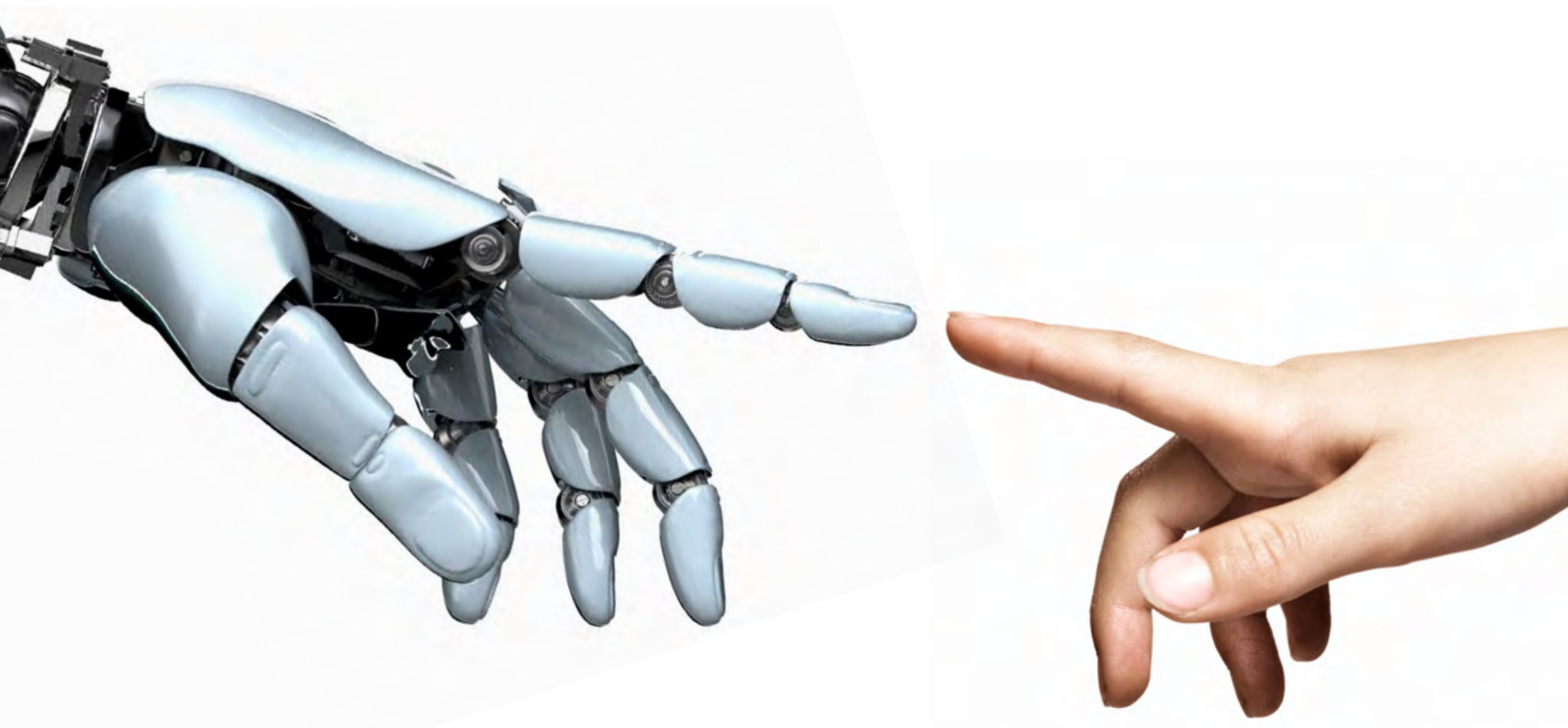


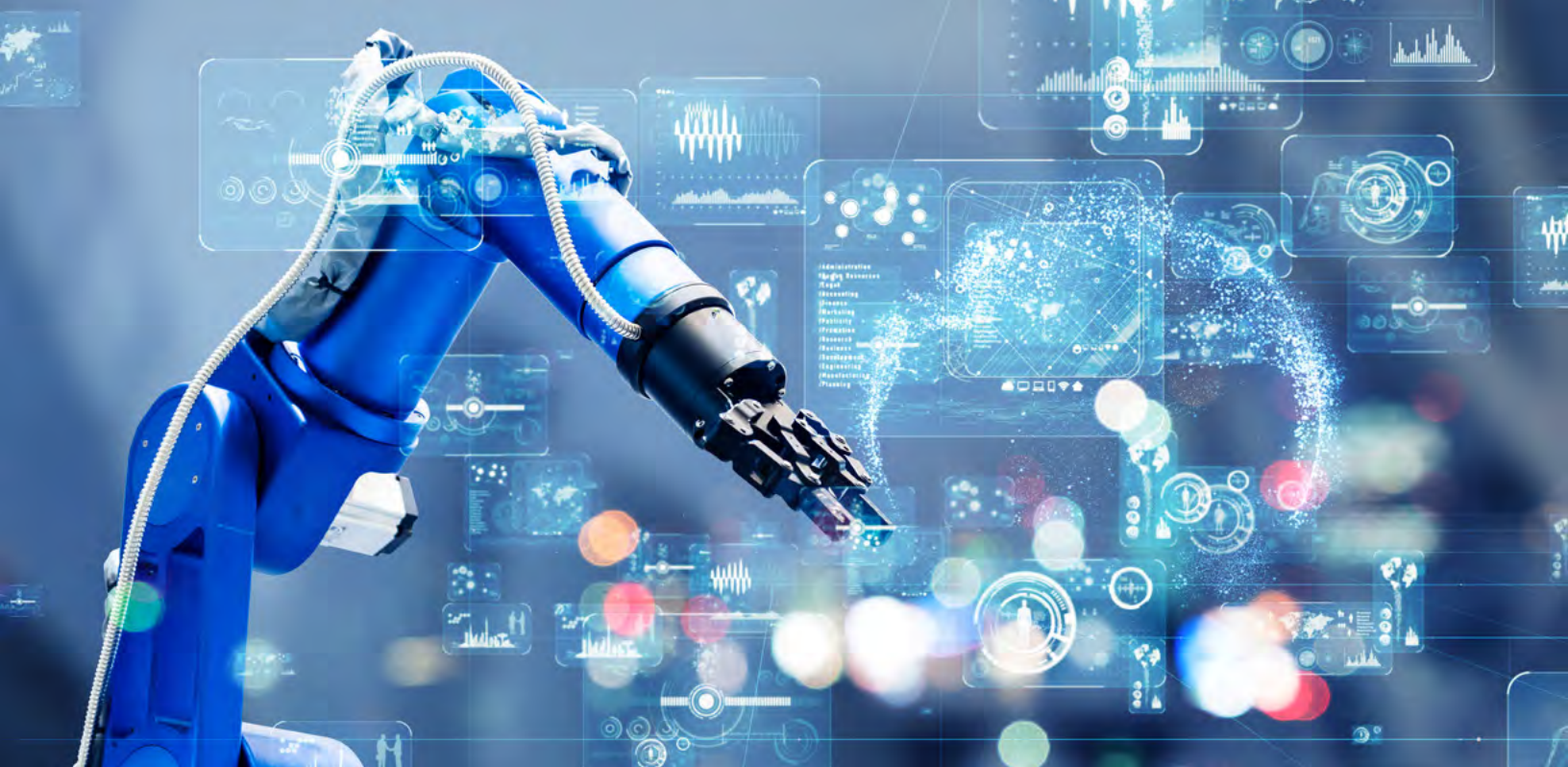


Aptean Manufacturing ERP

Perception Versus Reality: Manufacturing's Digital Transformation Disconnect

Why Manufacturers Must Put Automation Into Action





Digital Transformation Is Now A Top Priority

Digital transformation has been a medium or near-term manufacturing objective for several years. But market fluctuations have brought the business case for technology investment to the top of manufacturers' priority lists.

Smart technologies and connected decision-making have become critical to maximizing operational speed and efficiency. Helping manufacturers to find growth opportunities when they don't know where the industry is heading next.

But while many companies have developed a digital transformation strategy, fewer are executing these plans quickly. And this is creating a gap between how technologically advanced manufacturers believe they are, and how their business runs day-to-day.

To understand the consequences of this 'digital transformation disconnect,' Aptean surveyed 275 North American manufacturers on their current automation capabilities and future plans.

Keep reading to discover:

- › Where manufacturers fall on the digital transformation curve
- › How automation influences customer relationships and operational efficiency
- › Which technologies will drive company growth in 2022
- › Key action points for manufacturing executives

Next »» Where Are Manufacturers On Their Digital Transformation Journey?

Are Manufacturers Over-Inflating Change?

Our research discovered that 66% of manufacturers already have a digital transformation roadmap in place for some or all departments, while 72% of organizations categorize themselves as quick to adopt new technologies.

