



Reinventing innovation

Five findings to guide strategy through execution

Key insights from PwC's Innovation Benchmark

In an era of digital business and rapid technology change, virtually no company can ignore the imperative to innovate. Failing to do so is an invitation to lose business.

To learn how companies are responding to this mandate, PwC conducted a major global study. We surveyed over 1,200 executives in 44 countries and spoke in depth with individuals charged with managing innovation initiatives at leading companies.

Our goal was to understand how these leaders view innovation and what they are doing to better reap its rewards. We looked at innovation across a complex set of challenges, including innovation strategy, operating models, culture, metrics, and more to understand how innovating companies are seeking to create business value and financial returns on their efforts.

Our findings show that companies are struggling with clearly aligning their innovation efforts with their business strategy. We're also seeing companies across a wide range of industries enlist technology as the driver—not just the enabler—for market change and innovation, while also recognizing that technology is only as good as the humans using it, including customers, employees, and partners.

With this in mind, companies are opening up the innovation process earlier to a broader set of stakeholders both inside and outside the company. The majority of respondents, for example, say they are bringing customers into the innovation process at the ideation phase.



How do leaders view innovation, and what are they doing to better reap its rewards?



Moreover, companies applying customer-engagement strategies that employ design thinking and user-driven requirements from ideation to product/service launch are about twice as likely as their survey peers to expect growth of 15% or more over the next five years.

Clearly, bringing more parties into the innovation sandbox is a smart idea that can deliver significant benefits, ranging from improving strategic alignment to accessing fresh ideas and critical talent, to failing faster and getting new innovations to market sooner. We hope that these and other trends uncovered in our study, along with the insights accompanying them, will help other innovators in their path forward.

1) Strategy, not size, matters in innovation spend

Improving the financial return on innovation is ultimately the name of the game. But when it comes to getting results, it's not so much about the size of your budget. It's about how effectively you spend it—from strategy through execution.

Roughly half the companies participating in PwC's Innovation Benchmark think that their innovation efforts have had a “great” impact on driving their revenue growth, with an equally significant impact on cost management. And nearly all companies believe there has been at least a moderately positive impact on both topline and bottom-line growth.

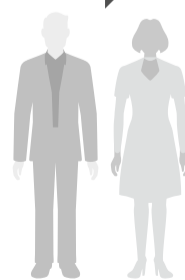
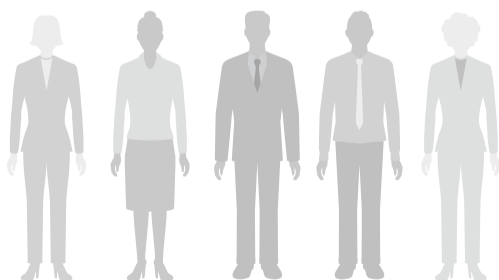
When it comes to financial performance in particular, respondents from sectors undergoing rapid digital disruption, such as communications, technology, automotive, and entertainment and media, are, overall, more likely than others to say that innovation has improved their revenue growth in the past several years. When probed more deeply, however, just slightly more than a quarter of respondents professed to being innovation leaders in their industries. As it happens, they also expect higher growth than their survey peers, as do those respondents who plan to reinvest in innovation at higher rates.

Innovation leaders are growth leaders too

More than one-quarter of companies see themselves as innovation leaders

20% of these innovation leaders expect >15% growth in the next 5 years

...whereas just 13% of all other innovating companies expect the same level of growth



Q: How innovative is your organization compared to competitors in its ability to develop new products, services, and user experiences effectively and efficiently? Q: How much total revenue growth does your organization forecast in the next five years?
Source: PwC's Innovation Benchmark
Base: 1,222

The relationship between a company's level of innovation spending and economic success is, however, tenuous at best. Over the past dozen years, our annual [Global Innovation 1000](#) study has found no statistical relationship between dollars spent on research and development (R&D)

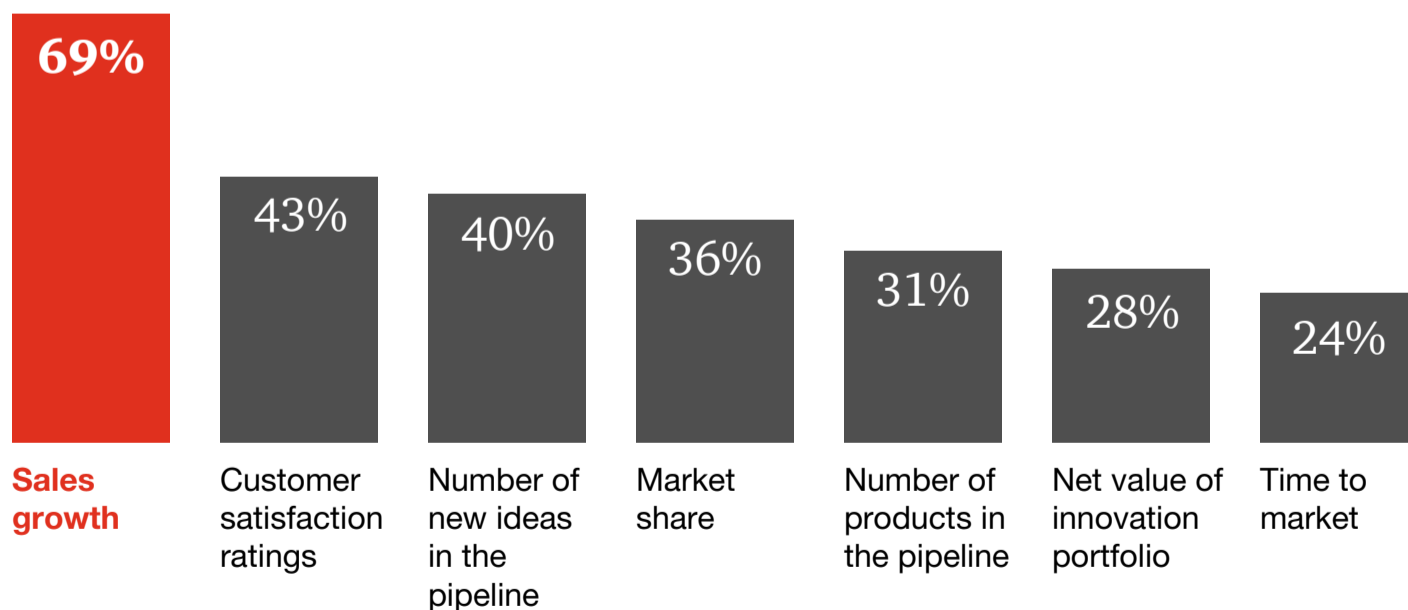
and financial performance, suggesting that the way you spend your innovation dollars is more important than how many of those dollars you spend. A majority of companies in PwC's Innovation Benchmark study are looking beyond R&D to focus more on inclusive operating models that bring a variety of parties into the innovation sandbox.

Companies are looking beyond R&D to focus on inclusive operating models that bring a variety of parties into the innovation sandbox.

It's good that these approaches are helping companies achieve the dual objectives of revenue growth and cost containment, since at the end of the day (whether it be in a year's time or ten years'

time), the business benefit delivered by innovation really does have to be a financial one, superseding other metrics such as brand health, product performance, and customer satisfaction. It's no surprise, then, that we see over two-thirds of firms flagging sales growth as the most important innovation metric, with all other metrics lagging considerably behind.

