





**MUNDANE REQUESTS  
CONSUME A LARGE CHUNK  
OF IT SUPPORT TIME.  
AUTOMATING THESE  
TASKS, USING VARIOUS  
INCREASINGLY AVAILABLE  
AI TOOLS, CAN FREE UP IT  
PERSONNEL TO MOVE UP  
THE CORPORATE DIGITAL  
VALUE CHAIN**

**T**he helpdesk of the future will bear little resemblance to the email/phone call interface we are all too familiar with.

For one, there may not be a living breathing human on the other end of that email. Instead, bots, powered by AI and machine learning, will take over many of the tasks assigned to IT support personnel.

The transition is already underway.

Automation has been a feature of enterprise service management processes for several years; AI and predictive analytics will significantly accelerate the process.

Gartner predicts that by 2019, IT service desks utilising machine learning enhanced technologies and AI will free up to 30% of IT support capacity. And within 10 years, virtually every application, from ERP to CRM to BI, will incorporate some form of AI, the research firm adds.

The driver for this evolution is simply that the network is becoming increasingly complex.

As the volume and sophistication of applications soars, the need for a more cutting-edge support infrastructure has become paramount.

Mark Ackerman, sales director, Middle East for Service-Now, a cloud-based ITSM solutions provider, says enterprises are looking to “consumerise” the enterprises user experience and improve employee productivity and efficiency. They are doing this by digitising workflows and employee interactions, breaking down silos within the organisation and automating tasks through machine learning and AI.

There are several things machines can do better than human in IT service management (ITSM). One of them is to collect and archive copious amounts of information. From this database, AI-powered chatbots can interact with users and dispense automated knowledge faster and more accurately than humans.

The ability to apply machine learning algorithms to organisation’s own operational data is crucial in intelligencedriven platforms. Organisations can use this predictive intelligence

“ Self-service using machine learning chatbots frees up human agents who can then focus on higher value work.”

**RAJESH GANESAN, DIRECTOR OF PRODUCT MANAGEMENT, MANAGEENGINE**



capability to create specified models that automatically categorise and route incoming requests and alerts to the right teams.

Mohamed Enab, regional professional services and customer success manager at Nexthink, which offers end user analytics solutions, says data collected from end points can be processed through an artificial intelligence database, allowing organisations develop deeper insights that will help the organisation serve its end users better.

## CHATBOTS

AI-powered chatbots and virtual agents are emerging as a new frontier in IT service management.

As workers become increasingly mobile, working odd hours and away from the office, chatbots can deliver IT services when no one is available to handle tickets.

ManageEngine is building chatbots that can assist end users through text messaging even when there are no technicians manning the IT helpdesk seat. “Bots that understand the query can sift through the solutions database, and deliver answers to end users any time of the day,” says Rajesh Ganesan, director of product management, ManageEngine. “At the backend, we are applying machine learning and deep learning, to power these virtual agents,” he adds.

ServiceNow recently acquired a company called Qlue with plans to apply artificial intelligence to routine service desk conversations using Qlue’s virtual agent (chatbots) messaging capabilities. The agent could answer FAQs such as “My internet connection is slow.”

IT service desks have to deal with password resets, equipment requests and software issues. Virtual agents provide a two-way flow of interaction in natural language between machines and humans. “With machine learning and artificial intelligence as the foundation, a virtual agent chatbot can solve problems, answer questions and undertake actions with greater efficiency and faster turnaround,” says Ackerman. “Self service, using chatbots, frees up human agents who can then focus on higher value work,” he adds.

“An automated self-service desk will allow users look up the knowledge base themselves and resolve tickets instead of referring to the helpdesk”

**MOHAMED ENAB, REGIONAL PROFESSIONAL SERVICES, CUSTOMER SUCCESS MANAGER, NEXTHINK**



↑ The higher up you go the IT support hierarchy, the higher the costs, notes Enab.

Indeed, vendors are emerging whose sole business model is providing IT service management based on bots. One such vendor, Kore.ai, provides round-the-clock Tier 1 IT self service and support through bots. The company offers automated solutions to tedious tasks, such as password resets or navigating through a database, through speech recognition or texts.

