# Innovating Japan

*Reigniting the giant*

IBM Institute for Business Value

**Executive Report**

IBM Business Analytics and Strategy

## How IBM can help

To succeed in today's environment, businesses need to lead through increased complexity and volatility, drive operational excellence and enable collaboration across enterprise functions, develop higher quality leadership and talent, manage amidst constant change and unlock new possibilities grounded in data. The IBM Business Analytics and Strategy practice integrates management consulting expertise with the science of analytics to enable leading organizations to succeed.

## *Seizing opportunity*

*Leading organizations have a clear focus on innovation. They recognize that effective and sustained innovation drives both value creation and competitiveness. In a 2014 survey of C-suite executives and their direct reports, we found that the most successful organizations approach innovation differently. Yet, organizations in Japan, which were once models of innovation for much of the world, have fallen behind in several key aspects – most notably in their failure to approach innovation in a systematic way. For Japanese organizations to regain their positions among the innovative elite, they must work to tear down three barriers – organizational, cultural and process – that impede enterprise-wide innovation.*

## Executive summary

While most Japanese organizations recognize the criticality of innovation, many struggle to pursue innovation in a systematic way. Underdeveloped entrepreneurialism, cultural roadblocks and organizational inertia stifles innovation and undermines economic growth. In a 2014 survey of 1,004 C-suite executives and their direct reports – including 108 from Japan – conducted by the IBM Institute for Business Value in collaboration with the Economist Intelligence Unit, we found that the most successful organizations approach innovation differently. Top organizations pursue distinct strategies in innovation organization, culture and process. This executive report highlights how the most successful organizations approach innovation and identifies specific strategies that can help Japanese businesses innovate like an outperformer.

**72%** more Japanese companies experience buy-in issues for innovation among their senior management.

**45%** fewer Japanese executives believe that their organizations will tolerate failure in innovation.

**63%** fewer Japanese executives believe that their organizations promote a culture of trust to support continuous innovation.

Analysis revealed three key categories that separate outperformers from the rest:

**Organizational structures and functions that support innovation**—The most successful organizations align innovation activities directly with business objectives, pursue "open" innovation structures and create specialized innovation teams.

**Cultural environments to make innovation thrive**—The most successful organizations maintain a clear focus on innovation across all business activities, encouraging innovative behaviors and finding ways to sustain innovation momentum.

**Processes to convert ideas into innovation**—The most successful organizations source new ideas from diverse locations, often leveraging big data and analytics; innovation is funded separately and measured rigorously.

# Global innovation forces

Examination of how the most innovative companies compare to others in the market provides evidence of how closely innovation is tied to financial performance (see Figure 1).

Japanese business leaders understand the importance of innovation, especially business-model innovation. In the IBM 2012 Global CEO Study, chief executives of organizations in Japan outpaced all others in the emphasis they placed on innovation in industries, revenue models and value chains (see Figure 2.)

**Figure 1**

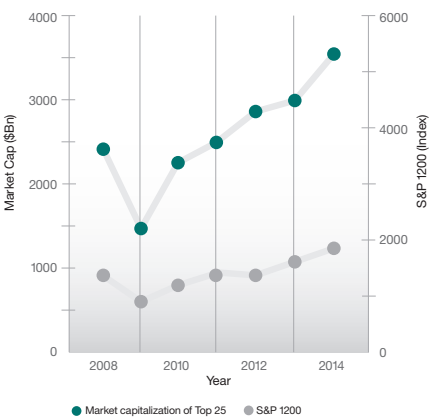
*Innovative companies outpace the overall market in value creation.*

**BCG 25 Most Innovative Companies in 2013[1]**

1. Apple Inc
2. Samsung Electronics
3. Google Inc
4. Microsoft Corp
5. Toyota Motor Corp
6. IBM
7. Amazon.com Inc
8. Ford Motor Co
9. BMW
10. General Electric Co
11. Sony Corp
12. Facebook Inc *
13. General Motors Co **
14. Volkswagen AG
15. The Coca-Cola Co
16. Hewlett-Packard Co
17. Hyundai Motor Co
18. Honda Motor Co Ltd
19. Audi AG
20. Daimler AG
21. Wal-Mart Stores Inc
22. Lenovo Group Ltd.
23. Procter & Gamble Co
24. Bayer AG
25. LG Electronics Inc

**Market capitalization growth**

BCG 25 Most Innovative Companies vs. S&P Global 1200



To that end, Japanese CEOs plan to increase both internal and external collaboration to support and enable innovation-oriented growth strategies. For example, 87 percent of Japanese CEOs plan to collaborate with customers in three years, compared to 54 percent today. Collaboration with partners/suppliers is expected to grow from 66 percent to 91 percent over the same period, and collaboration with employees from 57 percent to 85 percent.

