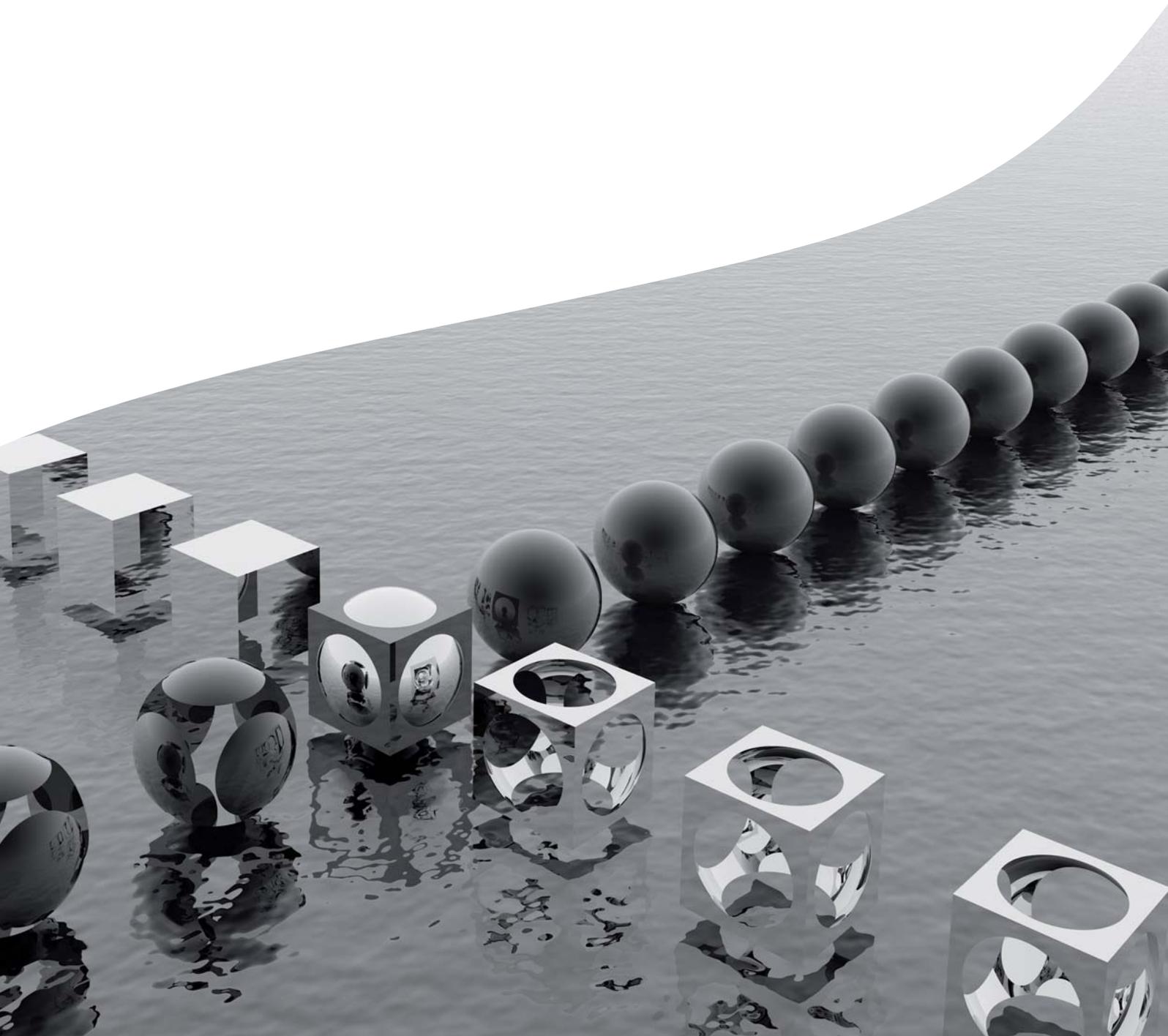


Transformation for Collaborative Innovation

Improving Product and Service Innovation



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Why is Collaborative Innovation so Important?

Companies want to be successful innovators yet few are consistently able to accomplish that objective. Establishing a sustainable competitive advantage related to innovation requires a focus on improving collaboration across many dimensions including the transformation effort itself.

The Context of Innovation

Innovation is a stated goal of almost every company in every industry. A recent survey of 765 CEOs globally found that they place a high priority on innovation in response to massive shifts in the global competitive marketplace¹. Even companies in commodity industries are looking for innovative ways to reduce cost or in some way differentiate their products or services from their competition. In response to this there is an ever increasing level of attention being paid to innovation. A recent Google search on innovation produced 124 million citations covering myriad companies, products, resources, and other innovation “enablers;” one week later the number of citations was up to 133 million!

