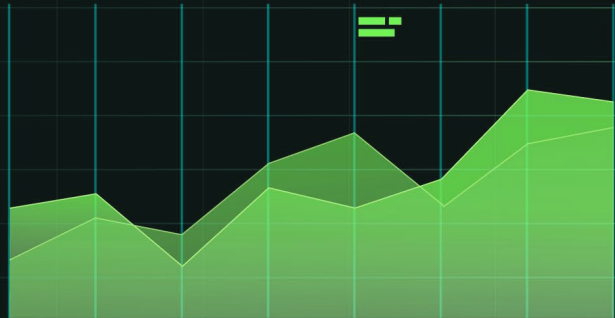


2025 REPORT

State of Digital Operations

From Buzzword to Backbone:
Charting AI's Evolution in Digital Operations



Contents

Introduction	3
Key Takeaways for 2025.	4
The New Pace of Digital Operations	5
From Buzzword to Backbone: AI's Integration into Core Operations	7
From Experimental to Essential: Decoding GenAI's Impact	8
Agentic AI's Ascent	10
From Adoption to Mastery: Addressing the Challenges of Automation	11
Safeguarding Digital Operations	13
The PagerDuty Advantage: Accelerating Digital Operations	15
Conclusion	16
Methodology	17
Industry Highlights	18
Regional Highlights	19

Introduction

Entering 2025, it is clear that artificial intelligence (AI) and automation have taken hold in digital operations. PagerDuty's annual survey of over 1,100 operations leaders in North America, EMEA, and APJ demonstrates concrete evidence of the business impact that AI and automation have delivered over the past year, and reveals significant enthusiasm about the benefits that these technologies will deliver moving forward.

As with generative AI (GenAI) before it, agentic AI in particular promises to unleash a new wave of efficiency and productivity gains in digital operations. The high expectations operations leaders have for agentic AI reflect a broader trend of investing in technologies that not only address current needs but pave the way for future competitiveness.

Yet, the impact and enthusiasm are accompanied by real challenges. With the deeper integration of AI and automation, cybersecurity concerns have intensified as companies grapple with how to protect complex systems and analyze vast amounts of data while ensuring regulatory compliance. The skills gap has also widened, prompting a new focus on talent development and acquisition as organizations reshape their workforce.

Digital operations are a key component of the transformation of the modern enterprise. They are a critical determinant of an organization's resilience and innovation capability, and if they are optimized using AI and automation, they can be a source of sustainable competitive advantage in a dynamic business and technology landscape.

Key Takeaways for 2025

Our research reveals six key trends that will shape digital operations in 2025. These insights set the foundation for understanding the opportunities and challenges ahead.

1 **Digital operations will continue to power efficiency, resilience, and growth.**

Digital operations teams have made remarkable strides in 2024, as respondents cite substantial improvements in operational maturity, resilience, use of automation, and time to market. This progress is fueling excitement and optimism across industries, reflected in increased IT budgets for 2025. Enterprises are leveraging this momentum to drive innovation, enhance efficiency, and strengthen competitive positioning.

2 **AI will become the backbone of digital operations.**

AI has rapidly evolved from a buzzword to the backbone of digital operations. GenAI in particular has delivered tangible benefits like improved operational efficiency and better customer experiences. As companies leverage GenAI for immediate gains, they are also moving quickly on emerging technologies like agentic AI, paving the way for the next wave of innovation.

3 **Companies will need to address a critical-skills gap to succeed.**

Companies face a widening talent gap as they embed AI and automation into their operations. The struggle to find the right talent quickly enough is of utmost importance as companies build an AI-centric future – especially in North America, where respondents indicate fierce competition for talent. Organizations are upskilling and reskilling teams to bridge that gap, recognizing that persistent learning is essential for leveraging and creating real value from new technologies.

4 **Security challenges will demand a balanced approach to innovation.**

Security concerns are intensifying as AI and automation become more deeply ingrained in operations, with 91% of respondents identifying cybersecurity as a significant focus. Organizations must navigate the task of protecting sophisticated and complex systems, and make security a cornerstone of operational strategy in 2025 and beyond.

5 **Leadership vision and team execution will become better aligned.**

Senior leadership and frontline practitioners view operational effectiveness differently, with executives generally having more bullish views on their companies' operational effectiveness, resilience, and plans for AI adoption. Clearly, bridging this divide is vital for maintaining a competitive edge. We believe that 2025 will be the year that teams at all levels begin to find common ground on an operational vision, desired impact, and shared metrics to move to a sustainable AI-centric model for operations.

