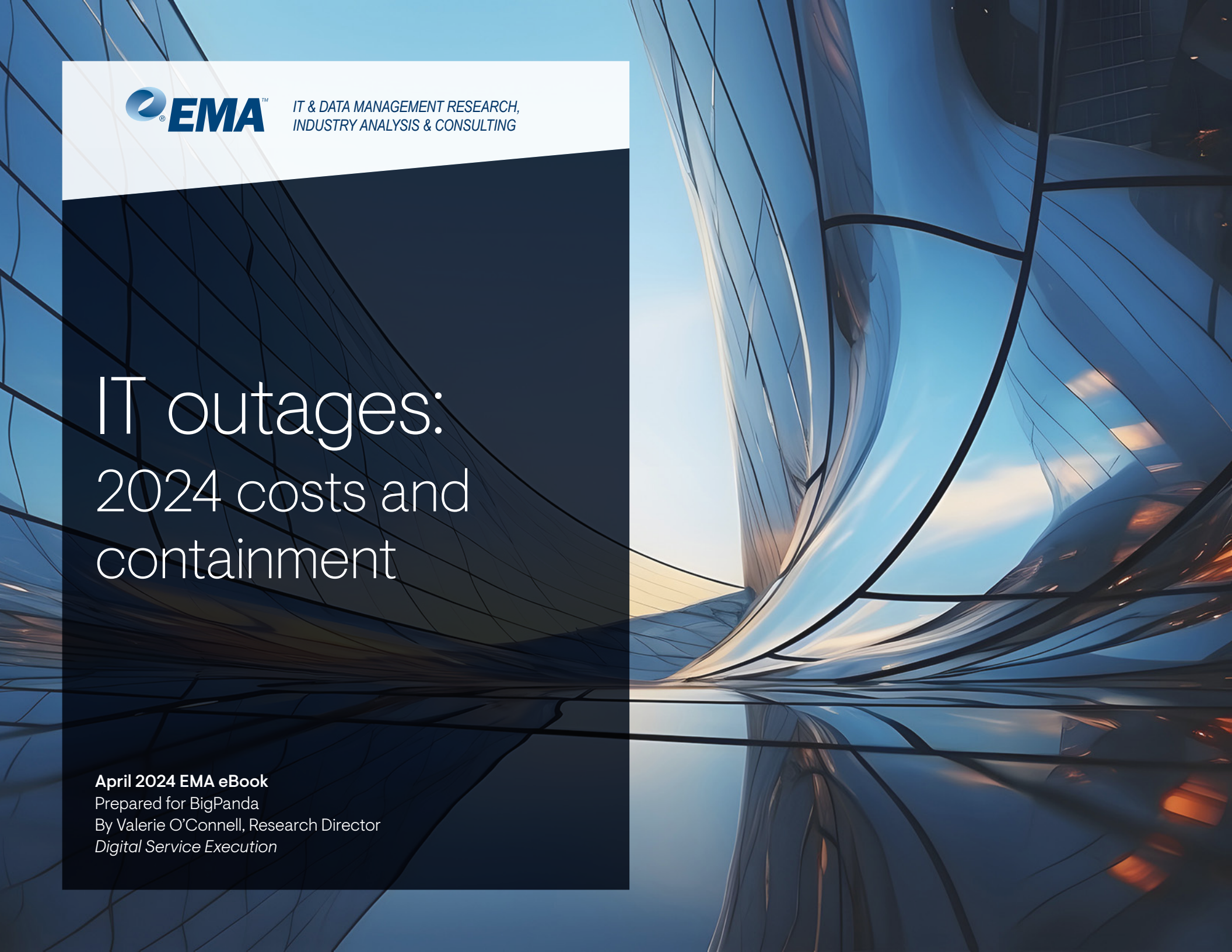


EMA™
IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING

IT outages:
2024 costs and containment

April 2024 EMA eBook
Prepared for BigPanda
By Valerie O'Connell, Research Director
Digital Service Execution

Table of Research Findings

Research overview

The average cost of an IT outage

For more than a decade, industry pundits and press pegged the cost of an IT outage at $5,600 per minute. It turns out that this figure is an urban legend. It sprang from a casual remark in a 2014 Gartner blog that never claimed the number to be either research or fact.

