



New Product Innovation and Development

A Case for Change

Innovation is woven into the fabric of Colgate.

Colgate-Palmolive Company

Microsoft was built on innovation, and our future depends on it.

Microsoft Corporation

We continue to devise new ways to enrich the Starbucks Experience.

Starbucks Corporation

Comments like these, from the most recent annual reports of three of the world's foremost corporations, highlight the crucial role that new product development, or NPD, plays in driving strategy and, ideally, creating value. These and other market leaders recognize, respond to, and sometimes even create the trends that are the engines of their industries. However, market leaders are clearly not

the only drivers of new product development. Consider that the annual rate of new product introductions for consumer packaged goods in North America has doubled over the past ten years alone. Countless organizations, large and small, are producing this dramatic increase in innovation initiatives.

Despite their best efforts, however, many companies remain disappointed in their ability to introduce profitable innovations to the market in a consistent, efficient and cost-effective manner.

Consequently, business leaders face a complex and often conflicting set of questions that span a broad array of strategic issues:

- How do we effectively manage a diverse portfolio of existing and potential products and services?
- What are the most objective and useful methods of comparing and making critical trade-offs on a like-for-like basis?

- What is the optimal level of capital and resources to invest in specific initiatives, and for what expected return?
- How do we minimize time-to-market without sacrificing product quality?
- Can we address customers' needs without shifting value from shareholders to consumers?
- From an organizational perspective, how do we promote and exploit innovation?
- What are best practices for capturing the lessons learned from new product development efforts?

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Through our experience working with leading product and service companies, we have learned that those organizations that are effective at innovation and product/service development do not address these types of issues on an ad hoc basis. Nor do they commit resources and structure their organizations without a clear process and model of success.

Our research into the U.S. packaged foods industry, for example, has shown that, although certain sectors of the market may be highly consolidated, innovation activity is not necessarily a function of a company's market position. In other words, companies with high market share do not launch drastically more products than their peers. Innovation value – the revenues generated specifically from new products – is, on the other hand, extremely consolidated within a small number of companies. This suggests that many innovation initiatives are unsuccessful. Additionally, we have found that market share leaders often launch the most successful innovations.

Market leadership clearly confers advantages that can greatly improve a new product's likelihood of success – a strong brand, extensive distribution networks, a sophisticated sales organization, etc. Nevertheless, having a formal, highly structured innovation and NPD process in place within an aligned organization can significantly increase a company's chances of consistently launching new products that sharpen competitiveness, capture

market share and create value. The market leaders we examined capitalize on this fact and structure their NPD processes to ensure the highest likelihood of success.

In this issue of *Executive Insights*, we consider several themes and best practices common among successful innovators. We examine the fundamental principles of effective NPD processes as observed across a diverse set of companies and industries, explore how these principles can be applied in practice, and consider the organizational implications of implementing a successful NPD program.

Foundation Elements of Effective NPD Processes

L.E.K. Consulting recently examined the innovation and new product development processes of 25 sector-leading companies representing a range of industries, including consumer products, financial services, hospitality, aerospace and transportation. To deliver a broad cross-section of key NPD characteristics, companies were selected with a number of criteria in mind, including:

- Number of active initiatives
- Scale of investment
- Mix of products versus services
- Balance of retail and industry customers
- Length of development cycle and pace of market change

NPD portfolios ranged from a small number of long-term, multimillion-dollar projects to hundreds of smaller initiatives characterized by relatively short time-to-market expectations and high churn rates.

Although the industries, company cultures, customers and scales of initiatives varied widely, we isolated four key principles of successful NPD programs present in all best-practice companies (see Exhibit 1):

- A highly structured innovation and NPD process
- Flexible and dynamic organizations
- Innovation directly linked to overall corporate objectives
- Post-project reviews and corporate learning systems

Although the characteristics of individual NPD programs varied across the peer set, each company consistently incorporated these four key principles, adapting each to reflect its unique culture, strategy, organization, industry and competitor dynamics.

Breaking down and examining the four key principles into their basic elements can aid us in understanding how each can be incorporated into an innovation and NPD strategy to increase the likelihood of successful new product and service introductions.