Innovation's impact: Sales growth is the top metric

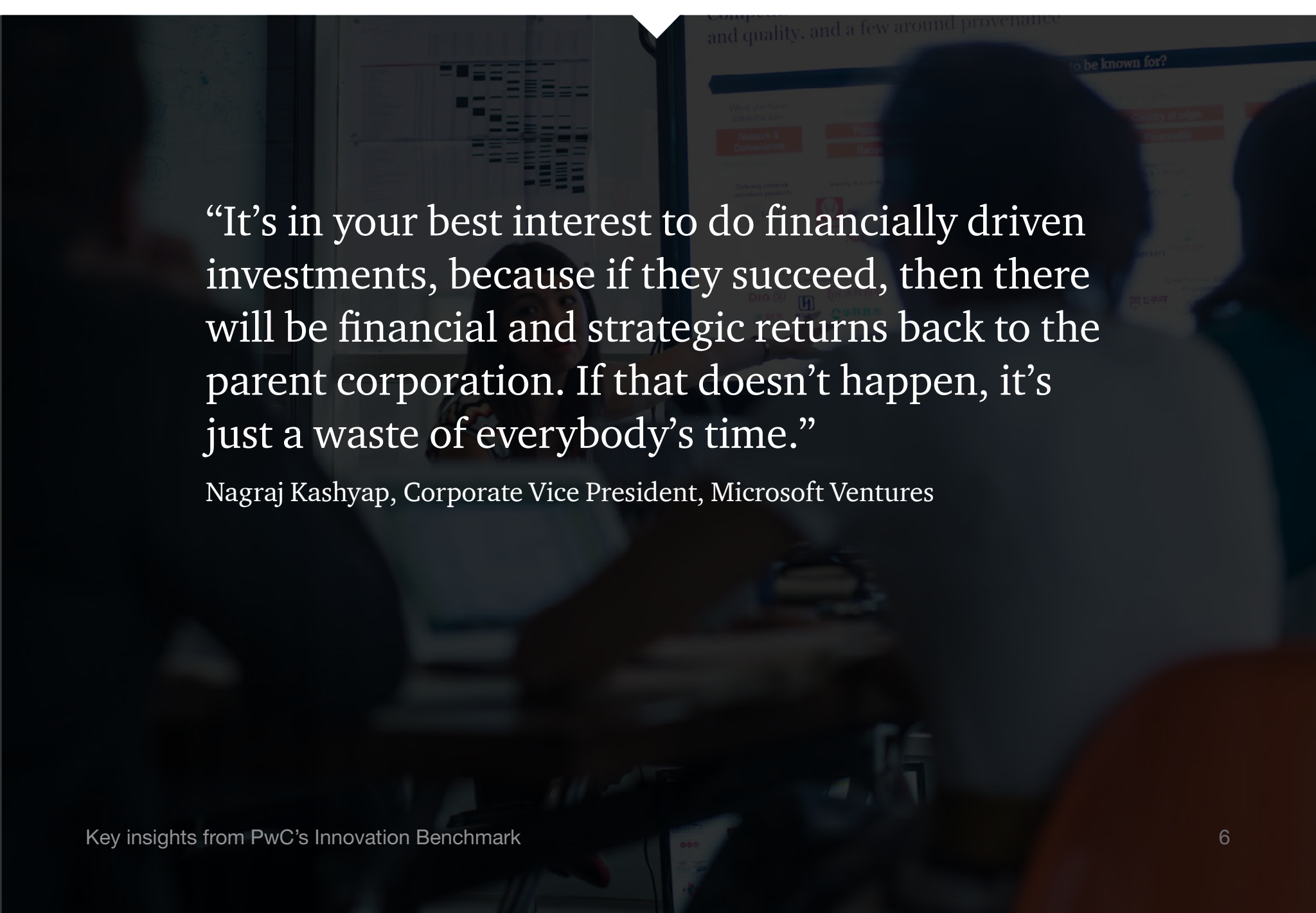


Q: What are the most important metrics for measuring innovation at your organization?
 Percentages denote the number of companies citing each metric as among their most important ones.
 Source: PwC's Innovation Benchmark
 Base: 1,222

For Bonny Simi, president of JetBlue Technology Ventures, a key metric is how the business model of the parent company, JetBlue Airways, evolves based on the strategic investments that her group makes. But she clarifies that the team also considers the financial returns to ensure that they are investing JetBlue's funds wisely.

Nagraj Kashyap, corporate vice president of Microsoft Ventures, is blunter: "Regardless of what anybody tells you, it's in your best interest to do financially driven investments, because if they succeed, then there will be financial and strategic returns back to the parent corporation. If that doesn't happen, it's just a waste of everybody's time."

While not everyone might see things precisely that way, no company innovates with the goal of losing money, and none can lose indefinitely. For that reason alone, how you innovate is every bit as important as how much you invest.



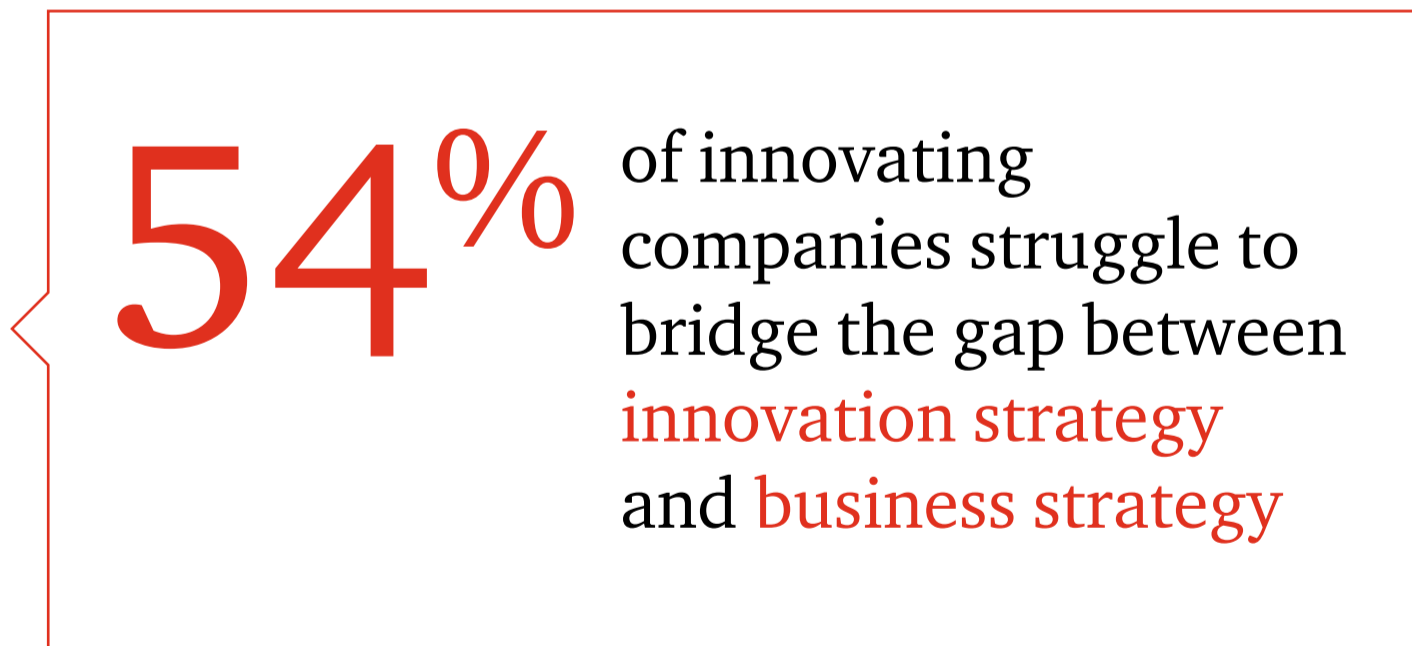
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Nagraj Kashyap, Corporate Vice President, Microsoft Ventures

