Get better, faster, cheaper IT service through AI capabilities
Introduction:

The world of IT service is changing rapidly. The demand for better, faster, cheaper IT operations and outcomes has been fueled by advances in technology and a rise in people's expectations. The impact of emerging technologies—specifically artificial intelligence (AI) including machine learning and virtual agents—on the modern workforce is still being grappled with. But once the challenges are surmounted, the benefits will be huge.
Tackling modern IT service and support challenges

Delivering IT services has never been a particularly easy or pleasant experience, which is why the IT support industry has seen such an evolution over the last 30 years. From disparate personnel responding to phone calls and emails, to help desk structures and basic ticketing systems, through IT service management (ITSM) tools and to self-service and automation, the way we deliver IT today is unrecognizable from IT of the past. Or, at least, it should be.

There’s still a lot of room for improvement in most IT support organizations. From age-old issues to modern challenges, IT still grapples with:

- The financial pressures related to cost suppression and even reduction
- The level of human effort, time, and cost required for simple, repetitive support tasks
- Staff turnover and recruitment issues
- Increased levels of business technology use and the resulting support volumes
- Higher employee or customer expectations
- More complicated technology and service-delivery scenarios
- The inability to understand and take advantage of increasingly larger data sets
- Modern CIO priorities such as digital transformation
New technology can help with these challenges

Thankfully, with AI—virtual agents and machine learning, specifically—at the core of innovative new solutions, it’s possible to meet the need for better, faster, cheaper ITSM and IT operations management (ITOM). In fact, according to the 2017 ServiceNow Global CIO Point of View survey, 89% of CIOs are already using or planning to use machine learning.

Intelligent automation and the use of intelligent agents move the dial beyond the traditional “better, faster, cheaper—pick any two” conundrum. With AI, organizations can improve operations across all three variables, making it possible to:

- Reduce costs
- Increase productivity (by relieving staff of mundane work)
- Improve the customer experience

Three ways intelligent automation and predictive intelligence can help your organization right now

In terms of the intelligent automation, there are a number of opportunities already available to IT organizations. Three such use cases are:

1. Self-service and self-help via virtual agents
2. IT staff augmentation via intelligent automation and greater predictive intelligence
3. Greater insight into operations, performance, and improvement, including ITOM improvements
IT self-service and self-help is nothing new. In 2015, both US and UK research showed that around 80% of organizations had implemented some form of self-service technology. And yet, while organizational adoption was prevalent, the real success indicators—employee and customer adoption and the realization of expected benefits—were less so. In fact, a 2017 Realizing ROI from Self-Service Technologies survey and report from the Service Desk Institute (SDI) stated:

“The increase in the adoption of self-service tools is undoubtedly due to the range of associated benefits that come with the implementation of such a solution, most commonly reduced support costs, increased customer satisfaction, and a round-the-clock support channel. However, the number of organizations that have realized these benefits and have achieved the anticipated return on investment (ROI) are few, less than 12% according to recent SDI research.”
The underwhelming result stemmed from a disconnect between service design and employee expectations, with SDI finding that, “The most successful organizations were those that benefited from a self-service solution designed with the customer at the heart of the service.” Because even the most beautiful self-service portal will suffer if:

- It requires users to find the right place to access the help
- Users might not know the type of help they need or the right words to use
- The relevant answer or solution might be hidden among a sea of text

Artificial intelligence encourages greater self-service adoption by delivering a better customer experience and faster resolution. How? By making help easier to access and consume, including the use of natural language processing (NLP) to facilitate understanding and context plus the quality of response. This removal of friction allows organizations to realize the incident-deflection benefits promised by self-service.

Here are just a few examples of how AI and self-service can already help end users:

- Resetting a password
- Searching a knowledge base or receiving outage information
- Opening a new ticket and checking the status of an existing ticket
- Scheduling a walk-up appointment with IT support
- Ordering a new or changed service via chat rather than following a service catalog hierarchy
IT staff augmentation via intelligent automation and machine learning

Because AI reduces the amount of low-complexity issues hitting the IT service desk, agents are free to focus on higher-complexity, value-add work. AI also helps service desk agents in their everyday responsibilities, augmenting their knowledge with predictive intelligence so they can operate more efficiently and effectively. Examples of currently available use cases include:

- **Repetitive task automation:** Using intelligent automation in the initial assessment, categorization, prioritization, and routing of tickets, based on the requester’s description and learned patterns drawn from historical data. While this might seem a trivial task to replace, it’s a high-volume, low-value activity that places a considerable toll on IT support teams, with our research showing that it’s approximately 12% of available IT support time. It’s also a task that’s prone to human error due to a high level of choice complexity. One Accenture survey and report, Enabling Service Excellence Through ServiceNow’s Agent Intelligence, found that:
  - 21% of IT service desk respondents have more than 100 categories to choose from, with more than 10% facing a choice from more than 300 categories
  - 43% of IT service desk respondents have more than 100 different assignment groups to choose from and nearly a quarter face a choice from more than 300 groups
ChatOps and analytics to assist with process participation and improvement: Allowing service desk agents to engage with a virtual agent while participating in ITSM processes such as incident and change management. This in-action assistance helps reduce both mean time to repair or restore (MTTR) and the adverse impact issues have on business operations. A few things intelligence capability can be used for include:

- Incident resolution, highlighting known solutions or similar issues in real time
- Process-based approvals via the agent
- Updating assigned support tasks
- Updating requests for change
- Identifying planned changes and change windows

Facilitating major incident management: Detecting known or potential major incidents and alerting service desk agents. For example, predictive intelligence informs agents that the current issue should be linked to a known major incident or the issue they’re currently working on may constitute a new major incident. The agents then propose a new major incident, ensuring that IT support efforts are suitably focused on the issue(s).

This IT support staff augmentation through intelligent automation is an area that will only grow in opportunity and improved IT and business outcomes over the next few years, with the technology able to assist in increasingly more-complex scenarios.
Greater insight into operations, performance, and improvement

While AI helps with the heavy lifting of repetitive task replacement, it can also help with the heavy thinking—giving us insight into large datasets that would be a slow, or potentially impossible, task for humans.

Machine learning can be used for ITSM-related operations, performance management, and improvement insights such as the identification of problems or greater visibility into IT service desk performance patterns and trends (even predicting performance). And it can be applied to ITOM-related opportunities that similarly help to deliver better business outcomes.

Capabilities that can be tapped into from an ITOM perspective include proactive analytics and preventative automation—with machine learning used within the context of AIOps, detecting patterns in event data to predict when IT components or services might fail and automatically applying appropriate preventative solutions. These anomaly detection capabilities correlate thousands of events to identify patterns that are likely to result in a future outage or issue, with incoming events are then matched with these patterns.
The takeaway

Today, intelligent automation and predictive intelligence improves the customer and employee experience, augmenting IT staff capabilities and deflecting more incidents and requests while reducing costs. But we’re just scratching the surface when it comes to the possibilities of AI and AI-enabled technologies. When designed with the end user in mind, your IT organization can take advantage of AI today to deliver support that is better, faster, and cheaper than ever before.

Discover how your organization use ServiceNow® ITSM and ServiceNow® ITOM to tap into the power of AI to transform IT.

ServiceNow was founded on a very simple idea: that work should be easier.

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