In 2022 and again in 2024, BigPanda commissioned Enterprise Management Associates (EMA) to undertake independent field research into the cost of an IT outage.[1] The objective is to develop a research-based average cost/minute – an average that is defensible, not definitive. The result of that initial global effort was an average cost of $12,900 for every minute of unplanned IT downtime.

This year's research-based average is **$14,056 per minute** of unplanned downtime.

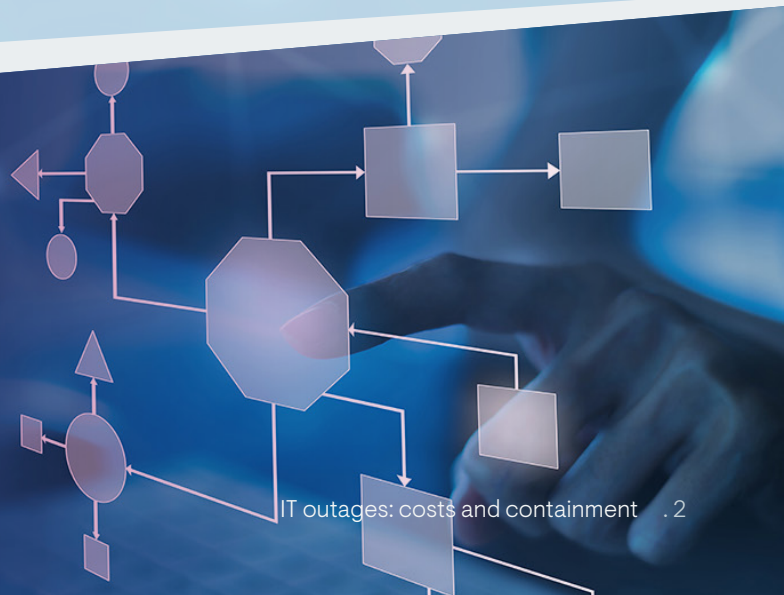
[1] Conducted in February 2024: 415 IT participants (20% IT professionals, 30% IT frontline manager or team leads, 35% IT VP/Directors, and 15% CXOs) in North America, EMEA, and APAC. There was an even distribution of company sizes between 1,000 and more than 10,000 employees across industries.

A winnable war

A 9% increase in the average cost per outage-minute is worth noting. What's more interesting are the underlying details – components, causes, and containment. In addition to thought-provoking research data, this eBook offers insight on reducing the frequency, duration, and impact of unplanned downtime.

- **AIOps** – EMA research finds that AIOps can intercept incidents before they become outages and minimize their most common causes in the first place. In fact, the top ITOps improvement or goal for the next 6-18 months is unanimously "increased use of automation, AI, and AIOps."
- **AI** – When asked, "If AI could do one thing really well, what would have the biggest positive impact?" the panel's top choice was "proactively respond to incidents before they impact users."
- **Context** – "Accurate business context and dependencies in real time" followed directly behind "proactive incident response" as the top desired AI impact. It was followed by "business context – understanding the impact." In combination, these responses make context one of the top weapons in the battle against outage costs, duration, and impact.
- **GenAI** – More than half of the panel (58%) see a 50% or greater reduction in MTTR as realistic through use of GenAI, with 12% foreseeing a 75% or more reduction. "Real-time identification of business context, dependencies, and impact" placed first on a long list of high-value/high-impact uses of GenAI.

Technology is not the only weapon. Increased collaboration, shared knowledge, and workflows between essential functions, such as IT service and ITOps, reduce cross-departmental friction, duplication of effort, and wasted time. A logical byproduct of this partnership is a sharp cut in MTTR and outage impact.



A closer look at the cost of an IT outage

The cost averages are interesting and even useful, but they aren't universal. Cost estimates don't take into consideration the large number of variables that could go into cost determination (or be left out) – factors that differ from one organization to another and account for a significant degree of variability.