2) From blind bets to viable business models

Random acts of innovation rarely pay off. For any initiative to deliver true value, the effort must clearly align with a company's business strategy. Yet, successful alignment between innovation strategy and business strategy can elude even the best of companies. How to overcome this challenge?

One way is to follow the approach taken by GE Ventures, which has no intention of making blind bets. Says Sue Siegel, CEO of GE Ventures, "For the venture community, we need to focus on reimagining and experimenting with new business models. Emergent technologies are very powerful, but what we have to figure out is, what is the sustainable business model that we could potentially either partner up with or use within our organization to drive growth? We've been able to experiment to translate these major trends and technology enablers and apply them to business model innovation. That is incredibly important to how we stay 'tip of spear' at GE." But Siegel also admits that it "can be challenging for corporations."



Q: What is your organization's greatest strategic challenge to successful innovation?
Source: PwC's Innovation Benchmark
Base: 1,222



GE is hardly alone. Over half of innovating companies struggle with bridging the gap between innovation strategy and business strategy, flagging it as their greatest strategic challenge when it comes to innovation. That's more than twice as many that point to any other strategic challenge.

This issue holds true across all industries and becomes more salient as a company invests more of its resources in innovation. Sixty-five percent of companies investing 15% or more of revenue in innovation say that aligning business strategy with innovation vision is their top strategic challenge. The upshot? Too many companies are flying blind (or semi-blind), with a lot of money on the line.

Bringing people from the business-strategy side of an organization into the innovation sandbox from the start—at the ideation phase of any new, potential innovation—is critical to making innovation pay off in the long term, rather than having it be a potentially losing proposition. That requires knocking down silos within a company.

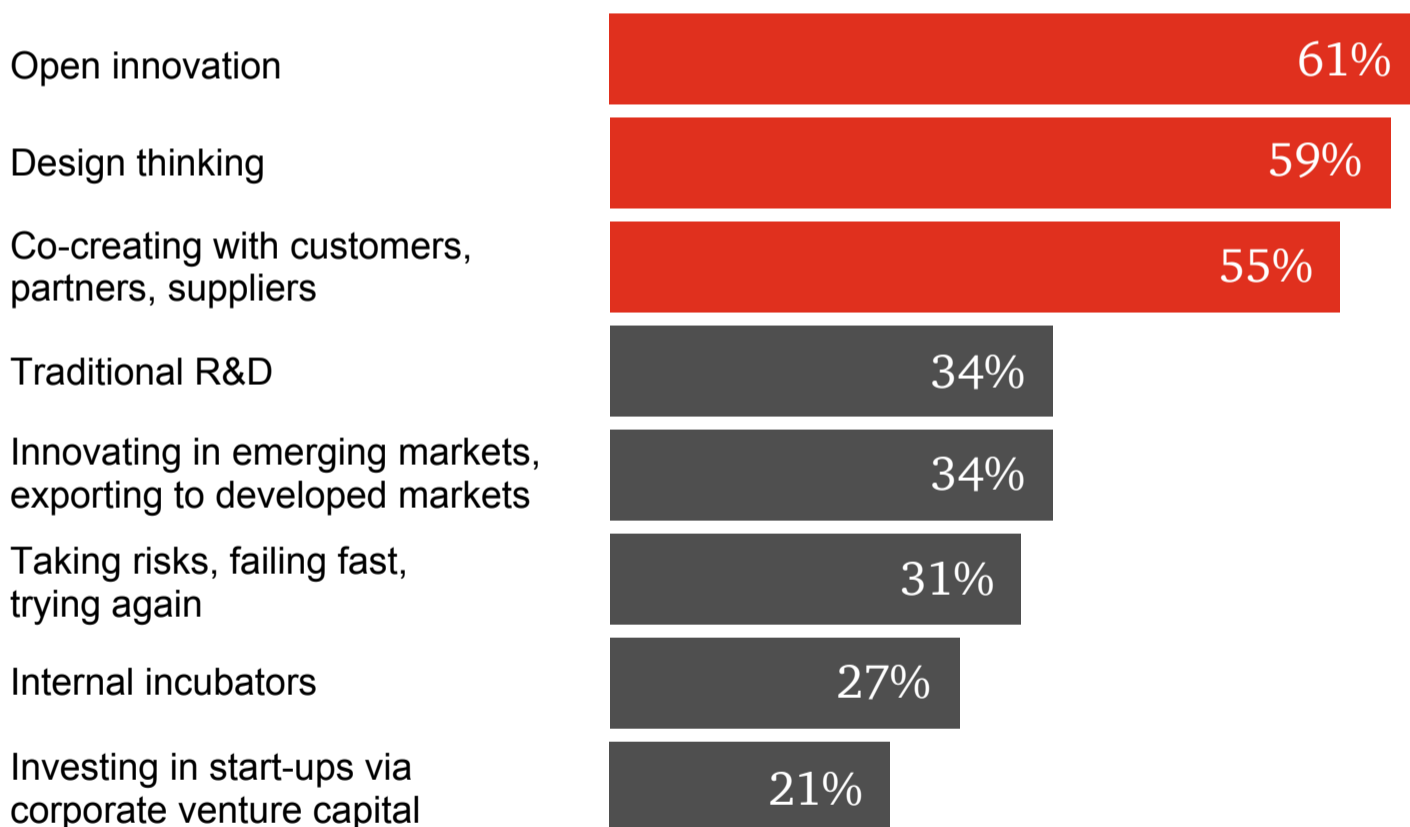
At GE, says Siegel, it means “looking horizontally within the company, across the various industries, and asking, ‘What can we take from the various trends in each of these verticals and bring them together to create an opportunity?’ It’s all about the horizontal place.”

3) Silo-busting innovation models

Innovative companies aren't going it alone. Instead, they're pushing the boundaries of innovation both inside and outside their organizations by breaking down traditional barriers, tapping a much wider ecosystem for ideas, insights, talent, and technology, and incorporating the customer throughout the innovation process.

