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Progress Amid Challenges:

GenAI's Impact on Lingering Obstacles in ITSM

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Executive Summary

Downtime is a no-go in IT service management (ITSM). Despite everyone's best efforts, problems and incidents do occur, and the traditional manual methods of managing these incidents are becoming increasingly insufficient. The global ITSM market value is expected to rise from USD 10.5 billion in 2023 to **USD 22 billion in 2028!** With the expectation of round-the-clock reliability, there's a critical need for solutions that not only work consistently but can also handle issues as they arise. That is where AI comes into the picture, although AI in ITSM is not new — **73%** of companies are already using AI capabilities in their ITSM tools. What's new is that now we have Generative AI (GenAI) changing IT in unprecedented ways.

The Unfolding Potential of AI in ITSM

In the past, the process of managing IT incidents used to be cumbersome. IT teams would monitor server logs, network performance, and application statuses to ensure everything is as it should be. This often involved a routine yet labor-intensive mix of scheduled checks and spur-of-the-moment monitoring. Take a server performance dip, for example. Typically, a system administrator would have to catch this during a routine log review, figure out what's wrong, and then kick off a solution. This manual approach was slow and prone to errors, which meant longer downtimes and interrupted business operations.

Then came **AIOps** and automated the grunt work. Instead of waiting for humans to notice and react to anomalies, AIOps systems continuously analyzed data streams in real-time. They detected issues before they escalated or even occurred and brought new levels of accuracy, reduced downtime, and made the systems more reliable.

The 'Watermelon' Effect: Deep-seated Challenges Persist

Despite the advancements brought by traditional AI, ITSM teams continue to face several challenges across their daily operations. Let's examine the typical tasks performed by a typical support agent to give the challenges faced by them their true share.

Data Overload and False Positives in System Monitoring:

Monitoring the sheer volume of data can be overwhelming, making it hard to pinpoint and separate critical issues from the noise, wasting resources, and desensitizing teams to warnings.

Integration Issues and Complex Context in Incident Management:

AI tools need to integrate seamlessly with existing ITSM systems, as poor integration can lead to gaps in incident management workflows. Coordinating changes to minimize disruption requires a level of strategic oversight that AI may not fully provide, especially considering human factors and concurrent business activities.

New Risks and Resource Assessment in Change Management:

While rule-based traditional AI engines can predict the potential impacts of changes based on past data, assessing the risk of new or significantly different changes can be challenging. AI can struggle with complex, novel, or ambiguous incidents that do not match the typical patterns it has been trained on.

Prioritization and Personalization in Service Requests:

Automation tools can handle and route service requests but prioritizing these based on business impact and current resources still poses challenges. Handling non-standard or complex service requests that require bespoke solutions often goes beyond the capabilities of AI.

Innovative Continuous Improvement and Measuring Impact:

AI supports improvements based on existing data and trends but may not identify out-of-the-box solutions that could leapfrog current technologies or processes. Quantifying the effectiveness of changes and continuous improvements becomes complicated.

As these challenges highlight, while traditional AI significantly aids ITSM processes, it is not a panacea. This is mainly because the challenges go much deeper than mere technological shortcomings.

While executives and management often have a solid awareness of the impact of technology adoption and process problems on the business, they typically lack visibility into the root causes of, say, skyrocketing cloud spend, poor data management, or inefficient workflows and tooling.

Poor hygiene or management of procedural details, such as failing to log every issue, not capturing sufficient details in the tickets, or neglecting to record adequate work and resolution notes, disrupts the overall health & efficiency of enterprise systems. Everything might look fine externally (green), but deeper problems (red) are revealed upon closer examination, described metaphorically as the “watermelon effect”. And it is difficult to detect these underlying issues as most organizations still monitor the skewed operational-level KPIs instead of the more accurate business-level KPIs.

The undocumented ‘tribal knowledge’ of the longstanding employees, insufficient staffing, and lack of technical and domain expertise further compound the scope of challenges.

Clearly, our operations teams need more help in addressing these challenges. And **GenAI**, presents the opportunity.

Generative AI Brings a New Dimension of Intelligence to IT

With its new and vast capabilities, GenAI can wipe off challenges within process, technology adoption, meeting business-level KPIs, and increasing team productivity. Here is a look at specific use cases and the benefits of each.

Improves Resolution Times With Automated Ticketing and Issue Resolution

ITSM teams typically handle ticketing through basic automation—sorting and routing based on predefined rules. However, these systems struggle with more complex queries that do not fall neatly into existing categories, causing delays and false escalations.