The emphasis of this paper is on collaborative innovation as it relates to the development of products and services, in contrast with a more general discussion about business innovation. The focus on products and services covers a wide spectrum of possibilities including a new and improved laundry detergent, a new-to-the-world high technology device for medical diagnostics, or a new way of providing aftersales service for automobile dealers and all points in between.

Innovation through collaboration is increasingly being singled out as a critical success factor. Given the well documented trends of outsourcing for capability and cost efficiency, coupled with the interconnectedness provided by the Internet, some have questioned whether innovation and collaboration are the only competitive advantages that matter². If that is the case, how should companies transform themselves into collaborative innovators? Experience across a variety of industries has demonstrated that the answer to that question is ... collaboratively.

Collaboration may be the focal point but in nearly every company setting, a recurring theme is a focus on value in terms of growth in revenues, margins and usually both. In addition to the top- and bottom-line product and service driven benefits, a steady stream of innovative market offers is often a requirement for survival. To put it simply, a company that is not improving or innovating faster than its competitors is falling behind. All of these are commonly held beliefs but let's take a closer look at how important innovation really is.

The most sophisticated companies in the world are having significant difficulties establishing and maintaining a competitive advantage associated with innovation.

Innovation Benefits

In today's business environment growing revenues is important; however, given increasingly competitive global markets within all industries, it is often even more important to maintain or increase margins and to reduce costs. Many major business transformation initiatives concentrate in areas that reduce costs such as outsourcing back-office functions to lower-cost providers; installing enterprise resource planning to improve the efficiency of internal operations; or improving delivery performance and reducing distribution costs with a transportation management solution. These investments tend to focus on one specific area generally with a primary emphasis on increasing efficiency and/or reducing cost. These types of investments are necessary, but not sufficient, to sustain a company's long-term viability. It is primarily through product and service innovation that companies differentiate themselves and either expand or contract in their respective industries and markets. Fortunately innovation transformation, as contrasted with many other types of reengineering investments, is capable of driving both top-line (revenue) and bottom-line (margin and cost) benefits.

According to a study of more than 800 companies from across the globe the 25% best performing companies in each industry in terms of innovation efficiency, when compared with other companies in their industry in the bottom quartile had:

- 4% higher profit (EBIT) margins
- 2.5 times higher sales of new products (products less than 5 years old)
- 10 times higher returns from their innovation investments³

Although the benefits from innovation excellence are intuitively significant, and quantifiably substantial as illustrated above, the ability of companies to innovate consistently well is generally poor. More specifically, an extensive study of the companies across the world with the 1,000 largest corporate R&D budgets found that less than 10% of companies are high-leverage innovators. Compared with others in their industries, only 94 of the companies in the Global Innovation 1000 produced significantly better performance per R&D dollar over a sustained period.⁴ The small percentage of high-leverage innovators outperformed their peers across five key performance measures: Sales Growth, Gross Margin Percentage, Operating Income Growth, Total Shareholder Returns, and Market Capitalization Growth over a five year period. They also spent less on R&D as a percentage of sales than their industry medians over the same five-year period.⁵

In spite of the clear benefits from innovation, the largest and most sophisticated companies in the world are having significant difficulties establishing and maintaining a competitive advantage associated with innovation.

Why is Innovation so Challenging?

People involved in innovation must steer their organizations through the business, technical and political aspects of the creation process.

Something New

One of the fundamental challenges associated with innovation is the fact that by definition it involves something new. Along with “new” comes the need to overcome, at least to some degree, the inertia of the old, or the status quo. Innovating a product or service requires insight, initiative, imagination, intelligence, willpower, perseverance, and a long list of other capabilities and characteristics. The team or teams of people involved in innovation must not only create and advocate, they must also steer their innovations and their organization through the business, technical, and political aspects of the creation process.

Each aspect contains some degree of risk that certain factions within an organization are often all too ready to highlight and magnify. Companies of all sizes and types are very accomplished at identifying and mitigating risk, generally the larger the organization the more sophisticated are their abilities to reinforce the status quo and challenge something new. Tom Kelley, the general manager of IDEO, recognized the power of the “Devil’s Advocate” as a toxic force against innovation and has developed an organizational model with ten key types of innovation team members that are needed to effectively combat the Devil’s Advocate and successfully drive creativity and innovation throughout organizations.⁶

Ownership

The department generally thought of as owning or responsible for innovation varies considerably. In manufacturing enterprises the innovation steward is often thought to reside within Research & Development and Engineering. In consumer products companies the leader of innovation may reside somewhere within Sales and Marketing, possibly under Product Planning or Product Management. Still other companies have recognized the need for innovation ownership to be closer to operations and hold the COO responsible.

