



A REPORT BY **HARVARD BUSINESS REVIEW ANALYTIC SERVICES**

# Closing the Gap:

## How Companies Achieve Smarter New Product Development and Make Better Decisions with Technology

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## Executive Summary

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**IN THE POST-GREAT RECESSION ECONOMY**, everyone from senior executives and middle managers to President Barack Obama has hailed innovative products and services as a top strategic priority.

But that goal comes with many challenges. Organizations must weigh the future benefits of new products or services against an economy still in recovery. Companies are spending-shy as they struggle with razor-thin margins. Demand for new products and revenues is high; tolerance for inefficiencies and failed experimentation is low. Executives face intense pressure to make the right product decisions quickly.

Still, companies are accelerating their commitment to research and development of products over the next two years, according to a new survey of 1,214 business executives from around the world by Harvard Business Review Analytic Services. While increased investments in R&D are limited, most companies believe their gains can come from increasing efficiency, deploying information technology (IT) to help identify promising ideas, and tracking and evaluating R&D projects as well as finding new streams of ideas from partners, suppliers, and others.

By reaching out for ideas, companies are expanding pools of innovation opportunities that demand new ways to sort, monitor, and capitalize on the new products and services that best align with corporate strategy. This newly expansive approach to innovation has vastly increased the complexity of their R&D process, according to respondents.

But the survey also found that a small, select group has better managed this complexity with the help of information technology like product lifecycle management (PLM). They use tools to help executives track the ideation process, monitor progress, identify laggard projects, and facilitate collaboration. By capturing knowledge, they are able to reuse it — and their capital — more effectively. These organizations have better new product development processes and outcomes.

Specifically, the email survey and follow-up qualitative interviews found:

- Since 2008, 55% of companies have sought to increase R&D efficiency.
- Half said increasing the rate of innovation is a top priority in 2011.
- IT is a key enabler of new product development processes and outcomes.
- Customer suggestions are the most important source of new product ideas.
- New product development is a team sport. More than half of the companies said marketing, operations, sales, and finance work with the R&D department.
- Fifty-five percent said partners are an important source of ideas and innovation support.
- Forty-three percent said intellectual property protection is a challenge in working with external organizations.

Organizations that are highly satisfied with IT support of new product development are much more likely to be satisfied with new product processes and outcomes.

# Closing the Gap: How Companies Achieve Smarter New Product Development and Make Better Decisions with Technology

## FULL REPORT

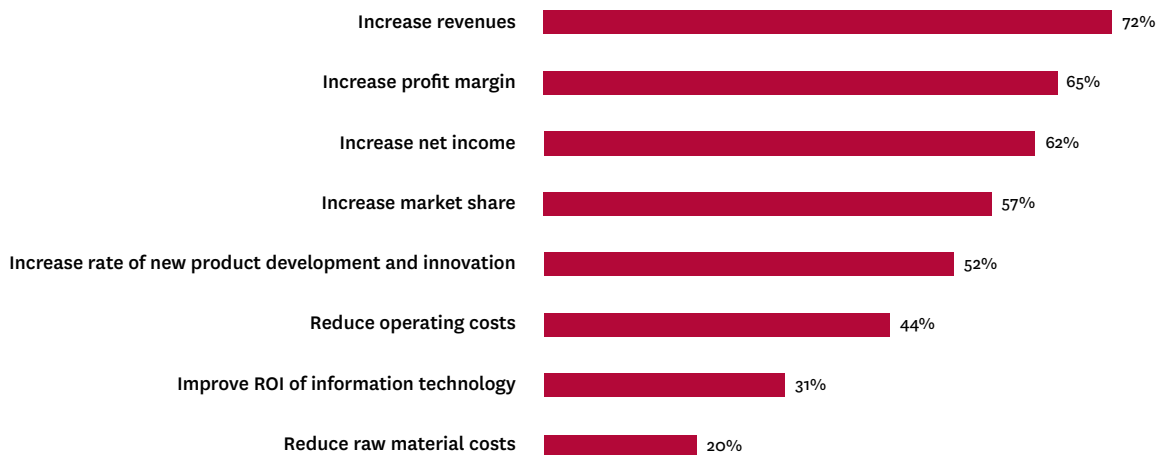
Innovation and new product development have always been part art, part science. In the post-recession economy, companies have added a third element: They're applying various information technology tools, including product lifecycle management, business intelligence, and analytics to their new product processes and realizing better outcomes.

It's a surprising result of the Great Recession of 2008-9 that the near-death experience of so many businesses has breathed new life into innovation. Companies are emphasizing creativity and ideas as a path for reinventing themselves through new products, services, internal operations, and business models. After years of cost cutting as the top priority, most senior executives realize there isn't much more left to cut. Furthermore, as the economy improves, they want to position themselves to grow revenues by offering new products. A new survey by Harvard Business Review Analytic Services found that more than half of the 1,200 organizations surveyed said new product development and innovation was a top priority in 2011. (Figure 1)

### High-Priority Business Strategies FIGURE 1

#### Where respondents are focusing their effort (score 8-10)

**QUESTION:** Please rate the level of priority of each of the following business strategies for your organization or, if you consult, your primary client, in 2011. High priority = those rating 8,9 or 10.



