



PagerDuty

Digital Dependency in 2021:

The Urgency of Real Time Operations

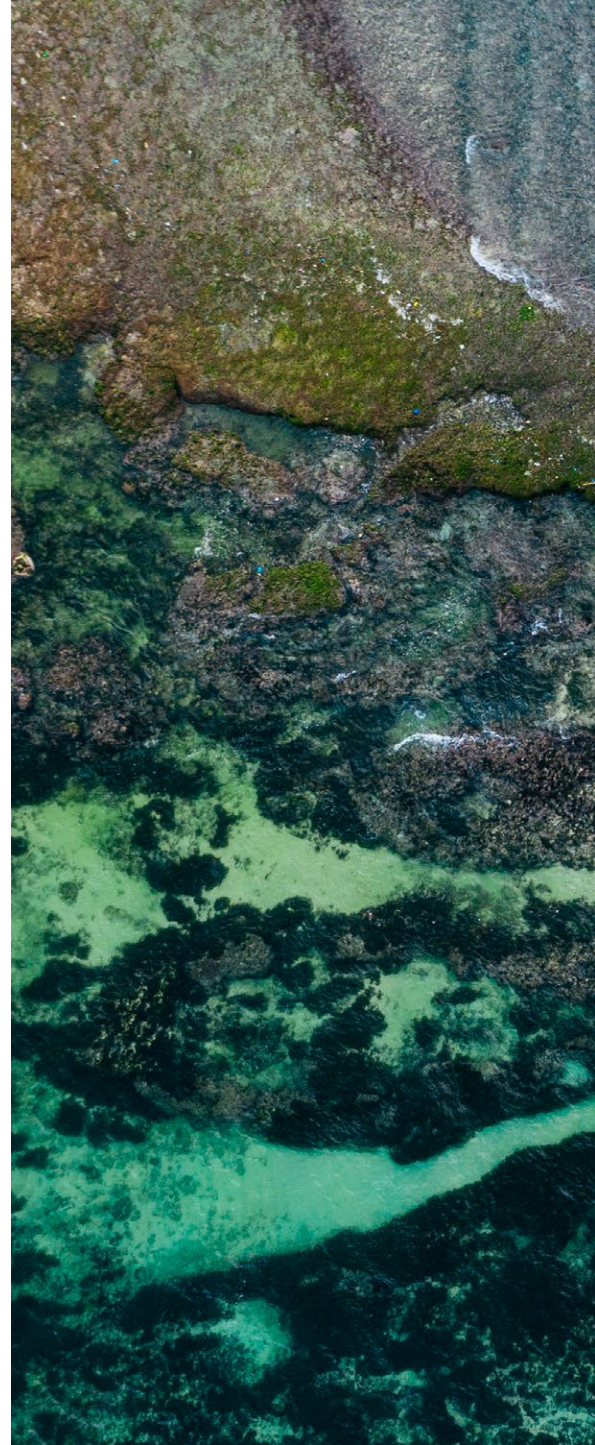
Global Tech Leadership Report

Surging digital dependency demands new operations approach

Customer experience is at the forefront of [C-level conversations](#), and leaders are putting their money where their mouth is. Whether B2B or B2C, modern customer expectations for digital, hybrid, and omnichannel experiences are higher than ever: everything must be seamless and available 24/7, 365 days a year. Reliability and innovation are business imperatives, and all eyes are on technical leadership to deliver.

But digital is hard. As with any complex systems, technology will break down and [trends show that digital incidents are on the rise](#) across the board. Left unchecked, these incidents threaten to not only damage customer experiences and business revenue, but also employee morale and retention.

Organizations must find a new, sustainable way of supporting both innovation and incident response that can unlock better digital operations, enable faster remediation, and keep the business always on.





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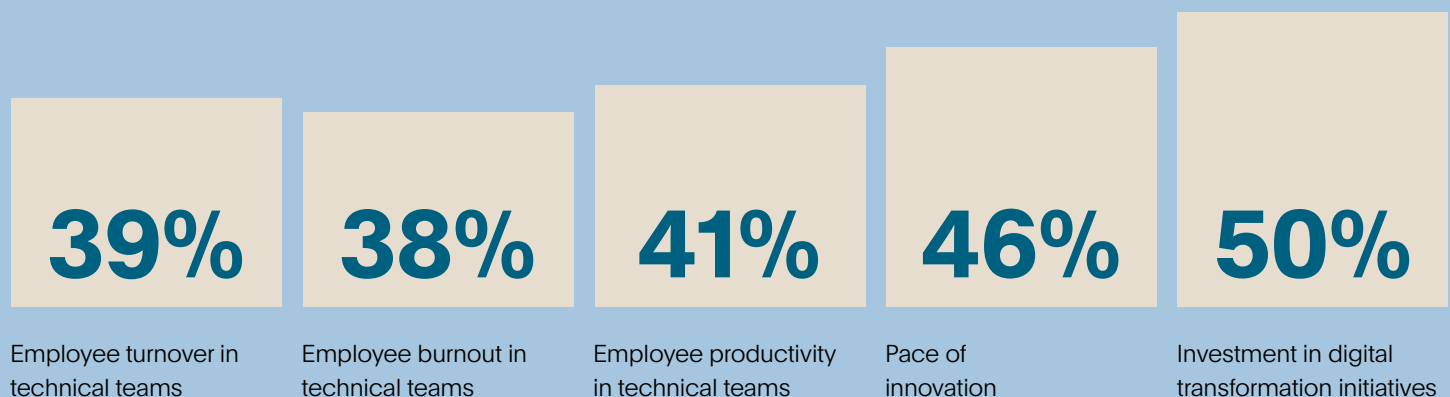
The pressure to deliver on digital and business outcomes

The pressure on technical leaders has never been greater. They're charged with delivering more innovation, faster, and tasked with finding cost savings and efficiencies, all while maintaining high availability of services and managing technical debt. Leaders are also working hard to align IT strategies with those of the wider business, which, amidst the setting of the Great Resignation, shines a light on the importance of keeping teams happy and productive to avoid burnout and attrition. A critical component of delivering on these aims is investing in the cultural changes required for long-lasting digital operations maturity. This will help shift the organization from a reactive state towards a more proactive posture.

