About the survey

From June 1—10, 2021, a Deloitte survey of private and mid-market companies was conducted by OnResearch, a market research firm. The survey examined technology trends taking place in this market segment to determine the role that technology plays and how it influences business decisions.

The 500 survey respondents represented mid-market companies with annual revenues ranging from $250 million to a little more than $1 billion, with firms with at least $750 million annual revenue comprising 40 percent of the sample this year. Half of the respondents were C-suite executives, while the remainder held other senior management roles.

Eighty percent of the respondents represented companies that are privately held, while the rest were publicly traded firms.

Twenty-nine percent of the respondents represented consumer and industrial products companies; 22 percent were from financial services companies; and 21 percent were from technology, media, and telecommunications companies. The remaining respondents were divided among life sciences and health care, and energy and resources companies. Some percentages in the charts throughout this report may not add up to 100 percent due to rounding, or for questions where survey participants had the option to choose multiple responses.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>4</td>
</tr>
<tr>
<td>Pushing boundaries, confronting risks</td>
<td>6</td>
</tr>
<tr>
<td>Advanced adoption or testing the waters?</td>
<td>11</td>
</tr>
<tr>
<td>Convergence: New partnerships and alliances across industries</td>
<td>16</td>
</tr>
<tr>
<td>Closing the divide: Making changes where they count</td>
<td>20</td>
</tr>
</tbody>
</table>
Across an array of industries, America’s middle market and private companies have tailored their operations amid the uncertainty of the COVID-19 pandemic. The crisis has accelerated the digitization of nearly every corner of the economy.

In response, most mid-sized and privately held businesses have used technology to adapt workforce and delivery models to engage with their customers, workforce, and partners more effectively.

Depending on their annual revenue and where the organizations sit along the spectrum of technology adoption, these businesses have taken divergent paths in their approach to technology modernization. While larger enterprises are stretching the boundaries of digital innovation, smaller and mid-market companies appear to be concentrating instead on core capabilities such as sales and operations, based on our survey findings.

Regardless of companies’ size, some universal themes continue to define their technology investments and challenges, according to our eighth annual survey of private company executives’ technology priorities. There’s consistent baseline adoption of cloud applications. Information security continues to rank as the technology trend driving the most worry among leaders. Nearly half of respondents indicate their organizations have no IT governance process in place, while other organizations are assessing their IT operating models, adjusting or redesigning them entirely.

In light of the shifting technology landscape magnified by the global pandemic, supply chain disruption, and increasing competition for talent, we chose a new focus area for this year’s annual survey: We examined how companies are establishing smart manufacturing capabilities, leveraging the Internet of Things (IoT), augmented human behavior, the power of predictive analytics, and integrated cloud applications to create more agile production systems. A majority of executives surveyed say their organizations intend to continue to expand their smart factory efforts over the next two years.
Overall technology investments: Broad agendas vs selective bets

Our survey revealed a pronounced split of respondents between smaller mid-market organizations ($250 million to $500 million in annual revenue) and their larger peers (from $500 million to $1 billion and above). Those surveyed organizations that had previously embraced technology investments, regardless of size, are clearly reaping benefits, as they were already deploying many foundational technology and architectural components prior to the pandemic. As we further analyzed the responses by company size, there were considerable differences in approach and execution based on revenue.

Our survey reveals that smaller organizations are primarily making selective bets on one or more technologies to enable digital transformation. For instance, many are moving to cloud-based architecture, ensuring applications have the flexibility, scalability, and bandwidth to support growth and advanced systems like machine learning and cognitive computing.

By comparison, among those surveyed, many larger organizations have moved beyond foundational priorities and now have targeted, focused plans to further deepen digital capabilities across their IT and business operations. They’ve been able to repurpose and reskill workers to support other areas of the business, which runs counter to the conventional wisdom that automation leads to headcount reduction. In fact, as automation increases, most executives we surveyed anticipate that workers will be more engaged, become more productive, and be better communicators.

Regarding investments in cloud computing, organizations at the lower end of the revenue spectrum seem especially concerned about information security within these applications. That contrasts with early adopters, who report they are largely focusing on cloud integration across core systems.

