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Solution White Paper

Empower the Digital Workplace with Enterprise Chatbots

Deliver intelligent, omni-channel experiences to drive employee engagement and productivity

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Executive Summary

Digital transformation encompasses both technological and human components. While many initiatives focus on ensuring that a company's multi-cloud infrastructure is agile enough to meet changing demands around cloud mobile, Internet of Things (IoT), and big data, it's equally important to empower business workers with the modern digital tools they need to be successful today. Artificial intelligence and machine learning can play a vital role on both of these fronts. In fact, 78 percent of CIOs and senior IT leaders are already looking to AI to address complexity,[1] and by 2019, 30 percent of IT service desks will utilize machine learning to free up support capacity.[2]

The magnitude of change has forced companies to take stock of the experience they offer employees. As digital natives[3] enter and advance in the workforce, talent retention is now a top priority. These workers expect to have the best tools; 93 percent of millennials cited modern and up-to-date technology as one of the most important aspects of a workplace.[4] Employees no longer want to use traditional web-based forms to request a service and expect seamless omni-channel experiences.

As artificial intelligence (AI) and automation technologies weave their way into the enterprise, **organizations must evolve to meet new expectations for how service is delivered to employees.** The next stage of the journey embraces and integrates these technologies to create the new intelligent workplace. With a proliferation of devices, social media, and cloud services, uniting generations in the workforce is more of an advantage today than ever before.

This white paper will help you understand how work gets consumed and done in the cognitive era, and how to seamlessly merge technologies at work to meet employee expectations with enterprise chatbots.

1 2017 BMC Survey of 1,000 CIOs and senior IT professionals.
2 Gartner, "Apply Machine Learning and Big Data at the IT Service Desk to Support the Digital Workplace," C. Fletcher, K. Lord, Feb 29, 2016.
3 https://en.wikipedia.org/wiki/digital_native
4 https://www.cio.com/article/3082775/unified-communications/millennials-are-shaking-up-workplace-communication.html

INTELLIGENT APPLICATIONS TRANSFORM ITSM

Market trends clearly show the rapidly growing role and value of intelligent applications in the enterprise:

- By 2018, 75 percent of enterprise and ISV development will include cognitive, AI, or machine learning functionality in at least one application.[5]
- By 2019, 75 percent of workers who work with enterprise applications will be interacting with intelligent digital assistants that enhance their own skills and expertise.[6]
- By 2020, applications leveraging AI and automation will yield $60 billion in productivity improvements annually for U.S. enterprises.[7]

In an ITSM context, intelligent applications like chatbots or virtual agents are crucial for addressing changing expectations around compelling user experiences. Consumers now experience conversational interfaces in a wide variety of tools and services in their daily life, and understandably see no reason they shouldn't be offered similar experiences at work. Many enterprises already provide more intuitive, consumer-like interfaces, from Amazon's Alexa to Slack, allowing employees to use natural language to find knowledge and solutions for their questions and service issues. The value of this approach goes beyond convenience; AI-powered experiences can make digital services easier for IT organizations to deploy and easier for employees to consume.

CHATBOTS

Chatbots allow IT to deflect calls away from the service desk by providing an automated, easy-to-use channel to search for the information and services employees need. Chatbots also provide an intuitive way to **break down silos** in information flows between teams like HR, IT, and others, as well as across the channels employees use. Integrating cognitive components into digital experiences lowers performance barriers for customers, offering enterprise organizations the ability to amp up efficiency and productivity. As companies expand their leverage of APIs and collaboration platforms, the potential for chatbots to evolve as data aggregators and collaborators offers exciting **new directions for innovation**.

Chatbots provide:

Consumer-like experiences tailored to platforms and devices employees are already using

Accelerated service delivery, which gives users more flexibility when accessing knowledge and submitting service requests

Use of context-aware devices and predictive analytics to improve self-service

For IT, a streamlined, simple-to-use chatbot can help **reduce and control costs**, while making it possible to standardize, modularize, and extend processes to improve existing services and scale new ones. By delivering a **personalized employee experience** that fuels and drives employee engagement and productivity, IT can redefine the relationship between the business and IT, and transform the organization into a **cognitive enterprise**.

As enterprises seek to **attract, recruit, and retain top talent**, fully modern, consumer-like technology experiences help differentiate the company as a forward-looking organization working on the front lines of innovation. No savvy candidate would be enthusiastic about joining a workplace that revolved around fax machines and CRT displays; legacy ITSM can make an equally poor impression. This will only become more true as chatbots increasingly become the norm.

According to Gartner, by 2019, 40 percent of enterprises will be actively using chatbots to facilitate business processes using natural-language interactions.[9]

5 IDC FutureScape: Worldwide Analytics, Cognitive/AI, and Big Data 2017 Predictions, Doc # US41866016, Nov 2016.
6 IDC FutureScape: Worldwide Analytics, Cognitive/AI, and Big Data 2017 Predictions, Doc # US41866016, Nov 2016.
7 IDC FutureScape: Worldwide IT Industry 2018 Predictions, Doc # US43171317, Nov 2017
8 https://www.mckinsey.com/business-functions/operations/our-insights/more-than-digital-plus-traditional-a-truly-omnichannel-customer
9 Gartner, "Four Use Cases for Chatbots in the Enterprise Now," Van L. Baker, Magnus Revang, Feb. 16, 2016.

