

Innovative Development Associates

White Paper

Building a Product Development Improvement Plan

22 Tips For Establishing a Successful Product Development Improvement Initiative

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Customer Centered Product and Market Development

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Often companies choose to enact a Product Innovation Improvement Initiative through some sort of cross-functional task force or planning team.

A recent Product-MASTERS study revealed the following:

- 80% of respondents were materially dissatisfied with their system for driving successful products to market. (This study focused on software companies.)
- 50% were planning to take action through some sort of planning/improvement initiative
- 20% of improvement initiatives are judged to be unsuccessful one year later. They consume time and resources but produce little change.

We've coached a number of such innovation teams/task forces at software and manufacturing companies. We recently made a list of observations and tips for improving the effectiveness of such efforts.

Some will seem obvious. Others less so. All deal with issues which we've either done wrong or come darn close to doing wrong so we assume a few of you might be heading for similar traps.

- 1. Use People Who Don't Have Time to Do This** – There can be a tendency for major players in the product management and development community to believe strongly in the development of the plan... but to feel they don't have the time to participate actively. Instead the effort is relegated to those who have somehow been marginalized or are good but lack experience. To be effective the plan must be believed. It's impact will be only as strong as the people on the team. Realize that in preparing a strategy to increase PD performance the journey is as important as the product... take the right people on the journey.
- 2. Just the Facts** – Even with quality individuals in the room there will always be a tendency to build improvement agendas around anecdotal observations. Often they are accurate. Equally often they are incomplete or biased in some way. Make a concerted effort to find at least some data or broader set of opinions to drive or support conclusions.

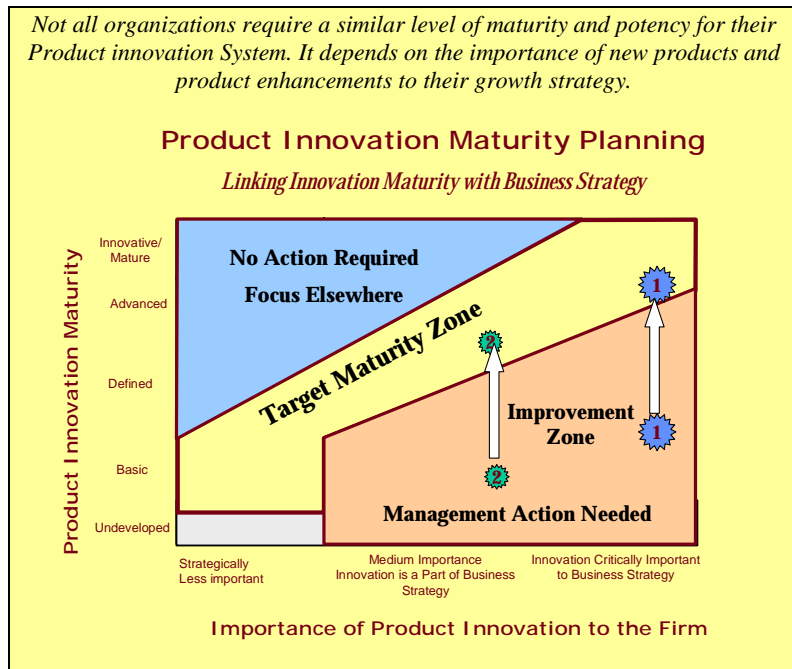
If generating a continual flow of increased customer value is important to your competitive advantage... can you expect to consistently achieve this without a competitive advantage in your "product innovation system"?

Put another way... "You are not competing with your competitor's products... you are competing with your competitor's Product Innovation System."

But what is the most effective way to go about building a system with a competitive advantage?