Meanwhile, talent and skillset challenges vary depending on revenue, our survey shows. While most smaller organizations are activating a range of strategies to enable their workforce through technology, larger organizations tend to have a much sharper focus on technology augmentation and redesigning job roles for even greater growth and scale. This, combined with more flexible working arrangements, may allow early adopters of advanced technology to compete more aggressively to retain and attract talent.

These developments follow a period of increasing headcount versus the expected reduction in workforce as organizations automate and modernize, as noted in our previous technology survey of private and mid-market companies.¹

This year’s report will provide perspective on the diverse paths mid-market companies have taken since 2020 to optimize their operations, enhance the employee experience, and cement connections with customers through the tools of technology.
Pushing boundaries, confronting risks

As middle market and privately held companies look beyond the pandemic, they are adapting to technology processes and infrastructure for new ways of doing business.
Connected technology has been the thread that’s kept these businesses operating through the pandemic. Out of necessity, many organizations have accelerated their digital transformations to expand or alter their customer offerings while navigating a complex series of cyber risks and confronting the evolving relationship between workers and their employees.

With these challenges in mind, respondents in this year’s survey have adopted a range of strategies that collectively point to a top-to-bottom reorganization and, in some cases, a reprioritization of their overall business and/or its operations. For instance, among the largest respondents in our survey, 72 percent expect digital disruption to create job-related changes in operations over the next 12 to 18 months. Many executives also report their companies are in the midst of a realignment that will permit them to modernize their systems in order to augment human capabilities with technology—with 52 percent of respondents indicating they expect technology advances will drive them to redesigning jobs and tasks to make it easier for people and machines to work together over the next 12 to 18 months.

**Consolidating the human-digital relationship**

There are multiple signs that companies are harnessing technologies to be more human-centric in terms of their use and how they interact with customers, with different levels of adoption by industry. For example, executives from life science and health care companies were about twice as likely as the next-closest industry to believe innovations like robotic process automation (RPA), machine learning and cloud integration would give their workers the greatest digital lift over the next 12 months. Across industries, respondents were also highly focused on the employee experience, ranking it as the most important area to be affected by digital disruption in the coming year.

Responses also offer a glimpse into how talent leaders intend to concentrate their efforts in the near future. When it comes to building workforce capabilities, a majority of firms rank skills related to robotics, AI, and cognitive analytics as key areas of focus, with financial services firms (53 percent of respondents from this industry) most likely to cite these capabilities. Finance executives were also more likely (57 percent of respondents) than those from any other sector to anticipate redesigning tasks to make it easier for people and machines to work together.

**DISRUPTION / ACTIVATION**

**Strategies that point to a top-to-bottom reorganization or even re-prioritization**

- **72%** expect digital disruption to create job-related changes in operations
- **52%** expect to redesign jobs and tasks to make it easier for people and machines to work together
- **44%** say the most significant impact of digital disruption will be on the employee experience
Leaders were evenly split as to whether providing flexibility in their return-to-work strategies or developing new ways to recruit candidates using next-generation technologies would give them the upper hand in talent acquisition (49 percent for each option). As many companies delay, reconsider, or indefinitely postpone their return-to-work plans, executives from energy, resources, and industrials companies (62 percent of respondents) were more likely than those from any other industry to provide continued flexibility in how, when, and where work gets done.

“Our 2021 Human Capital Trends Survey data indicates that skilled workers desire flexibility, a supportive environment, and modern tools to do their work,” says Michael Stephan, US Human Capital leader, Deloitte Consulting LLP. “Organizations that embrace technology modernization, workplace flexibility, and an employee centered approach will have an edge in the talent wars.”
Planning to mitigate business risks

For organizations that enacted work-from-home policies to comply with social distancing rules, the hybrid work environment has amounted to a global test run of the possibilities of distributed work. The sheer number of devices on the market illustrates the magnitude of the shift: Sales of laptop and desktop computers topped 302 million in 2020, a 13 percent increase over the prior year and the most since 2014. Home offices have become essential workspaces, but, as many lack firewalls and related protections, online work has fundamentally changed the contours of cyber and information security.

