# Collaborating for Innovation

**Results and Findings from Capgemini's 2008 Global Study**

# Contents

# Executive Summary

## Collaboration is a Critical Enabler for Successful Innovation

Capgemini has completed the first global *Collaborating for Innovation* study. This study was conducted with the objective of assessing the extent to which corporations use collaboration as a means to effectively empower their Product and Service Innovation[1] initiatives. The findings are organized in five sections. A summary of our key findings and recommendations are as follows:

### Corporate Strategy

- Innovation initiatives rank among the most important within their companies and strategic innovation related initiatives are intended to enhance their ability to launch new innovative products in the market and secondly to further take advantage of globalization and favorably impact their company's business.
- Companies view many barriers to innovation including: planning and budgeting; resource allocation; organizational structure; non-integrated IT platforms; and alignment with customer needs.

### Innovation Performance

- The rigor and comprehensiveness of the process used to select and develop new product ideas has a strong correlation with the success of companies' product development initiatives.
- Companies are significantly challenged in their ability to define and track metrics to monitor the performance of their product development process.

### Supplier Collaboration

- Engineering and Design teams collaborate very well with their suppliers for innovation related initiatives; however, their Sales and Marketing functions significantly lag in this aspect.
- Cost reduction continues to be the single most important motive for companies to engage in partnerships with their suppliers and companies choose to interact with suppliers primarily to source materials and components for their products instead of more complex systems or assemblies.

### Customer Collaboration

- Companies are lacking the processes and associated organizational discipline to effectively collect disseminate and interpret the needs of their existing and potential customers which is adversely impacting the effectiveness of their innovation efforts.
- Existing information systems do not adequately support the business processes used for managing the collection and analysis of customer needs.

### R&D Collaboration

- Participants' responses challenge the conventional wisdom of R&D as the only major driver of their company's innovation initiatives and indicate that other functional areas are also important influencers.
- Participants emphasized the importance of information systems to enable cross-functional collaboration.
- Companies face challenges in justifying and adopting improvements to processes and information systems to improve collaboration within the organization.

## Recommendations

- Continuously monitor performance of the innovation process by developing and implementing appropriate metrics for performance measurement
- Increase involvement of stakeholders in the innovation process through clear definition of roles and responsibilities
- View suppliers as strategic partners not just low-cost providers; develop advanced methods for customer segmentation and evolve an R&D organizational structure that improves cross functional collaboration with other functions

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[1] Henceforth referred to as Product Innovation in all future occurrences within this document

# Introduction and Methodology

Innovation is most often used to describe the process which individuals / organizations use to develop and improve products or services. The *Collaborating for Innovation* study is designed to provide a deeper perspective into evolving trends in *Product and Service Innovation* within organizations and highlight issues and challenges faced by companies across all industries.

## Study Objectives

The goal of the *Collaborating for Innovation* study was to draw executive attention to current strengths and improvement opportunities relating to the process of innovation within companies through the analysis of perspectives obtained from participants of a web-based survey on the following three overarching questions:

- Where do companies rank their innovation capability when compared to other corporate strategy levers for improving shareholder value?
- What prevents companies from meeting their innovation related goals and objectives?
- What impact does collaboration across a variety of stakeholders (suppliers, customers, and between internal functions) have upon company innovation initiatives?

## Study Methodology

The study was gathered through a web-based survey that collected responses from 139 senior executives and managers a majority of whom represent our active client base at 63 companies across 24 countries. Participants were carefully chosen to ensure that they were all involved in or responsible for initiatives related to the product innovation process.

Invitations to participate in this survey were sent to senior executives and middle level managers closely involved with innovation related initiatives at potential and existing clients through Capgemini's offices worldwide.

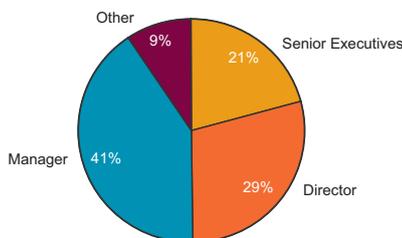Survey participants spread across the following four major sectors:

- Automotive, Aerospace and Defense (26%)
- Consumer Products and Retail (29%)
- High Tech (23%)
- Industrials: Chemicals and Energy, Industrials and Medical Devices (22%)

Although written in English, the survey was translated into local languages for countries such as France, Italy, Sweden, and Germany. The participants were from companies based in over 25 countries responded to the survey, with the respondent distribution of 47% from companies headquartered in Europe, 42% from the Americas and 11% from the Asia Pacific region.
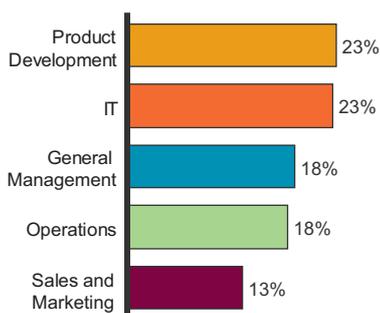
The study and this report would not have been possible without the participation of the survey participants. We would like to thank these professionals for taking time out of their busy schedules to share with us their opinions and perspectives on the current state of innovation at their companies.

We sincerely hope that this study will assist you to initiate or improve your company's innovation capabilities and results.