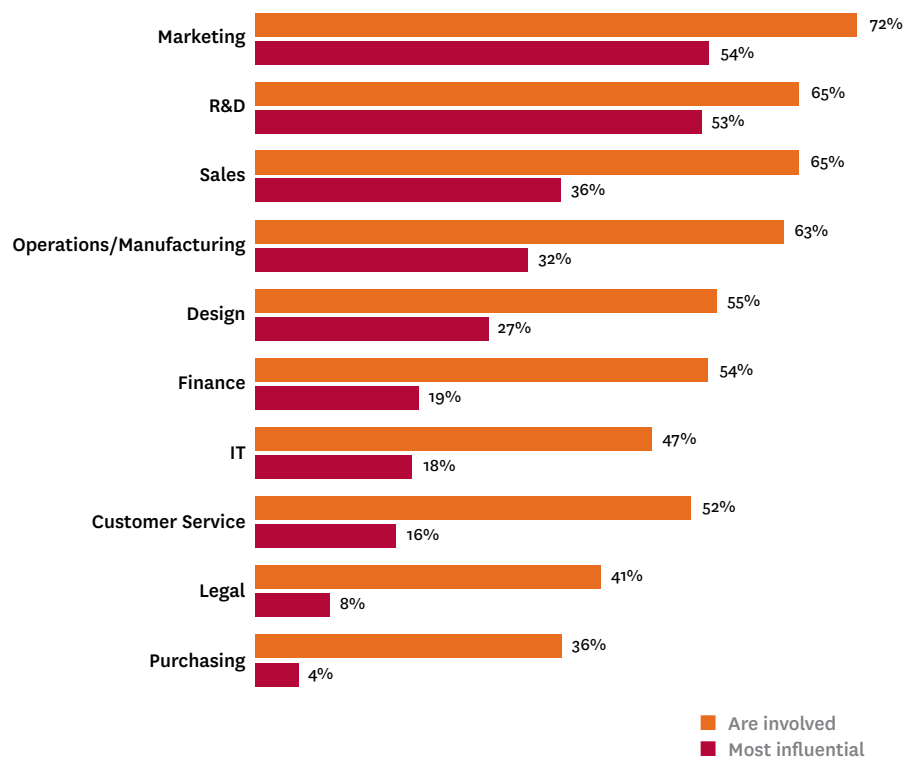
The focus signals research and development’s new role as a broad corporate effort. R&D has shed its traditional lab confines and gone mainstream within corporations, and so have contributions to new product development and innovation, which now come not just from the white-coat crowd in the R&D labs, but also from the marketing, sales, finance, customer service, IT, and legal departments. (Figure 2) R&D’s newly cross-functional nature underscores the growing role of collaboration in new product success.

The stepped-up emphasis on R&D comes with a caveat: Having already decreased costs to survive, “the future is 2% to 3% revenue growth – if they can find ways to be more efficient,” says Christopher Wasden, managing director for PricewaterhouseCooper’s health-care strategy and innovation practice.

### Departments Involved in R&D FIGURE 2

**QUESTION 1:** Please indicate which of the following internal corporate departments are involved in new product development at your organization or at your primary client.

**QUESTION 2:** Of the internal departments involved in new product development, which three are the most influential?



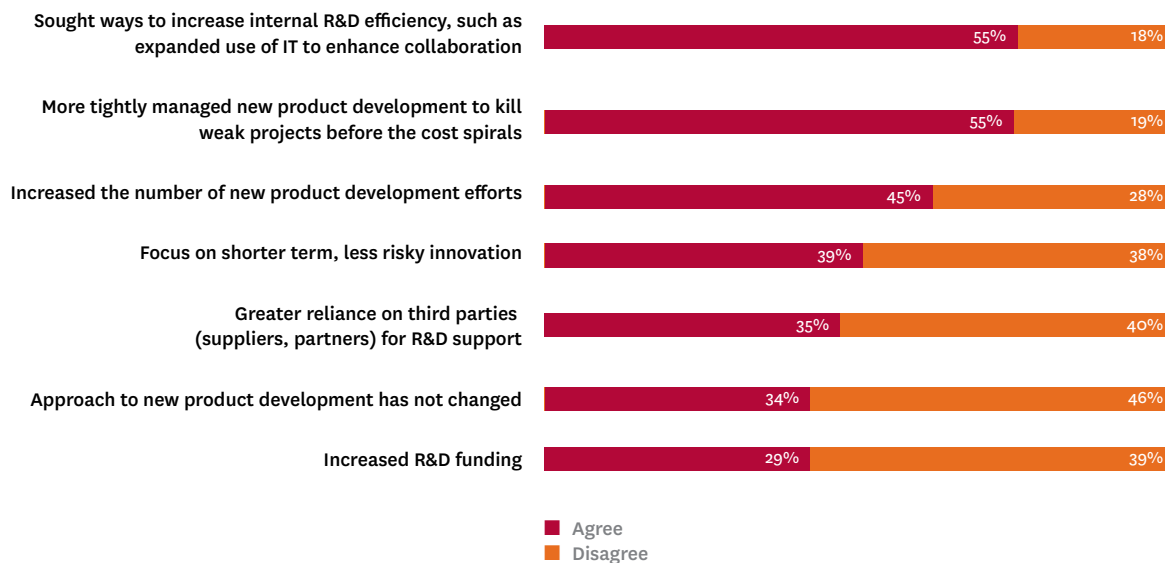
“Most companies don’t have enough smart people with enough cross-disciplinary abilities to keep up with innovation.”

R&D efficiency is the new corporate mantra. More than half of organizations seek to improve R&D with smarter, more strategic use of various IT tools. For example, tools can accelerate and improve decision-making across the product lifecycle by enabling companies to quickly drill down into information and then share it in easily understood formats. In addition, half adhere to the “fail fast” credo, tightly managing their project portfolios and jettisoning efforts that don’t fit. (Figure 3)

Accomplishing more R&D with less funding is paramount because innovation budgets aren’t surging. While most organizations say new product development and innovation are top priorities, the median R&D budget was a bit more than 4% of revenues in 2010, and the majority will increase that amount by less than 5%.

