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Enhancing operational efficiencies in technology-managed services using artificial intelligence (AI)

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Section 1: Executive summary

The rapid evolution of artificial intelligence (AI) is transforming information technology (IT) operations, with AI leading the way in automating routine tasks and generating valuable insights. Building on this foundation, agentic AI introduces a new paradigm—autonomous agents capable of making decisions, initiating actions, and adapting to dynamic operational environments. By combining AI's data-driven automation with agentic AI's proactive, self-managing capabilities, organizations can achieve unprecedented efficiency, resilience, and agility in managed services.

As IT operations leaders, you are constantly challenged to deliver greater efficiency, reliability, and value while managing costs and complexity. AI offers a powerful opportunity to transform managed services by automating routine tasks, proactively identifying and resolving incidents, and streamlining processes across the IT landscape. By leveraging AI, your organization can reduce the total cost of ownership, minimize manual intervention, and accelerate innovation cycles—freeing up your teams to focus on higher-value initiatives.

Beyond cost savings, AI enhances user experience by enabling faster response times, more accurate issue resolution, and personalized support. With robust implementation strategies and a focus on security and governance, AI adoption empowers IT operations to deliver consistent, high-quality service while maintaining compliance and trust. Embracing AI can position your organization at the forefront of digital transformation, driving both operational excellence and competitive advantage.



Section 2: AI opportunities in IT operations (managed services)

Many organizations have elevated expectations from using AI and agentic AI with a primary focus on reducing the cost of operations, improving their customer experience, and gaining a competitive advantage and the ability to fast-track innovation. IT services companies are invested in exploiting the benefits of AI to address their clients' needs while creating a competitive edge for themselves. Below is a detailed view of the areas of potential applications and benefits of AI in IT operations.

1. Prevent and eliminate incidents

AI-based models can analyze historical data and identify patterns, which, in turn, can:

- **Predict failures:** Anticipate hardware or software failures before they occur through predictive analysis.
- **Optimize maintenance schedules:** Schedule maintenance activities at optimal times to minimize downtime.
- **Self-healing:** Provide automated solutions for common issues, reducing the need for human intervention.
- **Problem management:** The insights from ticket analysis can help identify reasons for repeated incidents, and through proactive problem management, they can be addressed, resulting in significant reductions in issues.

2. Accelerate incident resolution

a. Autonomous response and resolution

Agentic AI can help accelerate the ticket response and resolution time, resulting in a reduction of cost to services, improved mean time to resolution, and a better user experience through:

- Autonomous ticket creation: AI-based tools can automatically create incidents and service requests for users facing issues or requesting services.
- Autonomous ticket response: Once the ticket is created, the AI-based tool can automatically acknowledge and assign the ticket to the right team.
- Autonomous ticket resolution: AI-based tools can help resolve the tickets created.

b. Automate repeated and routine tasks

AI can automate repetitive and time-consuming tasks, increasing uptime, reducing the cost of operations, and improving user experience by deploying AI agents for:

- **Ticket management:** Automatically categorizing and routing service tickets
- **System monitoring:** Continuously monitoring systems and generating alerts for anomalies
- **Report generation:** Creating detailed performance and compliance reports

3. Increase productivity

- **Knowledge management:** AI can help create and maintain documentation from the Transition phase through the support life. AI agents can query the existing knowledge base to suggest solutions for user queries and issues.
- **Automate coding for enhancements:** Automated coding significantly reduces enhancements' time, effort, and cost while promising uniformity in output through standards adherence.
- **Automate testing for changes and enhancements:** Automate test script creation, data generation, and testing through AI, which can reduce the time and effort required to test the changes and improvements while ensuring better output quality .



Section 3: Implementation strategies

AI and agentic AI are transformative technologies that affect various aspects of business and society. Here is a view of the different aspects of the implementation strategies with respect to IT operations:

1. Define clear goals and metrics for AI and agentic AI adoption

To enhance operational efficiencies using AI, IT services firms should clearly define their objectives with respect to their end goals; these could be:

- Reduce the cost of services through autonomous incident response and resolution.
- Better user experience by using autonomous incident creation, response, and resolution.
- Faster and reliable enhancements and changes using AI tools, like TurboCode and AI Assist.
- Ensure better quality of output by implementing AI-based automation testing .

2. Build a dedicated practice to focus on advancing AI and agentic AI

The organization should invest in building a dedicated team of cross-functional experts with expertise in operations and AI, which will focus on evaluating leading large language models (LLM) and making build-versus-buy decisions. Create a AI charter for the organization to create the desired differentiation in the marketplace.

3. Training

AI and agentic AI are relatively new and are growing at an exponential rate. To help ensure that the organization realizes the full benefit of the same, it's not only important to focus on the technology aspect of it but also to train its Operate workforce, which will use and advance AI. The training could involve an awareness program, a structured certification path, an academic partnership, or hands-on training.

