

Project replanning - points in a process model

Project replanning in a decade of change

By Helen S Cooke*

No one likes to talk about replanning. We all know it occurs, but people do not discuss it very much because it implies error. Not necessarily yours or mine, but "someone's" error. Somebody was not looking far enough in advance. Someone was not getting the proper "facts" before taking action.

It is not your fault

"...For the current modern project management period, time, cost, performance, *and* acceptance by the customer are the primary factors in achieving success. After all, the customer, not the contractor, defines what *quality* is.

"For the future, emphasis is being placed on two additional criteria for success: (1) with minimal scope change and (2) without disturbing the ongoing business of the company. The first criterion emphasizes effective project planning. The second stresses the need for making decisions based on what's beneficial for the company as a whole and not just for individual projects" (Kerzner Excellence 1998).

To deliver success in such an environment, the project manager has at minimum two levels of change to manage. These are the complexity within the project itself, and the complexity of the changing environment in which the project must operate. Even if both are monitored and controls established, surprises still occur.

We know replanning can be disruptive, even risky. It should be undertaken carefully and only after consideration of the possible downside damage. However, if replanning is where you find yourself, the pain of replanning is usually less than the pain of continuing under a plan that no longer accurately reflects what the project requires.

It's the rate of change!

In the twenty-first century, replanning could even become routine. We know few projects today are repetitive. Old models do not transfer, and technology can change even while systems are being designed. Projects are launched to resolve situations of unimaginable scope and complexity compared to those of even a decade ago. Moreover, complexity is not linear; it is exponential. The future will not be more stable.

Project management is already the tool of choice for bringing rapid change under control. Yet, the transfer of effective responses from actual projects to the common lexicon just is not fast enough. We can lay the best of plans and still be faced with replanning.

Based on what has already been said – the escalating rate of change, increasing technological complexity, and the number of unknowns that exist when a project is being planned today – chances are high that your project will face a replanning situation in the not too distant future. If you sense a convergence of complexities and unknowns that could lead to replanning, why not "plan for replanning," just as you "plan" for other risks and contingencies in a project?

So, plan for it!

One way to prepare sponsors, management and your customers for unexpected change is to build the expectation of replanning into early project negotiations. If you can describe when replanning might occur and what might trigger it if it does occur, replanning will be less of a surprise. A process model

can serve as a communication tool in building realistic expectations, and drawing out the best information you can get for planning the project.

How do you know it's time to replan?

There is always the nagging doubt of a premature decision. Is this a *real* replanning situation, or just symptoms converging to look like trouble? Is this a new version of large-scale plan maintenance or an integration issue? That plan represents a huge amount of work!

Procrastination is tempting. However, do not let negative thinking colour your efforts to replan. Sometimes it is difficult to distinguish between project failure, partial failure, and success. Indeed, what appears to be a failure at one point in the life of a project may look like success in another (Meredith and Mantel 1995).

Here is how you know it's time to replan. Quentin Fleming (Tustin CA) puts it simply: "Replanning is a necessity when you can't get to where you intended with what you have left to work with."

Replanning is not a choice. It is a quiet mandate. The sooner you call it, the better.

"The lesson from the last two recessions comes down to this: if change is necessary, make it as quickly as possible." (Kerzner 1998.)

Keeping your finger on the replanning triggers

Bruce Taylor of TWG says you can be 25% into your project and be faced with replanning if (a) you haven't defined your scope very well, or (b) something outside your control happens that changes your project. Scope is something we all understand. Change is something else.

You may not know when change is going to happen, but you know what it looks like. Organizational changes, regulatory changes, technology changes, unexpected external dependencies, inter-group conflict, management upheavals – each can introduce project earthquakes leaving mind-bending revisions in their wake. However, just because something is complex does not mean it has to be complicated.

Treat replanning as you would treat any other risk, and include it in your plan. Talk about it as an option to your client when the project is still in the concept stage. You can only control what you have planned. Describe the options and the trigger points for replanning. Then when those trigger points occur, you simply call it by its real name, switch to "plan B," and exercise "replanning" as a control option.