Partnering in particular is a priority in Japan. In the 2013 IBM C-suite study, 73 percent of Japanese CEOs anticipate partnering with other organizations to increase value, compared to only 61 percent globally.[2]

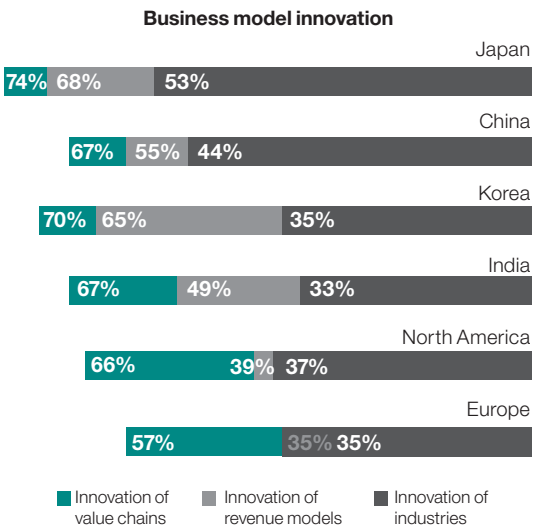
However despite aspirations, Japanese leaders struggle to create new tangible and compelling business models. Although 84 percent of Japanese companies are confident about their technology, 70 percent have doubts about their capabilities to create competitive business models.

Japanese companies spend more on research and development than most other nations, yet patent profitability and productivity are lower.[2] Despite Japanese government initiatives—such as establishing investment funds and special zones, with regulatory exceptions, tax, fiscal and financial measures —many Japanese businesses struggle to compete with the rapidly evolving business-model innovation and market disruption happening elsewhere in the world.[3]

Entrepreneurialism in Japan is comparatively immature. Whereas start-ups disrupt markets and industries with innovative business models in other advanced economies, in Japan innovation is generally concentrated in established corporations, which are typically slow to adapt new technologies and embrace more open forms of innovation.

**Figure 2**

*Leaders in Japan outpace others in recognizing the importance of innovation, especially business-model innovation*

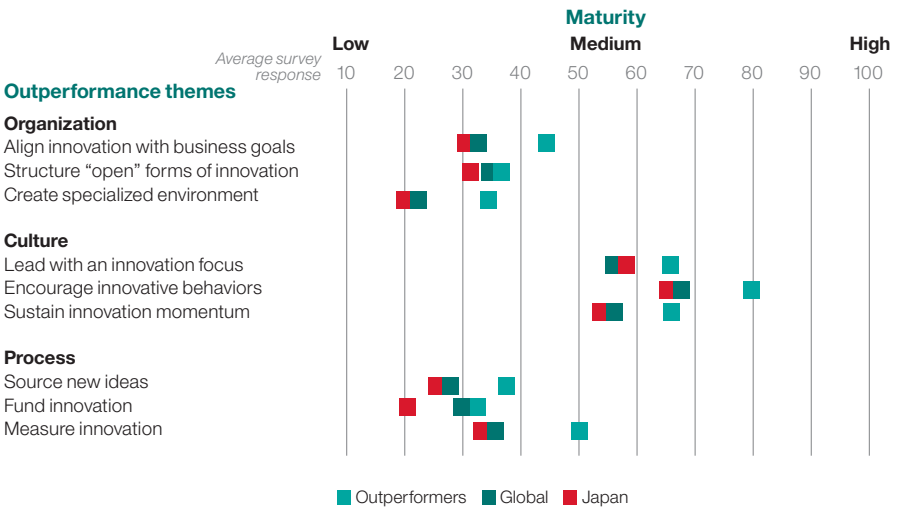


*While companies in Japan understand the importance of business models, many struggle to create new models that are tangible and compelling.*

As a consequence, Japanese organizations lag behind other nations across key innovation dimensions (see Figure 3).[4]

**Figure 3**

*Japanese organizations fall behind in several key dimensions*



To reverse this trend, Japanese leaders must breakthrough three major barriers to become more innovative:

**1. Organizational barrier**
Japanese organizations have less senior management buy-in for their innovation programs; innovation processes are less open across the ideation cycle; and organizations are less likely to have dedicated innovation teams.

