



IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING

AI Ops-powered IT service: insight for action

November 2024 EMA eBook

Prepared for BigPanda

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IT ServiceOps

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Human-sizing IT complexity

Done right, AIOps is all about people...

...specifically, people charged with managing the IT systems that drive business.



The compelling context for AIOps follows a logical path.

- The complexity of IT environments, made up of cloud services, hybrid infrastructures, microservices, and legacy systems, is beyond any human capacity to manage.
- Monitoring and observability tools are the only way that humans can keep track of the scope of the IT landscape. These specialized tools provide deep views of specialized technologies – many thousands of data points.
- However, because monitoring and observability tools have data models that are incompatible, those data points stand alone. Unrelated to each other, they are just as likely to add to the complexity as they are to provide problem-solving assistance.
- ITOps and service teams face this mountain of data looking for meaningful insight buried in tools that are spread across the enterprise. Using a combination of experience, expertise, and a little bit of luck, they connect enough data points to build an actionable view of the situation for incident detection, triage, investigation, and remediation.
- Manual and siloed processes are no match for the scale, velocity, and criticality of this challenge set. Automation is the only reasonable solution.
- However, automation is frustrated and hindered by the fragmented state of data and the siloed processes that specialization engenders.

Enter AIOps

With AI that is purpose-built for IT operations and service, AIOps can make sense of data scale and velocity, translating it into information that is useful to problem-solving people. A unified data fabric transforms siloes of specialized data and knowledge into an enterprise-wide asset for informed action and automation.

AIOps makes it possible for different teams to work within a shared context. An integrated view of the elements and impacts that matter enables specialization without siloes.

Context – AIOps' superpower

AIOps is in the business of deriving meaning from a whirling universe of otherwise unrelated data, change, and risk at high velocity and volume. Wielding AI that is purpose-built for IT operations and service management, AIOps can make sense of countless data points to form an actionable view of the whole – the context.

Context can include monitoring and observability data, topologies, alerts, applications, tickets, interdependencies, changes, historical ITSM ticket data, and even unstructured institutional knowledge found in chat channels. Context is the end product that turns data into information and effective action.

An analogy from the art world illustrates context. A closeup of an impressionist painting reveals a detailed collection of dots and small strokes. Interesting, even masterful, but they give no hint of the whole. It takes the perspective of distance and scope to convey the picture (in this case, one of Monet's waterlilies). That perspective is context.



Water Lilies,
1916-1919 by Claude Monet

In much the same way, AIOps ingests a complex brew of diverse data, translating it into a unified view that has meaning to the many teams charged with delivering IT service. Each team, using the tools they are used to, brings their specialized expertise to a common goal. This AI-generated context is the basis for friction-free cross-functional collaboration and automation – and speed.

Teams working in the absence of context are like children trying to put together a jigsaw puzzle without a reference picture of the end product. It's doable, but it's sure not fast.

