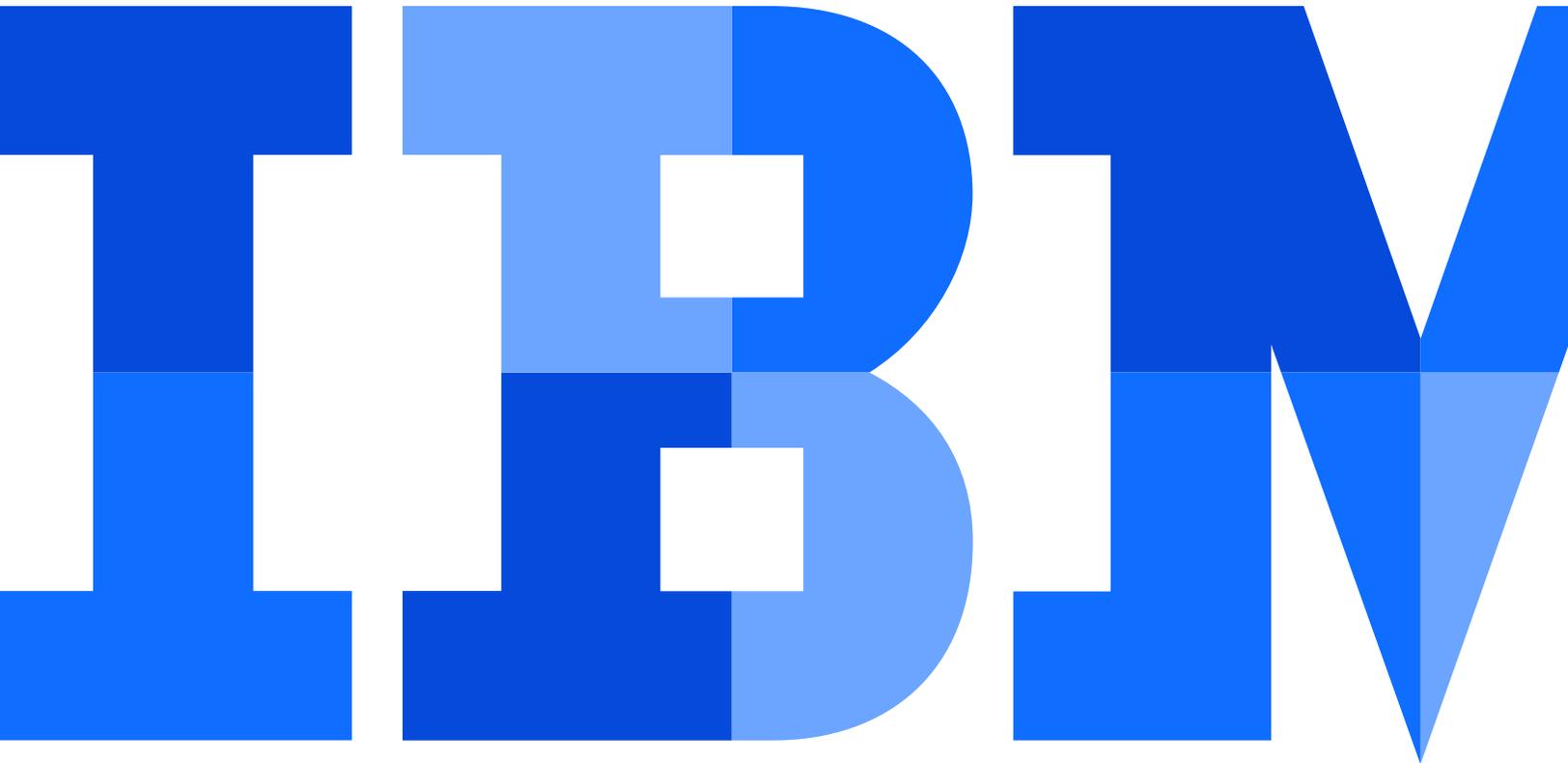


# Gain the advantages of automation and cognitive services delivery

*Build on a flexible enterprise services platform to enjoy  
efficiency and competitive advantages*



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## Introduction

IT is under an ever-increasing demand to do more with less during an age of accelerating disruption. This disruption can come from outside the enterprise—from start-ups, other industries and more agile competitors—but also from within, as business units look to outside vendors for specific or more cost-effective IT solutions.

