Beyond the Crisis:

How interconnected businesses exhibit leadership and resiliency

August 2020

Introduction

Business works best when every part of an organization, including its external partners and customers, is agile and interconnected. Executives need to ensure that high-quality information is flowing across their entire business ecosystem, allowing all participants to interact in ways that advance the goals of the organization.

Doing this effectively requires seeing the web of relationships within and beyond the organizational firewall as a single, unified entity that operates smoothly, dynamically, and as part of a cohesive strategy. This approach to management is known as systems thinking. The results of our global research show that applying systems thinking effectively can improve business performance and help organizations navigate challenging times.

SAP and Oxford Economics worked together in the first half of 2020, during the early peak of the coronavirus pandemic, to survey 3,000 business executives from around the world and discover how they incorporate this holistic management style into everyday business strategy and operations. We found that many executives have already begun to see measurable results from integrating processes and breaking down functional silos, but most need to improve the way data is used and commit to further transformation to get full value from their investments.

For systems thinking to facilitate critical priorities like growth, innovation, and customer experience, organizations need to make meaningful changes. End-to-end processes and real-time visibility are essential, with interactions extending even beyond ecosystem partners into the wider world, where sustainable, unbiased business increasingly drives consumer behavior. Doing all this requires high-quality data and the ability to make meaning from it, which in turn demands strong employee skills and the right technology. Adding to the challenges is a turbulent economy, with organizations around the world forced to condense years of transformation planning and implementation efforts into mere weeks just to stay in business.

Our data show that highly interconnected organizations are better able to work quickly and adapt to changing circumstances, and are likely to prove more resilient than siloed enterprises. A small group of respondents is further along than the rest of our survey population, and the rewards of leadership are clear. The benefits from their efforts are wide-reaching and include process efficiency improvements, superior customer and employee satisfaction, and strong financial performance.

Systems thinking

is a way of seeing the entire web of relationships within and beyond the organizational firewall as a unified entity that operates smoothly, dynamically, and as part of a cohesive strategy.

This executive summary discusses the high-level findings of our research and describes some key areas where executives are making progress—as well as areas where they need to improve. We will examine:

- The business drivers of interconnectivity and the progress to date toward those goals

- The importance of a skilled workforce to enabling the interconnected enterprise

- How technology investments and data-sharing between operational and customer-facing functions boost results

- How our leader group stands out from the rest of the survey sample

About the research

Oxford Economics was commissioned by SAP to conduct a survey of 3,000 business executives. The survey was conducted between March and May 2020 via computer-assisted telephone interviews.

Respondents come from the United States, Canada, Mexico, Brazil, France, Germany, the United Kingdom, Nordics (Norway, Finland, Sweden, and Denmark), India, Japan, Singapore, Australia, and New Zealand.

They represent 10 industries, evenly distributed across the automotive, banking, consumer products, insurance, industrial manufacturing, oil and gas, professional services, public sector, retail, and utilities sectors. One-third come from organizations with between $500 m and $999 m in revenue, one-third from organizations with between $1 bn and $9.9 bn in revenue, and one-third with $10 bn or more in revenue.

In addition to the quantitative survey, Oxford Economics conducted three in-depth interviews with executives within the countries surveyed. These conversations shed additional light on the topics covered in this report and offer perspective into how interconnected businesses work today.

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A holistic approach to management

> ## "Collaboration isn't something that happens naturally."
>
> *James Fairweather, chief innovation officer at Pitney Bowes*

Systems thinking is a top-of-mind focus for executives in our survey. Many say they are effectively managing end-to-end business processes, facilitating collaboration across their organization, and focusing on social, environmental, and governance excellence—but most are still working to create a truly interconnected organization. (Progress toward this goal varies by industry; see our industry-specific Think Pieces for details.)

To meet their goals, decision-makers must rethink their operations and business ecosystems and consider this broad web of relationships as a unified entity. Executives understand that collaboration across functions is a critical component of this evolution; they view interactions with IT (95%), sales and service (90%), finance (88%), and marketing (85%) as most critical to success—and they know that systemic changes take work.

"Collaboration isn't something that happens naturally," says James Fairweather, chief innovation officer at Pitney Bowes, the $3.4 billion shipping, mailing, and ecommerce service business based in Hartford, CT. "You have to invest time to build the required language you're going to use with one another, the reports that you're going to share and agree that you're going to review, and then the calendar and cadence on which you're going to review those [reports]."

Achieving the level of collaboration across people, processes, and data required to make all this possible is no small task: nearly one-third say working across their internal functions is highly complex, and 37% say the same for external collaboration. While a large majority (over 85%) have integrated business processes, talent and workforce, and data collection and analysis in at least some areas of the business, doing so across the organization remains a work in progress.

Those organizations that are further along in integrating operations are seeing results. Of all benefits listed as options in our survey, executives are most likely to report that business process integration has reduced costs and spend, and increased the speed at which they conduct business. Talent and workforce integration has enhanced customer experiences while increasing employee retention, and more than half of those who have integrated the collection and analysis of relevant—and GDPR-compliant—data have improved leadership's ability to make informed decisions.

