Business at the Speed of Thought: Accelerating Value Creation





Accelerating value through rapid ideation

The next phase of the Industrial Revolution is unfolding—quickly. Business is speeding up as constant connectivity, exponential increases in data, access to massive computational power, and even human-machine interaction redefine strategy and upend industries around the world. Disruption and continuous innovation are the new normal.

And the pace of change continues to accelerate. Businesses face increasing pressure to stay ahead of competitors old and new, with many established companies as committed to innovation as any start-up. To understand how companies are responding to these new pressures in the marketplace, Oxford Economics and Hewlett Packard Enterprise (HPE) fielded a global survey of 300 business and IT executives during the fourth guarter of 2015.

Our research shows that this new phase—what HPE CEO Meg Whitman calls the Idea Economy—is affecting companies across industries and around the world. And this cycle of disruption is not slowing down. In fact, executives anticipate that the rate of disruption will surge in the coming years.

The pressure to innovate is driving major changes regarding how companies invest, operate, and compete. Many have made substantial improvements to IT infrastructure and processes in support of rapid innovation, but they must continue to develop these capabilities, along with a culture of innovation, to stay competitive in the years ahead.

Our research revealed three key themes:

- The need for speed. Companies around the world are feeling increasing pressure to stay ahead of their competitors.
- The technology infrastructure gap. Despite investments, technology remains a challenge. Many businesses find it difficult to develop products or services quickly, with rigid and inflexible infrastructure cited as the leading roadblock.
- The culture clash. Technology alone does not guarantee success; businesses must also change organizational culture around innovation to succeed.

The emphasis on rapid ideation is already paying off for companies that have the right tools and strategies in place.

While we cannot separate cause and effect, our survey shows that companies that lead their peers in categories related to strategy and investments that drive rapid ideation and reduced time to value also report superior financial results.

In short, business performance and rapid ideation appear to be closely intertwined.

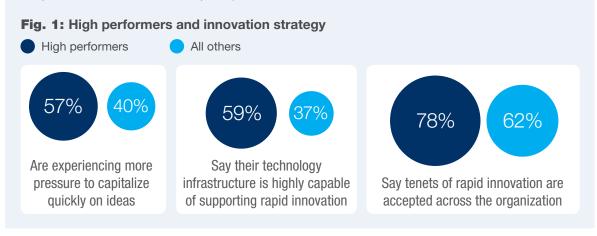
Spotlight on high performers

Companies with higher profit margins (15% or more reported in the past two years) are more likely to understand the speed imperative. These companies—we call them "high performers"—report feeling more pressure than their peers in a number of areas, including keeping up with established competitors, developing products and services more quickly, and capitalizing rapidly on ideas.

High performers are responding decisively. They are prioritizing technology infrastructure, and are more likely to have built out a solid tech toolkit that supports rapid ideation and speed to value (59%, compared with 37% of all other companies).

And these high performers know that rapid innovation is about more than just having the right tools. They are more likely to have changed their culture around innovation: More than three-quarters of high-profit-margin companies say tenets of rapid innovation are accepted across the organization, not just in R&D.

While we cannot say definitively that high profitability is a direct result of advanced innovation strategy, it is clear that the most successful companies are changing their approaches to investment and the culture of rapid ideation.



Case study: Edwards Lifesciences innovates for profit

Pressure to innovate is familiar territory for a healthcare company like Edwards Lifesciences. The \$2.3 billion medical technology company's primary focus is fulfilling the unmet needs of structural heart disease and critically ill patients through the development of new devices and therapies. "There is urgency in our work as we deliver breakthrough therapies as quickly as possible to patients in need," says Don Bobo, corporate vice president of heart valve therapy, corporate strategy, and corporate development.