A first step in dealing with these demands and disruption was discussed in a previous white paper, [Discover IT as a Service, the next generation of IT service delivery and consumption](#). To gain further efficiencies and competitive advantage, there's a revolutionary, new capability with enterprise IT as a service (EITaaS), which can fully employ automation and cognitive services delivery. IT departments can now manage tasks across an entire environment using advanced automation and predictive analytics. This capability is made possible by combining artificial intelligence (AI) with automation. AI is maturing rapidly, enabling many manual decisions and actions to be executed automatically by a robust and extensible platform.

This white paper examines the benefits of employing automation and cognitive services delivery to gain efficiency and competitive advantages. We will discuss the journey to build the EITaaS platform which is needed to deliver automation and cognitive technologies, the factors that make IBM uniquely capable of delivering this platform and share use cases of how IBM clients have benefited from these capabilities.

## The business value of automation and cognitive services delivery

Advanced IT solutions bring the power of brain and brawn to enterprises. The automation in a solution provides the muscle to consistently and flawlessly execute IT infrastructure operations faster than humans could—enabling much of the IT workload to be shifted from manual to robotic. At the same time, cognitive abilities provide the brain power needed for faster delivery and agility. By combining automation with AI, IT staff can use the insights generated by cognitive technologies to perform complex decision making with increased confidence, and any task identified by AI can be automatically triggered. In the experience of many IBM client enterprises, the efficiency improvement has been dramatic: within 6-18 months after adoption of automation, the manual workloads have dropped from between 20 percent to 70 percent.<sup>1</sup>

The benefits of adding automation and cognitive services delivery can:

- Reduce errors and enable more consistent outcomes
- Improve quality of service (QOS) and provide new, superior services
- Accelerate workflow
- Reduce or eliminate manual work, which can reduce costs
- Provide faster remediation times
- Reduce or eliminate incidents
- Provide on-demand scalability to meet peak and asymmetric workloads
- Enrich and improve timeliness of information to human practitioners

Automation enables enterprise IT to bring on board and rapidly resolve issues that previously were handled by system administrators and field technicians. Advanced automation technologies deploy virtual robots that live within an EITaaS platform. The robots are essentially IT specialists and architects that can operate in various platforms and applications. Using AI, they can automatically remediate problems virtually immediately, as problems happen or even before they occur.

For example, by installing over 4,000 sensors, a major railway uses predictive analytics for “condition-based maintenance.” The sensors report on equipment, such as overly-warm bearings on locomotives and rail cars, so they can be removed from service and repaired before breakdown. This technique can be used across industries to monitor physical equipment, servers, storage, networks, applications and middleware—before breakdowns happen.

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37%

faster in discovery of issues<sup>1</sup>

40%

of issues remediated with IBM® Dynamic Automation<sup>1</sup>

**To help improve train safety and prevent derailments, a major railway partners with IBM Services to process data from over 4,000 sensors. IBM Dynamic Automation, continuous compliance and predictive analytics make processing data at this scale possible and helps reduce the “busy work” to quickly get employees into the field with actionable insights.**

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To fully combine the power of automation and cognitive—and realize gains in efficiency and competitive advantage—enterprises need a robust and flexible architecture, built on the right cloud infrastructure.

## The journey to successful automation and cognitive services delivery

Once the potential benefits are clear, the real issue becomes how to harness the power of automation and cognitive computing. This process requires a roadmap that starts with where an enterprise is right now. And currently, most enterprises are in an era of disruption.

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81%

of events were automatically resolved on its top five servers<sup>1</sup>

45%

of events during spikes no longer require human intervention<sup>1</sup>

53%

of the 90 thousand tickets are now automated<sup>1</sup>

**A major European bank wanted to speed customer transactions and increase overall IT efficiency. By implementing IBM Dynamic Automation with IBM Services, the result was faster response times to resolve events, now on average within 3.14 minutes.**

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Disruption is inherent with new business models that are launching in the market. In addition, the exponential increase in the volume of data worldwide—especially unstructured data that has not been analyzed (dark data)—makes it challenging for IT to immediately extract value to help maintain their traditional competitive advantages. The answer to responding quickly is automation and cognitive computing.

When faced with reengineering decisions today, most enterprises want to have both flexibility and reliability. Their requests may include these kinds of sentiments:

- Our enterprise should be able to move with the speed of an agile start-up, but also maintain our security, compliance and adherence to regulatory demands.
- We want to be open, accessible and flexible—so that anyone who wants to use our services can use them from anywhere, on any device. But at the same time, we want this infrastructure to be fast, scalable, robust, resilient and secure.
- We want to disrupt the competition, but not our own day-to-day operations.