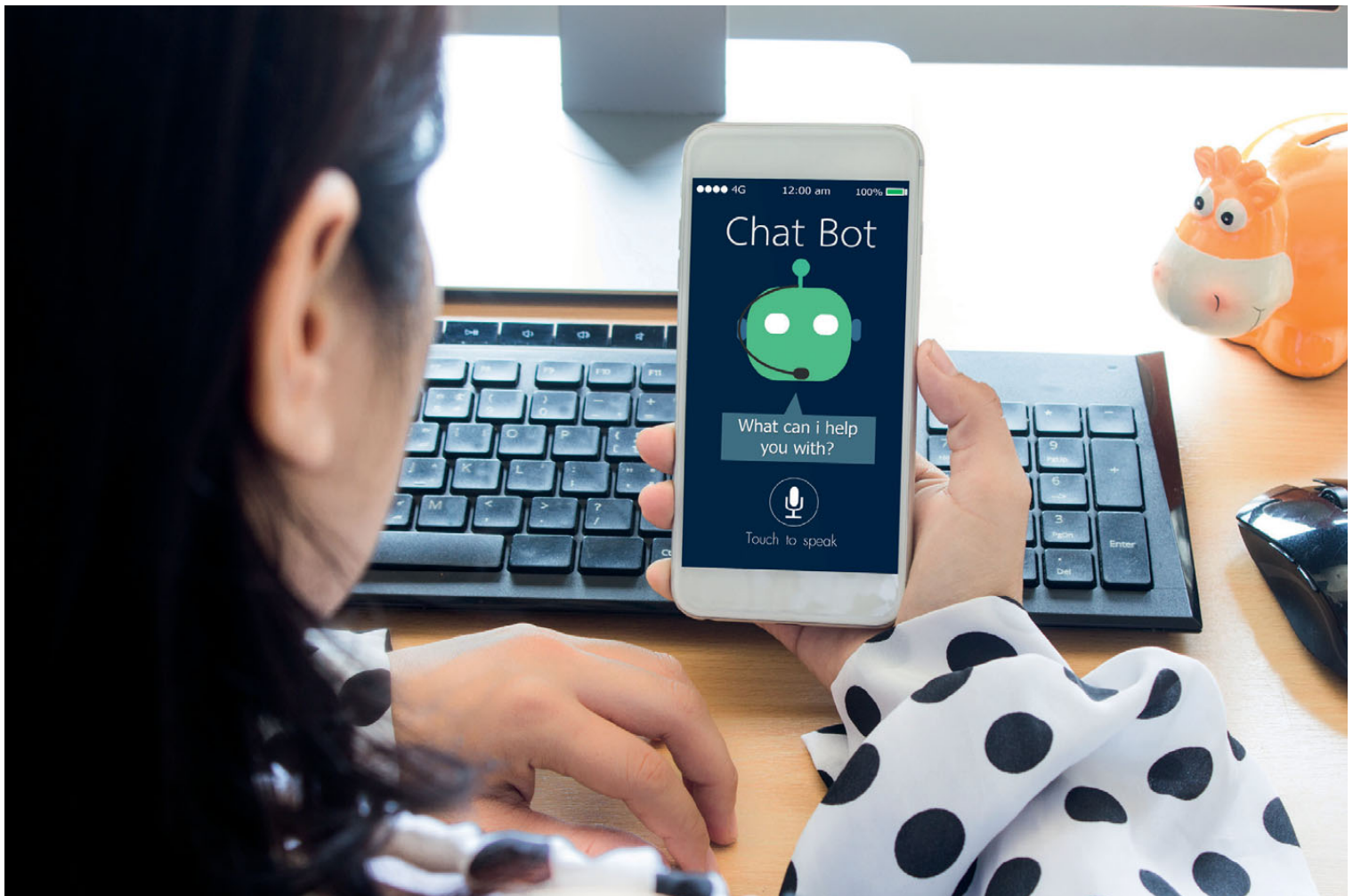
No one expects the IT helpdesk to completely disappear. They will just be fewer in number as AI in ITSM develops. Those that remain can take advantage of the same library of information mentioned earlier to solve problems their end users cannot on their own.

Service desk technicians will also be free from mundane and repetitive tasks to handle more complex IT tasks.