**Activities Since the Downturn** FIGURE 3

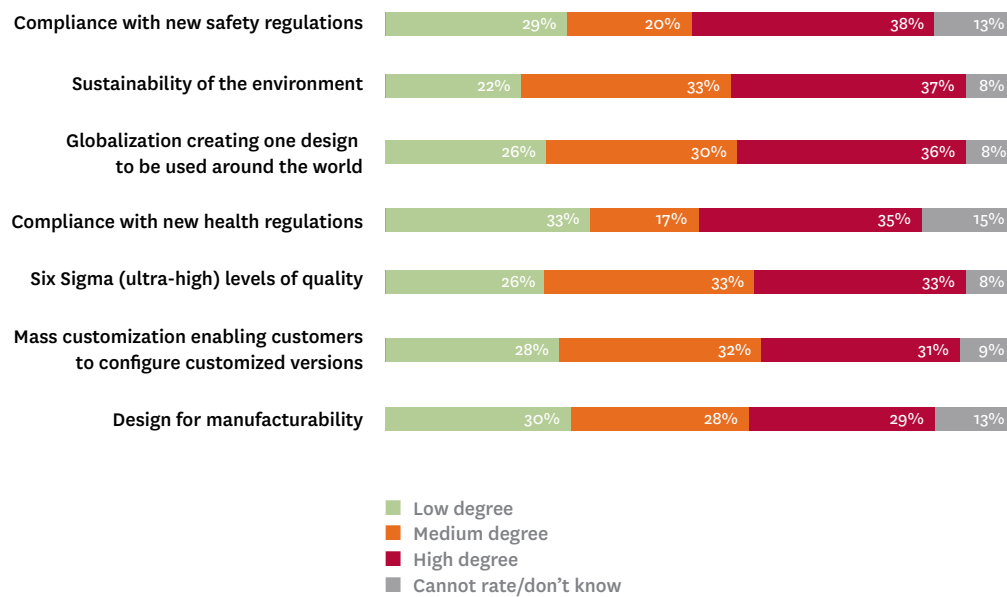
**QUESTION:** Please rate the extent to which you agree that each of the following activities may have taken place in your organization or primary client since the global economic downturn of 2008-09.



Globalization is also reshaping R&D strategy and implementation. To generate new revenue and further reduce costs, more companies are adopting global business models; for example, creating modular products and common platforms that let them launch quickly in local markets. International product teams are learning to work together across multiple time zones. Globalization brings with it different types of government regulation and demands for sustainability in product design and production as well. (Figure 4)

### Trends Influencing New Product Development FIGURE 4

**QUESTION:** Please indicate the degree to which the following product development trends affect your organization's (or primary client's) list of features and functions that are considered for incorporation into new products.



Against the backdrop of a tough economic climate, constrained budgets, demand for increased efficiency, and the addition of new players to the R&D mix, IT systems have assumed a leading role in innovation and product development. In fact, the technologies that enable disparate groups in different time zones to share the tasks of new product development — sketches, feature requirements, proposed bills of material, budgets, and other elements — produce better R&D outcomes. Management of all aspects of the product lifecycle from ideation to retirement is critical for success.

## THE RISING INFLUENCE OF PARTNERS ON INNOVATION

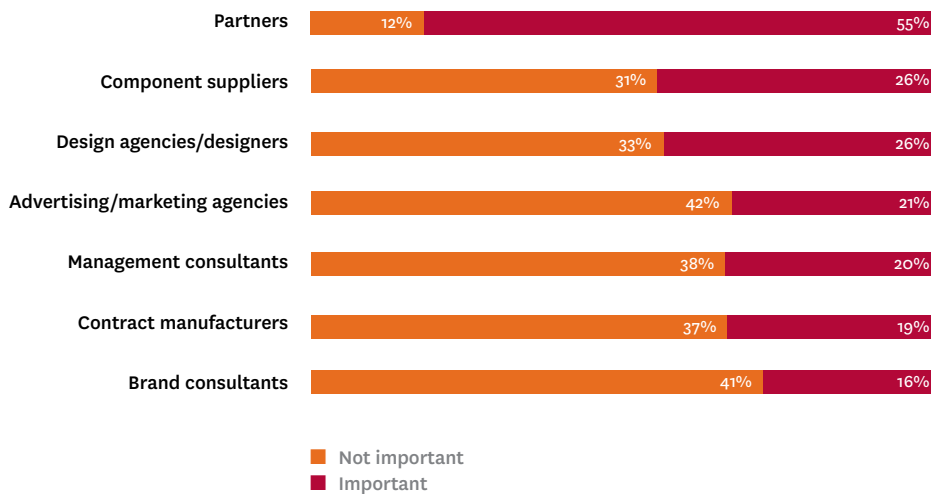
Among the most striking changes in the new product development landscape is the dependence on outsiders for ideas and innovation support. Third parties bring to the innovation table everything from design creativity and complementary technologies and markets to production facilities. The collaborations create a new order among partners as well as more fluid relationships. Not only is information freely swapped within this new ecosystem, but so are ideas — and anxieties.

On one level, corporate outreach for additional competencies and capabilities is simple pragmatism. Innovation-producing partnerships begin by tossing aside the expectation that organizations can go it alone. “Most companies don’t have enough smart people with enough cross-disciplinary abilities to keep up with innovation,” points out Wasden. “The only way to keep up is to harness the abilities of people outside their organization. The question is, how do you do that better?”

Indeed, the recession rendered the not-invented-here bias passé. More companies are determined to strike the balance of collaborating while competing. Over half (55%) rate partners as important for new product development. (Figure 5)

### Sources of New Product Ideas FIGURE 5

**QUESTION:** Please rate the importance of each of the following external sources of new product ideas and development support for your NPD. Important = those rating 4 or 5.



What’s more, the relationships are deepening: In 2007, 68% had R&D projects under way based on at least one idea from external partners. In 2013, 86% will. (Figure 6)

For their part, design and supply-chain providers are cognizant of their new and more integral role within customer organizations. Some are investing heavily in infrastructure to better support their customers with advancements like real-time data flow. Others are implementing tools to seamlessly link their production systems with those of their customers, including specifications, costs and availability of components. In many cases, partners provide prototype and other design services based on feature-set specifications transmitted by customers.