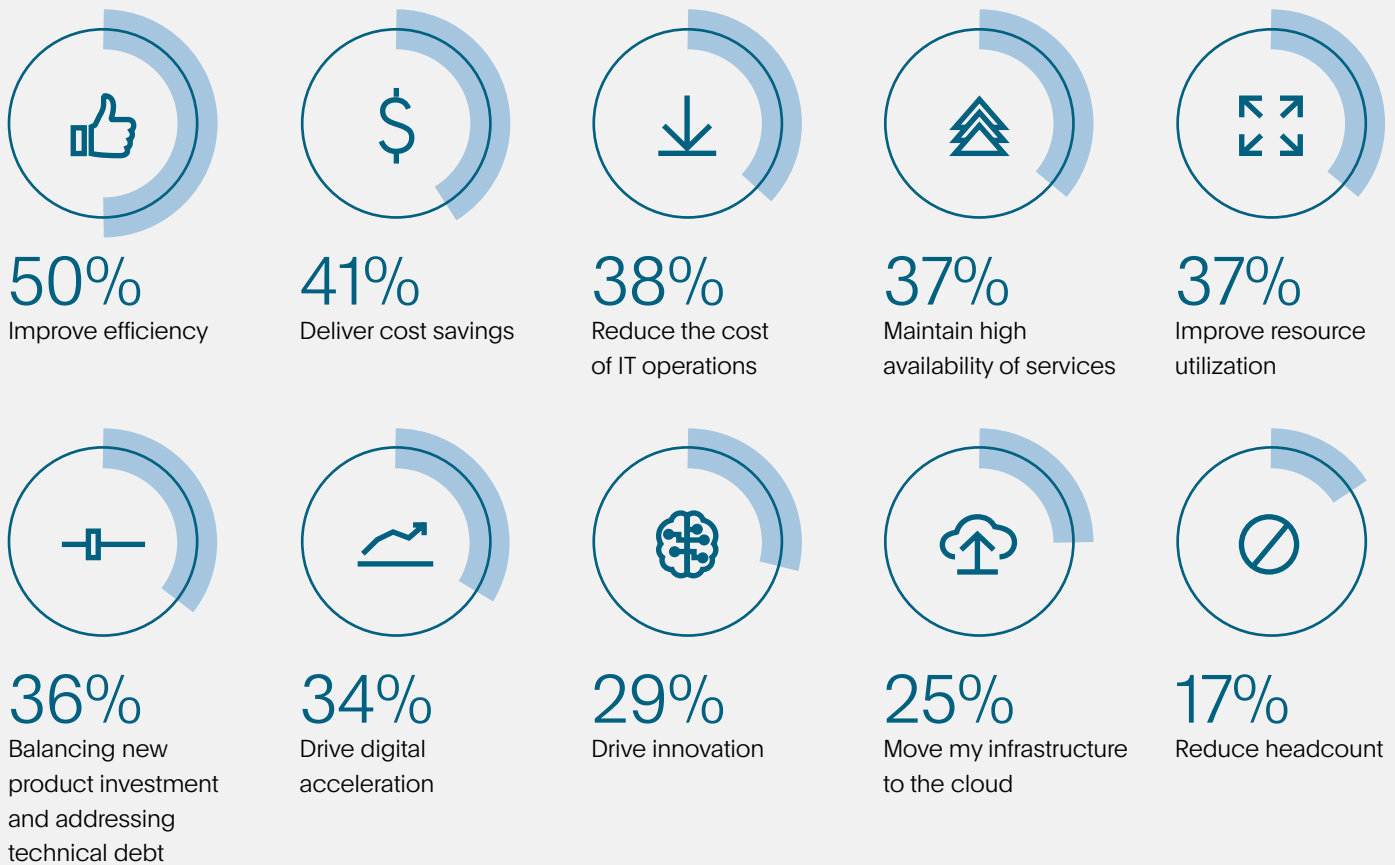
- 71% of leaders say that digital channels are more important to them than ever before
- 72% are accelerating their digital transformation strategy
- 64% say 2020 has taught them the importance of maturing digital operations to be more proactive
- 66% said their IT strategy has become more aligned to their wider business strategy
- 74% of those that have invested in DevOps say their IT strategy is more aligned with the wider business strategy, compared to 52% of those that have NOT invested in DevOps

68%
report that they are doubling down on their digital transformation strategy

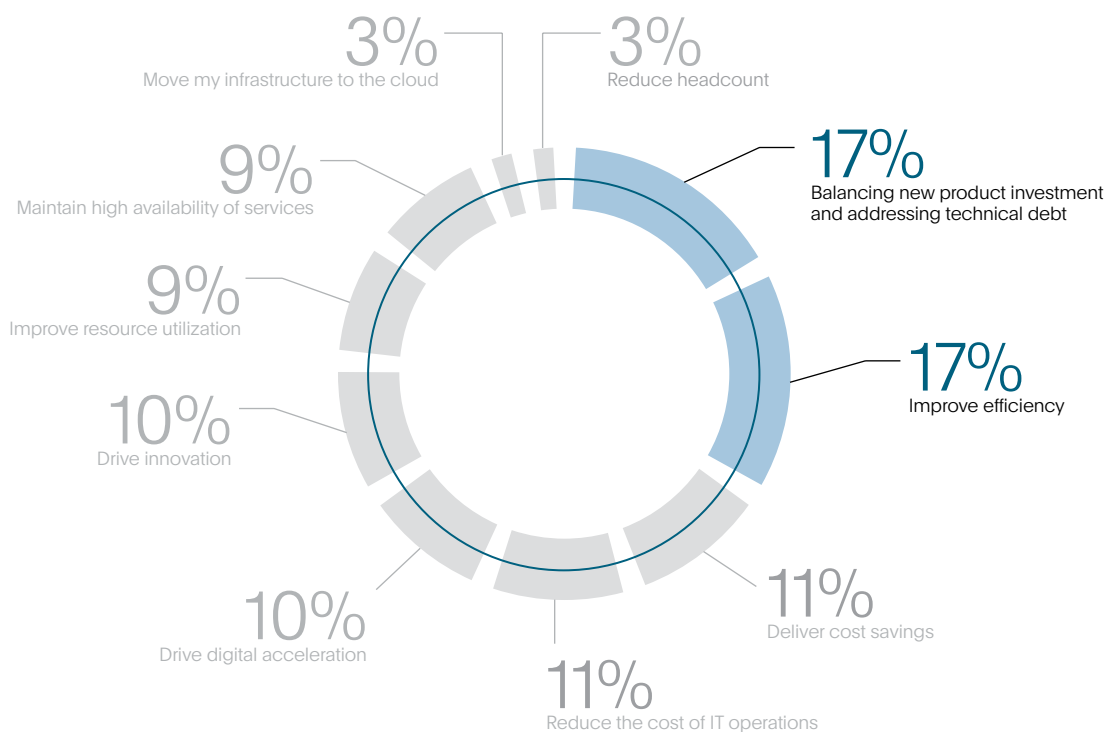
In the last 12 months, what increase have you see in the following areas?



As a technology leader in your organization, what are you expected to deliver?



Of these responsibilities, which are you under the most pressure to deliver?



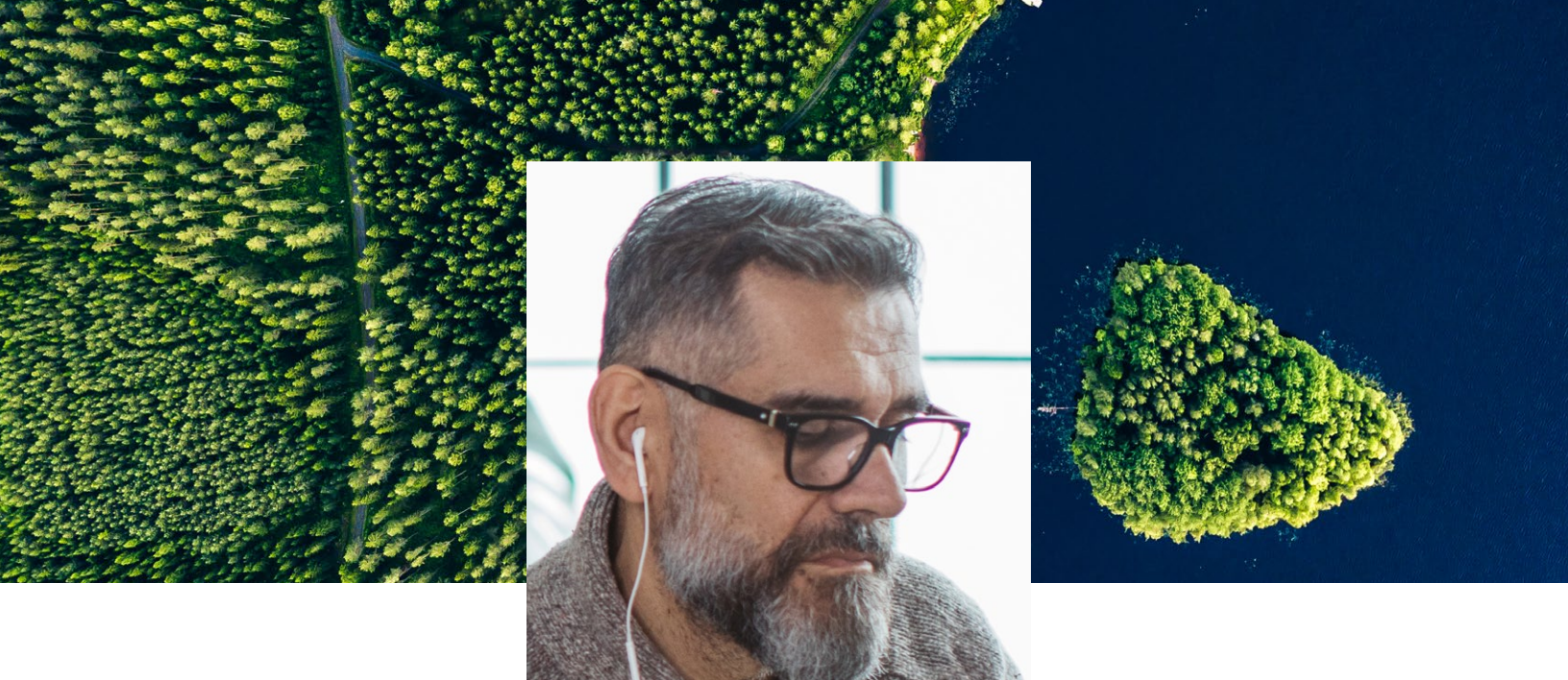
Traditional operating models aren't keeping up

