



Industry Insights: Accelerated Industrial Digitalization

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Executive Summary

Last year's compounded disruptions, the Suez Canal crisis, and ongoing impacts of a global pandemic inarguably accelerated the world's rate of digitalization. In an effort to gauge the current state of digitalization throughout the manufacturing industry, IndustryWeek and Hitachi Vantara conducted a survey of manufacturing leaders about their digital transformation progress.

Just over half of the respondents have corporate management or engineering roles within their company and work in a wide range of industrial sectors, including industrial machinery, automotive and the electronics sectors. The majority of participants (87%) are based in North America.

The responses to the questionnaire demonstrate a bullish approach to digitalization. Nearly half of the participants are already in the advanced stages of the digital transformation, and they're not slowing down.

Machine learning and automation-based technologies and processes are "already at the forefront of the company" writes one manufacturer responding to the 2021 "Industry Insights: Digital Transformation Progress Report."

This organization is not alone.

For example, more than half of the participants agree that production KPI reporting will be automated within the next one to two years. More than a third also indicate workflow management, internal IT deployment, production scheduling and quality inspections among the other key processes they intend to automate within the next two years.

Confidence in Digital Skills

Also encouraging is that survey participants demonstrate a high level of confidence in their digital competence, with 68% of all respondents indicating they're at least "somewhat comfortable" with their digital tools. The findings demonstrate that manufacturers are taking the necessary steps to ensure their employees are proficient in the use of Industry 4.0. However, manufacturers can't become complacent because they still have hurdles to overcome.

One respondent wrote, "When it works, fine. But when it doesn't, it is a huge pain to resolve. With more smart devices, there is more to fail or even vulnerabilities in the system, which can take you down. That didn't exist 5-10 years ago."

Companies must prioritize cybersecurity, technology integration and executive commitment for continued progress. It's not surprising that cybersecurity and privacy protection are the top attributes participants take into consideration when evaluating digital solutions. That's because system vulnerabilities can offset many digitalization gains.

Adoption Challenges Remain

When it comes to top challenges, top-level support from their management ranks high. For instance, 42% of all respondents cited "too much focus on running current operations," as their top challenge for continued progress. A lack of clear leadership and a defined digital strategy also ranked high as significant digitalization issues.

Executive Summary (continued)

The message is clear. Leaders must demonstrate more value to their organizations. Selling the benefits of more efficient and effective collaboration is a good starting point. Key findings to note:

- Half to slightly more than 50% of respondents still use either PowerPoints or spreadsheets to relay information during meetings.
- Only one-quarter of all respondents use a dedicated digital platform. Approximately half of all participants spend at least five to 10 hours per month preparing for meetings.
- Fourteen percent of respondents in the early stages of the digital transformation spend more than 10 hours a month prepping for meetings.
- Nearly half of respondents are already operating at pre-pandemic levels.

If manufacturing leaders don't adopt more effective methods to communicate strategic goals and results, it's understandable why the workforce may be resistant to change.

Industry 4.0 will play a critical role in manufacturers' continued recovery from the

pandemic and their resiliency going forward. There's little doubt that the operational efficiencies, increased visibility, and improved business agility that respondents cite as key benefits related to the digital transformation are all having a significant impact on manufacturing success in 2021 and beyond.

IndustryWeek and Hitachi Vantara present the following data from our findings to help manufacturers benchmark their current digitalization efforts and gain a better understanding of future opportunities or areas of improvement.

Learn more about Hitachi Vantara's digital solutions for Industry 4.0 by visiting their [Manufacturing page](#).

Introduction & Methodology

OVERVIEW

Methodology, data collection and analysis by *IndustryWeek* on behalf of Hitachi Vantara. Data collected June 30 through July 23, 2021.

Methodology conforms to accepted marketing research methods, practices and procedures.

METHODOLOGY

On June 30, 2021, Endeavor Business Media emailed invitations to participate in an online survey to members of the *IndustryWeek* database.

By July 23, 2020, Endeavor Business Media had received 140 completed, qualified surveys. Only respondents whose company has annual revenues of \$100 million or more qualified to participate in the study.

RESPONSIVE MOTIVATION

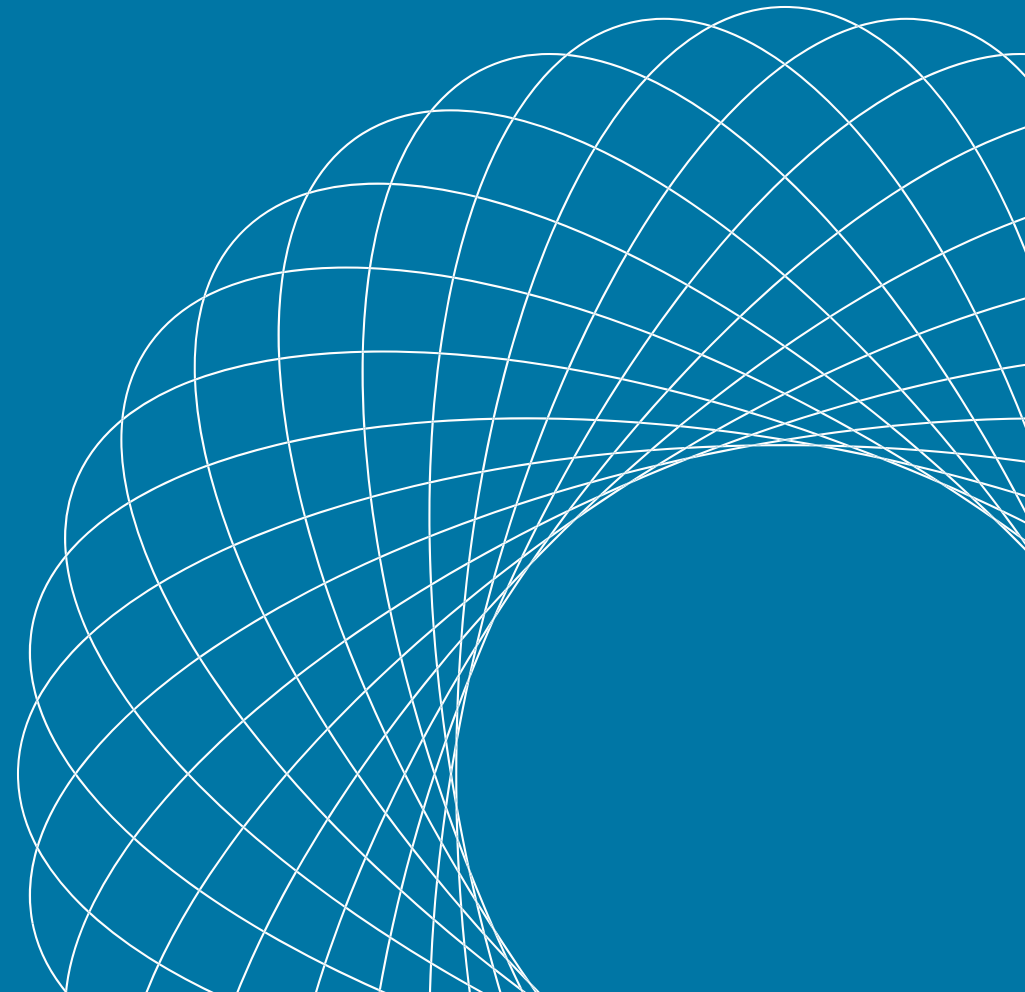
To encourage prompt response and increase the response rate overall, a live link to the survey was included in the email invitation to route respondents directly to the online survey.

The invitations and survey were branded with the *IndustryWeek* logo in an effort to capitalize on user affinity for this valued brand.

Each respondent was afforded the opportunity to enter a drawing for one of four \$100 Amazon gift cards.

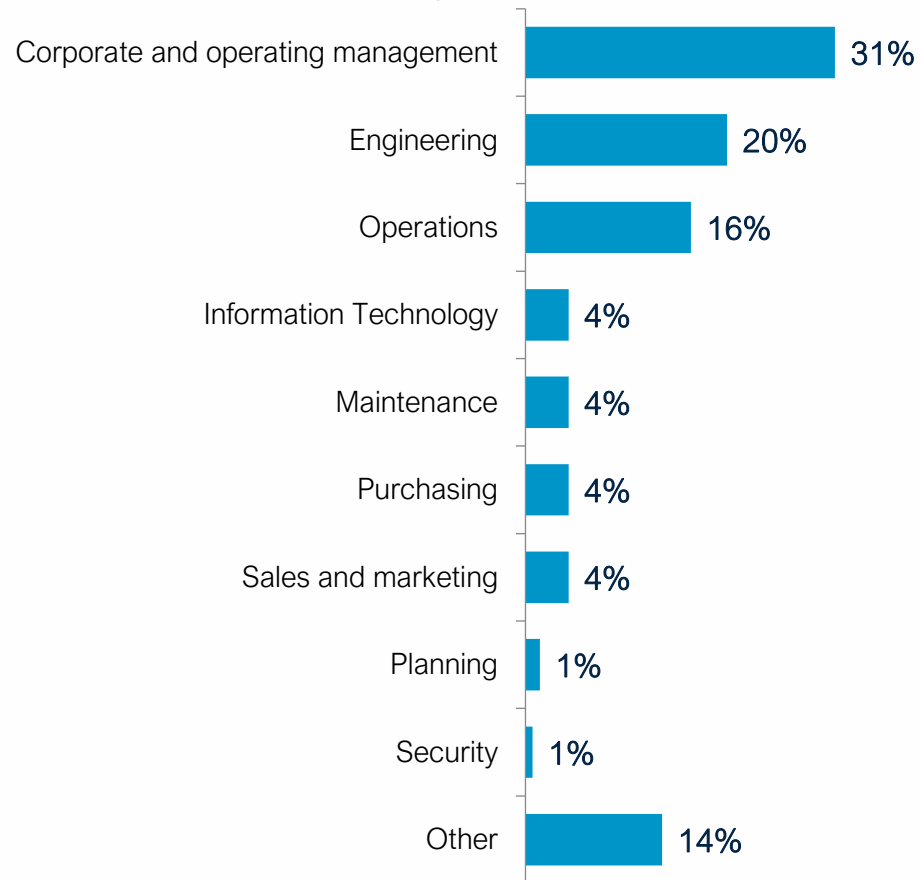
On July 14, a mailing was sent to non-respondents increasing the incentive to a \$10 Starbucks card for all qualified respondents.

Respondent Profile



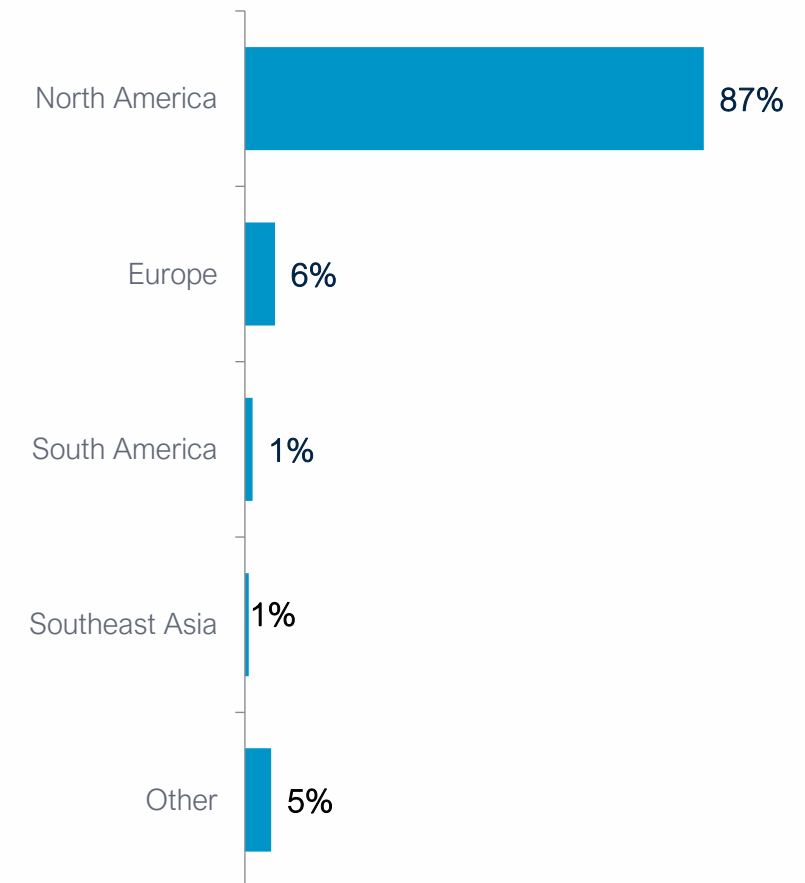
Respondent Profile

The largest percentages of respondents indicate their job title/role as corporate and operating management, engineering, or operations. Respondents are primarily located in North America.



Question: Which of the following categories best describes your job role/title?

Base: All respondents (n=140).