Regardless of where the responsibility for innovation execution lies, one key impediment to success is the belief that the majority of activities driving innovation reside within a handful of functional areas. Those companies that do not acknowledge the need to work collaboratively across the enterprise may arrive at products that could dramatically increase revenues and gross margins but often this value is ultimately not captured, presumably because it is eroded in the marketing, sales, operational, and administrative work required to bring the product to market. A key insight is the need for a cross-functional strategic approach to innovation: building a value chain that integrates R&D more effectively with marketing, sales, operations, and cost management.⁷

One sign of innovation’s importance and the need for top executive ownership is the belief that the CEO should ultimately be responsible for driving innovation. A 2006 study of 1,070 executives across 63 countries were polled about a number of issues regarding innovation. When respondents were asked to identify the person who is the biggest driving force behind innovation at their company, the CEO was selected by 45%; however, 55% picked someone other than the CEO in response to the question.⁸

The lack of cross-functional commitment to innovation and top management leadership is often a major contributor to problems companies have with both innovation execution and more importantly, transformation of their enterprises so that they obtain competitive advantage from their innovation efforts.

Without an end-to-end innovation process model, companies often tend to follow the latest fad or improvement approach even if it may not address company specific issues.

Process

Most of a company's processes are transactional in nature. Transaction-based activities are easily quantified both in terms of their costs and cycle times. It is these characteristics that have led to wave after wave of improvement initiatives and technologies including Reengineering, Activity-Based Costing, ISO 9000, Six Sigma, Enterprise Resource Planning, Supply Chain Management, eProcurement, and others. The measurability of transaction-based activities also makes them attractive candidates for improvement initiatives since they also are relatively easy to measure.

The attractive characteristics of transaction based processes often incents executives to apply similar approaches to the innovation area, sometimes with mixed results. At 3M in 2001 among a number of changes, James McNerney, the CEO, imported GE's well known Six Sigma program, which, in the near term appeared to work as demonstrated by growth in profits and stock price. More recently, however, the company that has always prided itself on drawing at least one-third of sales from products released in the past five years, found that fraction slip to only one-quarter. A key contributor to the loss in results from innovation has been attributed to the Six Sigma initiatives, which are now being dialed back in an effort to regain 3M's innovation capabilities and results. In a recent interview 3M's CEO, George Buckley, commented on innovation's challenge to existing procedures and norms in saying "Invention is by its very nature a disorderly process."⁹

The disorderly nature of the innovation process is further complicated by the inherent differences in capabilities from company to company, even within the same industries. There is no shortage of advice on ways to improve innovation. However, without an end-to-end innovation process model with associated performance metrics that are regularly monitored, companies often tend to follow the latest fad or improvement approach even if it may not address company-specific issues.

The innovation process is made even more challenging when considering the need to more actively involve process stakeholders from multiple functions, companies, and geographies.

Collaboration

In this iterative and disorderly process the best innovators are also the best collaborators. In "The World is Flat" Thomas Friedman describes the case for collaboration succinctly: "In the flat world, more and more business will be done through collaborations within and between companies, for a simple reason: The next layers of value creation - whether in technology, marketing, biomedecine, or manufacturing - are becoming so complex that no single firm or department is going to be able to master them alone."¹⁰ Companies that have taken a critical look at their competitive advantages, capabilities, limitations, and alternatives in light of the global ecosystem in which they operate often find opportunities for improvement.

One example of this global ecosystem of R&D and sourcing is illustrated by the deconstruction of a new cell phone. Its central processor is probably from Intel or Texas Instruments while the operating system is likely from Blackberry, Symbian, or Microsoft. The circuit board and specialty chips could have been designed in China, Taiwan, Ireland, or India. The color display probably came from Korea and the high-grade lens from Japan or Germany while the cellular links could be from Finland or France. If you have Bluetooth technology, it was probably licensed from Israel's IXI Mobile. Says Doug Raser, head of global strategic marketing at Texas Instruments, "The more we can leverage outside talent and companies with great ideas, the more product we can get out."¹¹

When asked what would most improve their companies' product innovation processes, 57.2% said, "better insight into customer or market needs".