In our previous survey, in 2019, incidents such as attacks by cyber criminals, phishing attempts, or “hacktivism” ranked as the top data privacy and security risks of concern, followed by employee-introduced risk.

In this year’s survey, the inverse was true. Employee-introduced risk, such as compromising data or infrastructure by disregarding password security or improper handling of confidential data, ranked as the top cyber threat. About half of respondents (49 percent) ranked these threats posed by employee behavior as their top concern, reinforcing the need for ongoing diligence and reinforcement training. By comparison, external threats came in second this year as the top security concern, cited by 41 percent of respondents.

“Cyber risk is a top technology concern, but it goes far beyond the IT department,” says Chris Jackson, Deloitte Private Technology leader, Deloitte Consulting LLP. “Enterprises should be continually questioning their threat intelligence monitoring across the organization, and setting goals to boost protections against threats. Ultimately, that’s how you build trust among key constituencies, whether it’s your workforce, your customers, suppliers, or communities at large.”
Advanced adoption or testing the waters?

Organizations that have taken an incremental approach to modernization have largely focused on foundational elements including information security risk, automation of repetitive tasks, and optimization of technology and process to reduce costs. Meanwhile, organizations that have invested aggressively in technologies that help predict business and talent outcomes appear to be more mature in how they leverage their talent and modernization efforts. Here’s how these organizations contrast by revenue.
Smaller organizations
≤ $750 million annual revenue

Larger enterprises
> $750 million annual revenue

**SYSTEM MODERNIZATION**

The smallest organizations in our survey are placing an emphasis on a wide set of foundational technologies such as cloud applications and the Internet of Things. For instance, **28% of respondents from companies with revenue up to $500 million say cloud applications will have the most significant impact on their organizations over the next 12 months**. They’re slower than their larger counterparts in making investments in cognitive technologies and haven’t extended their “core” legacy systems at the same pace as larger enterprises. These organizations may have to spend more to enable a robust, flexible, and more technological foundation.

**Cyber and Information Risk**

Many smaller or early stage growth organizations are concentrating on the basics of IT governance processes and principles, organizational understanding, and incident response protocols. They continue to report concerns around the ability to secure their migrations to the cloud. **Among companies with revenue up to $500 million, 31% of respondents cite mobility and remote work as one of their top three data privacy and security risk issues of concern.**

Among the larger and more complex organizations, information security is often a board-level priority. These companies are raising flags about the shared responsibility model with their cloud service providers. Slightly more than half of these organizations surveyed (52%) with annual revenue of more than $1 billion are concerned about leveraging external cloud-hosting providers, while **68% of the companies are concerned about employee-introduced risk that compromises data or infrastructure**. Additionally, organizations embracing Smart Manufacturing technologies will need to consider how connected factories or supply chains align with existing security controls.
Smaller organizations
≤ $750 million annual revenue

Larger enterprises
> $750 million annual revenue

**DIGITAL WORKFORCE**

“Recruiting new talent” could have the most impact

Many early-stage or smaller organizations are focusing on sales and cost optimization through technologies such as robotic process automation in their efforts to increase productivity and free employees from repetitive tasks. Those with annual revenue of $500 million to $750 million were more than twice as likely as larger organizations to say that “recruiting new talent” was the focus area that could have the most impact on efforts to augment their workforce with technology.

Updating workforce models to reflect new technology enabled or augmented worker models

Larger enterprises are hyper focused on digitally enabling their workforce—updating, redesigning, and redeploying employees to newly designed roles with new ways of defining success. For instance, 76% of respondents from companies with revenue over $1 billion say they’re updating job roles, competency requirements, and performance assessments to reflect the new technology enabled or augmented worker models.

**GOVERNANCE PRIORITIES**

Little to no formal IT management oversight

The smallest organizations are more likely to be tackling the basics such as overall governance processes, organizational understanding, accountability, and incident response protocols. Of note: 58% of respondents from organizations between $250 million and $500 million annual revenue report having little to no formal IT management oversight in place.