**Respondents by Position/Level**



- Other 9%
- Senior Executives 21%
- Director 29%
- Manager 41%

**Respondents by Function**



- Product Development 23%
- IT 23%
- General Management 18%
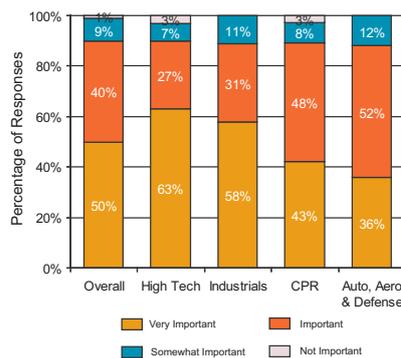- Operations 18%
- Sales and Marketing 13%

# Corporate Strategy

In this section of the survey, our intention was to gather our participants' viewpoints on the relative emphasis that their companies' leadership places on improving their organization's capability to innovate.
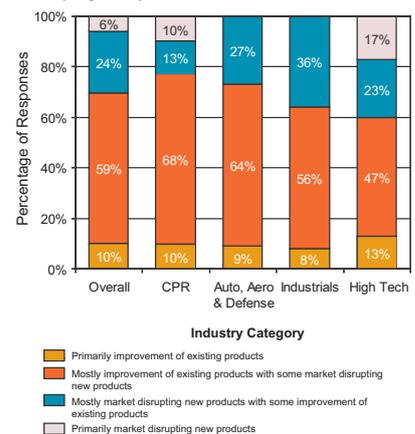
Participants across all industries unanimously identify innovation related initiatives to be extremely important to the growth and sustainability of their businesses. Exhibit 1 illustrates that over 90% of the participants consider innovation to be "important" or "very important" for their company. However, this does not necessarily translate to similarly uniform and high support from executives. Companies in different industries also differ in the kind of innovation they prioritize – incremental innovations to develop existing products and services or the development of market disrupting 'Breakthrough'[1] Products.

**Exhibit 1: Despite close agreement on the importance of Innovation, companies differ in their strategies to innovate**

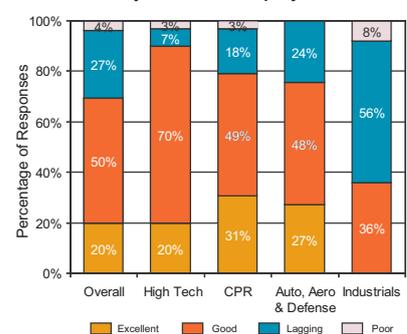**How Do You Rank the Importance of Your Company's Innovation Related Initiatives?**

| | Overall | High Tech | Industrials | CPR | Auto, Aero & Defense |
|---|---|---|---|---|---|
| Not Important | 1% | | | 2% | |
| Somewhat Important | 9% | 7% | 11% | 8% | 12% |
| Important | 40% | 27% | 31% | 48% | 52% |
| Very Important | 50% | 63% | 58% | 43% | 36% |

Legend: Very Important, Important, Somewhat Important, Not Important

**Where in the Continuum do You Rate Your Company's Emphasis on Innovation?**

| | Overall | CPR | Auto, Aero & Defense | Industrials | High Tech |
|---|---|---|---|---|---|
| Primarily market disrupting new products | 6% | 10% | | | 17% |
| Mostly market disrupting new products | 24% | 13% | 27% | 36% | 23% |
| Mostly improvement of existing products | 59% | 68% | 64% | 56% | 47% |
| Primarily improvement of existing products | 10% | 10% | 9% | 8% | 13% |

**Industry Category**

Legend:
- Primarily improvement of existing products
- Mostly improvement of existing products with some market disrupting new products
- Mostly market disrupting new products with some improvement of existing products
- Primarily market disrupting new products

> **While almost all participants recognize the importance of innovation, they enjoy different levels of executive support and translate it to different priorities – i.e., breakthrough vs. incremental innovation**

**How do You Rate the Executive Level Suppport for Innovation Projects in Your Company?**

| | Overall | High Tech | CPR | Auto, Aero & Defense | Industrials |
|---|---|---|---|---|---|
| Poor | 4% | 2% | 3% | | 8% |
| Lagging | 27% | 7% | 18% | 24% | 56% |
| Good | 50% | 70% | 49% | 48% | 36% |
| Excellent | 20% | 20% | 31% | 27% | |

Legend: Excellent, Good, Lagging, Poor

We do observe that companies who have a relatively higher focus on launching breakthrough products in the market correlate with greater executive-level sponsorship and support for innovation projects compared to companies who focus primarily on launching products through derivative product development initiatives.

[1] Breakthrough: Products are defined as "breakthrough" by virtue of their ability to disrupt pre-existing market conditions and significantly influence / control future patterns of customer behavior.
[2] Derivative: Products are defined as derivative if they are updates to existing products in the market - these could range anywhere from lower cost versions to add-ons or enhancements.

While executive level support is an internal factor that has an impact on innovation within organizations, external factors such as globalization also significantly influence a company's ability and motivation to innovate. Generally, companies across the board were unanimous about the impact of globalization on their innovation efforts. However, we did observe a significant difference in the perception of participants in the CPR sector regarding this topic (See Exhibit 2 below).

