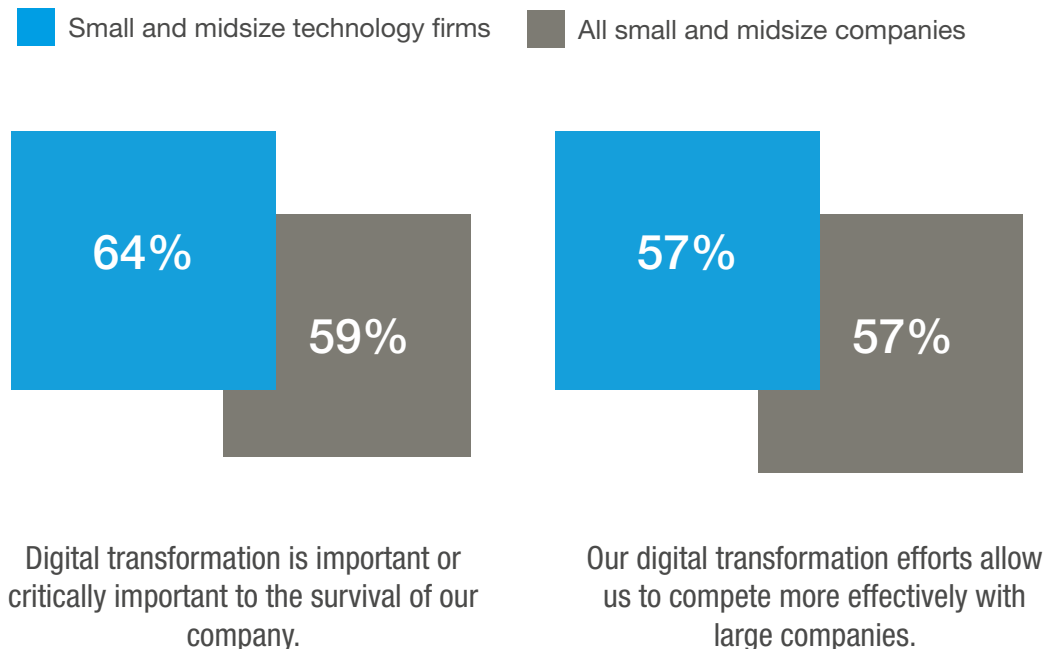


The Transformation Imperative for Small and Midsize Technology Companies

Technology is transforming the way small and midsize companies do business. Our global, cross-industry survey shows that that technology companies with less than \$1 billion in revenue, like their peers in other industries, are committed to digital transformation and optimistic about the payoffs they will see from their strategies and investments in the next two years.

Technology companies are marginally ahead of other small and midsize firms in some aspects of digital transformation: they are more likely to be investing in a range of technologies, including Big Data and machine learning, and expect more value from their efforts than do their peers from other sectors. This focus makes sense for an industry where innovation—of products, services, partnerships, and business models—is at a premium, and issues like data security and supply-chain management can make the difference between success and failure.

While it may be unsurprising that technology companies are relatively quick to adopt emerging tools, they are not immune to the challenges facing other sectors. Like businesses of all types, they must prepare for sweeping organizational changes, adjust processes, recalibrate workforce skills, and commit to broad cultural change in order to get the most from new technologies and make digital transformation a reality.



