

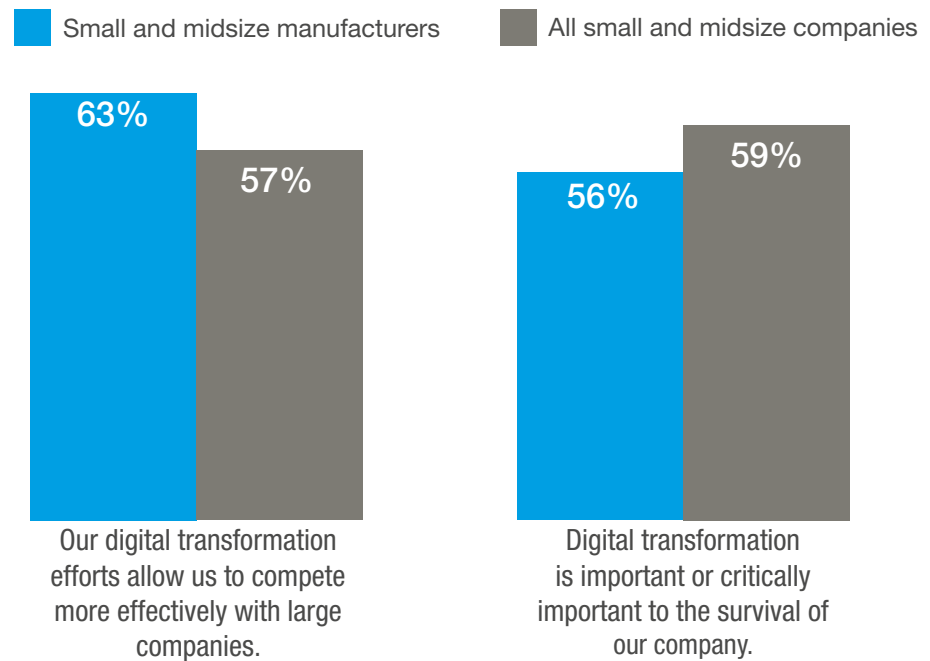
The Transformation Imperative for Small and Midsize Manufacturers

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

Small and midsize manufacturers are roughly on par with their peers from other sectors in most aspects of digital transformation we measured: they are about as likely to consider transformation critical to their organization's survival, to have digitized business processes and functions, and to have realized value from their efforts to date.

Emerging technologies—such as artificial intelligence, 3D printing, augmented reality, blockchain, machine learning, artificial intelligence, voice-controlled user interfaces, and robotics—are changing the way business is done. These innovations will help drive efficiency, productivity, and innovation.

While manufacturers have work to do to prepare their firms for this new era, their growing investment in digital tools, particularly robotics, shows their commitment to making digital transformation a reality.