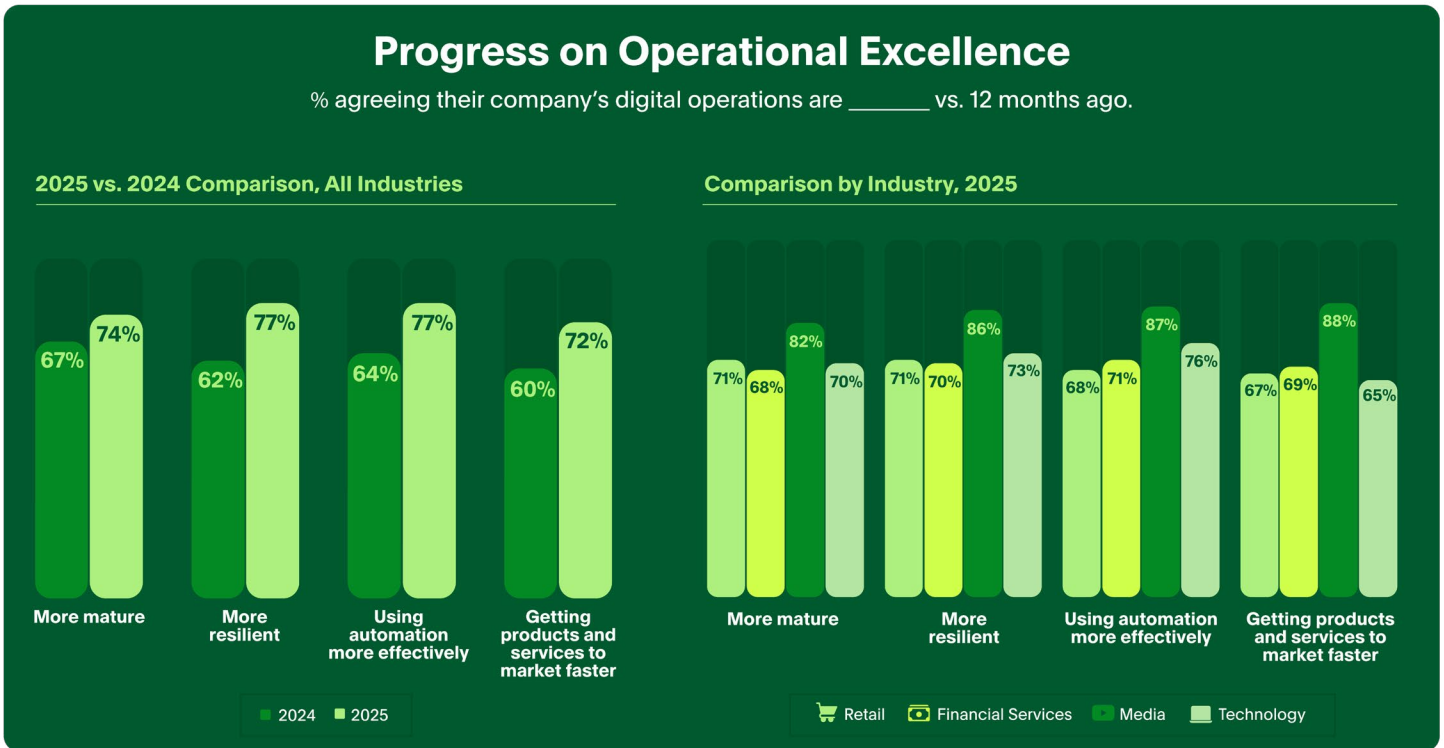
6 **PagerDuty will continue to create a foundation for operational excellence.**

Our research shows that PagerDuty customers consistently outperform non-customers in automation effectiveness, innovation, and operational maturity. As companies navigate the complexities of modern IT operations, PagerDuty is the platform that industry leaders are turning to in order to achieve operational excellence and resilience.

The New Pace of Digital Operations

Since our last report, organizations have made extraordinary strides in their digital operations. The progress extends across all aspects of the enterprise — from technology implementation and process optimization to measurable business results. Nearly three-quarters of respondents report improvements in operational maturity (74%), resilience (74%), effective use of automation (74%), and faster time to market (72%), representing an average increase of 11 points from 2024.

However, progress varies across sectors. The Media industry reports tremendous progress, with 86% of respondents indicating increased resilience and 88% citing faster time to market. While companies in the Technology sector show strong resilience (73%), they lag Financial Services and Retail companies in getting products to market.



The strategic adoption of AI and automation is fueling this progress. Organizations are already seeing tangible benefits from integrating GenAI and automation into their operations while simultaneously exploring emerging technologies like agentic AI.

When respondents were asked how IT operations best support operational priorities, automation emerged as a primary focus. Across all regions, 58% of respondents identified driving more pervasive automation as their path to reshape operational effectiveness and productivity. APJ (65%) and the Media industry (75%) are at the forefront of this trend, leveraging automation to maintain competitiveness and drive growth.

Improving employee productivity ranks second-highest globally, with 55% of respondents looking to IT for support on such initiatives. The Media sector (64%) and North American organizations (59%) emphasize this priority, highlighting their unique operational demands. North America's focus stems from the need to maximize workforce value in a high-cost labor market, while Media's emphasis centers on the critical balance between automation and human creativity in content delivery. As organizations free their workforce from routine tasks, they are enabling employees to tackle more complex, strategic challenges.

Reducing operational costs rounds out the top three priorities, with 55% of respondents looking for IT support on cost optimization initiatives. Its importance to the Financial Services sector (59%) reflects the industry's competitive pressures and regulatory demands, highlighting the delicate balance between compliance investments and operational efficiency. This evolution from traditional cost-cutting to strategic optimization reflects how organizations view IT as a driver of business value. Even so, the majority of respondents expect IT budgets to increase this year at 64%, up 7 points from 2024.

As organizations advance their digital operations, AI emerges as a critical enabler of success. The next chapter examines how AI has evolved from an experimental technology to become deeply integrated into core operations, driving both immediate efficiency gains and long-term innovation.

Top Operational Priorities

1 Driving more pervasive automation

2 Improving employee productivity

3 Reducing operational costs

4 Building operational resilience

Represents full sample of 1,103 respondents.

From Buzzword to Backbone: AI's Integration into Core Operations

Over the past year, AI has transformed from a promising novelty to the cornerstone of modern IT operations. The transition from pilot projects to strategic deployments has proven particularly valuable in areas where traditional approaches have fallen short, from processing vast amounts of data to enabling predictive responses to analyzing unexpected system behavior.

By examining leading AI operations use cases across industries, we can see patterns that differentiate early adopters from those who took a more measured approach. The Technology sector, as an example, is at the vanguard of AI integration. Its focus on security threat detection (53%) and agentic AI experimentation (47%) signals a proactive approach to current and future challenges. Likewise, Media was an early adopter of AI, going back over a decade in some companies' ongoing digital transformations. This behavior shows up in Media's prioritization of customer service automation (45%), agentic AI experimentation (45%), and process automation (43%).