The investments are shrewd — and necessary. The opportunity to share large amounts of information across the extended enterprise and improve decision-making has become essential for success.

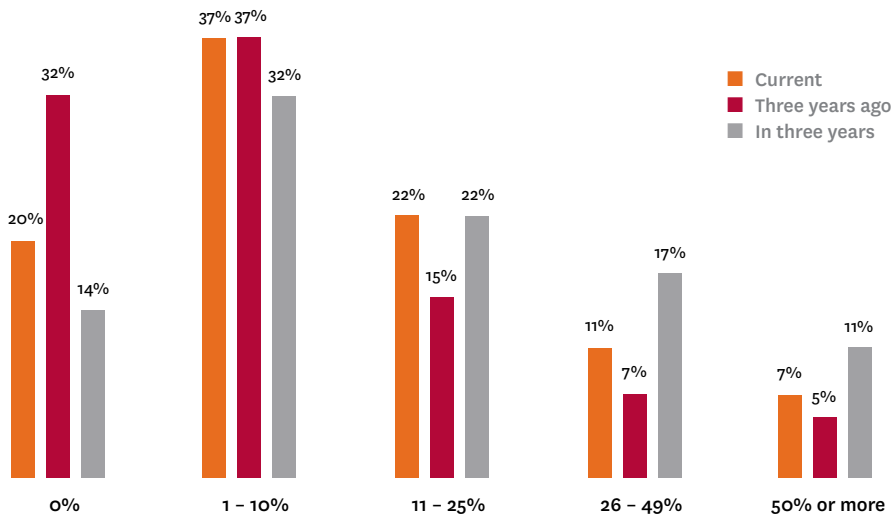
“Two years ago, it was OK to have static data,” says the IT director for an engineering services provider. “You could work on customers’ data and ship it back to them overnight. Today it has to be live data in real time.” Since 2008, he adds, clients have focused on supply-chain productivity as well as scheduling. “Now, it’s a requirement that we participate in approvals of workflow within their organization. We work as part of the system, not an adjacent piece.”

With partnerships comes data and systems access — or at least it should. The engineering services company is part of a minority, though — not all companies open their internal systems to partners. While there’s a growing reliance on partners, there’s widespread discomfort with providing partners access to the data and systems being used to track new product design and production.

Fewer than four out of 10 companies provide *their most important partners* with full access to their systems and data at least sometimes. What’s worse, only half provide read-only access to their most important partners at least sometimes. (Figure 7)

### Reliance on External Ideas FIGURE 6

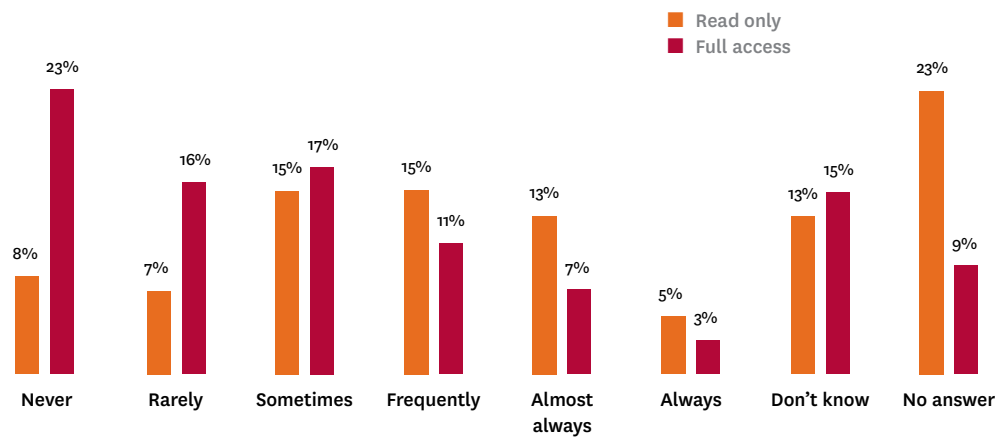
**QUESTION:** What percentage of new product development projects for your organization (or primary client) is based on ideas, support or investment from external suppliers?



Why the reluctance to share information with key partners? The potential loss of control of intellectual property strikes fear in the heart of businesses. When it comes to the challenges of working with external organizations, companies ranked safeguarding IP rights third (43%), behind finding suitable development partners (50%) and avoiding competitive conflicts (46%). (Figure 8)

### Level of Partner/Supplier Access to Internal Data FIGURE 7

**QUESTION:** If your company works with new product development partners and/or suppliers, please indicate the level of access to information and systems you provide to your most important external partners/suppliers. To what extent are they allowed “read only” access to information versus full access to the relevant IT systems?



### Challenges in Working with Partners/Suppliers FIGURE 8

**QUESTION:** What are the three biggest challenges to working with external organizations on new product development?



“We’re able to bring decisions about projects to a point where we can gain consensus by saying ‘based on these facts, it’s not a good idea to go forward.’ PLM helps a lot with that.”

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## IT BRIDGES THE GAP WITH DECISION SUPPORT

IT has a large and growing role in tracking the progress of R&D projects through the use of tools that track project progress, feature requirements incorporated in the prototypes, cost, bills of material, and other criteria. Almost half of the companies have implemented IT systems that monitor product development. These important tools provide a holistic view of the product lifecycle, linking R&D at the front end of the process to manufacturing at the back end, and as a result delivering better new product processes and outcomes.

Such an expansive view of product development is increasingly crucial in the future. The top three product development functions for which companies are using IT systems are cross-functional in nature: tracking compliance with product requirements, management of product data, and change and workflow requirements. While these and other functions are considered important now by a majority of companies, their significance is expected to grow substantially during the next two years. (Figure 9)

Accelerating adoption of certain technologies that support new product development is expected to have a big impact on revenues and net income from 2011 to 2013. Those technologies that may collectively become best practice processes include tools that enable or enhance design and analysis, change and workflow processes, R&D portfolio management, and integration of bill of materials and ERP.