Fig. 1: Tearing down the silos

Q: Which best describes your organization's operations across functions, in terms of their communication, data-sharing, and process management? *Select one. Base = 3,000*

- 5% Completely siloed
- 16% Somewhat siloed
- 54% Moderately integrated
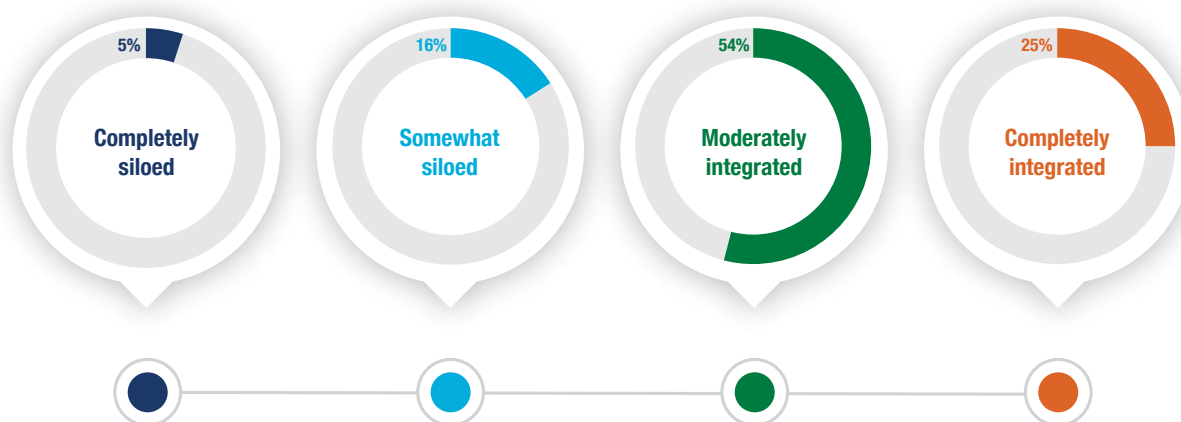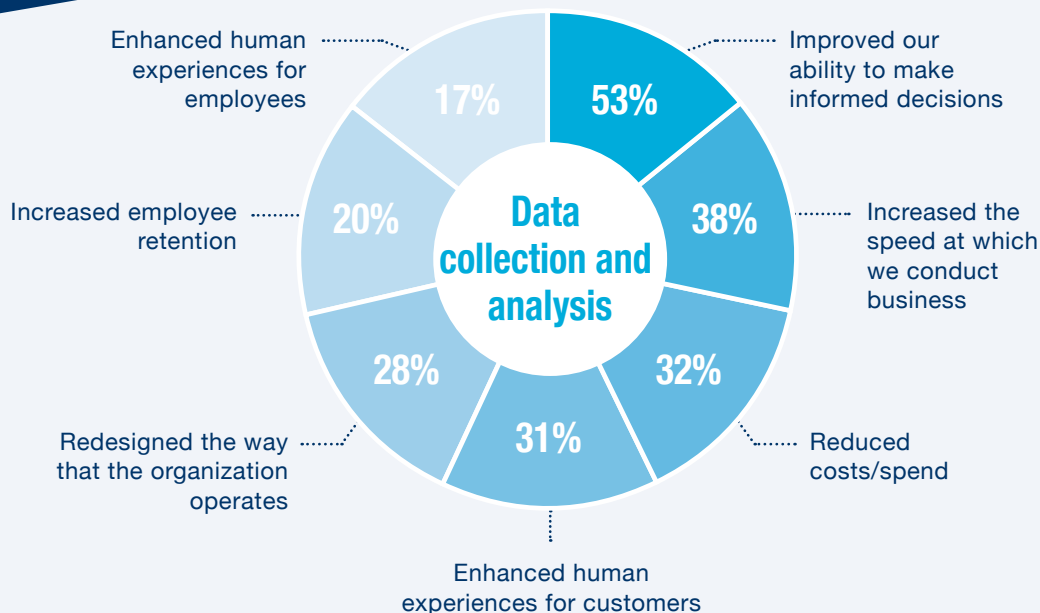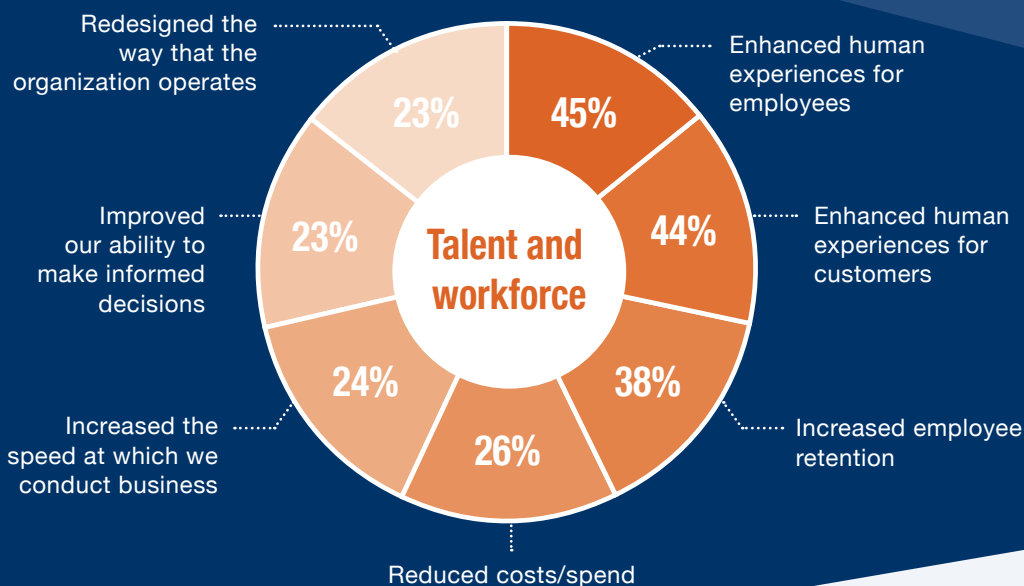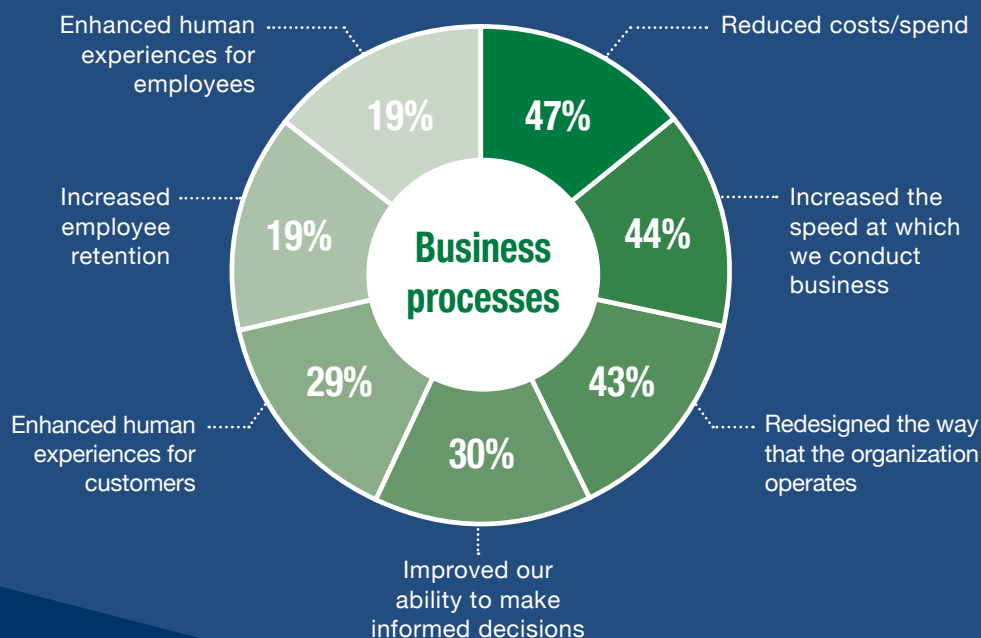- 25% Completely integrated