**Exhibit 2: Companies in CPR do not perceive as much impact of globalization on their innovation efforts as those in other sectors do.**
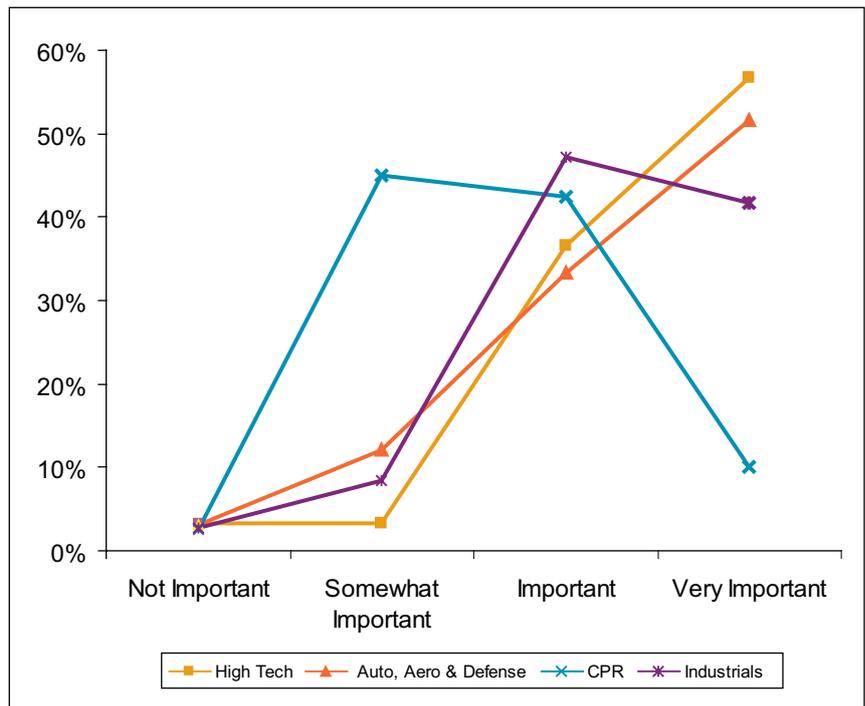


The pressure to compete by delivering products with more value at lower prices , or to grow margins by reducing costs, has led numerous manufacturers and retailers to source their production and suppliers from other parts of the world where labor and raw materials are cheaper. This has been a significant driver and beneficiary of globalization. It is curious to see 29% of the participating companies, i.e. from the CPR sector, differing from the rest in their perspective on this topic.

## R&D is NOT the Only Driver of Innovation

A majority of participants say that R&D is the primary driver of innovation within their company. The relative emphasis of other functions as an innovation driver varied significantly across each sector. The differences within the organization on the single readily-identifiable driver of innovation perhaps is an explanation of why the CPR sector has a lower emphasis on innovation as a strategic priority and places greater emphasis on derivatives to existing products.

As companies strive to move faster in development and in response to increasingly competitive global markets, a variety of functional sources for innovation within the organization can only help in the search for a faster better product or service to sell.

**Exhibit 3: R&D is not the Only Driver of Innovation**
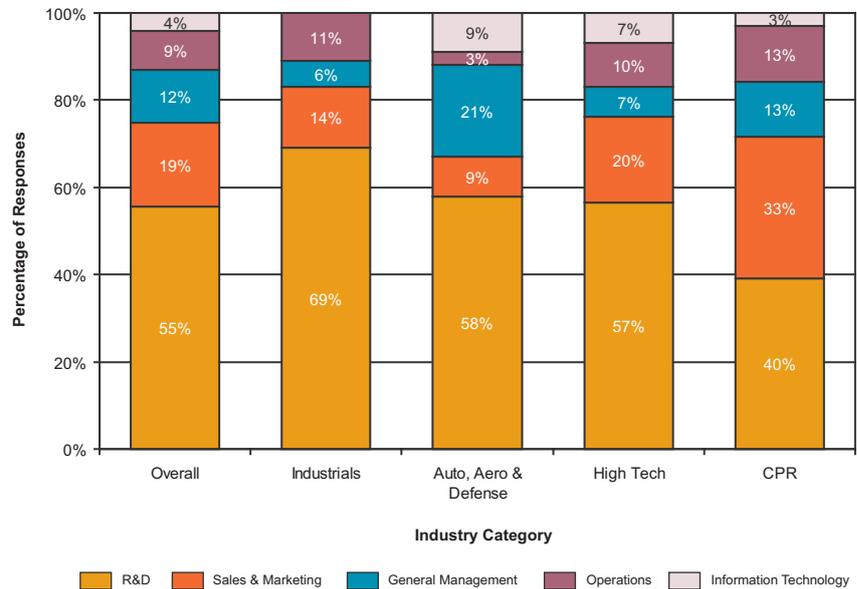


**What are the most significant Corporate Strategy related barriers to improved innovation facing your company?**

- Changing technology as quickly as the market requires it
- Division organized in relation to technique not to customer scope
- Funding required; and pressure to constantly increase EPS
- Lack of strategic planning and budgeting to support innovative product development
- Lack of consolidated resources (people and budget), lack of customer understanding (of) what innovations are an opportunity, lack of measurement on success of innovation
- Corporate culture is still a barrier to innovation
- Decentralized organization structure. Non-integrated IT platforms in all functional areas

## Additional Perspectives

It is clear from our analysis that innovation is certainly regarded as a strategic priority within most companies. They do, however place differing priorities and focus on their strategic goals and innovation programs.