Increased awareness of the ethical obligations toward customer data

The largest organizations leveraged their IT governance structures to navigate the cybersecurity challenges of the pandemic and are now poised to re-architect their organizations around new technologies. For instance, 70% of respondents from organizations with annual revenue of more than $1 billion report increased awareness of their ethical obligations toward customer data. However, these organizations are still early in the process, and like all organizations, have to weigh broader risk considerations as connectivity and business partner integration continues to increase in a hyper-connected, global business environment.
The middle market technology divide—2021 survey report

The smart get smarter, but the forward thinkers could have the edge.

One broad technology area where the divide is widening between the “haves” and the “have nots” is smart manufacturing (SM). We examined the differences between private companies we surveyed when it comes to tech-enabled solutions designed to enhance production and boost factory efficiency, based on what’s already operational, what’s currently being implemented, and what is only in the pilot stage.

First, there appears to be a natural chronology to investment in smart technologies. We scored companies as either nascent (no SM capabilities operational), developing (1-4 operational), and mature (5+ operational). We found that nascent companies tend to focus on foundational technologies at first, such as those geared toward improving energy management, quality control, and workforce efficiency, before progressing to solutions designed to improve their warehouse operations and close the loop between customer feedback and product development. The most mature companies tend to push even further, prioritizing technologies that help them analyze data coming off the shop floor to optimize their operations and make better decisions with their physical assets and workforces. What’s more, compared with companies that are exploring the foundational aspects of these investments, they have an edge on learning how to best use these technologies for business value.

Significant gaps emerged between developing and mature companies in certain technology areas. Among operational SM capabilities, mature companies are furthest ahead in augmenting their workforce efficiency, utilizing co-bots, robots, and other automated machinery to boost productivity, and cut costs. Quality sensing and detecting—using various data sources to get ahead of quality issues faster and earlier in the value chain—is another capability area where mature companies enjoy a significant advantage. “Shifting to ongoing implementations, mature companies are more likely to be investing in factory synchronization and dynamic scheduling, customer collaboration for product ideation and design, and factory asset intelligence and performance management,” says Stephen Laaper, Deloitte Consulting LLP’s Smart Factory leader.

We also found that significant gaps emerged between developing and mature companies in certain technology areas. Among operational SM capabilities, mature companies are furthest ahead in augmenting their workforce efficiency, utilizing co-bots, robots, and other automated machinery to boost productivity, and cut costs. Quality sensing and detecting—using various data sources to get ahead of quality issues faster and earlier in the value chain—is another capability area where mature companies enjoy a significant advantage. “Shifting to ongoing implementations, mature companies are more likely to be investing in factory synchronization and dynamic scheduling, customer collaboration for product ideation and design, and factory asset intelligence and performance management,” says Stephen Laaper, Deloitte Consulting LLP’s Smart Factory leader.

These capability gaps are likely to grow wider, given mature companies’ spending plans for the next two years. A greater percentage of respondents from mature companies say their firms are increasing their SM investments to accelerate growth, versus merely continuing them.
“Mature firms are doubling down on smart manufacturing because they’ve realized productivity gains and are seeing value and ROI with their technology investments,” says Chris Jackson, Deloitte’s Private Technology leader.

Mature firms are also more likely than both nascent and developing firms to prioritize new SM facilities over retrofitting existing ones. Jackson says this may give them a distinct advantage in luring talent away from other companies and industries, a critical factor enabling them to get the most out of their investments. Executives in this year’s survey told us that their biggest talent gap and training priority are skills related to robotics, artificial intelligence (AI), and cognitive analytics in competency requirements and performance assessments.

Emerging companies in particular may need bundled solutions that include not only new technologies but also solutions that offer the ability for vendor partners to operate the technologies. But these developing companies may not be able to secure talent in time or in their particular marketplace. Furthermore, while these businesses need solutions that offer easier payment and investment arrangements, they may not have been able to make significant capital investments to cover these fixed costs.

“A differentiator in landing engineers and other highly skilled talent, such as data scientists, is likely to be programs which are leveraging cutting edge technology that augments or expands the workers capabilities,” Laaper says. “Top talent will want to work in environments where they have exposure to technologies that enable them to learn, expand their capabilities, and ultimately increase their worth.”