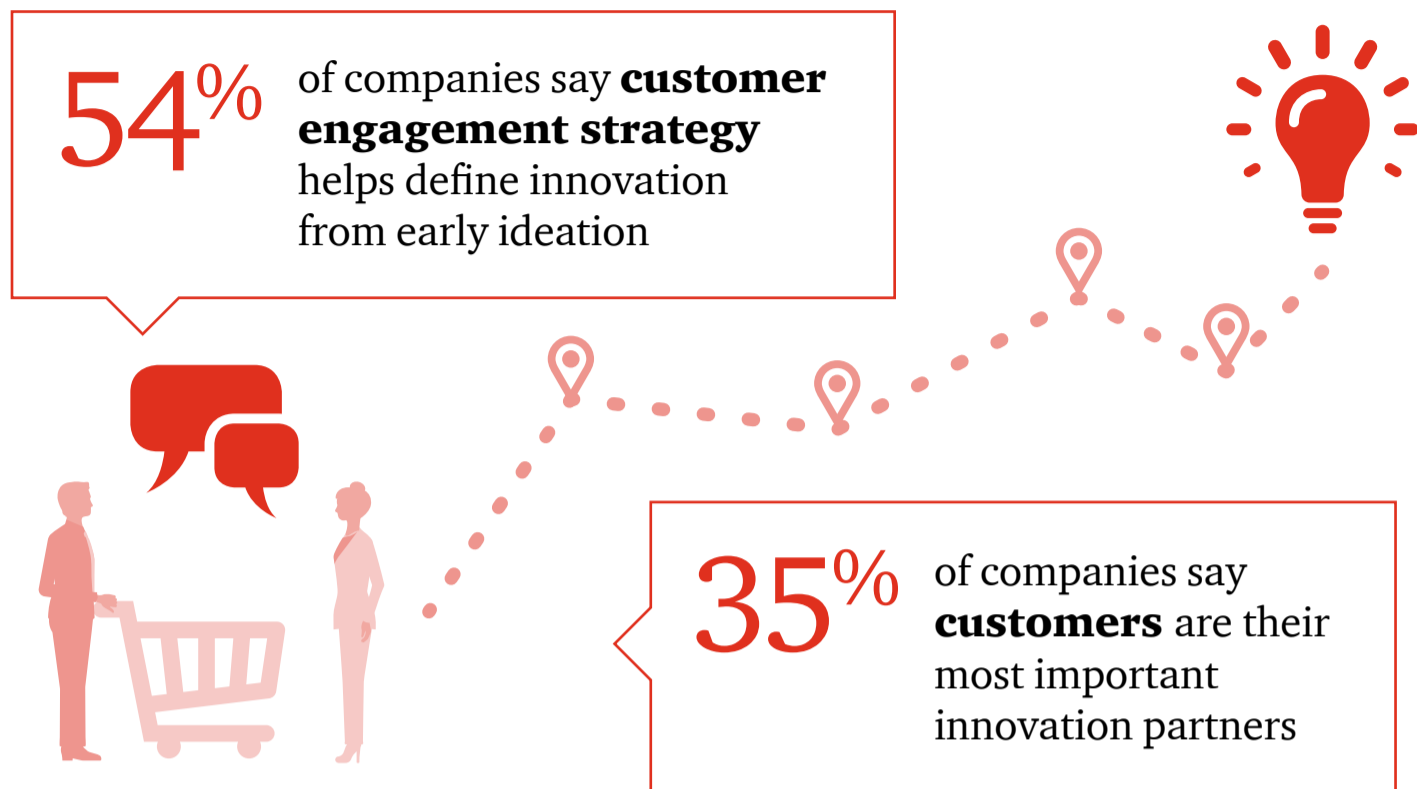
More-inclusive operating models, such as open innovation, design thinking, and co-creation with partners, customers, and suppliers, are now all embraced ahead of traditional R&D, and by a wide margin—almost twice as many companies favor these models.

More collaborative operating models outpace traditional R&D



Q: What operating models does your organization currently use to drive innovation?
Percentages denote the number of companies using these innovation models.
Source: PwC's Innovation Benchmark
Base: 1,222

Customers define and drive innovation



Q: Who are the most important external and internal partners for innovation at your organization?
Q: To what extent do you engage customers during innovation?
Source: PwC's Innovation Benchmark
Base: 1,222

When it comes to these more-inclusive operating models, over one-third of companies say that customers are their most important innovation partners. And the majority tell us that their customer engagement strategy helps define innovation requirements from the early ideation phase.

Real-time customer engagement, in particular, is playing an increasingly useful role in innovation, thanks to new connected technologies. “As our vehicles become smart products, we’ll start to see more of that real-time customer engagement, where we can really mash up what’s happening in the vehicle in real time with big data,” says Rachel Nguyen, executive director of Nissan Future Lab.

Established as an extension of Nissan’s advanced planning group, Future Lab is looking at what lies ahead for mobility, not just from the standpoint of the individual, but also from the broader perspective of urban mobility. The group’s research includes teaming with external partners, like the San Francisco-based scooter rental network, Scoot Networks, to learn by observing riders’ behaviors.

The goal is to find opportunities for solving unmet needs, Nguyen says: “We push ourselves to always look for something that has not yet been demonstrated.”

This desire to break new ground is shared by many organizations. And it is backed by financial commitment: PwC’s Innovation Benchmark study shows that companies investing more in innovation are more likely to be focused on breakthrough innovation than on incremental improvement. Of those reinvesting more than 15% of revenue, most are engaged in breakthrough innovation, with over 40% of them focusing on that exclusively. Larger companies with \$1 billion or more in revenue have a greater tendency than smaller companies to focus on breakthrough innovation. They’re also more likely than smaller companies to work with technology partners, engage in reverse innovation, adopt design thinking, and encourage open approaches to innovation.

Among companies re-investing more than 15% of revenue, most engage in breakthrough innovation.

The embracing of open innovation and design thinking by larger companies is a positive development, as it helps break down walls in those organizations and brings together people from across the company’s various areas of expertise, spanning business strategy to technology. This is something that smaller, streamlined companies are often able to do with greater ease and frequency but that has tended to elude bigger enterprises. And yet, in a key respect, larger businesses are better candidates for design thinking, in that they typically have greater financial wherewithal to devote the time and patience required of design thinking’s iterative process, whereby different approaches can be tried before the right solution is reached.

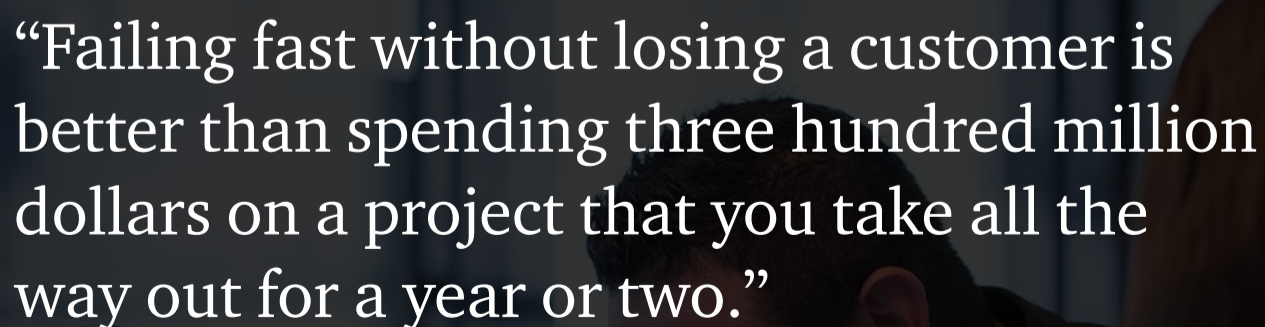
One large business that’s successfully taken an iterative approach to innovation is Marriott International. George Corbin, the company’s senior VP of digital, describes Marriott’s innovation cycle as a “prototype-to-pilot” process that is designed to test three risk factors. They will test the innovation as a pilot at a handful of hotels; as the risk factors are

vetted, the company will then begin to scale up to several hundred hotels, and ultimately may deploy worldwide. As part of this process, the teams first test customer adoption of the new service—do customers really use it, and if not, why not? Next, they need to prove that the new underlying technology not only works, but that it can scale; after all, Marriott will need to roll out the innovation to thousands of hotels around the world, and many promising technologies can struggle when activated at scale. Finally, the company tests the concept for its “operationalization” at the hotels. That is, can the people and protocols on property deliver the service consistently, cost-effectively, and with high accuracy (98-99%) once deployed globally? “If the concept passes those three tests, then, ladies and gentlemen, we have a winner. We move into the full funding and deployment mode.” Typically, the testing takes a matter of months.