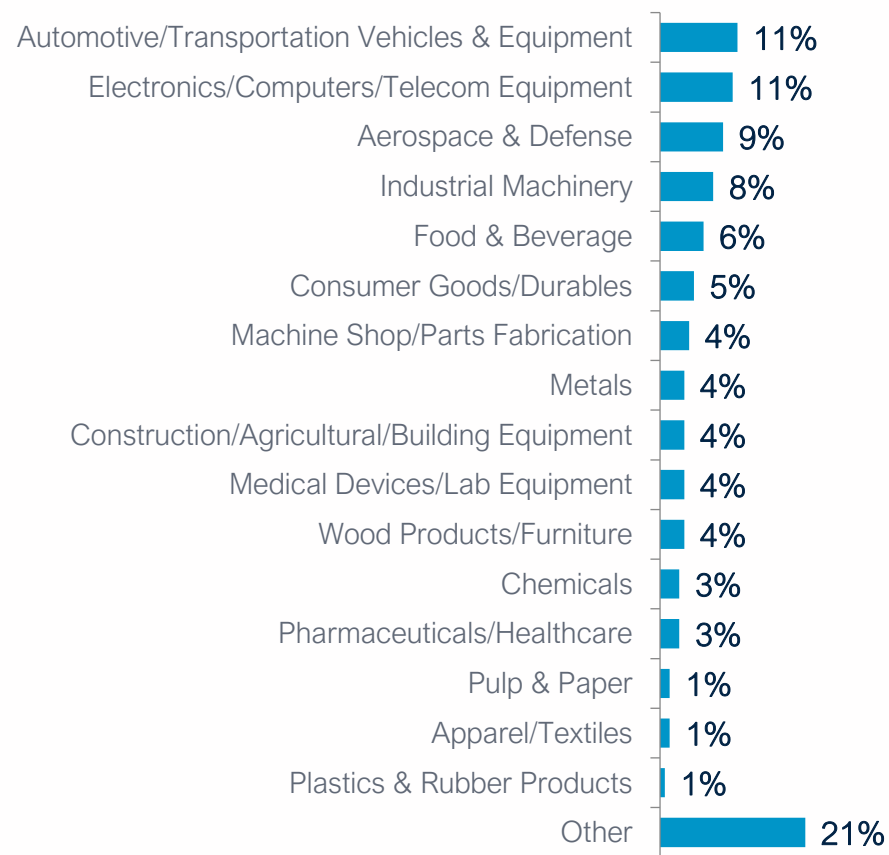


Question: In which region is your company or organization located?

Base: All respondents (n=140).

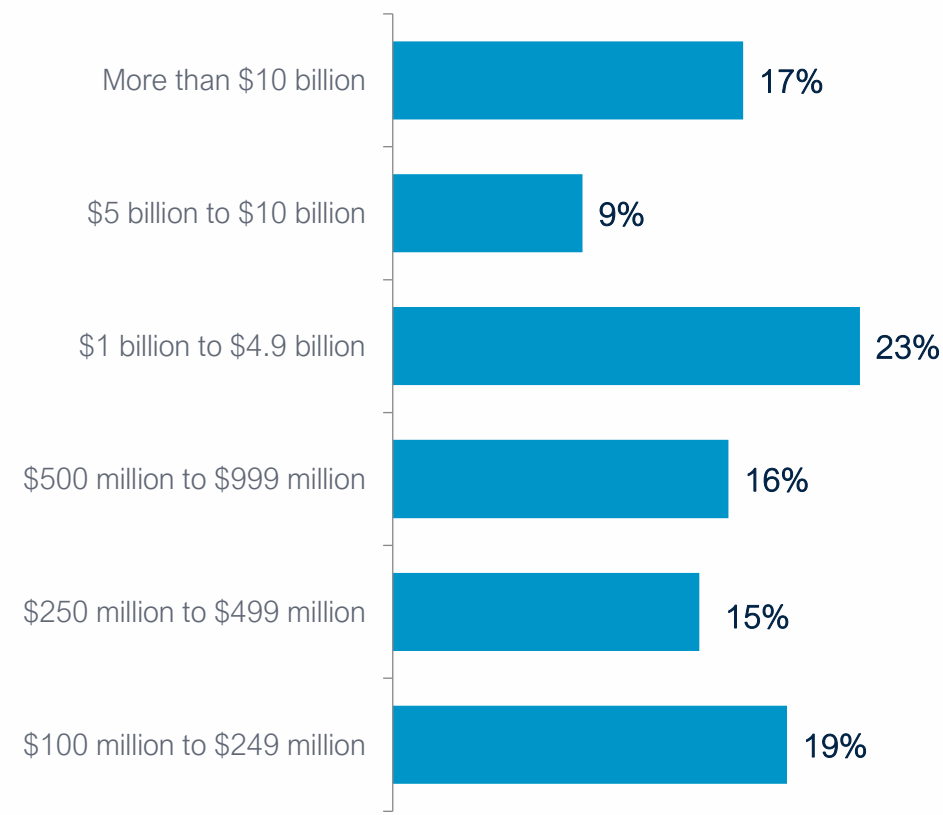
Company Profile

Respondents work in a variety of industries. Only respondents with annual revenues of \$100 million or more qualified to participate in the survey.



Question: What is your company's primary product at your location/division?

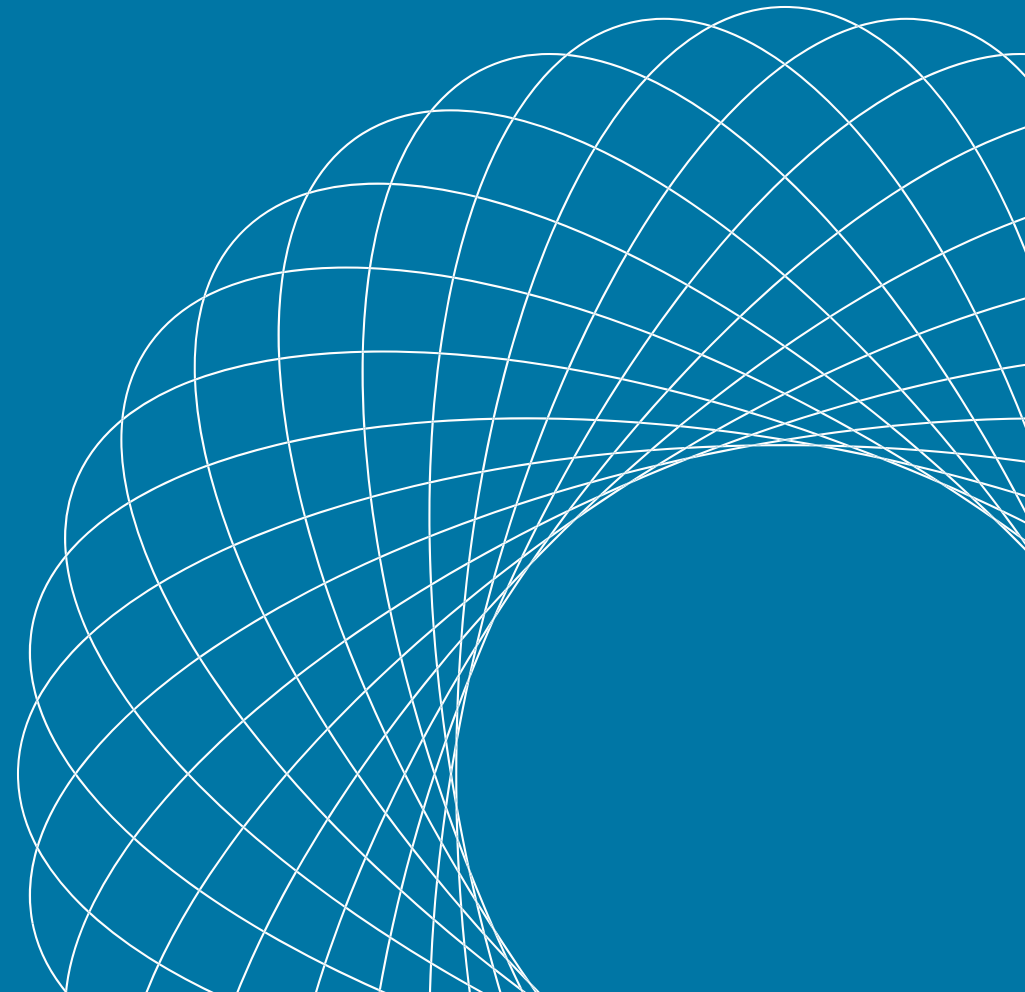
Base: All respondents (n=140).



Question: Into which of the following ranges does your company's annual revenue fall?

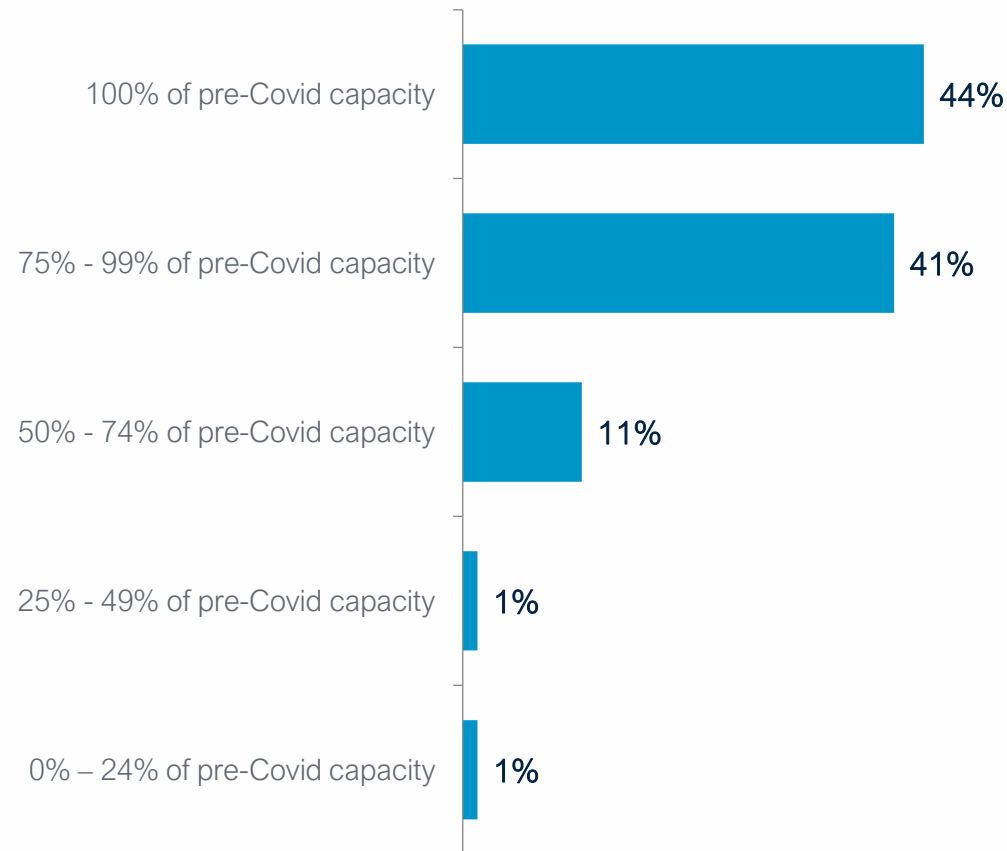
Base: All respondents (n=140).

Key Findings



Production Levels

Production has mostly recovered from the pandemic slowdown. Forty-four percent of companies are at 100% of pre-Covid capacity, and an additional 41% are between 75% and 99% capacity.