Organizations cannot unlock the agility and scale afforded by migrating to the cloud or adopting microservice architecture without introducing more change and complexity to the system, which inevitably creates more noise and more incidents. But incidents are disruptive to productivity and highly stressful to responders on the front-line. Leaders need to empower teams with the processes and technologies that will help them resolve incidents quickly and mitigate the impact on the business. However, they're often hampered by legacy IT operating models that were not built for the dynamic and complex technology stacks of the modern era.

- 62% say it is hard to find the right person to fix an issue because services have introduced complexity and multiple owners
- 61% feel cloud adoption has resulted in increased complexity
- 65% of leaders say there is a lack of service ownership, increasing the time to resolve digital incidents
- 62% say the traditional, ticket-based approach to ITOps means IT teams waste time figuring out how to respond to digital incident

91%
say that traditional IT Operations is no longer fit for purpose in the digital era





Balancing incident response with innovation

The increasing volume of digital traffic and incidents presents a significant challenge to leaders seeking to accelerate innovation with these same teams. With customer-facing digital services having a direct impact on the bottom line, and technical teams scrambling to make sure these services are available 24/7, it's a particularly difficult task to mitigate the time spent firefighting so that innovation doesn't take a backseat. Time and resourcing, after all, are limited, and tech leaders are forced to strike a balance between building new features and maintaining existing services. In light of all this, workload management and team health must also be a top priority to keep individuals happy and productive. To innovate at pace, leaders need a more dynamic, sustainable way to handle digital incidents.

- 69% of leaders are constantly having to balance the need for innovation against the need to tackle digital incidents
- 62% have felt a rise in pressure on customer-facing digital services
- 78% say the growing number of incidents has put extra pressure on technical teams
- 70% believe that if they are to innovate at pace, they need a new way to deal with rising digital incidents

3 in 5
leaders believe
innovation has taken a
backseat to firefighting
digital incidents

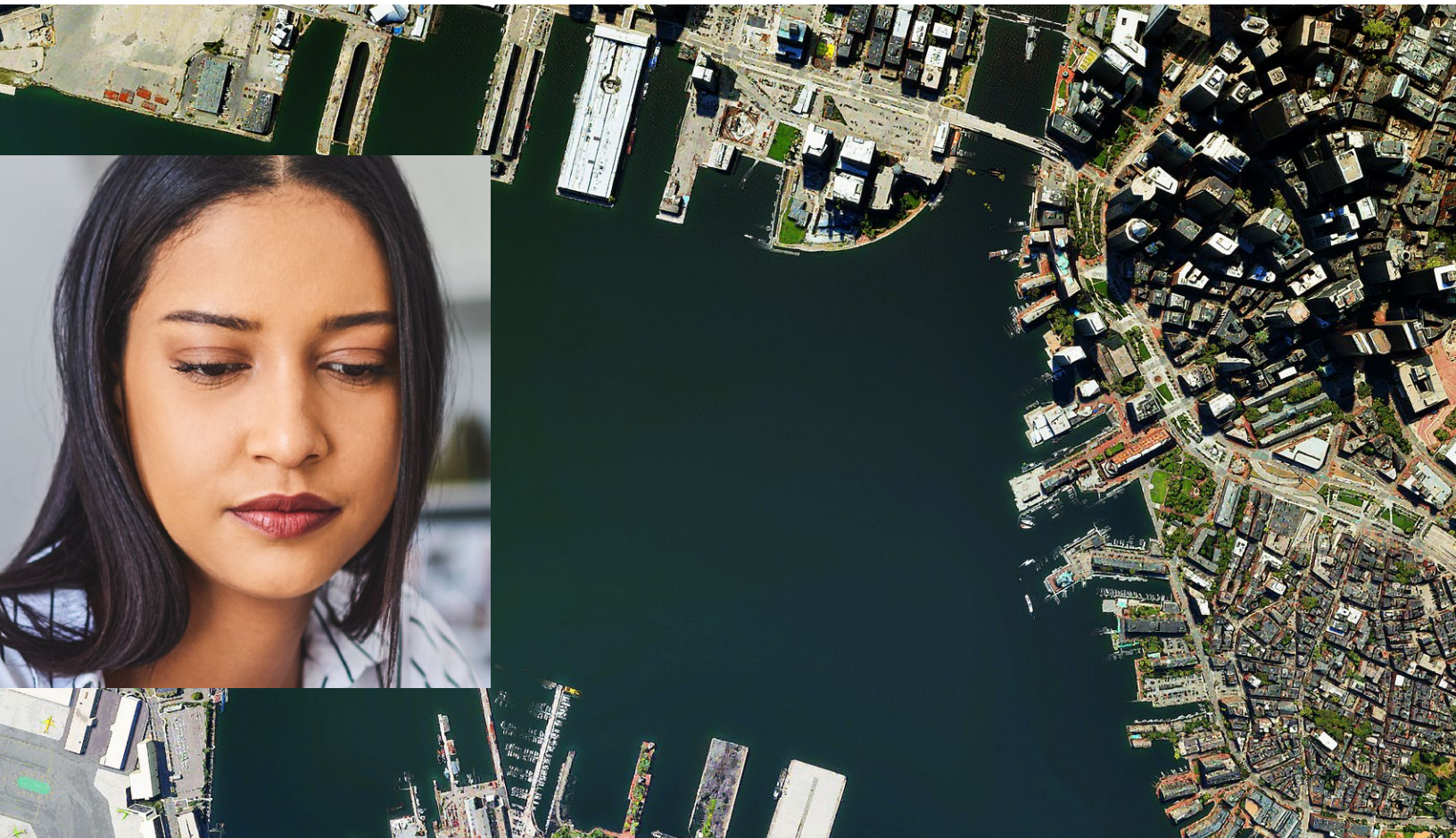
The business and human impact of incidents

The status quo causes pain across the board and has ripple effects that can create long-lasting damage to the organization. For the business, incidents can erode the customer experience and threaten the bottom line. A considerable amount of revenue is lost every year as technical teams are forced to spend so much of their day dealing with digital incidents. This increased burden is also a risk to teams' well-being, and can hurt employee morale and productivity.

- \$3.458M per year is lost to IT teams dealing with digital incidents¹
- 44% of IT teams' time is spent dealing with digital incidents
- 40% of organizations say that rising digital incidents have resulted in reduced revenues

38%
of organizations have
seen an increase in
employee burnout in
technical teams

1. An average of \$7.86m is spent on IT teams each year; teams spend 44% of their time dealing with digital incidents.





When seconds matter, real-time digital operations is the answer

Leaders want to do better. They know that uptime is money and that incidents can cost millions. They want the ability to gain deeper context on digital incidents, to mobilize response teams in real-time, and to collaborate seamlessly with other teams across the business. This requires a shift away from traditional, ticket-based approaches to ITOps towards more proactive solutions that enable organizations to react in real-time, as well as take ownership of services.