Many large companies, including Marriott, are publicly held and must therefore deal with the pressure of ROI and quarterly earnings reports. That can make speed essential, if stakeholders want results in the short term. When that’s the case, a company might want to consider accelerating open innovation, like at Nissan Future Lab, where their alliance with Renault enlists the kind of collaborative, rapid design processes needed to hold off potentially disruptive startups.

But building solutions rapidly needn’t mean skipping the “fail and try again” part of the iterative process. You just fail faster, hastening the valuable lessons gained from illuminating mistakes, but without paying dearly for them. As Sue Siegel, CEO of GE Ventures, puts it, “Failing fast without losing a customer is better than spending three hundred million dollars on a project that you take all the way out for a year or two.”

Privately held companies tend to feel less time-intensive ROI pressure from their stakeholders, allowing these businesses to apply patient capital.




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Sue Siegel, CEO, GE Ventures

When such capital is in limited supply, however, private companies can also speed up innovation by bringing in the right talent mix from the start, including business acumen, design experience, and technology know-how. The same applies to nonprofit organizations. The UK-based innovation foundation, Nesta, for instance, sets up workshops with employees, end users, and other stakeholders to consider innovative approaches.

Small entities (those with under \$1 billion in revenue) are also more likely than their large counterparts to work with academics and research institutions, where R&D is often conducted. Doing so is a way for these organizations to avoid the cost of conducting innovation in-house, which might be out of their price range, while also allowing them to take advantage of R&D tax credits.



“When you’re trying to design and implement a new way of working, you really need a feedback loop. And that feedback needs to come from all the people involved, and not just what senior management thinks is the right thing to do. This helps to foster a culture of innovation.”

Eddie Copeland, Director of Government Innovation, Nesta

All of this is not to suggest, however, that larger companies have scant use for R&D. Even as they increasingly adopt other innovation models, R&D will remain a critical part of the mix. As Rachel Nguyen of Nissan Future Lab points out, “When we’re talking about mobility and the future of electric, connected, and autonomous cars, there’s so much research and then development that needs to be done to create that future.”

It’s clear that the days when innovation was mainly a sequestered process are decidedly gone. The key is to enlist the right mix of employees, customers, technology partners, and others from the get-go and to be sure that the innovation strategy they devise—whether it’s with the help of a think tank or via design thinking—ultimately syncs up with the company’s business strategy overall and delivers measurable rewards.

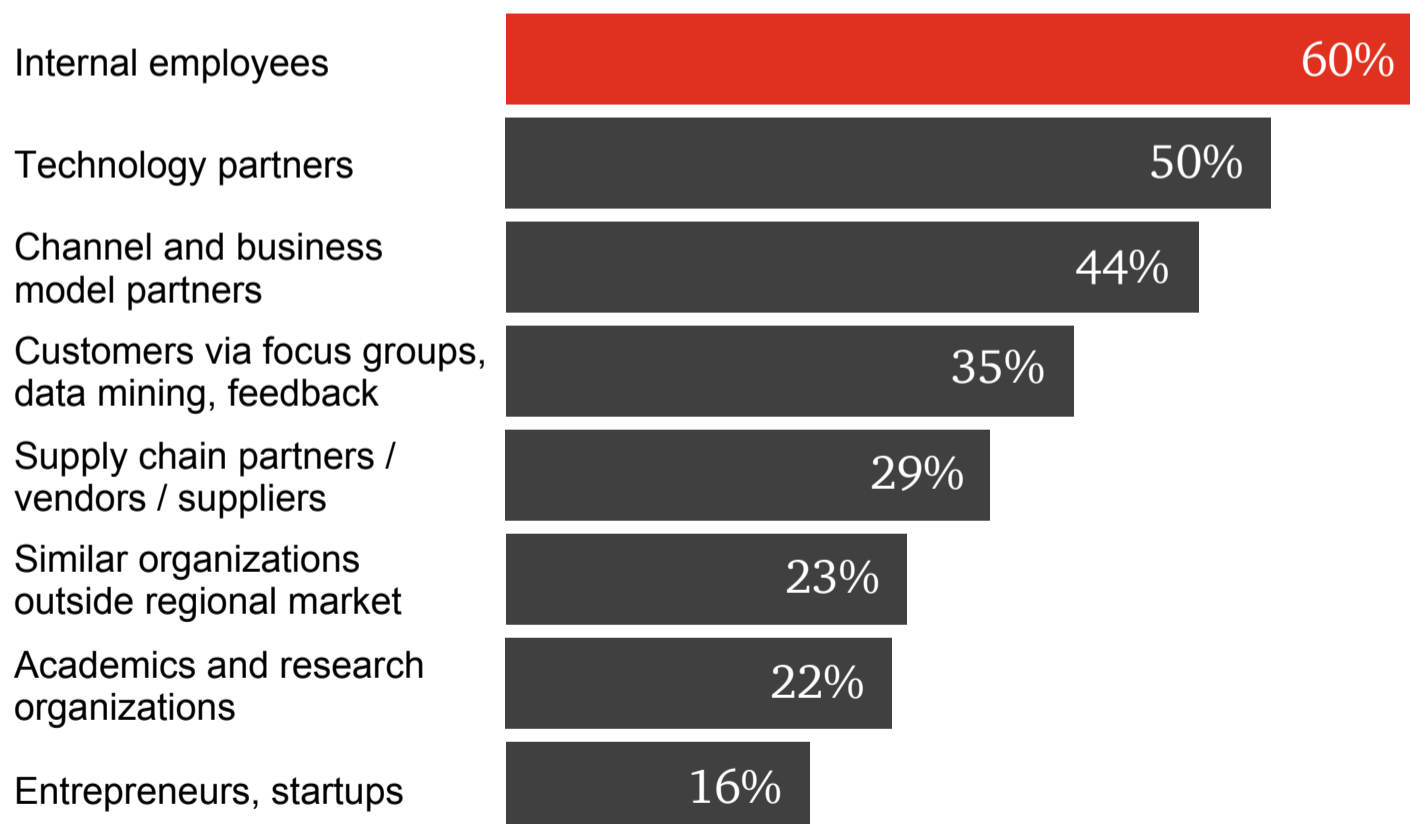
4) The X factor? Human experience

Successful innovation requires far more than great technology skills. Human experience and insights of all kinds help shape and deliver new ideas, solutions, products, and services that ultimately bring value to markets and businesses. That's why innovation teams today seek input from across a variety of disciplines, rather than relying disproportionately on technology-driven skills and insights.