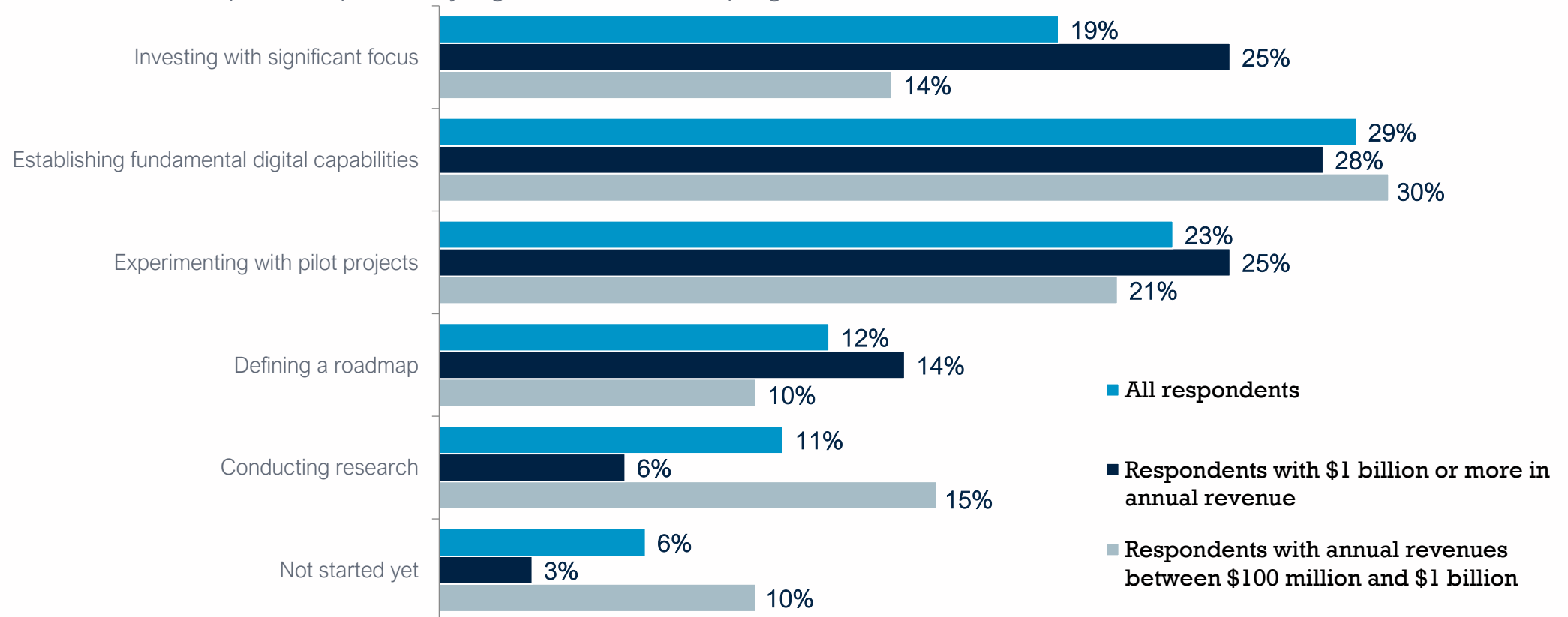


Question: To what extent has the percent of your production situation returned to pre-pandemic levels?

Base: All respondents (n=140).

Digital Transformation Progress

The chart below presents company progress towards digital transformation. Responses are presented in total and by using a company size comparison. Overall, 48% of respondents are in the advanced stages of digital transformation, i.e., either investing with significant focus or establishing fundamental digital capabilities. The remaining respondents are considered in the early stages of digital transformation. The following pages present data in total and compares responses by digital transformation progress.

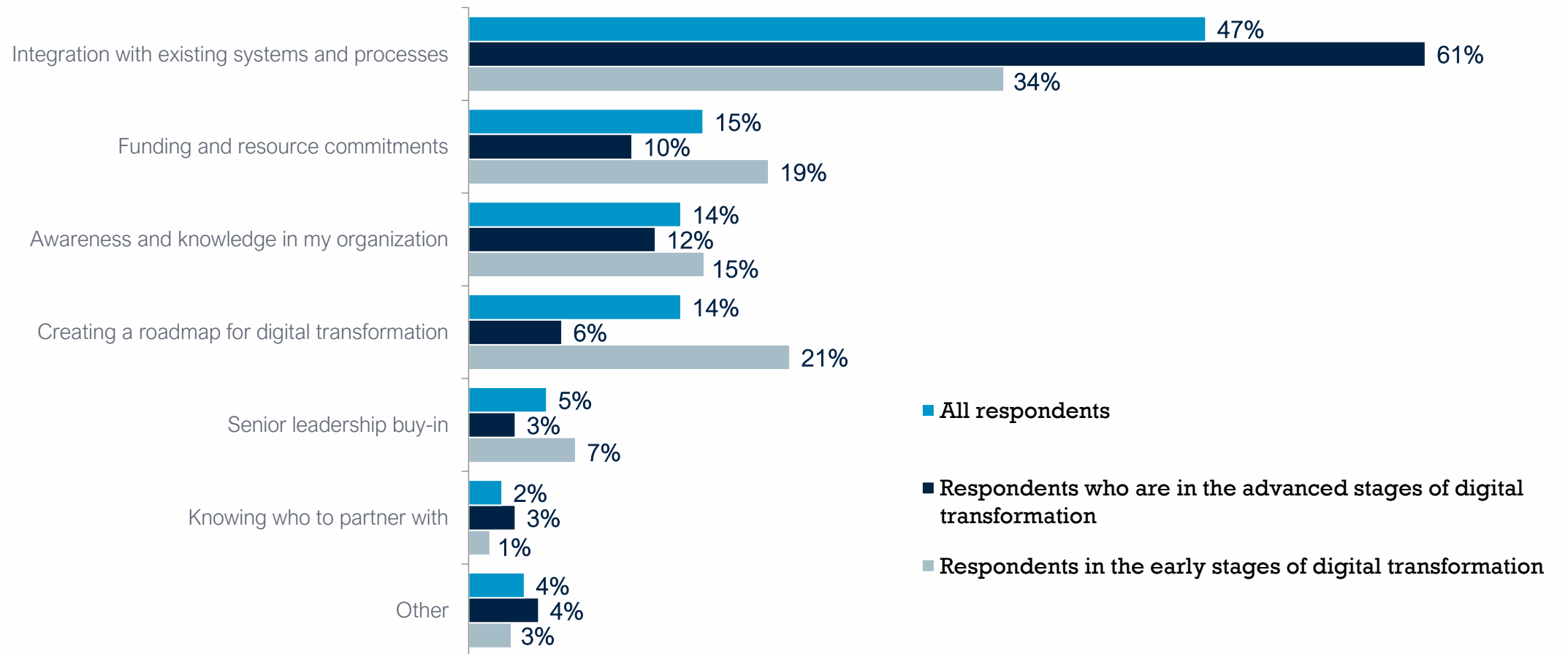


Question: How far along are you in your digital transformation journey?

Base: All respondents (n=140).

Digital Transformation Challenges

Respondents who are advanced in their digital transformation process agree that the biggest challenge has been integration with existing systems and processes. Respondents who are in the early stages of digital transformation vary in their assessment of the biggest challenge.

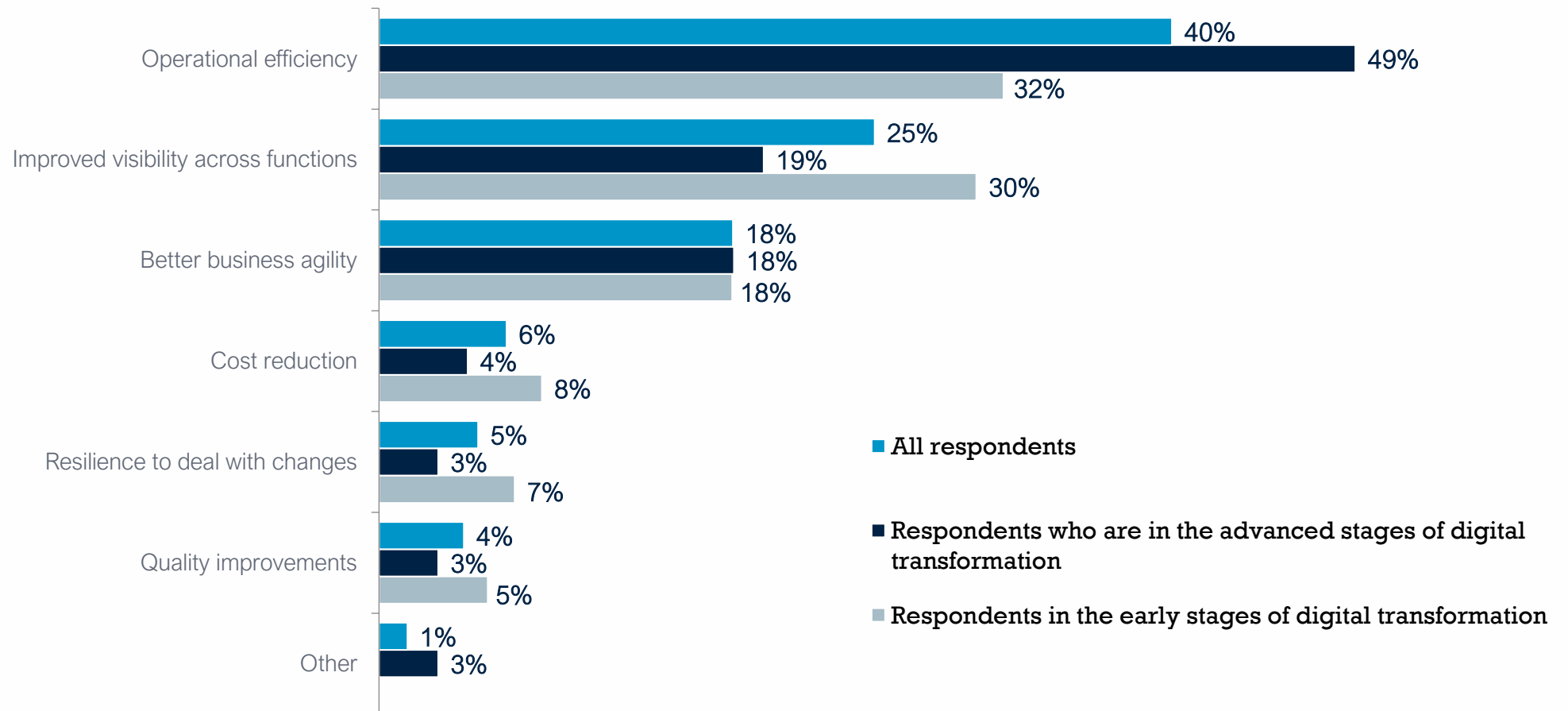


Question: What is your biggest challenge in your digital transformation journey

Base: All respondents (n=140).

Top Benefit of Digital Transformation

Nearly half of respondents in the advanced stages of digital transformation consider operational efficiency to be the biggest benefit. Respondents in the early stages of digital transformation are just as likely to consider improved visibility across functions the top benefit so far.

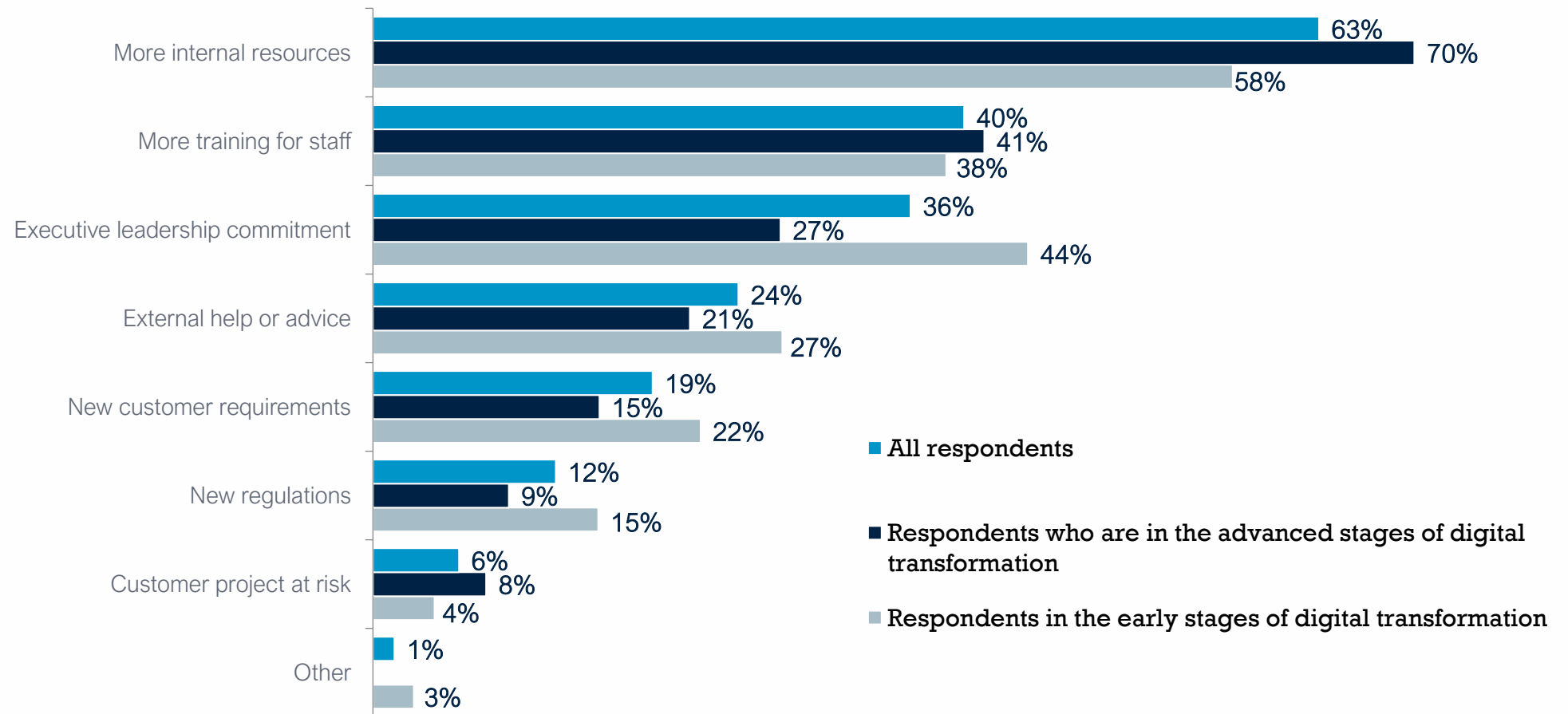


Question What is the top benefit you see from your digital transformation efforts?