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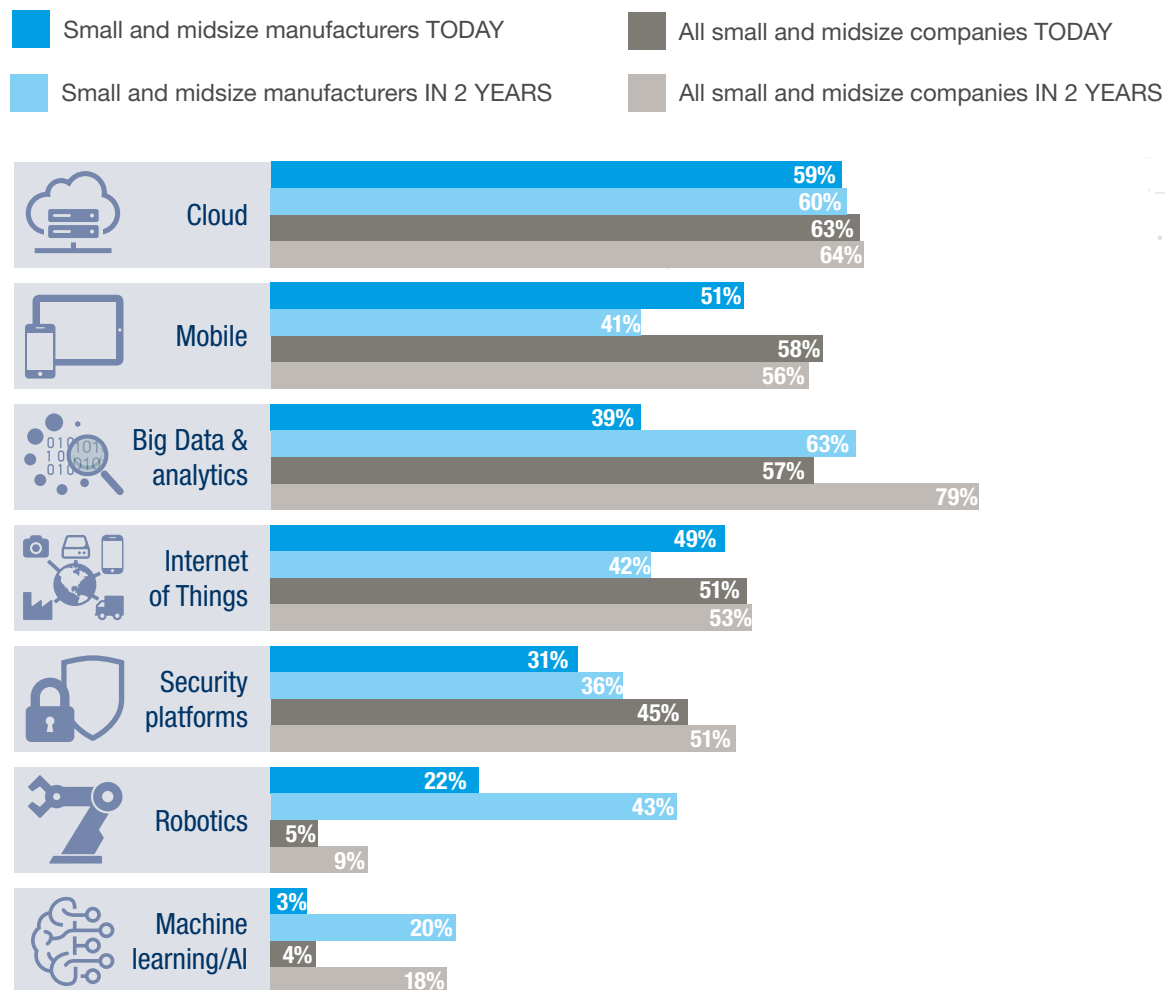
Small and midsize manufacturers are focused on robotics

Digital transformation revolves around investment in emerging technologies. For the most part, small and midsize manufacturers are directing IT budgets toward foundational tools like cloud and mobile. These will serve as innovation platforms for more advanced technologies—robotics, for example—critical to manufacturing’s future.

Small and midsize manufacturers already are investing in robotics at a greater rate than their peers in other industries (22% are investing today, vs. 5% of small and midsize companies across sectors). In two years, that difference will become even more pronounced: 43% of manufacturers say they will invest in two years’ time, vs. 9% across sectors. And while the largest—those with \$500 million to \$1 billion in revenue—are currently more likely to be investing in robotics, smaller organizations expect to close the gap in two years.

Over half (56%) of small and midsize manufacturers say digital transformation is critical to their organization’s survival today, and 80% say it will be in five years’ time. Yet many still have not prioritized transformation as a strategic plan. Smaller manufacturers—like other small and midsize companies—are less likely than larger enterprises to say digital transformation is a core business goal (55%, vs. 85% of larger manufacturers).

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. The top areas in which small and midsize manufacturers expect to see improvement are process automation (57%, vs. 51% of small and midsize companies across sectors), customer engagement (56% vs. 63%), and innovation (56% vs. 58%). Employee engagement will be another major focus (55% vs. 54%)—although the smallest manufacturers in our survey are less likely to expect improvements in this area.