Yet when it comes to executing this roadmap, there's a difference in manufacturers' perception of transformation versus their actual software investment.

For example, our survey found that 4 in 10 manufacturers have undeveloped (nascent) or non-existent digital capabilities, yet almost half (47%) believe their strategy is mature/sophisticated.

How advanced is your digital transformation strategy?

	Non-Existent	Nascent	Progressing	Maturing	Sophisticated
Perception	9%	16%	28%	23%	24%
Reality	22%	17%	26%	25%	10%

Despite this disparity, some sectors are further ahead than others. For instance, 97% of CBD manufacturers have a roadmap in place for some or all departments – over 30% higher than the industry average – and 52% are in the final stages of completing digital transformation projects.

This marked increase reflects the fact that CBD is a fast-growing, innovative area and manufacturers must work dynamically to stay competitive.

Next >> How Does Company Size Impact Digital Transformation?



Only 9% of manufacturers admit to not having a digital transformation strategy in place. But in reality, 22% have no clear roadmap.



SMBs Most Likely To Lag Behind

While overstating digital transformation may seem harmless, our research revealed a concerning disconnect between what manufacturers believe they can achieve versus their actual capabilities. Especially in smaller businesses.

Here's an example – overall, 92% of manufacturers say their data allows them to make sound business decisions, yet 64% admit to having significant gaps in their business intelligence.

When we look more closely at the realities of manufacturing automation, small to medium-size businesses (SMBs) are more likely to be behind the curve, as fewer resources and limited in-house technical knowledge interfere with their digital development.

How advanced is your digital transformation strategy?