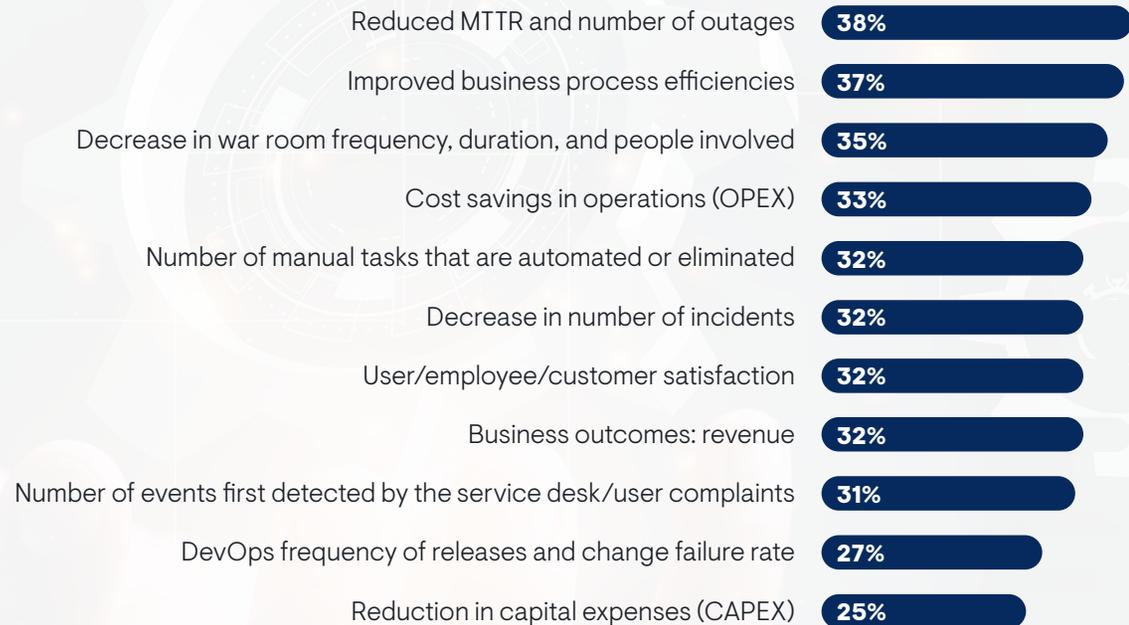
AIOps in context

Thousands of global IT leaders inform EMA's research-based views of AIOps. The bottom line is that AIOps, especially in combination with automation, is a profitable venture that always delivers results. Asked to name the top metrics used to measure AIOps effectiveness, a recent research panel offered a tight grouping of benefits that fall into three high-level categories.

AIOps quantifiably:

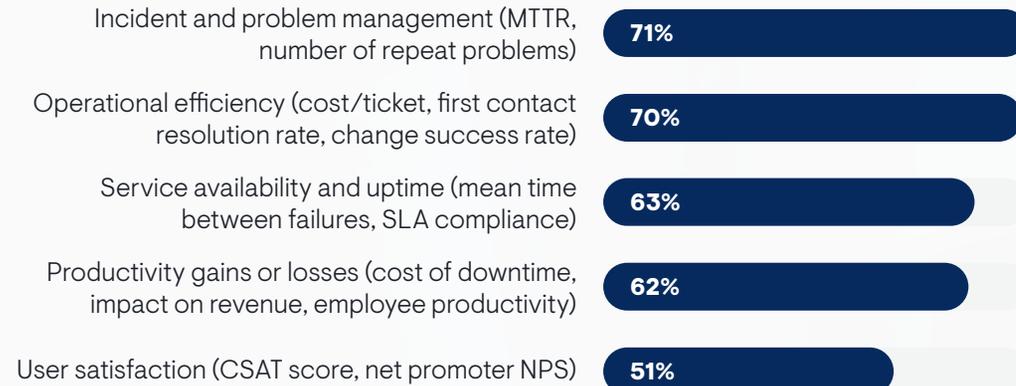
- Increases service availability and performance
- Improves IT employee productivity and user satisfaction
- Results in real cost savings with no downside

What are the top metrics used to measure AIOps' effectiveness in your organization?



AIOps directly addresses the organizational pressure points of IT service and ITOps – both charged with delivering high-quality IT service.

How does your organization measure the business impact of ITOps and ITSM?



There is an almost exact map of AIOps effectiveness and the business impact of ITOps and IT service. AIOps positively shapes service reliability, operational efficiency, and cost.

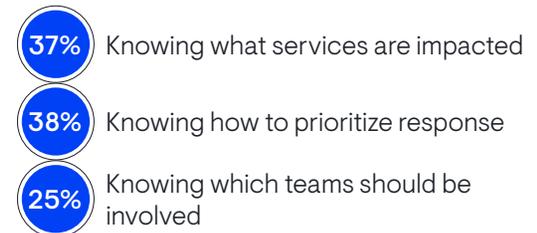
AIOps boosts IT service availability and performance

AIOps' ability to master vast amounts of data from varied sources of information makes it possible to intercept potential issues before they cause problems. When incidents do arise, it slashes resolution time. SLAs are met or exceeded and user satisfaction soars. AIOps capabilities that directly impact service availability and performance include:

1. Proactive and predictive insights – anticipate and respond to issues before they impact users
2. Automated incident detection and resolution – detect patterns, identify issues, and even resolve incidents without human intervention
3. Noise reduction and alert prioritization – AIOps filters through thousands of alerts, reducing noise and focusing on high-priority issues that need immediate attention. By reducing alert fatigue, IT teams can focus on critical tasks, improving the quality and speed of service response
4. Impact analysis – identify interdependencies and business implications for effective prioritization and identification of problem-solving teams
5. Root cause analysis of events, changes, and topology slashes MTTR
6. Continuous improvement and learning – AIOps solutions continuously learn from historical data and past incidents, improving over time. This results in more accurate predictions, faster problem resolution, and enhanced service quality

It turns out that one of AIOps greatest contributions to slashing MTTR occurs early in the lifecycle of an incident. Knowing which services are impacted is the starting point of knowing how to prioritize a response and which teams should be involved.

Research shows that mean time to knowledge (MTTK) is a big part of MTTR. What takes the most time or is the most difficult to get right?



A shockingly high portion of MTTR is plain old wasted time.

For 71% of research panelists, wasted time constitutes 25% or more of MTTR – with 27% stating it takes up **more than half** of that time. Of those respondents who experience 10% or less wasted time, 100% have mature AIOps implementations.

AIOps attacks MTTR at the source(s)

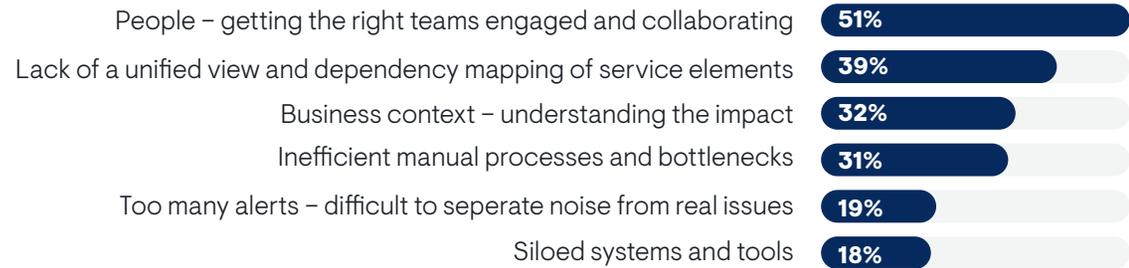
Sometimes a picture really does speak better than words. As the chart shows, AIOps directly addresses five of the top six biggest challenges to effective incident response and management. As for the outlier, when organizations have easy access to a unified view and business context, they tend to identify and streamline those inefficient manual processes and bottlenecks.

AIOps slashes MTTR by cutting or eliminating the biggest time thieves. The ability to translate all available data into meaningful information is context to speed root cause analysis and suggested remedies. Context addresses the lion's share of incident response challenges and time.

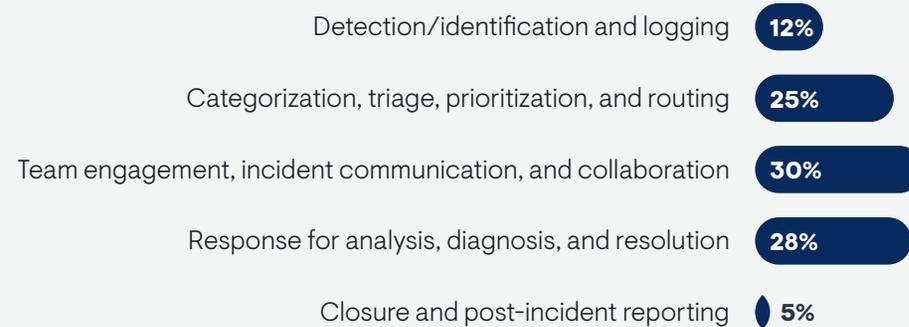
The panel was asked to estimate the effect on MTTR of a GenAI /AIOps' ability to automatically generate an accurate description of incident context/impact, identify possible/likely root cause, and identify/engage the correct responders/teams. The responses were:

- 58% of respondents envisioned a 50% or greater reduction in MTTR
- A bullish 12% saw a reduction of 75% or more as realistic
- Only a misguided 3% were unimpressed by the power

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



Which phase is most time-consuming – the biggest contributor to MTTR? Select one.