There is also the universal challenge to averages...

...every organization is different.

Cost by company size

The nature of averages makes it unlikely that any single organization experiences the $14,056 per minute average cost of an unplanned IT outage. In order to make this average more meaningful, EMA reports the cost by company size, with size determined by number of employees rather than by revenue.

Outage cost/minute by company size

1,000-2,500 employees	2,500-5,000 employees	5,000-10,000 employees	More than 10,000
$3,637	$6,858	$12,500	$23,750

Multiplication of these averages by the 60 minutes that are in an hour gives the costs per hour as:

$218,220	$411,480	$750,000	$1,425,000

Comparing this year's averages with those of 2022 reveals an interesting finding: The three "smaller" categories (1,000-10,000 employees inclusive) reported an average cost increase of about 65%. The largest organizations (10,000+ employees) remained essentially stable at a reported 5% decrease.

These numbers raise a logical question:

"What explains the difference between a 65% increase in the cost of an IT outage and a 5% decrease?"

Logical answers to a logical question

It's impossible to state with certainty why the largest organizations would sport a decreased or stable cost of an IT outage while the rest of the pack report a 65% average increase. However, EMA field experience and adjacent research offer some plausible reasons.

Large organizations have invested heavily in technologies that take direct aim at anything standing in the way of first-rate service availability, performance, and quality. Automation, AI, AIOps, and platforms for cross-functional collaboration all combine to reduce the number of incidents and the likelihood of outages. Large organizations are also apt to have contingency plans in place to mitigate adverse effects.

Factors contributing to outage cost increases as reported in 2024 include:

- **Increased reliance on IT brought on by digital transformation** – Although human error still ranks as the top cause of increased outage costs in this research, second place is "digital transformation and the increased reliance on IT."
- **The return of cost awareness** – In 2023, EMA saw a sharp upswing in attention to costs and cost reduction across the board. As the world returns to its new normal, cost has regained its traditional seat in the pantheon of top IT priorities.
- **Unintended consequences of cost reduction initiatives** – Cost-cutting measures, such as lowering headcount and delayed purchasing, may impact the effectiveness of incident prevention and response.
- **The growing inclusion of cybersecurity in mainstream IT** – The United States Securities and Exchange Commission (SEC) mandated publicly traded companies to report cybersecurity incidents that have material impact within a four-day window. It is a reasonable assumption that even companies that are not publicly traded in the US have an increased awareness that investors are interested in outage costs, frequencies, and impacts, whether IT or cyber in origin.
- **Cross-functional collaboration** – As organizations break down organizational and technology siloes, they develop a cross-functional, pan-organizational view of factors and issues, such as outage costs. From this vantage point, companies can have a more complete and accurate view of outage costs than is available by piecing together fragmented pieces of data.

The large rise in reported outage costs is most likely a hybrid of factors that include heightened awareness of outage costs and accuracy in reporting, as well as actual monetary increases.

The significant outage

Cost

EMA asked about the cost, duration, and frequency of significant outages. What constitutes a significant outage was left open to varying definitions of each responding organization. Once again, there was a distinction along the lines of company size.

How much did the most recent significant outage cost your organization in US dollars?

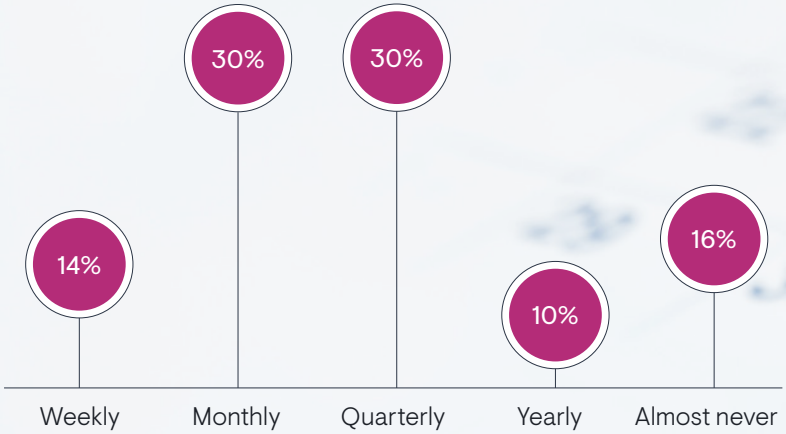
1,000-2,500 employees	2,500-5,000 employees	5,000-10,000 employees	More than 10,000
$963,660	$1,330,000	$1,610,375	$3,209,800