Companies also point to a variety of cultural, technical, financial and organizational constraints that challenge the success of these initiatives in their comments. A few notable examples are displayed here.
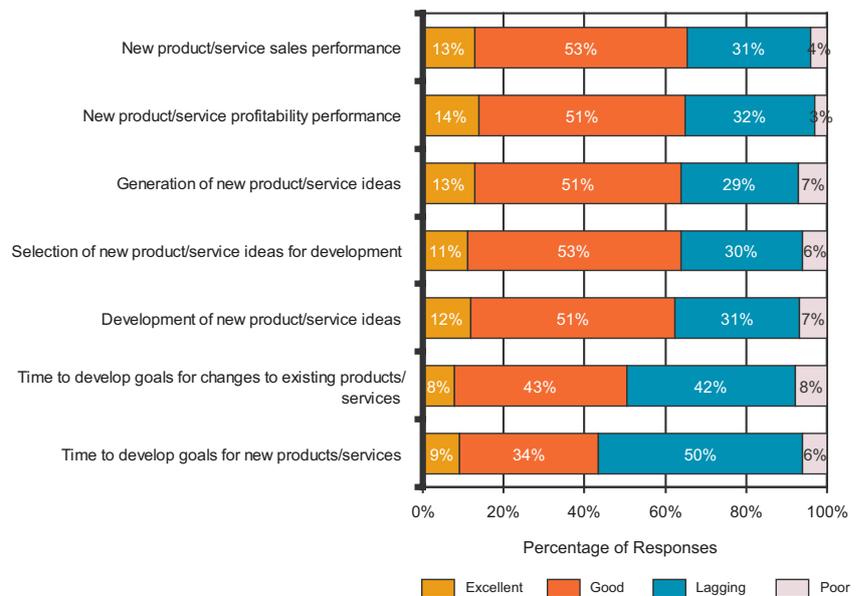
# Innovation Performance

Our primary objective in this section of the survey was to assess the strength of companies' innovation capabilities across key areas identified as critical to maintaining a robust innovation process. For the process of innovation to function effectively and achieve financial targets, there is a need for an emphasis upon developing, and monitoring metrics that track the company's innovation related initiatives. From the analysis of responses we observed that companies that have established methods to measure their innovation processes are better positioned to achieve success with their innovation initiatives.

## Lagging Ability to Track and Meet "Time to Develop" Goals

While most companies have the capability to track key metrics that monitor their innovation initiatives performance, in most cases their ability to measure '*Time to develop goals for new and existing products*' in the product portfolio lags others significantly. About two-thirds of all survey responses indicate their companies are "Good" if not "Excellent" in measuring most stages in the innovation process.

'Sales' is the metric that companies are most comfortable measuring as a proxy of effective innovation. While this may be easy to measure comparatively, it is a lagging indicator. Making intelligent decisions and correcting the course of product development projects requires more of a leading indicator, i.e. metrics that measure earlier stages in the process of development, testing and launch.

**Exhibit 4: Sales and profitability are easier metrics to track than 'Time to Develop'**



| Metric | Excellent | Good | Lagging | Poor |
|---|---|---|---|---|
| New product/service sales performance | 13% | 53% | 31% | 4% |
| New product/service profitability performance | 14% | 51% | 32% | 3% |
| Generation of new product/service ideas | 13% | 51% | 29% | 7% |
| Selection of new product/service ideas for development | 11% | 53% | 30% | 6% |
| Development of new product/service ideas | 12% | 51% | 31% | 7% |
| Time to develop goals for changes to existing products/services | 8% | 43% | 42% | 8% |
| Time to develop goals for new products/services | 9% | 34% | 50% | 6% |

Percentage of Responses

Over 56% of the companies admit that measuring 'time to develop new products/services' is a challenge. In fact over 50% of participants indicate that their innovation efforts do not meet their 'time to develop' goals. In the Industrials category of companies, participants noted that they miss their goals 60% of the time.

Interestingly, the survey revealed that almost 70% of participants in Senior Management roles are pessimistic about their company's ability to measure "time to develop" goals for new and existing products. In sharp contrast, a majority of Managers (56% – 60%) are by and large satisfied with their capabilities to meet the same goals. This dichotomy in perspectives may be interpreted positively – middle management that oversees day-to-day activities and delivers results is optimistic about their capability, while the forward looking and direction setting senior management cadre see opportunities for improvement. A sense of optimism in the middle management, if used appropriately can provide a great environment for the rank and file members of organizations to experiment, innovate and develop new products or services.

## Companies face Challenges in Idea Selection and Development

We asked participants to assess: their companies' ability to generate ideas for new products; their ability to evaluate and select ideas for further development; and their ability to develop selected ideas into products for market launch and commercialization. Responses from Automotive, Aerospace and Defense and High Tech sectors indicate that idea generation is an area of strength in comparison to the CPR and Industrials sectors. Overall, the results indicate that over two-thirds of participants are satisfied with their ability to generate innovative ideas for products and services. In contrast, a little over 50% of participants are satisfied with their ability to select concepts for development and testing prior to launch. Companies are also challenged to develop selected ideas into new products. In Exhibit 5, 60% of all participants indicate that this capability is 'Good' or 'Excellent.'
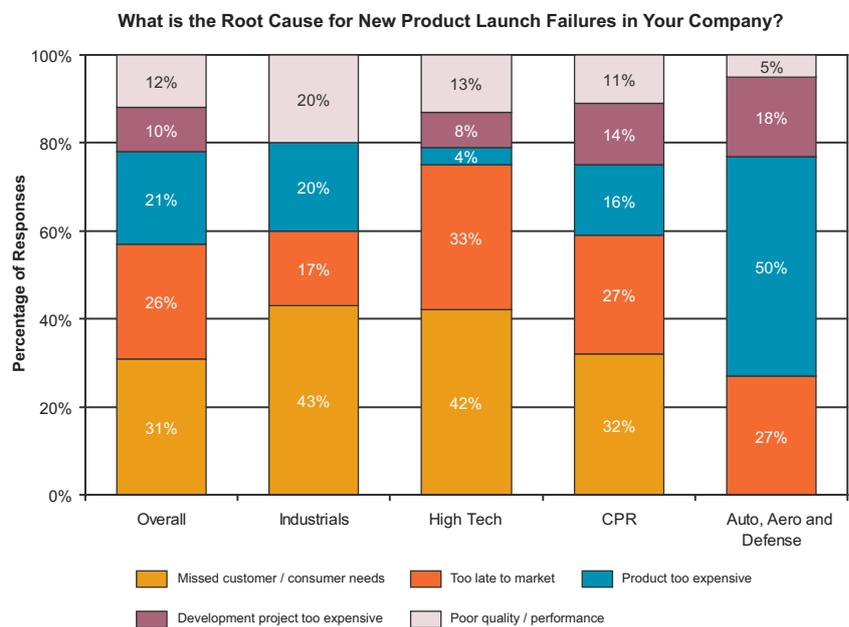
**Exhibit 5: Companies are satisfied with their capability to generate ideas, but not in idea evaluation and selection**