To enable this modern vision of real-time operations, leaders are looking towards AIOps tools and automation to increase productivity and reduce the toil of manual, repetitive work on technical teams. A real-time operations cloud can reduce delays from manual incident routing, boost collaboration, and free teams to focus on innovation. When seconds matter, the PagerDuty operations cloud is the best way to keep your digital services always on.

65%
of organizations say that adopting real-time digital operations will allow them to reduce the cost of ITOps and accelerate innovation

Which of the following would help your IT teams to keep digital services always on and allow them to rapidly respond to digital incidents?



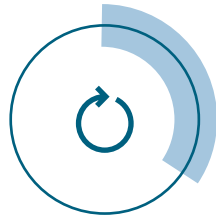
37%

of leaders want the ability to mobilize an incident response team in real-time



43%

want to get more context on digital incidents to identify the right plan of action for incident response



38%

want the ability to drive a coordinated business response by updating stakeholders in real-time



53%

say collaborating with other business teams, such as customer service, would help their IT teams to keep digital services always on, and allow them to rapidly respond to digital incidents



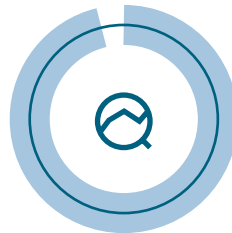
73%

of leaders have invested, or plan to invest, in AIOps tools and automation to cope with rising digital pressure



37%

say that the adoption of real-time operations will allow them to better collaborate with other teams, such as customer service



97%

want to shift to real-time digital operations to improve their ability to keep digital services always-on



28%

of organizations believe real-time operations will reduce employee burnout

Appendix

Digital dependency in 2021: real time global and regional data breakdown

1. What proportion of your tech stack is hosted in the cloud?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Less than 10% (10)	3%	–	4%	4%	6%	3%	3%	4%	2%	4%
Approximately 25% (25)	26%	24%	26%	26%	21%	24%	27%	38%	14%	44%
Approximately 50% (50)	40%	44%	38%	38%	47%	36%	42%	34%	39%	34%
Approximately 75% (75)	25%	20%	28%	27%	21%	30%	21%	20%	40%	16%
More than 90% (90)	7%	12%	4%	5%	6%	6%	6%	4%	5%	2%

2. Has cloud adoption resulted in an increase in complexity across your digital operations?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes	61%	54%	64%	61%	62%	70%	55%	58%	66%	70%
No	39%	46%	36%	39%	38%	30%	45%	42%	34%	30%

3. Have you invested in DevOps methodologies (i.e. agile, service ownership)?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes	65%	61%	66%	64%	65%	76%	73%	58%	69%	70%
No	35%	39%	34%	36%	35%	24%	27%	42%	31%	30%

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4. How much, in USD equivalent, do you estimate your organization has spent on IT staff (including full time and part time staff salaries and also contractors costs) in the last 12 months?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Under \$500,000 (0.5)	1%	-	2%	2%	-	-	-	4%	-	-
Approximately \$500,000 - \$1 million (0.75)	11%	10%	7%	14%	12%	15%	27%	6%	6%	12%
Approximately \$1 million - \$2 million (1.5)	14%	12%	19%	21%	9%	6%	9%	10%	12%	12%
Approximately \$2 million - \$5 million (3.5)	19%	20%	15%	18%	24%	30%	12%	20%	16%	24%
Approximately \$5 million - \$10 million (7.5)	22%	25%	25%	15%	12%	24%	21%	22%	20%	24%
Approximately \$10 million - \$15 million (12.5)	18%	18%	14%	15%	18%	6%	15%	24%	24%	24%
Approximately \$15 million - \$20 million (17.5)	12%	12%	14%	12%	21%	9%	9%	6%	18%	2%
Approximately \$20 million - \$25 million (22.5)	3%	2%	4%	2%	3%	9%	3%	6%	4%	-
Over \$25 million (25)	1%	-	-	1%	3%	-	3%	-	-	2%
Unsure	*	-	-	-	-	-	-	2%	-	-

5. In the last 12 months, have you seen increased pressure / usage on your organization's customer facing digital services?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes	62%	65%	66%	63%	59%	61%	48%	54%	64%	62%
No	38%	35%	34%	37%	41%	39%	52%	46%	36%	38%

Proportion of tech stack hosted in the cloud

	Total	Less than 10%	Approximately 25%	Approximately 50%	Approximately 75%	More than 90%
Yes	62%	67%	68%	63%	60%	45%
No	38%	33%	32%	37%	40%	55%

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6. Have you invested in, or do you plan to invest in, AIOps and automation to help enable real-time digital operations? Which of the following best applies?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes - we've invested in it	43%	42%	37%	44%	44%	48%	45%	34%	53%	34%
No - but we plan to invest it	30%	31%	35%	29%	24%	18%	30%	28%	27%	36%
No, and we have no plans yet to invest in it	27%	26%	28%	27%	32%	33%	24%	38%	20%	30%

7a. In the last 12 months, have you seen an increase in the number of customer impacting digital incidents? (e.g outages or issues impacting customer facing digital services)

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes, we've seen an increase	68%	69%	70%	54%	74%	79%	61%	64%	80%	68%
No, it's stayed the same	28%	29%	28%	41%	24%	15%	33%	32%	16%	24%
No, we've seen a decrease	4%	2%	2%	5%	3%	6%	6%	4%	4%	8%

	Investment in DevOps	
	Total	No, have not invested in DevOps
Yes, we've seen an increase	68%	55%
No, it's stayed the same	28%	39%
No, we've seen a decrease	4%	7%

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7b. Can you estimate by what % you have seen a growth in digital incidents, in the last 12 months?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Increase by above 100% (100)	-	-	-	-	-	-	-	-	-	-
Increase by 91-100% (95.5)	6%	4%	9%	4%	12%	4%	5%	9%	4%	9%
Increase by 81-90% (85.5)	8%	8%	7%	4%	4%	15%	15%	6%	14%	3%
Increase by 71-80% (75.5)	13%	13%	13%	15%	8%	4%	10%	12%	15%	18%
Increase by 61-70% (65.5)	11%	12%	6%	15%	12%	4%	5%	6%	16%	9%
Increase by 51-60% (55.5)	16%	16%	19%	15%	12%	15%	20%	16%	15%	12%
Increase by 41-50% (45.5)	15%	17%	16%	11%	12%	8%	20%	22%	8%	21%
Increase by 31-40% (35.5)	14%	12%	17%	17%	12%	15%	10%	9%	18%	9%
Increase by 21-30% (25.5)	9%	9%	6%	9%	8%	15%	5%	9%	9%	15%
Increase by 11-20% (15.5)	8%	8%	9%	11%	12%	15%	5%	9%	1%	6%
Increase less than 10% (10)	1%	1%	-	-	8%	4%	5%	-	1%	-

7c. Has this put extra pressure on your technical teams?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes	78%	79%	90%	69%	92%	77%	75%	78%	74%	71%
No	22%	21%	10%	31%	8%	23%	25%	22%	26%	29%

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7d. Can you estimate by what % you have seen a decline in digital incidents, in the last 12-months?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Decrease by above 100% (100)	-	-	-	-	-	-	-	-	-	-
Decrease by 91-100% (95.5)	4%	-	-	20%	-	-	-	-	-	-
Decrease by 81-90% (85.5)	4%	-	-	-	-	50%	-	-	-	-
Decrease by 71-80% (75.5)	4%	-	-	-	-	-	-	-	25%	-
Decrease by 61-70% (65.5)	-	-	-	-	-	-	-	-	-	-
Decrease by 51-60% (55.5)	4%	-	-	-	-	-	-	50%	-	-
Decrease by 41-50% (45.5)	15%	-	100%	-	-	-	50%	-	-	25%
Decrease by 31-40% (35.5)	12%	25%	-	-	-	-	-	-	50%	-
Decrease by 21-30% (25.5)	35%	25%	-	60%	100%	50%	50%	-	25%	25%
Decrease by 11-20% (15.5)	19%	50%	-	20%	-	-	-	-	-	50%
Decrease less than 10% (10)	4%	-	-	-	-	-	-	50%	-	-