Important differences exist by sector. Discrete manufacturers are far more likely to rely on IT for their innovation and product development processes. For example, the integration of bill of materials with ERP systems is important to about one-third (35%) of companies that use IT to monitor product development, but among manufacturers of engines, automobiles, airplanes, furniture and other discrete items, the figure doubled to 70%. Indeed, even across all categories, one-half indicated that the integration of BoM and ERP will be important to their companies two years from now.

A similar pattern is seen in strategic R&D portfolio management. This approach — a combination of analytics, ERP data, and performance-management tools — brings better project valuation and prioritization to R&D. With it, companies can more readily pick the projects that best conform to corporate strategy and profitability goals and terminate those that do not.

Half of companies that use IT to monitor product development said strategic portfolio management is important. In two years, that number rises to nearly two-thirds. (Figure 9) Proponents say the baseline valuations help their companies in several ways. For one thing, the valuations can more readily pick the products that collectively make a smart portfolio. For another, they help create integrated product development processes that embrace cross-functional teams and external partners.

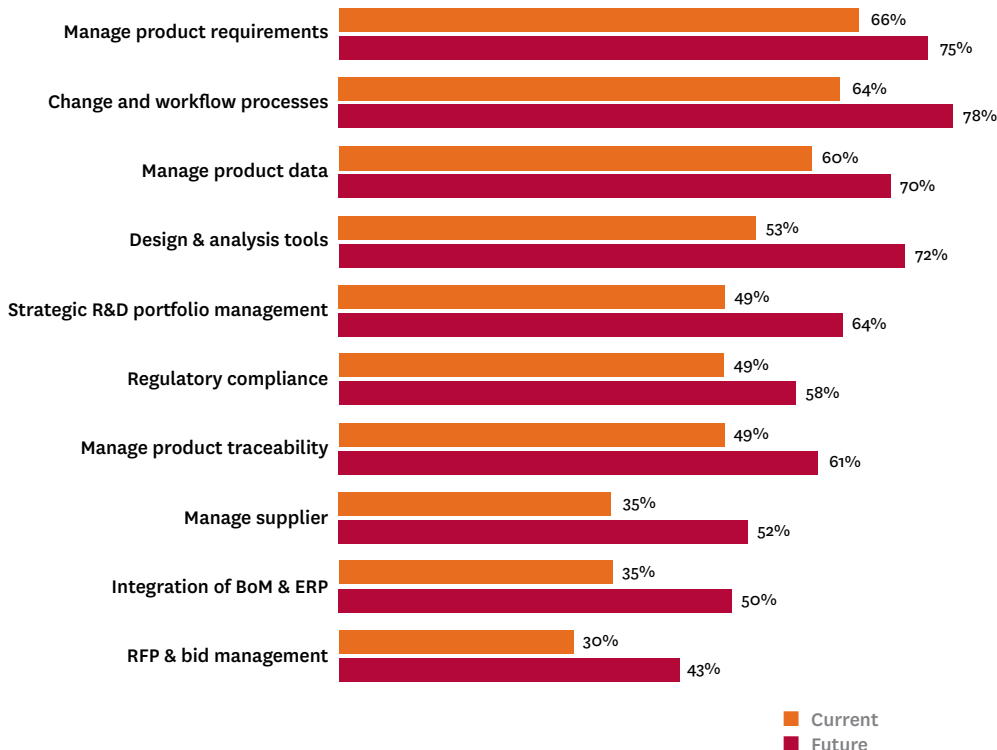
The director of strategy and program management for a marine-engine maker that uses product lifecycle management (PLM) software to plan its product portfolio said his company benefits by pulling the plug on more projects faster than it used to. “We’re able to bring decisions about projects to a point where we can gain consensus by saying, ‘These are the facts, and based on them, it’s not a good idea to go forward.’ PLM helps a lot with that.”

Careful benchmarking has replaced the “Eureka!” approach to innovation, and companies that use IT systems to monitor new product development are embracing process-driven innovation in larger numbers. According to the survey, three-quarters (76%) are likely to set project milestones against predetermined objectives, versus the survey average of 69%.

### Importance of Functions in R&D FIGURE 9

**QUESTION 1:** Please indicate the current importance of functions provided by the system to monitor and track new product development. Important = those rating 4 or 5.

**QUESTION 2:** How important do you think system monitoring functions for NPD will be two years from now?



For a maker of chip-manufacturing equipment, process-driven product design has prompted a rethinking of how the company designs, develops, manufactures, and services new products. By emphasizing discipline throughout the design process, product lifecycle management software prevents unreliable parts from getting through to new instruments, said an engineering manager for the company. When production is beginning to ramp up for large volumes, “everything has to be production-ready. In the past at this stage, things weren’t finalized, people didn’t document. Now the PLM system says you can’t get through this gate until the system says you can. It’s putting in discipline where there were leaks before, and it improves the product in the long term.”

### COLLABORATION’S NEW ROLE IN PRODUCT DEVELOPMENT

Although four out of 10 companies are not using IT to monitor product development, many realize IT would enhance collaboration across their business. A Midwestern wholesale foodservice manufacturer said it suffers from limited visibility as a result of failing to implement IT systems that track the progress of new products. “We don’t follow product through the supply chain — that’s the big miss,” says the senior vice president of the \$1.5 billion company. “There’s no accountability. What are a project’s costs? Was the time and energy we spent on it successful? Our tools don’t measure that.”