Base: All respondents (n=140).

Digital Transformation Acceleration

Respondents agree that more internal resources would accelerate their digital transformation efforts. Respondents in the early stages of digital transformation would also like to see executive leadership commitment.

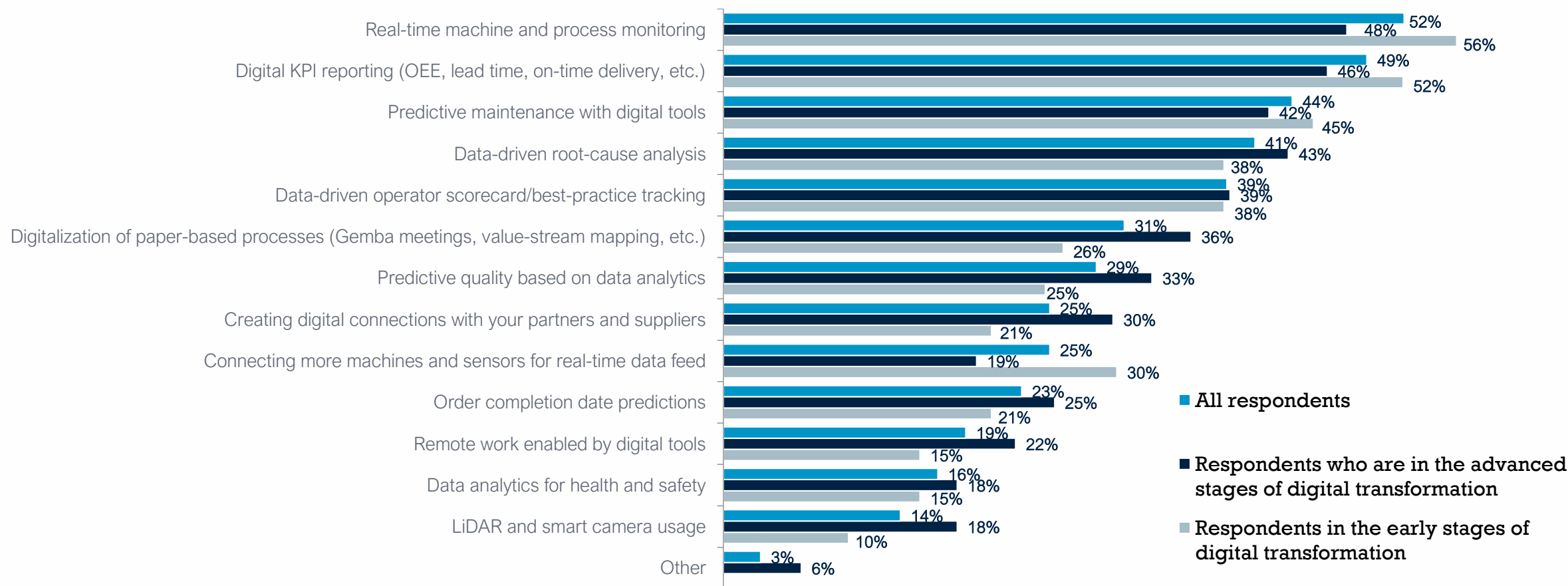


Question Which of the following would most accelerate your digital transformation efforts?

Base: All respondents (n=140). Multiple answers allowed.

Digitalization Needs

Digitalization in real-time machine and process monitoring, digital KPI reporting, and predictive maintenance with digital tools are most needed in order to improve systems.

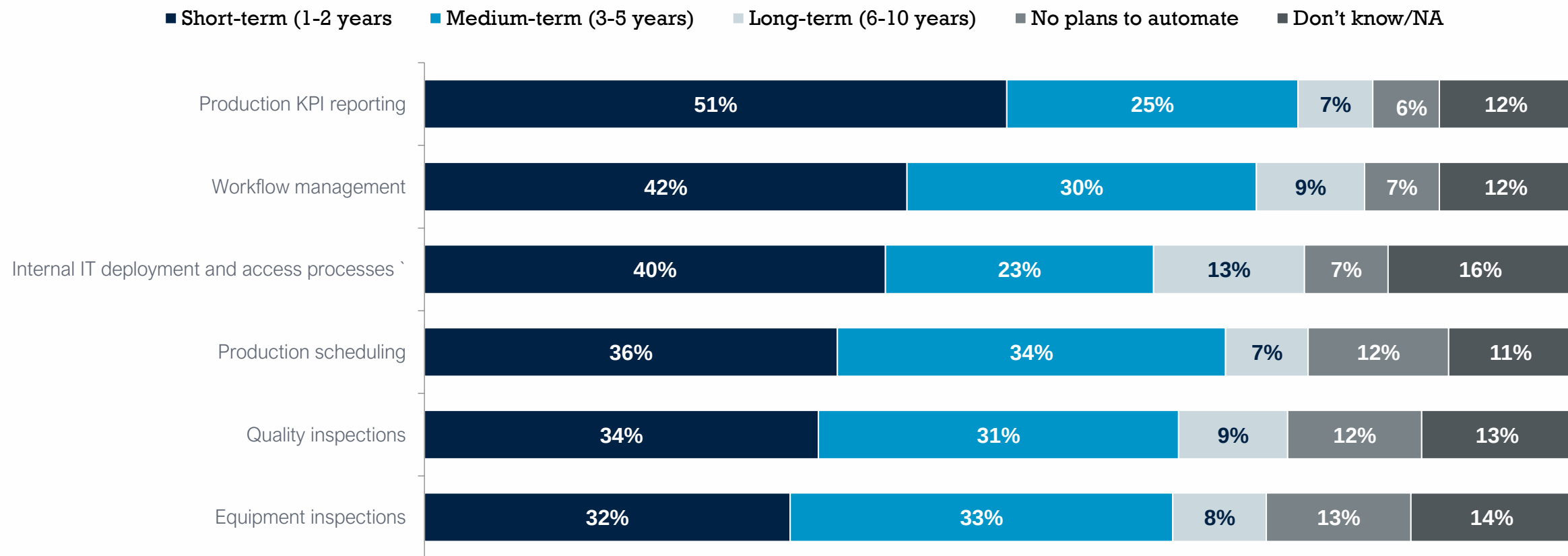


Question Which of the following areas do you believe have a high priority need for digitalization in order to improve your systems?

Base: All respondents (n=140). Multiple answers allowed.

Process Automation Timeframes

Within the next five years, each of the processes will be automated by a majority of respondents.

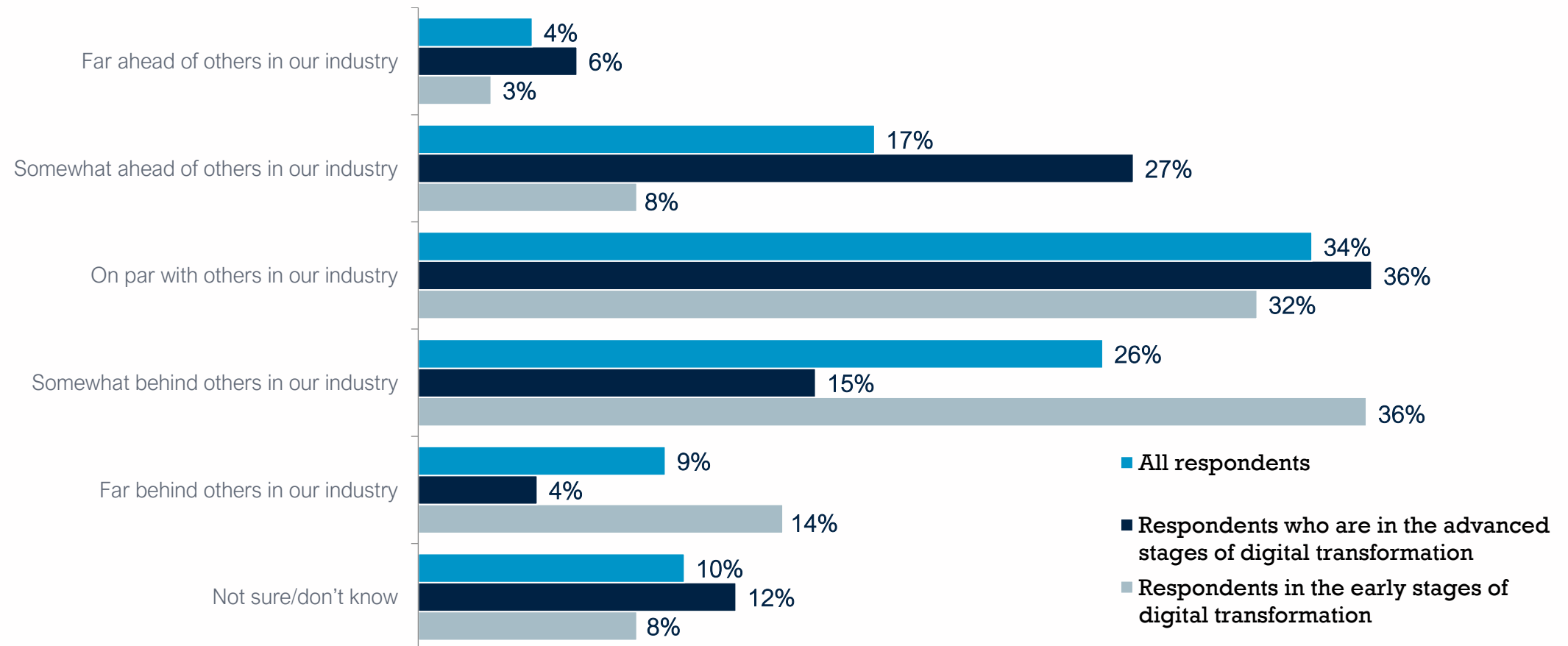


Question: When do you expect to automate the following processes?

Base: All respondents (n varies from 135 to 139).

Comparison with Industry

Respondents who are in the advanced stages of digital transformation are more likely to consider their company's adoption of solutions on par with the industry rather than ahead of the industry. Those in the early stages are most likely to consider themselves behind others in the industry.

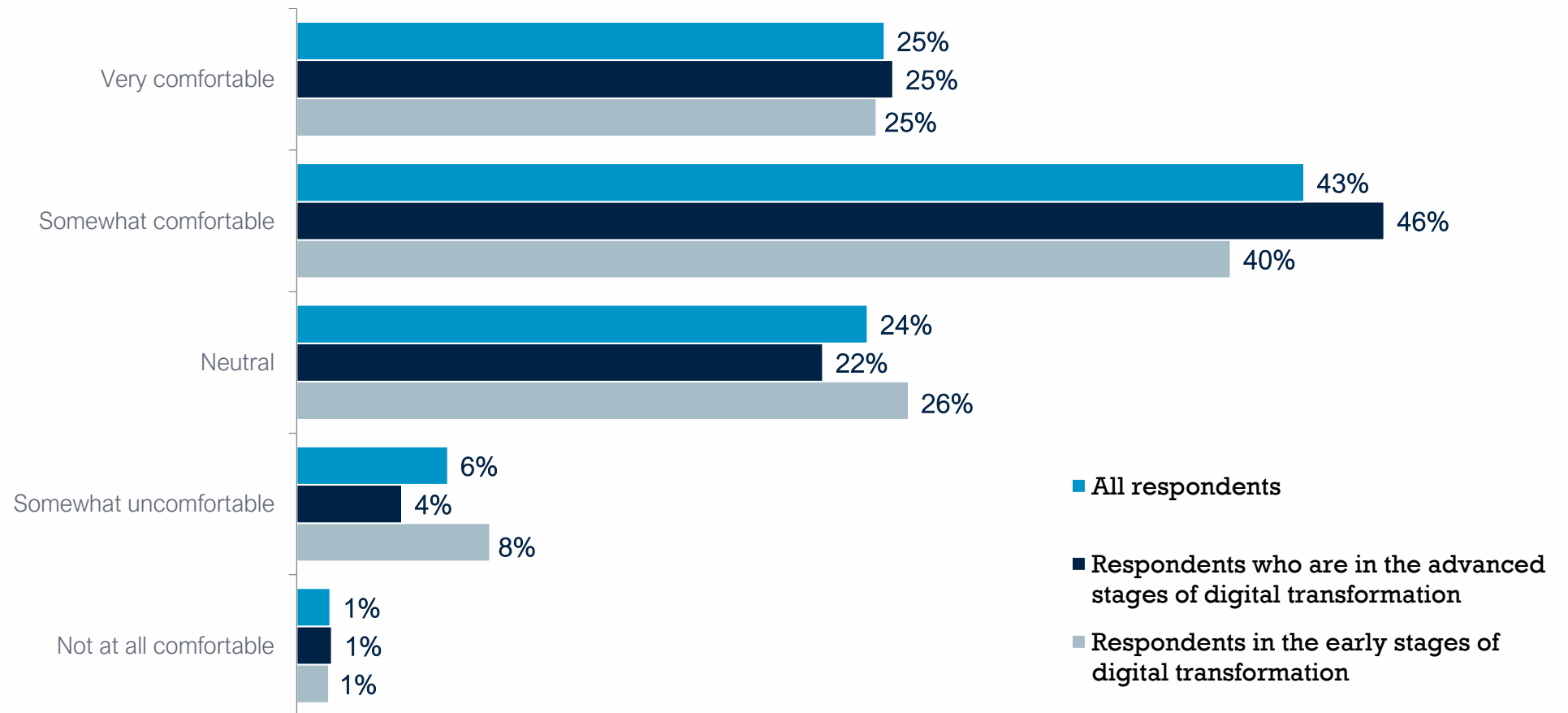


Question: How would you describe your company or organization's adoption of digital transformation technology solutions compared to others in your industry?