The key elements of replanning success are designing high-level plans around relative constants like life cycles and processes. If you pinpoint appropriate points in the project life cycle where replanning occurs, you can talk about its causes and build disaster recovery right into the design of the project.

Perhaps a good analogy is the difference between driving a car and winning an auto race. Assuming good materials, talent and engine performance, winning a race relies more on a good team with a good plan, clear goals, excellent contingency management, and a fine transmission. Involve your team. Plan for it. Design your plan to be the transmission. Design for replanning.

Structure your project to shift gears with accelerated change. Build the plan around things that are less likely to change (like life cycle and business processes). Keep detail separate. Keep changeable elements free of the project plan and structure, and volatile information in a format easy to update. Disengage potentially dysfunctional parts of the plan at natural "hinges." Know where the natural decision points are. Group stable elements together and isolate them from the impact of volatile elements. That way you can put the project back together, replacing changing or unknown elements without dismantling everything that has been done to date.

Remember, in the racing pit, replacement parts are easy to get to. The real trick in designing to reconfigure your plan is in recognizing where the hinges are! That is where a process model helps.

Process model

Life-cycle definition

A process model can be a time saver in communicating points where replanning is likely. It reflects repeatable processes across projects, so it builds "common knowledge" in the organization. Use of life-cycle based templates for plans can also make replanning easier on everyone.

According to Alan Kerzner, "today, in successful project management organizations, all projects are broken down into similar life cycle phases. This provides consistency among projects, and it provides checkpoints at which managers can either cancel or redirect individual projects." (Kerzner 1998.)

Points in a process model where replanning occurs

A process model like the one below – based on the *PMBOK Guide* – can be a foundation starting point for project plan development. A process model adds high-level order to the chaos of replanning, and serves as a "talking paper" for discussions.

The scope and effort involved in replanning varies by life-cycle phase, and the mechanics are different based on who needs to be involved. There are also natural points for introducing major change to a project plan. At these integration points, necessary questions should be asked – and answered.

Sometimes rigorous planning can head off a replanning effort, sometimes not. However, if you know and leverage the points in the process, you will have more overall control.

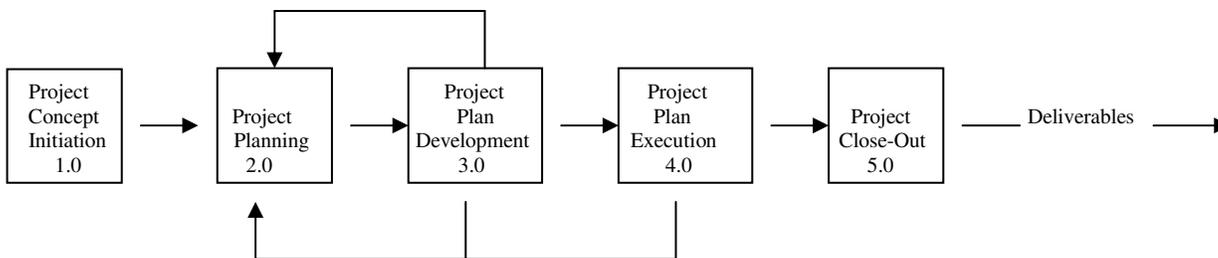


Figure 1: Project management process model

Core processes:

Replanning points in the process model

The main points where replanning occurs – and where a plan can loop back on itself – each have a distinct purpose in the planning cycle. There are different points in the project life cycle for assessing the effects of technology or management environment than for addressing resource access or team configurations. There are also different audiences for the replanning message at each point, and different players in the replanning effort.

Here is an overview of those change points and "loops".

- **Project concept initiation** concerns itself with the project's business purpose, target, client needs, and perceived solutions. Key players in replanning are often senior management, senior client management, business analysts and a few advisors. This process phase addresses the implementation environment for the project.

Major adjustments to plan this early in the life cycle happen fast and are often worked out through negotiations or reconfiguration of the players. However, whole projects can be created around creating concepts, and flexibility is usually part of their design. Regulatory or legal issues that occur later in execution phase of other projects can send the whole project "back to go" in a replanning effort. When it does, this is the phase it returns to. New product, perhaps?