In contrast, more conservative industries like Retail and Financial Services began pilot projects later, owing to factors like a slower pace of AI adoption and greater regulation. As they've done more to integrate AI into their core operations, these sectors are focusing on applications like enhancing customer experiences and optimizing workflows through automation.

DevOps automation stands out as a prevalent use case across all industries, highlighting its critical role in today's business operations. With adoption rates of 46% in Technology, 43% in Media, and 41% in Financial Services, DevOps automation allows organizations to streamline development processes while maintaining a focus on innovation. DevOps also helps organizations modernize their operations by bridging legacy systems and emerging infrastructure, underscoring its importance in driving efficiency and innovation across sectors.

From an audience perspective, technical decision-makers prioritize AI for security threat detection, process automation, and data management, while business leaders focus on DevOps automation and customer service improvements. This difference reflects their distinct responsibilities and perspectives on organizational needs. Despite these differences, all stakeholders agree on a crucial point: AI must deliver a measurable impact. Whether enhancing operational efficiency, bolstering security, or improving customer satisfaction, the shared priority is to implement AI solutions that provide tangible, quantifiable benefits to the organization's performance.

The role of AI in digital operations is in a transitional state, evolving from a differentiator to a fundamental component of operational strategy. As this shift continues, the ability to effectively integrate AI and automation into core business processes while exploring its emerging capabilities will become a clear determinant of competitive advantage.

From Experimental to Essential: Decoding GenAI's Impact

GenAI has rapidly evolved from an experimental technology to a keystone of digital operations, delivering tangible and material benefits across industries, including operational efficiency gains (37%), improved customer experiences (36%), and better insights from data (38%) at the top of the list. These findings reveal how GenAI is reshaping business operations by improving efficiency and decision-making while enabling new capabilities across the organization.

Top GenAI Benefits by Market

GenAI Benefit	Overall	North America	EMEA	APJ
Higher quality data insights	38%	41%	34%	44%
Increased operational efficiency	37%	41%	34%	39%
Improved customer experiences	36%	37%	36%	35%
Better team collaboration	33%	38%	31%	32%
	n=1103	n=352	n=528	n=223

Figures represent the % of respondents in each market indicating each outcome as a benefit of GenAI in 2024.

State of Digital Operations

The Technology and Media sectors are reaping the highest rewards from their GenAI investments, with these industries reporting significant gains in operational efficiency and improved customer experiences. As early adopters of AI and automation, companies in these sectors have leveraged their technical expertise and data-rich environments to accelerate the impact of GenAI. Financial Services firms are not far behind, leveraging GenAI for data analysis (aligned to the industry's need for precise information in decision-making and risk management). While Retail is showing more modest adoption, the sector still reports a notable improvement in customer experiences, highlighting GenAI's potential for use cases like personalized shopping and customer service.

The benefits of GenAI adoption vary by region, based on market-specific needs and appetites for adopting transformative technology. Companies in North America were on the forefront of the GenAI adoption curve. Respondents note the technology's ability to drive operational efficiency and extract high-quality data insights, which likely stems from the region's early adoption and integration of GenAI into decision-making frameworks. In APJ, the most significant benefits have been driving innovation and accelerating time to market, aligning with the region's reputation for technological advancement and signaling a more aggressive approach to leveraging AI for competitive advantage. By contrast, EMEA took a more measured and holistic strategy. Improved customer experiences and increased operational efficiency emerged as the top benefits for the region, highlighting the need for flexible, culturally-aware approaches to GenAI deployment across diverse markets.

Top GenAI Benefits by Industry

GenAI Benefit	Retail	Financial Services	Media	Technology
Higher quality data insights	34%	45%	41%	45%
Increased operational efficiency	30%	38%	40%	43%
Improved customer experiences	36%	33%	42%	46%
Better team collaboration	27%	35%	28%	41%
	n=181	n=156	n=103	n=87

Figures represent the % of respondents in each sector indicating each outcome as a benefit of GenAI in 2024.

As organizations evolve their AI strategies, many are already looking beyond GenAI to more comprehensive AI integration across their operations. The next wave of AI innovation, in which humans and digital agents come together to collaborate, is the next frontier in operational transformation.

Agentic AI's Ascent

Agentic AI has quickly emerged as a potentially transformative innovation. Our survey found that 38% of respondents expect to make this technology a core part of their IT operations within the next two years. When including those who plan to use it in peripheral operations, that intent rose to 88%. This suggests that AI adoption is no longer about experimenting or keeping pace with technological advancements. Rather, companies are actively positioning themselves to harness AI's most advanced capabilities to drive business outcomes – or simply ensure continued relevance.