In a time of heavy consolidation in the healthcare industry, Edwards' focus on structural heart disease and critical care continues to distinguish the company from its peers. To push that effort along, Edwards is investing in innovation aggressively, with an estimated 16% of sales dedicated to R&D in 2016. Says Mr. Bobo: "Our focused innovation means that we go after the tough

things that are close to home. We apply our maximum energy in those areas that are really breakthrough."

These focused innovation investments have helped the company drive a five-year double-digit CAGR, and leadership strongly believes such investments will fuel future growth, too. For example, its work in transcatheter aortic valve replacement—a device the company has been pioneering the development of for more than 15 years—could grow dramatically by 2021.

Edwards is moving quickly to deliver innovative devices and therapies to patients and emphasizes the spirit of innovation infused in company processes. "The development process requires patience, discipline, and knowledge to follow through," says Mr. Bobo. "Our long-term commitment to these fields allows us to make an impact and transform patient care."

The need for speed

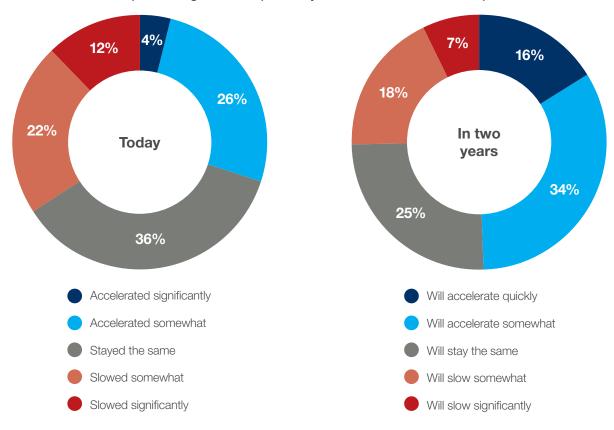
Faster time to market is a competitive necessity, and organizations are under pressure to innovate quickly. This pressure isn't slowing down any time soon.

Across industries and regions, companies plan to accelerate speed to value over the next two years (30% today vs. 49% in two years).

But they should be wary, because their competitors are doing the same.

Fig. 2: The acceleration of product and service development

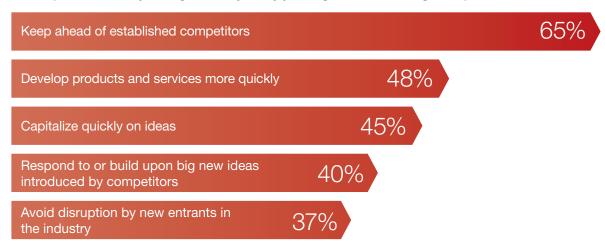
Q: Thinking about product and service development, how has your company's ability to transform ideas into realities in the marketplace changed over the past two years? Select one for each time period.



Growing pressure to innovate is changing the way business is done. In fact, survey respondents cite increasing competition and the accelerating pace of change as top issues affecting the way they do business, trailing only big-picture trends like economic conditions and global security. Responding to this pressure, companies are focused on quickly turning ideas into value: More than two-thirds say rapid development of new products and services is a competitive necessity. "The leading players in the game—the other big environmental companies—are all trying to get an edge over each other. We don't want to be left behind," says Dr. Philip Abraham, global head and senior vice president for research and innovation at Veolia, the France-based environmental services and energy multinational. "We always try to keep our long-term needs in mind and catch the next big idea."

Fig. 3: Growing pressure to outpace the competition

Q: Compared with two years ago, would you say your organization is facing more pressure to...



The pressure comes from every direction. Even the oldest companies are modernizing technology infrastructure and processes as disruptive newcomers abound. Executives are even more concerned with threats posed by established competitors than they are with start-ups, as the disruption mindset spreads across entire sectors and beyond traditional industry boundaries. There is some variation by region; respondents in North America, for example, are more concerned about competition—from both established companies (73%) and new entrants (46%)—than others around the world. And while most firms are optimistic about their progress, with half saying they will have accelerated their speed to value in two years, they must bear in mind that their competitors may be making similar advances at the same time.