**Stages of Product Development**
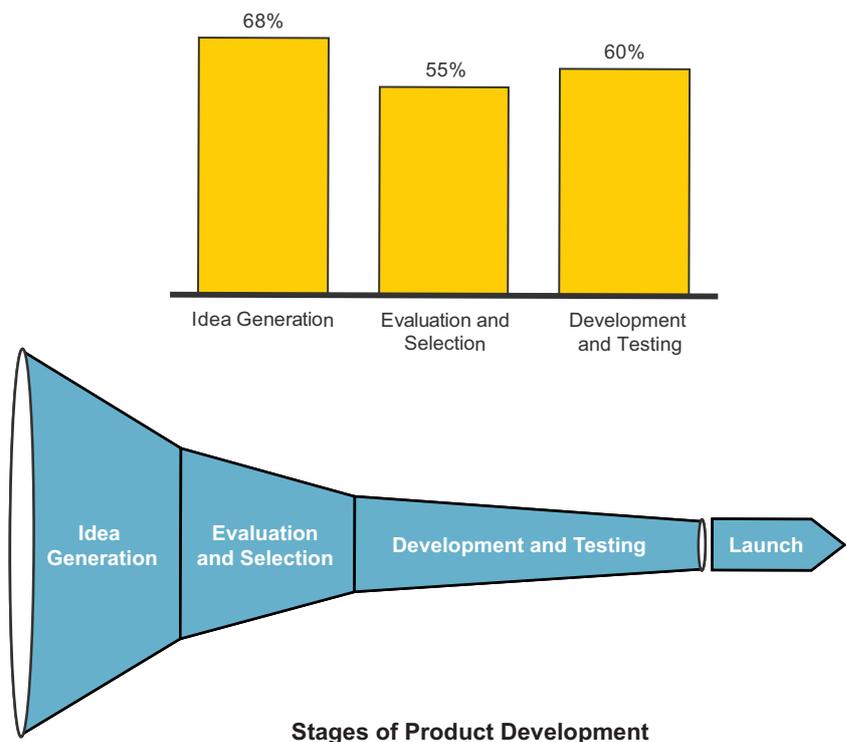
## Lack of Customer Centricity: Primary Cause for New Product Launch Failure

Participants attributed a number of causes for failure to launch products at their companies. While the primary reason(s) for this failure is different in each sector, Exhibit 6 below shows that failure to meet customer needs is the primary cause of new product launch failure in most sectors. However, companies in the Automotive, Aerospace and Defense sector indicate product development costs and time to market are the biggest challenges. This is perhaps indicative of the nature of the design and development lead times in Auto, Aerospace and Defense industries as well as the capital investments required in these asset heavy manufacturing industries.

**Exhibit 6: Automobile, Aerospace and Defense companies face challenges significantly different from those in other sectors profiled in this study.**

**What is the Root Cause for New Product Launch Failures in Your Company?**



| | Overall | Industrials | High Tech | CPR | Auto, Aero and Defense |
|---|---|---|---|---|---|
| Poor quality / performance | 12% | 20% | 13% | 11% | 5% |
| Development project too expensive | 10% | | 8% | 14% | 18% |
| Product too expensive | 21% | 20% | 4% | 16% | 50% |
| Too late to market | 26% | 17% | 33% | 27% | |
| Missed customer / consumer needs | 31% | 43% | 42% | 32% | 27% |

Legend: Missed customer / consumer needs · Too late to market · Product too expensive · Development project too expensive · Poor quality / performance

## Overall Return on Innovation: Not an Encouraging Sign

While opinions on Return on Innovation differ widely based on sector, companies in the High Tech sector claim to have a higher Return on Innovation. This is not surprising; prior observations of companies in this sector placed a higher priority on innovation related initiatives, focusing more on development of breakthrough products and higher executive support for innovation. Of course, the low capital investments required of software and other computing/web related products and services also gives companies in those industries a head start in terms of the cost of development and testing prior to launch. Working collaboratively across organizational boundaries may be key to iterating often and quickly and reducing the time and cost of development.

Overall, participants are relatively confident of their companies' ability to successfully improve the existing portfolio of products and their ability to generate new product ideas. Companies are less confident in their ability to selecting good ideas and developing these selected ideas into successful new products.

## Additional Perspectives

From the above discussion, there exists a wide array of opportunities to improve the process of innovation at most companies. This includes the capability to accurately define metrics to measure the process itself, the ability to accurately manage new ideas and their development, and to enable the launch of these products within reasonably well defined schedules.

# Supplier Collaboration

In this section, participants share the nature of their partnerships and interactions with suppliers to collaborate with them to develop innovative products. The objective was to assess the strength of companies' collaboration with suppliers, uncover some of the key challenges that companies face and identify opportunity areas for improvement.