Companies with between 1,000 and 5,000 employees averaged a doubling of costs over those reported in 2022, while those with more than 5,000 employees averaged only a 17% increase. Putting aside the fact that "the last significant outage" represents a one-time occurrence/moment in time, it makes sense to attribute the same line of reasoning for these increases as those suggested for cost per minute.

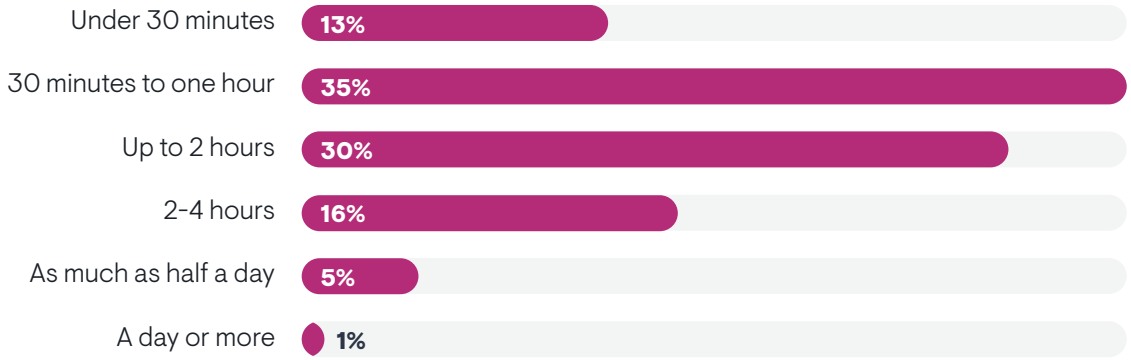
Frequency

There is positive movement in the frequency of significant outages. In 2022, only 19% of respondents placed the frequency of significant outages as “yearly” or “almost never” compared to 26% of this year’s panel. Although any frequency higher than “almost never” has the potential to carry a staggering cost, the larger the company, the more inherent risk there is to any outage. The stakes are quantifiably higher. However, smaller companies are at greater risk of being substantially damaged by losses. They have fewer resources to recover from hits to corporate health.

How often does a significant outage happen?



How long does a significant outage usually last?