**2. Cultural barrier**
Japanese executives do not always provide clear direction and impetus for innovation; employee engagement and incentives are lower; and organizations are less agile in acting quickly in response to opportunities and changing circumstances.

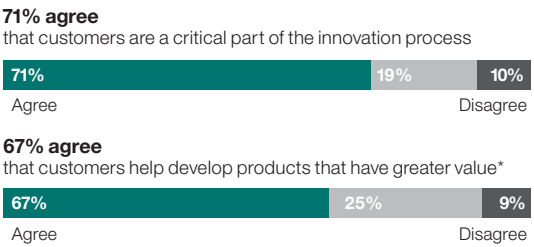
**3. Process barrier**
Japanese companies are less likely to seek new ideas from employees, business units and channel partners; innovation is less likely to be funded from a dedicated budget and less likely to have financial metrics applied.

Removing these barriers to innovation is essential and will involve a fundamental rethinking of how innovation is conducted within Japanese organizations.

*Japanese companies focus on partnering more than organizations in many other nations.*

**Figure 4**

*Innovation is occurring outside traditional paradigms – consumers are participating directly in innovation processes.*




* numbers sum to 101 due to rounding error

# The nature of innovation is changing

Increasingly, innovation is occurring within what we call the everyone-to-everyone (E2E) economy. E2E encompasses a fundamental shift in mindset from "me" to "we".[5] In years past, organizations pushed out products and services to customers and then told customers why they were valuable. Today, continuing digital evolution and revolution, combined with a transition from traditional market-based economic structures to an ecosystem-based environment, have altered innovation in three distinct ways:

*1. Consumers have become directly involved in innovation.* Technology and hyper-connectedness have been catalysts for the collaboration of consumers and organizations across the gamut of value-chain activities: co-design, co-creation, co-production, co-marketing, co-distribution and co-funding. Consumers and organizations increasingly work together to create value in an environment of transparency and trust (see Figure 4). For example, Xiaomi, a leading smartphone producer in China, has a business model with no marketing budget or sales team. To build customer loyalty, the company releases a new version of its software every week in response to user feedback.[6]

*2. Technology is at the core of innovation.* New technology enables organizations to respond faster to customer needs and build compelling new capabilities and business models (see Figure 5). For example, users of Foldit, an online game that provides for crowd-sourced protein folding, deciphered the retroviral protease of the Mason-Pfizer Monkey Virus in ten days, a problem that had challenged scientists for more than 12 years.[7]

*3. Ecosystems are defining new types of innovation.* An ecosystem is a complex web of interdependent enterprises and relationships aimed at creating and allocating business value (see Figure 6). An example of this development is the partnership between Quirky and GE. GE is crowdsourcing innovation through Quirky, reducing risk and sharing revenues with inventors who make breakthroughs.[8]

**Figure 6**

*Ecosystems are emerging and driving more open approaches to innovation*


**Figure 5**

*Technology is typically at the center of innovation, but tolerance of failure and encouragement of experimentation remains limited*