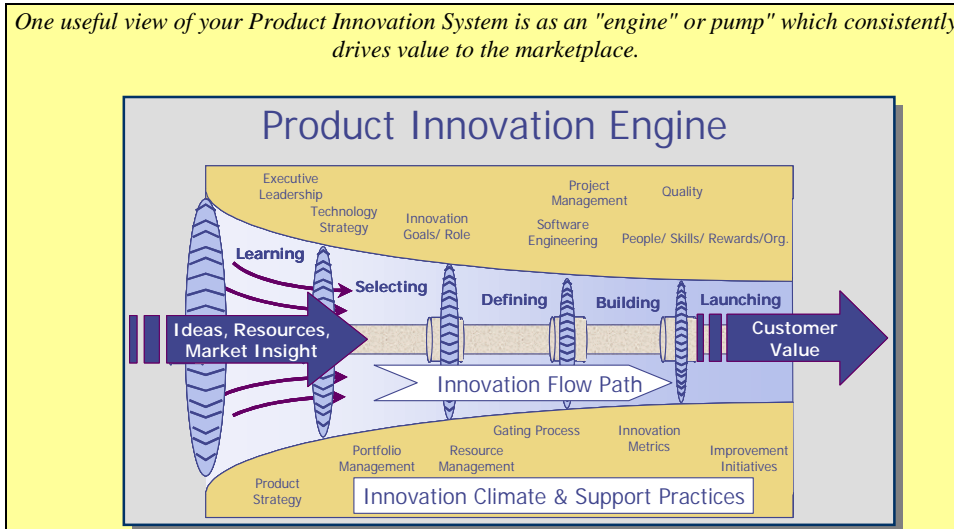
This paper takes a quick look at some of the key pitfalls to driving organizational change in new product development. .

3. **Provide Staff Resource** – To assist the task force plan on some “staff” resource to dig for information at the request of the task force.
4. **Establish a Support Group** – The value of a management steering committee for such efforts is obvious. Of additional value however is to establish a support group of middle managers who can serve as the actual recipients of the plan and can provide interim feedback as it is being developed. One company referred to this as the **Product Development Leadership and Learning** team. The group became invaluable as a mechanism for leading the implementation of necessary changes recommended by the plan.
5. **Set a Deadline Which Can't Be Moved** – Exploring a complex topic like improving product development performance can take forever. Start by bounding the effort with a critical deadline that keeps the team's eye's on the ball. Linking to a corporate planning cycle can be useful. One team, to create the necessary results pressure for itself, announced to management and the entire product development community when they would be done and scheduled an a priori meeting to present their results. The specter of embarrassment proved to be an important driver.
6. **Build an On-Going Impact Meter** – In addition to meeting deadlines other devices are sometimes helpful for keeping improvement teams focused on delivering a results oriented plan in a reasonable time frame. One team built an “Impact Meter” that simply calculated the investment made in the plan to date (in man days or \$), and established a benefit cost ratio factor that determined a desired minimum return on the planning. In their case they said that every day or \$ they invested in “planning” needed to return four fold with a three year period. As the planning investment mounted the plans benefit threshold increased proportionally – along with pressure to deliver.
7. **Corporate Strategy Assumptions** – To be effective a PD improvement plan needs to support higher level strategic choices. The plan should be tuned to the enterprise's plans in a myriad of areas such as market and distribution choices, innovation charters, technology strategies, competitive assumptions and R&D investment targets. Without decent answers to these and other strategic questions the plan won't align with the corporate direction. In many cases, however, many of the key strategic issues necessary to build a grounded plan will be murky. The temptation is too assume it is unnecessary or impossible information and to ignore strategy issues/questions. A better approach is to take a best guess, (here is where your insistence on the involvement of senior PD professions will pay off) document this as a set of assumptions that underlie the plan, forward the assumptions to



appropriate executives for comment and then move on to building your plan around the assumptions. Chances are you'll stir useful discussion that will help the executive team to better understand how to link innovation into their corporate strategy.

8. **Adopt a Factory Analogy-** Being effective at product development bears many similarities to managing a factory. Therefore think of yourself as designing a product development factory. This will quickly lead you to needing to understand the annual output of the factory. (Items like "four maintenance releases per year, one new version of our base product each year, two new products per year; one major re-architecture every five years.) This establishes that you are designing a system for executing multiple projects with different objectives rather than merely defining the approach for a single project.



