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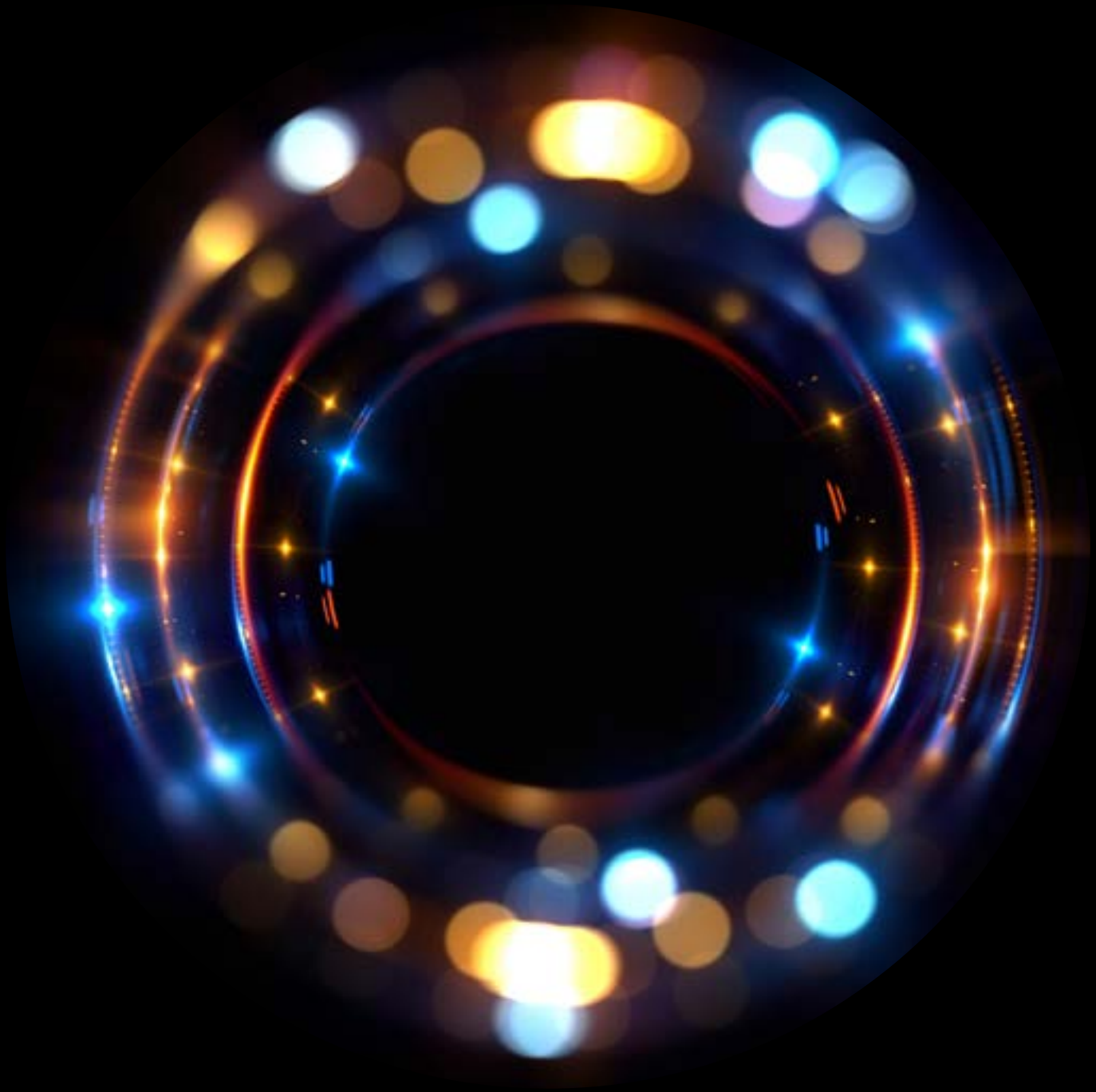

Accelerating application management services automation

Time to break out the bots?

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A compelling option continues to emerge in IT application management services (AMS), fueled by advances in robotic process automation (RPA), cognitive computing, machine learning, and other forms of artificial intelligence (AI). *AMS automation* is rapidly expanding beyond the realm of existing IT service management (ITSM) tools to include a new generation of robotics that minimizes the amount of human intervention in the workflows, analysis, and solutions associated with AMS and helps drive business value in new areas.

This Deloitte point of view reviews the history of AMS automation, introduces six imperatives driving development of new AMS automation tools, and offers six principles of AMS automation that can help companies in their pursuit of better, faster, cheaper AMS.

A brief look at today's AMS automation

AMS encompasses various services, processes, and methodologies for maintaining, enhancing, and managing custom, packaged, and network-delivered software applications.[1] It typically involves performing routine or scheduled maintenance; enhancing, patching, or upgrading applications with software changes; and resolving operational and performance issues (incidents). Each of these activities contains workflow, analysis, and solution elements.

At its simplest level, AMS automation can enhance or replace human activity associated with each element. It is hardly a new concept. For decades, ITSM tools have supported workflows and provided knowledge databases that assist in application analysis. Monitoring tools identify events and initiate the workflow through alerts. Configuration, development, and testing tools support the application development lifecycle.

That said, recent dramatic advances in robotics, cognitive computing, and machine learning are taking the state of the art in AMS to a new level. The potential impact of automation on the organization is significant, opening up new avenues not only for efficiency, speed, and cost reduction, but also other business benefits.