	Overall n=275	\$0-99 million n=162	\$100-499 million n=82	\$500+ million n=31
No Digital Transformation Started or Planned	9%	14%	1%	3%
Beginning Digital Transformation Process	16%	15%	21%	6%
In Progress of Digital Transformation	28%	26%	27%	42%
Gathering Data Automatically / Digitally and Using Analytics for Business Insights	23%	25%	20%	23%
Completed Digital Transformation Project and Realizing Benefits	24%	20%	31%	26%

In fact, company size has a more decisive impact on automation strategies than time in business – except when it comes to experienced manufacturers.

Organizations in business for 20+ years are more likely to be relying on legacy systems and longstanding processes than investing in new technologies. And because of this, they risk being ‘caught napping’ by younger competitors more focused on innovation.

Do you have a digital transformation strategy/roadmap?

	No Digital Transformation Started or Planned	No Roadmap or Plans
Overall n=275	9%	10%
Less than 5 years. n=38	12%	12%
6-10 years. n=85	6%	8%
11-20 years. n=99	7%	6%
Over 20 years. n=53	15%	18%

Next >> Which Technologies Are Manufacturers Prioritizing?



Technology Is Already Delivering Tangible Improvements

Although there's a lag between transformation goals and everyday reality, manufacturers understand the value of digital investment. And early software adoption in key business areas is demonstrating the value of automation.

34% of manufacturers say digital transformation has enabled them to increase speed of production, while 30% have improved employee productivity. In addition, 1 in 4 organization have reduced operational costs and enhanced product quality, accuracy and consistency using manufacturing software.

We also asked manufacturers to identify which business areas they've already transformed through automation. Managing profit margin, calculating recipes/bill of materials and managing the production process all scored highly.

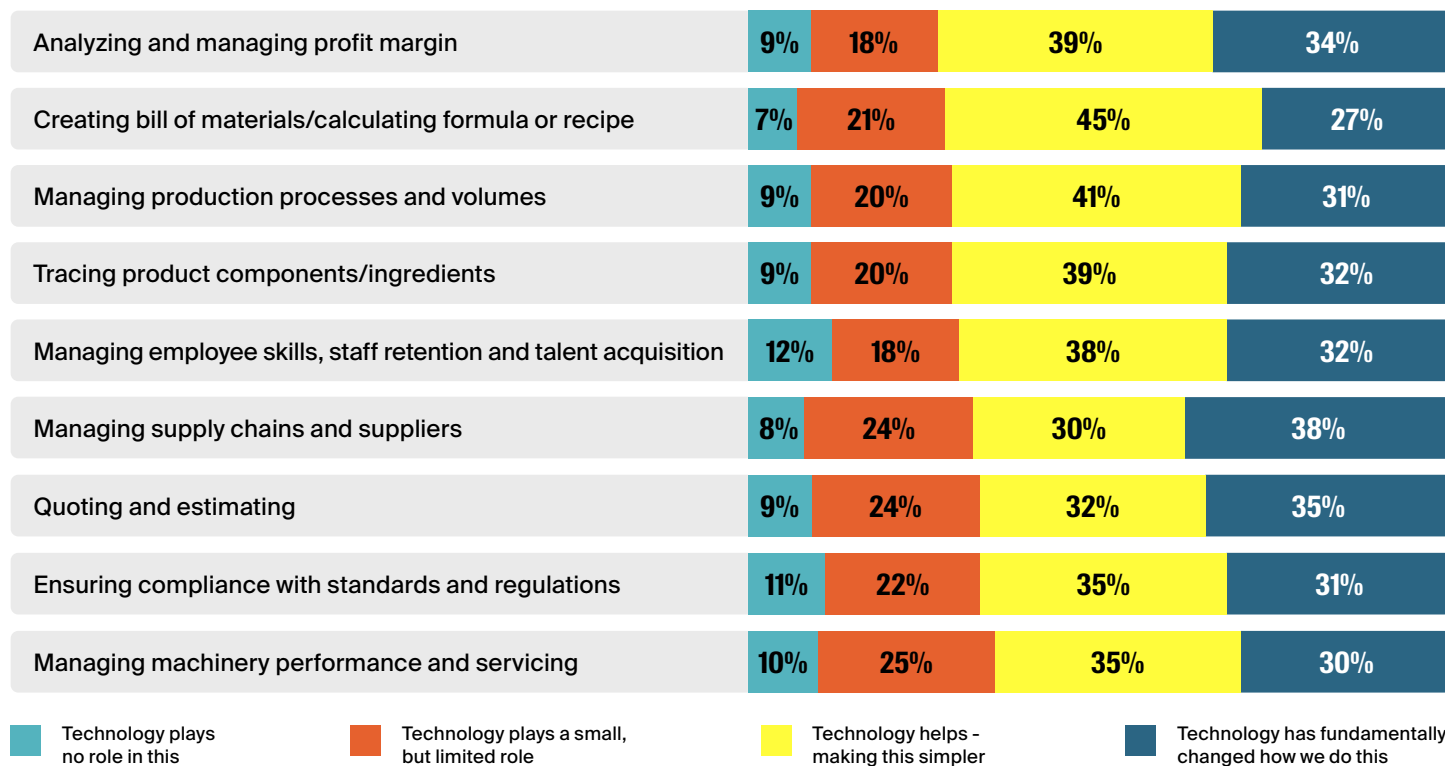


34% of manufacturers have already increased their speed of production by investing in manufacturing software.





Which business areas have you already optimized using technology?