- **Planning** is often the business case examining the financial impact of the project on the business, any potential savings, and alignment with strategic goals. Key players in replanning are the top operating managers of affected groups, the project manager or surrogate, senior financial

executives, and resource owners.

Replanning as a result of technology shifts or reorganizations, quality mandates or realignments often kick back to this level of the process, where the executives responsible for these elements of the broader organization make budgetary decisions and have the power to stop a project in its tracks.

- **Plan development** is the stage of the project life cycle where designing things in detail reveals the need for new tools, access to scarce resources, or the need to allocate more time or money to specific elements of the project.

Key players are the project managers, team managers, key line managers in the customer or client context; technical specialists and subject matter specialists; functional specialists and designers. Replanning at this level can often be handled within the team itself, even if the plan is well under way, but projects that proceed into execution without adequate attention to this detailed level of planning often “kick back” to this stage to resolve physical or technological barriers to progress.

- **Execution** is of course the stage of the project, where doing the work, places the project face to face with the real limits of people, dedicated time, logistics and cash flow.

Key players in replanning are the project managers, team managers, customers, sponsors, suppliers, subcontractors and executive oversight staff. Many of the supportive planning processes that are within the project manager’s span of control earn their value during execution.

Overlooking the less obvious planning elements can kick the project back into plan development or, if the schedules are too long or costs too high, all the way back to planning, where executive management can “reconsider” the value of the project. Projects whose legal and regulatory context changes significantly can kick all the way back to replanning the project concept, and perhaps starting over with a new one.

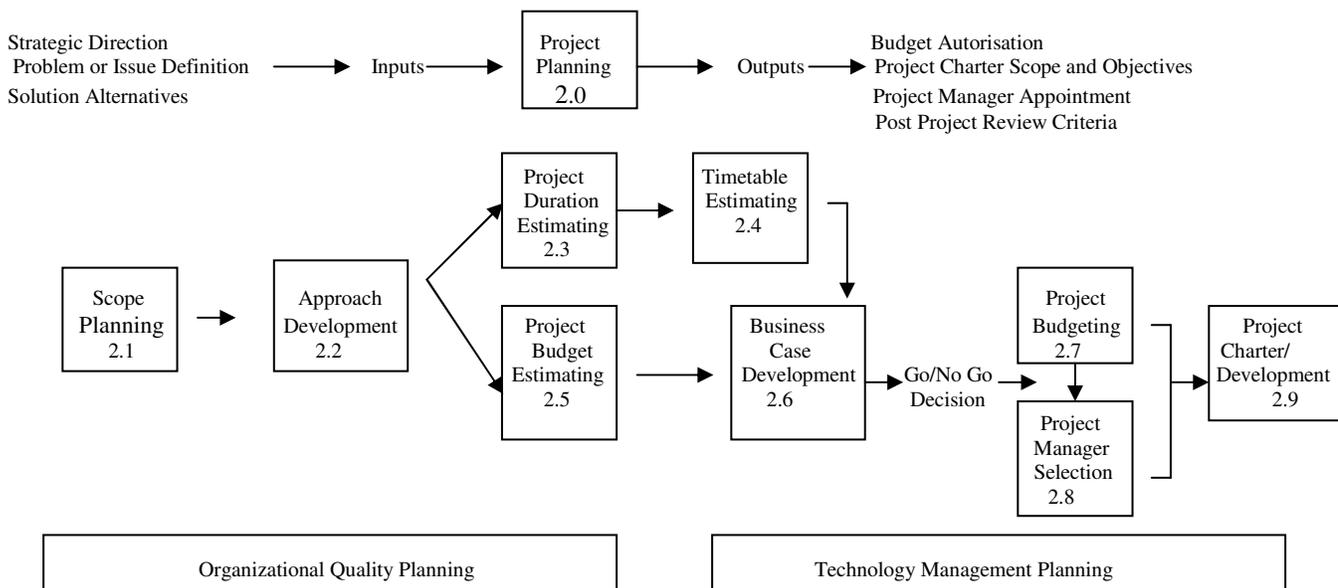


Exhibit 2: Project Planning

- **Close-out** is usually concerned with “replanning” the next project based on this project’s experiences in conjunction with executive oversight. A project can close down earlier than planned, starting a new initiative with different players or changing.