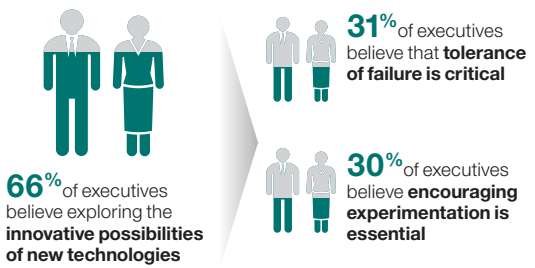
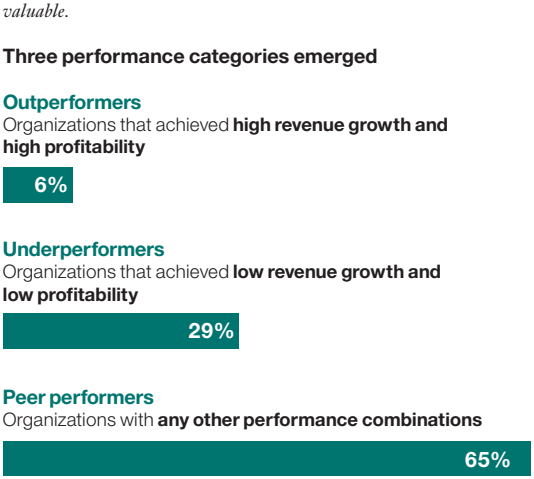


**Figure 7**

*Role models can play an important role in making innovation more valuable.*




Source: IBM Institute for Business Value

## The most successful organizations do innovation differently

Only 6 percent of organizations surveyed in our 2014 Global Innovation survey outperform others in both revenue growth and operating efficiency (profitability). We asked executives to rank themselves against their competitors along the two metrics. Using the survey respondent's ranking, we identified three specific categories of performance: outperformers, underperformers and peer performers (see Figure 7).

Armed with this categorical classification, we can answer two important questions. What do the top organizations do differently when it comes to innovation? And how do they consistently outperform their peers?

We found that outperformers:

- Build an organization that encourages innovation
- Create a culture that fosters innovation
- Design processes that enable innovation.

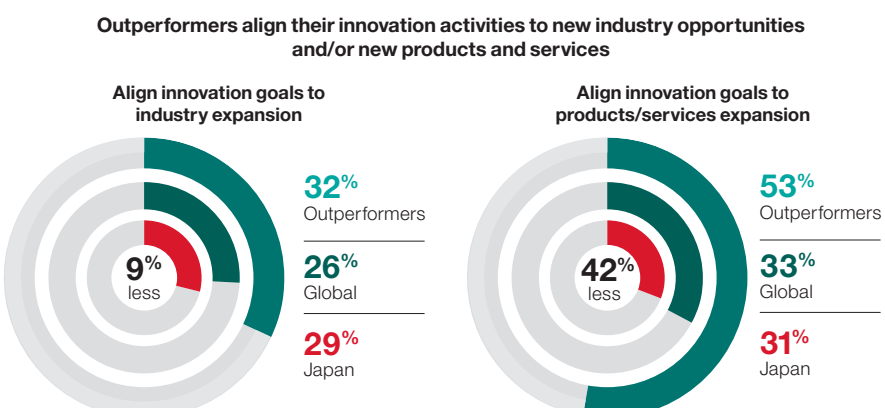
**Outperformers approach innovation differently**

The most successful companies create innovation structures and functions that align with and support their underlying business mission. They:

*1. Align innovation with business goals*—They promote innovation objectives related to their business objectives (see Figure 8). For example outperformers align innovation goals to the expansion of products and services 84 percent more than underperformers. They align innovation goals to industry expansion 61 percent more, and are 30 percent more likely to have senior management buy-in around innovation processes and initiatives. In contrast, 72 percent more Japanese companies experience buy-in issues for innovation among their senior management.

**Figure 8**

*Outperforming organizations explicitly align their innovation strategy and objectives to clear business goals*




**The University of Tokyo (Todai) established a dedicated legal entity to promote increased invention, innovation and patent submission**

In 1998, The University of Tokyo (Todai), one of Japan's most prestigious universities, established a wholly owned subsidiary, Todai TLO, to help monetize invention and innovations conducted by the university through licensing and patent arrangements. Working closely with the private sector and adopting commercial marketing principles, Todai TLO has been highly successful in positioning the University of Tokyo as a leader in invention submissions, patent applications and licensing income.[9]

**AkzoNobel's open innovation drives new product lines, solves technical challenges and boosts carbon-friendly research**[10]

AkzoNobel, the Dutch paint and chemicals giant, uses open innovation to seek out partnerships and solicits ideas through its online portal, Open Space. Open innovation engagement has created a number of success stories, such as better beverage cans, carbon-friendly research, low-carbon paint and the do-it-yourself repair solution, Stickerfix.