**Innovation Ranks Low among Priorities for Collaborating With Suppliers**
Our analysis revealed that companies still hold cost reduction as the top motive to collaborate with suppliers. "Product Innovation" comes in at fourth with "Reducing Time to Market" and "Improvement of Quality" also ahead of it in priority. This seems to reflect in the quality of companies' efforts to collaborate with suppliers in the process of innovation. Less than 50% of participants were satisfied with their relationships with suppliers in that context, with only 6% responding in the superlative.

Of those who were not satisfied, an overwhelming majority of responses (over 93%) attribute their company's inadequate use of open innovation environments to collaborate with suppliers as one of the primary reasons for their dissatisfaction. Of these participants, about 78% say that their company's information systems to support collaboration with suppliers were unsatisfactory if not poor!

Clearly, there is significant room for improvement.

At the pace that technology and businesses are evolving, numerous companies have adapted to compete. They have realized that they cannot do it all themselves, and have enlisted the help of external partners, in academia and industry. In fact, Open Innovation Networks have been accepted by a number of industry leaders such as Procter & Gamble and IBM. The benefits of collaboration with suppliers and other partners can be very powerful, but they have to be balanced with the challenges that come with it.

**Trust and Communication among Top Challenges for Collaboration**
A large majority of participants indicate that Intellectual Property, Trust and Communication were the top three challenges that their companies address well (either good or excellent) while collaborating with their suppliers.

The analysis of the survey responses revealed differences on the challenges that various sectors address well. For instance, companies in the Automotive, Aerospace and Defense sector indicated that the top three challenges that they addressed well were: Communication, Intellectual Property and Target Clarity. On the other hand, participants in the Consumer Packaged Goods and Retail sector revealed that Trust, Target Clarity and Clarity of Roles and Responsibilities were aspects of their supplier collaboration initiatives that they were satisfied with. Participants from the High Tech sector pointed to Intellectual Property and Trust to be challenges they place a high priority on.

**Additional Perspectives**
Participants' comments on the barriers to improved collaboration with suppliers suggest the need for companies to view suppliers more as strategic partners who benefit mutually from the association rather than merely low cost providers. The competitive dynamic introduced by using multi-vendor sourcing is also cited by respondents as a challenge they face. Most participants perceive collaborative engagement with suppliers early in product development and innovation as a positive step.

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**What are the challenges you face in collaborating with Suppliers?**

- Not seen as strategic partners; our inability to provide clear requirements
- The multi-vendor competition that is part of our business model.
- Don't always understand how to collaborate, don't always create expectation for suppliers to provide innovation, too cost focused
- Clarification of intellectual property rights and "responsibility" – which party pays if something goes wrong.
- Clarity of roles between the company and the suppliers
- Lack of collaborative information systems

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# Customer Collaboration

In this section, survey participants were asked to respond to the strength of their companies' innovation initiatives in the context of collaboration with customers. The ability of companies to establish an intimate relationship and understanding of their customers' needs and aspirations is often regarded as an indicator of success that is as important as the quality and functionality of their product(s) itself. This section analyzes the responses from participants from this viewpoint.

**Need for an Organized Approach to Involve Customers in the Innovation Process**

Participants are divided about the effectiveness with which their companies involve customers in their innovation process. While the positive responses exceed the negative by 10%, the bulk of the responses straddle the middle ground.

Further analysis of responses from participants who say they were dissatisfied indicated that their companies are not very good at predicting and capitalizing on their customer's unmet needs. A majority of them also say that less than 20% of products that their companies developed and introduced over of the last three years were from ideas that emerged from partnerships with customers during development! Almost 75% of these dissatisfied participants also say that they would rate their company's ability to work with customers to co-develop products/services as unsatisfactory, if not poor. This response from participants is not surprising as 85% of these companies do not use open innovation environments to collaborate with their customers and close to 93% of these companies do not have adequate information systems to support collaboration for innovation with customers!

On the other hand, a majority of participants who express their satisfaction on the status of their companies' collaboration with customers are convinced that their companies' are able to predict and capitalize on customers' unmet needs and also that they work very well with customers to co-develop products/services.

**Impact of Customer Collaboration on Innovation Performance**

We observed an interesting correlation between companies' ability to generate new product/service ideas for development and the strength of their Customer Collaboration initiatives. An overwhelming majority of participants who say that their companies struggle with generating new product/service ideas for development expressed that their companies' overall strength of customer collaboration was unsatisfactory if not poor, and also, that these companies were failing to capitalize and predict customer's unmet needs and aspirations which is critical to generating new product/service ideas for development.
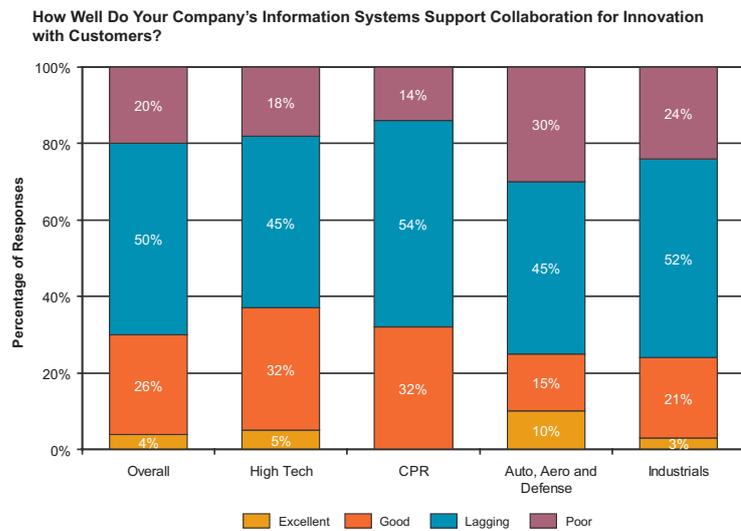
Similarly, about two-thirds of participants who were dissatisfied with their companies' ability to develop game changing or market disrupting products/services also said that their companies were unable to predict and capitalize on customer's unmet needs.