Key players during closeout are the project managers, remaining team managers, quality assurance staff, the project sponsor and executive management representatives (auditors). Hard

experience and the lessons learned are rolled into subsequent stages of a multi-project initiative or conceptual redesigns of dependent projects.

Hinges

There are typical elements of project planning that can focus replanning. They can be unifying factors around which you retool the plan. In the initiation and planning phases, these include customer requirements (which can change), critical success factors (slightly more stable), and scope boundaries.

During plan development, they include scope definition (hard to pin down, but you must), schedule development (the most visible one), baseline (it can restrict your options), and selection of metrics. During execution they include resource configurations, data trends (tied to a collision of company goals and project objectives), hard reality (need I say more?) of getting what you need when you need it to get things done (logistics), and change management (the pulse to keep your finger on, especially when it comes to legal or regulatory issues, which can also change mid-project).

During close-out, it is usually a later project in the overall initiative that changes, but replanning future projects in a multi-project initiative can be triggered by lessons learned.

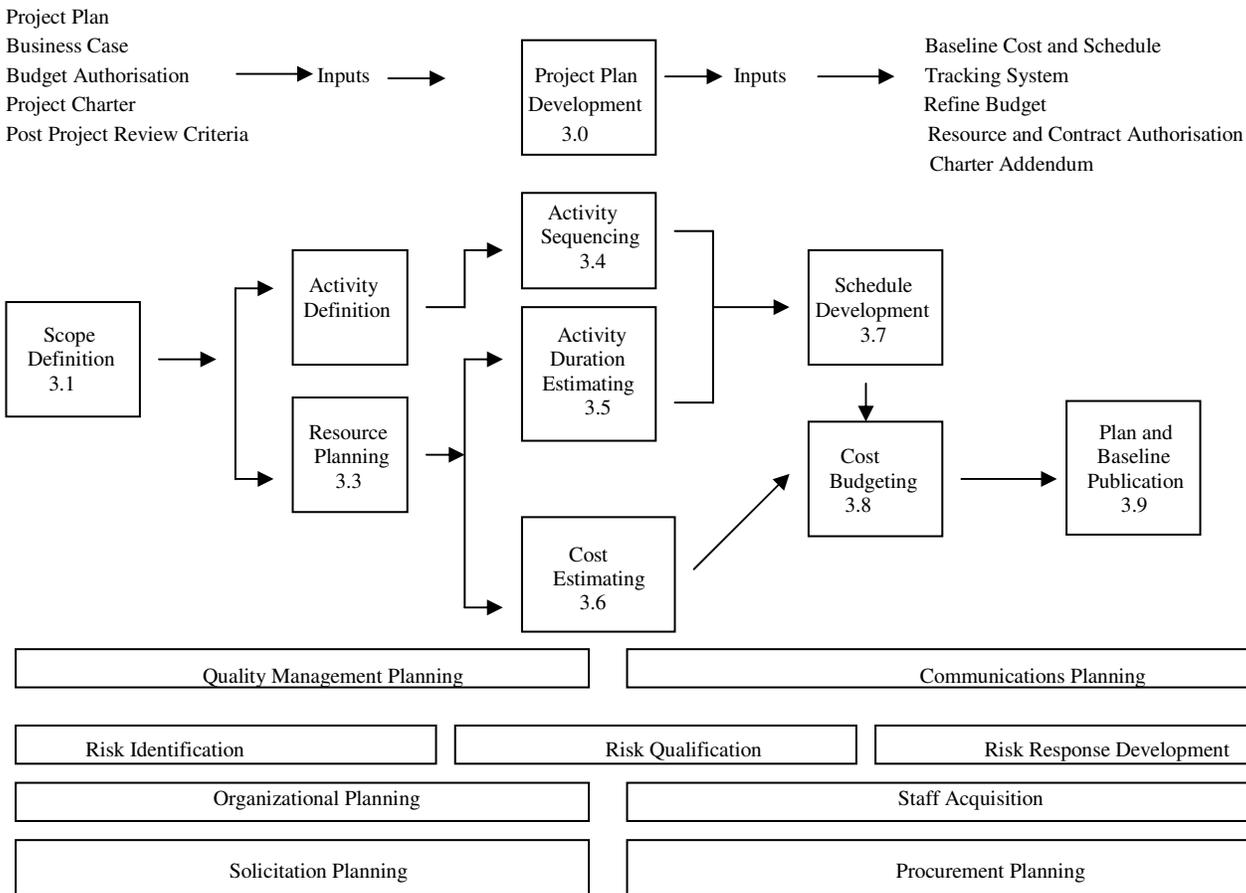


Exhibit 3: Project Plan Development

- **Hinge No 1 – Customer requirements.** If captured early in concept development, customer requirements can provide an underpinning for changing the project without scuttling the target results and business benefits of the intended solution. Record these, and protect their integrity throughout the project, even in replanning. Drop them down into the work of your technical team.

If you inherit the project from on high without being involved in this stage of planning, make customer requirements your first item of business in deciding to take on project leadership.

- **Hinge No 2 – Critical success factors.** These are defined by management for the business and should be tacked down securely in the second phase of planning. Having accurately pinpointed the business benefits for your own organization, you are in a better position to stay focused on the right things during replanning. Discuss critical success factors with sponsors and boldly articulate them during business case development. During change, things get thrown out. Not these. If these are lost in replanning, management may scuttle your project in the face of other pressing business matters.

Critical success factors provide a focal point for replanning a project. As an example, the Waterfront Complex Holiday Inn, Cape Town South Africa changed from two contracts for constructing “towers” as separate buildings to one contract for building a single lobby spanning the entire complex, and one for construction of the two towered “upper floors.” Their critical success factors differed.