*2. Structure open forms of innovation* — Outperformers build robust structures to support open forms of innovation (using internal and external ideas and/or embracing open innovation concepts such as crowd sourcing). Twenty-four percent more outperforming organizations consider open environments more conducive to effective innovation than underperformers. And 10 percent more say that open environments lead to better and faster idea development. Thirty-seven percent more outperformers use open innovation processes than underperformers, and they are much more likely to adopt open strategies and approaches to ideation processes. However, in Japan 12 percent fewer executives consider open innovation promotes an innovative environment. And 17 percent fewer believe openness leads to better, faster idea development.

*3. Create specialized teams* — Outperforming organizations are much more likely to create dedicated innovation teams. Specifically, outperformers are 79 percent more likely establish and maintain special or designated innovation teams, and those teams are 24 percent more likely to be part of a specialized innovation department. For Japan, however, 14 percent fewer executives consider products, services and operations in their innovation decisions.

Some Japanese companies are seeking to realign R&D professionals with lines of business. For example, Panasonic announced in June 2014 plans to move 500 R&D employees, half its current size, to profit-making divisions.[11] The retained R&D team focused on developing new products in advanced technology areas.

**Outperformers build organizational climates conducive to innovation**

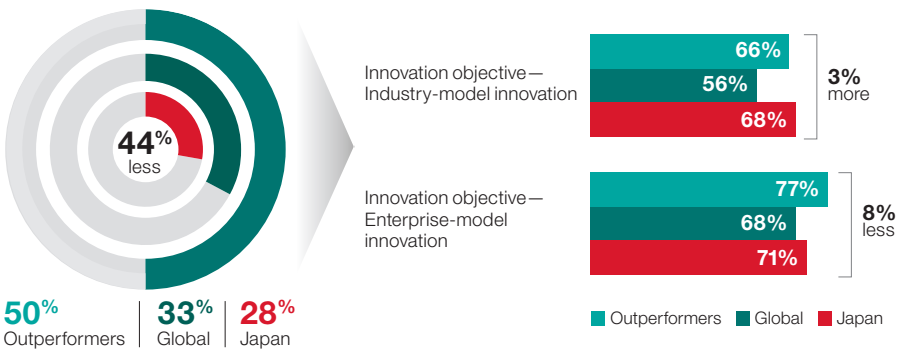
Creating cultures and environments in which innovation can thrive is crucial for successful innovation and is another differentiating characteristic of outperformers:

*1. Lead with an innovation focus*—Business leaders in outperforming organizations explicitly promote innovation as central to business activity. Leaders of outperforming organizations are 92 percent more inclined to provide a clear direction and impetus for innovation (see Figure 9). They are also more open to industry and enterprise-model innovation, and are 27 percent more likely to link innovation efforts with financial performance, requiring and expecting innovation to be associated with increased business value. For Japanese executives, however, 11 percent fewer Japanese executives consider clear focus on performance as key to successful innovation.

**Figure 9**

*Top performers are, by a considerable margin, more adept than underperformers at using procurement technologies to advance strategic priorities and drive value to the enterprise.*

**Outperformers are more open across innovation processes**




**Philips' goal is to create meaningful innovations to improve lives[12]**

Philips R&D, founded in 1914, is one of the world's largest corporate research organizations, encompassing Research, Innovation Services, Intellectual Property & Standards, Innovation Campus and Healthcare Incubators & Design.

Philips R&D employs about 5,000 professionals globally and has an annual budget of more than 7 percent of annual sales. Such investment in innovation has paid dividends. In Germany, for example, innovation leadership in oral healthcare resulted in a market-share improvement.

**Honda builds customer trust through battery technology[13]**

Honda's "battery traceability system" enables it to develop high-spec Electronic Vehicles (EV) battery systems. The system captures battery usage data in real-time from customer EVs, and analyzes it to develop better and faster EV battery systems.