9. **Establish a Planning Horizon** – What is the timeframe for this plan (factory design)? Are we designing the factory we want to have in use in six months or three years? If you decide this up front discussions will be less likely to wander all over the map.
10. **Establish an Improvement Goal** – This sounds obvious but it's often overlooked. The goal (or goals) need to be precise and measurable. More importantly they need to inspire the troops. Often the statement of the goal, more so than the individual items that make up your improvement plan, is the critical item in galvanizing the need to change within the organization. Often the goal has something to do with reducing time to market. In other cases the goal is to achieve an increased flow of product for a given R&D resource. The key value of the goal is to be able to test improvement ideas against it with a question like: "If we undertake actions x, y, and z will we likely achieve (goal). Or... "Are these actions necessary to achieve the goal of _____.
11. **Define Scope/Questions to be Answered** – OK, you've got a small select team, an improvement goal and a time frame. That's great but chances are the team still doesn't know exactly what it needs to do. The tendency is to outline the plan's contents and begin thinking about how to fill it in. Sometimes the group's thinking will be better stimulated by thinking of the task as answering a set of questions. For example, "We will have an effective plan when we know the answers to..." Questions you might consider are;
 - a. What are the distinctive competencies we need from our product development system to fulfill this goal?
 - b. What have been the past barriers to improving PD performance and how will we attack those barriers?

- c. What actions should we take, in what order and in what time frame?
- d. How much will it cost and what specific results will it bring?

Or, better yet, questions which are specific to the key issues you know to be on everyone's mind such as:

- e. Are we going to implement cross functional teams and how are we going to do it?
- f. What metrics will we monitor to track progress?
- g. Will we continue to develop products from one campus or multiple campuses... and many, many more.

12. **Use Spiral Method** – Once you decide what the scope and schedule of your planning effort will be, plan to make two or three passes through the entire plan. Don't spend all of your time on upfront analysis leaving precious little time to define implementation actions. Instead make a quick pass through the whole effort -- from situation analysis through implementation. Then recycle adding detail, deleting interesting but non-essential info etc.

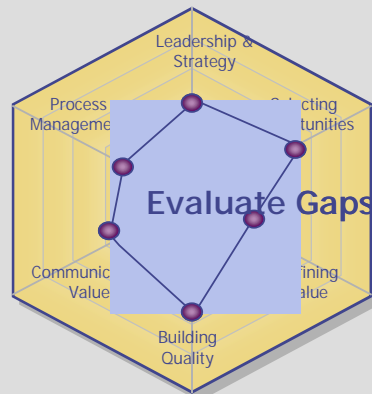
13. **Start Looking for the Money Right Away** – The quick pass through the entire plan will give you an early look at a few implementation ideas – and put you smack dab in front of the need for resources to do these projects. Possibly you'll recommend adopting a project management methodology and training key professionals in it's use. Perhaps some special projects will need to be staffed to define detailed processes or build knowledge bases. Or, you may feel the need for a defined methodology for creating an effective upfront product definition. All of these cost money or at least further planning time. Eventually you'll boil it all down to the statement that "by spending \$X on a, b and c we expect to achieve the performance improvements of ___, ___ and ___ by (date). Create this value proposition early and test it on management to see if, once you develop credibility for these statements they will in fact commit to investing in your recommendations.

14. **Make a Trip** – No matter how much time you spend exploring the above issues and how much actual data you have to back up opinions, you'll still be relying on the team to come to some shared vision of "the way things need to be." Often that vision can come faster by taking a trip together. The trip may be to examine the practices of another company or to attend a conference. If possible try to extend the trip by a day and have an off site team meeting away from the office. Having the group hearing the experiences of others then discussing them can help create a common understanding of the road ahead.

15. **Find the Jewels** – Companies can't be excellent at everything. Likewise your product development system won't excel in every potential area either. Figure out what it is that makes your products accepted by your customers and, likewise, what that will be in the future. Then, determine the specific product development competencies and skills that have been (or will be in the future) the vehicles for building these product qualities. These are your product development crown jewels. Develop specific scenarios for nurturing these competencies as you go forward.

16. **Look Here First!** – As you analyze 'what is wrong with Product Development and Innovation in our

The basic competencies for Product Innovation are shown below. Buried within each competency area are usually specific "strategic competencies" that are the foundation for your competitive advantage. Discovering these jewels is at the heart of a winning product development strategy.



organization' (often described as "why does it take so darn long to create undistinguished products") please realize the answers can **ALWAYS** found in one of the following areas:

- Inconsistent product vision
- Weak Leadership
- Ineffective processes
- Lack of Understanding the Customer

Sometimes (usually in fact) it involves more than one of these areas but, trust me, exploring the above facets of how your organization conceives, develops, births, maintains and retires products will **ALWAYS** get you to the core issues quickly. Are you listening? I said **ALWAYS**.