IT automation puts teeth into the old refrain, “Do more with less.”

AI makes it possible.

Proactive beats low MTTR

The best MTTR is one in which the incident doesn't cause an outage or that never happens at all. Asked, "If you could choose one thing to do really well, what would have the biggest positive impact?" a convincing 43% of respondents chose "proactive response to incidents before they impact users" (followed by "AI-enabled fast/accurate root cause suggestions" 22% and "real-time assessment of incident impact" 20%).

Proactive interception of potential issues consistently heads the IT wish list across EMA research initiatives. The ability to apprehend predictive signals from the sea of monitoring and historical data is a big part of AIOps' promise.

Typical responses to the question, "If you could improve one thing about your organization's approach to incident response, effectiveness, or tools used, what would it be?" are:

- "Preventative action is worth more than incident response after the fact, no matter how good it might be."
- "Be proactive rather than reactive. We seem to wait until things happen before we do anything to stop it."
- "I would like to see more automation and integration of the tools used. That would help reduce the manual effort and human error that is typical of the incident process."
- "If I could improve one thing about my organization's approach to incident response, it would be to try to be a bit bolder – a bit more unconventional – and try out more innovative methods using AI and automation."



An unsurprising 82% of a recent research panel characterized incidents and outages as increasing every year (19% went so far as to state that "increased reliance on IT **guarantees** continued increases"). Running counter-trend, a fascinating 18% of that panel stated that incidents and outages have **decreased** due to proactive systems they've put in place.

100% of that group have mature AIOps implementations in place.

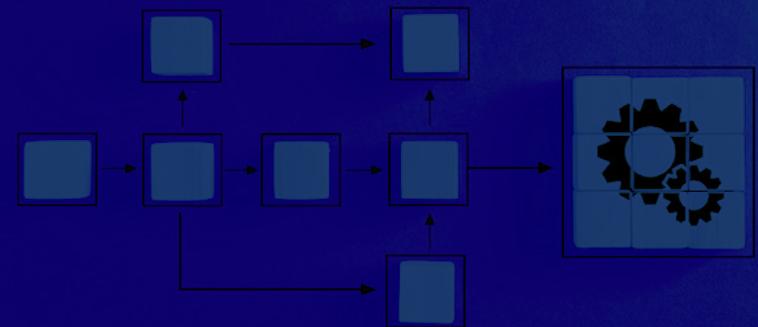
AIOps improves IT employee productivity

It's not just for cutting MTTR

AIOps' game-changing impact on MTTR and incident frequency obviously saves tremendous amounts of IT employee time. Less obvious are its other contributions to employee productivity. AIOps' unified platform for shared insights and action is a clear basis for cross-departmental collaboration. IT employee productivity soars when AIOps returns time to their days by:

1. Allowing specialization without silos. Every team does what they need to do using the tools they choose without changing their day-to-day work. AIOps quickly collects and transforms those specialized results into insights that are useful across the enterprise.
2. Providing a foundation for cross-departmental workflows, processes, and automation.
3. Cutting duplication of effort, gaps in knowledge, and conflicting information. It reduces friction between IT operations, IT service, development, and security teams. Teams are more willing to collaborate when it improves their work life without adding demands or requirements. Morale and job satisfaction improve as well.
4. Automating repetitive and mundane tasks. AIOps allows IT teams to focus on higher-value tasks, which boosts overall operational efficiency and accelerates service delivery.

Simplifying collaboration speeds up the time to do everything that requires cross-team cooperation and cuts costs as well.