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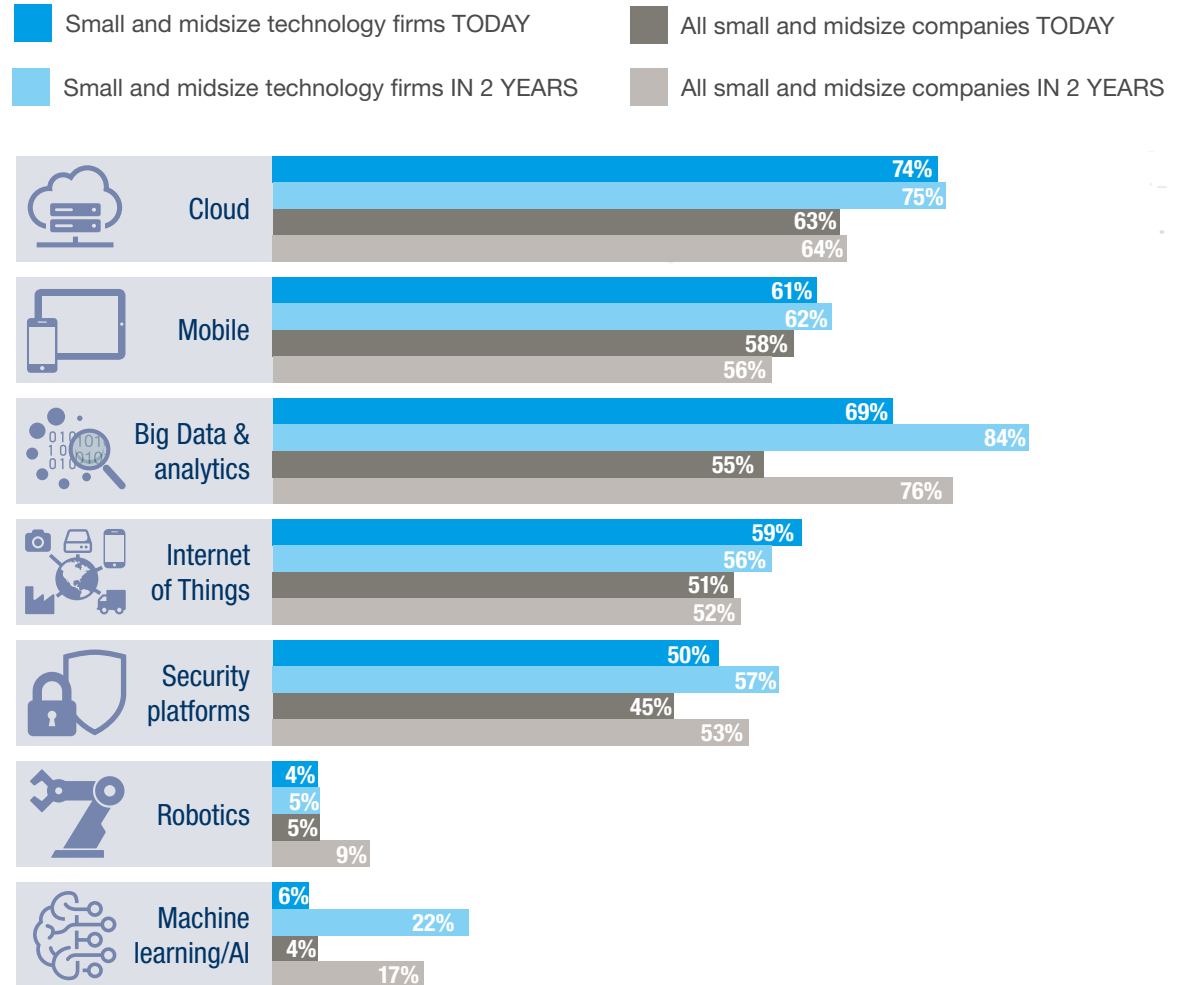
Small and midsize technology firms are focused on machine learning

Digital transformation revolves around investment in emerging technologies. For the most part, small and midsize technology companies are directing IT budgets toward foundational tools, such as cloud and Big Data/analytics. These tools will serve as innovation platforms for more advanced technologies critical to the technology sector's future—for example, machine learning, which has the potential to turbocharge processes from product development to advanced manufacturing.

Small and midsize technology companies already are investing in machine learning at a slightly greater rate than their peers in other industries, although the numbers are still low (6% of smaller technology firms are investing today, vs. 4% overall). In two years, that difference will become more meaningful: 22% of small and midsize technology companies say they will invest in two years' time, vs. 17% in other industries. The largest small and midsize technology firms in our sample—those with \$500 million to \$1 billion in revenue—are even more likely to say they are investing in machine learning, both today and in two years' time.

Nearly two-thirds (64%) of small and midsize technology companies say digital transformation is critical to their organization's survival today, and nearly all say it will be in five years' time (94%). Yet many still have not prioritized transformation as a strategic plan. Smaller technology companies—like their peers in other sectors—are less likely than larger enterprises to say digital transformation is a core business goal (63%, vs. 87% of larger technology companies).

Q: Which technologies are you investing in most heavily, today and in two years?
Respondents could select all that apply.