8. In the last 12 months, and as a result of rising digital incidents, which of the following has impacted you?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
We have been forced to do more with less	51%	56%	54%	48%	48%	62%	60%	38%	46%	41%
We have seen reduced revenues	40%	45%	41%	31%	36%	62%	30%	31%	36%	38%
We have failed to meet service level agreements	33%	33%	41%	28%	32%	23%	30%	16%	39%	38%
We have suffered reputational damage to our brand	27%	28%	26%	24%	40%	27%	25%	25%	34%	6%
We have lost customers to rival services	26%	24%	29%	28%	24%	19%	30%	19%	28%	29%
Other	-	-	-	-	-	-	-	-	-	-
None	7%	7%	3%	7%	8%	4%	10%	19%	6%	12%

Appendix

9a. In the last 12 months, what change have you seen in the following areas? (Increase - Summary Table)

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Employee turnover in technical teams	39%	40%	42%	35%	26%	27%	39%	18%	52%	46%
Employee burnout in technical teams	38%	36%	43%	45%	38%	33%	30%	24%	46%	30%
Employee productivity in technical teams	41%	43%	38%	37%	50%	58%	42%	36%	40%	38%
Pace of innovation	46%	50%	43%	45%	29%	48%	42%	50%	46%	42%
Investment in digital transformation initiatives	50%	53%	54%	41%	50%	36%	55%	50%	57%	40%

9b. In the last 12 months, what change have you seen in the following areas? (Stayed the Same - Summary Table)

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Employee turnover in technical teams	38%	40%	39%	33%	47%	52%	39%	40%	27%	38%
Employee burnout in technical teams	39%	39%	39%	40%	38%	48%	27%	38%	32%	50%
Employee productivity in technical teams	36%	32%	39%	40%	35%	27%	33%	42%	36%	44%
Pace of innovation	36%	33%	38%	27%	47%	27%	45%	36%	40%	42%
Investment in digital transformation initiatives	34%	30%	35%	41%	29%	45%	24%	36%	29%	44%

10. What proportion of their time do you estimate technical teams spend on dealing with IT outages and digital incidents?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Less than 20% (20)	4%	3%	3%	4%	12%	-	3%	6%	2%	4%
Approximately 20%-30% (25)	23%	23%	25%	36%	21%	21%	15%	16%	14%	24%
Approximately 30%-40% (35)	19%	12%	20%	24%	18%	33%	21%	18%	14%	28%
Approximately 40%-50% (45)	20%	22%	13%	22%	15%	3%	21%	22%	24%	22%
Approximately 50%-60% (55)	18%	22%	23%	7%	15%	24%	24%	16%	21%	8%
Approximately 60%-70% (65)	11%	12%	9%	5%	9%	15%	3%	10%	17%	10%
Approximately 70%-80% (75)	7%	6%	7%	2%	12%	3%	12%	10%	8%	4%
More than 80% (80)	-	-	-	-	-	-	-	-	-	-
Don't know	*	-	-	-	-	-	-	2%	-	-

Appendix

11. To what extent do you agree or disagree with the following statements?

“Digital channels are more important to us than ever before”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	40%	42%	47%	33%	47%	30%	39%	48%	36%	28%
Agree	31%	33%	27%	30%	29%	21%	33%	26%	34%	44%
<i>Net: Agree</i>	71%	75%	74%	63%	76%	52%	73%	74%	70%	72%
Disagree	16%	10%	17%	17%	9%	18%	18%	20%	20%	18%
Strongly disagree	13%	14%	9%	20%	15%	30%	9%	6%	10%	10%
<i>Net: Disagree</i>	29%	25%	26%	37%	24%	48%	27%	26%	30%	28%

“We are doubling down on our digital transformation strategy”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	34%	40%	31%	31%	32%	33%	45%	30%	31%	24%
Agree	34%	28%	34%	37%	41%	30%	30%	32%	35%	44%
<i>Net: Agree</i>	68%	69%	65%	68%	74%	64%	76%	62%	66%	68%
Disagree	21%	18%	29%	21%	9%	33%	18%	24%	17%	24%
Strongly disagree	11%	12%	6%	11%	18%	3%	6%	14%	17%	8%
<i>Net: Disagree</i>	32%	31%	35%	32%	26%	36%	24%	38%	34%	32%

Appendix

“We are accelerating our digital transformation strategy”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	39%	42%	37%	32%	44%	36%	42%	36%	42%	40%
Agree	33%	38%	35%	31%	38%	24%	21%	38%	31%	24%
<i>Net: Agree</i>	72%	80%	72%	63%	82%	61%	64%	74%	73%	64%
Disagree	17%	14%	21%	25%	15%	24%	18%	10%	13%	18%
Strongly disagree	11%	6%	7%	12%	3%	15%	18%	16%	14%	18%
<i>Net: Disagree</i>	28%	20%	28%	37%	18%	39%	36%	26%	27%	36%

“We are slowing down to reprioritize our digital strategy”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	15%	15%	15%	16%	9%	18%	21%	14%	14%	10%
Agree	26%	20%	26%	27%	18%	18%	36%	32%	29%	44%
<i>Net: Agree</i>	41%	35%	41%	43%	26%	36%	58%	46%	43%	54%
Disagree	36%	37%	40%	34%	44%	33%	30%	32%	35%	34%
Strongly disagree	23%	28%	19%	23%	29%	30%	12%	22%	22%	12%
<i>Net: Disagree</i>	59%	65%	59%	57%	74%	64%	42%	54%	57%	46%

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12. Has your IT strategy become more or less aligned with the wider business strategy in the last 12-months? Which best applies?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Our IT strategy is more aligned	66%	70%	65%	58%	59%	82%	73%	48%	83%	46%
The same as before	30%	26%	32%	39%	38%	18%	24%	50%	16%	42%
Our IT strategy is less aligned	4%	4%	3%	3%	3%	-	3%	2%	1%	12%

	Investment in DevOps		
	Total	Yes, have invested in DevOps	No, have not invested in DevOps
Our IT strategy is more aligned	66%	74%	52%
The same as before	30%	24%	43%
Our IT strategy is less aligned	4%	3%	5%

13. Broadly speaking, IT activity can be split into two areas. Innovation (i.e. developing new services / applications) and maintenance (i.e. keeping the lights on activity). On average, how much of your technical team's time do you estimate goes into:

Developing new services / applications

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
1%-10%	-	-	-	-	-	-	-	-	-	-
11%-20%	1%	2%	2%	-	3%	-	-	2%	3%	-
21%-30%	10%	3%	14%	15%	9%	15%	9%	6%	10%	18%
31%-40%	15%	12%	18%	14%	15%	15%	24%	18%	14%	14%
41%-50%	35%	38%	33%	36%	44%	42%	24%	30%	28%	32%
51%-60%	25%	30%	21%	16%	24%	21%	24%	30%	28%	24%
61%-70%	12%	14%	10%	14%	3%	6%	18%	10%	14%	10%
71%-80%	2%	1%	2%	5%	3%	-	-	2%	3%	2%
81%-90%	*	-	-	-	-	-	-	2%	-	-
91%-100%	-	-	-	-	-	-	-	-	-	-

Appendix

Maintaining existing services / applications

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
1%-10%	*	-	-	-	-	-	-	2%	-	-
11%-20%	1%	1%	-	4%	-	-	-	-	2%	-
21%-30%	9%	10%	8%	8%	3%	3%	12%	10%	11%	8%
31%-40%	24%	32%	20%	18%	24%	15%	24%	26%	24%	20%
41%-50%	33%	36%	33%	34%	35%	36%	27%	32%	29%	30%
51%-60%	19%	16%	21%	18%	21%	24%	24%	16%	17%	20%
61%-70%	10%	3%	12%	13%	12%	21%	9%	10%	13%	12%
71%-80%	4%	2%	6%	5%	6%	-	3%	4%	4%	10%
81%-90%	-	-	-	-	-	-	-	-	-	-
91%-100%	-	-	-	-	-	-	-	-	-	-