But concerning, across the board, at least a quarter of manufacturers say technology currently plays little or no role in making their manufacturing operations simpler and more efficient; showing the untapped potential of digital transformation in almost every operational area.

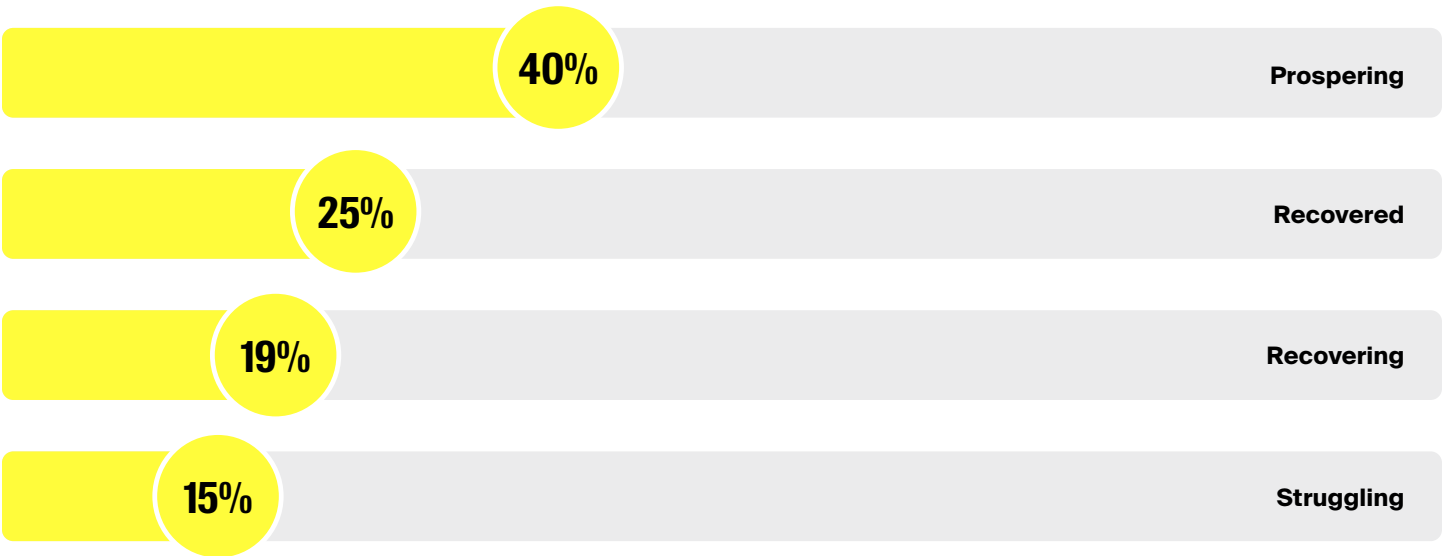
Next » How Is Digital Transformation Impacting Financial Performance?

Greater Automation Means Greater Prosperity

Digital transformation strategies are far more than a benchmark of how innovative manufacturers want to be. Technology investment is impacting how organizations are performing right now – particularly when it comes to meeting customer expectations.

As part of our research, we asked manufacturers to compare their current sales and revenue to last year and forecast their performance for 2022. The responses we received clearly categorized companies into four different stages: struggling, recovering, recovered and prospering.

How is your business performing currently?



When we integrated digital transformation data into this table, we discovered a clear correlation between how advanced manufacturers are in their technology innovation strategy and how quickly they have recovered from recent market disruption:

How is digital maturity influencing manufacturer performance?

Growth Segment	No Meaningful Digital Transformation (Stage 1)	On the Digital Transformation Journey (Stages 2-5)
Prospering	28%	44%
Recovered	16%	29%
Recovering	25%	17%
Struggling	32%	10%

Manufacturers prioritizing digital transformation are better equipped to weather the impact of economic disruption than those who are cautious about manufacturing software investment.

Next >> How Are Manufacturers Solving Specific Challenges Through Automation?

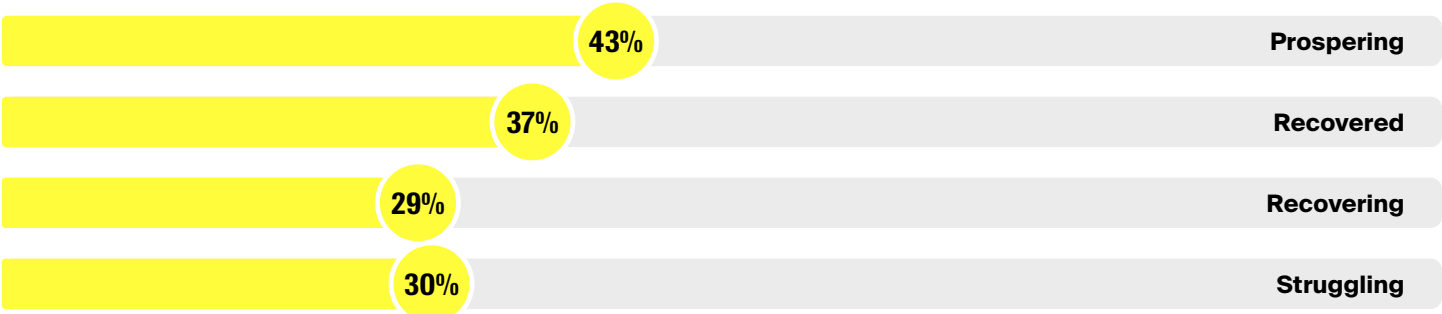
Tackling Priority Problems Through Technology

In addition to fueling general business prosperity, prospering manufacturers are also using automation to target performance in specific operational areas.