What automation is already doing in supply chains and customer engagement can be applied to the AMS realm.

AMS automation imperatives

Six key factors driving advances in AMS automation:

Service improvement. Automation can lead to increased service level quality for the same reasons—bots are "always on," and they are fast and reliable when compared to humans. They also help free up resources, as noted previously, for other value-added activities. In addition, customer self-service can be enabled as a part of AMS automation, often a preference and almost always adding another layer of efficiency to AMS.

Speed. For many processes, bots are faster than people, partially due to physics, but also because they never rest. Through automation, tickets can be routed faster, steps can be removed from incident analysis, and software enhancements (releases) can be deployed weekly or daily versus quarterly or monthly.

Cost optimization. Bots replace or amplify human effort. By one estimate, the majority of IT service providers will use intelligent automation service techniques by 2021, resulting in a 15- to 20-percent reduction in the cost of commodity AMS.[2] This means that rather than searching through databases or categorizing service tickets, valuable human resources can be redeployed to more meaningful tasks with accompanying savings.

Risk reduction. Once properly configured, bots can be less prone to errors than people. Especially when machine learning is introduced to the automation equation, bots can even learn from their mistakes so they are less likely to repeat them.

1 Gartner glossary.

2 Arup Roy and Gianluca Tramacere, "Understand the Impact of Intelligent Automation Services on IT Service Providers' Strategy," Gartner, November 2, 2016.

Innovation promotion. Freeing up IT resources has yet another potential advantage: It can give them time to investigate and implement new solutions for AMS and other IT/business services provided across the enterprise, thereby creating a virtuous cycle of innovation. This creative application of technology can help build the IT group's credibility with its business counterparts, increase the excitement of current and prospective employees, and play a role in establishing an innovation culture.

Business value generation. That which is learned, tested, and implemented in IT often has a conceptual or actual application to business processes. For example, automation that applies to resolving IT service tickets might work well in a company's customer service function. This extension of IT capabilities can increase IT's impact on business outcomes and further build credibility across the enterprise—perhaps the ultimate benefit of AMS automation.

AMS automation is about far more than building bots—it is about understanding the fundamental transformation of the business and how automation can augment and enhance the delivery of services.

Building an automation program on sound principles

The hype around RPA, cognitive computing, machine learning, and AI might lead to the mistaken impression that automation is an "easy button." It isn't! AMS automation, especially for complex business domains, is about far more than building bots—it is about understanding the fundamental transformation of the business and how automation can augment and enhance the delivery of services.

Six guiding principles of AMS automation can help organizations determine their digital maturity and develop an AMS automation strategy and road map:

Start with objectives, not technology. With potentially thousands of automation tools available in the market, along with constantly evolving standards and vendor claims, it can be easy to be distracted by "the bright shiny objects" that technology represents. More effective first steps are to understand the digital maturity of the organization and define core automation objectives. In other words, answer the why question first, not the what, when, where, and how. *The expected results should drive automation decisions. Once those objectives are defined, the technology decisions should follow along.*

Scale matters. AMS automation has an important economy-of-scale dimension. Large-scale service desks and application management operations, for example, may be able to justify the investment in state-of-the-art AI capabilities. On the other hand, small organizations may simply want to improve the use of existing ITSM tools. *The automation strategy should align with the specific characteristics of the application management operation.*

Automation has prerequisites. Automating a workflow ideally means having a defined process that is executed consistently. For example, effectively implementing incident resolution analytics requires having a data repository of historical activity or a knowledge base. *The automation approach should carefully consider the "as-is" application management operating model.*

Pay attention to the application architecture. Automation used in an ERP environment differs from that used in a custom software development environment. Even within ERP environments, automation solutions will be different depending upon the ERP vendor. Software as a service (SaaS) solutions add yet another dimension. *An effective automation strategy should account for the specific nuances of the organization's application architecture.*

Leverage what's available. Many automation tools are already available in existing products from technology vendors and service providers. For example, ERP systems and leading ITSM tools often include a variety of automation and analytics capabilities—or application programming interfaces (APIs) to such capabilities from other vendors. An understanding of the available portfolio of solutions, versus a single toolset, can potentially reduce costs and speed deployment. *The latest technologies in the marketplace can be alluring, but in many cases the tools for an effective start may be close at hand.*

Go for quick wins. Part of developing an AMS automation roadmap is determining where the best opportunities for automation reside—those that might be implemented at the least cost and effort while producing desired outcomes. Very often, relatively modest automation efforts can yield compelling results. *An automation heat map that shows candidate processes for automation across the enterprise can help pinpoint opportunities that closely align with IT and business objectives. Such an approach can help identify and prioritize specific opportunities, especially those that can improve other elements of IT service delivery.*

Establishing a new paradigm

AMS automation represents a potential major leap forward in how IT services are planned and delivered. Also, unlike many IT decisions in the past, it does not force stakeholders to decide between effectiveness, speed, or cost reduction. All three—and more—are likely possible.

In fact, although automation does potentially offer significant labor cost reductions, other business benefits, such as risk management, promotion of innovation, and even business value generation, may be even more important factors that drive the automation strategy and road map. Conversely, delays in weighing automation opportunities could put IT organizations and the enterprise at a significant competitive disadvantage in the near future.

By focusing on desired outcomes, following a clearly defined path, and leveraging the technology options that make the most sense for the business, IT organizations can work under a new ITSM paradigm going forward.

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