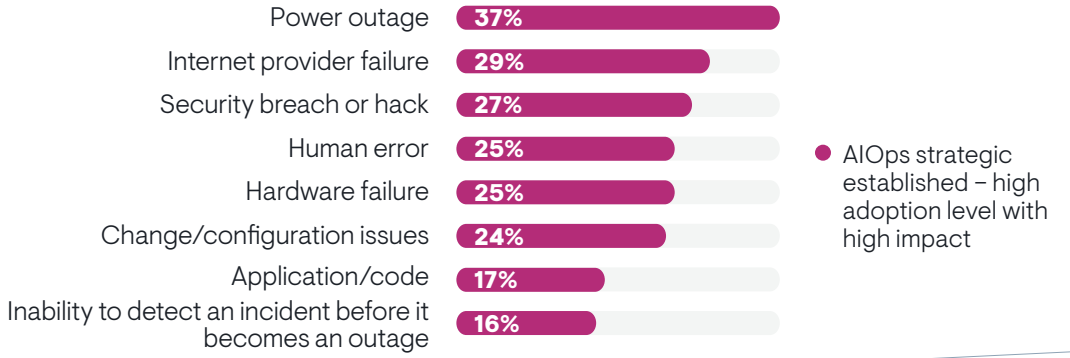
Duration

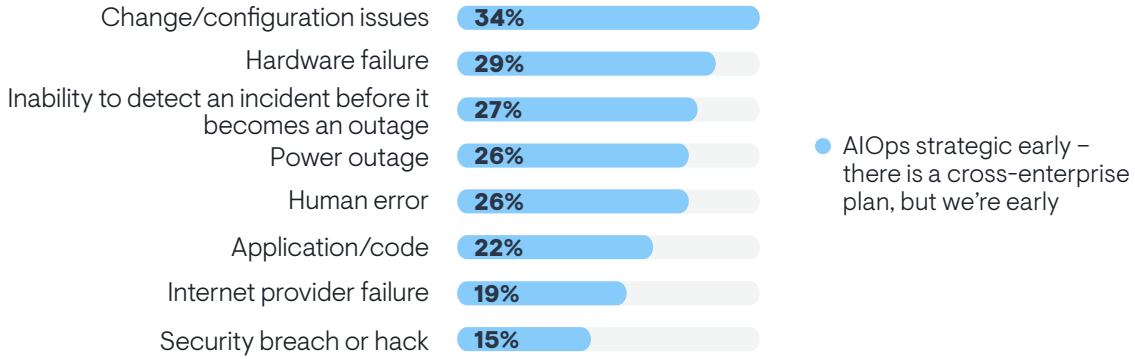
When it comes to the duration of a significant outage, 65% of respondents clocked between 30 minutes and two hours. By comparison, a recent study put the time between logging and resolution of an incident at 1-4 hours (70%), 19% more than four hours, and 11% under 30 minutes. In both studies, more than 50% of those with mature AIOps implementations came in under an hour, with 19% under 30 minutes.

Causes

Answers to the question, **"What is the most common cause of an outage?"** were unchanged from those given in 2022. What is interesting is the differences in causes between organizations with mature AIOps implementations and those that are early in their AIOps progress. Although human error plays a role for both groups, a comparison of the two response sets highlights a significant difference.

The top three causes of an outage for organizations with mature AIOps implementation are all "unavoidables" – causes originating from outside the company. In contrast, causes for those early in their AIOps implementation are largely problems that are greatly reduced with the combination of automation and AI. This finding is consistent across multiple EMA research projects: AIOps takes a big bite out of outage frequency, duration, and impact.





Research panelists were asked to look for causes behind increases in outage duration, cost, and impact. This year, human error was added to the menu of causes of outage increases and quickly raced to top the list, followed closely by "digital transformation and the increased reliance on IT" and "networking complexities."

One obvious difference between this year and 2022 is that "work from anywhere" dropped from top of the leader board to last place. Apparently, familiarity breeds competence in IT.

Fighting back

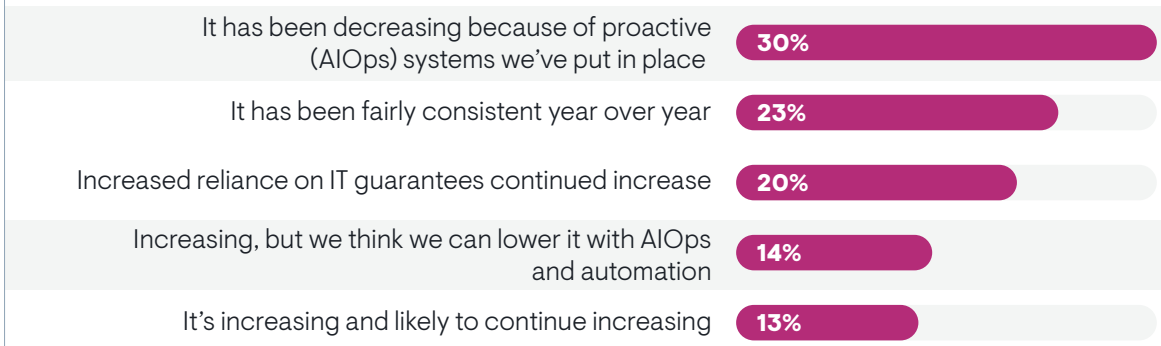
AIOps and automation

Although 20% of this year's panel believe that increased reliance on IT guarantees continued increase of outage frequency and cost (down from 36%), increases are not inevitable. Proactive systems/AIOps have resulted in a decrease for 30% of the responding organizations. Another 14% plan to battle increases with AIOps and automation.