Base: All respondents (n=140).

Comfort Level with Technologies

Respondents are likely to be at least somewhat comfortable with adopting and trusting machine-learning and automation-based technologies and processes.

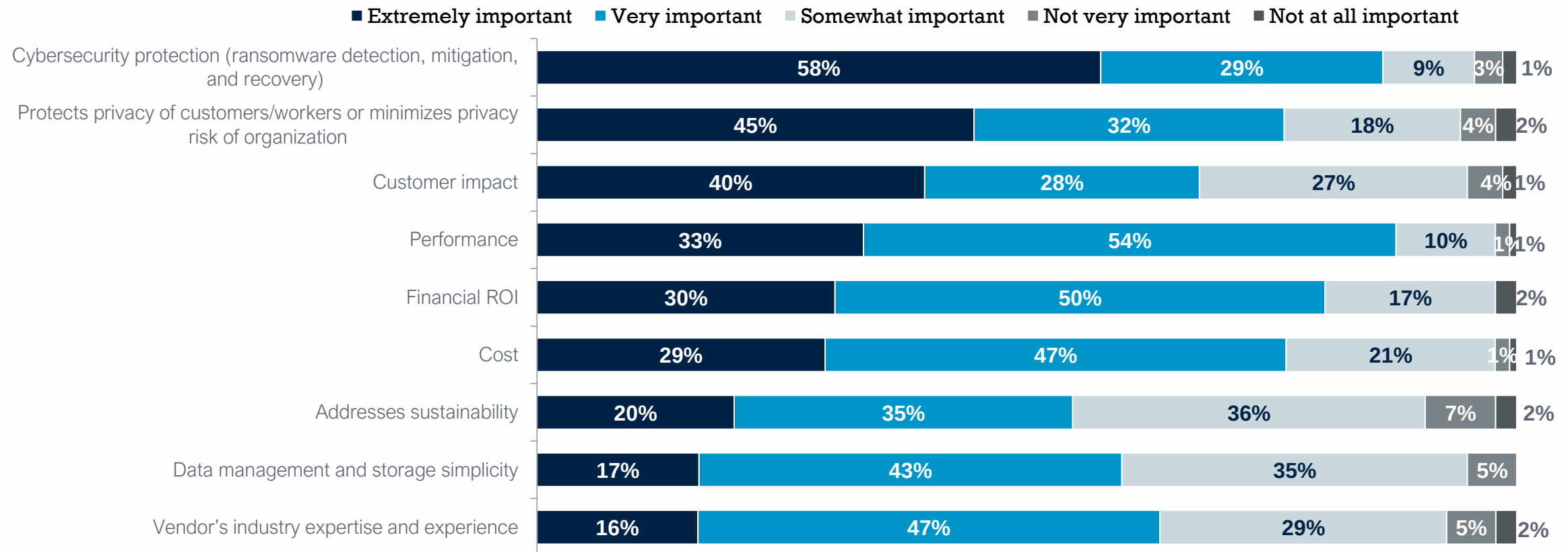


Question How comfortable are you adopting and trusting machine-learning and automation-based technologies and processes?

Base: All respondents (n=140).

Important Aspects of Digital Transformation Solutions

Cybersecurity protection is the most important consideration in digital transformation technology solutions. Each of the considerations listed below is very or extremely important to a majority of respondents.

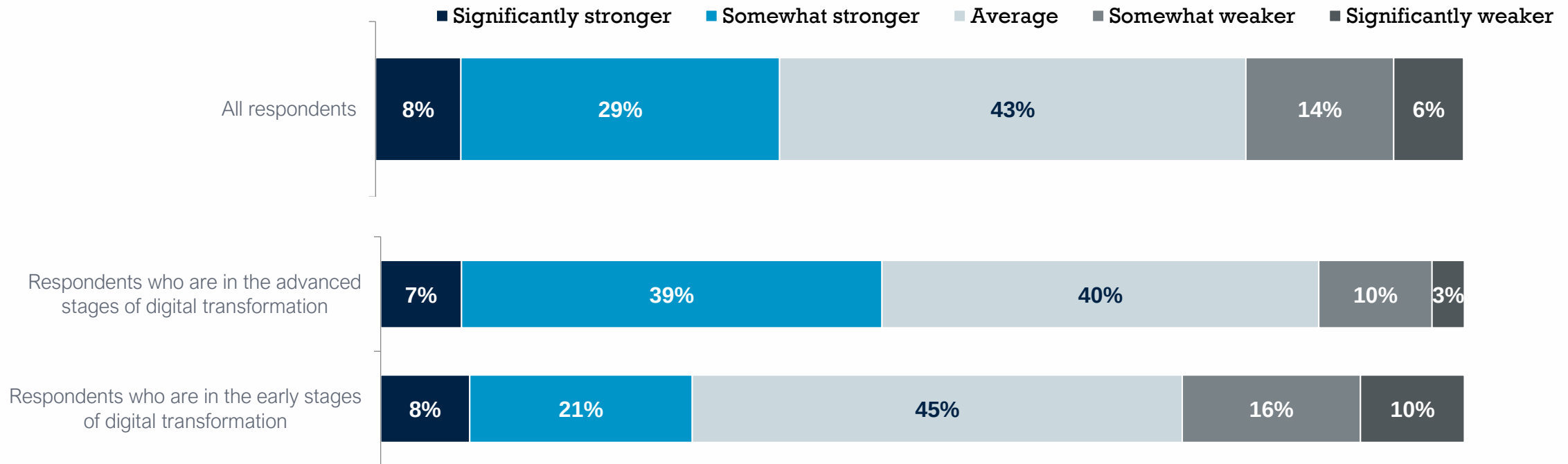


Question: When it comes to considering digital transformation technology solutions, how important are the following?

Base: All respondents (n varies from 136 to 140).

Kaizen Culture Comparison

Respondents in the advanced stages of digital transformation are more likely than those in the early stages to rate their kaizen/lean/continuous improvement culture ahead of the competition. However, less than half of respondents in either category rate their company stronger than the competition.

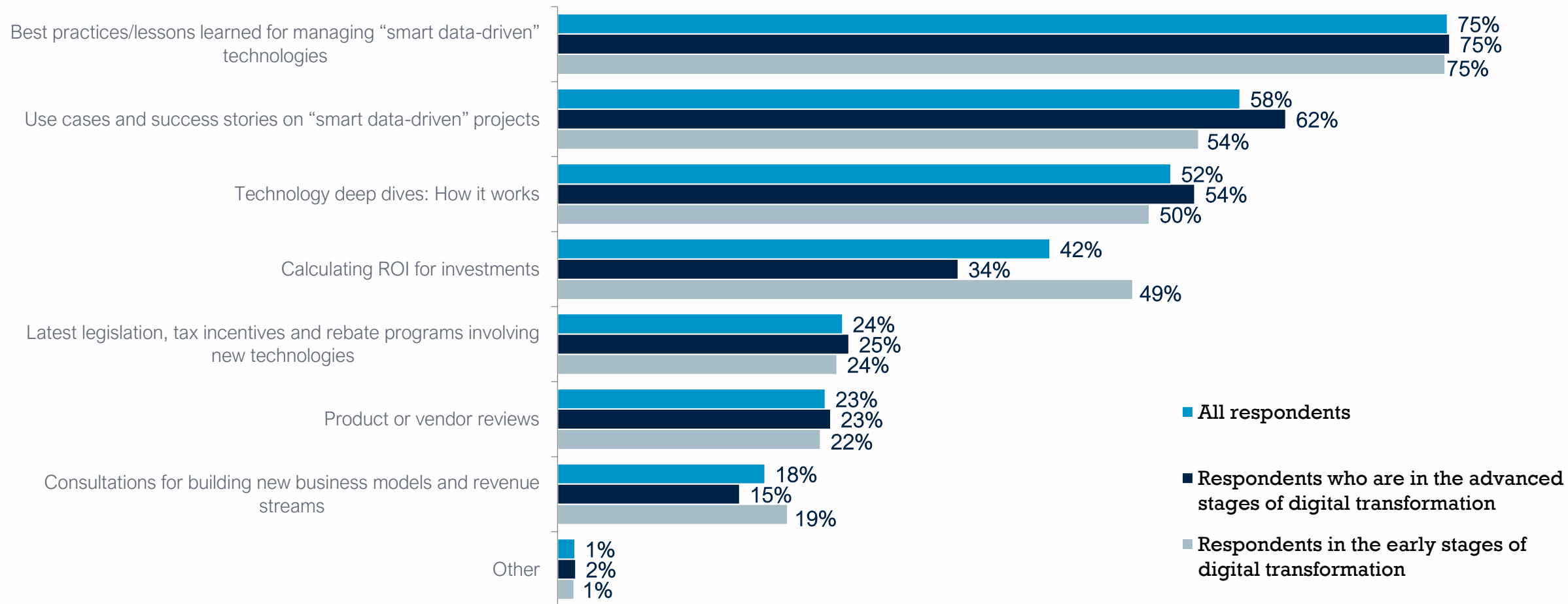


Question: How do you rate your kaizen/lean/continuous-improvement culture compared to your competitors?

Base: All respondents (n=140).

Topics of Interest

Respondents are interested in learning about best practices, use cases and success stories, and technology deep dives.

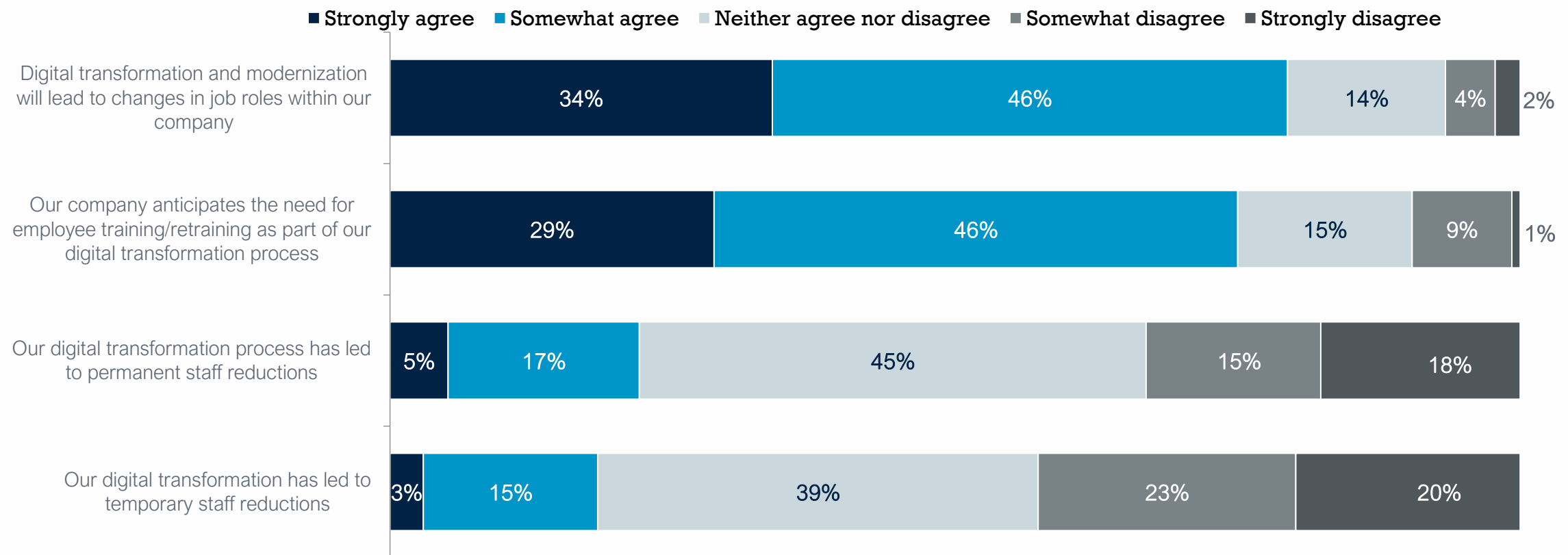


Question Thinking about digital transformation technology solutions and technologies, how interested are you in the following content/topics?

Base: All respondents (n=137). Multiple answers allowed.

Impact of Digital Transformation

The majority of respondents agree that digital transformation and modernization will lead to changes in job roles and the need for employee training/retraining as part of the process. Respondents are less likely to agree that digital transformation has led to temporary or permanent staff reductions.