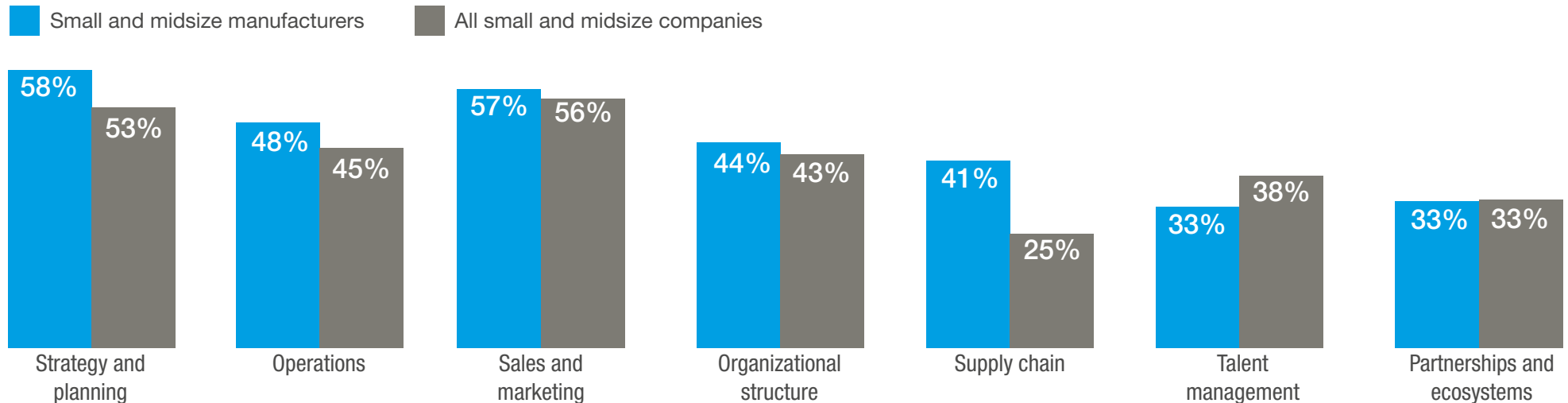
Broader digital transformation efforts—involving the processes and business goals that surround technology investments—also will affect business performance. Most small and midsize manufacturers have not yet seen transformative change in these areas from their digital efforts.

Less than one-quarter report dramatic improvements to strategy and planning (23% say digitization has led to substantial or transformative change), operations (12%), and other business functions.

But change is on the way. Well over half are using digitization to improve functions ranging from strategy and planning (58%) to sales and marketing (57%). And, critically, small and midsize manufacturers are more likely than other industries to expect improvements to supply chain (41%, vs. 25%).

Developing new products and services and increasing speed to market are seen as top revenue and profit drivers for manufacturers over the next two years. These technology-driven improvements to business functions will support core strategic goals—if they can build the culture to facilitate these 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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Manufacturers must engineer a digital culture