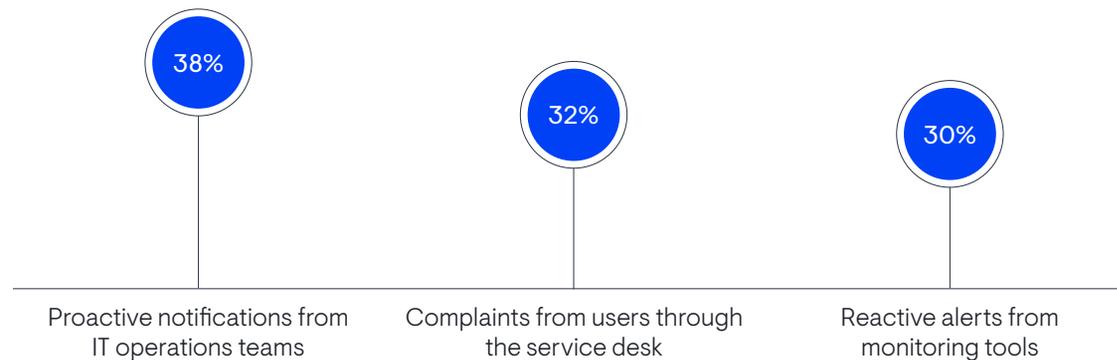
AIOps and the service desk

Incident initiation

AIOps is usually associated with IT operations. After all, “ops” is in its name. However, IT operations can make or break a service agent’s day. It may surprise some people to learn that roughly one-third of all incidents are first surfaced by complaints from users to the service desk. This source is second only to proactive notifications and leads reactive alerts from monitoring tools.

According to EMA research conducted over five years, this proportion remains consistent. Organizations with mature AIOps alter the equation. They have a much higher rate of proactive notification (50%) with a correspondingly lower rate of user-initiated incidents (20%) and a significantly higher quality of IT service.

How are incidents most often first surfaced in your organization?



Escalations cost time and productivity. AIOps saves both.

70% of organizations with mature AIOps in place give high or very high quality information to the service desk vs. 37% of early implementations.

Service desk agents find user-initiated complaints to be the most difficult incidents to handle because they come in with very little information that is useful. That lack of context translates into time and effort.

Asked, “What level of information does the service desk usually have about an incident?” only 12% of panelists rated the quality as very high (“containing dependencies, impact, routing, prioritization, possible causes, and remediation steps”).

The vast majority of respondents cited a lower mix. The amount of information a service desk agent has about an incident directly impacts the likelihood of escalation.

Escalation

When it comes to escalations, most organizations have a lot of room for improvement. Only 20% of respondents rate escalation quality as exceptional – “done with speed and accuracy only as needed.” The majority of organizations have escalation policies in place, but find that the execution quality is somewhere between effective, just okay, and uneven.

Of the 44% who expressed significant dissatisfaction with their organization’s escalation quality, the reasons were:

- Expert talent thinks it is way too often, but management thinks it’s fine (17%)
- Escalations are frequently not warranted (14%)
- Escalations lack any insight or direction for resolution (13%)

Lack of information or context is collectively the largest challenge that service desk agents face when responding to an incident. AIOps steps up to this challenge with the ability to synthesize data and present actionable information.

Which statement best describes the challenges your service desk agents face when responding to incidents?



Asked, “Compared to an experienced service desk agent, how likely is a new hire to escalate a case?” 43% of respondents said the new hire would be twice as likely, and 31% said they would be “many times more likely” to escalate.

There is a direct line between information – or lack of it – and service agent productivity. AIOps’ context-rich guidance levels the playing field by arming new hires with the expertise of seasoned agents.

(Gen)AIOps

The explosive advent of generative AI (GenAI) expands the power and reach of AIOps, making it accessible to everyone. Its genius is language. GenAI mines rich stores of unstructured human expertise – typically locked away in emails, chat threads, knowledgebase articles, runbooks, and historical ticket data – and presents its collective guidance in simple, clear language.

