Creating Value in Product Innovation

Project Management Capability is Strategic

The project manager is uniquely positioned to be a catalyst for the value dimension of product innovation.

Gregory D. Githens, PMP

Welcome to the "product launch" of *PM Network*'s Special Topics issue on New Product Development. Practitioners in all areas of project management will find something of interest in this issue.

This introductory article highlights a few links between project management and strategy. One concern of strategy is understanding the factors that affect the success and failure of the project. These factors include the product value proposition, internal competencies, product development capabilities, top management support, and external factors (see sidebar). The articles in this issue present strong evidence for considering project management a significant business process.

Products *Are* Value, Projects *Create* Value

A Guide to the PMBOK defines a critical distinction: the project is the work that creates the product-of-the-project. The product is the reason for the project's existence.

What is a successful product-of-the-project? (Products are both goods *and* services.) A successful project creates a successful product, which I define as a product that creates value for the customer and value for the company. Objectives of time, budget, technical elegance or please-the-boss parameters do not entirely define project success. Project participants must understand how stakeholders value their products.

Customer Value. Customers buy benefits, not features. They find value through calculating a benefit-cost ratio. When choosing among competing products, they select value by considering one or a combination of greatest benefits, least cost, or greatest ratio. Buying is a highly subjective, personalized process of determining relative value.

Product features are the physical or functional attributes of the product. *Features* are relatively easy to understand and physically model, *benefits* are not. Project developers must invest up-front time evaluating the "voice" of the customer and the "context" of the customer with regard to desired benefits. The *customer value proposition,* an integral part of every product development plan, is a statement of vision for the product which considers the required functionality (benefits) and cost.

Customers demand more value over time. A product benefit that once delighted the customer becomes a basic expectation. Guaranteed overnight delivery or built-in cupholders in automobiles are examples. Product development becomes a value-adding process practiced throughout the product's life cycle.

Company Value. Companies create value and manage risks through their portfolio of products and technologies. Product and technology portfolios are investments that bring opportunity, risks, and rewards. Product portfolios provide opportunities to reach multiple markets or to serve the same market with multiple offerings. Technology portfolios provide opportunity to create new products based on a core technology.

The Catalyst for Value. Project management is the vehicle for applying the technology portfolio and realizing the product

portfolio. Because projects are customer-focused, the developer can fit organizational capability with demanded customer benefits. In terms of creating value, product development is a vital cross-functional business process, not a technical function.

Product Innovation Strategy and Project Management

All product innovations include three dimensions that collectively define the degree of innovativeness of a product. The first dimension is that of the *technology architecture,* which are innovations in how the product functions. The second is *market selection*, which is the segmenting of the market and positioning of the product. The third dimension of innovation involves methods for producing the product, the *production competencies* of the organization. Production competencies

Does Project Management Affect Product Innovation Success?

Success in the marketplace is the primary objective of product innovation. The framework described below will help project managers to develop a deeper understanding of success.

In addition to the articles in this issue, we have data confirming the importance of the project execution activities. Figure 1 presents a model of ten factors influencing product success, grouped into five themes. The ten-factor ranking was developed by Cooper and Kleinschmidt after evaluating the reasons for success and failure in 203 new product development projects. (For more information, see *Winning At New Products* by Robert G. Cooper, Addison Wesley, 1993.) Project-level development activities have a clear and important role in this model of product success.

The factors fit neatly into the following five themes:

Superior Product Value. Superior product value (#1) is the most important determinant for a winning product. This means that the product delivers value to the company and the customer. The creation of value reflects the competencies of the organization and its alignment with customer needs. Superior product value is the output of the product development and organizational strategy process

Project Development. Four factors are cross-functional project activities, with very high rankings. They are early and sharp product definition (#2), quality execution of technical elements (#3), quality execution of up-front activities like business and financial screening (#5), and the execution quality of market tests, prototypes and launch (#7). The project management process is the organizing discipline that assures quality execution.

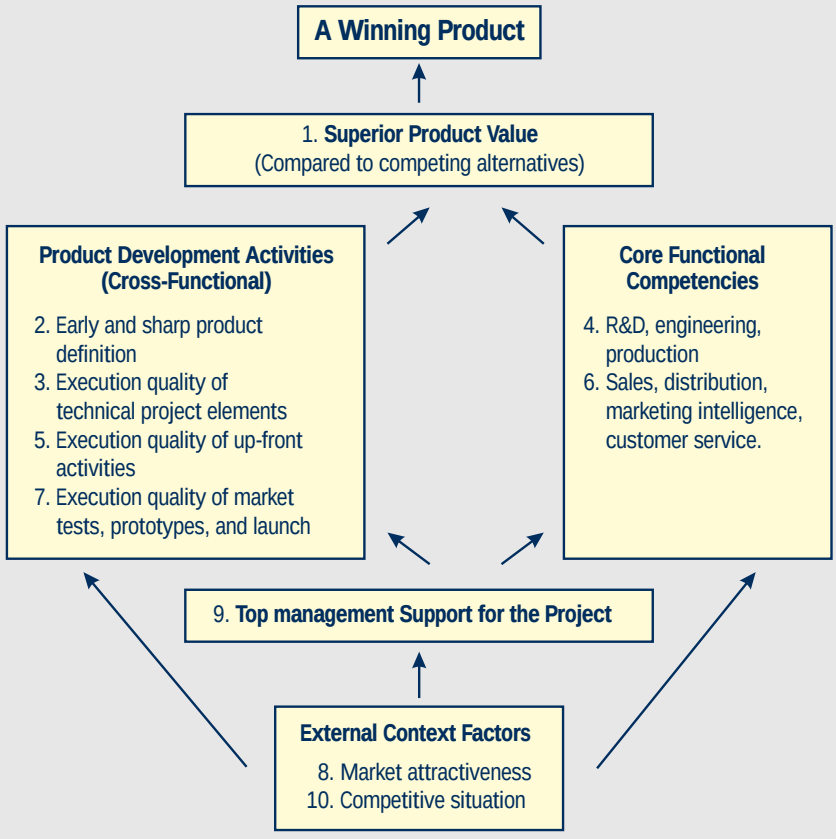
Core Functional Competencies. The functional capabilities of technical, engineering and production (#4), and marketing (#6) provide the inputs for creating synergies with the demanded customer benefits. Development projects are the vehicle for creating the synergies expressed in product value.

