control and live the process? Become the information from where it is created thru the flow to the feedback that changes performance. If you can do that, the control may work.

We control things we can measure—like concrete slump—rather than measure things we should control like concrete mix design and compliance with the design.

I suggest we write plans for Reliability, Relationships, and Learning. What is reliability? Reliability measures the compliance of reality with the plans and estimates. Just how close are we with effort, duration, when work occurs? How close are with scope and risk?

## Exhibit 7

### Boxes

- |                     |                |
|---------------------|----------------|
| ■ Event or activity | ■ Equipment    |
| ■ Material          | ■ Type of Work |
| ■ Tool              | ■ Craft        |

## Exhibit 8

### Project Strategic Plan

- |                      |                               |
|----------------------|-------------------------------|
| ■ Vision             | ■ Scorecard                   |
| ■ Values             | ■ Measures of Project Success |
| ■ Stakeholders       | ■ Measures of Result Success  |
| ■ Goals              | ■ Operating Procedures        |
| ■ Objectives         |                               |
| ■ Guiding Principles |                               |

When we mitigate risk, does it work? Little reliability is measured in construction or in any project.

### Strategy Seven—Scenario Planning

Conduct scenario-war gaming and contingency planning using both box and time-slice methods.

The time-slice is easily understood. What all has to happen during the first 5% of a project? Take any crucial time of the project and look at every thing that is happening at that point in time. We looked at the beginning of the Pan Am Games and realized that there was no way we could manage all the problems. We created a problem management center and then put people on the street to look for and manage problems.

A box can be an event—rebuild the kiln, the controlling activity; material—pumps; equipment—cranes; tool—welders; type of work—steam leaks, soot blowers; or craft box—NDT technicians. That element is studied and planned in detail because it is a controlling activity or resource or type of work.

### Strategy Eight—Project Management

Develop project policy, project management processes, and project procedures. We focus on the project work: planning, estimating, controlling, and procuring. We look less at the Strategic, Tactical, Operational levels of managing and controlling the project. Take a look at business strategic planning. A project should its own strategic plan.

My projects all have strategic plans. Values and ethics are crucial to a project. Knowing how the stakeholders will evaluate success is crucial. Successful projects can be failures in the eyes of stakeholders. Saving 100k on a project was discarded as poor planning rather than recognized for extraordinary management.

Eight Strategies for planning projects have been presented. Wisdom tells us when and where to plan. No project has failed from over planning.