Among companies that do, better collaboration — within design teams, across departments, and among external partners — is a major benefit. Today’s IT systems integrate data from multiple systems and as a result feed role-based data to teams. Engineers, for example, see only the information relevant to their work, while procurement views components in nontechnical terms. The director of PLM for a major consumer electronics company with global operations said the flexibility of his company’s PLM implementation was crucial for the successful launch of a new product last fall, enabling participants in the process to better monitor change orders and manage cost-reduction changes to the design. Without it, he says, “it would be pure chaos.”

Bringing order to a complicated personnel situation is another key benefit. After implementing PLM software, the marine-engine manufacturer coordinated not only design decisions for the 400 or so parts and components of the newest engine it was building, but also communication within its far-flung staff. The economic downturn had reduced its workforce by one-third, and the downsizing had created “distraction and turnover,” said the project’s program manager. “Having the data organized in a consistent way made it possible for us to stay coordinated” with no loss of critical information that might otherwise have been squirreled away on local hard drives.

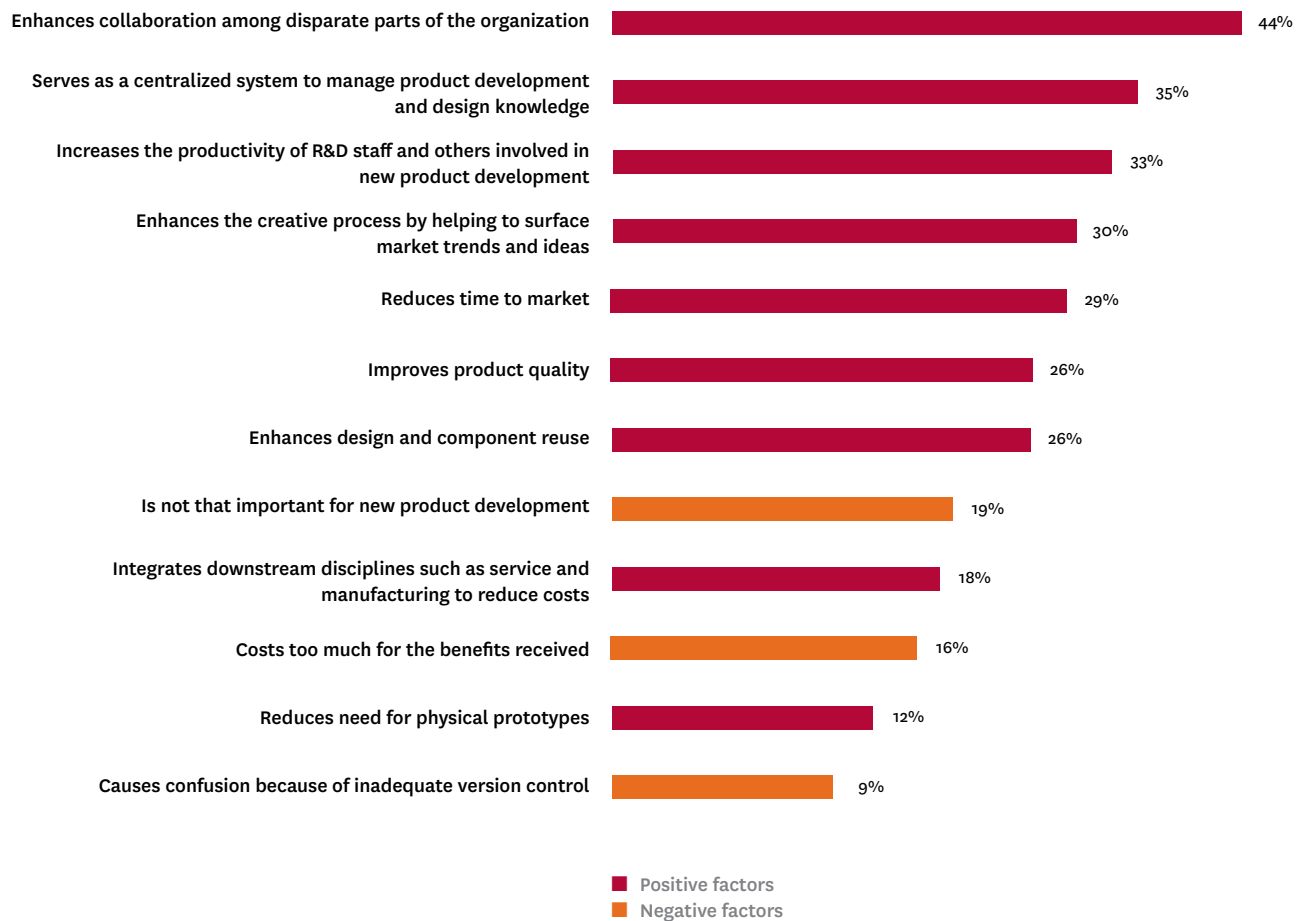
Sharing ideas and processes side by side within the same facility is often no longer an option. Business has grown too global, too expansive. So within many companies, IT systems open avenues of collaboration that accelerate product development.

“We’re about doing things more quickly and cheaply and with better quality,” says the IT director for the engineering services provider. “So we link back to tools that make our engineers more efficient.” The tools “aid us in the collaboration we can achieve, whether we’re sitting next to each other or not. It eliminates handoffs and ensures we’re working on the same thing at the same time. That’s very powerful to us.”

Almost half of the organizations credit information technology — including the Internet — with enhancing collaboration within their businesses. More than one-third linked it to higher productivity from their research and development staff. Only a handful considered IT to be a negative factor in new product development. (Figure 10)

### Benefits of Technology in R&D FIGURE 10

**QUESTION:** Please select from the list below your organization’s (or primary client’s) view of the role of IT, including the Internet, in new product development.



“You can enable a lot of good data exchange and feedback using IT. It lets you reach further and broader than you could by bringing people into the facility.”