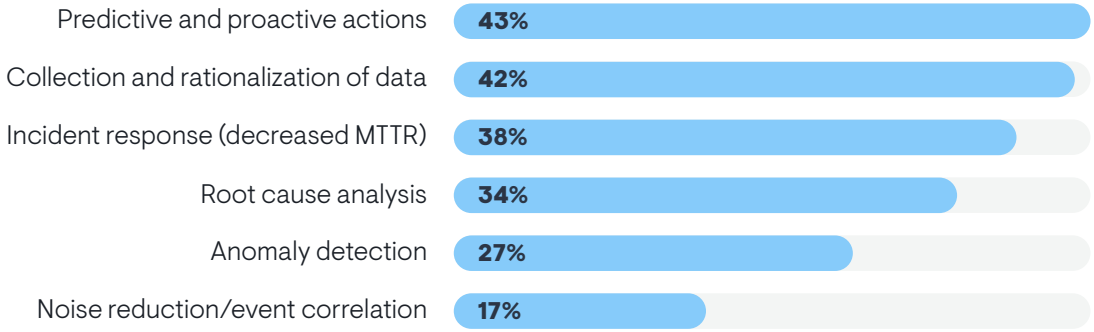
AIOps' ability to take proactive actions is highlighted in respondents' top two uses of AIOps. "Predictive and proactive actions" was in a tight grouping with "collection and rationalization of data" and "incident response (decreased MTTR)."

It is no surprise that, when asked to name the top two ITOps improvements/goals in the next six to 18 months, 100% of the respondents named "increased use of automation, AI, and AIOps." Last year's top two were "reduce major incidents/MTTR" (50%) and "reduce costs" (50%).

Which statement best describes the frequency and cost of an outage to your organization?



How is AIOps most useful in your organization? Select two.



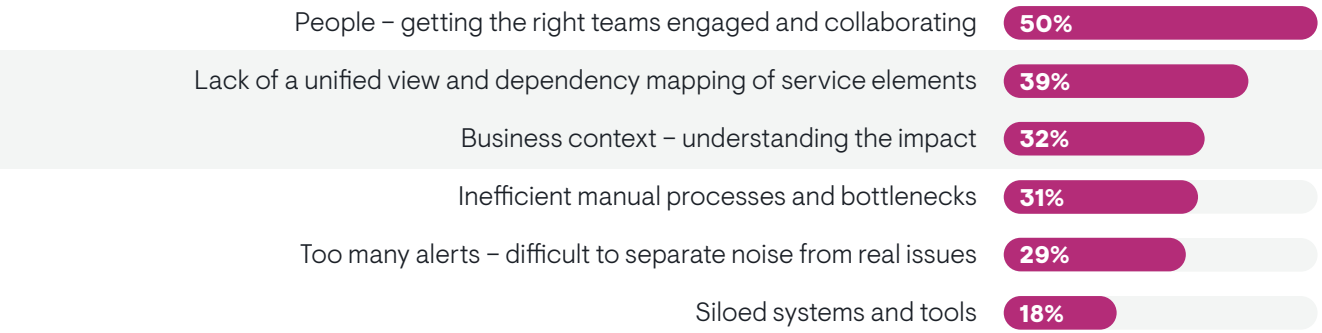
In one year, "Automation, AI, and AIOps" jumped to a convincing first place on ITOps' to-do list.

AI and GenAI

Context

AI has the potential to address the biggest challenges to effective incident response and management – people and lack of both technology and business contexts.

What are the biggest challenges to effective incident response and management? Select two.



Teams that have to diagnose and resolve complex incidents by sharing their individual "pieces" without context are like children trying to complete a jigsaw puzzle without a picture of the finished product.

It's doable, but it's sure not fast.