Top Management Support. Senior management support (#9) is a driver of both cross-functional and functional excellence. This support provides vision, influence and resources to the organization.

External Context Factors. External variables affect the product's success, creating risks and opportunities that the enterprise must manage. These include market attractiveness (#8) and competitive situation (#10).

Test your own product development projects against this model and see if the team has all the resources, information, discipline, and guidance needed to achieve the intended result.

Figure 1. Factors Influencing New Product Success



determine the cost of the product, and its quality. Collectively these dimensions describe the customer value and company value propositions, helping to explain product success and failure.

Product development team members often become "feature creatures," focused on the physical representation of the product proposition. They find it easier to cope with tangible product features than to understand the abstract propositions of customer value and company value.

The project manager has two critical product development roles in working with the abstractions of strategy: as Translator and as Challenger of Strategy.

Strategy Translator Role. Innovation involves fundamental uncertainties about product technology, market behavior, production capabilities, and customer requirements. Rework and waste often occur when the project team does not understand the product strategy. The strategy translator role involves interpreting product vision into the concrete technical language for individual participants, and supporting with teaching and coaching behaviors.

Strategy Challenger Role. The project team fits the product offering to the customer and the market. Project managers must help organizations avoid wasting resources on ill-advised product opportunities. They must actively *challenge* the product strategy. A "best practice" is to allow and encourage the project team to say NO! when there is a mismatch between intent and capability. Indicators for the mismatch can include changed strategy objectives, adequate resources and over-committed resources.

In This Issue: Project Management is a Strategic Capability

Because tactical execution drives product success, the project management capability is increasingly significant. Project management applied to product development is a crucial capability, deserving of search for "best practices."

The articles in this issue explore the best-of-breed of project management for product innovation. The authors describe what works and what does not work. You will read about the fundamental importance of supporting change in corporate culture as well as practical techniques for planning and executing new product development projects. A theme common to all articles is the critical importance of fully-engaged *early* definition of the product and the project.

In our first article, Carol Wright, PMP, and Nick Schacht, PMP, describe the role of project management in a major reengineering effort at IBM. IBM is adopting project management as one of its most important enabling processes in the corporation's integrated product development business model.

In our second article, Ken Ports, Maggi Dutczak, and Alex Walton, PMP, describe the development of a best practices project management culture at Harris Corporation. Their results with *Project:Go!* provide an inspiring example of the value of effective project management practices.

Next, Cindy Berg, PMP, explains the role of project management improving Medtronic Micro-Rel's business. She raises several crucial issues regarding the flexibility-control paradox in applying templates to the new product process.

In a new environment of vertical strategic alliances, it's crucial to attend to the contribution of our supplier-partners. Eberhard Scheuing, Itzhak Wirth, and David Antos describe how the purchasing function can help the project team save time and cost. They provide a terrific example from Eastman Kodak Company.

In our next article, Mark Durrenberger, PMP, applies Modern Project Management tools and builds team behaviors. This practical article can benefit

many organizations that need to achieve "hard" results but need "soft" methods to enable their process.

In our sixth article Barry Brownstein, PMP, evaluates the technique of project templates and examines their application to a medical products firm. He provides insight into an emerging trend of groupware project management tools in distributed work settings.

Creativity is traditionally an ad hoc practice. In an introduction to an exciting leading-edge technique, Ellen Domb, Bob King, and Karen Tate, PMP, describe how to dramatically improve the results of invention and product innovation. Systematic innovation is a significant new product development technique for "technology push" markets.

The final article draws from the experiences of Mark Durrenberger, PMP, Beebe Nelson, and Steve Spring. They correctly point out the importance of identifying and managing the external forces in new product development. They describe the vital roles that project team members play and provide techniques for anticipating risk and uncertainty.

Our team of authors have made an important contribution to the practice of project management in product innovation. They deserve our deep thanks. We also need to recognize and thank Paul E. Shaltry, PMP, and Sheldon Conary, PMP; they were the behind-the-scenes reviewers who invested considerable time in examining and commenting on each article. ■

Greg Githens, PMP, is chair of the New Product Development Specific Interest Group. He is a project management consultant with MaxiComm Project Services and specializes in innovation. He is also a member of *PM Network*'s Editorial Board.