**Umpqua Bank's innovation strategy aims to deliver unique, socially rich, tech-enabled customer experiences[14]**

Innovation is a core business value to of Umpqua Bank's strategic decision-making. In 2007, Umpqua launched an "Innovation Lab" to test new technologies and conceive new ways to create improved banking experiences for customers

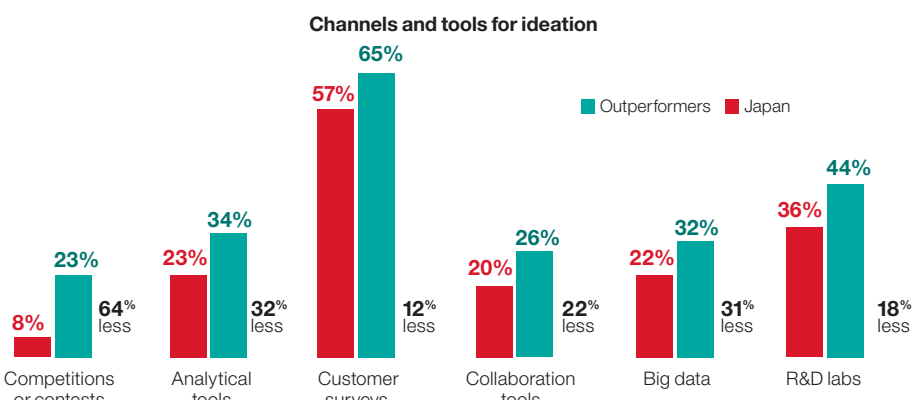
Despite rapid expansion, Umpqua's continues to engage customers by offering comfortable, socially-rich and tech-enabled multipurpose branches.

*2. Encourage innovative behaviors*—Outperforming organizations are 17 percent more likely to actively encourage innovation by employees through specific incentives and rewards than underperformers. And they are 31 percent more likely to engage employees directly in innovation. Outperforming organizations also have a greater tolerance of failure. They are 25 percent more likely to accept that some innovation projects will not succeed. However, 45 percent fewer Japanese executives believe that their organizations will tolerate failure in innovation.

*3. Sustain innovation momentum*—Outperforming organizations are 37 percent more likely to promote agility in their culture and way of doing business. They are also 29 percent more likely to stay ahead of changing customer attitudes and expectations. Outperformers are 26 percent more likely to consciously and explicitly build an environment of trust among stakeholders in pursuing innovation. Sixty-three percent fewer Japanese executives believe that their organizations promote a culture of trust to support continuous innovation.

**Figure 10**

*Outperforming organizations source new ideas from a variety of sources*



**Outperformers have clear processes to source, fund and measure innovation**

The most successful organizations source and directly fund new ideas. They are also more likely to measure the effectiveness of their innovation program to demonstrate the value created:

*1. Create new ideas from a wide range of sources*—Outperforming organizations are more likely to welcome inputs into ideation processes across the board (see Figure 10). They are 23 percent more likely to use big data and 79 percent more likely to use analytics to identify new innovative opportunities. They are 35 percent more likely to use customer surveys and 156 percent more likely to use competitions. And they engage employees (31 percent) and channel partners (37 percent) in idea generation much more frequently. However, 39 percent fewer Japanese organizations source ideas from channel partners, 31 percent fewer from business units and 28 percent fewer from employees.

*2. Fund innovation*—Outperforming organizations are more likely to approach innovation with the same disciplined approach that they would any other business process. They are 45 percent more likely to allocate dedicated funding to innovation and use business-case methodologies to make go/no-go decisions on specific innovations. They are also more likely to fund innovation activities at sufficient levels for maintenance of an effective innovation program. In Japan, however, 45 percent fewer organization have dedicated innovation funding.

*3. Measure innovation outcomes*—Outperforming organizations hold innovation initiatives explicitly accountable to clear financial objectives. They are 35 percent more likely to explicitly measure the outcome of innovation initiatives. Specifically, they are 48 percent more likely to measure financial return on investments from innovation, and 47 percent more likely to assess its impact on their market than underperformers (see Figure 11). By being methodical and promoting accountability and transparency in ROI of innovation spending, outperformers are better able to justify its continuing funding. As such, outperforming organizations are more

**Maruti Suzuki engineers have freedom to drive innovation[15]**

India's Maruti Suzuki embraces an open door policy to boost the spirit of innovation.