Exhibit 1

Foundation Elements of Successful NPD Programs

- 1. Highly Structured Innovation and NPD Processes**
 - Formal gating process
 - Process support systems
- 2. Flexible and Dynamic Organizations**
 - Cross-functional teams with accountability
 - Aligned performance management and appraisal systems
- 3. Innovation Directly Linked to Overall Corporate Objectives**
 - Clearly articulated strategic goals guide innovation
 - Explicit customer value/cost of delivery trade-off
- 4. Post-Project Reviews and Corporate Learning**
 - Assessment of performance versus expectations
 - Lessons learned directly incorporated into the process

a remarkably effective approach, with the benefits being a better product, maximized resource utilization and reduced time-to-market. The specifics vary, but broadly speaking, three gates are typically used: (1) the *Initiative Screen*, (2) the *Product Brief*, and (3) the *Business Case* (see Exhibit 2).

The Initiative Screen focuses on capturing a firm's creative efforts by cataloguing early-stage innovations and concepts. It provides a standardized structure for describing a potential product or service, its value to customers and shareholders, and its link to strategic objectives. The Initiative Screen is designed to foster creativity rather than engage in rigorous analysis.

Foundation Element 1:

Highly Structured Innovation and NPD Processes

We discovered that the companies we examined are consistent in their disciplined use of structured process management systems. Specifically, successful innovators have generally adopted some form of gating

processes and formal support in their drive to make NPD more likely to succeed.

Gating Process

Structured one-way gating processes form the backbone of each of the NPD programs we examined. The objectives of these systems are simple but effective: bring together the right people with the right information at the right time. This is

The second gate, the *Product Brief*, mobilizes internal resources to analyze the feasibility, potential demand and competitive positioning for a proposed product or service. It includes preliminary product specifications and an accounting of the likely operational considerations and potential economic costs and benefits. The positioning relative to competitors is evaluated and potential reaction assessed. Where the Initiative

Exhibit 2

	1. Initiative Screen	2. Product Brief	3. Business Case
Product/Service Description	<ul style="list-style-type: none"> • Idea capture • Mainly descriptive 	<ul style="list-style-type: none"> • Product work-up • Key specifications ranged • Concept diagrams 	<ul style="list-style-type: none"> • Detailed feature description • Specifications confirmed • Prototypes tested
Analysis/Resources	<ul style="list-style-type: none"> • Business opportunity • Indicative benefits • Fit with strategy 	<ul style="list-style-type: none"> • Initial financial case • Competitor analysis • Qualitative benefits • Internal resources assigned 	<ul style="list-style-type: none"> • Complete business case • Full project team assigned • Detailed budget submitted • Performance metrics and timing
Research/Feedback	<ul style="list-style-type: none"> • Anecdotal/experience based • No new spend 	<ul style="list-style-type: none"> • Research budget approved • Customers/stakeholders engaged 	<ul style="list-style-type: none"> • Validation of key assumptions • Customer value analysis • Targeted market testing
Vendor Involvement	<ul style="list-style-type: none"> • Limited 	<ul style="list-style-type: none"> • List of potential vendors/partners • May engage in development 	<ul style="list-style-type: none"> • Preferred vendor selected • Tender documents prepared • Negotiation started

Screen is primarily focused on creative efforts, the Product Brief is more analytical and applies established criteria in order to prioritize initiatives. The criteria for passing this gate are high, with many initiatives failing at this point. Those initiatives passing through this gate are rewarded with project teams, management support and financial resources. The sidebar on this page illustrates how one company systematizes the Product Brief gate.

The final gate, the Business Case, readies potential products for full-scale implementation and coincides with the highest level of pre-launch spend. It is a highly collaborative process in which vendors are evaluated and engaged as development partners, prototypes are built and tested, and potential customers are surveyed. An evaluation team outlines detailed product specifications, charts the product lifecycle, quantifies the expected financial impact, and develops a comprehensive project plan. Competitor analysis is completed and potential impacts reflected in the financial projections and product strategy. Process and project key performance indicators (KPIs) are specified and targets are set. Process KPIs measure the efficiency of the NPD function, while project KPIs capture the market-facing, product-specific, and economic performance dimensions. All metrics are integral to the business case and establish a performance contract between the project teams and the gatekeepers who represent shareholders' interests. Initiatives passing through the Business Case gate are approved and funded for final development and launch.

All companies use some sort of approval process, whether formal or informal. One attribute that makes a gating process effective is that each stage contains its own unique criteria. Decision criteria are predefined for each gate and are linked

directly to corporate and business unit targets agreed to in the strategic plan. Initiatives unable to satisfy these requirements are rejected, whereas those that pass are rewarded with resources, funding and increased management support.