14. How many projects has your organization had to delay or cancel due to the increased focus on firefighting in the last 3-6 months?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
None	6%	10%	4%	4%	3%	3%	6%	10%	2%	4%
1 - 5 (3)	16%	15%	13%	13%	15%	18%	15%	28%	19%	14%
6 - 10 (8)	22%	22%	21%	25%	24%	18%	18%	18%	20%	24%
11 - 15 (13)	25%	24%	22%	36%	12%	33%	24%	18%	24%	28%
16 - 20 (18)	16%	16%	22%	12%	12%	12%	21%	10%	19%	16%
21 - 25 (23)	10%	8%	11%	8%	18%	6%	15%	10%	14%	6%
26 - 30 (28)	5%	4%	7%	2%	18%	9%	-	4%	2%	8%
Over 30 (30)	*	-	-	-	-	-	-	2%	-	-

Appendix

15. To what extent do you agree or disagree with the following statements?

“Innovation has taken a backseat to firefighting digital incidents in the last 12 months”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	24%	26%	26%	19%	21%	24%	24%	26%	28%	22%
Agree	34%	37%	33%	37%	24%	33%	33%	28%	29%	38%
<i>Net: Agree</i>	58%	62%	59%	56%	44%	58%	58%	54%	57%	60%
Disagree	27%	24%	25%	30%	32%	21%	27%	26%	33%	28%
Strongly disagree	15%	13%	16%	14%	24%	21%	15%	20%	10%	12%
<i>Net: Disagree</i>	42%	38%	41%	44%	56%	42%	42%	46%	43%	40%

“Due to the amount of time my team spends firefighting digital incidents, I now think twice before approving new customer facing projects”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	28%	25%	27%	23%	26%	42%	33%	34%	34%	26%
Agree	33%	37%	34%	36%	29%	24%	12%	28%	39%	22%
<i>Net: Agree</i>	61%	62%	61%	59%	56%	67%	45%	62%	73%	48%
Disagree	27%	26%	32%	27%	29%	21%	27%	26%	20%	34%
Strongly disagree	12%	12%	7%	14%	15%	12%	27%	12%	7%	18%
<i>Net: Disagree</i>	39%	38%	39%	41%	44%	33%	55%	38%	27%	52%

Appendix

“Time pressures on my team means I am constantly having to balance the need to innovate against the need to address digital incidents”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	32%	38%	27%	26%	38%	36%	18%	18%	39%	32%
Agree	37%	34%	42%	37%	26%	33%	55%	40%	35%	36%
<i>Net: Agree</i>	69%	72%	69%	63%	65%	70%	73%	58%	74%	68%
Disagree	20%	20%	21%	20%	21%	21%	18%	26%	14%	18%
Strongly disagree	11%	8%	10%	17%	15%	9%	9%	16%	12%	14%
<i>Net: Disagree</i>	31%	28%	31%	37%	35%	30%	27%	42%	26%	32%

“If we are to innovate at pace, we need a new way to deal with rising digital incidents”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	36%	42%	31%	25%	29%	36%	45%	44%	43%	26%
Agree	34%	32%	39%	37%	35%	42%	18%	30%	31%	44%
<i>Net: Agree</i>	70%	73%	70%	62%	65%	79%	64%	74%	74%	70%
Disagree	19%	16%	21%	25%	18%	15%	30%	20%	14%	18%
Strongly disagree	11%	12%	9%	13%	18%	6%	6%	6%	12%	12%
<i>Net: Disagree</i>	30%	27%	30%	38%	35%	21%	36%	26%	26%	30%

Appendix

16a. Thinking about your role, what are you under pressure to deliver?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Improve efficiency	50%	55%	50%	39%	35%	67%	58%	44%	53%	42%
Deliver cost savings	41%	48%	38%	36%	38%	42%	36%	36%	38%	42%
Reduce the cost of IT operations	38%	42%	42%	29%	38%	42%	33%	44%	36%	32%
Maintain high availability of services	37%	38%	42%	35%	44%	27%	36%	24%	42%	36%
Improve resource utilisation	37%	42%	38%	37%	26%	39%	45%	34%	33%	26%
Balancing new product investment and addressing technical debt	36%	36%	39%	38%	18%	39%	42%	34%	33%	34%
Drive digital acceleration	34%	34%	36%	33%	29%	45%	27%	34%	40%	24%
Drive innovation	29%	28%	28%	26%	26%	30%	42%	34%	34%	24%
Move my infrastructure to the cloud	25%	22%	25%	20%	24%	45%	21%	18%	33%	22%
Reduce headcount	17%	17%	15%	15%	26%	21%	15%	16%	16%	24%

16b. And which are you most under pressure to deliver?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Balancing new product investment and addressing technical debt	17%	14%	22%	22%	6%	21%	24%	12%	19%	12%
Improve efficiency	17%	16%	19%	12%	15%	30%	21%	16%	15%	16%
Deliver cost savings	11%	9%	14%	8%	15%	3%	6%	10%	10%	24%
Reduce the cost of IT operations	11%	14%	9%	10%	6%	6%	3%	22%	8%	8%
Drive digital acceleration	10%	8%	5%	15%	15%	21%	9%	16%	9%	8%
Drive innovation	10%	10%	9%	9%	12%	3%	18%	6%	13%	10%
Improve resource utilisation	9%	12%	7%	9%	6%	9%	6%	8%	12%	4%
Maintain high availability of services	9%	10%	8%	6%	15%	-	9%	8%	9%	10%
Move my infrastructure to the cloud	3%	3%	6%	3%	3%	6%	-	-	3%	2%
Reduce headcount	3%	2%	1%	6%	9%	-	3%	2%	2%	6%

Appendix

17. To what extent do you agree or disagree with this statement?

“The traditional, ticket-based approach to IT operations isn’t fit for purpose in the digital age.”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	43%	42%	43%	34%	41%	52%	45%	42%	50%	40%
Agree	48%	51%	51%	54%	41%	39%	36%	52%	42%	48%
<i>Net: Agree</i>	9%	6%	6%	12%	18%	9%	18%	6%	8%	12%
Disagree	7%	4%	4%	12%	15%	9%	9%	4%	7%	8%
Strongly disagree	2%	2%	2%	-	3%	-	9%	2%	1%	4%
<i>Net: Disagree</i>	9%	6%	6%	12%	18%	9%	18%	6%	8%	12%

18. When it comes to IT operations, which of the following pain points, if any, do you face?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Difficulty coordinating a response among technical teams	39%	44%	49%	29%	29%	36%	33%	34%	39%	40%
Slow, manual incident response processes	39%	42%	31%	44%	41%	45%	27%	32%	43%	38%
Difficulty communicating digital incidents with the wider business	34%	34%	41%	33%	38%	27%	30%	26%	35%	30%
Lack of visibility and context into incidents	32%	34%	29%	39%	24%	24%	39%	24%	33%	26%
Having the right tools to respond to incidents	32%	33%	37%	27%	24%	36%	30%	28%	34%	26%
Having the right teams respond to incidents	28%	28%	33%	25%	44%	24%	27%	24%	30%	22%
Lack of business process ownership among users	26%	26%	25%	30%	12%	18%	21%	20%	32%	26%
Too much alert noise	26%	32%	34%	25%	12%	12%	18%	16%	26%	20%
Lack of code ownership	21%	20%	26%	17%	15%	18%	30%	16%	20%	28%
None	3%	2%	1%	4%	3%	6%	3%	4%	5%	2%