GenAI, on the other hand, has the capability to learn from every ticket processed. It not only categorizes and prioritizes tickets more accurately but also adapts to new types of requests and anomalies over time. This means it can automate responses to a wider range of issues, even **drafting personalized responses** or step-by-step troubleshooting guides for more complicated problems. This reduces the load on teams and minimizes downtime with the shortest time-to-live (TTL) resolution times.

Provides Intuitive Experiences With Natural Language Understanding

Traditional AI has been limited by rigid, keyword-based inputs. Any deviation would be handled like an exception, frustrating users.

GenAI can support **self-service with chatbots** that bring a unique understanding of natural language and generate human-like responses that are tailored to the context. For example, it can differentiate between a **casual inquiry and an urgent request,** adjusting its tone and urgency accordingly. This sentiment analysis improves the user experience by providing support that feels more intuitive and responsive.

Enhances Operational Reliability With Predictive Analytics and Proactive Problem Management

Predictive analytics uses historical data to predict and alert about potential failures, which is helpful but limited to scenarios that have previously occurred. Any new issues or complex interdependencies that haven't been directly observed before slip through the thick cracks.

GenAI-powered analytics are not limited by known issues. It can generate and simulate new **hypothetical scenarios** and predict how they might play out if they ever do materialize.This allows IT teams to prepare for and prevent problems, both known and unknown.

Eliminates Manual Effort in Knowledge Management and Documentation

GenAI automates the creation and continuous updating of documentation, generating accurate and detailed content such as how-to guides, troubleshooting procedures, and policy updates directly from service interactions and resolved tickets. That means, at any given time no matter which branch or location, the entire organization will have access to up-to-date information. It also reduces training time and ensures that the 'tribal' knowledge is not lost.

Removes Risk With Enhanced Security and Compliance

Current AI systems can monitor for deviations from compliance standards but typically require extensive programming to adapt to new regulations or to integrate new security protocols. GenAI can proactively adjust workflows and security measures in real time as it learns from security incidents and new regulations, reducing the overhead associated with compliance activities.

Boots Performance in Configuring IT Resources and Asset Management

AI-driven infrastructure-as-code (IaC) and configuration-as-code (CaC) can propose optimal configurations for new software deployments or infrastructure changes based on performance data and evolving best practices, significantly reducing the likelihood of errors and enhancing performance.

By integrating with asset management tools, GenAI can **predict** when assets need maintenance or replacement, schedule these activities without human intervention, and even order necessary parts or updates autonomously. And AI tools can aggregate the best reference material and provide it to the right teams — reducing the skill gaps where that's most needed.

Bridges the Organizational Siloes for Overall IT Health

Not least, AI can help to team up individuals working on the same issue across different organizational silos. It can unearth process-related issues in those silos and across the teams. It can "artificially" merge siloed services across teams for a more comprehensive view of the overall health of IT services and systems while helping reduce costs by eliminating idle resources, duplicated work, and over-provisioning.

Preparing for GenAI in ITSM: Data Continues to be the King

GenAI relies heavily on training with large language models (LLMs) to produce various types of content, such as text, images, and videos. The effectiveness of GenAI is significantly influenced by the quality and relevance of its training data. In IT operations, particularly, the available **training data** often comes from reactive end-user support interactions and basic monitoring systems. This content typically lacks maturity, meaning it does not provide the rich, structured, and diverse data sets needed for GenAI to learn effectively.

Publicly available content is of no help either. The training content for platforms like ChatGPT often includes publicly available data, which can vary widely in quality and relevance. This "immaturity" in the training data can limit the effectiveness of GenAI when applied to specific domains like IT operations, where specialized knowledge and context are crucial. The content generated by vendors, however, is more curated and targeted toward specific IT operations needs and provides a more mature training dataset for GenAI. Using such refined data to train GPT models could enhance the AI's performance, making it more suitable for specialized applications in IT services. Having the right AI solutions, knowing how AI engines can be effectively adopted across an organization for the best ROI, and securing the right talent and partners to build and manage AI are collectively an uphill task. It's worth the effort in the long term, due to cost efficiencies and performance improvements that AI can deliver at scale.

About Us

SLK is a global technology services provider focused on bringing AI, intelligent automation, and analytics together to create leading-edge technology solutions for our customers through a culture of partnership, led by an evolutionary mindset. For over 20 years, we've helped organizations across diverse industries - insurance providers, financial service organizations, investment management companies, and manufacturers - reimagine their business and solve their present and future needs. Being A Great Place To Work Certified, we encourage an approach of constructively challenging the status quo in all that we do to enable peak business performance for our customers and for ourselves, through disruptive technologies, applied innovation, and purposeful automation. Find out how we help leading organizations reimagine their business at https://www.slksoftware.com/