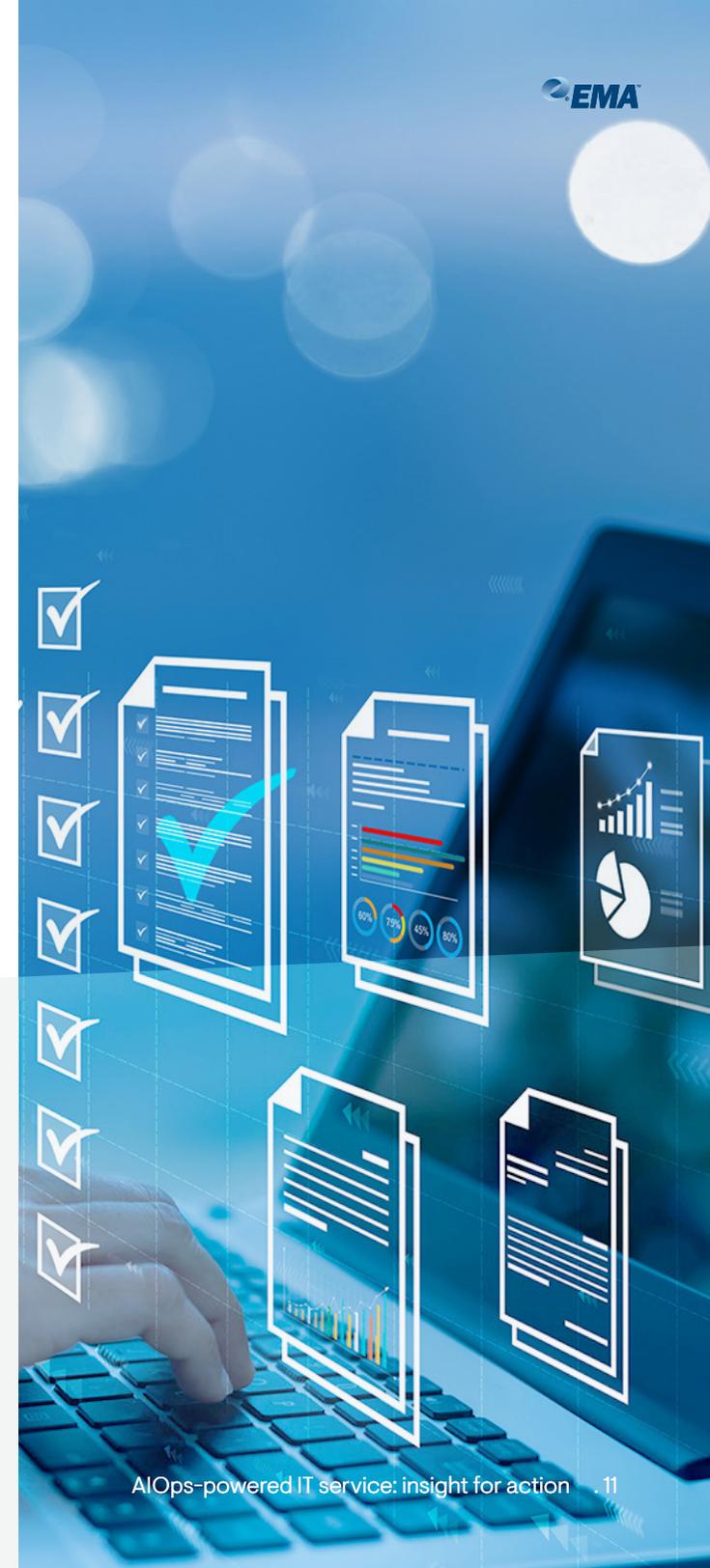
Are there data sources not currently used, but that would be helpful?