Almost half (43%) of the best-performing organizations we surveyed have already used technology to overcome a specific challenge (like those we outlined on page four), compared to just 30% of struggling manufacturers. Demonstrating that market leaders have less of a gap between their digital roadmap and actual implementations.

What percentage of manufacturers have invested in technology to overcome a specific challenge?

% of companies that have already invested in a given technology to overcome a specific challenge (average % used across all challenges faced)



We can see this difference in action if we take a critical business area as an example: the supply chain.

Overall, 88% of manufacturers are still experiencing longer than usual lead times as a result of supply chain delays. However, 91% of the companies whose lead times have already returned to normal are early technology adopters – establishing a clear link between economic recovery and digital innovation.

Next >> How Is Digital Transformation Influencing Customer Satisfaction?



43% of prospering manufacturers have used technology to overcome a specific challenge, compared to 30% of struggling companies.

Automation Is Accelerating Customer Satisfaction

Automation is also playing a critical role in manufacturers’ ability to meet customer expectations.

Overall, it’s been a challenging year for manufacturing organizations, with many finding external disruptions such as extended supplier lead times have impacted customer relationships.

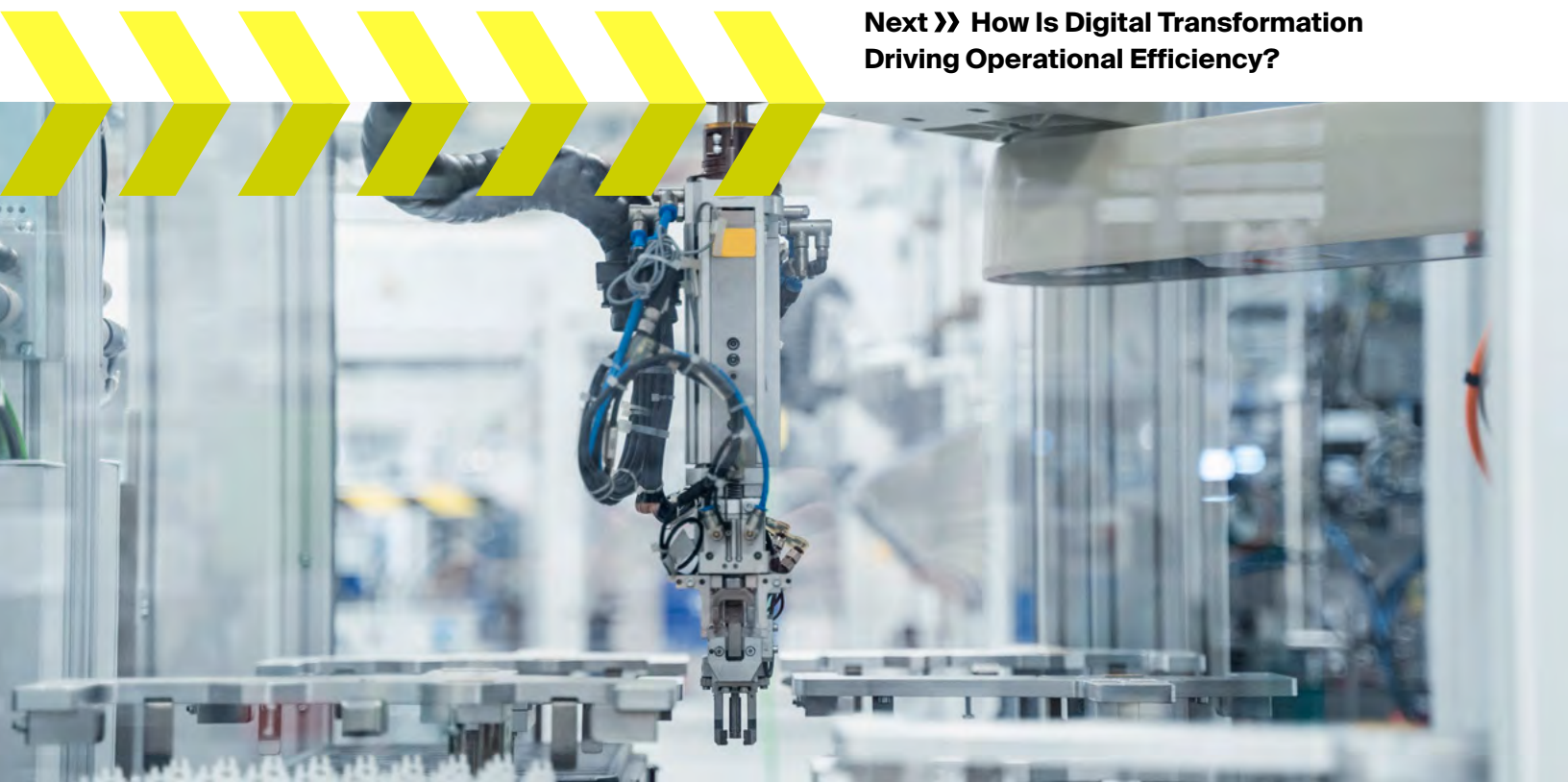
How have market disruptions impacted your customer service capabilities?