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Technology investment will support core business goals

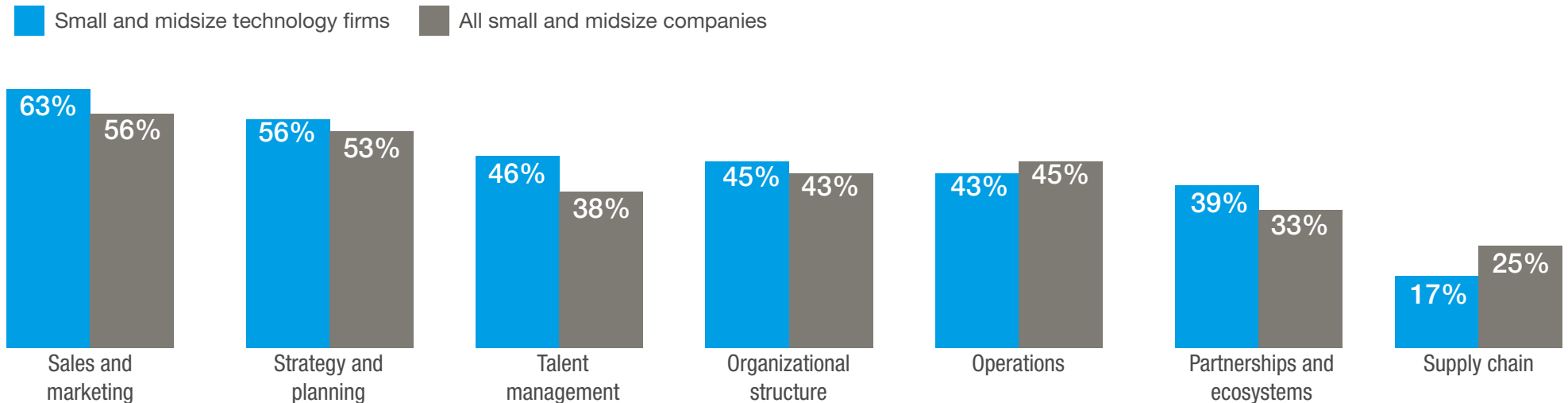
Technology investments are expected to yield dividends in the next two years. Small and midsize technology companies anticipate the greatest value in terms of innovation (63%) product development and transformation (56%), and process automation (56%). Employee engagement (57%) will be another major focus—although the smallest technology companies in our survey are less likely to expect improvements in this area.

Broader digital transformation efforts—involving the processes and business goals that surround technology investments—also will affect business performance. Most small and midsize technology companies have not yet seen transformative change from their digital efforts: less than one-quarter report dramatic improvements to strategy and planning (21% say digitization has led to substantial or transformative change), operations (16%), and other business functions.

But change is on the way. Well over half of small and midsize technology companies expect digitization to improve functions ranging from sales and marketing (57%) to strategy and planning (58%). And, critically, small and midsize technology companies are more likely than other industries to expect improvements to talent management (44%, vs. 38% overall).

Developing new products and services and increasing speed to market are seen as top revenue and profit drivers over the next two years in this innovation-driven industry. These technology-driven improvements to business functions will support core strategic goals at smaller technology companies—if they can build the culture to facilitate the necessary changes.

Q: To what extent do you expect digitization to change the following areas of your organization over the next two years?
“Substantially” and “It will be transformative” responses combined are shown here.



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Technology companies must engineer a digital culture

To get digital transformation right, small and midsize technology companies must leverage their inherent strengths, including agility and the ability to build a strong and collaborative culture. These firms, like their peers from other sectors, have work to do to prepare their organizations for the digital era.