Analyzing responses by functional/organizational alignment reveals that members of General Management are more optimistic than other functional groups, with R&D in particular, about their companies' ability to predict and capitalize on customers unmet needs.

## Information Systems – The Bottleneck for Improving Customer Collaboration

Two out of three participants who say they were not satisfied with their company's ability to develop game changing products/services and that their new product introductions failed to meet planned sales and profitability targets, say that they are disappointed with the way their company works with customers to co-develop products/services. More than 80% of these same participants also say that their companies' current information systems do not support collaboration with customers. Exhibit 7 provides a sector specific breakdown of responses that corroborates this.

**Exhibit 7 There is a significant room for improvement in the impact of Information systems in supporting innovation across industries.**

**How Well Do Your Company's Information Systems Support Collaboration for Innovation with Customers?**



| | Overall | High Tech | CPR | Auto, Aero and Defense | Industrials |
|---|---|---|---|---|---|
| Poor | 20% | 18% | 14% | 30% | 24% |
| Lagging | 50% | 45% | 54% | 45% | 52% |
| Good | 26% | 32% | 32% | 15% | 21% |
| Excellent | 4% | 5% | | 10% | 3% |

Legend: Excellent, Good, Lagging, Poor

### Additional Perspectives

From the discussions above we can infer that there is a certainly a need to improve the nature and extent of customers' involvement in the process of innovation and our participants' comments are suggestive of this very same ideology. Many participants also have concerns about the availability of specific methodologies or tools within their companies to capture customers' needs. This in their opinion is further accentuated by the diversity of their customers and/or the sheer size of their customer base therefore posing challenges to aggregation of inputs to derive meaningful insights into their customers' needs. While there is a need to better classify customers and develop advanced methods for segmentation, participants have stressed the need to overcome an even greater barrier – an organizational perception especially among Engineering and Manufacturing related communities that customer research is expensive. Participants think that this threatens product development initiatives as being an abstraction of the R&D organization's experiences rather than insights obtained directly from the voice of customers.

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**What are the most significant customer collaboration related barriers to improved innovation facing your company?**

- Lack of collaboration information systems
- No specific methodology or tools to capture customer needs
- CRM process and objective VOC processes.
- Engineering/manufacturing mindset doesn't always focus on importance of customers, perception of customer research as being too costly, industry is not customer focused
- Product development is historically driven, based on own technologies and experiences, not so much on new customers insights
- Information technology a key lagging component

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# Research and Development (R&D) Collaboration

In this final section of the survey, participants were requested to respond to questions about their current R&D footprint and supporting infrastructure as well as shed some light on the future strategy, outlook and challenges of this important function. Through this we were able to better understand the extent to which their R&D operational setup impacts their ability to collaboratively innovate with internal as well as external partners.

## Collaborating on Innovation Initiatives is Not Easy

In the Corporate Strategy section of the survey, a majority of participants had identified R&D to be the primary function driving innovation within their company. We also observed several responses that pointed to other departments being closely involved in the process of innovation. Sales and Marketing as well as General Management were ranked second and third respectively as drivers of innovation.

When asked about the magnitude of challenges faced by these departments in innovating collaboratively, a consistent message came through: All these departments are faced with significant issues when working on development and innovation initiatives in a cross-functional manner. Some of the challenges faced by companies have been listed in the inset above.

## Organizational Structure Not Perceived as Fostering Innovation

Participants were asked if the organizational structure of their companies challenged collaborative innovation. The responses were relatively even between the affirmative and the negative. Further segmentation of the responses by functional departments of participants revealed that a majority of participants from R&D were disappointed with their organizational structure's ability to foster innovation where as those from General Management were mostly satisfied. The rest of the functional groups were evenly distributed between the positive and negative responses.

This does highlight a key difference in perception between these two departments. If the environment is not viewed as conducive or supportive to collaboration and cross functional innovation, competing by generating breakthrough or even incremental innovations becomes that much more difficult. The difference in perceptions between Management and R&D regarding organizational challenges can make delivering and meeting complex project deadlines even more difficult. This is something that the participants have expressed their frustration with in previous sections.

## External Resources and Information Systems Not Being Leveraged Adequately

More than 77% of participants who responded that their company's organizational structure was either poor or unsatisfactory in fostering innovation also indicated that they were not satisfied with the use of open innovation environments to collaborate with external parties, scientists and subject area specialists.

Companies across all sectors, most notably High Tech and Automotive, Aerospace and Defense are significantly dissatisfied in the effectiveness with which they are able to use outside support to complement their existing capabilities and collaboratively find solutions to their innovation problems.