The tendency is to look at an example like this as merely global strategic sourcing of components (some commodity components). However, it is through the process of collaborating with the global community of researchers, developers, suppliers, and manufacturers that enables the leading companies to take advantage of their suppliers' innovations and in turn differentiate their own products in the marketplace. Further support of globalization's significance was captured in the Innovation 2006 study, which found that of the 1,070 executives polled, "nearly 70 percent of respondents said that globalization is having a major impact on how their company approaches innovation."¹²

Although supplier collaboration is important and challenging, arguably customer collaboration is even more critical. In "Leading Through Growth," published by Capgemini and IndustryWeek, 273 manufacturing executives were surveyed about their growth prospects and capabilities and only 18% claimed to be world class in the area of product innovation. When subsequently asked what would most improve their companies' product innovation processes the leading answer with 57.2% of the responses was "better insight into customer or market needs," followed by "better functional integration internally" at 42.2%, and "better processes and controls at 40.2%"¹³

The need for companies to expand beyond traditional organizational silos in support of innovation improvement may be understood. Yet, conversations with senior managers at more than 30 major corporations by researchers for a recent Harvard Business Review article on the topic indicated that although most companies have come to understand the importance of looking outside for innovation, they have serious misgivings about how to do it.¹⁴

The ever increasing complexity of products and intensity of the competitive landscape are major contributors to the need for collaboration, but another critical dimension is time. Companies simply cannot afford the time required to innovate in a siloed department or even just collaboratively within their own companies. They must actively collaborate within the entire innovation ecosystem including functions, suppliers, and customers across geographies.

Measurement

What is measured is what is done. Unfortunately the old adage about measurement and performance seems to relate to innovation as well. Intuitively, the disorderly process of innovation, which is difficult to execute is also difficult to monitor. From keeping track of all the "fuzzy front end" process activity, to measuring all of the post-launch performance and support results, companies generally do not measure innovation very well. Aside from the challenges in monitoring innovation performance, a significant level of organizational discipline is also required to consistently track activity where the full lifecycle can often span years.

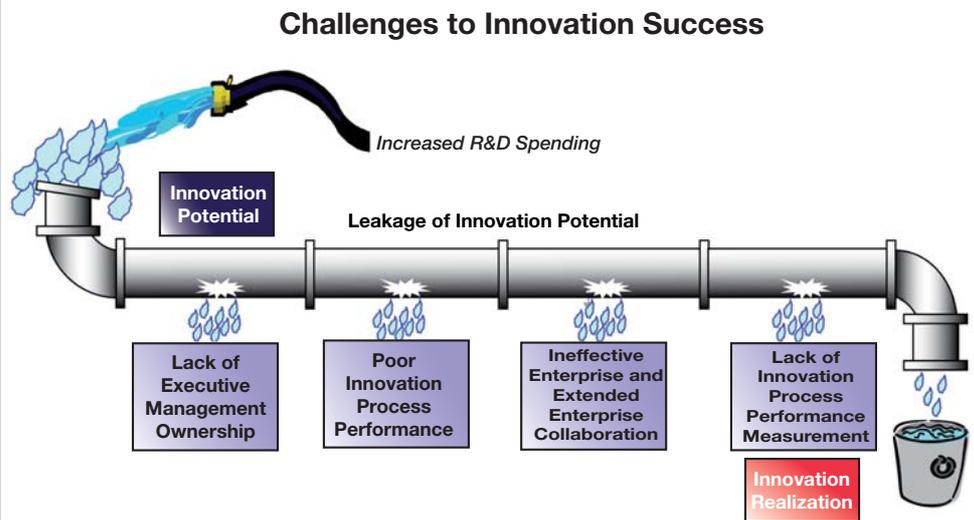
A recent study of innovation performance measurement with 269 executives was conducted to better understand the level of innovation monitoring and measurement and the degree of satisfaction with those efforts. A few of the key findings include:

- Innovation is widely undermeasured, and few firms – even those that attempt to track innovation rigorously – are confident they're doing it right.
- The majority of companies that do use metrics typically use only a handful – i.e., five or fewer.
- Few companies tie employee incentives to innovation metrics.

Overall the study found that the potential for most companies to improve their measurement practices – and, as a result, boost their return on innovation spending – is sizeable.¹⁵

A Call for Action

The benefits associated with innovation are intuitively well known and objectively substantial; however, in spite of the tremendous potential for increased financial performance related to innovation, many companies still struggle to perform. One response has been to increase R&D spending but it has been shown that is not necessarily the path to innovation success. One of the key findings from the recent Global Innovation 1000 study found “Money simply cannot buy effective innovation. There are no significant relationships between R&D spending and the primary measures of financial or corporate success: sales and earnings growth, gross and operating profitability, market capitalization growth and total shareholder return.”¹⁶