4. Encourage innovation and reward results

We have seen that a dedicated focus yields results. The leadership should encourage the team involved with Operational work to identify use cases that can have maximum impact on their client regarding productivity, resolution time, faster enhancement and better testing, and user experience—resulting in a lower service cost. The most impactful ideas should be rewarded to encourage better participation across the ecosystem.

5. Measuring impact

Sample metrics to track success for AI and agentic AI in IT operations

Organizations should track a balanced set of quantitative and qualitative metrics to measure the impact and success of AI and agentic AI in IT operations. These metrics should reflect efficiency, cost, user experience, risk management, and innovation improvements.

1. Operational efficiency

- **Incident resolution time:** Average time taken to resolve incidents before and after AI implementation
- **Mean time to repair (MTTR):** Time taken to remediate incidents, especially those autonomously resolved by agentic AI
- **Percentage of automated tasks:** Proportion of IT tasks (e.g., ticket triage, patching) handled autonomously versus manually

2. Cost reduction

- **Total cost of ownership (TCO):** Reduction in overall IT operational costs
- **Labor cost savings:** Decrease in manual hours required for routine operations
- **Resource utilization:** Improvements in server, storage, or network utilization due to AI-driven optimization

3. User experience

- **User satisfaction scores (CSAT/NPS):** Improvement in end-user satisfaction with IT services
- **First contact resolution rate:** Percentage of issues resolved on the first interaction, including those handled by AI agents
- **Service availability/uptime:** Reduction in downtime or service interruptions

4. Productivity and innovation

- **Time to deploy new services:** Speed of rolling out new features or services enabled by AI automation
- **Number of AI-driven enhancements:** Count of process improvements or innovations initiated by AI and agentic AI
- **Knowledge base growth:** Increase in AI-created knowledge articles or solutions

Section 4: Risk and challenges

1. Data privacy and security

- **Risk:** The biggest challenge to adopting AI is the risk of unauthorized access, transmission, and misuse of personal, confidential, and sensitive data.
- **Mitigation:**
  - **Data encryption:** Implement robust encryption methods for data at rest and in transit to protect sensitive information.
  - **Adherence to strict access controls:** Use strict access control mechanisms to ensure that only authorized personnel can access sensitive data.
  - **Technology adoption:** Have the proper technical control in place to flag the unauthorized access and transmission of session data.
  - **Periodic security and compliance audits:** Have periodic security and compliance audits to identify and address potential security gaps.

2. Model accuracy and reliability

- **Risk:** AI models have, time and again, produced inaccurate and inconsistent results.
- **Mitigation:**
  - **Oversight:** It's essential to build a mechanism for human intervention to review and validate the outcome of AI.
  - **Regular updates:** Regularly update and retrain AI models with new data to ensure they remain accurate and relevant.
  - **Robust testing:** Conduct extensive testing and validation of AI models before deployment to ensure their reliability.

Section 5: Market potential and conclusion

The global AI market was valued at approximately **$13.7 billion in 2023** and is projected to reach **$165 billion by 2032**, growing at a **CAGR of 32.2%**.[1]

Enterprise adoption: By 2026, **80% of enterprises** will have used AI application programming interface (APIs) or models, up from less than 5% in 2023.[2]

IT operations impact: IDC predicts that by 2025, **75% of IT operations** will leverage AI-driven automation, with AI playing a central role in reducing manual workloads and improving service quality.[3]

Agentic AI/autonomous AI market

Autonomous AI and agentic AI market size: The global autonomous AI and agentic AI market is projected to grow from **$4.8 billion in 2023** to **$28.5 billion by 2030**, at a **CAGR of 28.6%**. This includes AI agents capable of independent decision-making and action in IT operations, customer service, and more.[4]

Adoption in IT operations: By 2027, more than **40% of large enterprises** are expected to deploy agentic AI agents for IT operations, up from less than 10% in 2023 (Gartner, 2023).[5]

Focus area for organization's investment: According to Deloitte's survey, the two most interesting areas today are **agentic AI (52%)** and **multiagent systems (45%)**, which is essentially a more advanced, complex variant of agentic AI.[6]

In conclusion, integrating AI into managed services represents a paradigm shift that promises to redefine the industry. By embracing this technology with a strategic and responsible approach, organizations can achieve new heights of efficiency, innovation, and customer satisfaction. The path forward is one of continuous learning and adaptation, ensuring that the benefits of AI are realized while maintaining the highest standards of integrity and trust.

Endnotes

1 Precedence Research - Generative AI Market Size

2 Gartner Press Release - GenAI Adoption

3 IDC FutureScape: Worldwide AI and Automation 2024 Predictions

4 MarketsandMarkets - Autonomous AI and Agentic AI Market

5 Gartner Hype Cycle for Artificial Intelligence, 2023

6 State of Generative AI in the Enterprise 2024 | Deloitte US



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