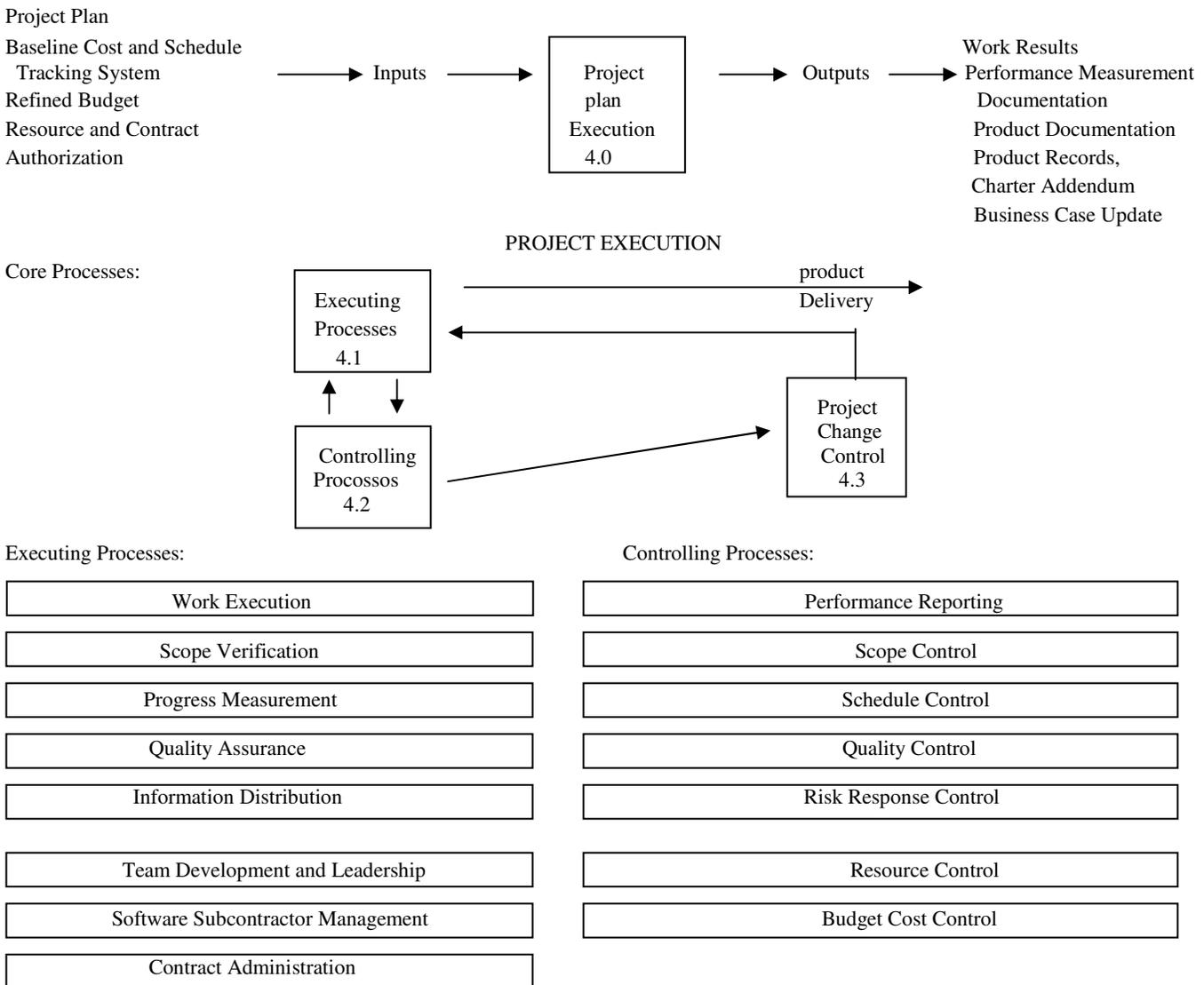


Figure 4: Project Planning

- *Hinge No 3 – Scope definition.*

Carefully planned scope discussions can get buy-in from the customer's key players as to the boundaries of the project. This usually occurs during business case analysis or when deliverables are defined after the "go-no go" decision. Scope can go through several levels of planning, just as projects can. Get signatures after active discussions with customers and sponsors to firm up your understanding of scope before you move into detailed planning.

Sort out the critical elements of project outcomes, including the customer's business benefits, product performance, and results targeted after the project is over. Reaffirm these in replanning. Use a crystal-clear statement of work everyone can agree to as a way of reaffirming continuity between the old plan and the new. Use these to rebuild the WBS or renegotiate them as necessary during replanning.

- *Hinge No 4 – Resources.*

Resources are always a sensitive issue in replanning. Changing direction is wasteful, and there will be conscious awareness of what is being declared "water under the bridge."

What a project is "worth" in dollar value and payoff can be mitigated by secondary benefits such as contributions to future technology, building capacity for future projects, or earning political "goodwill" with important constituencies. Keep both the "tangible" benefits of the project and the "intangible" benefits of the project in the foreground during early budget cycles, and cite them again during replanning. You may have to call in the intangibles to "outshout" the cost echoes from unplanned change.