Fig. 2: How an integrated approach pays off

Q: Which of the following benefits have you realized as a result of business function integration in these areas? *Select all that apply.*

Base: Business processes = 2,854; Talent and workforce = 2,770; Data collection and analysis = 2,582

Business processes

- Enhanced human experiences for employees: 19%
- Reduced costs/spend: 47%
- Increased the speed at which we conduct business: 44%
- Redesigned the way that the organization operates: 43%
- Improved our ability to make informed decisions: 30%
- Enhanced human experiences for customers: 29%
- Increased employee retention: 19%

Talent and workforce

- Redesigned the way that the organization operates: 23%
- Enhanced human experiences for employees: 45%
- Enhanced human experiences for customers: 44%
- Increased employee retention: 38%
- Reduced costs/spend: 26%
- Increased the speed at which we conduct business: 24%
- Improved our ability to make informed decisions: 23%

Data collection and analysis

- Enhanced human experiences for employees: 17%
- Improved our ability to make informed decisions: 53%
- Increased the speed at which we conduct business: 38%
- Reduced costs/spend: 32%
- Enhanced human experiences for customers: 31%
- Redesigned the way that the organization operates: 28%
- Increased employee retention: 20%

Decision-makers must rethink their operations and business ecosystems and consider their broad web of relationships as a unified entity.

People-powered interconnections

Establishing a culture that provides purpose and opportunity for the workforce is critical to attracting and retaining the skilled workers needed to make systems thinking successful. An improved employee experience is the top driver of industry reputation for more than half of respondents, and more than two-thirds say they have improved in this area to a significant extent.
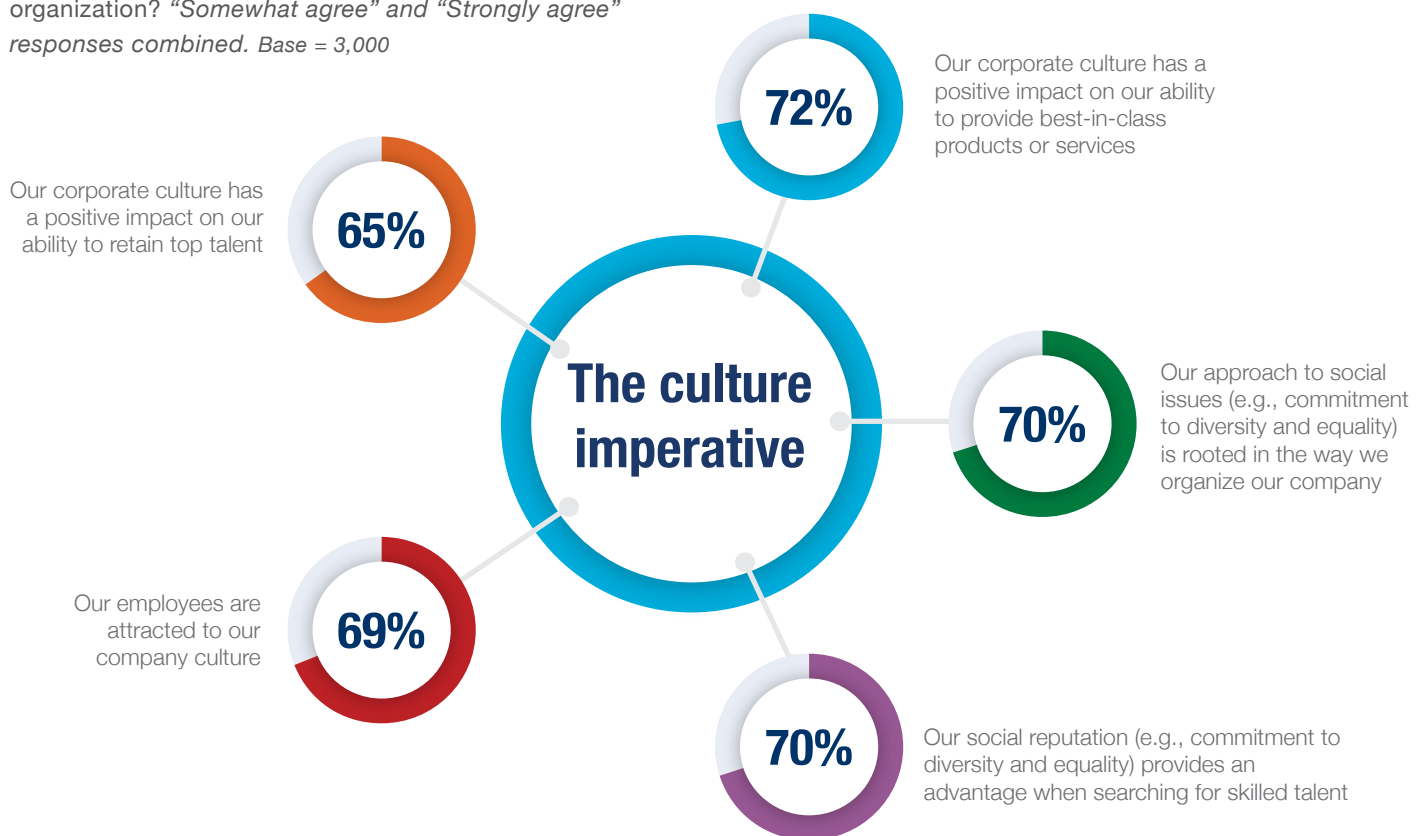
Prioritizing employee wants and needs becomes even more important in a global crisis. "Our core value is 'we do the right things the right way,'" says Mr. Fairweather of Pitney Bowes. "In these times, this focus on doing the right things the right way encompasses making sure we're taking care of the workforce and ensuring worker safety. We make extra effort to keep people informed. We try to make the right operating decisions every day."