Big data, for example, can tell you that customers behave a certain way—that they embrace or reject a given innovation—but data alone won't explain *why* they behave that way. Bringing the right human judgment and intuition to bear on the data (and not just from the analytics department) is critical to obtaining useful insights for innovation.

Soft skills like these are clearly valued by the executives we surveyed, who say their employees are their most important partners in innovation, ranking them above technology partners. Eddie Copeland, director of

People-powered innovation starts with employees



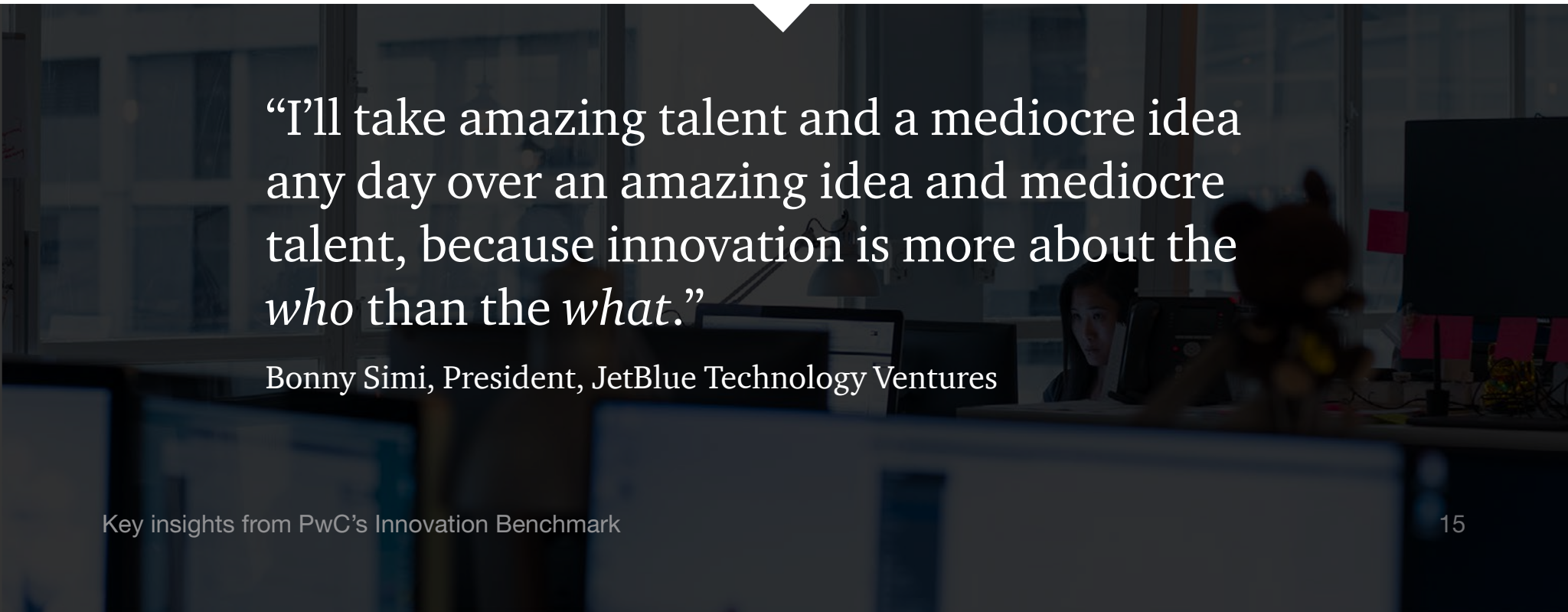
Q: Who are the most important external and internal partners for innovation at your organization?
Percentages denote the number of companies citing each innovation partner as among their most important ones.
Source: PwC's Innovation Benchmark
Base: 1,222

government innovation at Nesta, says that senior management's failure to listen to frontline workers can be a major obstacle to innovation in government organizations. Frontline employees often see problems and solutions more clearly than their cost-conscious managers.

It's important, therefore, to realize that employees aren't merely workers with a defined set of job or managerial skills. Even if they don't sit on a company's core innovation team, employees can be valuable contributors to innovation efforts early in the process, functioning as more than just personnel to whom innovations are pushed out for execution purposes. Employees are also consumers who can bring end-user insights into the innovation process. Some employees are intrinsically involved in the company's business strategy as well, making their input critical at the inception of any innovation undertaking. Still other employees have deep technology experience—innovation teams should enlist these workers well before the execution phase of a project, bringing them in on the ground floor as [innovation co-strategists](#).

Building an organization with a culture that fosters the right temperament, skills, and creativity in its people is essential to successful innovation. Bonny Simi, president of JetBlue Technology Ventures, says she'll "take amazing talent and a mediocre idea any day over an amazing idea and mediocre talent, because innovation is more about the *who* than the *what*."

Simi is not alone. Roughly two-thirds of innovating companies say that bringing in employees with fresh thinking and establishing innovative behaviors and culture are the most critical success factors for innovation, well above other criteria, such as increasing the innovation budget or establishing a clear business model for innovation.



"I'll take amazing talent and a mediocre idea any day over an amazing idea and mediocre talent, because innovation is more about the *who* than the *what*."

Bonny Simi, President, JetBlue Technology Ventures

But not all companies are sure their workforce measures up when it comes to having the right kind of experience for their innovation efforts. Thirty-two percent of the businesses we surveyed say that finding employees with the right skills is their biggest people-related innovation challenge. This challenge is topped only by the need to establish a leadership culture conducive to innovation, cited by 37% of companies.

Part of the problem might simply be a matter of mindset. Innovation is often associated with startups and agencies but hardly needs to be limited to them. “Since we partner closely with entrepreneurs,” says Sue Siegel of her GE Ventures team, “we really understand how they are doing it. We sometimes walk out of those meetings and go, ‘Wow, that was really creative.’ Well, why not us? Why not be able to experiment within the corporate realm? I think part of our responsibility is to be bold and do just that.”

This requires strong C-suite leadership, which over half the companies we surveyed consider the most important factor to successful innovation. Such leadership could go far in helping these companies overcome their biggest organizational challenge to doing innovation well: establishing the right behaviors and culture.