When replanning, target those areas of work that consume the highest hours of effort, as well as any complicated processes with simple outputs. Cut unnecessary elements to keep the critical ones lean and mean. Then place costs and tangible/intangible benefits side by side. The latter had better come out ahead.

- *Hinge No 5 – Schedule.*

Schedule development and integration is another "trigger point" for proactive replanning discussions. If there are significant unknowns or volatility in the project environment, articulate their potential effect on the schedule.

If you replan, it is likely to change the critical path, delaying business benefits. If it does, act fast on simple elements that feed other dependent parts of the project. Get all the "quick hits" you can to emphasize benefits. If something slips on the schedule let it be the "productivity hog" that consumes resources and produces small benefits. Then conspicuously replan it. Of course you need to know the range of tolerance. Be able to quantify – and justify – the benefits of the changes you make in spite of delays – or face potential shutdown.

Communicate the new schedule as far ahead as you can see and affected groups can tolerate. Microsoft, for example, changed its critical path during launch of Windows 95 to resolve legal issues in contracts in all participating countries, a necessary "critical path" item to moving forward. A unified launch was worth the delays.

- *Hinge No 6 – Baseline plan.*

Keep your baseline plan at a high enough level to accommodate change without unlinking work package dependencies. How much detail should you have in the plan? As much as is necessary, as little as possible. Keep only as much detail as needed for control. If subprojects carry the detail in their operating plans, the higher level plan can change during replanning while people continue to work.