Of course, drivers of competition often vary by industry. Our survey shows that healthcare organizations and telecommunications firms are more likely to report increased pressure to avoid disruption from new entrants, while energy companies are more focused on building upon new ideas introduced by competitors. For Repsol, the Madrid-based global energy company, this pressure is being increased by market conditions like low oil prices, says Pablo Hernando, who heads corporate business improvement and innovation.

Repsol shows that the start-up mentality is not just for start-ups. The 30-year-old company is adjusting its organizational structure and processes to become more nimble, developing groups and initiatives aimed at turning ideas into value quickly.

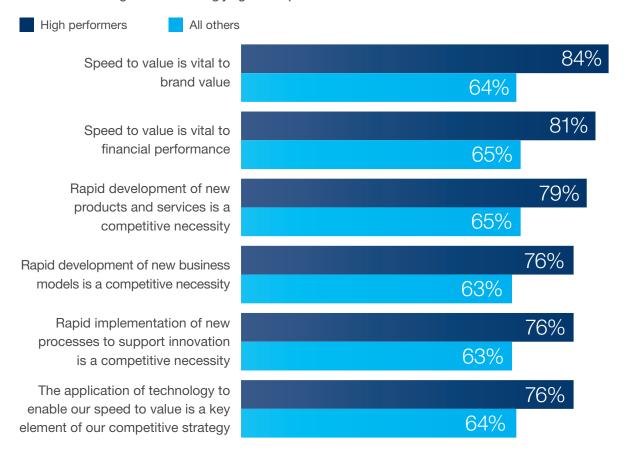
Older companies from all industries are prioritizing new technologies and focusing on innovation alongside their younger peers and are feeling the same pressures.

In fact, the oldest companies in our survey (those that have been in business for more than 20 years) are at least as likely as their younger peers to be executing at scale on innovation programs and introducing new services to customers at a substantially faster rate than previously possible.

Most businesses understand the importance of innovation to their core measures of success. They see payoffs in financial performance, brand value, and differentiation from competitors and expect more rewards in the next two years as innovation continues to pick up speed. While this is true across regions, enthusiasm lags in EMEA, where firms are less likely to say pressure has had a positive impact across the business and are less likely to emphasize the importance of speed to value. Laggards might consider how the most successful companies view rapid ideation and innovation when drawing up their next strategic plan: High performers emphasize the value of speed.

Fig. 4: High performers see speed as a competitive necessity

Q: To what extent do you agree with the following statements about your company's approach to bringing ideas to value? "Agree" and "Strongly agree" responses shown.



Case study: BT rethinks innovation

BT Group plc is moving faster than ever. In early October 2015, Jean-Marc Frangos, the company's managing director of external innovation, spotted a promising new technology on a trip to Israel. Seven weeks later, the telecommunications giant had completed all evaluations to be ready for launch.

The time to market was short even by the standards of Mr. Frangos, who likes to see value from new projects in 90–180 days, but wants to move faster.

"My target is to improve the average cycle time by 5% every year and keep accelerating the process," he says.

With £18 billion in revenue and nearly 90,000 employees around the world, BT has an appetite for speed that might seem more typical of a start-up than a business with roots going back to the 19th century. To satisfy that need, BT has expanded beyond its venerable R&D organization by pursuing innovation wherever it may happen. For example, Mr. Frangos runs his global acquisitions operation from Silicon Valley, far from BT's traditional R&D hub in Martlesham Heath, UK. This is the new imperative for all companies, young and old: Move quickly or fall behind.

The technology infrastructure gap

Focusing on innovation as a strategic imperative is not enough. Accelerating business requires substantial and consistent upgrades to technology infrastructure (i.e., the essential hardware and software, including cloud, that support business operations). Yet many companies are not doing enough to stay ahead of the curve. While there are many significant obstacles to rapid innovation and speed to market, including security of data and intellectual property and difficulty changing company culture, no barrier is more challenging than rigid and inflexible technology infrastructure.