Executives in our survey sample are confident in their corporate culture. Over two-thirds say their employees are attracted to their culture, and nearly three-quarters (72%) say it has a positive impact on their ability to provide best-in-class products and services.

Fig. 3: The culture imperative

Q: To what extent do you agree with the following statements about current and prospective workers at your organization? *"Somewhat agree" and "Strongly agree" responses combined.* Base = 3,000

72% Our corporate culture has a positive impact on our ability to provide best-in-class products or services

Our corporate culture has a positive impact on our ability to retain top talent **65%**

The culture imperative

70% Our approach to social issues (e.g., commitment to diversity and equality) is rooted in the way we organize our company

Our employees are attracted to our company culture **69%**

70% Our social reputation (e.g., commitment to diversity and equality) provides an advantage when searching for skilled talent

Despite this confidence, half of respondents say securing skilled talent is a major barrier to carrying out strategic change initiatives, making it the top such challenge in our survey. Executives may need to consider employee experiences more closely: only 35% say employee satisfaction is a significant influence on business strategy, and just 34% say they have retrained employees to work with data—a critical skill for a 21st-century workforce. A lack of urgency in integrating other functions with HR may be part of the problem: the HR function is cited as one of the least critical business areas to the success of the organization, despite its role in defining the employee experience.
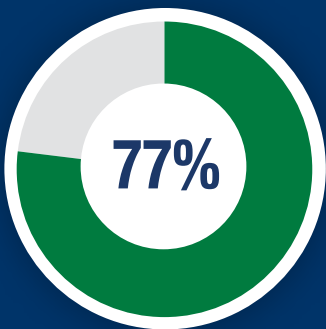
A sense of purpose

Even the most complex and well-managed organization is part of a larger network of networks involving the society, culture, and world around it. Many leaders are recognizing the role that a larger purpose beyond immediate business goals plays in attracting employees, satisfying customers, and thus fulfilling strategic initiatives.

For Hydro, the $11 billion Norwegian aluminum and renewable energy company, reducing the carbon footprint of products provides an environmental message that customers seek. "[Our environmental focus] definitely gives us a competitive edge," says chief information officer Jo De Vliegher. "We're one of the first companies that actually does this in a third-party certified way, so it has been quite a success." Hydro's aluminum production, produced in plants powered by hydroelectricity, emits 75% less CO_2 than the global average.

Efforts like this should also resonate with employees. More than three-quarters of executives surveyed say they effectively provide employees with a sense of purpose. Most claim success in carrying out their social, environmental, and governance initiatives (84%), which is critical to attracting and retaining skilled workers. More than two-thirds say their environmental reputation provides an advantage when searching for talent, and 64% agree that their environmental focus is valued by current staff.

Fig. 4: Purpose is easier said than done

Q: How effectively is your organization carrying out the following today? *"Somewhat effectively" and "Very effectively" responses combined. Base = 3,000*

Q: To what extent have you executed on the following business decisions? *"To a significant extent" and "Completely" responses combined. Base = 3,000*

77%   yet only   **52%**

77% say they are effectively providing employees with a sense of purpose.

52% say they have created and acted on a clear, consistent, purpose-driven message (e.g., sustainability, social advocacy).

Yet some executives may fail to adequately prioritize or communicate initiatives that define purpose and shape culture. Just over half say they have created and acted on a clear, consistent purpose-driven message. And social and environmental excellence is rarely cited as a top-three influence on business strategy—a concerning omission, given that nearly two-thirds say an environmental focus is valued by current staff.

> **"[Our environmental focus] definitely gives us a competitive edge."**
>
> *Jo De Vliegher, chief information officer at Hydro*

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Data: The lifeblood of the interconnected enterprise

True systems thinking is enabled by sharing relevant data safely, securely, and in a manner compliant with increasingly demanding regulations. The advantages of a sound data strategy accrue to both customers and employees: nearly two-thirds (63%) of our respondents say data-sharing connects organizations with customers, and 60% say data-sharing improves the employee experience. Sharing relevant data also drives broad company performance, in areas like innovating products and services (57%), and exceeding performance goals (55%).