Engineers are free to innovate and to apply "anything they have learned from their colleges" that could be new. The automaker owns more than 100 patents, the majority of which were developed by its own engineers.

This innovative approach has contributed to significant financial growth and improvement over recent years.

**MUN provides contextual information for customers[16]**

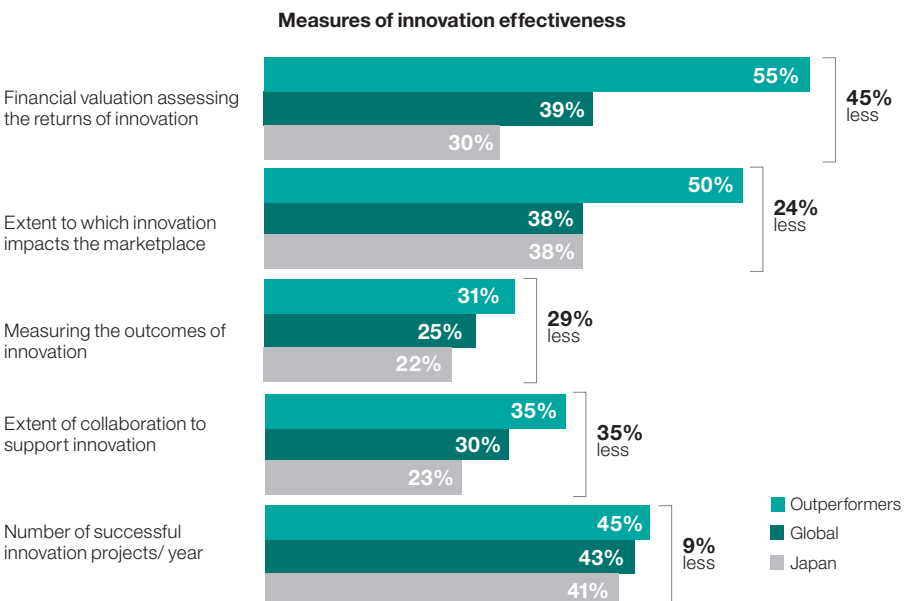
Mitsubishi UFJ Nicos, a Japan credit card company, card has implemented a customized campaign management for its cardsholders that analyzes customer transactions and stays ahead of their expectations through focused promotions.

The campaign enables merchants with contextual customer information to drive targeted sales.

likely to secure stable investment and diminish the vagaries of quarterly or annual budgeting volatility. In Japan,
14 percent fewer executives consider velocity of innovation (time between initial idea and final execution) a key measure.

**Figure 11**

*Outperforming organizations measure financial return on investments from innovation*



# Innovation lessons from the most successful performers

**Innovation organization**

*Create impact from innovation resources.* Idea-generation processes will inevitably produce far more good ideas than can be funded. Scarce funds and people resources limit the number and extent of innovation projects. Focus on those most aligned to overall business goals. The absence of clear vision and strategy for research is one of the biggest constraints to effective innovation.

*Open up innovation processes.* Establishing open forms of innovation provides increased depth and relevance to innovation initiatives. Provide employees the tools and physical/virtual environments to engage in open collaboration. Allow them to interact with a range of external parties. Establish governance to help ensure regulatory compliance and protect intellectual property.

*Establish dedicated innovation teams.* A dedicated innovation group can fulfill two important roles: provide management and governance for the overall innovation program and support specific innovation activities. Support can include facilitation of new ideas, collaboration support and assistance in business-case development. Consider establishing a separate company in which the team can decide everything from partnering to management system (stock option for the staff etc.).

**Innovation culture**

*Place innovation at the organization's core.* Innovation can underpin all aspects of day-to-day business, from interactions with customers, to operations. But innovation needs to be more than semantic—hold innovation accountable to produce real value creation. Nurture more disruptive forms of business-model innovation centrally to avoid organizational resistance. Include concepts of "innovation" or "creative destruction" in the center of the corporate value statement and apply it to decision-making processes from the executive board to front-line local offices.

**BMW turns to online communities for open innovation[17]**

German automaker BMW engages customers through open innovation contests to design cars of the future. The company considered the crowd's discussion and voting in selecting the design theme for the BMW Urban Driving Experience.