The typical helpdesk has three different stages of support, defined as levels 0 to 3. The higher up you go the IT support hierarchy, the higher the costs as those engineers at levels 2 and 3 are experienced, highly paid experts.

With automation, organisations can empower the people sitting in levels 0 and 1 with more insights and visibility about their environment, so they are able to solve the tickets at that level and not escalate them to levels 2 and 3, explains Enab.

“With this, IT departments can be able to reduce costs by



↑ By automating some of the more mundane helpdesk tasks, chatbots can do the same job as an IT support manager for less time and at much lower costs, anywhere and at any time.

empowering both their end users and low level engineers,” Enab adds.

Nexthink is working on a technology for end user feedback where they can report the issues they face to a system. An automated self service desk will then allow users look up the knowledge base and resolve the ticket themselves instead of going to the helpdesk, explains Enab.

IT organisations can also expect more efficiency in ITSM when there is less human involvement.

Machines make far fewer mistakes than humans, and increased automation of ITSM will cause an inevitable reduction in human error, which can have adverse effect on the business.

As automation of industrial systems has shown, predicting problems before they happen significantly reduces downtime. Proactively identifying failures before they occur and then offering up the most likely resolutions can significantly reduce mean time to resolution (MTTR) and reactive resolving of issues.

Cybersecurity is another area where intelligent systems could be particularly useful.

The Shamoon II malware that targeted Saudi Arabian or-

ganisations was specifically engineered to release its payload on the weekend when IT security personnel were away.

Between the evolving threat landscape and most enterprises’ approach to security, one of the major challenges facing organisations is the discovery of these threats, notes ServiceNow’s Ackerman.

“Overcoming this challenge requires a solution to help organisations deliver faster, more efficient security response, connect security and IT, and know their security posture, which is where ITSM plays a vital role,” he adds.

An AI security platform that never goes to sleep could have caught anomalies and alerted the security teams.

ITIL, the leading framework for ITSM was set up 30 years ago and was conceived as a framework to enforce standards, largely for humans carrying out IT tasks.

Whether ITIL is agile enough to handle the future where machines replace humans is a major point of discussion in ITSM circles.

ITSM was also primarily a technology function managed by IT teams. This included purchasing and supporting all

**30%**  
Less IT support  
due to AI





↑ Ackerman says enterprises want to "consumerise" the enterprises user experience.



↑ Ganesan notes that departments now purchase their own applications, with no input from IT.

“A virtual agent can solve problems and answer questions with greater efficiency and faster turnaround.”

**MARK ACKERMAN, SALES DIRECTOR, FOR MIDDLE EAST, SERVICE NOW**

**30**  
Years ITIL has  
been the de facto  
ITSM standard

the IT applications for the entire organisation, Ganesan observes. But many departments today purchase their own applications, typically on the cloud, with no input from the IT department. But the IT department is still required to handle customer service for all these applications, many of them cutting edge, and do so with no prior training.

This is where chatbots could be especially useful, picking up some slack from the IT department.

Vendors are incorporating virtual assistants to help customers, who would otherwise refer to IT. A good example of this is Oracle Voice, a smartphone based virtual assistant designed to help users more easily navigate through its CRM system. Cisco also announced a collaborating with noHold, which provides web based self service solutions, to launch

SARA, a virtual assistant that aims to answer basic questions and perform simple tasks related to Cisco products.

The rise of AI is the latest in an evolution that has taken in IT service management from telephone based IT support, to email and the simple self service modules available today.

