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Planning for Change

Preston G. Smith

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Every project needs a plan. Our tacit assumption seems to be that we can plan the project from start to finish, and then simply carry out our plan. In the real world, it isn't so simple, because the project environment often changes before we can complete the plan.

This is especially true for the most valuable type of projects--those involving innovation. In innovation, we work at the frontiers of the known, creating something that hasn't existed before. In so doing, things are likely to change from the plan. For instance, a member of our team leaves the company, the customer desires new product features after seeing a prototype, a new technology appears or a competitor changes the business model for the industry.

I work with many innovation teams, and I observe their project managers consumed in re-planning as the ground shifts beneath them. They apparently waste considerable time re-planning as their plans become obsolete. What can we do to make planning more efficient in a world of change?

First, remember that the process of planning is more valuable than the final document. As General--later, President--Dwight Eisenhower put it, "In preparing for battle, I have always found that plans are useless but planning is indispensable." Planning uncovers assumptions that should be challenged, risks that should be addressed proactively, resource shortages that need correcting, missing information to be collected and contrary views that must be addressed. Observe that these items you discover are likely to persist even if change invalidates the plan itself.

Understand Your Pitfalls

This suggests one thing you can do to make better use of your planning time: spend it in understanding what might thwart your plan rather than in continually adjusting the plan to fit new realities. At the outset of the project, assemble a cross-functional group of key stakeholders and identify the pitfalls in your project. If you can keep these pitfalls under control, you won't need so much detail in your plans. And the pitfalls are less likely to change than the detail in your plans.

Work from a Vision

Similarly, establish a strong vision for the project outcome, for example, for the desired product if it is a product-development project. Although project execution details are likely to change before project completion, the vision is unlikely to change. If you have a strong top-level vision, it acts as a compass, constantly telling team members whether they are headed in the right direction. A project subject to heavy change is likely to be completed in an iterative, cut-and-try style. In this mode, a constant vision that can act as a compass in the fog of daily activity is priceless.

Use Rolling-Wave Planning

Another approach is to recognize that long-range plans are more likely to change than short-range ones. This suggests what is called rolling-wave planning: plan only the next part of your project in detail, the following part in moderate detail and everything beyond this in only broad terms. Then when you are about to finish the detail-planned part, complete detail planning of the moderately planned part and moderately plan the succeeding part. In this way, your plans roll forward just ahead of you, and you put most of your planning effort into the part that is both most valuable and least likely to change.

However, if you do rolling-wave planning, be careful to plan the long-range part accurately. When doing this type of high-level planning, there is a tendency to miss the project detail that consumes the time, thus badly under-estimating the time and effort required. This is basically a quantum effect in which activity below a certain quantum level just doesn't register.

You can correct for this error by establishing an "expansion factor" to apply to your top-level plan, based on planning one project both in detail and at top level, or you can calculate your expansion factor from historical shortfalls in projects that have been planned at only the top level.

Consider Loose-Tight Planning

Agile software methods deal with changing plans by alternating periods of loose planning with ones of tightly controlled planning. Most agile methods work from a backlog of product features to be developed. Between iterations, anything in the backlog list is a candidate for the next iteration (very loose control), but once the features for the next iteration have been selected, the team goes into a tightly controlled mode in which nothing is added or changed until the end of the iteration.

Some agilists are so adamant about this that they will abort an iteration if any change is introduced during it. But between iterations, they are completely open to change. Boeing used this approach more mildly in the design of its 777 airliner. They alternated periods of design (loose) with periods of stabilization (tight, to coordinate changes that had been made differently by different teams and to correct design defects).

In summary, I have suggested four ways to deal effectively with project plans that are bound to change before you can finish the project. Observe that the first two methods work by rising above the details of change to a more stable higher level, and the last two work by modulating the intensity of planning to yield higher planning usefulness for the effort invested.

Preston Smith is a product development consultant and trainer based in Portland, Oregon. He is coauthor of the time-to-market classic, Developing Products in Half the Time, and more recently author of Flexible Product Development. You can reach him at preston@NewProductDynamics.com or visit his website at FlexibleDevelopment.com.

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