Appendix

19. What proportion of their time do you estimate your IT team spends on dealing with alert noise?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Less than 20% (20)	4%	6%	4%	6%	-	-	-	6%	3%	2%
Approximately 20%-30% (25)	24%	26%	24%	27%	26%	27%	21%	26%	13%	32%
Approximately 30%-40% (35)	20%	20%	22%	17%	26%	9%	30%	18%	21%	24%
Approximately 40%-50% (45)	19%	18%	17%	22%	21%	21%	21%	22%	19%	12%
Approximately 50%-60% (55)	17%	13%	14%	19%	18%	15%	15%	10%	26%	22%
Approximately 60%-70% (65)	11%	14%	12%	6%	3%	15%	9%	12%	11%	8%
Approximately 70%-80% (75)	5%	6%	7%	3%	6%	12%	3%	6%	7%	-
More than 80% (80)	-	-	-	-	-	-	-	-	-	-
Mean	42.59	42.22	42.90	40.40	41.18	46.82	41.97	41.70	46.45	39.50

20. To what extent do you agree or disagree with the following statements?

“The traditional, ticket-based approach to IT operations means our IT team wastes too much time figuring out how to respond to digital incidents”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	24%	26%	20%	21%	24%	21%	21%	24%	28%	28%
Agree	38%	38%	37%	50%	32%	27%	30%	36%	38%	30%
<i>Net: Agree</i>	62%	63%	57%	71%	56%	48%	52%	60%	66%	58%
Disagree	26%	25%	31%	20%	29%	39%	21%	30%	21%	30%
Strongly disagree	12%	12%	12%	9%	15%	12%	27%	10%	13%	12%
<i>Net: Disagree</i>	38%	37%	43%	29%	44%	52%	48%	40%	34%	42%

Appendix

“The traditional, ticket-based approach to IT operations means our IT team has to deal with an overwhelming volume of alerts to sort through”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	25%	26%	16%	23%	26%	33%	21%	24%	35%	22%
Agree	39%	42%	47%	42%	24%	24%	33%	42%	33%	42%
<i>Net: Agree</i>	64%	68%	63%	65%	50%	58%	55%	66%	68%	64%
Disagree	23%	18%	22%	19%	35%	24%	42%	30%	22%	24%
Strongly disagree	13%	14%	15%	16%	15%	18%	3%	4%	10%	12%
<i>Net: Disagree</i>	36%	32%	37%	35%	50%	42%	45%	34%	32%	36%

“The digital landscape is becoming increasingly complex with distributed teams and service dependencies making it hard to know who is responsible or best suited for fixing a particular service when an incident occurs”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	29%	28%	27%	28%	26%	24%	24%	32%	36%	30%
Agree	35%	38%	38%	40%	24%	45%	36%	28%	34%	16%
<i>Net: Agree</i>	64%	65%	65%	68%	50%	70%	61%	60%	70%	46%
Disagree	23%	24%	17%	21%	29%	18%	30%	28%	15%	36%
Strongly disagree	13%	10%	18%	11%	21%	12%	9%	12%	15%	18%
<i>Net: Disagree</i>	36%	35%	35%	32%	50%	30%	39%	40%	30%	54%

Appendix

“Lack of service ownership (not having assigned owners to services in production) results in lost productivity for my teams that are forced to context switch when pulled in to troubleshoot incidents”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	23%	20%	14%	23%	24%	30%	21%	26%	31%	24%
Agree	39%	40%	41%	33%	35%	30%	58%	40%	38%	40%
<i>Net: Agree</i>	62%	60%	55%	56%	59%	61%	79%	66%	69%	64%
Disagree	23%	24%	25%	27%	21%	21%	12%	26%	19%	24%
Strongly disagree	15%	15%	20%	17%	21%	18%	9%	8%	12%	12%
<i>Net: Disagree</i>	38%	40%	45%	44%	41%	39%	21%	34%	31%	36%

“It is hard to find the right person to fix an issue because services have introduced complexity / multiple owners”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	26%	26%	24%	26%	21%	15%	24%	24%	29%	32%
Agree	32%	34%	30%	35%	32%	42%	30%	30%	31%	26%
<i>Net: Agree</i>	58%	60%	54%	61%	53%	58%	55%	54%	60%	58%
Disagree	28%	26%	30%	32%	32%	24%	24%	34%	26%	26%
Strongly disagree	14%	14%	16%	7%	15%	18%	21%	12%	14%	16%
<i>Net: Disagree</i>	42%	40%	46%	39%	47%	42%	45%	46%	40%	42%

“A lack of service ownership (not having assigned owners to services in production) increases the amount of time it takes to resolve digital incidents”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	26%	19%	29%	27%	32%	27%	30%	30%	32%	20%
Agree	39%	44%	32%	41%	32%	45%	33%	24%	38%	56%
<i>Net: Agree</i>	65%	63%	61%	68%	65%	73%	64%	54%	70%	76%
Disagree	22%	23%	21%	26%	12%	12%	24%	32%	20%	14%
Strongly disagree	13%	14%	18%	6%	24%	15%	12%	14%	10%	10%
<i>Net: Disagree</i>	35%	37%	39%	32%	35%	27%	36%	46%	30%	24%

Appendix

21. With digital services becoming ever more important to organizational success, do you think that IT operations need to be transformed for the digital era?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Yes	82%	96%	72%	70%	68%	100%	70%	82%	82%	72%
No	18%	4%	28%	30%	32%	-	30%	18%	18%	28%

	Investment in DevOps		
	Total	Yes, have invested in DevOps	No, have not invested in DevOps
Yes	82%	89%	68%
No	18%	11%	32%

22. Which of the following, if any, would help your IT teams to keep digital services always on, and allow them to rapidly respond to digital incidents?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Ability to collaborate with other business teams, such as customer service	53%	60%	54%	55%	44%	42%	58%	50%	51%	30%
Ability to integrate incident response processes with any tool in our IT ecosystem	48%	46%	57%	42%	35%	45%	58%	46%	56%	42%
Ability to automatically learn from past incidents to optimise our future responses to digital incidents	46%	51%	51%	46%	59%	55%	58%	32%	39%	28%
Ability to gain context on digital incidents to identify the best way to respond	43%	42%	41%	40%	38%	52%	30%	46%	51%	42%
Ability to automatically reduce alert noise and focus on the incidents that matter	42%	46%	37%	45%	35%	45%	39%	34%	45%	42%
Ability to drive a coordinated business response by updating stakeholders in real-time	38%	42%	36%	41%	32%	42%	39%	38%	36%	24%
Have developers take ownership of their code to help improve incident response	38%	40%	40%	32%	41%	30%	52%	24%	44%	30%
Ability to automatically mobilize an incident response team in real-time	37%	40%	33%	38%	44%	30%	24%	30%	43%	28%
None	1%	-	1%	-	3%	-	3%	2%	5%	2%

Appendix

23. To what extent do you agree or disagree with the following statement?

"We need to shift to real-time digital operations to improve our ability to keep digital services always on"

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	54%	56%	55%	47%	59%	58%	48%	50%	63%	46%
Agree	42%	44%	44%	44%	35%	42%	52%	36%	35%	48%
<i>Net: Agree</i>	97%	100%	99%	91%	94%	100%	100%	86%	98%	94%
Disagree	2%	-	-	6%	6%	-	-	8%	2%	6%
Strongly disagree	1%	-	1%	3%	-	-	-	6%	-	-
<i>Net: Disagree</i>	3%	-	1%	9%	6%	-	-	14%	2%	6%

24. Which, if any, of the following do you think would be the biggest benefits to your organization from adopting real-time digital operations?