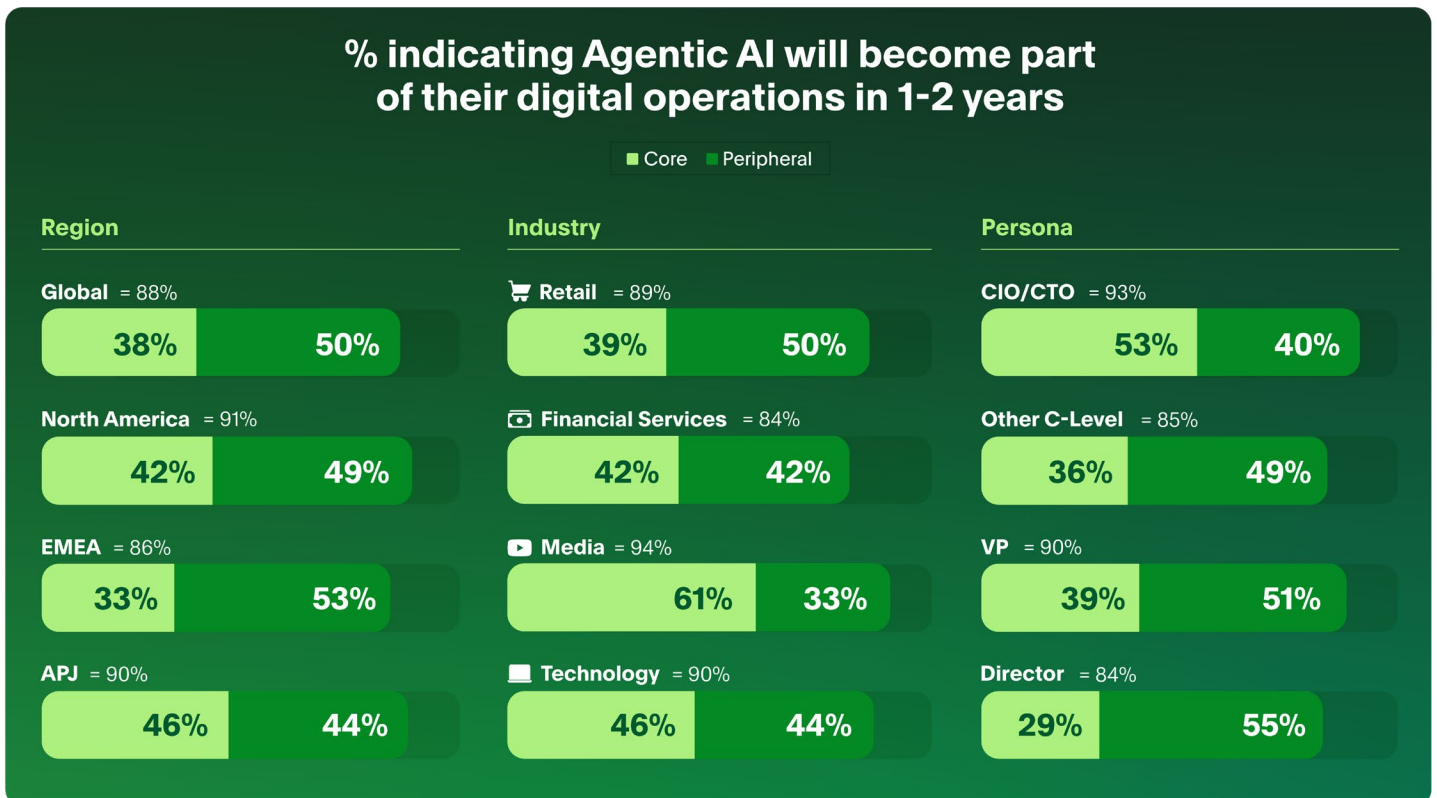
The Technology industry is again leading the way, with 47% reporting that agentic AI will be core to their operations in 1-2 years, followed by Media (45%) and Retail (40%). Utilization in these sectors underscores the technology's widespread potential, from enabling more sophisticated software development to providing deeper insights into consumer behavior.

Regional differences are notable. In APJ, 46% view agentic AI as core to the future of IT operations, slightly exceeding North America (42%) and significantly exceeding EMEA (33%). While

APJ response may be rooted in the market's reputation for adopting cutting-edge technologies, the lag in EMEA reflects its more cautious approach, influenced by stricter regulatory requirements and greater emphasis on human oversight.

Enthusiasm for agentic AI is highest among CIOs and CTOs, with a majority (53%) seeing it as core to future IT operations. Practitioners, likely owing to greater experience managing current AI limitations and implementation challenges, show more caution (29%). As agentic AI moves from experimentation to implementation, we expect to see a more favorable response from those working directly with the technology.

The ascent of agentic AI marks a pivotal moment in the evolution of enterprise technology. As with GenAI before it, the acceptance of agentic AI will usher in a period of sustained and rapid innovation. Rather than deploy it for its own sake, operations leaders need to develop a clear view of the use cases for which agentic AI can drive business impact, and architect a strategy for its implementation with a view to desired outcomes. We believe the coming years will see a flurry of exciting activity as operational leaders embrace these agentic technologies and turn their promise into value-driving reality.



From Adoption to Mastery: Addressing the Challenges of Automation

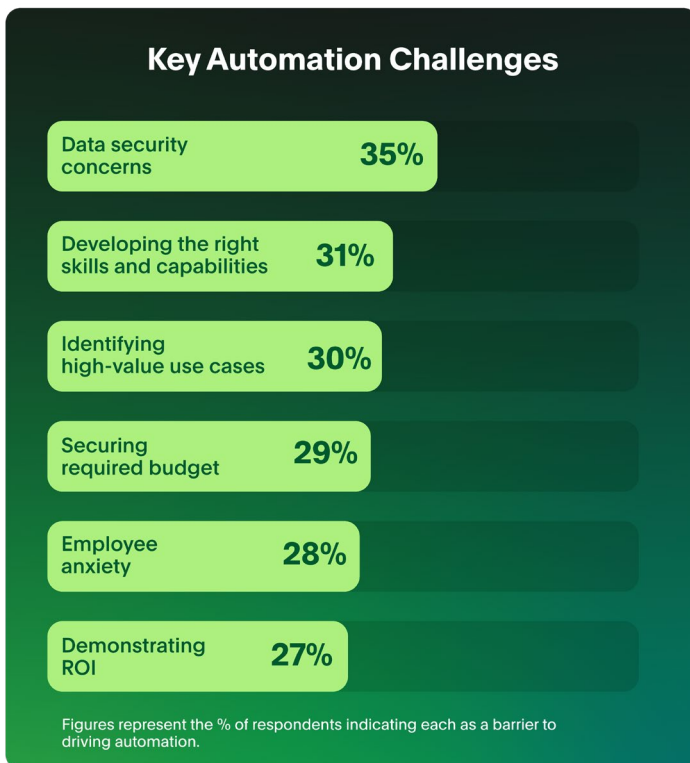
When we asked about **automation adoption in 2024**, respondents were trepidatious, citing concerns about not knowing where to start or lacking trust in the technology.