Informal human knowledge (SMEs and experience) **34%**

Incident communications: Slack, Teams, call transcripts, emails **33%**

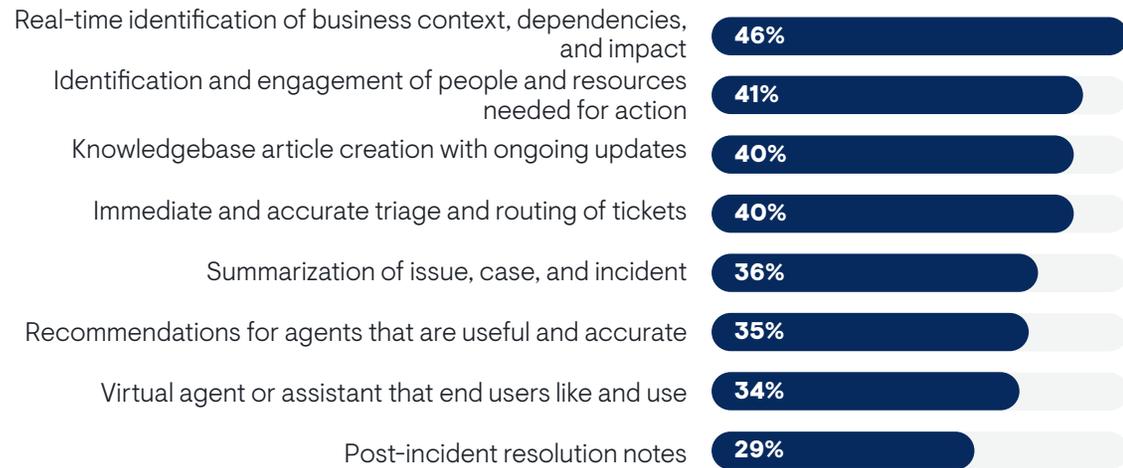
Historical data: ITSM past tickets, past resolutions **31%**

Runbooks, Knowledgebase articles, SOPs, AARs **31%**



Asked to project high-value use cases for GenAI, the panel enthusiastically championed a convincing list. With the exception of IT service advances in knowledgebase and virtual agents, capabilities at work in event and incident response and management dominate the list.

If GenAI can accurately automate or transform a function, which capabilities would have the most value to your organization?



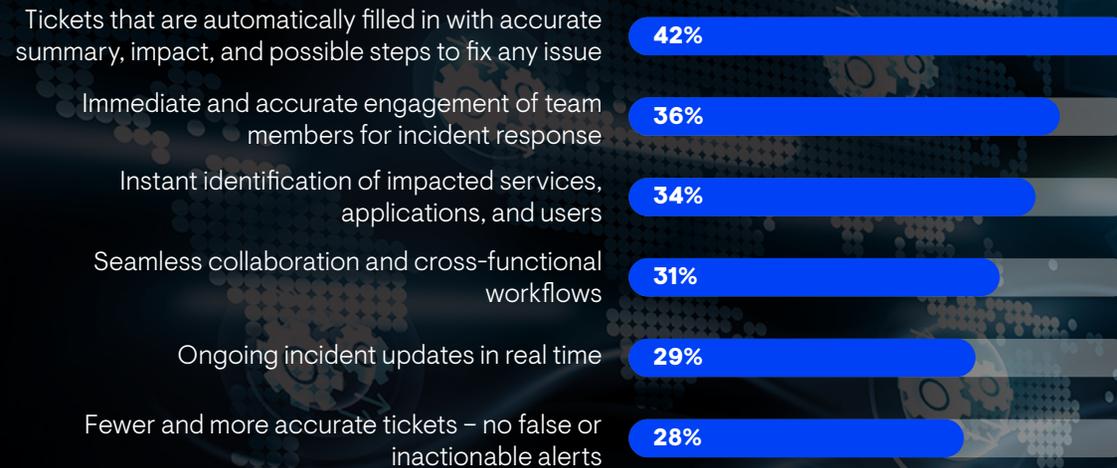
Ops-purposed GenAI maximizes AIOps' real-time, incident-busting understanding of impact, priority, and assigned teams to automatically create/populate tickets with suggested possible root causes and remedies. In calmer times, it can harvest that experience to produce post-incident reports and documentation.



Context-rich automated tickets

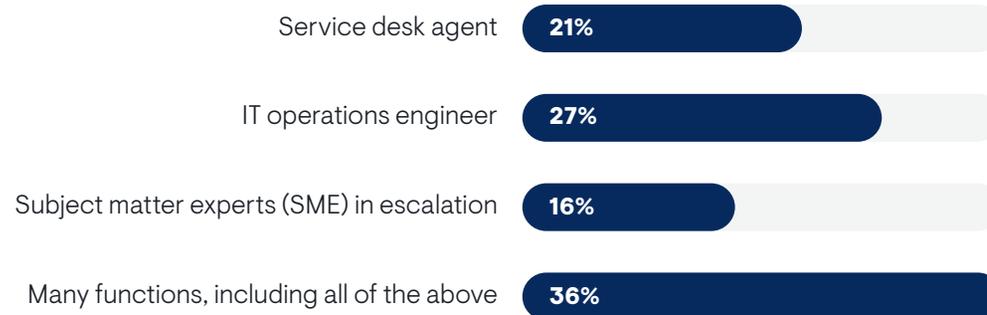
The trifecta of GenAI, AIOps, and automation heads the service desk's wish list for ITOps. The number-one improvement is automated ticket creation and population. The ideal automation includes incident summary, impact, and possible steps to fix any issue.