Significant efforts to improve how data is used to innovate and improve operations are still in the early stages. For example, only 27% of respondents have changed
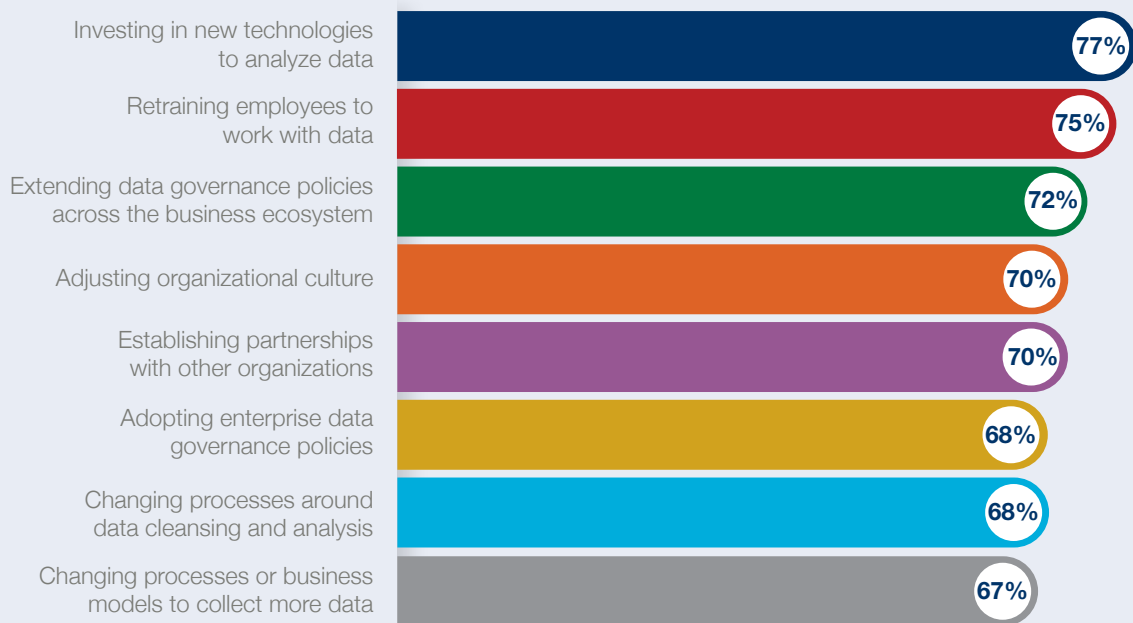
processes around data cleaning and analysis. One area that is top of mind: data protection, especially given a deepening focus on privacy due to regulations like GDPR and headlines about misuse of personal information. Nearly two-thirds of survey respondents say they have effectively implemented rigorous cybersecurity or data protection initiatives.

Beyond the firewall, there is more work to do. About one-quarter have increased data-sharing with outside partners, and just one in five share supply chain data with business partners with moderate or rapid speed; 25% have extended their data governance policies across the business ecosystem.

Fig. 5: Investments in people-powered analysis elevate data proficiency

Q: Which of the following efforts to improve the way you share data has provided the most value? *Select up to three responses. Base = a range from n=562 to n=1,008*
Note: respondents were only shown answer choices that they have made investments in.

Investment	Percentage
Investing in new technologies to analyze data	77%
Retraining employees to work with data	75%
Extending data governance policies across the business ecosystem	72%
Adjusting organizational culture	70%
Establishing partnerships with other organizations	70%
Adopting enterprise data governance policies	68%
Changing processes around data cleansing and analysis	68%
Changing processes or business models to collect more data	67%

Organizations that have invested more in data analytics and other essential technologies are seeing a variety of benefits. Retraining employees to better work with data and investing in technologies for analysis are among the tactics providing the most value to date. Extending data governance policies across the business ecosystem also yields results. Nearly half cite technology investments as a contributor to improved experiences for both customers and employees— and 46% say they have seen rises in employee productivity.

Creating an interconnected enterprise and ecosystem depends on turning data into information. Artificial intelligence is an increasingly important tool for making meaning from data, and slightly more than one-third of executives say it has been an investment priority over the past three years. One-third say IoT—itself a major data generator—has been an investment focus.

But technology works best when combined with human expertise. "Data by itself can tell you only so much," says Ramesh Iyer, vice chairman and managing director at Mahindra Finance, the Mumbai-based financial services division of the Indian conglomerate Mahindra Group.

That is why the company brings in talent with a deep understanding of local markets. "People who come with knowledge of local challenges make a difference. Technology plus data plus understanding of the people— these together build success."

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>
> *Ramesh Iyer, vice chairman and managing director at Mahindra Finance*

Fig. 6: Executives are investing in intelligent technologies that harness data

Q: In which of the following technologies has your organization as a whole prioritized investment over the past three years? *Select all that apply. Base = 3,000*

34%
AI (artificial intelligence)

33%
IoT (e.g., sensors)

27%
Analytics or predictive analytics

21%
Chatbots

19%
Machine learning

14%
RPA (robotic process automation)