17. **Include Marketing** – PD improvement initiatives often tend to get technically focused quite fast. But the PD improvement strategy is both a business and technical plan. Include marketing around the table as much as possible to keep focused on business benefits and cross-functional processes dedicated to **driving value** to customers.



18. **Predictive Metrics** – In item 10 we talked about the need for your team to adopt a major performance improvement goal. As part of your plan you'll also want to establish a few operational measures that your team feels can predict overall performance. These measurements serve as distant early warning indicators of improved performance. Such predictive metrics of course vary depending upon your overall performance goal (usually expressed in terms of cycle time, predictability, business success of products, or quality) In our experience most teams leave the idea of specific measures until too late in their effort. Early agreement on forward-looking indicators of progress (e.g. reduced requirements changes, time to commit to new projects, percentage of developers visiting customers to name a few) can focus the group's action plan and save endless debate on "what we're trying to do here".

19. **Change Minds/Make Clear Choices** - In addition to monitoring implementation progress with metrics, I find it important to measure the effectiveness of the planning team. Often such task forces start out with widely varying opinions on how things ought to be" and after a time seem to find common ground. While appears to be progress the apparent harmony may be superficial. People have learned to avoid the critical tough issues on which they disagree. You know your dialogue has been important and valuable in defining a useful improvement strategy if you can score on the following metrics:

- The number of team members who **actually changed their minds** about a key issue as a result of the team's efforts/deliberations. Without this you may have been avoiding the tough issues or learning to find a least common denominator description.
- The number of clear choices that the team made. If the team can't identify at least a few key areas where they've actually made some tough choices (often as result of some minds being changed) you probably aren't heading toward a plan with real traction.

20. Stop/Start/Continue – One simple way of summarizing improvement choices made by the group and communicating these to the rest of the organization is to build a list of important organizational attitudes, practices and behaviors which fall into one of the following categories:

- **Stop** – Behaviors/practices we intend to eliminate or modify.
- **Start** – Behaviors/practices that have been missing in the past but will now be nurtured
- **Continue** – well you get the picture... these are the (few?) practices that are working well and need to be further baked into the organization's PD System.

21. Use a Consultant – While this sounds like an obvious plug (OK it is.) I can offer the following observation. A few years back I served as the lead evaluator for an award on integrated product development being offered to hardware manufacturers. As part of this I had the opportunity to review written analysis of product development practices by over seventy organizations and conducted thorough on site reviews of about twenty of them. Some had engaged consultants. Most had not. It was obvious when an organization had involved a skilled PD consultant to coach their improvement efforts. Those who had worked with a consultant had made faster progress, demonstrated a more mature understanding of their status and exhibited improvement on a broader range of activities.

Remember: There is a reason why Doctors don't treat their own families as patients. It's hard to be dispassionate. It's easy to miss issues that are right under your nose. It's hard to get those close to you to take good advice.

22. Use a Consultant Wisely – One of the great misplays of many organizations when using a consultant to improve product development performance is to assume the consultants can drive change. Many organizations look for the largest, most expensive, prestigious firm to guide their product innovation metamorphosis believing that misaligned internal silos will fall into line when they hear recommendations from venerable experts.

In our experience meaningful changes happen when key internal leaders understand the value, scope and character of necessary changes to behaviors and practices and make it happen. As a result the time of consultants can't be substituted for daily, internal participation in the improvement initiative.

As we mentioned in tip number 1 "the journey is as important as the product – make the right people accompany the consultants on the journey.

Well that's it... the sum total of **everything I know** about PD Improvement Initiatives. (Well, not exactly because -- the secret is in the sauce as they say.)



Joseph Kormos is author of Product Planning Practices in the Software Industry, published by Culpepper and Associates.

Innovative Development Associates helps high tech companies benchmark and improve product development processes to boost the payoff from their R&D investment.

The Product-MASTERS Collaborative is a benchmarking and improvement network of product management/development executives dedicated to helping member companies compress innovation cycles and build differentiation through the adoption of mature product development management practices.