Fast-forward to 2025, and the landscape has shifted dramatically. Automation is becoming more sophisticated and pervasive across all industries and regions. While differences in operational priorities remain, it's clear that leaders see automation as a cornerstone of IT infrastructure, vital for driving innovation and competitive advantage.





However, activating automation comes with challenges. As with last year, data security remains the key concern, with 35% of leaders identifying it as their top challenge. This apprehension exposes the double-edged nature of automation: While the technology offers greater efficiency and insights, it exposes the enterprise to new vulnerabilities and challenges.

Practitioners are most concerned about security (41%), reflecting their experience integrating automation with legacy technology as well as their accountability for ensuring that companies do not experience events or outages. The different views expressed by executives and practitioners suggests the need for better communication and alignment on security strategy overall.

Developing the right skills and capabilities to drive automation is the second most pressing challenge (31%). The gap is highest in North America and the Media industry, reflecting both a competitive job market and ongoing digital transformation efforts. This is an opportunity for companies to upskill and reskill existing talent, simultaneously reducing cost pressures and alleviating employee concerns about job security.



Key Barriers to Automation by Industry

Barrier to Automation	 Retail	 Financial Services	 Media	 Technology
Data security concerns	29%	35%	28%	29%
Developing the right skills	23%	26%	37%	35%
Identifying high-value use cases	24%	35%	33%	37%
Securing budget	22%	28%	30%	28%
Employee anxiety	31%	26%	30%	16%
Determining ROI	25%	28%	19%	34%
	(n=181)	n=156	n=103	n=87

Figures represent the % of respondents in each market indicating each outcome as a benefit of GenAI in 2024.

Managing disparate “islands” of automation has become a significant hurdle for early adopters, particularly those in APJ and the Technology industry. As pioneers who invested in diverse tools before developing strategic integration plans, these groups face the complex task of unifying their automation landscape. This challenge underscores the imperative for standardization to achieve cost efficiencies and unify operational workflows.

Key Barriers to Automation by Market

Barrier to Automation	North America	EMEA	APJ
Data security concerns	34%	35%	33%
Developing the right skills	38%	26%	30%
Identifying high-value use cases	31%	30%	30%
Securing budget	25%	32%	30%
Employee anxiety	26%	27%	33%
Determining ROI	29%	27%	26%
	n=352	n=528	n=223

Figures represent the % of respondents in each market indicating each outcome as a benefit of GenAI in 2024.

As automation scales, enterprises must address these complex, interconnected challenges head-on. Success will hinge on a multifaceted approach that bolsters data security, cultivates talent, manages change effectively, and identifies high-impact use cases. By tackling these issues head-on, leaders can position their organizations to lead the next wave of digital transformation.

Safeguarding Digital Operations

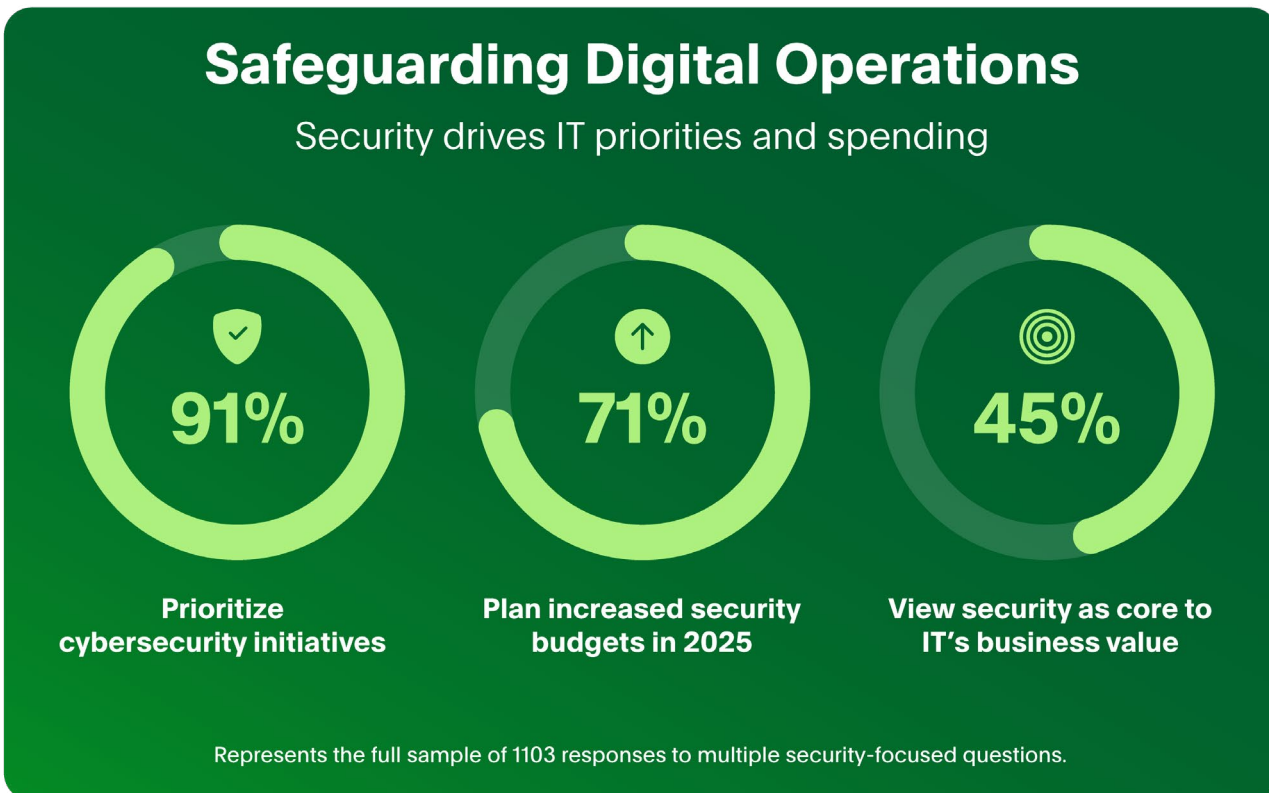
Throughout this report, security emerges as a top priority across multiple dimensions of digital operations. With it now inextricably linked to every aspect of enterprise technology, organizations must carefully balance innovation with maintaining secure environments.