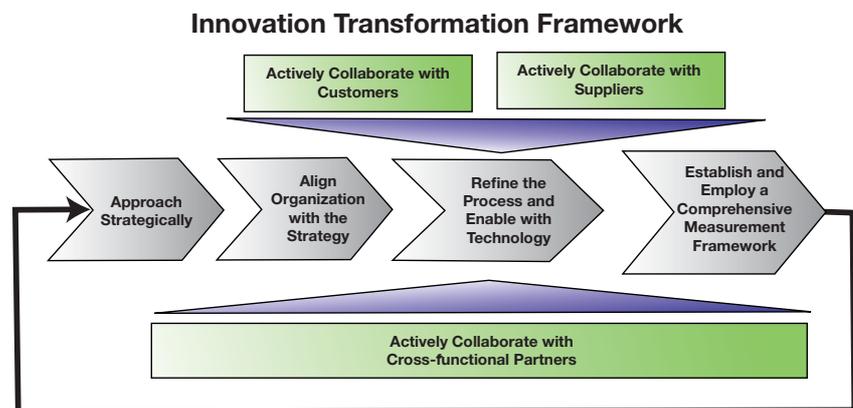


Increased understanding about some of the key root causes of sub-optimal innovation performance, combined with a realization that more R&D spending isn't the answer, should serve as a catalyst for further discovery and action to improve results from company innovation efforts. Enough on the challenges, what is the path to sustainable innovation improvement?

How are Sustainable Innovation Improvements Achieved?

The single biggest requirement for innovation improvement is to approach the transformation effort strategically.

The path to sustainable innovation improvement contains seven primary interrelated enablers. Predictably the journey begins strategically; however each of the other enablers must at least be considered when designing or implementing a change to one of the other six. The following Innovation Transformation Framework illustrates the seven innovation enablers along with a feedback loop signifying the need for continuous measurement, monitoring, and adjustment as a result of performance and marketplace dynamics.



Approach the Issue Strategically

The single biggest requirement for innovation improvement is the need to approach the transformation effort strategically. This needs to start with visible and sustained commitment from the very top of the organization. Leading innovation improvement must extend beyond delegation of responsibility to a functional vice president, or mentioning a focus on innovation to analysts, or highlighting innovation plans in the annual report's management letter. The requirement for active participation and involvement from all areas of the company in innovation efforts demands top management led transformation and ongoing monitoring, attention, and support.

An effective way of initiating a successful innovation transformation effort is often to identify a key catalyst for change, typically involving some type of competitive threat that serves as the rallying point for the organization.

One such example took place with an automotive supplier that had previously been primarily a provider of parts, and due to increased outsourcing of design responsibility by its OEM customers recognized the need to transition into more of an integrated engineered systems supplier. This transformation was initiated by the company president who recognized the significant impact this change would have on the company's organization, business processes, and information systems. Critical to the success of this transformation was a series of multi-day workshops over a six-month period in which the president and all functional area leaders worked hands-on with a broad set of key subject matter specialists to plan and define the transformation that would take place.¹⁷

It pays to focus on several key areas: people, measurement, and environment.

Align the Organization with the Strategy

“Strategic high-leverage innovators seem to have one thing in common: They focus on building multifunctional, company-wide capabilities.”¹⁸ This key finding from the Global Innovation 1000 study highlights the breadth and depth of the contributions to innovation required throughout the organization. A similar conclusion was reached in the Innovation 2006 survey, which concluded: “There is no single best organizational structure for innovation. Indeed, almost any company, regardless of size, shape, culture, or hierarchical structure can be innovative, as the wide range of firms that populate our ‘most innovative’ list illustrates. The critical, elusive ingredient is alignment - having the entire organization on the same page concerning objectives, tactics, and ultimately commitment to innovation. ... it pays to focus on several key areas: People, Measurement, Environment.”¹⁹

Involving the broad organization behind the innovation transformation strategy is easy enough to understand; the challenge is executing in a way that is meaningful and lasting. In the previous example of the automotive supplier transformation, over 60 key company stakeholders at a variety of levels representing operations from more than a dozen countries were engaged throughout the design and execution of the transformation. This broad, organizational transformation took place leveraging a process and facility called the Accelerated Solutions Environment (ASE). This Capgemini approach has been a catalyst for organizational change, alignment, and action employed over 1,100 times by more than 425 companies during the past 11 years in North America alone. In aggregate, over 50,000 executives have experienced an ASE session. Use of the ASE approach is tailored for each project and has been leveraged in a variety of applications, among them providing a foundation for successful innovation transformation.²⁰

Another organizational alignment example took place with a major aircraft manufacturer that had an innovation transformation effort focused on dramatically reducing the time and cost required to develop a new airplane to retain its market position in light of new competition. In embarking on this mission the company recognized that the tremendous knowledge and experience of their product development people was also one of the largest potential barriers for the company to make the necessary innovation transformation changes. Confronting that head on and involving these people throughout the innovation transformation was critical to the success of the initiative. Nearly ten years after the initiation of the airplane creation process transformation initiative, the company’s leader has indicated that the decisions made by the organization during the initial phases of that effort are still being actively applied by the company.²¹