12%
Blockchain

8%
Augmented reality or virtual reality
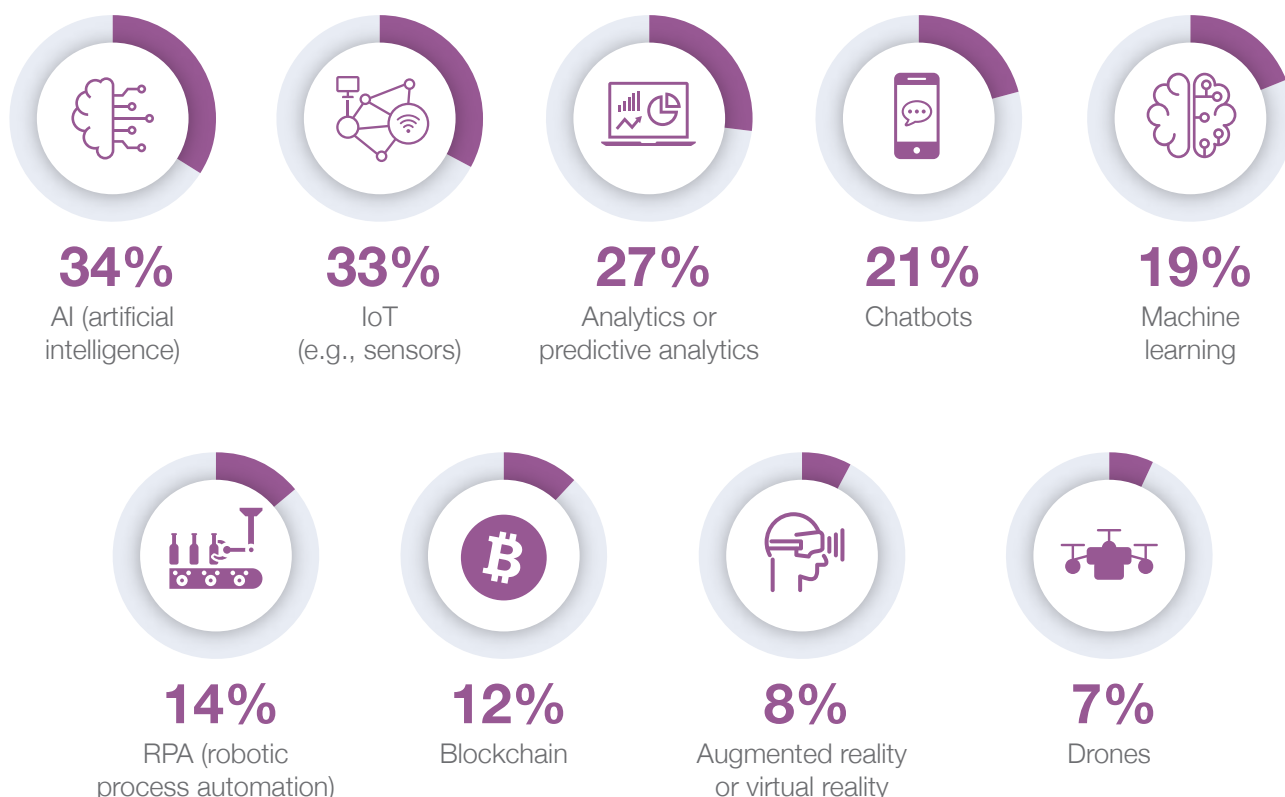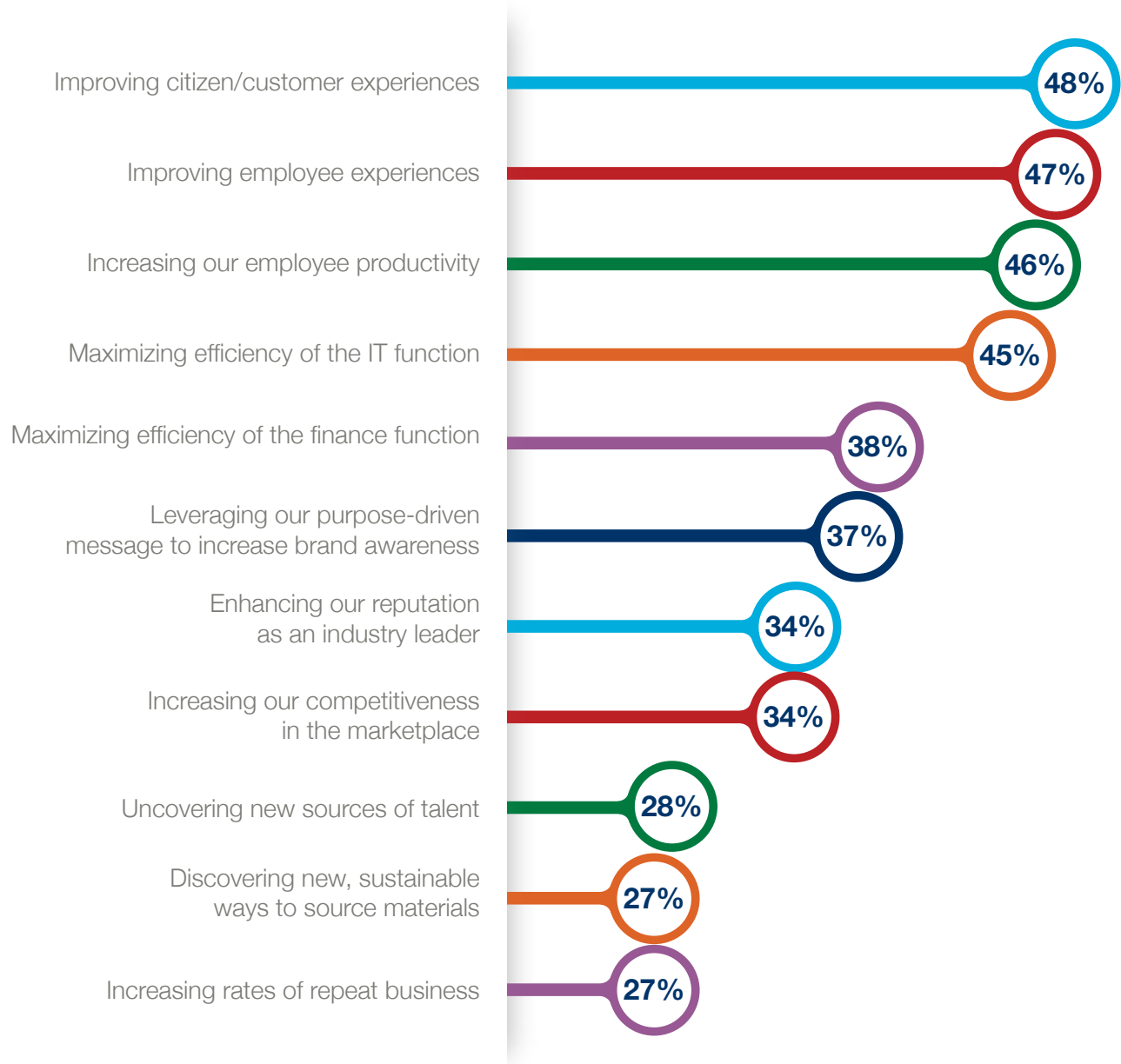
7%
Drones

Fig. 7: How technology investments support strategic goals

Q: To what extent have your technology investments contributed to your organization's success in the following business areas? *"Significant contributor to success" and "Success is entirely dependent on technology investments" responses combined.* Base = 3,000