We extended lead times on product deliveries to customers	70%
Customers reduced/canceled their orders due to their own challenges	61%
We delayed orders to prioritize our highest-value customers	53%
We were unable to meet customer orders on time	51%
We canceled orders to prioritize our highest-value customers	45%
Customers reduced/canceled their orders because they were dissatisfied with us	45%

However, the increased insight and operational flexibility that digital transformation creates has enabled manufacturers in the advanced stages of their smart manufacturing strategy to manage these disruptions more effectively.

For example, 69% of manufacturers who rarely or never felt unable to meet customer demands came from the early technology adopter category – compared to just 41% of digitally cautious manufacturers.

Next >> How Is Digital Transformation Driving Operational Efficiency?



Mid-Size Manufacturers Need To Act Quickly

In addition to financial performance and customer satisfaction, digital transformation is determining how well manufacturing companies manage operational efficiency. And mid-size manufacturers are in the most vulnerable position.

It makes logical sense that as more processes are digitized, organizations can create orders quicker and more accurately. What's interesting to note, however, is which operational areas manufacturers are focusing on first in their digital transformation strategies. And the biggest difference is not being driven by economic recovery stage, but by business size.

Which operational areas have you already automated?

	Overall	\$0-99 million	\$100-499 million	\$500+ million
BASE:	275	162	82	31
Creating bill of materials/calculating formula or recipe	50%	38%	67%	61%
Tracing product components/ingredients	48%	43%	51%	68%
Quoting and estimating	46%	39%	55%	55%
Managing production processes and volumes	45%	33%	59%	74%
Analyzing and managing profit margin	45%	33%	63%	57%
Managing machinery performance and servicing	44%	33%	60%	55%
Managing supply chains and suppliers	42%	34%	50%	63%
Ensuring compliance with standards and regulations	38%	28%	49%	61%
Managing employee skills, staff retention and talent acquisition	37%	28%	50%	45%

Earlier, we identified SMBs as being more likely to be in the early stages of digital transformation, and this is reflected in our data on current software investment. Compared to larger competitors, a lower percentage of smaller manufacturers have automated operations in every business area.

And while digital capabilities balance out as company size increases, there are still areas where enterprise manufacturers are likely to be ahead of the field – such as automatically tracing product ingredients, managing the supply chain and meeting compliance standards.

These are areas where mid-size manufacturers will need to invest quickly if they want to ensure their growth trajectory doesn't compromise production transparency, efficiency and reliability. Digital innovation and process automation will empower them to remain market-reactive and quality-driven as they expand towards enterprise level.

Next >> What Is The Golden Thread Connecting Manufacturers' Digital Strategies?

Real-Time Data: The Golden Thread

While investment priorities depend on individual business challenges and goals, there is a golden thread that runs through every area of digital transformation. And that golden thread is data.

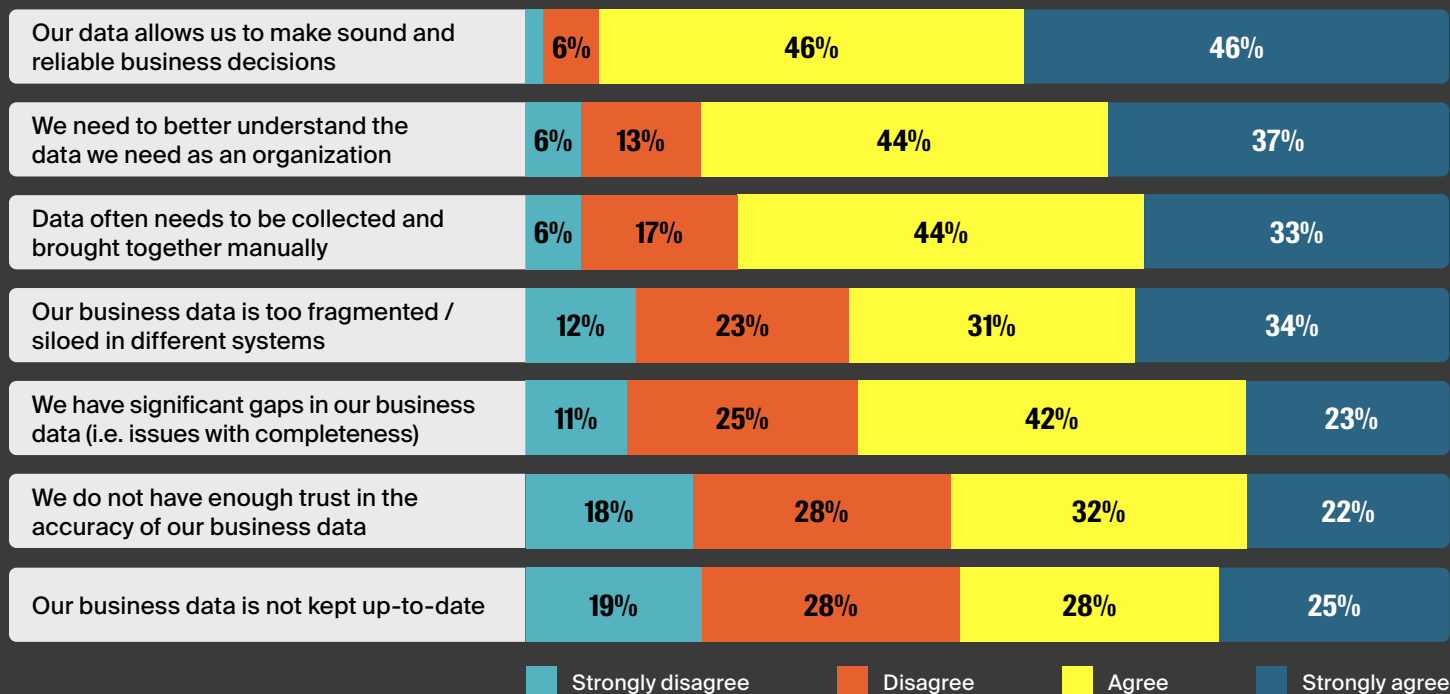
As companies integrate more processes and start connecting production end-to-end, manufacturing technologies are generating an increasingly sophisticated pool of business data. Using this data to share clear, cohesive insights will ensure that every manufacturing decision is based on the latest internal and external information – and is therefore contributing to business growth.