Fig. 5: Inflexible technology infrastructure is a top barrier to faster innovation

Q: In your opinion, what are the top current roadblocks to bringing ideas to value quickly at your company? Select up to 3; top 5 responses shown.

| Rigid and inflexible technology infrastructure | | 34% |
|--|-----|-----|
| Regulatory or statutory hurdles in our domestic and/or international markets | 30% | |
| Leadership does not understand the value | 30% | |
| Security of data and/or intelectual property | 29% | |
| Lack of ability to recruit or train employees with the right skill sets | 28% | |

Most companies are lukewarm about their current infrastructure's ability to support innovation, with more than half saying their systems are somewhat (54%) or not at all (4%) capable of supporting rapid innovation.

Confidence varies by industry, with healthcare companies most satisfied in their infrastructure (57%) and financial services and government organizations less so (36% and 33%, respectively). At the regional level, North American respondents are most likely to say their infrastructure is highly capable of supporting rapid innovation (52%).

Fig. 6: Infrastructure capabilities need improvement

Q: Which of the following statements best describe your company's technology capabilities? Select one.

42%

Our technology infrastructure is highly capable of supporting rapid innovation.

54%

Our technology infrastructure is somewhat capable of supporting rapid innovation.

4%

Our technology infrastructure is not capable of supporting rapid innovation.

Getting the right technology in place will only become more important as refresh cycles shorten and the pace of change continues to accelerate. Businesses understand this imperative—roughly 60% have invested in infrastructure in an effort to increase speed of innovation, and more than two-thirds say the application of technology to enable speed to value is a key element of competitive strategy.

The must-have technology list is a long one, with Big Data/analytics and advanced security rated as most important to driving innovation. Mobility and uptime of business processes are close behind.

As medical technology company Edwards Lifesciences invests in a range of strategic initiatives for patient-focused innovation, the company is updating and expanding its IT infrastructure and rapid prototyping capabilities. "Rapid prototyping, iterative clinical development, and adaptive quality systems are of critical importance to achieve speed and high-quality outcomes," says Don Bobo, corporate vice president of heart valve therapy, corporate strategy, and corporate development. "We are confident that advancements in technology will fuel improvements and advancements in many areas of healthcare, and our hope is that technology will benefit patients by informing them, empowering them, and ensuring better health."

Investments in technology infrastructure tend to pay off for the organizations in our survey: Nearly three-quarters say the success of bringing ideas to value quickly has had a measurable impact on financial performance.

At BT Group plc, heavy investment in new technology allows the telecom giant to run its networks in a more cost-effective way and act as a catalyst for innovation.

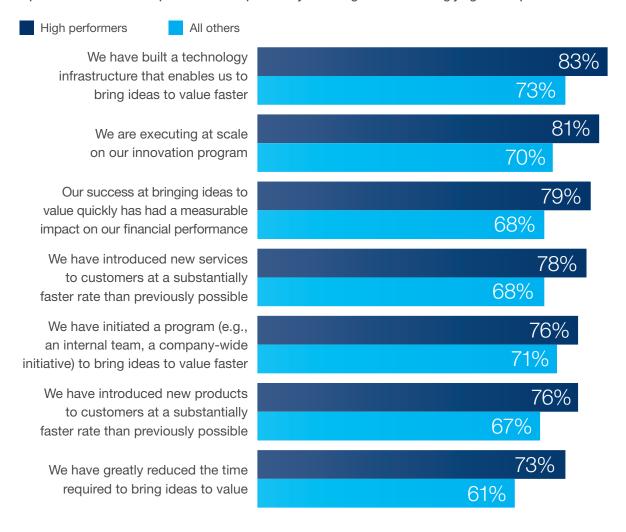
But maximizing the value of these investments requires a lot of work on multiple fronts. Says Jean-Marc Frangos, managing director of external innovation: "The challenge is to take the entire community with us—the other operators, the suppliers, the standards bodies, and so on—to make this a reality."