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
We will be able to improve IT team efficiency by ensuring the right people are working on digital incidents	45%	49%	50%	42%	44%	42%	42%	40%	43%	38%
We will be able to better collaborate with other teams in the business, such as customer services	37%	44%	41%	30%	35%	39%	33%	34%	27%	44%
We will be able to reduce the cost of IT operations	37%	40%	38%	32%	38%	33%	42%	32%	35%	36%
We will be able to increase the speed of innovation and work on creating new digital experience	37%	41%	39%	39%	29%	27%	36%	24%	38%	32%
We will be more prepared to deal with rapid shifts in consumer behaviour	34%	36%	33%	32%	35%	52%	39%	26%	36%	18%
We will be able to reduce repetitive, manual tasks	33%	36%	37%	26%	29%	33%	27%	24%	43%	26%
We will be able to reduce downtime	32%	30%	27%	27%	35%	36%	33%	44%	35%	32%
We will have better context into the incidents that matter	32%	32%	44%	26%	21%	27%	36%	30%	32%	24%
We will be able to reduce alert noise	28%	36%	33%	24%	18%	39%	15%	20%	22%	22%
We will be able to reduce employee burnout	28%	28%	24%	30%	18%	30%	27%	16%	39%	28%
None	1%	-	-	-	3%	-	-	2%	5%	4%

Appendix

25. To what extent do you agree or disagree with the following statements?

“2020 has taught me the importance of maturing our digital operations so we can be more proactive”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	30%	30%	32%	26%	24%	21%	39%	28%	37%	24%
Agree	35%	36%	29%	39%	32%	30%	27%	34%	34%	42%
<i>Net: Agree</i>	64%	66%	61%	65%	56%	52%	67%	62%	71%	66%
Disagree	19%	18%	15%	22%	18%	24%	21%	24%	17%	18%
Strongly disagree	17%	16%	24%	13%	26%	24%	12%	14%	12%	16%
<i>Net: Disagree</i>	36%	34%	39%	35%	44%	48%	33%	38%	29%	34%

“Assigning developers to take ownership of the code they built in production would help improve incident response and lead to faster resolution”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	25%	24%	28%	24%	29%	30%	24%	18%	30%	24%
Agree	38%	42%	33%	42%	29%	39%	33%	38%	36%	40%
<i>Net: Agree</i>	64%	66%	61%	66%	59%	70%	58%	56%	66%	64%
Disagree	22%	20%	21%	21%	29%	18%	27%	30%	24%	24%
Strongly disagree	14%	15%	18%	13%	12%	12%	15%	14%	10%	12%
<i>Net: Disagree</i>	36%	34%	39%	34%	41%	30%	42%	44%	34%	36%

Appendix

“Real-time digital operations is the future of IT operations”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	32%	33%	29%	29%	26%	24%	52%	26%	40%	28%
Agree	31%	31%	39%	33%	15%	21%	12%	36%	27%	42%
<i>Net: Agree</i>	63%	64%	68%	62%	41%	45%	64%	62%	67%	70%
Disagree	20%	17%	16%	31%	35%	30%	9%	14%	18%	16%
Strongly disagree	17%	19%	16%	7%	24%	24%	27%	24%	15%	14%
<i>Net: Disagree</i>	37%	36%	32%	38%	59%	55%	36%	38%	33%	30%

“Real-time digital operations would improve our ability to keep digital services always on”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	28%	30%	23%	26%	29%	21%	24%	32%	34%	20%
Agree	34%	30%	36%	39%	29%	24%	36%	24%	34%	46%
<i>Net: Agree</i>	61%	61%	59%	65%	59%	45%	61%	56%	68%	66%
Disagree	22%	24%	25%	18%	21%	24%	24%	28%	14%	16%
Strongly disagree	17%	14%	16%	17%	21%	30%	15%	16%	18%	18%
<i>Net: Disagree</i>	39%	39%	41%	35%	41%	55%	39%	44%	32%	34%

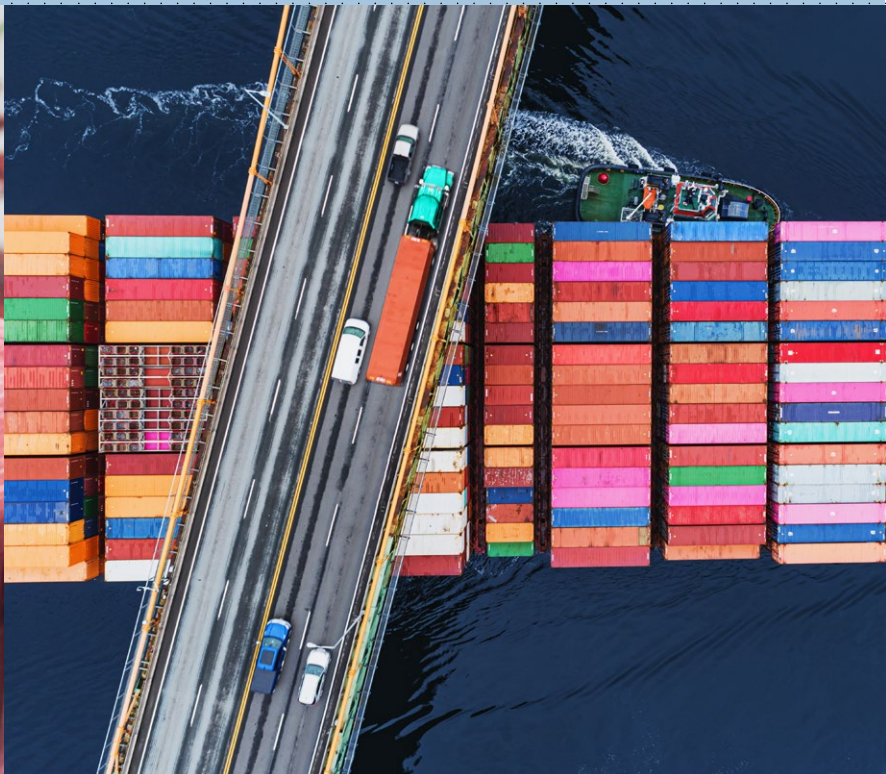
Appendix

“Shifting to a real-time digital operations approach is critical to the future success of my organization”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	30%	32%	33%	24%	29%	30%	24%	28%	33%	28%
Agree	32%	34%	24%	39%	21%	33%	27%	38%	34%	28%
<i>Net: Agree</i>	62%	66%	57%	63%	50%	64%	52%	66%	67%	56%
Disagree	20%	14%	18%	25%	32%	24%	27%	20%	15%	32%
Strongly disagree	18%	20%	25%	12%	18%	12%	21%	14%	18%	12%
<i>Net: Disagree</i>	38%	34%	43%	37%	50%	36%	48%	34%	33%	44%

“Adopting real-time digital operations will allow us to reduce the cost of IT operations and increase the speed of innovation”

	Total	US	UK	France	Germany	Austria	Switzerland	Japan	Australia	New Zealand
Strongly Agree	27%	26%	23%	29%	26%	39%	45%	30%	24%	14%
Agree	38%	42%	43%	37%	38%	21%	24%	32%	36%	46%
<i>Net: Agree</i>	65%	68%	66%	66%	65%	61%	70%	62%	60%	60%
Disagree	22%	20%	17%	25%	21%	27%	21%	26%	22%	28%
Strongly disagree	13%	12%	17%	9%	15%	12%	9%	12%	18%	12%
<i>Net: Disagree</i>	35%	32%	34%	34%	35%	39%	30%	38%	40%	40%



Methodology

This report is based on a global survey of 700 senior IT and development decision makers in large enterprises with over 1,000 employees, conducted by Coleman Parkes and commissioned by PagerDuty. The sample included 200 respondents in the U.S., 100 in each of the UK, France and Australia, 50 in each of Japan and New Zealand, 34 in Germany, and 33 in each of Austria and Switzerland.

About PagerDuty

[PagerDuty, Inc.](#) (NYSE:PD) is a leader in digital operations management. In an always-on world, organizations of all sizes trust PagerDuty to help them deliver a perfect digital experience to their customers, every time. Teams use PagerDuty to identify issues and opportunities in real time and bring together the right people to fix problems faster and prevent them in the future. Notable customers include GE, Cisco, Genentech, Electronic Arts, Cox Automotive, Netflix, Shopify, Zoom, DoorDash, Lululemon and more. To learn more and try PagerDuty for free, visit [pagerduty.com](#). Follow our [blog](#) and connect with us on [Twitter](#), [LinkedIn](#), [YouTube](#) and [Facebook](#).