77% of manufacturers are still manually collecting and analyzing business data.

Within companies in the advanced stages of digital transformation, this deep level of data intelligence is paving the way for machine learning, so they can begin to model potential outcomes to every market scenario, developing automated best practice responses.

However, to reach predictive modelling, most manufacturers still need to work on the visibility and accuracy of their operational data:

How reliable is your business data?



With 77% of manufacturers still manually collecting and analyzing data, there is a huge opportunity for manufacturing software to make intelligence gathering and interpretation more efficient.

Next >> How Does Company Size Affect Data Capabilities?

Mid-Size Manufacturers Are Experiencing Growing Pains

While access to real-time data is a critical objective for all companies, mid-size manufacturers are most in need of rapid operational insight.

Our research revealed that manufacturing organizations with a turnover of \$100-499 million are more likely to have siloed business data, and struggle with data completeness.

How does company size impact data reliability?

	Overall	\$0-99 million	\$100-499 million	\$500+ million
BASE:	275	162	82	31
Our data allows us to make sound and reliable business decisions	92%	93%	91%	87%
We need to better understand the data we need as an organisation	82%	80%	87%	77%
Data often needs to be collected and brought together manually	78%	79%	80%	63%
Our business data is too fragmented / siloed in different systems	65%	59%	79%	58%
We have significant gaps in our business data (i.e. issues with completeness)	64%	61%	77%	48%
We do not have enough trust in the accuracy of our business data	53%	52%	60%	42%
Our business data is not kept up-to-date	53%	51%	66%	32%

This is because many mid-size manufacturers have undergone a period of significant growth, and their infrastructure is not keeping pace with customer demand.

Legacy systems and processes can power manufacturers through the nascent stages of digital transformation. However they can't provide the level of connected action and smart decision-making needed to scale operations and meet customer expectations long-term – which is what manufacturers that have completed digital transformation projects can achieve.



79% of mid-size manufacturers say their business data is too siloed – compared to 59% of SMBs and 58% of enterprise manufacturers.

Next >> How Will Digital Transformation Underpin Business Growth in 2022?

Automation Increases Manufacturers' Ambitions

Through our analysis, we've benchmarked how technology investment is shaping manufacturers' current performance. But how will it influence their 2022 growth strategies?

When we asked companies about their top priorities for the next 12 months, manufacturers at every stage of digital transformation shared common goals.

The top objective for 2022 is to improve customer satisfaction (shared by 39% of respondents), followed by acquiring more new customers (35%) and improving operational efficiency and integration (33%).

However, when we segmented manufacturer goals by digital transformation stage, those at the beginning of their automation journey have a very different set of priorities to companies that have already digitized their operations.

Technologically advanced manufacturers are focused on utilizing their data insights and digital processes to shape their business culture and move from a reactive to a predictive planning model.



Manufacturers' Top 5 Business Goals for 2022

1. Improve customer satisfaction
2. Acquire more new customers
3. Improve operational efficiency/integration
4. Improve supply chain resilience
5. Expand into new markets/sectors





Will you be using technology to achieve these goals in 2022?

	Beginning DX	Completed DX	Difference
Attract best talent	9%	25%	16%
Move to predictive maintenance	12%	23%	11%
Meet sustainability targets	19%	27%	8%
Optimize pricing	14%	19%	5%
Streamline core business processes	17%	22%	5%

These ambitious goals should open the eyes of manufacturers in the early stages of digital transformation. Mature competitors have moved beyond automation for efficiency; they are now exploring its deeper capabilities – and this is going to influence which technologies they buy next.

Next >> How Quickly Will Manufacturing Embrace Robotics?

The Rising Role of Robotics

Up to this point, we’ve looked at how manufacturing software can drive operational efficiency and effective decision-making. But innovative organizations are looking beyond optimization technologies to next-gen solutions that change the entire structure of their business.

One powerful example of innovation in action is manufacturers’ attitude towards robotics. When we asked companies about their attitude towards the use of robots, 88% were open to the idea, showing a strong interest in using them to take over dangerous, high risk and low value tasks.



88% of manufacturers are interested in robotics – rising to 95% among manufacturers that have completed digital transformation projects.

Would you be interested in using robotics in your manufacturing processes?