In company after company, managers are eliminating so-called “Centers of Excellence” and “Centers of Innovation,” making these jobs the province of all workers. Everyone now must innovate. How can you make a wave of innovation if only the 20 or so people in your Skunk Works stand up? As traditional job silos break down and become horizontal, command-and-control hierarchies begin to lose their relevance. A new model emerges: connect and collaborate.²²

The best companies outsource to win: to innovate faster and more cheaply in order to grow larger, gain market share, and hire more and different specialists.

Approach the Issue Collaboratively with Cross-functional Partners and Suppliers

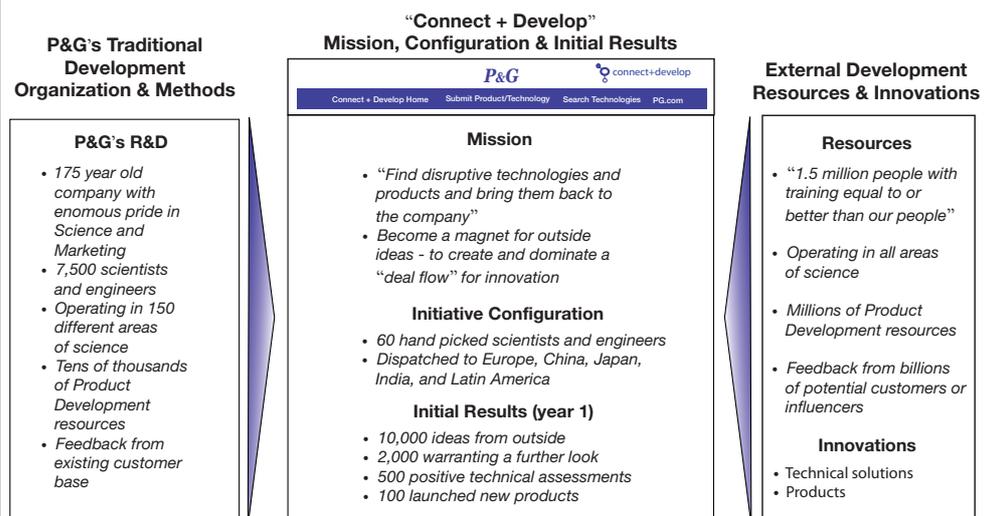
Broad stakeholder involvement in innovation transformation strategy development is an important collaborative first step. However, a long-term critical success factor is the engagement of cross-functional partners and suppliers throughout process execution. Increasingly the collaboration is also global in nature as indicated by a rapid shift to global product development. Although global R&D networks are not new, the two relatively recent factors that are intensifying this effort are the fully networked and digital nature of the product design process, and the fact that many more businesses have experience with global collaboration.²³

Successful companies recognize the importance of leveraging the extended enterprise for innovation and are doing so to improve and expand their capabilities. “The best companies outsource to win, not to shrink. They outsource to innovate faster and more cheaply in order to grow larger, gain market share, and hire more and different specialists - not to save money by firing people,”²⁴ notes Friedman.

One comprehensive example of this type of partner/supplier collaboration is found in Procter & Gamble’s open innovation model entitled Connect & Develop. By 2000, realizing that P&G couldn’t meet its growth objectives by spending more and more on R&D for less and less payoff the newly appointed CEO, A.G. Lafley, challenged the company to reinvent its innnovation business model. His stated goal was for P&G to acquire 50% of its innovations from outside the company.

The strategy wasn’t to replace the capabilities of its 7,500 researchers and support staff, but to better leverage them. This has been accomplished by combining the company’s capabilities with external resources, solutions, and products as illustrated below.²⁵

Open Source Innovation/Collaboration Example – P&G’s Connect + Develop Initiative



“Half of our new products, Lafley said, would come from our own labs, and half would come through them. Today, more than 35% of our new products in market have elements that originated from outside P&G, up from about 15% in 2000. And 45% of the initiatives in our product development portfolio have key elements that were discovered externally.”²⁶

Another example of supplier collaboration, this time in a services industry, is unfolding within healthcare. Two large credit card issuers and a major insurance provider wanted to create and launch a new healthcare payment solution that would create value for patients, providers, plan issuers, and employers. To accomplish this the three stakeholders recognized the need to work together to develop an innovative solution that would increase the efficiency and reduce the cost of healthcare processing, which is from a macro-perspective, an increasingly expensive burden on the U.S. economy. Each of the organizations recognized they were unable to accomplish this independently and initiated this collaborative effort through a multi-day workshop with over 40 representatives from across the three organizations who defined and put in motion the vision, process, and action plans needed to take this forward.²⁷

Approach the Issue Collaboratively with Customers

Although much of the collaborative innovation emphasis is typically on improved interaction with internal cross-functional and extended enterprise supplier stakeholders, this must be complemented and balanced with an increased level of emphasis on customers. Customers' unique insights into needs, desires, constraints, and pain points have become even more important because of the Internet, which has provided them with an exponentially increasing ability to influence other customers and markets in general.