Other challenges include security issues, which threaten rapid innovation and demand their own set of tools. Companies feel fairly confident in their infrastructure's ability to support security initiatives, but may not have the right skills and processes to make full use of it.

High performers have a better handle on many of these issues. These companies are more likely to have built a technology infrastructure that enables them to bring ideas to value faster and to say their infrastructure is highly capable of supporting their efforts in these areas.

Fig. 7: High performers build better tech infrastructure

Q: To what extent do you agree with the following statements about your company's achievements in rapid ideation and development over the past two years? "Agree" and "Strongly agree" responses shown.



The culture clash

Even the best technology must have a healthy organization around it to drive innovation. Corporate culture matters. Yet companies show a surprising lack of focus on the organizational challenges associated with accelerating change: Nearly one-third say leadership does not understand the benefit of bringing ideas to value quickly, and many are not embracing the innovation mindset company-wide.



Many companies underestimate the importance of organizational change. Most have not changed their company culture to speed up the ideation process, and worse is that most have no plans to change: Just 32% say they will have changed their company culture to increase the speed of innovation over the next two years. And while two-thirds say tenets of rapid ideation are accepted across the organization, only half say failure—a common result of rapid ideation and experimentation—is acceptable, even as "fail fast" has become a mantra in Silicon Valley.

"People working on innovation initiatives need to recognize that every single idea will fail, at least the first time. They will always fail," says Mr. Hernando of Repsol.

Repsol knows the benefit of trial and error, and even has a category in its innovation-prize program for the best failures. This award is for "ideas that maybe didn't achieve the results we were expecting, but that we learned from," says Mr. Hernando.

But while companies are slow to change culture, the pressure of innovation is forcing change on them. More than two-thirds say this pressure has changed their workplace culture for the better, and significant majorities report improved operational processes and employee productivity and satisfaction, along with better workforce composition and leadership. Perspectives vary by function; IT executives in our survey are more likely than business executives to say the pressure to innovate has a positive impact on employee productivity (72% vs. 56%) and satisfaction (68% vs. 55%).

One approach to improving a company's culture of innovation is working with new partners. Veolia has an open innovation program that allows the company to tap into ecosystems outside its organization. "The program allows us to identify a research area, then work together to test it, tweak it, and use our client base to get access to technology that would have been more time-consuming to find on our own," says Dr. Abraham.

Case study: Repsol's culture of innovation

For Repsol, the €44 billion Madrid-based global energy company, innovation is rooted in collaboration. Head of corporate business improvement and innovation Pablo Hernando leads the cultural change program required to fuel rapid ideation and experimentation, and works to connect all areas of the business.

In the last five years, the company has seen a huge increase in collaboration across divisions, which has made it much easier to carry out cross-functional projects and in turn inspire greater innovation.

"When working with cultural change, you have to think that it works like a virus," says Mr. Hernando. "You start an innovation project—the virus—and then the reaction of the organization (antibodies) helps you identify what really needs to be changed. If you are successful, that innovation culture will spread."

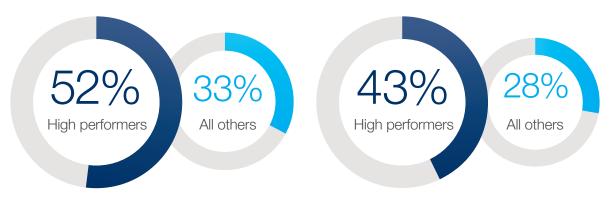
But getting everyone involved in these types of experimental projects can prove challenging for a company as large as Repsol. In response, the company has developed programs to constantly encourage innovation, including training innovation coaches nominated by employees across the business and establishing an innovation prize for the most successful projects.