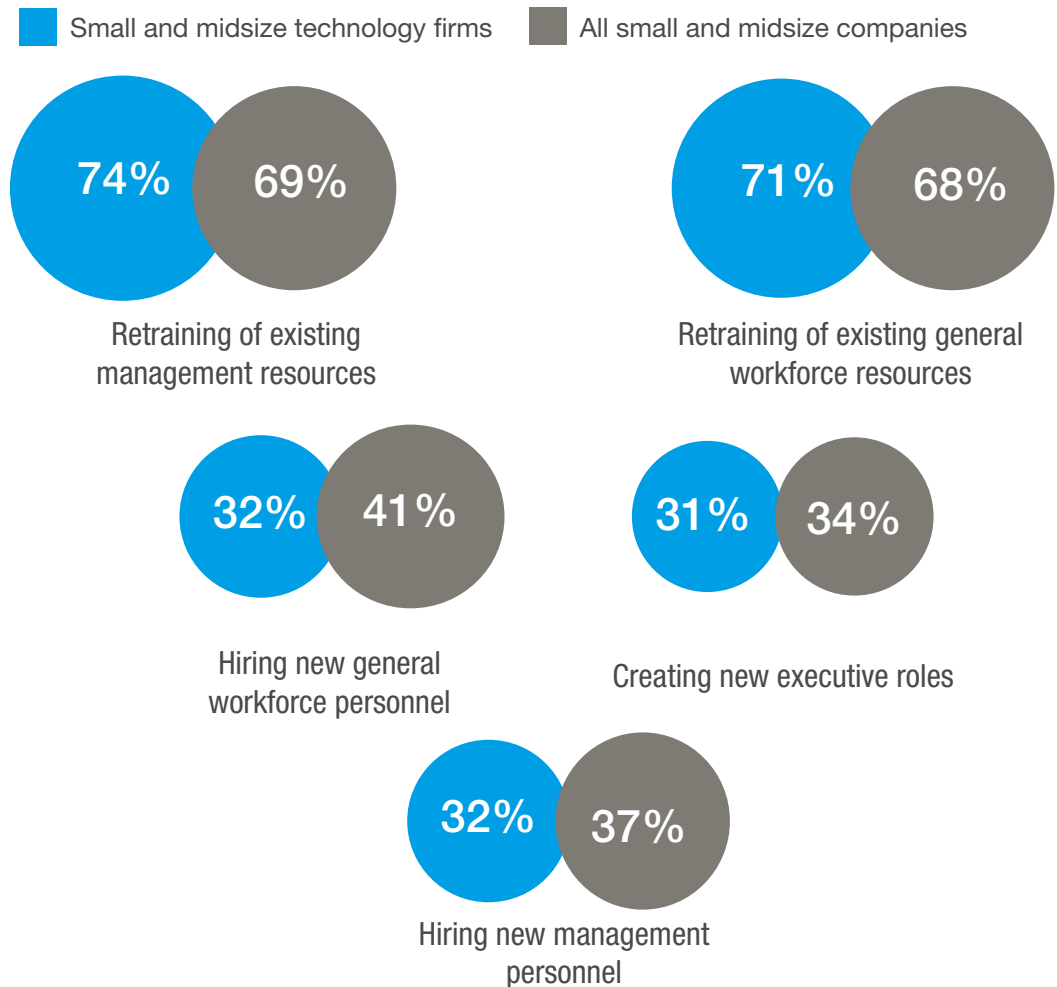
Changes must begin at the employee level. The technology industry should benefit as digital-native and digital-fluent Millennials continue to assume leadership positions, but in order to maximize the value of these younger workers it must create productive environments in which they—and members of the fast-rising Generation Z now beginning to enter the workforce—can thrive.

Small and midsize technology companies cite a lack of workforce skills as the top barrier to their digital-transformation initiatives—52% rank it as a top-tier challenge, even ahead of lack of budget. Technology investments are expected to affect retraining of general workforce resources (71% of small and midsize technology companies say this) and retraining of management resources (74%), yet most respondents are slow to address talent issues; just 19% report well-developed strategies for employee engagement.

Despite the reputation of the industry for cutting-edge culture, small and midsize technology companies must make serious organizational changes for transformation to pay off. Currently, complex and bureaucratic organizational structures make it difficult for many of these companies to move quickly. While they are as likely as their peers from other industries to say they are getting value from simpler decision-making (76%, vs. 72% overall) and less bureaucracy (66%, vs. 64% overall), there is room for improvement.

Q: Thinking about the technologies you are investing in, to what extent do you expect them to affect your human capital and HR strategy?

“Minimal increase” and “substantial increase” responses combined are shown here.



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Conclusion

Digital transformation is understood as a survival-level issue for small and midsize companies, and the imperative to leverage emerging tools and create flexible, fast-changing organizations is especially strong in the technology industry. Leadership at technology companies must continue to focus digital investments on the suite of tools that will be most valuable to their business models over the next two years (e.g., machine learning and artificial intelligence), develop processes and strategies around the application of these technologies, and build a workforce that can adapt to these changes—and the ones that follow them.

Get the complete story in our [executive summary on small and midsize companies](#).

About the research

Oxford Economics was commissioned by the SAP Center for Business Insight to conduct and analyze a survey of over 3,100 executives around the world about the opportunities and challenges facing companies as they attempt digital transformation.

Our sample includes nearly 2,600 companies with revenues of less than \$1 billion; 287 of these small and midsize companies are from the technology sector. This paper includes our analysis of the technology industry survey results.

Fieldwork took place in 2017 by computer-assisted telephone interviewing. Respondents come from 17 countries or regional groupings, with a significant sample of small, midsize, and large enterprises within each area. Geographies covered were Brazil, Mexico, Australia/New Zealand, Japan, Southeast Asia, India, Greater China, Canada, the US, Germany, Switzerland, Russia/Ukraine, France, the Nordics, the Netherlands, the UK, and the Middle East/North Africa.

Companies surveyed represent a range of industries: manufacturing, retail, banking/insurance, healthcare, professional services, technology, consumer goods, public sector, and wholesale distribution.

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