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## THE VOICE OF THE CUSTOMER JOINS IN

Within new product development, the voice of the customer is often a murmur. Half of the companies identified customer suggestions as the most valuable source of new product ideas. But marketing and R&D still top the list of departmental influences, with 54% of companies crediting them with the most clout, followed by sales (36%), operations (32%), and IT (17%). Rounding out the bottom at a mere 16% is customer service.

That lowly role seems poised for change. While many organizations routinely conduct formal surveys and assign customer sponsors to large development projects, a healthy 22% are keeping an eye on companies and consumers through social networking sites like Facebook, LinkedIn, and Yelp.

Is social media becoming the tipping point for customer involvement in the innovation and new product development processes, especially when the social networks are connected to structured-data back ends? A regional director for a global leader in construction equipment thinks so. “We’re reaching much bigger volumes of customers than we have in the past, and we’re learning how to use social media for customer input,” he says. “The more we get involved, the more we’re finding how valuable [the sites] are and how willing customers are to give you good information on dealers and the brand. We’ve got to get better at anticipating and utilizing and responding to customer needs.” He and others report that they are getting a much better idea of not only which new product features or functionalities to offer, but the prioritization of those requests. Dell Inc. and others have noted that they aggregate the suggestions and use the frequency of requests in determining which new features and functions to offer, and when.

Innovation guru Robert Shelton, director of the global innovation practice for consulting firm PRTM, says one fresh, IT-fueled approach he sees gaining traction is the creation of customer engagement platforms. In this electronic spin on the traditional focus group, companies launch online interchanges — environments that can be as simple as web portals — as a way to try out new ideas and solicit feedback. “You can enable a lot of good data exchange and feedback using IT,” says Shelton. “It lets you reach further and broader than you could by bringing people into the facility.”

## EVIDENCE THAT IT IMPROVES INNOVATION PROCESSES AND OUTCOMES

Senior executives' satisfaction with new product development is decidedly lukewarm. Only one out of five companies rated executive satisfaction with innovation processes and outcomes as good, while the majority says they are just satisfactory.

But among organizations with IT departments that strongly support innovation, confidence abounds. Almost half said senior executives rate their companies' new product development processes as good. (Figure 11)

The top five technology tools most typically used in organizations with strong IT department support and R&D success are:

- Design and analysis
- Supplier management
- Management of product requirements
- Strategic R&D portfolio management
- Change and workflow processes

Other technology tools were also considered important by a majority of the organizations that are pleased with the support of their IT departments as well as with their new product development processes and outcomes:

- Regulatory compliance
- Product traceability
- Integrated bills of material and ERP
- Request for proposal and bid support
- Product data tracking

Smart use of IT in innovation appears to be giving companies a leg up over competitors in the marketplace.

Further evidence that strategic use of IT leads to better innovation and new product outcomes is the converse: Businesses that do not use IT to monitor new product development or are unhappy with the IT department's support for it take a much dimmer view of their innovation processes. What's more, organizations with poor IT support for new product development were much more likely to have poor innovation outcomes and thereby affect their overall revenues. (Figure 12) Clearly, IT satisfaction and utilization is pivotal to new product development satisfaction.

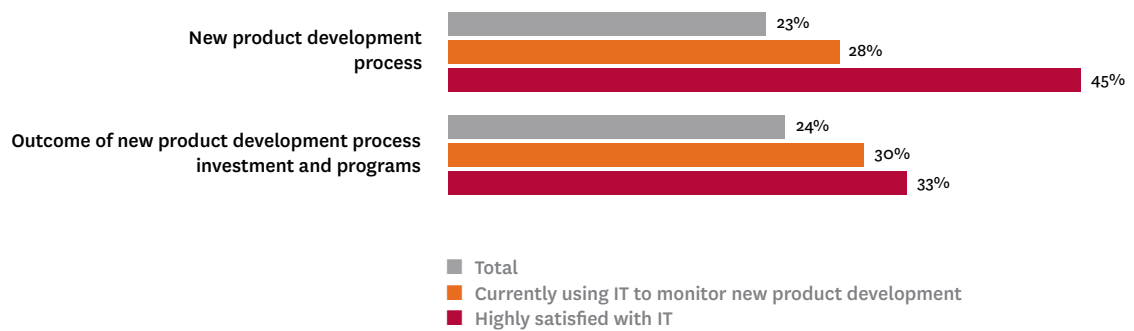
Interestingly, satisfaction levels varied by job title; senior managers were typically more pleased with their organizations’ new product development processes and performance than those further down the corporate hierarchy. Lower-tier managers, on the other hand, were more likely to use IT to monitor new product development than their seniors.

The disparity may be due to a generation gap. As one 50-something engineer pointed out, while he and his peers are more comfortable sequestering themselves in a conference room to hash out ideas, so-called digital natives’ adeptness with all things technological bodes well for an expanded role for IT in future innovation and new product development.

“We have lots of tools,” says the systems engineer for a defense contractor, “but figuring out why computers are having a hard time integrating into a vehicle is a tough thing to do virtually. Eventually it will become easier as the newer generation of engineers grows up with collaboration tools and is more capable of using them well.”

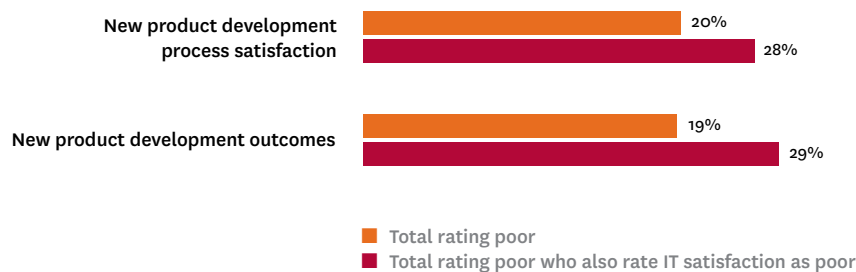
### Relationship Between Technology Use and R&D Outcomes FIGURE 11

**QUESTION:** Please rate your senior management’s satisfaction with each of the following aspects of new product development.