Not surprisingly, gating processes can have profound organizational implications. One company L.E.K. examined introduced a new gating process to support alignment of the key decision makers representing major functional areas. In the past, decisions made for some initiatives were revisited and specifications changed many times over the life of a project. This iterative approach contributed to a significant level of rework, a lack of direction within the project teams, conflict at the senior level, and pressure on vendors to meet deadlines with increasingly compressed lead times. Ultimately, in a drive to honor a set launch date, product testing was undermined, resulting in poor reliability and performance. Despite best intentions, too much flexibility resulted in a sub-par product with expensive retrofit bills and, ultimately, dissatisfied customers.

In this example, the introduction of a gating process raised significant organizational issues. Key stakeholders reacted negatively to losing what they perceived to be flexibility and control over the process. It was critical, therefore, for this company to design gates and establish new "rules of the game" to retain the benefits of some flexibility while eliminating negative implications to the teams, customers and product performance. On a practical level, the senior executive team underscored the importance of these organizational changes by visibly changing its behavior and practices.

NPD in Practice

Structured Innovation and NPD Processes

Biotechnology companies are highly dependent on discovery and innovation to bring new products to market. Although scientific discoveries are often considered serendipitous, one company with which L.E.K. Consulting works has applied a rigorous process to its discovery engine – especially to its gating process – to ensure only the most promising projects are advanced and receive the resources needed to succeed. At this company, each project undergoes three days of critical review prior to commitment. The first day is an open scientific review during which the lead scientist of the project presents to a general audience and senior management. The second day is a closed scientific review that involves only the lead scientist and the senior managers who make a go/no-go decision. The last day is a review by the resource committee, whose members decide the level of support and resources to commit to each project. This rigorous gating process allows the organization to prioritize and develop only the most promising scientific discoveries into a therapeutic product.

Support Systems

All the companies we examined use a wide range of tools to facilitate effective process management. Project management systems, for instance, track progress by initiative and report against agreed milestones. Regular status reports provide advance warning for projects when KPIs trend outside of agreed variances, and remedial action is tracked and escalation enabled where appropriate. These systems also serve as the central collation and dissemination mechanisms for project-related documentation and scheduling.

Support systems vary, with some customized enterprise systems available online through corporate websites, while other systems consist of standalone project management tools. Standard documentation and use of preset templates are common, with agreed formats adopted across teams to streamline communications.

Personnel allocation and tracking systems are used to manage capacity utilization and ensure that projects receive the necessary resources, with systems solutions ranging from enterprise applications to independent spreadsheets.

One company described its web-based solution as essential to improving NPD performance. In this system, predetermined templates are available for each gate, including the fields required to satisfy gate criteria, and online help functions provide work examples and explanations. Drop-down menus prompt users to ensure that initiatives meet those criteria that are linked to business objectives. Teams using the system to manage project workflow and coordinate with

gatekeepers find that the use of templates supports a consistent approach and streamlines cross-functional team collaboration. Gatekeepers find that they are able to keep abreast of project developments and make decisions as efficiently as possible.

This company found the system worked very effectively as a central repository for all project-related documents, approvals and budgets. It became the “collective conscience” of the NPD process and played a critical role in post-implementation reviews. Importantly, this system ensured that standards were adhered to across the business and that project teams had a reliable mechanism to move initiatives rapidly through process roadblocks that were problematic prior to its implementation.

Foundation Element 2:

Flexible and Dynamic Organizations to Support NPD

In our experience, best-practice NPD firms have a number of common characteristics with respect to how they manage their personnel and organizational structure. Specifically, well-defined cross-functional teams, whose members work within an aligned performance system, are consistently employed within those companies that enjoy successful new product innovation and development.

Cross-Functional Teams

For instance, cross-functional project teams are encouraged, and each company's organizational structure is flexible enough, to allow individuals to be drawn from a wide range of departments, often for extended periods of time. In some cases, person-

nel are formally reassigned to NPD project teams for several years at a time.

Teams are given the autonomy to pursue and manage the project as they deem appropriate – always, of course, within the parameters identified and agreed to in the preceding gate. They are also given the accountability and authority to proceed to the next gateway without undue interference from senior management. Importantly, members of cross-functional NPD teams typically work together through to product launch.

Aligned Performance Management

Performance appraisal systems are calibrated such that NPD teams are rewarded in terms of salary, bonus and promotion based in part on project success. Against this backdrop, senior management provides vocal and active sponsorship and encouragement, as well as clear strategic guidance. Overall, this approach generally results in highly motivated, cohesive project teams with a strong sense of pride and project ownership.