When culture and technology work well together this way, benefits multiply. The right infrastructure can smooth the ideation process at multiple stages, from increased employee productivity and satisfaction (69% and 61%, respectively) to more efficient processes (66%). For Edwards Lifesciences, placing innovation at the center of its culture has helped the company stay motivated to address currently unmet patient needs. "We have realized our goal of providing breakthrough therapies to patients as efficiently as we can, while still maintaining a high level of science and evidence to support our therapies with clinicians around the world," says Mr. Bobo.

High performers are changing organizational culture around these new ways of working. They are more likely to have leadership that promotes a culture of innovation, to say tenets of rapid innovation are accepted across the organization and not just in R&D, and to have achieved measurable results from cultural change around innovation and technology.

Fig. 8: High performers focus on culture

Q: Which of the following steps, if any, has your company taken to increase the speed of innovation? Select all that apply.



Changed company culture

Sought out new partners or changed relationships with existing partners

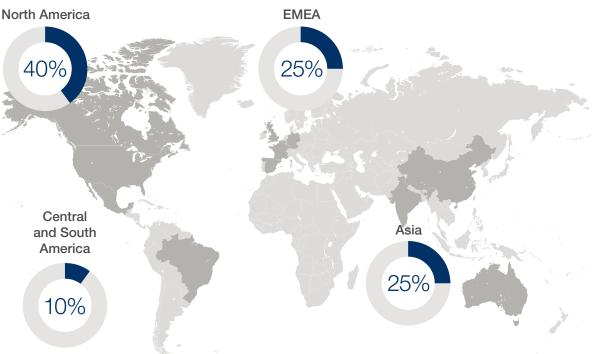
Conclusion

The pace of change in business is accelerating, and rapid ideation and innovation are required for success in the next phase of the Industrial Revolution. Says Dr. Abraham of Veolia: "Ideas are easy to find; creating new business out of them is the difficult part." To stay ahead of the curve and turn ideas into value, companies must invest in the right infrastructure and commit to changing their corporate culture. Speed to value has become a strategic imperative, and the most successful companies will be those that move fastest.

About the research

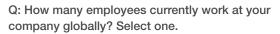
Working with HPE, Oxford Economics surveyed 300 senior business and technology executives about innovation processes and goals at their company. Respondents are from around the world and a range of industries, including financial services, manufacturing, retail, energy, healthcare, telecommunications, education, and government services (roughly 10% each).

Fig. 9: Respondents by location

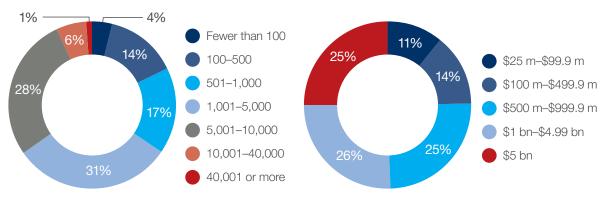


Respondents represent a range of company sizes in terms of both employee count and annual revenue—reported revenues for the most recent fiscal year range from \$25 million to over \$5 billion. These companies are old and new, with some fewer than five years old and others more than 40 years old.

Fig. 10: Respondents by organization size



Q: What is your firm's annual revenue in US\$ for the most recently completed fiscal year? Select one.



Interviews were conducted with executives from a range of industries, providing critical qualitative support to our survey findings.

About Oxford Economics

Oxford Economics is a leader in thought leadership and forecasting and quantitative analysis for international corporations, financial institutions, governmental organizations, and universities worldwide. Founded in 1981 as a joint venture with Oxford University, Oxford Economics is now a leading independent economic consultancy. Headquartered in Oxford, with offices around the world, we employ more than 250 people, including over 150 economists, industry experts, and business editors. Visit us at oxfordeconomics.com.

This project was managed by Deputy Director of Thought Leadership and Technology Practice Lead Edward Cone and Associate Editor Adrianna Gregory.

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