Modern enterprises must maintain constant vigilance to safeguard sensitive information against cybersecurity threats, ensure the integrity of AI systems, and maintain security protocols within increasingly automated environments. Security must be treated as a critical business imperative that helps power operational resilience, customer trust, and competitive advantage.

An overwhelming 91% of respondents identify cybersecurity as a significant focus for their company over the next 12 months. This concern is particularly acute in sectors handling valuable

intellectual property and emerging technologies. Media (95%) and Technology (94%) companies report the highest priority for security. Further emphasis on security is reflected in planned IT budgets, with 71% of respondents expecting to see an expansion of security and operations budgets in 2025 compared to only 14% who expect to see a consolidation.

When asked about the essential ways IT supports their business, respondents rate improving security measures and reducing risk second (45%), just behind driving more persistent automation. As mentioned earlier, while data protection concerns are cited as the top challenge for automation adoption, their close pairing demonstrates how deeply intertwined security and automation have become.



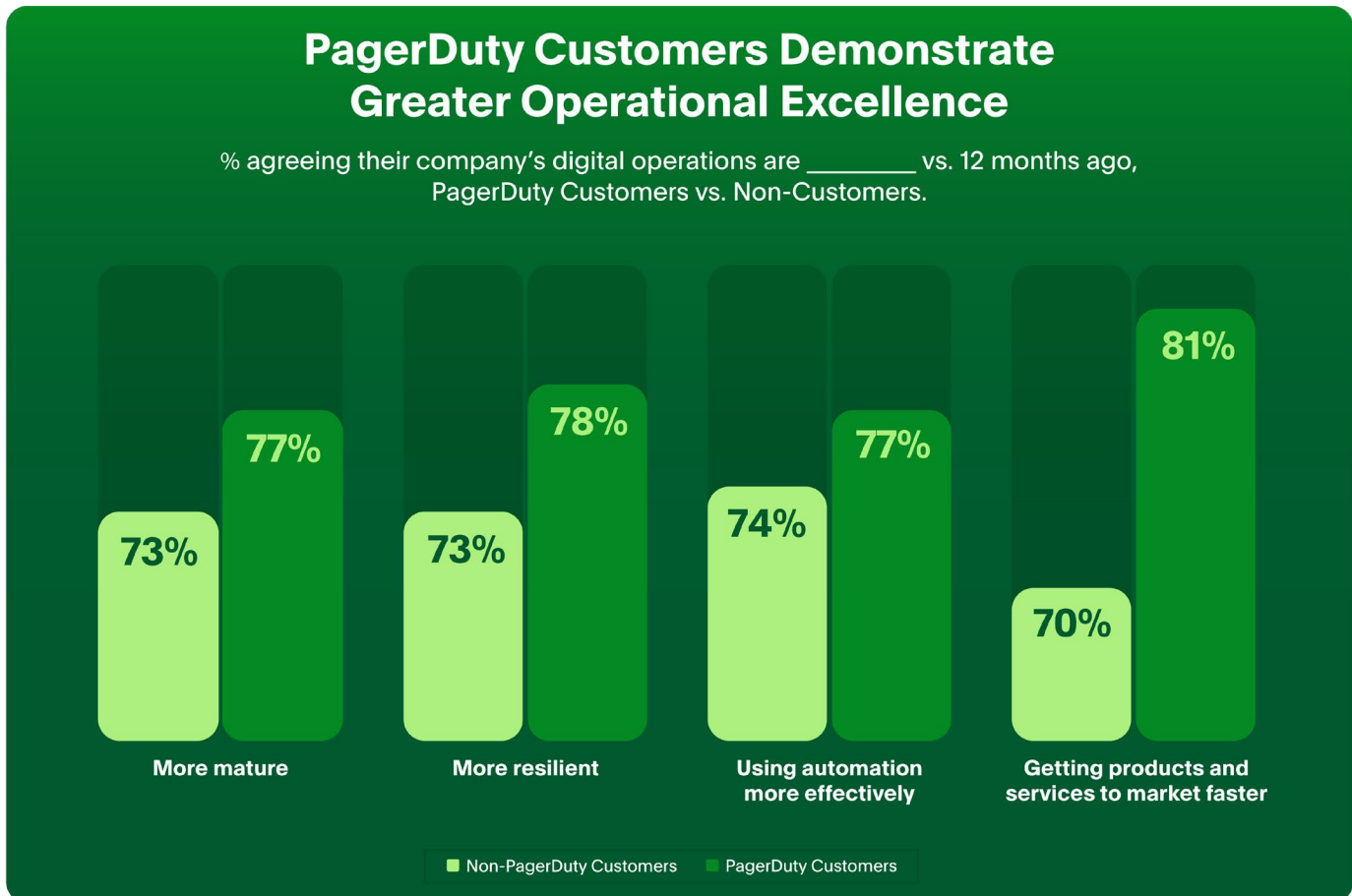
Regional variations in priorities highlight distinct security challenges. Following several high-profile cyberattacks in recent years, North American companies (51%) expect IT to have the greatest involvement in implementing protective measures. In contrast, EMEA (42%) and APJ (43%) show tempered expectations, especially given the former's strict data protection laws. These regional differences underscore the importance of nuanced, location-specific cybersecurity strategies that account for local regulatory environments and threat landscapes.

