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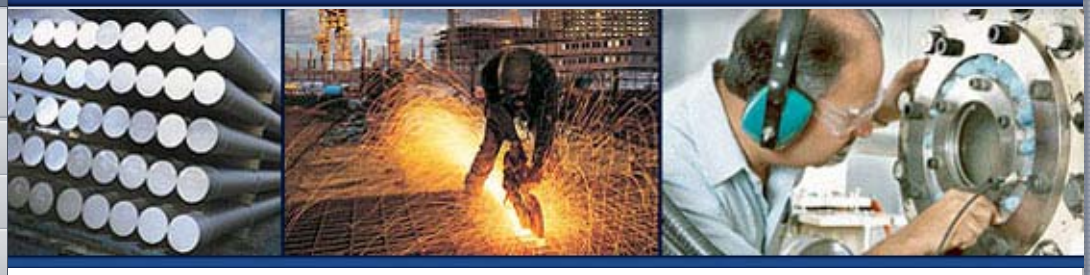

What's Really New About Innovation? Managing It (Part III)

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With patent and trademark applications up significantly over the past few years and the recent explosion of new products, the question for firms is not if they should innovate, but rather how they manage their innovation efforts. Georgia Tech's Enterprise Innovation Institute believes manufacturers should borrow from their own playbook and apply their well-honed skill of process management to the innovation effort (see graphic).

In short, firms should break down the innovation system into its core processes. The processes then need to be aligned with each other and with other relevant processes such as the organization's strategy and culture, then be allowed to operate without bureaucracy.

Enterprise Innovation Institute staff suggest firms begin by analyzing three core processes of opportunity sensing, idea incubation, and opportunity development. They also believe manufacturers should expand the traditional view of innovation beyond product development to include new types of services such as systems integrators and new processes such as involving customers in product design. Previous issues of *Focus on Manufacturing* discussed the first two processes; this issue examines the third.

Opportunity development is the stage in the innovation process where the rubber meets the road. In short, we move opportunities from ideas and feasible concepts to detailed business cases, prototypes, and product launches. We also begin a series of hurdles where "go/no-go" decisions are required and each "go" decision demands additional and, typically, increasing investments. The challenge is to move fast enough to take advantage of a potential market opportunity but be willing to stop before the next hurdle if red flags start to fly.

Many companies have adopted a streamlined decision-making process to manage concept development. Several such processes have their roots in the Stage-Gate methodology developed by Robert Cooper, PhD, president of the Product Development Institute (http://www.stage-gate.com). Increasing innovation as the primary competitive strategy throughout the global economy has created significant pressure on all companies to move ideas through the concept development phases and into the opportunity development process.

In the course of working with numerous firms over the past few years Enterprise Innovation Institute staff have been exposed to various concept and product development processes. Three significant components seem to be consistently applied by firms with a history of successful new product development: (1) development of a data-driven business case, (2) use of prototypes early in the process, and (3) adoption of an integrated and detailed product-launch planning discipline.

Not every company develops a market-driven business case for new concepts, and fewer spend the resources to collect market data or test demand assumptions with potential customers. Often, senior managers or engineers become enamored with a new concept or product idea, particularly if they had a part in creating it. Their zeal to "birth their baby" can blind them to the fact that although their idea is interesting, the customers won't pay for it! So if the decision-maker to sign off on the first hurdle (*Can we bring this concept to the market and make money?*) is the senior manager, it is little wonder many managers don't demand rigorous business cases.

To prevent this from happening, we recommend the sales assumptions be validated with external data. This may be an iterative process beginning with an educated guess and moving through focus groups to market validation field studies. We also recommend that manufacturing sign off on the estimated production costs and total quality requirements. The investment in

collecting real data and more thoroughly analyzing the feasibility of profitably taking the concept to market may result in a “no-go” decision. We believe such a decision is a success because the company that cuts its losses early has some funds to invest in another project.