The experience of one company demonstrates the importance of designing and reinforcing a dynamic and flexible organizational structure to support NPD. Following implementation of an NPD project, the company was frustrated to discover that initial process improvements soon regressed to pre-project norms. Investigation into the root causes of this shift revealed that a change in the NPD process alone was not sufficient to change behavior: After a brief “honeymoon” period, many team members involved in the project simply reverted to practices, processes and behaviors with which they were most familiar and comfortable.

Senior management realized that modifying and reinforcing behavior was key to success and that this required a significant change in corporate values. After translating the company's strategy and business plan into a compelling internal communications plan, management explained to key constituents why the existing approach to NPD required change, how it would be changed, and how specifically the new process would benefit customers and shareholders. New roles and responsibilities were also detailed, and, critically, the performance management and appraisal systems were realigned to reflect these new values and demonstrate how this directly affected employees.

Foundation Element 3:

Innovation Directly Linked to Overall Corporate Objectives

Our experience and research have confirmed that, in addition to highly structured NPD processes with flexible and dynamic organizational support, many companies with consistently successful NPD programs link innovation directly to strategic objectives in their planning processes, decision criteria, and communications. Furthermore, we have found that a sophisticated appreciation of the trade-off between customer value and costs is another hallmark of successful innovators.

Articulated Strategic Goals

All of the best practices companies we examined have clear, proactive and focused approaches to product innovation, and their NPD programs are integrated and consistent with corporate and business unit strategies and targets. Agreed corporate objectives guide their NPD activities,

which in turn are reflected in business unit performance targets, resource allocation and financial budgets. This ensures that individuals within the organization are fully aligned and, consequently, help to mitigate the type of poor productivity commonly associated with uncertainty and a general lack of direction. This approach also provides an internally consistent mechanism to prioritize competing initiatives and ensures that scarce resources are applied in the most effective ways.

Customer Value/Delivery Costs Trade-offs

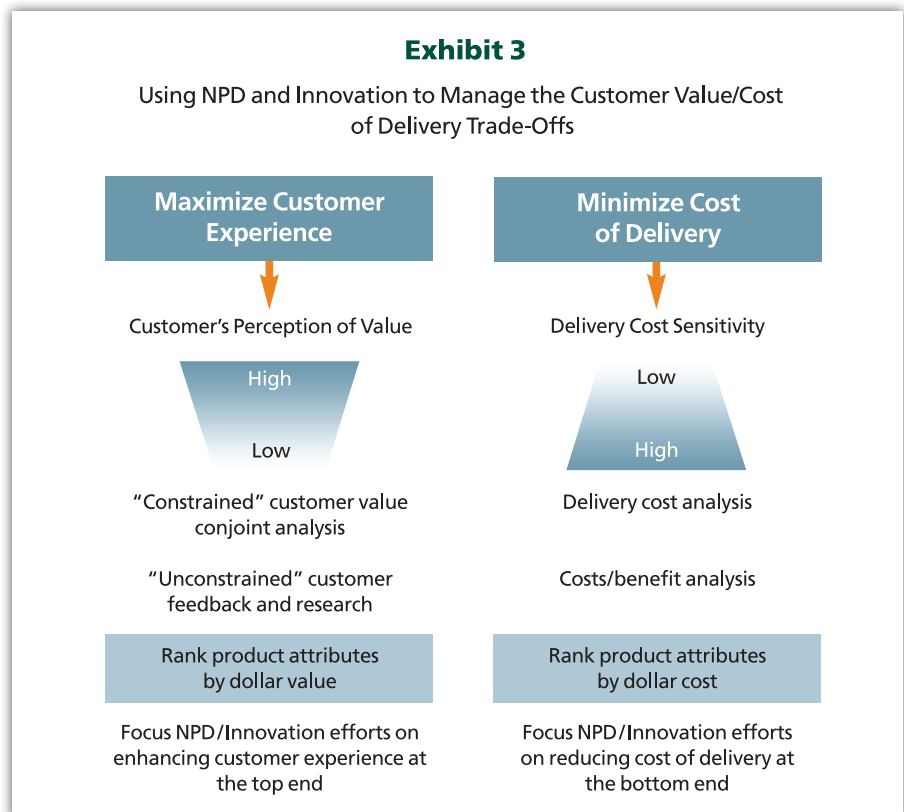
Critical to linking NPD processes to corporate strategy is understanding how customers perceive and value existing product and service offerings.