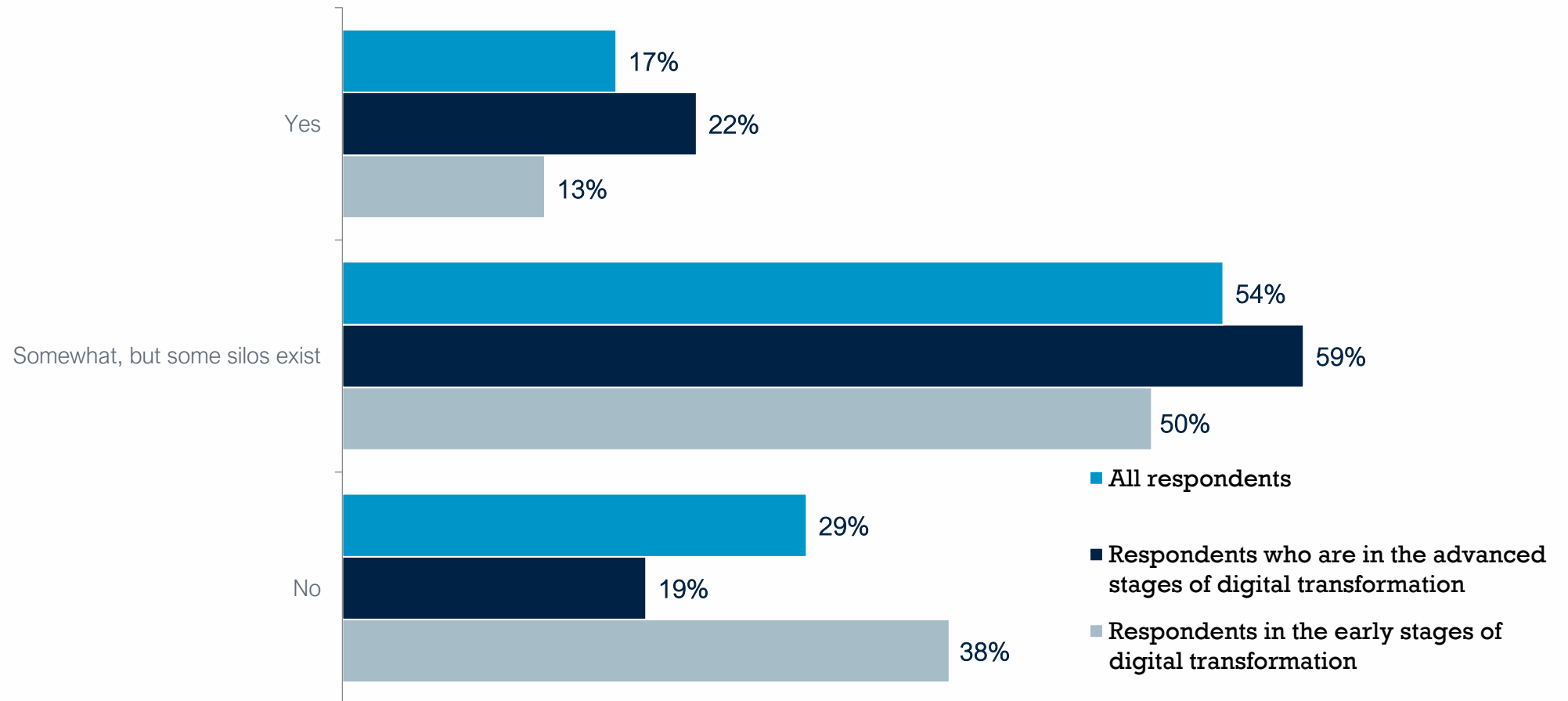


Question: To what extent do you agree or disagree with the following statements about your company and digital transformation and modernization?

Base: All respondents (n = 136).

Ease of Information Sharing

While respondents in the advanced stages of digital transformation have seen an increase in the ease of sharing information among enterprise systems, they are likely to report that some silos still exist.

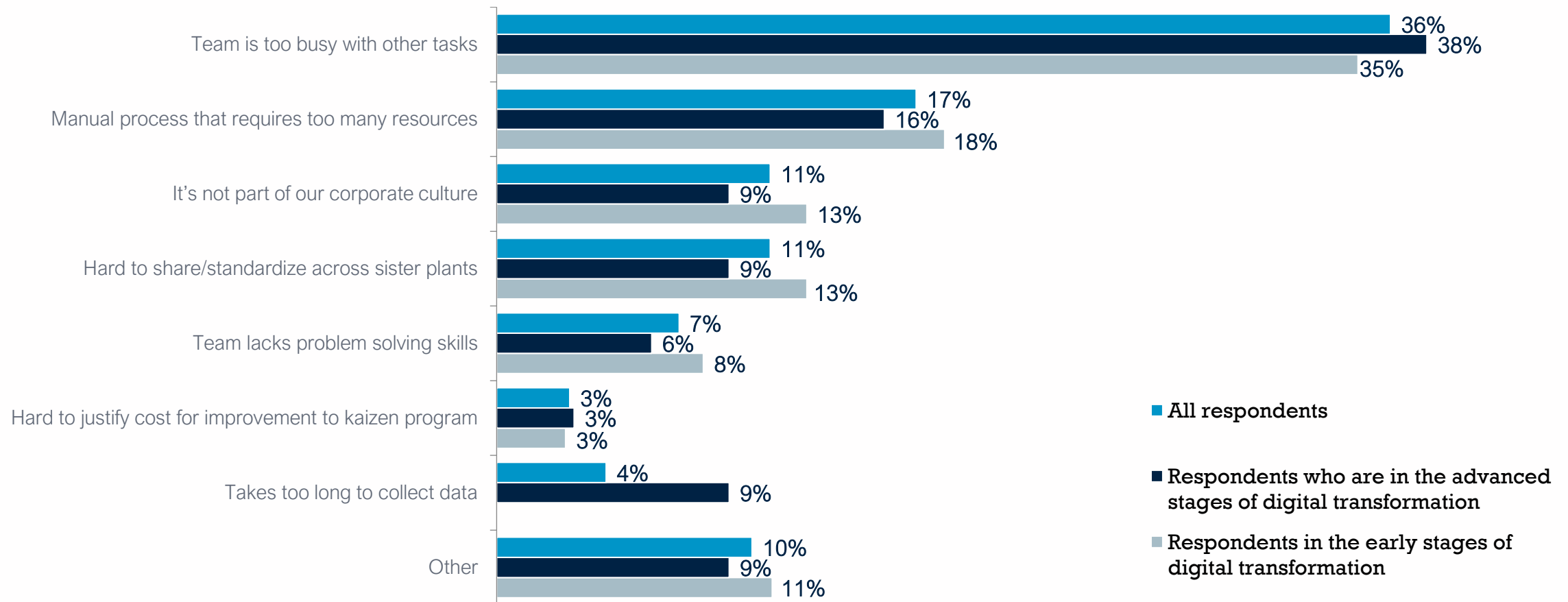


Question Is it easy to share information among your enterprise systems, including ERP, MES, QMS, and maintenance platforms?

Base: All respondents (n=136).

Weakness of Kaizen Program

The most common weakness of kaizen programs is a team too busy with other tasks. Nearly one in ten respondents in the advanced stages of digital transformation report that the time to collect data is too long, compared to none of the respondents in the early stages.

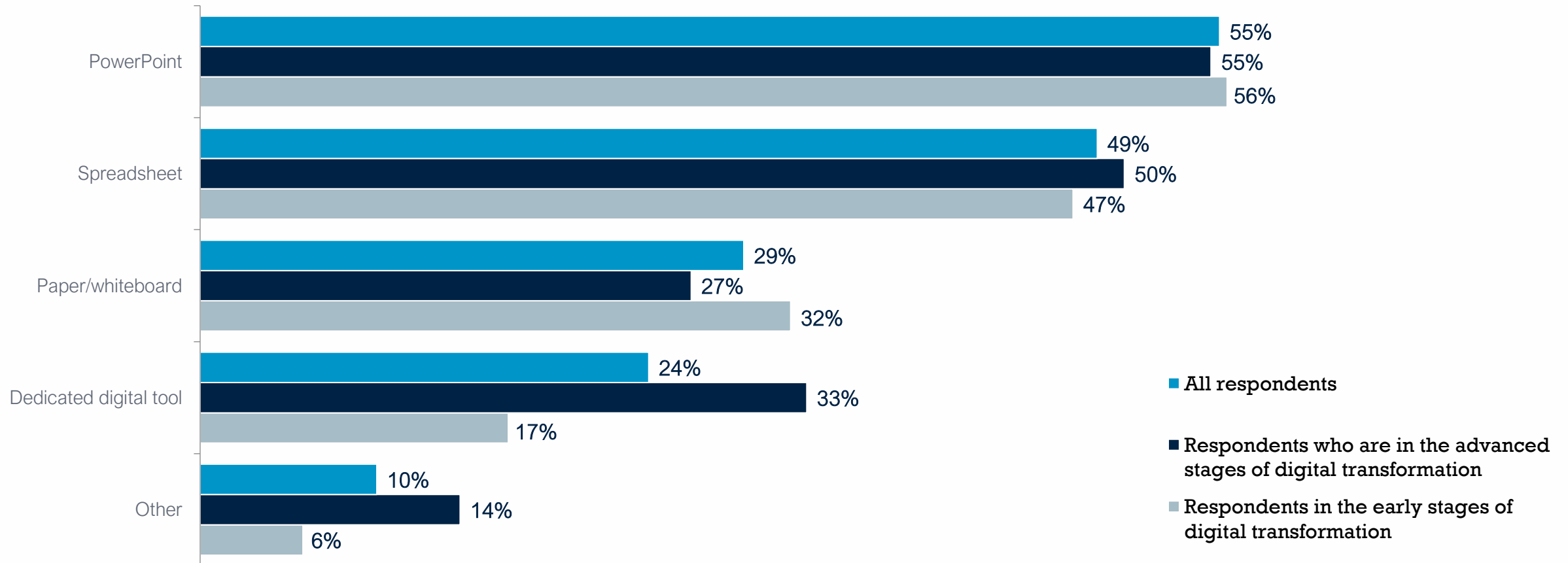


Question What's the main weakness with your kaizen program?

Base: All respondents (n=136).

Technology Used in Operations Meetings

Respondents are likely to use PowerPoint and/or spreadsheets to communicate information during operations review meetings. One in three respondents who are in the advanced stages of digital transformation also use a dedicated digital tool.

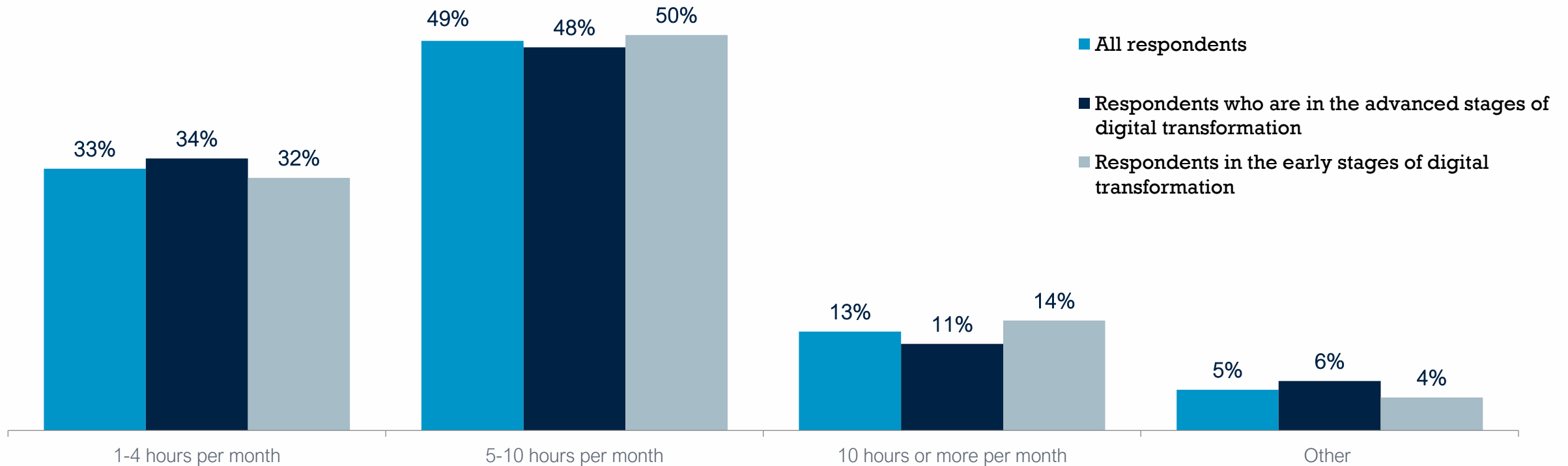


Question What format do you use to communicate your manufacturing operations review meeting?

Base: All respondents (n=136). Multiple answers allowed.