Human factors seen as key to innovation success



65%

Innovative behaviors and culture



63%

Fresh thinking



52%

Strong C-suite leadership



47%

Clear business model



32%

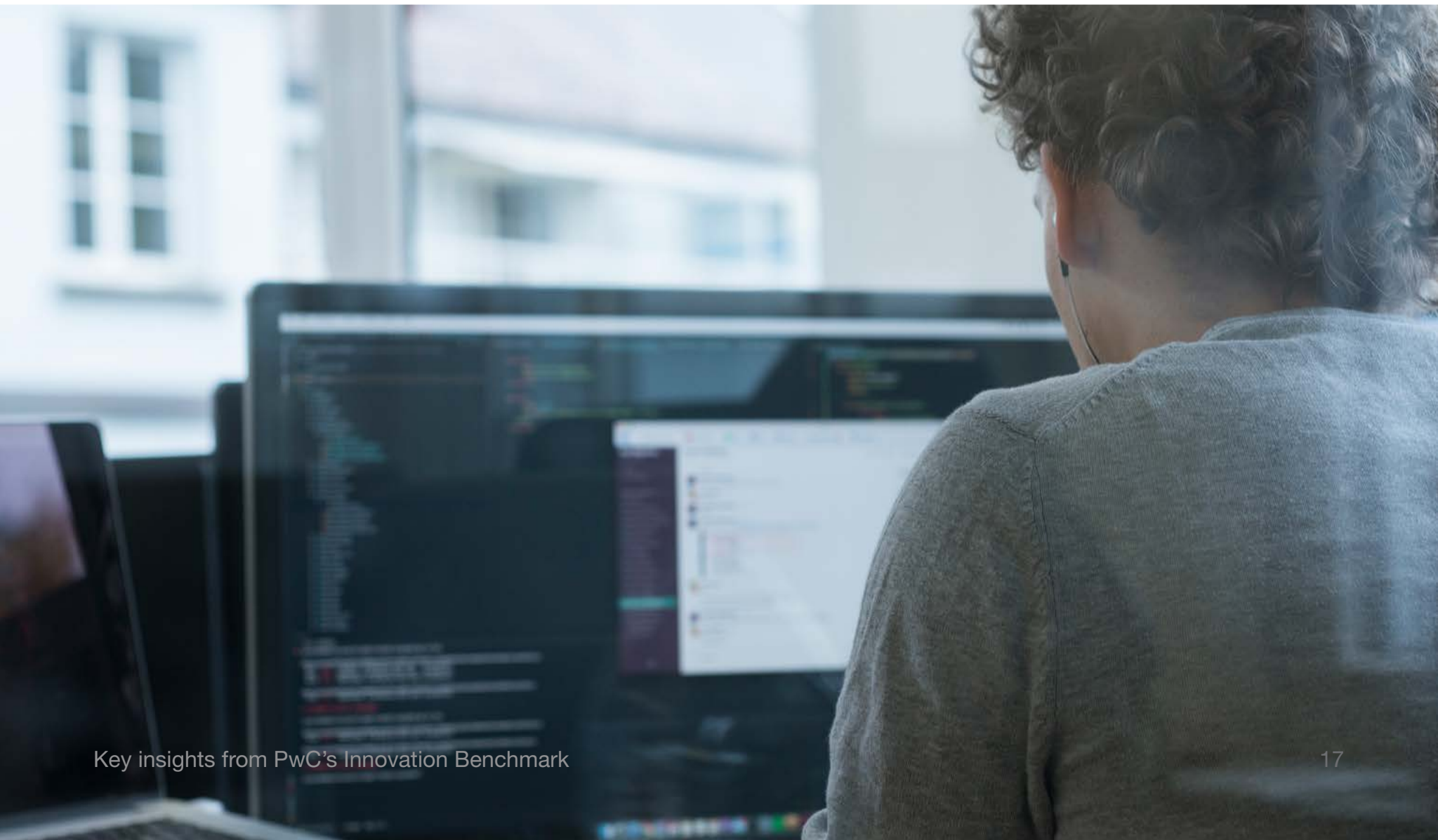
Increasing innovation budget

Q: What are the most important factors that impact successful innovation at your organization?
Source: PwC's Innovation Benchmark
Base: 1,222

5) Tech innovation leader or follower?

While technology is not the be-all and end-all of innovation, its importance is undeniable, particularly for game-changing innovations. Gone are the days when most businesses looked to technology mainly to keep pace with evolving market demands and competitors' innovations. Instead, with technology-fueled disruption and dislocation having become the norm rather than an anomaly, a majority of companies across a variety of sectors rely on technology as a driving source of innovation.

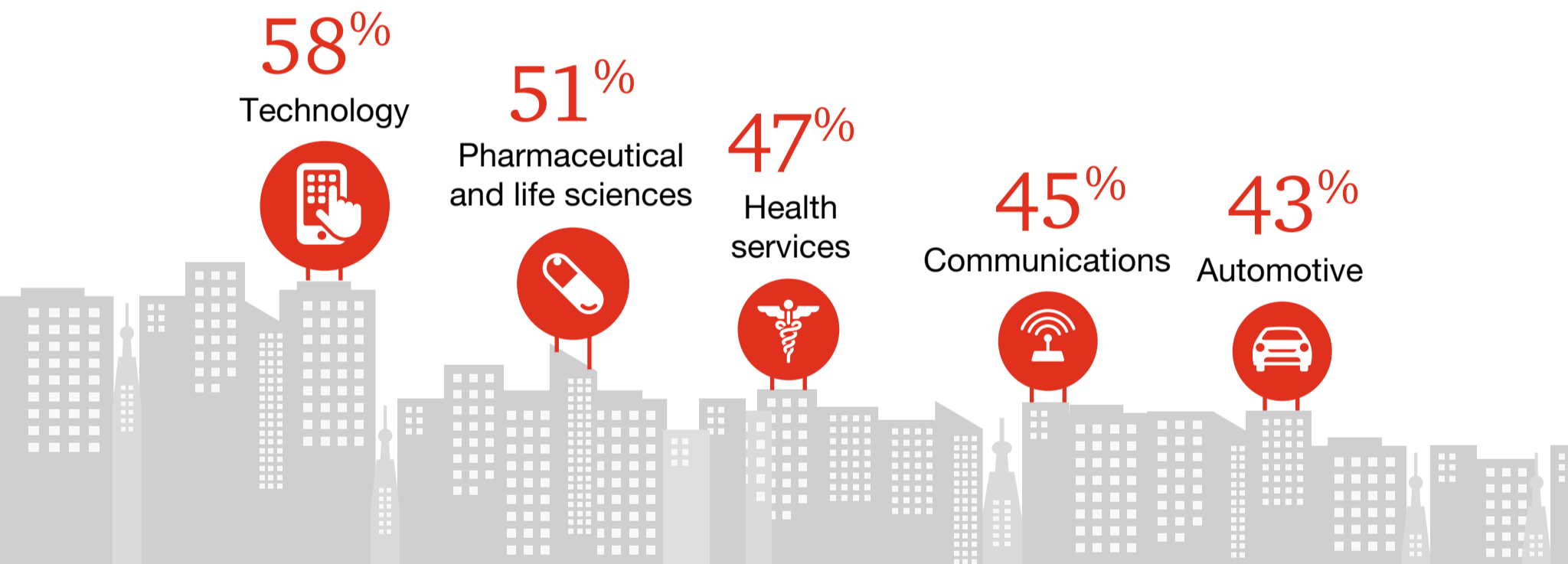
Increasingly, companies are looking to technology to help create markets for novel products and services that don't yet exist and to meet needs that customers don't yet know they have (e.g., the previously unknown/unmet need for smartphones or wearables). Almost a third say their innovation is either all or mostly technology-led, and another third say they use a combination of technology and market-led innovation. Nearly half of technology-led companies focus entirely or mostly on breakthrough innovation; another quarter of them focus on a combination of breakthrough and incremental innovations.