Do not encumber your overall plan with excessive detail, or replanning will be a nightmare. Forty-hour work packages are a good bite.

- *Hinge No 7 – Measurement.*

Define your metrics to track real critical success factors. Monitor trends rigorously during the project's initial phase of execution. Because planning is more accurate when detail is known, the latter stages of the project are most likely underestimated.

Overruns often get worse with the passage of time. The reason: near-term planning is often better than far-term planning. Problems experienced in the near term have a tendency to get worse, as the quality of the project planning gets progressively more vague in the far-term time frame." (Fleming 1996.)

For most projects, if you are 25% into the project and still addressing significant unknowns, you are probably facing a replanning situation and a potential overrun. Call it as soon as you see it, and talk about it openly with both client and sponsors. If there is something to be done, they can help you do it. If there is nothing to be done, their involvement will make them more ready to accept what comes later.

- *Hinge No 8 – Reality.*

Implementation in a real life environment has a way of revealing hard "truths" that planning overlooked. As environmental, quality, legal or regulatory issues take their hits, reassess their impact on delivery dates and priorities.

Entire projects have been shifted by changes in these "environmental" factors. These are executive domains. Of course the risk plan is also a place to spot shifts leading to replanning. If the risks you planned do not resemble the risks you manage, you may be "waiting for the other shoe to drop." Act fast. Stay ahead of the curve. Redo the risk management plan.

All projects carry risks. Earned value is an excellent risk mitigation tool... it is up to the project manager to react to avoid the adverse cost and schedule possibilities (Fleming 1997).

- *Hinge No 9 – Amount of change.*

Change management and uncover replanning symptoms. As issues become more difficult to track to closure and the sheer number of changes mounts, examine these for clues to the unknowns. Create a matrix with frequency of occurrence on one axis and complexity on the other. Get ahead of (or get rid of) elements that rank high on both. Waiting for quality samples and late reported metrics may not give you the lead time you need to stay ahead of the curve on predicting the need for major change.

We have learned that complexity cannot be managed by cost alone. "Increasing program complexity in the last decade led... to recognition that management control systems... needed to be improved." (Abba 1996.) "Unfortunately, it is common to focus monitoring activities on data that are easily gathered – rather than important – or to concentrate on "objective" measures that are easily defended at the expense of softer, more subjective data that may be more valuable for control." (Meredith and Mantel 1995.)

- *Hinge No 10 – Lessons learned.*

By the time you reach project close-out, replanning is history. You may as well open a new project and use lessons learned from this one. Maybe hire a new project manager, too?

Communicating the replanning effort

Once you do "make the call" to begin replanning, how do you explain it to others?

Projects cost a lot even when they are well run. Just as a custom car costs more than one from dealer inventory, a custom project solution costs more than "normal operations."

The work that goes into planning a project in adequate detail to maintain control is substantial. Surprises are even less welcome than expensive solutions. Moreover, while our organizations might prefer to avoid projects, we cannot. If a problem could have been resolved through normal

operations, it would have been. Projects are formed when operations simply cannot produce the outcome that is needed.

Your customer's viewpoint

Most replanning should certainly be carried out with close client consultation and buy-in, which seems obvious but does not happen as much one might think. Before you break "bad news" (and change is seldom considered good news), consider where your client is coming from.

Projects are being used to solve problems of greater complexity than those of only a decade ago. Your client is relying on street smarts gained in another era. The globalization of markets and the appearance of new technologies have triggered intense competition. Time to market can mean success or failure. In addition, while unspoken, careers are often "on the line." Progress is hard to measure, trends are hard to predict, and projects lie right in the path of progress.

"Project managers know it is not always easy to find out what's going on when working on a project. Records are frequently out of date, incomplete, in error, or 'somewhere else' when needed." (Meredith and Mantel 1995.)

Projects appear too important and too hard to "pin down." If not strategic in their own right, many projects create the infrastructure in which strategy will be played out. There simply is not room for error, and the path to success keeps changing. A lot rides on being able to predict accurately *and* deliver results.