Time Spent Preparing for Operations Review Meetings

About half of respondents estimate that plant managers and operations leaders spend 5 to 10 hours per month preparing for manufacturing operations review meetings. Estimated times do not vary significantly by digital transformation progress.

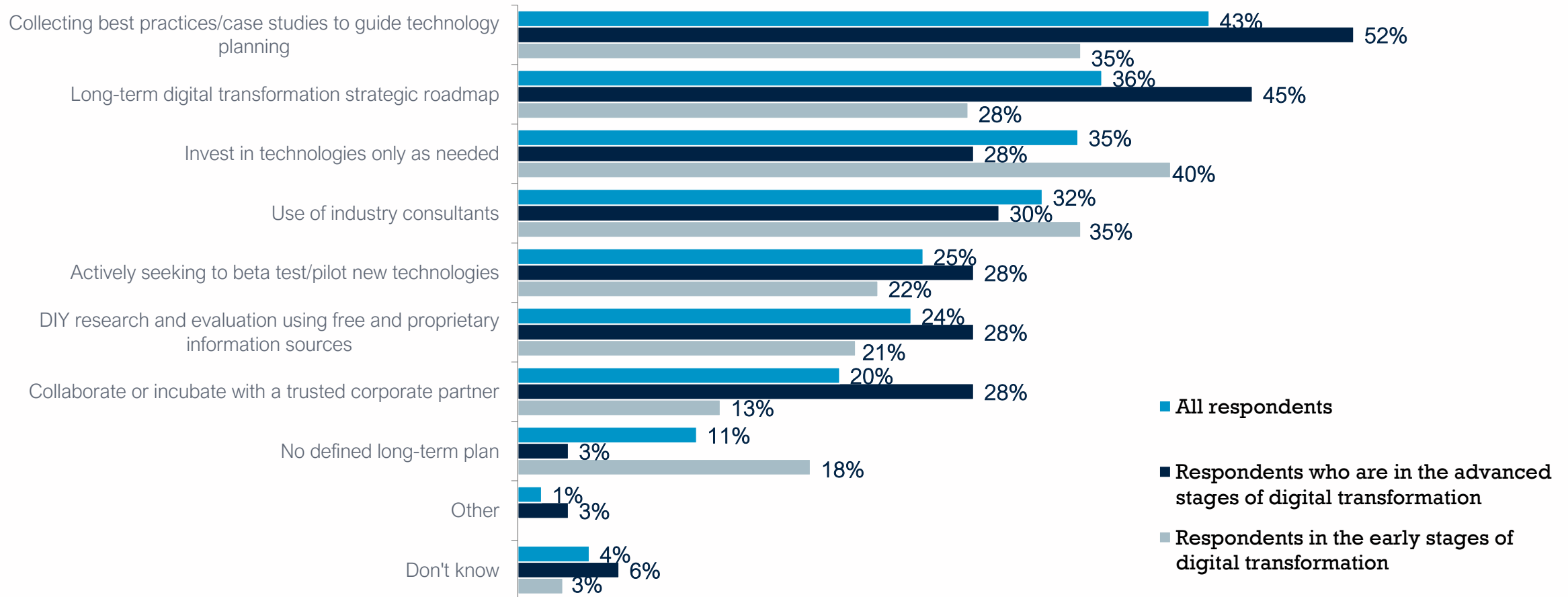


Question: On average, how much time would you estimate your plant managers/operations leaders spend preparing for manufacturing operations review meetings?

Base: All respondents (n=136).

Decision-Making Strategies

Respondents in the advanced stages of the digital transformation process are likely to collect best practices/case studies and/or a long-term digital transformation strategic road map to make investment decisions, while those in earlier stages are more likely to invest only as needed.

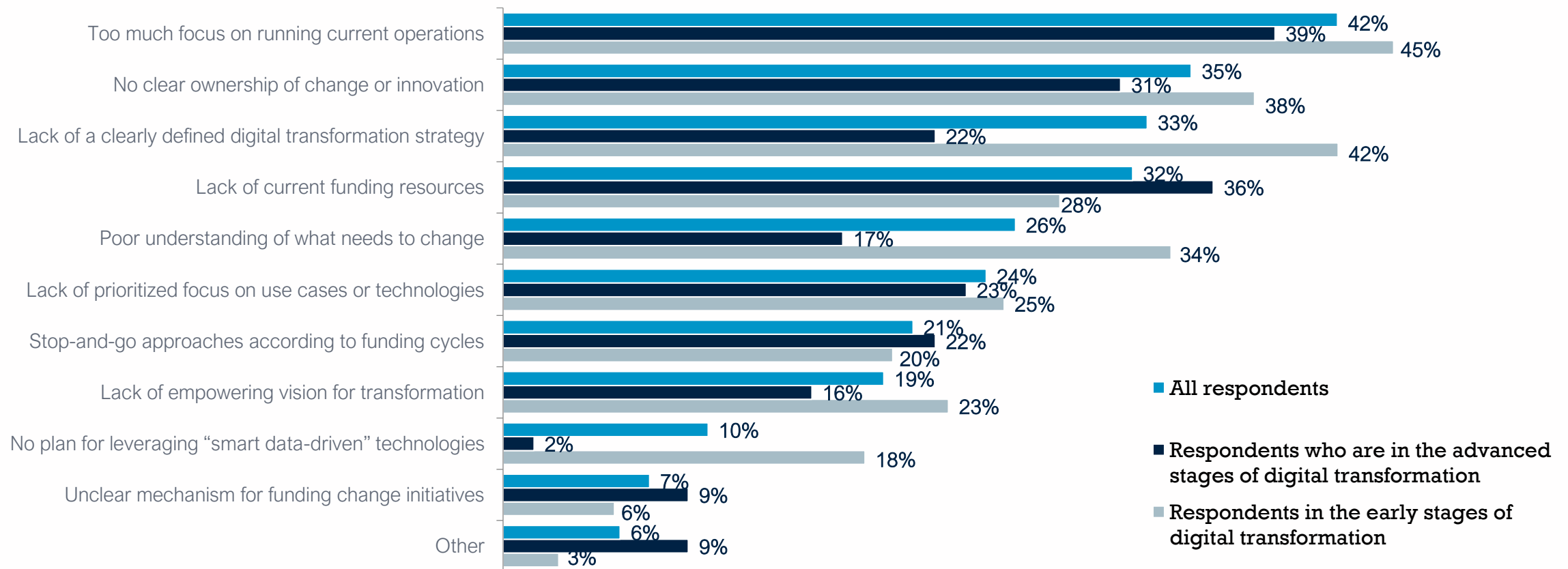


Question Which of the following mechanisms or strategies does your company or organization use to make digital transformation solution investment decisions?

Base: All respondents (n=136). Multiple answers allowed.

Top Challenges

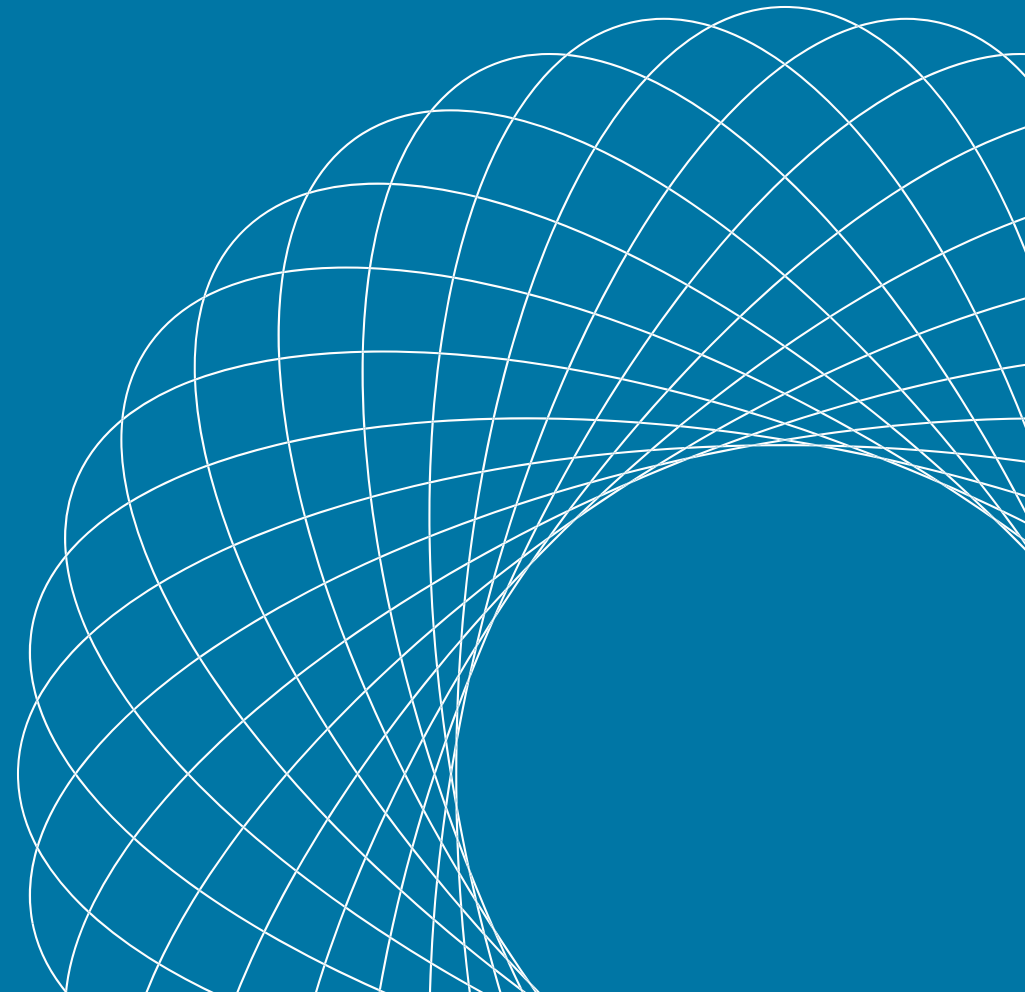
Respondents in the early stages of digital transformation are challenged by too much focus on current operations, the lack of a clearly defined strategy, and the lack of a transformation champion or owner. Those in the advanced stages of digital transformation are challenged by too much focus on running current operations and a lack of funding resources.



Question Which of the following are challenges to your company or organization’s progress in adopting digital transformation solutions and systems?

Base: All respondents (n=135). Multiple answers allowed.

Write-in Comments



Write-in Comments

Which of the following categories best describes your job role/title? Other responses:

- | | | |
|---|--|--|
| • Adjunct Professor at the University of Rhode Island | • Health & Safety | • Research |
| • Business Analyst | • Health and Safety | • Safety – 2 mentions |
| • Chair, Board of Directors | • Lean/Continuous Improvement training/education | • Safety Division |
| • Consulting | • Manufacturing | • Safety Management |
| • EHS | • purchasing & inventory control | • Strategy Realization (Global Operational Excellence) |
| • EHS/analytical manager | • Quality – 3 mentions | • Supply Chain |
| • Finance "Cost Accounting Area" | • R&D | • University/College |

What is your company's primary product at your location/division? Other responses:

- | | | |
|---------------------------------------|---|---|
| • Appliance, foodservice equipment | • Fork lift dealer | • Medical Electronics |
| • Consumer products | • Government – 3 mentions | • Metal cutting tools, oil/gas/construction tools, wear parts |
| • Control Panels | • Grinding wheels | • Metal slides manufacturer |
| • cybersecurity | • Health insurer | • Paint |
| • Education – 2 mentions | • Lean Education/Training/Coaching | • Plating / Finishing |
| • Electrical infrastructure | • LED Lighting | • Power generation |
| • Engineering | • Logistics | • Printing |
| • Fabrication of Electronic Materials | • Manufacturers of Windows and Doors | • Providing Site services for Hanford Nuclear Site |
| • Fenestration products | • Manufacturing | • Stainless Steel and high alloy piping |
| • Fire Protection Sprinklers | • Manufacturing/Engineering Software – 2 mentions | • Training Center |
| • Fluid Power Components | • Marine Monitoring Equipment | |

In which region is your company or organization located? Other responses:

- Global – 7 mentions
- Global HQ = Europe My office North America

Write-in Comments

What is your biggest challenge in your digital transformation journey? Other responses:

- Getting workers to understand just what got transformed.
- Hiring enough people
- Not enough staff to complete projects
- Lack of Manpower
- Resources to implement (people)

What is the top benefit you see from your digital transformation efforts? Other responses:

- E2E efficiency with fact-based decisions

Which of the following would most accelerate your digital transformation efforts? Other responses:

- Capital
- More staffing. Can't keep up with day to day tasks.
- More budgetary funding
- Success stories

Which of the following areas do you believe have a high priority need for digitalization in order to improve your systems? Other responses:

- Automated, AI driven test report generation.
- Balanced trade-off strategic priorities like Efficiency, lead time, Inventory, etc.
- Market driven production planning
- availability of chips

Thinking about digital transformation technology solutions and technologies, how interested are you in the following content/topics? Other responses:

- Automated, AI driven test report generation.
- Balanced trade-off strategic priorities like Efficiency, lead time, Inventory, etc.
- Market driven production planning
- availability of chips

Write-in Comments

How comfortable are you adopting and trusting machine-learning and automation-based technologies and processes?