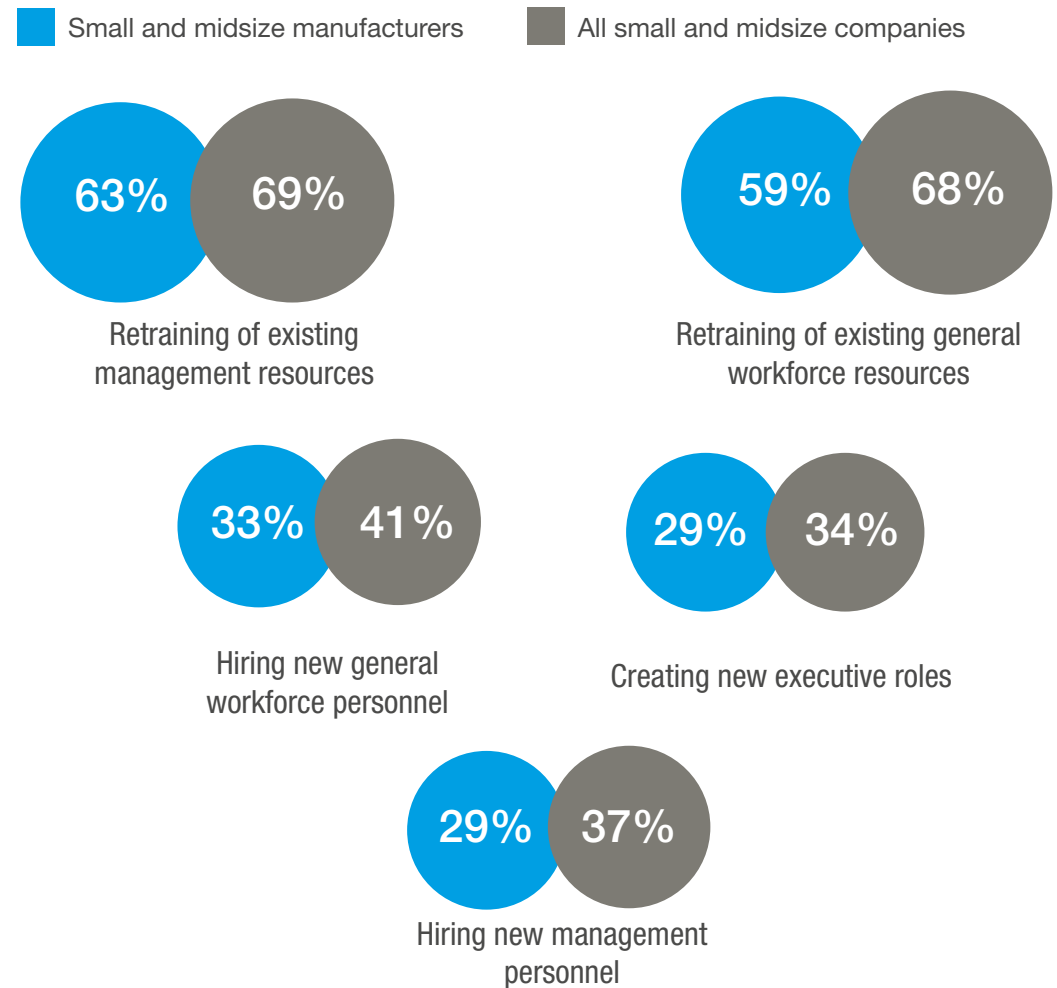
To get digital transformation right, small and midsize manufacturers must leverage their inherent strengths, including agility and the ability to build a strong and collaborative culture. Like their peers from other sectors, they have work to do to prepare their organizations for the digital era.

Changes must begin at the employee level. Manufacturers cite a lack of workforce skills as the top barrier to their digital-transformation initiatives (49% rank it as a top-three challenge)—even ahead of budget (46%). Technology investments are expected to affect retraining of general workforce resources, yet most are slow to address talent issues; just 9% report well-developed strategies for employee engagement, and only 59% are retraining workers to support new technology investments.

Small and midsize manufacturers also must update their company culture to make transformation pay off. Currently, complex and bureaucratic organizational structures make it difficult for many manufacturers to move quickly. They are somewhat less likely than their peers from other industries to say they are getting value from simpler decision-making (62%, vs. 72% overall) or less bureaucracy (54% vs. 64%)—both advantages that should be attainable for smaller companies.

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. Leaders at manufacturing companies must continue to focus their technology investments on the suite of emerging tools that will be most valuable to their business models over the next two years. They also must develop processes and strategies around the application of these technologies, and build a workforce that can adapt to these emerging technologies today and in the future.

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; 286 of these small and midsize companies are from the manufacturing sector. This paper includes our analysis of the manufacturing 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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