**Developing / Mature**

Smart manufacturing investment plans over the next two years

Companies with <$750M annual revenue are balancing retrofitting existing facilities with building new ones (58%)

Companies with >$750M annual revenue are primarily prioritizing building new facilities (73%)
Convergence: New partnerships and alliances across industries

Remarkable things can happen when challenge meets opportunity. The technology disruption and industry convergence we are witnessing represents tremendous potential for mid-market and private companies.
Like many large public companies, private companies have the opportunity to re-evaluate how they can potentially monetize unique assets—specifically their data and insights. These organizations can reconsider how they serve their customers more intimately by thinking about how they team with their ecosystem and vendor partners. In addition, while companies that are slow to change are more likely to be disrupted themselves, those that embrace change by thinking differently in order to capitalize on the chaos may gain share via acquisition or by better meeting the needs of their customers.

Our survey responses continue to demonstrate that when an organization focuses on customer and employee engagement and also has a robust technological foundation it tends to more quickly adopt its business model to meet the needs of the marketplace. When we look at those companies that thrived during the pandemic, it is largely those companies that leaned into technology investment early and had a sound grasp of data and how to leverage it to predict trends within their business; the lesson for leaders to consider is that cross-industry convergence often accelerates the opportunity for innovation. Organizations that understand this can proactively position themselves to deliver greater value to their customers.5

In this year’s survey, a majority of companies across all industries reported that the pandemic is fostering the formation of new partnerships and alliances. That’s especially true in the life science and health care industry which has been at the center of the global disruption resulting from the COVID-19 pandemic. Deloitte’s 2021 M&A Trends Survey reinforces this position: 74 percent of life science and health care companies said they’re taking advantage of disruptive opportunities to enter new markets and/or business areas, while 69 percent said they’re establishing new partnerships and alliances. What’s more, 67 percent of respondents in life science and health care said they’re exploring acquisitions in adjacent markets.6

Industry convergence is likely to be a continuing story in this sector as with the expansion of retail consumer products and e-commerce companies into health care. In fact, venture funding for health tech innovators reached $14 billion in 2020, nearly double the amount of the prior year, according to a Deloitte analysis. Many investors view the post-pandemic era as the beginning of a multiyear opportunity for companies in this area.7
The pressure for industry incumbents to think about ways to partner with non-traditional players is also increasingly apparent in financial services. A number of examples illustrate how businesses are modernizing their offerings to respond to customer needs. For instance, with fintech solutions, retailers can offer point-of-sale loans to customers during the checkout process or accept deposits in-store, effectively expanding a bank’s physical footprint. There are also solutions in the insurance industry: apartment leases can include renter’s insurance provided by a banking partner of the property management company. By integrating non-banking businesses with regulated financial infrastructure, these companies can work together to build an ecosystem to meet new needs.

The intensification of industry convergence is also driving the rise of technology solutions vendors developing hybrid business solutions that enable organizations to respond to the dynamic needs of an enterprise as they scale, pivot, and acquire businesses to expand their business models.

As middle market and private companies decide how to navigate these opportunities, the real opportunity may actually lie in their data—monetizing internal assets, exposing insights within their supply chains, or tapping into marketplace insights.

Family businesses: Adapting to disruption
These technology-focused pursuits are producing particular challenges for family-owned private companies, which comprised 30 percent of this year’s survey respondents. Consider that for more than any other ownership type, family-owned companies were the most likely to say that technical complexity—such as integrating new technology with legacy systems—was the biggest IT challenge faced by their organizations. They were also more likely than any other ownership category to cite the overall cost of implementing new technologies as the biggest challenge faced by their organizations.

These results indicate there may be internal constraints that are preventing these companies from reaching their potential, including the ever-expanding complexity among the network of ecosystem partners these organizations rely on to support their growth needs.