What IT operations improvement would most benefit the service desk? Select two.

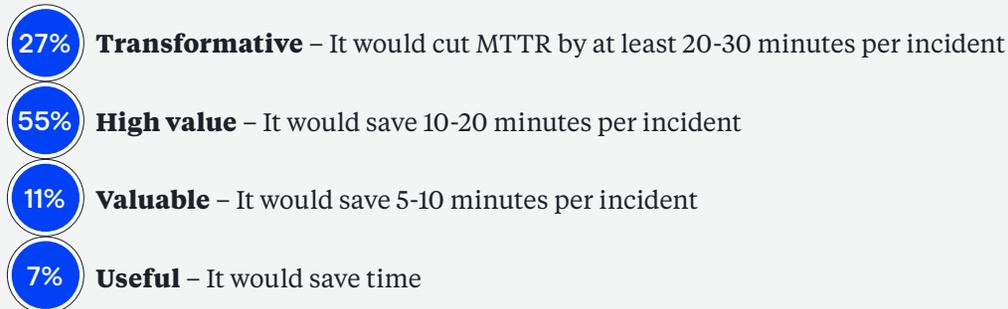


Not only does smart, automated ticket creation save time in the ops-service handoff, it uplevels the information available to all responders. High-quality information and guidance speed response time and decrease inappropriate escalations, automatically improving service quality and IT productivity. Context-informed tickets and incident workflows have cross-functional appeal.

If a solution could automatically populate tickets with incident summary, impact, and dependencies across all applications and services in real time, which function(s) would find it most valuable?



Asked to place a time-saving value on this hybrid capability, the breakdown was:



Before (Gen)AIOps, 49% of respondents stated that service desk agents spent more than half of their time doing repetitive, manual tasks. After, that percentage dropped to zero.

Concluding thoughts

AIOps is not just for IT operations anymore – if it ever was. The one-two punch of AI and automation crosses the enterprise with direct improvements in service availability and operational efficiencies that boost employee productivity and user satisfaction.

It also saves real money.

Automated processes, faster issue resolution, and reduced downtime lower operational costs and optimize resource allocation. The contextual intelligence that drives operational efficiencies also informs cost-saving efficiencies with practical insight into IT operations and service.

The addition of GenAI to the mix brings a new opportunity. Post-incident reporting and analysis – a potential source of improvement – is the least attended phase of the incident lifecycle. With the best of intentions, most people respond to an incident's end with relief and return to work rather than rearview mirror analysis and documentation. Yet, this area could be a rich source of guidance for the forward-looking practice of prevention. Continuous improvement can move from a C-level value to a practical reality in the IT trenches.

When there's an issue, what is most difficult?

Knowing what's wrong

27%

Figuring out how to fix it

20%

Finding a way to prevent it from happening again

53%

Context is the cornerstone of AIOps effectiveness. It is the bridge between an IT organization that organizes around technology specializations (networks, servers, applications...) and the business that judges IT effectiveness on service availability and performance that is cross-functional. It goes beyond knowing that server X is down to showing that it's bringing order-entry with it.

AIOps speaks
business as it
human-sizes IT
complexity.



A word from the BigPanda team

BigPanda delivers AI-powered IT operations and incident management. We enable enterprise IT to keep their digital world running by fixing reactive and chaotic processes.

Our enterprise SaaS platform transforms IT noise into insights for faster detection & triage, and surfaces siloed knowledge into situational awareness for faster investigation & remediation.

We increase the speed and productivity of Ops and Incident management teams, which is why the world's most trusted brands rely on BigPanda to improve operational efficiency and deliver exceptional service reliability to their customers. Visit us at bigpanda.io.



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