Very comfortable:

- Already at the forefront of the company.
- Already familiar and looking to implement test products from vendors.
- Been working with it for years, as the new tech comes out it is getting more reliable
- Established processes to leverage the technologies.
- Experience in line management of automated manufacturing processes taught me to trust the data
- Experienced with SAP, moving to the next level.
- Familiar with technology with realization of benefits/returns
- For repeatability and ergonomics, we need the machine learning and automation based technologies.
- Functional test automation, KPI tracking, and root cause analysis is key to our business success.
- I have spent timer researching and understand the technology, however, this technology is rarely used in the fan industry.
- I'm comfortable with it, its getting upper Mgmt to sign off and fund to implement.
- Identify patterns and trends, continuous improvement, standard work, better customer service
- Most of the low level AI/Automation is mature technology. Second order and greater AI is emerging, but seems to always be a step ahead of simpler methods.
- My company implemented this before the pandemic.
- No concerns. It is the logical next step.
- No issues
- No trust issues here.
- We develop such technologies and so are comfortable with them.
- We embrace change
- We have had some success in this area, due to adding sensors.
- we produce cybersecurity equipment
- With proper set up and maintenance, the data can be trusted.
- Worked with other processes with past companies

Write-in Comments

How comfortable are you adopting and trusting machine-learning and automation-based technologies and processes?

Somewhat comfortable:

- Always concern with automating processes with molten metal!
- As I haven't actually worked in a place that had automation, and only read about it
- As long as there is oversight
- Automation is necessary in order to improve efficiency and this machine learning is a way to speed up the process of increasing automation.
- comfortable with the science worried about execution
- Currently in use
- Data reliability that feeds machine learning is not always good and not easy to filter out
- Demonstrations and research will assure and comfort upper management
- Depends upon the level of management commitment
- Do not know the technology
- Experience
- Happy to have automation-based technologies, worried about cyber security issues not yet addressed
- How it is received and top management commitment
- I am comfortable as long as our team is trained and the projects are resourced appropriately
- I feel that some things are hard to learn and would need to be interpreted yet.
- I want to see AI!
- I'm basically somewhat "old school" and have some level of comfortability with turning over complete control of machines to computers.
- I've experimented with some machine learning in other venues. It's impressive. It's hard to fathom how exactly it will change our workflow.
- I've read various articles but not sure if it will work effectively for our industry and age of equipment. If I have an understanding of how it's programed.
- If you test properly you will become comfortable with the results
- Many flows are predictable and have a benchmark
- Many of our Divisions are already using our digital transformation.
- Much more confidence in the machines needs to be gained by having better explanation of decisions.
- Need to see some proven applications in our industry
- One cannot take the human touch away completely sometimes production factors are intangible.
- one step at a time
- Our processes are manual.
- Our product is highly cosmetic. Concerns regarding machine-learning.
- Real-world applications of ML to be piloted across the value chain. Moving from theory to the practice
- Software conflicts
- Some expertise onsite but look to partner or acquire
- Still learning about capabilities with types of equipment we use for manufacture. Are very comfortable using machine-learning and automation on the products we produce.
- Still learning the advantages and results
- Still new so I am sure some things are still to be discovered and resolved, but overall I am comfortable.
- There are no finished solutions we could check and convince us in good solution
- There are to many variables day to day, job to job to rely only on tech.
- Training the older associates in adopting technology
- Using AI scheduling now
- We are just beginning
- We have many systems that can be remotely accessed via the web and that opens us up to cyberattacks. And with all of the attacks in the news, it leaves us very apprehensive.
- We trust the tools already existing and have more than normal trust in this area
- we're a high tech firm and pretty comfortable implementing new technologies
- Working on ML implementation

Write-in Comments

How comfortable are you adopting and trusting machine-learning and automation-based technologies and processes?

Neutral:

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • Adopting/adapting is something necessary in order for continuous improvement and to stay ahead of the competition. • Comfortable • Diversity of workers and languages • Have basic understanding, however, need to educate team • I don't have experience in this so I can't say I am comfortable or not. • I would run current processes in conjunction with machine-based processes simultaneously at first to prove the machine system's capability. • Insignificant experience to judge • Is complexity worth the risk • it depends on the implementation; a good implementation is easier to trust than a bad one. | <ul style="list-style-type: none"> • It sounds great but there is not enough experience to know the good and bad. • Knowing the way the upper manager thinks, it will be required to develop a full strategy to change their mind set and become more "friendly" those technologies and processes • Level of functional understanding or the organization is most of the issue. • More examples testing needed • More experts integration is required • Need more time to learn and implement • Need more working proof of concept examples • Need to find out more • No sufficient knowledge and experience • really don't know enough about it • Some programs have been a bust while others have | <ul style="list-style-type: none"> • been great. • Testing and confirming • Too unfamiliar • Unsure • We have not used it enough to feel completely comfortable . • We struggle to imagine which assembly processes could be automated. • When it works it is fine, but when it doesn't it is a huge pain to resolve. with more smart devices there is more to fail or even vulnerabilities in the system which can take you down that didn't exist 5-10 years ago. • Would need to see more use and involvement to build confidence. • Yeah that seems way too futuristic for our little City |
|---|--|---|

Somewhat uncomfortable:

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • AI development will reach a point of uncontrolledly processes relying on individuals. These individuals will be the weak link. My level of comfort is based on meeting the requirements through predicting demand a human benefit.. | <ul style="list-style-type: none"> • I need to be better informed before I am comfortable. • Lots of unknowns • Still want human oversight • The smarter the machine the dumber the operator • Using historical data to predict future results has been | <ul style="list-style-type: none"> • misleading in the past. • We are comfortable with automation but machine learning is something we have not yet explored. |
|---|--|---|

Write-in Comments

How comfortable are you adopting and trusting machine-learning and automation-based technologies and processes?

Not at all comfortable:

- Potential negative effects on learning/motivation of "people." To the extent this technology frees people from waiting on machines, it is positive, but development of flexible, creative people ot been emphasized enough and continues to be a problem
- We do a lot of short run work. Seems difficult/impossible to automate.
- We really don't see how machine learning can benefit us.

When it comes to considering digital transformation technology solutions, how important are the following? Other responses:

- Fits into our manufacturing environment/process
- Implementability
- It doesn't harm or fill spectrum so other solutions are affected
- Maint of budgets
- Open platform, scalable, adaptable
- Support

Thinking about digital transformation technology solutions and technologies, how interested are you in the following content/topics? Other responses:

- How to connect with others who can use our products
- MRP / ERP
- New concepts and technologies

Write-in Comments

What's the main weakness with your kaizen program? Other responses:

- Execution
- Lack of standardize products
- Mature processes large gains are difficult
- Nobody knows what "kaizen" means.
- Personnel shortage
- Pretty much all of the above
- Too many projects need to be done at once

What format do you use to communicate your manufacturing operations review meeting? Other responses:

- 3D Lean – 2 mentions
- Chipserver
- Combination and varies by site
- Dedicated reports from software tool
- Email
- Morning huddles
- PowerBi – 2 mentions
- Real-time cross-site performance review boards
- Tableau, TV
- Townhalls
- Walkaround/in person
- We do IDEX/IWEX/Imex meetings

On average, how much time would you estimate your plant managers/operations leaders spend preparing for manufacturing operations review meetings? Other responses:

- Less than 30 minutes per month
- Several hours daily
- Zero. They just "wing it" - no preparation whatsoever

Which of the following mechanisms or strategies does your company or organization use to make digital transformation solution investment decisions? Other responses:

- See where our customers are going and try to match or keep up
- Targeted research and investment, all in-house

Which of the following are challenges to your company or organization's progress in adopting digital transformation solutions and systems? Other responses:

- Conflicted visions among divisions
- Lack of staff to research and implement
- Legacy systems that need to be updated
- Looking at the 50k foot level and not at ground level where it applies
- Not enough people
- Regulatory requirements of Medical Device industry
- The company is currently in the process of implementing a new system

Write-in Comments

In your opinion, what are the major factors that will help your company or organization accelerate its digital transformation?

- Clearing the post pandemic production backlog.
- Staffing significant number of open positions.
- "Post-Covid" customer expectations/demand
- A clear vision for the future
- A drastic change in upper management vision.
- ability to contact forward looking companies with new tech
- adding to the bottom line.
- additional funding
- additional workforce
- Adoption by Management
- Affordability
- Amazon – 2 mentions
- Anticipating areas needing improvement/change
- Availability of qualified internal resources.
- Awareness and commitment
- Bdc026
- Better buy in from all levels of organization, from top to shop floor
- better organization of project management and follow through
- better planning
- better training for the end users on the new tech
- Better understanding by Upper Management of the needs and what improvements it would make
- Big T
- Bold changes thru proven ROI exercises.
- buy-in
- Canam Group Inc.
- Capacity constraints aligned with quality expectations by customers.
- Change in C-suite focus to accept and push for change.
- Company wide buy in and collaboration.
- Company wide commitment
- Competition
- comprehensive roadmap, external forces, leadership buy-in/decision
- Continue small implementations instead of waiting for big bang approach
- Cost – 2 mentions
- Cost, ease of use
- CPJ Technologies
- Create a definite goal and communicate throughout the organization
- Customer cooperation
- Customer needs
- Customer requirements or opportunity to improve efficiency
- Debt reduction!
- Dedicated resources to implement and to train users
- Don't let purchasing buy with out listening to the workers
- Easier tools
- education and industry specific solutions
- Effective integrator and digital thread for the part specific data
- Elevate the program to a global corporate goal with very high visibility. Require alignment through all levels of staff.
- Employees skills
- falling behind competitions
- Financial
- Financial budgetary funding
- Focus and commitment to make this a priority.
- Funding - 3 mentions
- Funding and standardization decisions
- Funding, understanding ROI, understanding long term value
- Funds to purchase what is needed, time to test different systems to see which is the best fit.
- Gaining leadership buy-in
- Getting past current supply and manpower availability issues
- Getting the entire work force to embrace the changes
- Have someone explain the benefits without a bunch of sugar coated BS
- Highly skilled teams
- Honestly, the pandemic shifted a lot of attention toward the project. Just hope we don't lose steam as things return to normal.

Write-in Comments

In your opinion, what are the major factors that will help your company or organization accelerate its digital transformation? (...continued)

- If customers demand it in order for us to retain their business
- Improved bandwidth and more network reliability
- Improving customer response, lowering costs
- Increased sales
- industrial boiler
- Iowa State University - Center for Industrial Research and Service
- Kennametal
- knowledge
- Leadership buy-in.
- Leadership direction
- Long term vision.
- Look out for best practices, modify and reapply practices, explore solutions and going beyond internal silo's, 70-20-10 rule on application than doing all outsourcing.
- Management buy in to the need for a upgrading our systems.
- Manpower – 2 mentions
- Manpower and a vision.
- Market study
- meet customers needs
- money
- Money and availability
- More case studies and knowledge sharing across industries and geographics
- More dedicated staff levels
- More good workers available to spearhead key initiatives
- More understanding
- More, educated staffing
- narrowed focus on key projects - smaller scoped efforts in high impact areas
- Naumann Hobbs
- Need the ability to move forward with supply and demand.
- Need to see the benefits of completing.
- None. The company has been digital all along, thus minimal transformation is needed; no need for acceleration.
- Our capacity to Learn
- Ownership throughout the organization
- Persistence
- Pressure from customers and regulatory agencies
- Priority changes by top management
- Production/plan intersection
- Progressive company understanding of client needs.
- Proven examples of application to businesses in our segment.
- Quick ROI
- Real cost effective ideas
- Removal of some senior management staff from the company
- Remove some layers
- Resource bandwidth to see it through to finish on time.
- resources to implement (people)
- Roadmap
- ROI, customer benefits.
- see actual benefits in similar job shop entities
- Select Genetics LLC
- Senior Leadership buy in
- Senior management support
- Solid plan
- stay focus on digital transformation
- Success stories case studies
- Support from top management
- Systems that can improve upon our system
- The addition of AI technology
- The identification of a high return on investment.
- The major factors are how far competitors are ahead or behind and whether or not they choose to develop solutions internally versus externally.
- The market must demand it either through customer demands or competition advancing beyond the norm.
- time
- Time and commitment
- Top Management buy in
- Training and user success stories

Write-in Comments

In your opinion, what are the major factors that will help your company or organization accelerate its digital transformation? (...continued)

- Training and user success stories
- Translation services
- upper management awareness and acceptance
- Upper management buy in and investment.
- Use case for small companies
- Use of best infrastructure available in the market
- Vision and education on what digital transformation really means
- We were recently purchased by EATON Corporation (June 2021), so we will work with them to develop our plan for transformation. EATON has employees dedicated to Industry 4.0 initiatives.
- When senior leadership realizes cost, delivery, and quality improvements.
- Willingness to change

Thank you!