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**What are the most significant R&D related barriers to improved innovation facing your company?**

- Lack of alignment between marketing and R&D
- Collaboration in a matrix environment
- Costs of development, lack of innovation culture
- Synergized research efforts for feedback and collaboration are fragmented at most
- Product Lifecycle Management
- Resources, and getting Manufacturing and Purchasing to play stronger roles.
- The pressure to shorten time to product release

| Participants that Perceive Company's Organizational Structure as Either Poor or Unsatisfactory in Fostering Innovation | Participants that Perceive Company's Organizational Structure as Either Good or Superior in Fostering Innovation |
| --- | --- |
| ■ 77% not satisfied with the use of open innovation environments to collaborate with external parties, scientists and subject area specialists<br><br>■ 68% say that their company's information systems to support collaboration were either inferior or unsatisfactory<br><br>■ Not satisfied with their company's capabilities to collaborate internally across functional groups in support of innovation | ■ 60% successful in the use of open innovation environments to collaborate with external parties, scientists and subject area specialists<br><br>■ 66% claim that their company successfully used internal efforts to collaborate cross-functionally in support of innovation |

The use of open innovation networks and collaborative cross-functional efforts seems to be positively correlated with the satisfaction expressed by participants in their companies' innovation initiatives. The exhibit above highlights the differences in the characteristics and opinions of two groups of participants that differ in their perception of their companies' organizational structure and its ability to foster a collaborative environment for innovation.

Collaborating for innovation with external partners is not trivial, and requires a deliberate and cautious approach, especially when intellectual property rights and trust and communications issues have been previously identified as areas of challenge to companies.

## Future R&D Strategy Differs by Sector

While using external partners to for R&D collaboration may be new avenues for some companies, there are other companies that seek to completely outsource their R&D. Texas Instruments recently announced that they would suspend all In-house R&D and work with third party vendors and partners to stay on the forefront of their silicon technology. On the opposite end of the spectrum, there are companies that keep their R&D internal and focus on doing more by themselves. This strategy may continue to work for some industries, markets and niches, but may not in the long run.

Such dramatic changes in companies' long term strategies could be leading indicators of where the industry may be going in the future. We asked participants questions regarding the direction of their future R&D strategy, from an organizational perspective.

Overall, the responses were inconclusive. But, after segmenting the responses by sectors, some interesting patterns emerged. A majority of participants from companies in the CPR sector and the industrials sector say that increasing In-house R&D is their primary strategy. Outsourcing is being considered by a very small fraction of the respondents in those sectors. In the meanwhile, responses from the High Tech and the Auto, Aero and Defense sectors are evenly split between keeping R&D in-house vs. outsourcing it.

Interestingly, companies looking to keep R&D functions in-house compare very well with respect to the rest in the following three dimensions:

■ Ability to foster innovation within their company

■ Their success with internal collaboration for cross-functional initiatives and

■ The maturity of their information systems to support cross-functional collaboration.

Keeping the core product development and innovation capabilities within the company is key to differentiating oneself in the market. Companies that consolidate, defend and build these capabilities can only benefit from the effort. Increasing the level of communication, and leveraging external resources in a collaborative manner, to address gaps in its capabilities can provide companies a powerful advantage in the market against their competitors.

## Additional Perspectives

Participants to our survey represent a very diverse set of companies that have R&D operations spread across all parts of the globe. A majority of their views as expressed through comments represent the need for a unified vision across their companies' R&D organization. Although differences due to variations in regional objectives are unavoidable, their common perspective on the primary method to improve collaboration across the R&D organization is to have a big-picture approach within their companies and to use this to develop common goals aligned for all groups such as Sales and Marketing and R&D across the entire geographical footprint.

# Recommendations

The usual belief in most companies is that a relentless focus on continuously improving the internal innovation capabilities has a direct correlation with the ability to attain long term sustainable competitive advantage. While our analysis of survey responses presented in this report supports this viewpoint to a large extent, we have also identified improvement opportunities for companies that we believe are effective strategies for companies to achieve sustainable competitive advantage through improved management and execution of innovation initiatives. Some of these opportunities for improvement that were inferred from the analysis of survey responses are as follows:

- Continuously monitor performance of the innovation process by developing and implementing appropriate metrics for performance measurement
- Increase involvement of stakeholders in the innovation process through clear definition of roles and responsibilities
- View suppliers as strategic partners not just low-cost providers; develop advanced methods for customer segmentation and evolve an R&D organizational structure that improves cross functional collaboration with other functions

**Corporate Strategy**
- Define and regulate the balance in focus for enabling success of breakthrough as well as derivative innovation efforts
- Evolve an organization structure to enable innovation to be driven by non-R&D functions

**Innovation Performance**
- Formalize a robust process for generation of ideas and strengthen the process for the selection of ideas for development
- Develop a methodology to use specific company-specific metrics to measure and track the performance of the company's innovation process
- Increase access to open innovation networks to leverage external support for both idea generation for basic R&D

**Stakeholder Collaboration with Suppliers, Customers and Internally within R&D**
- Increasingly view suppliers as trust-worthy partners in the innovation process
- Develop new methods to collaborate closely with customers to capture their unmet needs
- Evolve design of the R&D organizations that foster cross-functional collaboration and enables sharing of information across the organization

This study has provided us deeper insights into the strengths, challenges and opportunities across a number of areas with reference to the topic of *Collaborating for Innovation*. We hope that you too have benefited from the findings and discussions presented in this report.

Conversely, we also believe that this study has enabled us to ask more questions that probe even further into various topics related to innovation. We look forward to seek answers to these and many more unanswered questions through our future studies. We conclude by leaving you with a few of these questions and also request that you to send us some of your thoughts to the contact address provided at the end of this report.

- How do companies strike a favorable balance between the focus on breakthrough innovation versus derivative and incremental innovation?
- How do organizations sustain the focus on assessing the performance of their innovation process without subverting or diminishing the creativity of the employees?

## About Capgemini and the Collaborative Business Experience

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