As a result, it is critical to drive much more significant levels of customer integration and intimacy into the innovation process. An excellent comparison of the differences between the customer-driven outside innovation approach and that of the traditional internally driven innovation approach is summarized in the table below.²⁸

How Outside Innovation Differs From "Traditional" Innovation Terminology	
Traditional Innovation (Internally Driven Innovation)	Outside Innovation (Customer-Driven Innovation)
1. Internal scientists, engineers, or subject matter experts lead R&D efforts.	1. Lead customers and lead users drive 50% of your R&D agenda.
2. Internal research and experimentation drives innovation.	2. The structural tension between lead users' current reality and their desired outcomes and experiences drives innovation.
3. Customer requirements are collected and prioritized by product marketing.	3. Customers design new business models; extend, customize, and modify products; and share their ideas and creations with one another.
4. New product ideas are generated in the labs and tested in stealth mode with existing or prospective customers.	4. New business models, processes, and solutions are co-designed with customers and tested with a broader customer community in an open process.
5. Business processes and business models are designed by internal teams and approved by management.	5. Customers are actively engaged in co-designing business processes with cross-functional stakeholders and top executives.
6. Chief technologists and business development officers scan the environment for buy vs. build opportunities to complement or extend existing product lines and markets.	6. Customers scan the environment for complementary solutions and do the initial integration themselves.
7. A small percentage of internal innovations are actually commercialized.	7. Customers actively promote new products and services to one another and help build a vibrant ecosystem.

In spite of the overwhelming benefits, innovation investments have often been difficult to justify due to the lack of ownership and benefits measurement. As a result, many investments only focus within a particular functional area or division, which has limited benefits realization.

The difference between the traditional inside-out and the customer-led outside-in innovation process extends to support within a product/service environment as well.

A major automotive OEM wanted to dramatically improve its ability to support its global dealer network across all aspects of the business, including ordering vehicles, selling vehicles, providing aftersales support, and selling parts. The company recognized the need for improved access to information required to support these activities, but also understood the need to significantly involve dealer representatives in the requirements definition and the user interface design of the solution. To accomplish this the company embarked upon a series of global user experience visits to dealers across the world in order to observe and gather user requirements in the dealer's work environment. Following this requirements gathering effort, the company constructed prototypes of the solution and returned to the field to confirm the proposed solution with the dealer representatives. The result was a solution that had been developed and tested with the dealers (customers) prior to writing a single line of code for the eventual production solution.²⁹

Enable the Process with Information Systems

As discussed previously, innovation is a disorderly process by nature. Major contributions to the disorderliness stem from the difficulties associated with stakeholder collaboration and its related workflow, managing product information throughout its lifecycle, and interoperating between the other enterprise and extended enterprise information systems supplying or receiving product information.

Product Lifecycle Management is the class of information systems that are used to create and manage a company's product-related intellectual capital, from the product's conception to its retirement. Unfortunately, in spite of the overwhelming benefits associated with innovation (i.e., growth enablement and cost reduction) investments in PLM have often been difficult to justify due to the lack of innovation ownership and problems with benefits measurement. As a result many PLM investments have been focused only within a particular functional area or division, which has limited benefits realization.

AMR Research commenting on the value of PLM stated "If 80% of supply chain costs are determined in the design phase of product definition, then better execution here should have huge business impact. Product Lifecycle Management (PLM) is supposed to bring technology to improve this process, yet business cases consistently fail to drive needed change, let alone appropriate investment. Allowing user groups to pick their tools independently has led to poorly integrated product information systems, but doing nothing is a recipe for competitive disaster."³⁰ A sample of AMR's major findings and analysis include:

- "Impacts on supplier-facing, customer-facing, and internal operational benchmarks are central to the business case
- PLM's strategic value is a 100 to 1 payback
- Vendor's Return on Investment (ROI) analyses fail to properly integrate the three key buckets of payback - infrastructure savings, operational improvement, and strategic impact"³¹

Historically investments in PLM have been concentrated in capital-intensive industries with complex products such as automotive, aerospace, and computers, electronics and manufacturing. Future investments are being made to enable the collaborative capabilities described above and to improve the integration of product information with ERP and other enterprise information systems.