GETTING CHATBOTS RIGHT

In traditional organizations, service desk processes are largely reactive, manual, time-consuming, and often inaccurate. Slow resolution consumes time and resources. To adapt to the dynamic demands of digital business, ITSM must become **proactive, predictive, automated, and highly accurate**. Speed and efficiency are essential to reduce cost, improve satisfaction, and free up resources for higher priorities like multi-cloud management. These requirements are simple enough to understand, but can be much more difficult to achieve. As a rule, ITSM groups tend to be unable to pivot quickly; it can take years to enable and deploy new service delivery models, channels, and tools. This is especially problematic at a time when new multi-cloud, multi-channel, and multi-device environments pose pressing new service management challenges.

AI and digital automation have a profound impact on service delivery in three key areas:

1. **Machine learning** gives computers the ability to change when exposed to new data without the need for explicit programming. The system seeks better ways to understand and meet user needs, enabling continuous improvement without continuous IT effort.
2. **Speech recognition** capabilities automatically and accurately transcribe human speech, allowing hands-free experiences for users.
3. **Natural language** processing enables machines to understand ordinary human speech without the need for special syntax.

Implemented to power collaborative services such as virtual agents or chatbots, AI makes it possible for IT to transform the user experience. Business workers no longer need to learn how to use specialized applications to access IT services; instead, their interactions are conducted intuitively through a natural language conversation. By being able to understand and remember the context of the conversation, the collaborative service can act on a user's request with accuracy and efficiency.

Another key requirement for modern ITSM is the ability of users to access services across channels without having to leave their current application and log into a separate portal, or having to dial into an automated telephone voice response unit (VRU). A user currently deep into a collaborative task on Slack or Office 365 should be able to call up a chatbot from within that interface even by voice, seamlessly complete their request, and resume work for **uninterrupted productivity**.

THE EVOLUTION TO COGNITIVE SERVICE MANAGEMENT

As cognitive technologies such as AI and machine learning transform ITSM, a new standard in next-generation enterprise service delivery is emerging: **Cognitive Service Management (CSM)**. By making use of service-aware operations, tools, and process automation, CSM enables enterprise services that are:

- **Intelligent** – Making use of big data and predictive analysis to provide fast and accurate results
- **Conversational** – Providing virtual agents that understand user queries in natural language
- **Personalized** – With chatbots that provide relevant and targeted information reflecting the user's current context and needs

CSM helps IT organizations pivot more quickly and effectively to respond to the ever-changing needs of digital business. CSM platforms and technologies leverage industry partnerships and integrations to enable a unified approach to address requirements across the organization, saving time, conserving IT resources, and providing the agility and versatility to respond to the primary challenges of modern IT listed below.

The Primary Challenges of Modern IT

- **Multi-cloud infrastructure** – Enterprises no longer have workloads running only in existing data centers, but also across hybrid cloud, managed cloud, and other environments.
- **Multi-device (IoT) environments** – Companies must manage more than just IT devices and assets. As the IoT becomes ubiquitous, business assets and objects of all kinds throughout the enterprise will be connected with the device mesh.
- **Multi-channel/omni-channel experiences** – Customers and employees want service provided through the channel they find most relevant, including traditional channels like email and phone, as well as chatbots and virtual agents.

The BMC approach to CSM is based on **openness, flexibility, and choice**. Employees gain simple, one-click access to the products and services they need using their preferred channel. On the service desk, cognitive and multi-cloud capabilities are embedded into existing service management processes to bring agents to new levels of agility, productivity, and efficiency. Developers can also infuse predictive intelligence into new and existing enterprise applications put the power of intelligent systems to work throughout the business.

CSM delivers powerful business outcomes for the digital enterprise, including:

Improved customer and employee experience – Cognitive capabilities enable enterprises to deliver digital workplace initiatives and people-centric experiences that increase employee engagement, retention, and productivity.

Increased business agility, efficiency, and productivity – CSM capabilities, such as virtual agents, help IT and business users complete tasks more quickly and cost-effectively across service delivery experiences, a key benefit in today's heterogeneous environments.

Cost savings – CIOs can demonstrate more value to lines of business by supporting new revenue streams, improving operational efficiencies and accelerating digital services in the cloud.

CONCLUSION

ITSM is the engine of digital transformation, connecting business users with the tools and services they need to maximize individual and team productivity, drive innovation, and meet the needs of customers and the business. Legacy ITSM can slow transformation, and the business itself, by forcing both IT and business users to spend time navigating manual, non-intuitive workflows and interfaces.

Collaborative services, such as chatbots and interactive agents, enable a modern digital workplace where users can easily access IT information and services across channels using natural language. Instead of having to interrupt their productivity to enter a separate interface and wrestle with specialized language, they can ask for assistance as naturally as speaking to another person. These automated interactions free service desk personnel to focus on other tasks, increasing IT efficiency and productivity. As an implementation of Cognitive Service Management, chatbots are a key example of the power of artificial intelligence, machine learning, predictive analytics, and automation to drive transformation for the cognitive enterprise.

FOR MORE INFORMATION

To learn more about BMC solutions for Cognitive Service Management, visit **bmc.com/cognitive**

BMC is a global leader in innovative software solutions that enable businesses to transform into digital enterprises for the ultimate competitive advantage. Our Digital Enterprise Management solutions are designed to fast track digital business from mainframe to mobile to cloud and beyond.

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