Business area	%
Improving citizen/customer experiences	48%
Improving employee experiences	47%
Increasing our employee productivity	46%
Maximizing efficiency of the IT function	45%
Maximizing efficiency of the finance function	38%
Leveraging our purpose-driven message to increase brand awareness	37%
Enhancing our reputation as an industry leader	34%
Increasing our competitiveness in the marketplace	34%
Uncovering new sources of talent	28%
Discovering new, sustainable ways to source materials	27%
Increasing rates of repeat business	27%

However, blind spots persist for many respondents. Less than one-third have directed investments toward technologies that analyze data, and just 27% cite analytics or predictive analytics as a top-three investment priority.
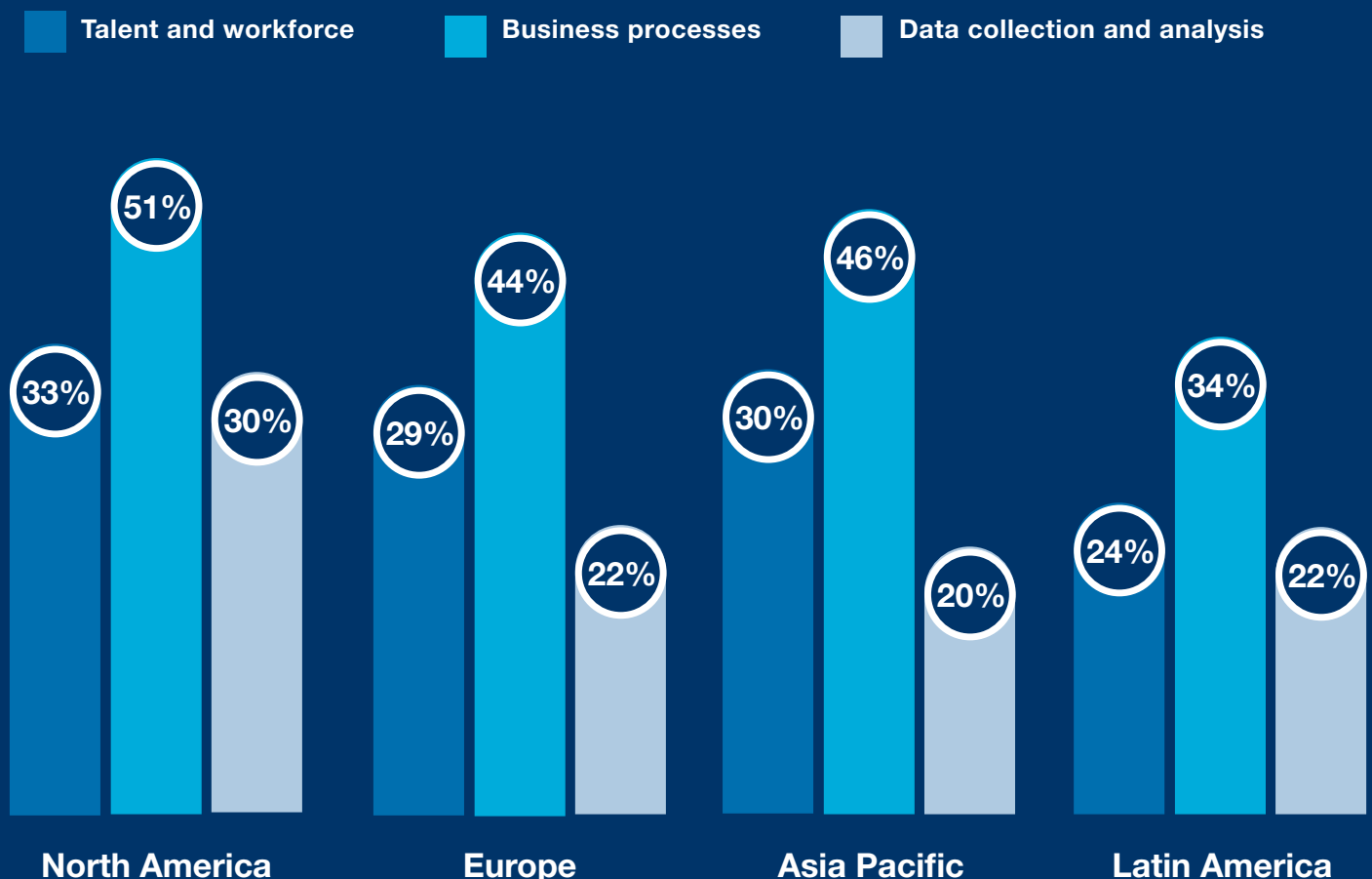
Regional analysis

Our survey included respondents from 16 countries in four regions around the world: North America, Europe, Asia-Pacific, and Latin America. Progress toward implementing systems thinking varies by region, with North America tending to be ahead of the others and Europe generally close behind, while Asia-Pacific and Latin America have some catching up to do on many fronts.

Progress toward interconnectivity

North American and European respondents are more likely to say they are effective at facilitating collaboration and implementing technology on schedule. Respondents from Asia-Pacific are least likely to have integrated their data collection and analysis process, and Latin American respondents are among the least likely to have integrated all types of activities across the business—including talent and workforce, data collection, and data analysis processes.

Fig. 8: The interconnected enterprise by region

Q: To what extent are your organization's business functions integrated in the following ways? *"Integrated across all functions" responses. Base = 3,000*

■ **Talent and workforce**   ■ **Business processes**   ■ **Data collection and analysis**

| Region	Talent and workforce	Business processes	Data collection and analysis
North America	33%	51%	30%
Europe	29%	44%	22%
Asia Pacific	30%	46%	20%
Latin America	24%	34%	22%

Workforce and talent

Respondents from Asia-Pacific are most likely to say they are held back by a shortage of skilled talent, while respondents from North America are least likely to say this. Latin American respondents, meanwhile, slightly lag other regions in terms of transforming to create personalized employee experiences.