The multifaceted emphasis on security revealed in our research signals a shift in how organizations view data protection. It's no longer only a protective measure or compliance requirement, but a key enabler of business continuity and operational resilience. Organizations that can effectively integrate cybersecurity measures across their digital operations will be best positioned to thrive in an increasingly complex and threat-prone environment.

The PagerDuty Advantage: Accelerating Digital Operations

As we explored throughout the report, the landscape of digital operations in 2025 will be characterized by an intensifying adoption of AI and automation, a focus on customer-centric innovation, and the imperative to build operational resilience. Our data reveals a clear advantage for organizations leveraging the PagerDuty Operations Cloud to achieve these outcomes.

PagerDuty customers consistently demonstrate higher levels of digital maturity and resilience than non-customers. They report using automation more effectively than non-customers (77% vs. 74%) and indicate higher operational maturity (77% vs. 73%) and operational resilience (78% vs. 73%). Our customers also report getting products to market faster (81% vs. 70%). These advantages are critical in today's landscape, where efficiency, innovation, and resilience create competitive advantage and help determine market leadership. By providing a platform built on strong AI and automation foundations, PagerDuty is helping organizations drive the operational excellence and resilience that will define success in digital operations in 2025.



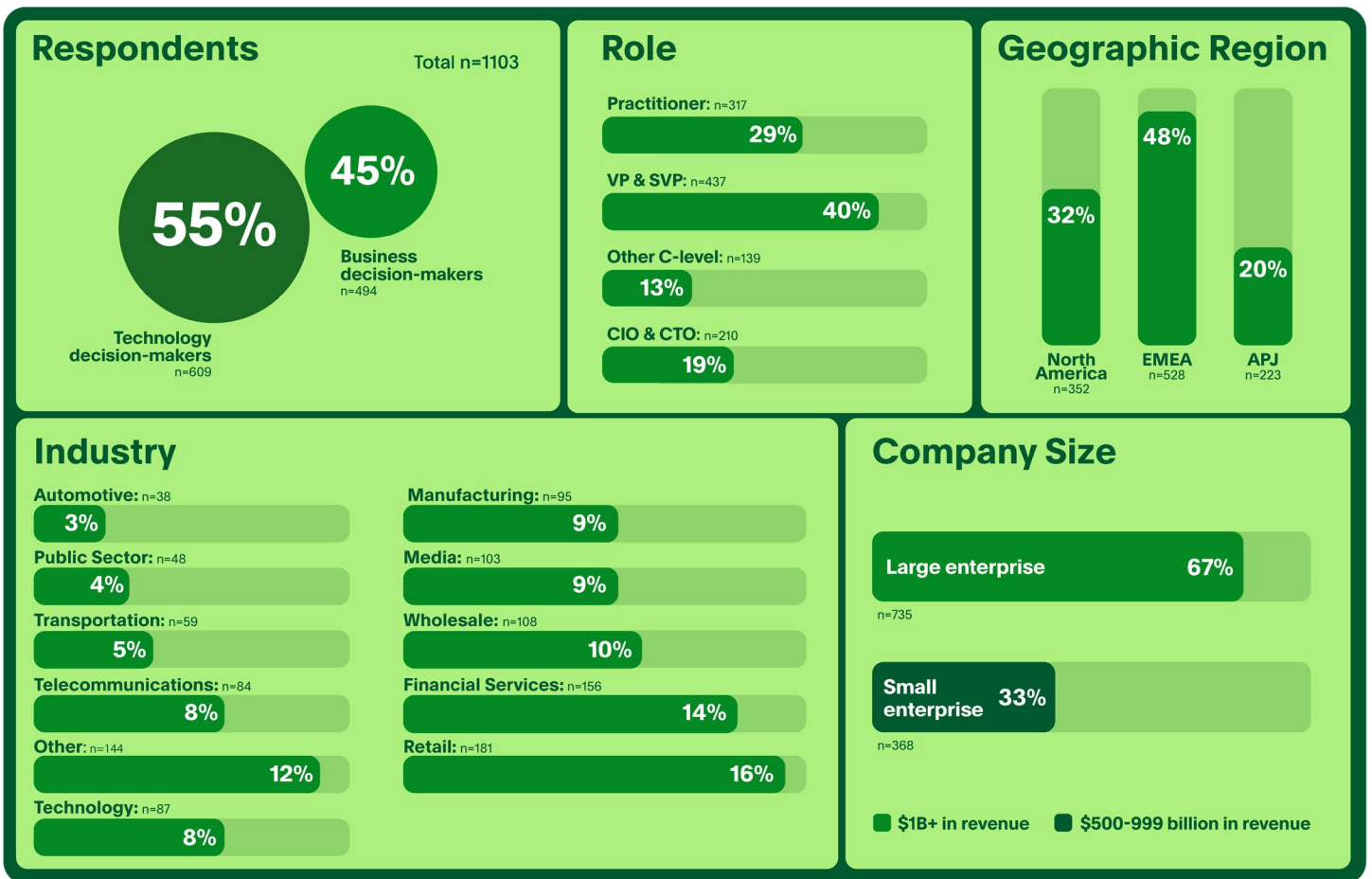
Conclusion

As we move into 2025, organizations that invest in the right platforms to mitigate risk, build resilience, and strategically leverage AI will be best positioned to thrive. Companies that build and transform their digital operations on a foundation of AI and automation will set themselves apart from competitors and create a sustainable competitive advantage. PagerDuty is committed to supporting this journey, helping organizations navigate the complexities of modern digital operations and turn the promises of advanced technologies into tangible business value.