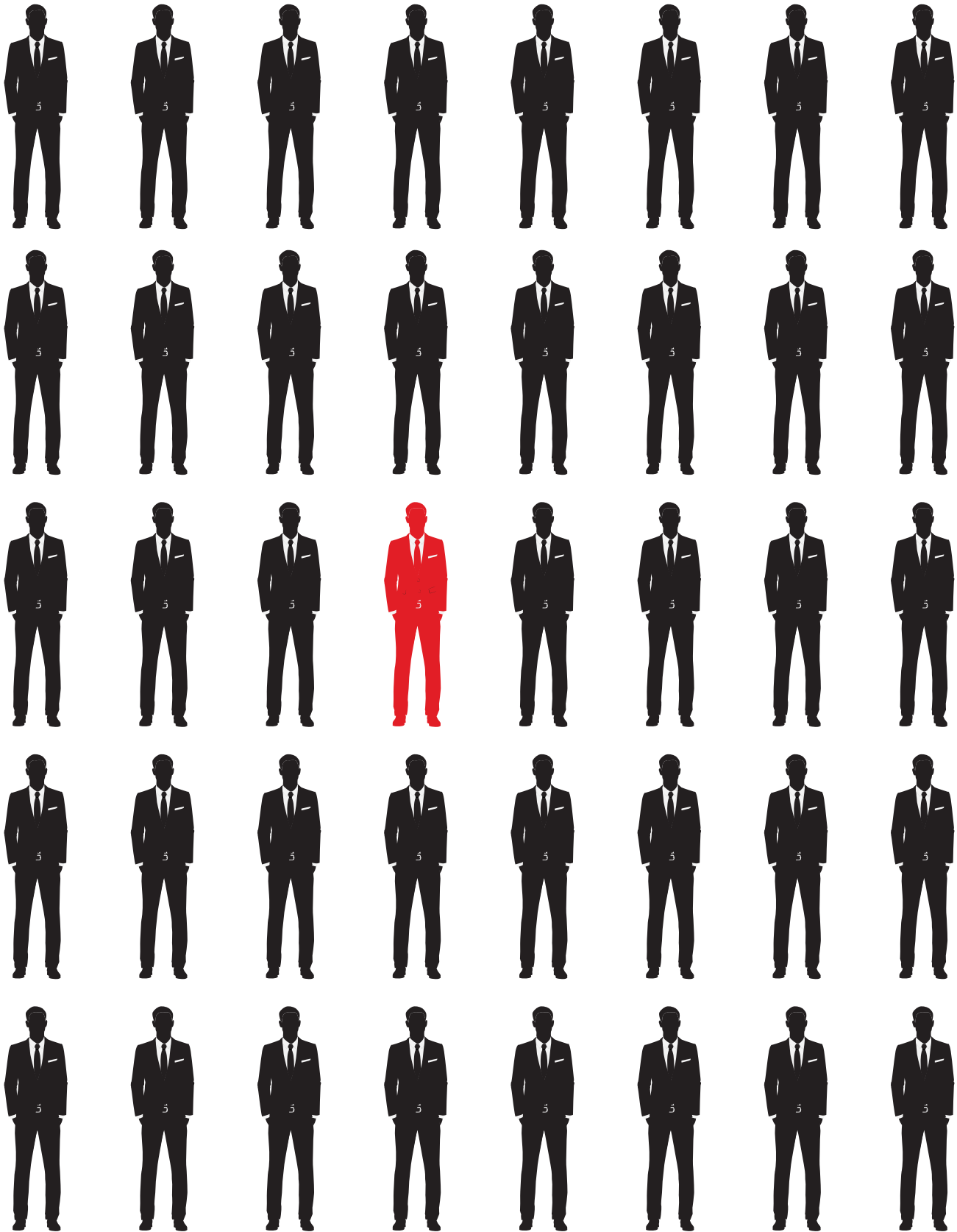
Vendors are also incorporating consumer tools to offer a more familiar and user friendly communication between users and IT support. These include popular messaging tools such as WhatsApp. “We can now integrate our tools with services end users utilise on a daily basis such as WhatsApp so IT departments can offer better customer service,” says ManageEngine’s Ganesan.

Further integration of ITSM is coming to the fore with consumer AI services such as Amazon Alexa, which are increasingly used by end users, Ganesan says.

Salesforce recently released the results of research from IDC detailing the economic impact of AI on CRM. AI-powered CRM activities will drive new efficiencies in how companies sell, service, and market, ultimately expected to create more than \$1.1 trillion in new GDP impact worldwide and 800,000 net-new jobs by 2021, the report said.

The adoption of automation, algorithms, cognitive computing and machines learning will drive the future of IT service operations.

ITIL expert Allan Andersen says there will be nothing incremental about this change. It is going to be disruptive, he asserts, and it will require humans to understand where we are slowing things down and get out of the way. ●



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