Impact of Supply Chain Challenges On Customer Relationships		Overall
	BASE:	275
We are interested in using robots for dangerous/high risk tasks		47%
We are interested in using robots for low value/repetitive tasks		36%
We are interested in robots collaborating with our people to improve our output		33%
We are interested in replacing certain people/roles with robots		30%
We are not interested in using robotics		12%

When we isolate the data for manufacturers who have completed digital transformation projects already, appetite for robotics is even higher: 95% are interested, with 55% wanting to use them for dangerous tasks and 45% for low value repetitive tasks.

Interestingly, digitally advanced manufacturers are more likely to replace people with robots (36% versus the industry average of 30%), so we may see the shape, size and skillset of the manufacturing workforce evolve as automation increases.

But remember, this group is also keen to attract the best talent through technology. So they are looking to enhance human ingenuity and focus people’s skills by implementing robotics, rather than trying to replace people altogether. It’s a major cultural reformation.

Next >> Digital Transformation: Now and Next

Digital Transformation: Now And Next

The findings we've shared provide a useful snapshot into the current capabilities and future role of automation in manufacturing. But what does digital transformation look like today for most manufacturers – and what should they be striving for next?

Each of the five stages of digital maturity we identified increase technology's impact on the manufacturing business. To the point where manufacturers are using software to easily collaborate, share insights and use common processes to make connected decisions and actions.

The golden thread of centralized data insight runs through every stage. However, the extent to which manufacturing companies are able to streamline operations, innovate approaches and predict where markets and customers are heading next depends on their stage in the digital transformation journey.

Take a look at our stage-by-stage overview to identify where your business lies on the digital innovation curve and plan your next step towards smart manufacturing.

Digital transformation next steps

NOW >>	
Non-existent	Most/all processes executed manually. Major data gaps/inaccuracies. No DX roadmap.
Nascent	Some basic processes automated. Business data incomplete. Informal/limited DX roadmap.
Progressing	Some processes automated. Data quality improving. Formal DX roadmap created but not shared across the business.
Maturing	Most processes automated. Data cohesive and being used to drive decisions. Formal DX roadmap shared across departments.
Completed	Almost all processes automated. Data being used predictively and reactively. Multi-functional DX roadmap in action.

NEXT >>	
Non-existent	Create roadmap for change, mapping digital investment to biggest operational vulnerabilities.
Nascent	Formalize roadmap and focus on finding end-to-end technology that can fill gaps in business data.
Progressing	Share roadmap across business and get all departments using the same, integrated data to drive change.
Maturing	Move from proactive to predictive approach, modelling 'what if' scenarios to anticipate disruption.
Completed	Explore advanced, deep learning technologies that can unlock new levels of efficiency and create a future-fit infrastructure.

Recommended Digital Transformation Actions for Manufacturing Executives:

- › Prioritize creating/updating your digital transformation strategy, mapping objectives to your key business challenges and goals. The stage-by-stage guide on the previous page will help you develop a logical, robust outline
- › Turn your strategy into a roadmap with clear execution plans and deadlines to ensure your digital perception matches your smart manufacturing reality
- › Identify technology solutions that target improvements in your key transformation areas to ensure manufacturing software delivers rapid return on investment. Focus on holistic technologies like manufacturing ERP to make sure process automation and optimization are not managed in siloes
- › At every stage of digital transformation, improve and integrate data to extract the valuable insights needed to improve your operational performance and meet customer expectations
- › Regularly revisit your digital transformation strategy to identify opportunities for refinement and improvement; digitally advanced manufacturers can move beyond core efficiency and visibility objectives to explore the deep value of predictive modelling and machine learning





Aptean: Get Ready For What's Next, Now[®]

Aptean ERP for Manufacturing drives digital transformation through a holistic approach to technology investment. Our solution will automate your end-to-end operation, from shop floor to delivery.

- › Increase visibility and collaboration with reliable, digital processes
- › Replace paperwork and automate tasks to boost productivity and cut costs
- › Create more accurate and dependable plans
- › Gain visibility into job costs and profits
- › Improve on-time delivery rates
- › Achieve maximum throughput
- › Make smarter operational and strategic decisions

To ensure you're Ready for What's Next, Now[®] we offer three solutions:

Aptean Industrial Manufacturing ERP

Aptean Process Manufacturing ERP

Aptean Food and Beverage ERP

Aptean: building specific solutions for your business

In the world of enterprise resource planning software, we are the experts.

At Aptean, we know our clients' industries inside and out. And every day, we put this deep knowledge to work by creating hyper-niche ERP software solutions that enhance your operational efficiency—and drive better results for your business.

As by-your-side partners, we provide the critical support you need, every step of the way. That's why companies like yours rely on us to help them streamline, save and scale.



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Contact us at info@aptean.com or visit www.aptean.com.



About Aptean

Aptean is one of the world's leading providers of purpose-built, industry-specific software that helps manufacturers and distributors effectively run and grow their businesses. With both cloud and on-premise deployment options, Aptean's products, services and unmatched expertise help businesses of all sizes to be Ready for What's Next Now®. Aptean is headquartered in Alpharetta, Georgia and has offices in North America, Europe and Asia-Pacific.

To learn more about Aptean and the markets we serve, visit www.aptean.com.

About our research study

Aptean and B2B International surveyed 275 North American discrete and process manufacturers in October 2021.

B2B International is a global, full-service market research firm, specializing in researching B2B markets. Helping clients achieve their business goals by making smarter decisions driven by insights.