The responses to the question, **"If AI could do one thing really well, what would have the biggest positive impact?"** are:

- 26% Proactively respond to incidents before they impact users
- 24% Easy and seamless team communication and collaboration
- 26% Have accurate business context and dependencies

In fact, when the topic turned to GenAI, "real-time identification of business context, dependencies, and impact" was the number-one capability named as having the highest value.

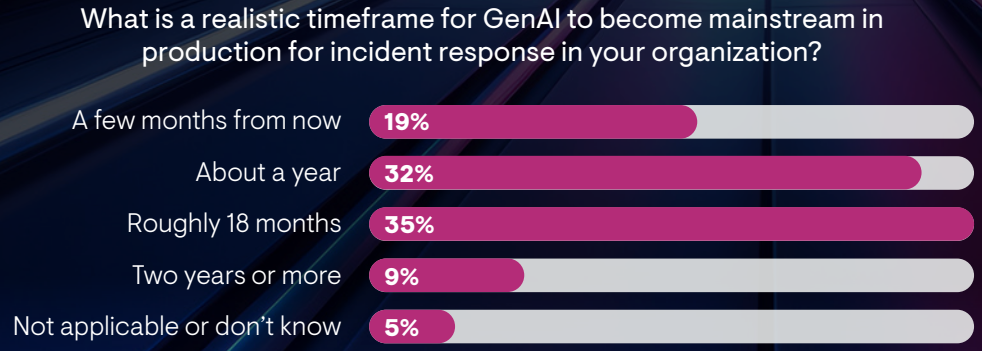
Isolated by specialization in skills, tools, processes, charters, and perspectives, various IT teams each bring their own pieces to the war room puzzle. There, under the pressure of an organization paralyzed by the unplanned downtime of an outage, they must learn how to fit the pieces together. Having a unified view of the business and technical context as well as consolidated data and a shared point of view attacks the biggest challenges to effective incident response, slashing MTTR in the process.

GenAI

The worldwide fascination with GenAI is at play in this research panel as well. Only 12% of the respondents stated that their organization has no plans to use GenAI. The rest were quite evenly distributed between progressively more invested stages of engagement:

- **31%** are in the research phase, exploring practicality and use cases
- **24%** have proof of concepts (PoC) or pilots underway
- **26%** are in production with plans to expand uses

It should be noted that "in production" was not defined. It could therefore mean anything from GenAI scripts spun up by engineers to vendor-supported offerings. What is clear is that there are high hopes and expectations for GenAI in the incident/outage management arena. A little more than half of the panel anticipate GenAI being mainstream in production in a year, or even months. The main reasons for any delay are "regulation, data privacy, and compliance issues" and "security concerns."



Considering a range of roles that GenAI could realistically play in incident prevention and management, research participants were asked to project the impact on MTTR:

- 12% posit a 75% reduction in MTTR (or more)
- 46% foresee around a 50% reduction in MTTR
- 27% think at least a 25% reduction is realistic
- 9% say it's too difficult to quantify, but it would slash MTTR
- 3% aren't sure, and another 3% think the impact will be marginal (they're wrong)

The truth will probably run the spectrum of results depending on how GenAI is implemented and the underlying people, processes, and technology that make up the whole.

One thing is certain – IT is in for another game-changing ride.

A word from the BigPanda team

BigPanda is dedicated to rescuing ops teams from the deluge of data, tickets, and escalations. We know how to do it because we've been there.

Our front-line, practical platform uses AI to automate incident management and operations from detection through investigation and remediation. We unify operational data across fragmented tools, teams, and clouds, leveraging AI to transform your data into actionable insights and game-changing automation.

And BigPanda is the only platform that offers a transparent, "open-box" AI that your teams can easily adapt, control – and understand.

Across industries and businesses that include the Fortune 500, BigPanda empowers the teams that keep your digital world running. Visit us at **bigpanda.io**.

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Founded in 1996, Enterprise Management Associates (EMA) is a leading IT analyst research firm that specializes in going "beyond the surface" to provide deep insight across the full spectrum of IT management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help its clients achieve their goals. Learn more about EMA research, analysis, and consulting services at **www.enterprisemanagement.com** or follow EMA on **X** or **LinkedIn**.

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