### Relationship Between Technology Satisfaction and R&D Outcomes FIGURE 12

**QUESTION:** Please rate your senior management’s satisfaction with each of the following aspects of new product development.



## CONCLUSION

As the post-recession global economy takes shape, companies are increasingly putting technology to use as a hedge against the risks of innovation and new product development. Many IT implementations so far have been basic building blocks, the first steps in automation. The real challenge now is integration, transforming assets and knowledge to meet global needs and drive a higher level of innovation and product development.

Information technology tools that help organizations track, manage, and optimize their new product development from idea to production provide important decision support for organizations. They help companies sort through new ideas, execute process-driven product design, and move ideas along more quickly to the marketplace. In this cost-conscious, “new normal” environment, these tools also help organizations make better and faster decisions about what projects to halt. In addition, Internet-based technologies and social media are opening new avenues of information and have become key tools for deepening customer inputs into product design.

The converse also is true — organizations that do not have these tools may be doomed to lag their competitors in revenue and profit growth as well as customer satisfaction. Over the next few years, the gap between the haves and the have-nots is likely to become wider and more obvious to the marketplace. Companies that fail to adopt these tools may find themselves in a downward spiral with little hope for recovery.

What will the future bring? Expect IT’s influence — and advantages — to strengthen. About one-third of respondents believe that IT will play an even more important role in new product development in two years. The move toward greater collaboration is also set to gather speed: In 2007, only one-quarter of respondents had input from external partners on 10% or more of their portfolios; by 2013, one-half expect the same level of input.

## Methodology and Participant Profile

Harvard Business Review Analytic Services received survey responses from 1,214 subscribers to the *Harvard Business Review* or its email newsletters in November 2010. In addition, 12 in-depth qualitative interviews were conducted by telephone with a cross section of executives of large and medium-sized companies.

### Participant Profile

#### Size of organization

The average number of employees was 3,810. Average annual sales in 2009 were \$1.8 billion. Thirty-six percent of organizations had sales in excess of \$1 billion while 44% had less than \$150 million.

#### Seniority

55% of all respondents were in executive/senior management positions. Just over a third (36%) were in other management positions.

#### Job function

28% were in general management. Just under one-fifth (19%) worked in R&D or product/operational roles. 16% of respondents were in marketing or sales roles.

#### Key industry sectors

Almost a third of the organizations were in the manufacturing sector (30%); other industry sectors included professional services (17%), financial (10%), and healthcare (7%).

#### Region

53% of organizations were based in North America; 32% were in EMEA (32%); 12% were based in Asia.

#### International scope of operations

29% of organizations were purely domestic. 25% operated in up to five countries. 16% had operations in more than 50 countries.

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## Sponsor's Perspective

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Charles C. "Chuck" Grindstaff  
President and Chief  
Technology Officer  
Siemens PLM Software

Today's leading companies drive innovative products to market at an ever-increasing pace, because in a global economy, successful first movers have a significant advantage. Competitive pressures require product development processes deal effectively with more complexity. Additionally, there are more people involved from early ideation through engineering, into manufacturing and beyond to product retirement. The days of simply designing a product and sending it to manufacturing for production have given way a complex global network of partners, customer desires, sustainability targets and regulatory requirements. Vast amounts of information must be collected and used throughout the process to make better decisions and develop the next successful product.

At Siemens PLM Software, we understand that the process of developing products is comprised of thousands and thousands of decisions. Some of them are big milestones on a project timeline, but many more are the decisions that people like designers, engineers, program managers and procurement specialists make every day. Each has a significant impact on the success of the product. If the right decisions — even the small ones — are

reached quickly, the cumulative effect on the overall process can be dramatic. Time is removed. Efficiency goes up. Costs are reduced. Rework eliminated.

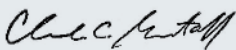
That's why we're focused on helping our customers manage and understand all of the complexity surrounding their products and processes so that they can quickly get to the right information, in the right context for each decision they make throughout the product life cycle.

As products and processes have become more sophisticated, more dependencies exist between departments in an organization. Mechanical functions are dependent on the electronics that drive them. Electronics are dependent on software. Changes to any aspects of the product also can affect manufacturing. Understanding these dependencies inside the PLM system is critical to ensuring the right information is used in the thousands of decisions that happen in the product lifecycle every day. Our products — from requirements management through design, simulation and manufacturing — form the foundation of a collaborative decision support platform that supports smarter decisions throughout the product lifecycle. This platform is at the core of High Definition-PLM, or HD-PLM, vision that focuses on helping you make smarter decisions, resulting in better products.

Companies that successfully leverage Product Lifecycle Management software solutions from Siemens are able to reduce the time-to-market and increase productivity. These tools increase collaboration across the extended enterprise, so that companies capture the best ideas and get them to market sooner — improving profitability while reducing product costs.

We would like to invite you to engage Siemens PLM Software and find out how we can help you take your next product or idea to market faster while improving your organization's productivity. Our software solutions are fast-to-deploy and our professional team will work closely with you to meet your company's business objectives. Ask about our Innovation Assessment to gauge where your organization stands which can be found at [www.siemens.com/plm/HBR](http://www.siemens.com/plm/HBR).

Sincerely,



Charles C. Grindstaff  
President and Chief Technology Officer, Siemens PLM Software

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### ABOUT SIEMENS PLM SOFTWARE

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services with 6.7 million licensed seats and more than 69,500 customers worldwide. Headquartered in Plano, Texas, Siemens PLM Software works collaboratively with companies to deliver open solutions that help them turn more ideas into successful products. For more information on Siemens PLM Software products and services, visit [www.siemens.com/plm](http://www.siemens.com/plm).



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