Fig. 9: Personalized experiences by region

Q: To what extent has your organization incorporated personalized experiences into its digital transformation efforts? *"Piloting," "Implementing in some areas," and "Fully implemented" combined.* Base = 3,000

North America — 76%
Europe — 76%
Asia Pacific — 76%
Latin America — 71%
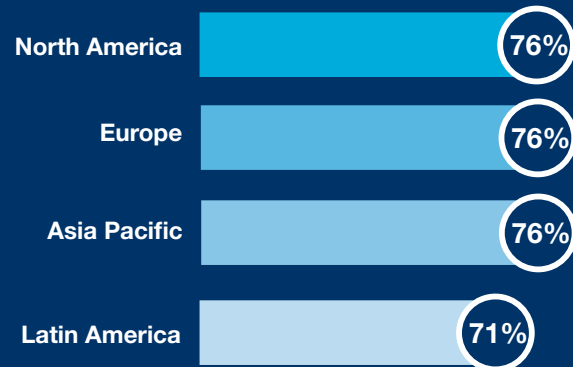
Data utilization and technology investments

Respondents from North America and Asia-Pacific are most likely to have changed their processes around data cleaning and analysis, while European and Latin American countries are less likely to say this. But European respondents are more likely than all other regions to have incorporated data-sharing between functions—and most likely to have invested in both artificial intelligence and IoT technologies to help them achieve success.

Latin America
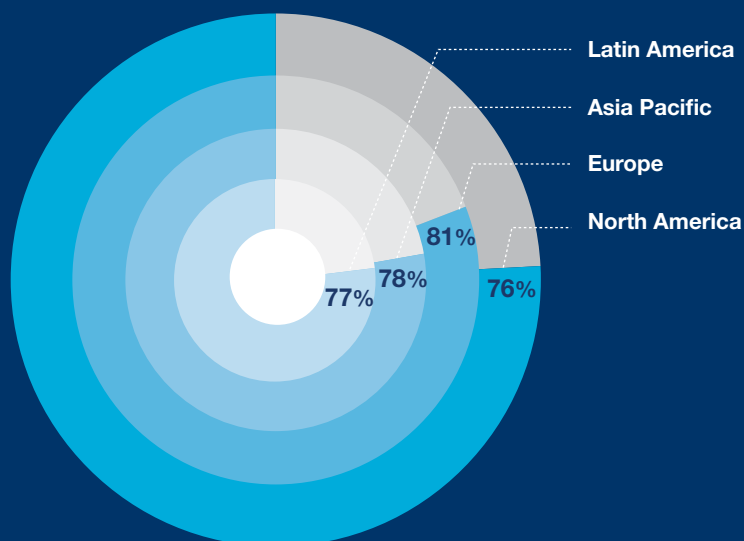Asia Pacific
Europe
North America

81%
78%
77%
76%

Fig. 10: Cross-function information-sharing by region

Q: To what extent has your organization incorporated increased data-sharing between functions into its digital transformation efforts? *"Piloting," "Implementing in some areas," and "Fully implemented" combined.* Base = 3,000

Leaders show how the responsive organization pays off

Systems thinking leads to quantifiable benefits across organizations. We identified a small group of respondents who are further along the systems thinking journey than their peers. To qualify for this leader group, respondents must have:

- Integrated business processes, data collection and analysis, and talent and workforce strategies across all functions and operations

- Created and acted on a clear and consistent purpose-driven message to a significant extent

Only 6% of our survey sample qualify for this elite group, indicating that fully embracing systems thinking is still a rarity. These organizations appear to know what they are doing: they are more likely to have completely integrated their communication and data-sharing processes across the business (75% vs. 22% others), increased transparency into operations (88% vs. 61%), broken down organizational silos (94% vs. 68%), and invested in collaborative technologies (96% vs. 73%).

Although our data does not establish a clear causal link between systems thinking and strong performance, consistently superior performance among the leader group suggests that holistic management strategies pay off. Leaders are more likely to have seen profit margin increases over the past three years (94% vs. 59% others), and are more likely to say their innovation is viewed as better than their industry peers.

This group also sees rewards from better data management, like data cleaning and analysis (83% of leaders say this has provided the most value vs. 67% others) and extending data governance policies across the business ecosystem (75% vs. 72% others).

These strategies ultimately support a broader organizational purpose, though particular goals vary from enterprise to enterprise. Leaders are more focused on culture and social initiatives: they are more likely to say their approach to social issues is rooted in how they organize the company (95% vs. 69% others) and incorporate sustainable alternatives for their products and processes (91% vs. 65%).

Consistently superior performance among the leader group suggests that holistic management strategies pay off.

Conclusion

As organizations embrace the interconnected future, new challenges will arise. To get full value from the systems thinking framework, executives must:

- **Interconnect and integrate.**
  Organizations must view operations as though all business relationships—internal and external—are part of the same network. Build this philosophy into all decision-making, nurture collaborative processes, and reap the benefits of interconnectivity.

- **Prioritize the employee experience.**
  Developing a strong culture influences industry reputation and business performance. Attracting the most talented workers should be a strategic priority: executives must consider the causes that matter to employees and make sure these are reflected in processes and purpose.

- **Share relevant data across functions—and beyond.**
  Making sure the right people have access to the right information drives efficiency and productivity. Working closely with vendors and outside partners will be critical to success.

About Oxford Economics

Oxford Economics is a leader in global forecasting, quantitative analysis, and thought leadership. Our worldwide client base comprises more than 1,500 international corporations, financial institutions, government organizations, and universities.

Headquartered in Oxford, with offices around the world, we employ 400 staff, including 250 economists and analysts. Our best-in-class global economic and industry models and analytical tools give us an unmatched ability to forecast external market trends and assess their economic, social and business impact.

About SAP

As the market leader in enterprise application software, SAP helps companies of all sizes and in all industries run at their best. Our machine learning, Internet of Things (IoT), and advanced analytics technologies turn businesses into intelligent enterprises, and SAP applications and services enable more than 437,000 customers to operate profitably and adapt continuously. With a global networks of customers, partners, employees, and thought leaders, SAP helps the world run better and improve people's lives.

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