Specifically, BMW was able to encourage new ideas from customers by providing a platform for consumer engagement, adding new insight into ideation processes and facilitating deeper customer connections. BMW also encourages employee engagement in innovation through its global research and innovation network.

**Shiseido measures impact of innovation[18]**

Shiseido invested in several innovations for customer data integration and new sales tools that enable promoters to use the latest innovations to make better sales and offer better customer service.

Return of investment was generated from increased sales and service quality, as well as acquisition of new customer segments.

**Shell Technology Ventures invests in companies for development and deployment of new technologies[19]**

Shell Technology Ventures works closely with entrepreneurs and early-stage companies, as well as the venture capital firms that invest in them.

*Build a climate of innovation.* Innovation works best when it becomes a philosophy, broadly applied through the organization. With a strong innovation culture, employees naturally collaborate and support new thoughts and initiatives. Give people the time and space they need to innovate. Provide small incentives or rewards for innovative behavior, including visible recognition. Business-plan contests, process-improvement awards and case-method training can stimulate employee behavior.

*Prioritize agility as a critical capability.* Speed and flexibility are the defining features of successful innovation. Innovation is becoming insatiable—requiring continuous injections of new ideas and initiatives. Staying ahead of changes in customer aspirations will be a crucial part of any successful innovation strategy. Lean startup (of new business development) can become a standard methodology not only in for new ventures, but also across established enterprises.

**Innovation process**

*Build ideation platforms and competencies.* Ideas are a critical input to innovation. Poor ideas limit the potential for value creation. An open, flexible idea-generation platform, coupled with strong ideation and facilitation skills and robust idea-evaluation processes can drive substantial benefits. Deploying analytics and data in pursuit of new ideas, for instance social listening and persona building, adds an additional, powerful dimension. Establish or participate in formal or informal study groups across the company and industry where different knowledge combines to generate new insight and ideas.

*Secure an innovation funding stream.* Innovation works best with stable, distinct funding. Creating a formulaic funding source for innovation can protect it from the perils of quarterly budgeting decisions. Crowd-funding or allocating a specific percentage of cost savings to innovation can help provide a more stable funding arrangement. Convert some R&D budget

to connect and create development activities, especially for research projects addressing non-core technologies. Utilize non-recourse financing schemes for corporate ventures to limit business risks and conflicts, while securing autonomy for the team.

Use quantitative metrics to evaluate innovation. Financial metrics provide clear, consistent discipline to innovation funding decisions, but they are only part of the story. Other measures, such as likely market impact, can give added context to funding and gating decision making, potentially keeping alive projects that, while not break-even, are of major strategic importance to the business. Set more outcome (not output) based measures. Identify quick wins — innovative projects likely to deliver quick returns on investment.

**Conclusion**

Innovative organizations outperform their peers. The most successful innovators are able to create new types of business value in sustainable ways. But innovation is not some type of magic. It is a systematic discipline that can be embraced and adopted by all organizations. Japanese companies once led the world in innovation of operations, products and business models. But in many markets and industries, Japanese companies have fallen behind. The most innovative companies now come from elsewhere. Absence of entrepreneurs, reluctance to embrace new business models and cultural resistance to open innovation keep many companies from realizing their full innovation potential.

But all is not lost. This executive report has identified and documented clear steps that Japanese organizations can embrace that can support a resurgence of Japanese business leadership. By applying the innovation lessons of the most successful organizations, Japanese companies can reposition themselves to be among the innovation leaders of the future.

**Otsuka improves healthcare coordination through patient health records[20]**

Otsuka connects mental health services providers, such as community centers, hospitals and social organizations, which enables patient health records to be more comprehensive by avoiding prescribing past failed medications.This has reduced medical cost in South Florida by reducing the ratio of patients readmitted to hospitals after discharge. This pursuit of innovation has led to significant year-on-year revenue growth.

**Canon makes innovation and technological advances central to its corporate DNA[21]**

Canon promotes innovation throughout its corporate activities, beginning with manufacturing. The company engages in basic research in unexplored fields, aiming to spark innovation and create new or previously untapped markets.

This commitment to research has paid off in the development of a range of patented products and processes. Canon is a leader in patents granted both in Japan and internationally.

**For more information**

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