Methodology

The 2025 PagerDuty State of Digital Operations report draws insights from a comprehensive survey of 1,100 IT and business leaders. All respondents hold director-level and above positions at enterprise companies generating at least \$500 million USD in annual revenue. The survey maintained a balanced 55/45 quota across seven key markets: the United States (n=352), Japan (n=148), Australia and New Zealand (n=75), the United Kingdom and Ireland (n=140), France (n=101), Germany (n=140), and the Nordics (n=147).

Data collection occurred between November 6th and November 23rd, 2024, using email invitations and an online survey platform. The survey captured data from a wide-range of industries and functional areas, providing a comprehensive view of the IT operations landscape. This approach ensured a diverse and representative sample of global enterprise perspectives on digital operations.



Industry Highlights

We identified the following insights from six industries.

Retail

Retail (n=181) balances operational resilience (71%) with customer experience priorities, focusing heavily on predictive analytics (42%) and process automation. The sector demonstrates growing confidence in AI adoption, with 75% identifying high-value use cases, though employee anxiety (31%) remains the top automation challenge. While showing more modest agentic AI adoption rates (29% view it as core), the sector maintains strong investment plans, with 72% expanding AIOps budgets and 71% increasing agentic AI investments. A notable disparity between technical and business decision-makers regarding budget growth (54% vs 33%) suggests different perspectives on technology investment priorities.

Financial Services

Financial Services (n=156) maintains a measured approach to digital operations advancement, balancing innovation with regulatory compliance. While 70% report increased resilience, the sector faces unique challenges in identifying automation use cases (35%) and addressing data security concerns. Despite these challenges, 74% are optimizing or innovating with AI, and 42% view agentic AI as core to the future of their operations. Budget expansion plans focus on process automation (68%) and AIOps (65%).

Media

Media (n=103) emerges as the clear leader in digital operations maturity, with 86% reporting increased resilience and 88% citing faster time-to-market. The sector shows exceptional confidence in AI adoption, with respondents citing strengths in identifying high-value use cases (87%) and using AI more effectively than last year (88%). While talent development remains a key challenge (37%), Media demonstrates the highest propensity for agentic AI adoption, with 61% viewing it as core to future operations.

Technology

Technology (n=87) leads in emerging technology adoption, particularly in security threat detection (53%) and agentic AI experimentation (47%). The sector shows substantial AI maturity, with 81% identifying high-value use cases. While facing challenges in talent development (36%) and use case identification (37%), the sector maintains aggressive investment plans, with 80% expanding GenAI budgets and 75% increasing agentic AI investments.

Wholesale

Wholesale (n=108) demonstrates strong operational resilience (72%) and confidence in risk management (82%). The sector shows the highest budget expansion rates across all technology categories, with 90% planning to increase agentic AI investments. Key challenges include data security concerns (33%) and use case identification (30%).

Manufacturing

Manufacturing (n=95) prioritizes data management (51%) and security threat detection (49%), focusing on operational efficiency and risk mitigation. The sector reports substantial progress in AI effectiveness (81%) but faces significant challenges in talent development (46%) and data security (45%). Investments in GenAI (86%) and agentic AI (78%) are increasing.

Regional Highlights

The following provides a snapshot of the findings for the three regions discussed in the report.

North America

North America leads in digital operations maturity (80%) and confidence, with notably higher rates of AI adoption and operational resilience than other regions. Organizations in the region show strong momentum in bringing products to market faster (82%) and leveraging automation effectively (80%). Additionally, it shows particular strength in identifying high-value AI use cases and maintaining reliable digital customer experiences. While the region reports the most mature digital operations and AI effectiveness, the fierce competition for skilled talent remains a top challenge (38%) despite a decrease in overall hiring. Regional data came from 352 respondents in the United States.

EMEA

EMEA is taking a measured and holistic approach to digital operations advancement, balancing innovation with pragmatic implementation. While it shows strong progress in operational resilience (72%), compliance requirements and security concerns reflect its complex compliance environment. A significant difference in budget expectations between technical and business decision-makers (61% vs. 76%) suggests different perspectives on investment priorities and the potential misalignment of key initiatives. Data security concerns top the list of automation challenges (35%), and companies are focused on enhancing processes with automation without disrupting existing processes (91%). Regional data came from 528 respondents in France, Germany, Ireland, the United Kingdom, and the Nordic countries of Denmark, Finland, Norway, and Sweden.

APJ

APJ demonstrates an aggressive adoption of emerging technologies, particularly in security threat detection (43%) and agentic AI experimentation (41%). The region shows the highest readiness to integrate agentic AI in its digital operations, with 46% of respondents saying it will be core to the business within the next 1-2 years, much higher than EMEA (33%) and slightly ahead of North America (42%). While overall operational resilience metrics lag behind other regions (61%), regional organizations show a strong commitment to operational advancement through increased budget allocation and staffing plans. Employee anxiety about automation remains a key challenge (33%) despite its high adoption of advanced technologies. The investment outlook is positive, with most companies planning to grow IT budgets (64%) and GenAI utilization (67%). Regional data came from 223 respondents in Australia, Japan, and New Zealand.

About PagerDuty

PagerDuty, Inc. (NYSE:PD) is a global leader in digital operations management, enabling customers to achieve operational efficiency at scale with the PagerDuty Operations Cloud. The PagerDuty Operations Cloud combines AIOps, Automation, Customer Service Operations and Incident Management with a powerful generative AI assistant to create a flexible, resilient, and scalable platform to increase innovation velocity, grow revenue, reduce cost, and mitigate the risk of operational failure. Half of the Fortune 500 and nearly 70% of the Fortune 100 rely on PagerDuty as essential infrastructure for the modern enterprise. To learn more and try PagerDuty for free, visit www.pagerduty.com.