Incremental replanning will usually be the preferred route for your customer. Since that is not what replanning is all about, involve him or her actively in the replanning process. Involvement in the mechanics, decisions and processes defuses the threat of the unknown.

Speed up replanning by creating planning templates. Templates can be designed to reflect important decisions and simplify group team involvement. Make sure you use proper planning dependencies before you develop plan detail, and leverage the process based on the stage of the project life cycle. Structure, shorten response time, and communicate, communicate, communicate!

Whenever possible, keep the team working. Reassign those on derailed tasks to the planning effort. Restructure activities and reporting relationships around the new reality. Even office furniture is being built with recognition that teams reconfigure, and work changes with it, so stay optimistic! The fundamentals – if they truly are fundamentals – endure even when change occurs.

Leverage diversity (and the loyalty) of the team by involving them in replanning the impact of change on the way they work. Multifunctional teamwork is now routine, and indeed, to be sought after. Of course involving more people takes longer, but the variety of inputs and viewpoints infused by multifunctional teams strengthens the project against fatal oversights. Workers know what can be cut out, and taking their suggestions also builds their co-operation and sense of ownership in the new plan.

"Effective project management cultures are based on trust, communication, co-operation, and teamwork. ...Successful project management can live within any structure, no matter how awful the structure looks on paper, just as long as the culture of the company promotes teamwork, co-operation, trust, and effective communication." (Kerzner 1998.)

Conclusion

Replanning is sometimes inevitable. If you plan for replanning (ie, design your project for replanning) you can build a project much like a race car transmission, shifting gears as the revolutions per minute (rpm) increase. If your plan is process-based and modular, then as plans change the work packages can still maintain their integrity. Replacing changed elements with new directions, people can continue working during replanning. With a process-based modular plan, you can re-deploy resources in a more orderly manner.

Let's demystify replanning. It has always been around. It has a normal cycle tied to points of project integration. It happens when the variables effecting projects are changing at an unprecedented rate. As the rate of change increases on projects and their sponsoring organizations, replanning is expected to become more frequent. Plan for replanning. Talk about it with your sponsors and build it into your client's expectations. They live with rapid change, too. It should come as no surprise. What is a surprise these days is anyone willing to pretend we can manage the way we used to!

* *Helen S Cooke, PMP, is Project Management Consultant for McDonald's Corporation*

References

- Abba, Wayne. 1996. USDoD. Earned Value Management: Reconciling Government and Commercial Practices. Project Management Institute's 27th Annual Seminars & Symposium.
- Project Management Institute. *Principles of Project Management: Collected Handbooks from the Project Management Institute*. Upper Darby, Pa.
- Cooke, Helen S 1991. Manage the Environment Not Just the Project. AMS User conference. Arlington Va.
- Project Management Institute. 1996. *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*. Upper Darby Pa.: Project Management Institute.
- Fleming, Quentin. 1996. From Our Readers. *PM Network* 10 (November).
- Kerzner, Harold. 1998. *In Search of Excellence in Project Management: Successful Practices in High Performance Organizations*. New York: Van Nostrand Reinhold.
- Meredith, Jack R and Samuel J Mantel, Jr 1995. *Project Management: A Managerial Approach*. Third Edition. New York: John Wiley & Sons, Inc.
- Putnam, Lawrence H, and Ware Myers. 1992. *Measures for Excellence: Reliable Software on Time, Within Budget*. Upper Saddle River, NJ: Yourdon Press /Prentice Hall PTR.

Proceedings of the 29th Annual Project Management Institute 1998 Seminars & Symposium Long Beach, California, USA: papers presented 9 to 15 October 1998.

This article was first published in ProjectPro magazine Vol 9 No 1, February 1999

[Back to the top](#)

© ProjectPro Management Services 2001

Permission: Requests to reprint articles published by ProjectPro must be made in writing to the publisher. No part of the articles contained in the ProjectPro Library, e-Zine or e-Newsletter may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission from the publisher.

Reprints: copies of individual articles published in the ProjectPro Library, e-Zine or e-Newsletter may be purchased. For further information please contact ProjectPro at tel: +27 (0)12 346-6674; fax: +27 (0)12 346 -6675; e-mail: editor@projectpro.co.za.