Another critical component of the concept development process is the ability to build prototypes. Successful companies build prototypes quickly and often. The old saying that “A picture is worth 1,000 words” is pure wisdom when applied to the opportunity development process. The picture may be real basic in the early stage of the development process, but it will become clearer as more people look at it, particularly if some of them are potential customers.

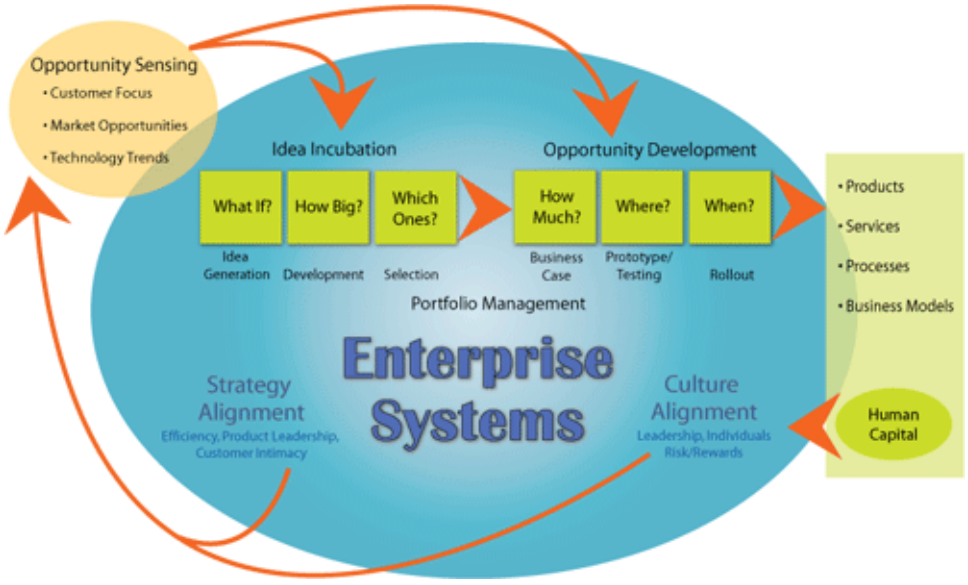
Many companies have adopted CAD tools to help facilitate design. Rapid prototyping centers and design firms can build inexpensive models using stereo-lithography technology. Some companies have very creative maintenance, machining, and engineering departments that collaborate to produce amazing prototypes. Remember, the prototype’s purpose is to validate customer demand and support manufacturing design.

A third component of the opportunity development process in innovative companies is an almost obsessive attention to building an integrated rollout plan. The image of an orchestra conductor comes to mind when describing an effective rollout plan. Marketing has precisely identified the initial markets, sales has developed campaigns that clearly describe the problem the next concept solves, manufacturing has built reliable and scalable processes to support a rapid increase in demand, and customer services is knowledgeable of next product features and capabilities. Great rollouts, like great concerts, result from practice and coordination. Imagine the opening night of a concert being the first time the orchestra met and actually played the entire piece. When a company has invested considerable funds into developing and testing a new concept, why should they risk a flop on opening day because of poor execution?

Now comes the hard part of opportunity development – reducing the time from opportunity selection to new product launch. One aspect of doing so is clearly systematic communication with all the players. Most companies have embraced project management tools and techniques to support this communication need (a discussion on project management can be found at the Product Development and Management Association’s web site http://www.pdma.org/). Many small companies have adopted tried-and-true methods of project management and call weekly, even daily, meetings. One company took all the chairs out of the conference room and turned the walls into progress charts to ensure the meetings were short and focused.

A second aspect of project management is a shared sense of urgency. Some of the most aggressive companies measure and report “time-to-decision” for each step of the concept development process. And why not be aggressive? After all, the name of the innovation game is no longer a single new product or concept, but one every few months.

--Ned Ellington
Enterprise Innovation Institute



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