Still, there are some encouraging signs: Family-owned and closely held companies were more likely than any other ownership type to agree that their digital transformation accelerated through the crisis. This is evident in the increasing use of cloud-based ERP solutions. As many growth-oriented family businesses or closely held private companies scale, they are increasingly looking at cloud ERP as a digital foundation on which to build the next generation of their businesses. And this is likely driving the trends seen across ERP vendors and consultancies, not just implementing ERP software, but also helping these organizations run and operate systems to reduce blind spots and increase speed to market.

A hybrid technology business is one that creates discrete software products and IT-driven accelerators that can be woven into an organization’s existing architecture, licensing only the IP intellectual property, vs the software only.
America’s privately held and family-owned companies are facing continuous change within the marketplace, with the need to increase performance under greater constraints on multiple fronts, including from their customers and their employees.

In a period of unprecedented physical isolation, companies have perhaps never been closer to their partners and their customers, thanks to the power of connectivity. As they look beyond the pandemic, many of these businesses have begun to develop creative alliances with partners in adjacent and not-so-adjacent industries.

As they seek to create new value and carve out new niches, they’ll need to hold these new partners accountable as teams operate outside traditional walls.

In that spirit, here are some actions companies can consider to create new value as leaders examine the mission, structure, and operations of the US middle market.
Seize the potential of smart factories
As this year’s survey indicates, one emerging avenue to watch is smart manufacturing. To have a shot at success, companies need to decide how their systems (and, importantly, their people) will interact with the increasingly sophisticated automated technologies that are transforming factory operations.

Explore the possibilities within ecosystems
The lines between companies continue to blur amid industry consolidation and the evolving consulting and software vendor landscape. Leaders of both larger and smaller organizations within the middle market should begin to reconsider how they can utilize their supply chain ecosystem and technology vendor partners. These providers will need to be able to operate at scale as companies expand regionally, nationally, and globally.

Address operational gaps
Ecosystem partners will need to support their clients’ digital transformation needs. These providers should also have the ability to operate those technologies for their customers, accounting for internal talent or operational gaps, as companies attempt to “staff up” with the emerging skills needed to operate today’s technology.

Lift up and empower teams for the future
Organizations need time to address talent challenges. But as the growth in cognitive technologies designed to enhance jobs continues to explode, organizations may find themselves at a disadvantage if they don’t prepare their people to use technologies that can help them become more productive workers.

Enhance oversight
As the digitally focused, largely remote workplace becomes the default option across organizations and roles, it will be important for organizations to maintain management practices to keep their people engaged and energized. Accomplishing this typically requires enhanced IT oversight—to navigate the challenges of distributed teams and remain nimble enough for the exponential rate of arrival of new technologies.

Private organizations have access to a powerful assortment of next-generation technologies to leap ahead of the competition. The challenge is making improvements where they count. We’re eager to see how these businesses use technology to position themselves for achieving even greater growth.
Endnotes


**Deloitte Private Perspectives**

This report is just one example of Deloitte research on topics of interest to mid-market companies, including private enterprises. Deloitte Private Perspectives is a multifaceted program that utilizes live events, signature reports, research publications, webcasts, newsletters, and other vehicles to deliver tailored and relevant insights in an integrated fashion.

Please visit our Deloitte Private website (https://www.deloitte.com/us/private) to view additional material on issues facing mid-market companies, including private enterprises.

**Acknowledgment**

We would like to thank all survey respondents and interviewees for their time and the insights they shared for this report, *The middle market technology divide—2021 survey report*. 
Contacts

**Jason Downing**  
Vice Chairman and US Deloitte Private Leader  
Deloitte LLP  
jdowning@deloitte.com

**Brian Umbenhauer**  
Deloitte Private Consulting Leader  
Deloitte Consulting LLP  
bumbenhauer@deloitte.com

**Chris Jackson**  
Deloitte Private Technology Leader  
Deloitte Consulting LLP  
cajackson@deloitte.com

**Bob Rosone**  
Managing Director  
Deloitte Private  
Deloitte LLP  
rrosone@deloitte.com

**Research and editorial lead**  
**Janet Hastie**  
Senior Marketing Strategist  
Deloitte Services LP

**Report design**  
**Isaac Brynjegard-Bialik**  
Senior Manager  
Deloitte LLP