With technology being key to innovation in general, it's no surprise that technology companies lead the way in breakthrough innovation, with nearly two-thirds of them making this the focus of most or all of their innovation efforts. They're followed by companies in the pharmaceutical and life sciences, health services, communications, and automotive industries—roughly half of innovating businesses in those sectors focus mostly on breakthrough innovation.

The technology sector also invests the most in innovation as a percentage of revenue, followed by the pharmaceutical sector. Significant levels of investment are becoming essential in various other industries, too, as companies face increased disruption and dislocation from new technology-led business models and offerings.

Tech companies set the pace in breakthrough innovation

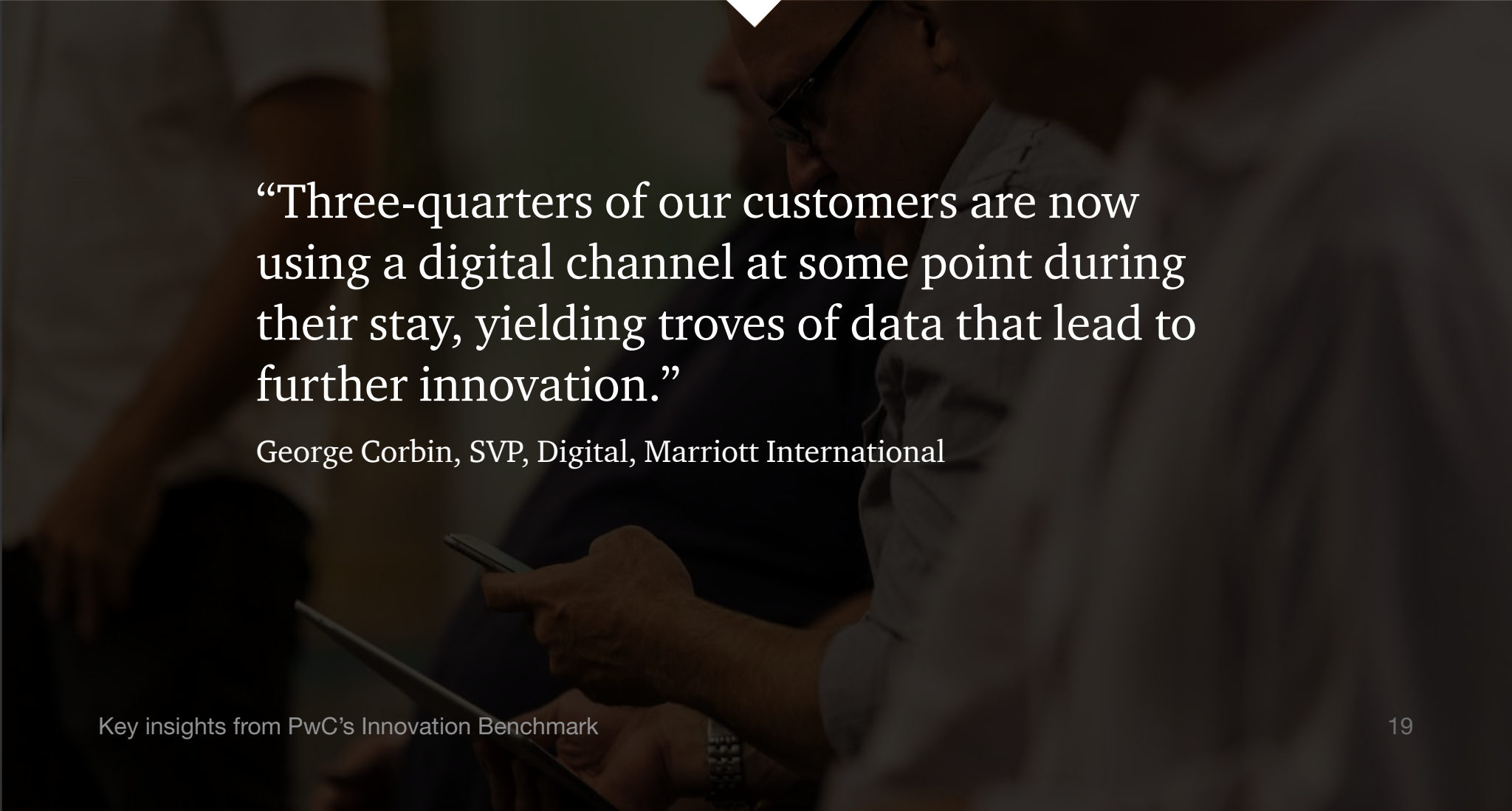


Q: Is your organization more focused on "incremental change" where innovations are generally moderate, or "breakthrough innovation" where innovations are significant and introduce major technological or market applications?
Percentages denote the number of companies saying they focus mostly or entirely on breakthrough innovation.
Source: PwC's Innovation Benchmark
Base: 1,222

“We have \$13 billion in revenue riding on this,” says George Corbin, senior VP for digital at Marriott International, which does not plan to be disrupted out of business by competitors in the sharing economy. “Three-quarters of our customers are now using a digital channel at some point during their stay, yielding troves of data that lead to further innovation. Digital is by far the No. 1 channel choice among our Marriott Rewards members and, in particular, our elite—the most valuable and profitable customers for us. That’s why we’ve had to invest heavily and intelligently.”

With so much riding on technology, it’s no wonder that half of companies rate technology partners as their most important innovation collaborators. Technology partners outrank all others, except internal employees. And, when it comes to those employees, technology remains a priority. Nearly all companies say that proximity to technical talent is either very important or somewhat important in deciding where to conduct innovation, just behind cost.

Clearly, the right mix of technology and talent, from strategy through execution, is key to improving the odds that a company’s big innovation bets will pay off. We expect to see businesses increasingly play their hand with that approach in mind.



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George Corbin, SVP, Digital, Marriott International

Beyond the benchmark

Innovation is no longer the domain of a chosen few. In an era of rapid technology and market change, companies in virtually every industry and of every shape and size must increase their capacity to innovate.

This nearly universal requirement to innovate is putting pressure on companies around the world to find the best ways to nurture, manage, and measure innovation so that it delivers superior financial results, from strategy through execution. For most companies, that means opening up the innovation process more to customers, employees, and partners.



Innovators should understand and help define future business models that can support the innovations they create.

It's a far cry from the days when innovation was viewed as a functional capability existing only inside isolated R&D centers. Instead, organizations say they're focused on creating winning innovation cultures across their companies, and in bringing new thinking and ideas to their innovation initiatives, from both inside and outside corporate boundaries. Indeed, inclusive innovation operating models, such as design thinking and co-creation with customers, partners, and suppliers, now are all far more prevalent than traditional R&D. And these new innovation approaches are delivering results.

But as companies invest more in innovation, they must strive to do a better job of aligning their innovation efforts with their business strategy. Innovation spending ultimately has to drive business value and financial performance. But for that to happen in any consistent way, innovators should understand and help define future business models that can support the innovations they create.

An open “innovation sandbox” can help innovating companies meet these challenges. How? By engaging customers early on, teaming with business and technology partners, and bringing together the right business leaders, strategists, and employees from across the organization to develop an innovation culture and operating models that close the strategy-to-execution gap. Companies that master this are true innovation leaders and well worth emulating by businesses that want to stick around for the long term.

www.pwc.com/innovation-benchmark

To have a deeper conversation about innovation:

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