The most important innovation transformation enabler is that of metrics and measurement.

Additionally, investments in PLM are increasingly being made by companies in a widely diverse group of industries including textiles, food, beverages, consumer package goods, and apparel. These PLM investments are designed to obtain the same benefits: time to market, R&D productivity, product cost reduction, compliance, product quality benefits, along with some that are unique to those industries.

One example of this took place with a large apparel retailer that was looking to fundamentally shift its business from one oriented around a push supply chain model to one that is based upon continuous measuring, sensing and responding to the market and its customers with a demand chain enabled business model. This company was additionally comprised of a number of brands that operated independently with separate unintegrated information systems infrastructure. As a result the brands were not able to respond quickly enough to changing fashion trends and had inefficient internal development, sourcing, manufacturing, and retailing operations. The shift to a demand chain business model started with design and implementation of a single instance of PLM. This approach drove innovation operations efficiencies and economies of scale in product development through the establishment of common business processes, support for open innovation from a variety of sources, enterprise libraries for improved reuse and lower cost sourcing, and tight integration with ERP for innovation project management, portfolio management, sourcing, and manufacturing.

Aside from the strategic and operational benefits, the solution was implemented using a bare minimum of enhancements to the “out of the box” PLM software, which accelerated implementation and will help to reduce infrastructure and maintenance costs in the future.

Measure and React to Results

In regard to innovation transformation, possibly the most important enabler is that of metrics and measurement. The fact that such a critical business capability is so poorly measured and monitored is appalling; however, it also represents a tremendous opportunity to drive meaningful transformational improvement of innovation. Establishing an innovation measurement framework is critical to effective management of innovation activities, and it is the analysis of innovation results, or lack thereof, that should form the foundation to define and justify the transformation projects that will drive the desired improvement investment.

Treating innovation like other business processes, including systematically reviewing the inputs, processes, and outputs while also monitoring quantity, quality, costs incurred, cycle times, resource consumption, etc., is a first step toward more active and holistic monitoring of innovation. One innovation framework that has been used is that of an Innovation Value Chain that defines the major activities associated with generating ideas, converting the ideas and concepts into products, and diffusing the products across the organization and market.³² A framework like this can provide a means of breaking down and organizing the key innovation activities so they can better be monitored and measured, but can also serve as a model to more critically examine a company’s innovation performance strengths and weaknesses.

Take Action

This discussion presented a wide variety of perspectives and evidence related to product and service innovation. Few if any would argue against the importance of successful innovation; however, the evidence indicates that innovation performance is seriously lacking. Increased collaboration in innovation is a theme that permeates many of the key areas for improvement but there are also significant leadership, process, and information systems enablers that must be addressed for innovation improvements to be meaningful and lasting. A few key steps can serve as a catalyst for innovation improvement, either to help in getting started, or to increase the effectiveness of existing efforts.

1. Create a Comprehensive Innovation Transformation Initiative. Most companies have a series of process improvement, system upgrade, system implementation, or other projects related in one way or another to innovation. Establishing a comprehensive and coordinated initiative focused on transforming your overall innovation capabilities will identify gaps and overlaps and improve coordination among initiatives and functional areas.

2. Incorporate all Elements of the Innovation Transformation Framework. The previous section introduced a general framework to guide innovation transformation efforts. Included were seven key elements that have been key to successful innovation transformation:

- Approach Strategically
- Align the Organization with the Strategy
- Actively Collaborate with Customers
- Actively Collaborate with Suppliers
- Actively Collaborate with Cross-functional Partners
- Refine the Process and Enable with Technology
- Establish and Employ a Comprehensive Measurement Framework

Leveraging this framework can serve as an effective set of guidelines when evaluating the sufficiency and effectiveness of the transformation initiative.

3. Make the Innovation Transformation Initiative Visible. When considering the full lifecycle of product and service innovation it is difficult to identify a functional area that should not be involved in the transformation effort. Representation from these areas is critical to innovation transformation success both during the transformation design and also during implementation. Even more important is the need to make the transformation efforts visible, not in a superficial way, but in a manner that publicly (first inside your organization) acknowledges the importance of innovation and the organization's commitment to take action that will drive measurable lasting improvement.

Approaching innovation improvement in a comprehensive coordinated manner can greatly increase the magnitude and quality of results. The evidence shows that excellence in innovation is richly rewarded in many ways. Given the compelling case for innovation improvement, shouldn't an Innovation Transformation Initiative be part of your company's future?



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