Particular attributes are generally perceived as being more valuable to a given customer

segment than others. Once this range of perceptions is understood, resources can be focused on enhancing the customer experience in the areas that are most highly valued as well as on reducing the costs associated with those of least value. Simply put, invest behind the characteristics that customers are willing to pay for (and set prices accordingly), and rationalize costs where customers are indifferent (see Exhibit 3).

This is a very strategic approach to enhancing customer satisfaction while simultaneously improving financial performance – an approach that often demands a not-too-subtle shift in thinking about how to engage most profitably in innovation.

For example, organizations driven primarily by marketing considerations frequently err on the side of transferring too much



value from shareholders to consumers. To avoid this value-destroying trap, a healthy tension between the costs and benefits of innovation and NPD must be proactively managed. This requires an in-depth understanding of the trade-offs customers make between the level of delivery and the dollar value for a given product or service attribute. Such a holistic approach addresses both the revenue and cost aspects of NPD and makes the linkage between new product or service development, corporate strategy and performance clear and explicit.

A case that illustrates the impact of balancing product and service attribute costs and the benefits derived from them by customers may be helpful. L.E.K. Consulting collaborated with a company's innovation team to determine which features to redesign and which to de-emphasize in a relaunch of its trademark product. This was an emotionally charged debate in which different stakeholders aligned themselves with often opposing positions. To establish a fact-based benchmark and thereby mitigate the influences of emotion on the decision making process, conjoint analysis was used to test individual product attributes and determine which of them customers were willing to pay for, and by how much. This constrained view allowed the company to put their unconstrained customer surveys and research in perspective. As a result, significant variances between what customers wanted and what they would actually pay for were uncovered. In fact, the innovation team was surprised to learn that some features, considered indispensable by several team members, were of little dollar value to customers.

Ultimately, the relaunch led with a novel set of innovative features and established new standards for the industry.

Foundation Element 4:

Post-Project Reviews and Corporate Learning

Our experience working with and consulting to leading innovators has reinforced the importance of capturing and incorporating both key success factors and fail points in each NPD initiative.

In the companies we examined, products are tracked post-launch for their ability to meet market expectations while staying within projected cost and performance parameters. Successful product innovation is celebrated, while less successful initiatives are analyzed for shortcomings. In both instances, the lessons learned from development and launch are internalized by all stakeholders and applied against future initiatives. This contributes to a substantial increase in productivity and builds a culture of self-evaluation and project ownership.

The most successful NPD programs incorporate a detailed post-launch performance review of the process and project KPIs. Robust evaluations, often done by the original NPD team members, compare achieved results against the original estimates developed for the business case and launch. Where differences occurred, the project teams are encouraged to uncover and understand the differences between projected and actual results. By understanding why some aspects did not go as planned, best-practice firms are able to ensure that

adjustments are made to improve future initiatives. This proactive approach to continual learning is considered a key enabler of constant NPD program improvement.

Integrating Innovation and NPD Processes

The past decade has seen a dramatic expansion of choices as the number of new or enhanced consumer goods introduced per year has more than doubled. This rate of change has not been restricted to consumer goods, with the service and industry segments also experiencing much higher levels of innovation. From consumer goods to prepared foods, financial services to airlines, companies are striving to provide as many product and service choices as there are customer needs and wishes.

Altering a firm's product portfolio is always an important and difficult decision. Whether the new product is an airline's low-cost passenger offer, a pharmaceutical firm's transdermal drug technology, or a bank's adjustable-rate mortgage, customers respond to available choices based on their perspective of the differentiation and attributes introduced. Firms that employ clear systems, processes and tools to foster consistent innovation have a much greater likelihood of capturing market leadership and the associated economic performance. In the final analysis, a successful NPD program is a marriage between cultivating ongoing innovation and relying on clear processes. Long-term market leadership is best achieved when both are integrated fully into the organization and its strategy.

L.E.K. Consulting is a global management consulting firm that uses deep industry expertise and analytical rigor to help clients solve their most critical business problems. Founded more than 25 years ago, L.E.K. employs more than 900 professionals in 20 offices across Europe, the Americas and Asia-Pacific. L.E.K. advises and supports global companies that are leaders in their industries – including the largest private and public sector organizations, private equity firms and emerging entrepreneurial businesses. L.E.K. helps business leaders consistently make better decisions, deliver improved business performance and create greater shareholder returns. For more information, go to www.lek.com.

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