Agility and stability can seem like contradictory goals, but there's a way to accommodate both with a two-step process that enables competitive advantages and IT efficiency improvements.

The first step is moving to the flexibility and reliability of business services delivered by the cloud with an EITaaS model.

The second step is fully engaging automation and cognitive computing across the IT infrastructure.

EITaaS enables leading chief information officers (CIOs) to become brokers of services to their companies in the evolution to hybrid cloud. The driving factor is to deliver both internal and ecosystem services to enable the enterprise to be responsive to competitive demands for services from outside the enterprise. Most IT departments no longer have a monopoly on IT services. Internal customers might go outside an enterprise to different service providers because the internal IT department can't keep pace.

Moving to an EITaaS model brings the flexibility to offer business services at different service level tiers and changes the financial model to offer business units flexible consumption models, such as pay-as-you-go resources.

The IBM EITaaS architecture is extensible, scalable and built on a pay-only-for-what-you-use model—and has been delivered repeatedly over multiple industries. The solution is vendor-agnostic and can include third-party services in addition to the services developed by IBM. The recommended hybrid cloud infrastructure can also include third-party vendors and different cloud providers, in addition to traditional on-premises IT, private cloud or the IBM Private Cloud.

The result is a modular system that works across multiple vendor platforms and is designed to support end-to-end workloads. This modular system can be adapted to virtually any size enterprise and works just as well for a company with 135 data centers in over 40 countries as it does for a company with 800 servers.<sup>1</sup>

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**62%** reduction in mean time to resolve (MTTR)<sup>1</sup>

**A major insurance company used Cognitive Delivery Insights to help improve the value of automation in three ways:**

- 1. Identify the servers that weren't currently being automated. This process enabled the project to increase the number of servers automated from 87 percent to 100 percent.**
  - 2. Identify new automations to deploy. This process enabled the project to deploy 14 new automatas, with eight more under assessment.**
  - 3. Improve performance of existing automation. This increased the incidents that were automatically resolved from 12 to 61 percent.<sup>1</sup>**
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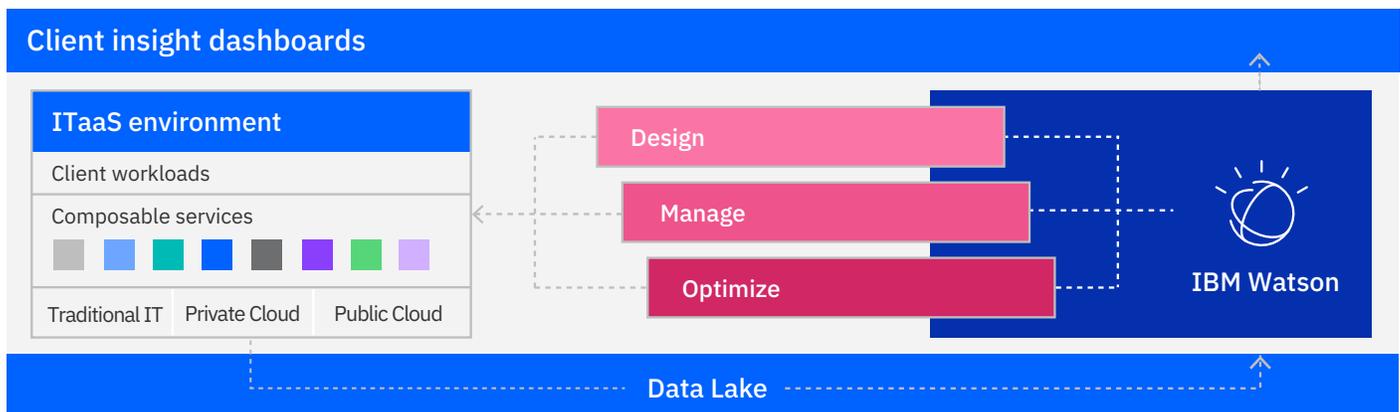


Figure 1: Watson can deliver greater efficiency and competitive advantages by driving automation—optimize, manage and design—based on information drawn from the data lake.

## Why enterprises can depend on IBM for automation and cognitive services delivery

IBM helps enterprises develop a roadmap and define an EITaaS model. That's step number one, but it realizes only some of the benefits. Step number two is fully implementing automation and cognitive delivery.

What's unique to IBM is IBM Watson® and the cognitive services Watson™ can provide. By using the IBM Services Platform with Watson, enterprises can fully reap the benefits of AI-infused advanced automation, together with the cognitive delivery and predictive analytics that Watson provides. IBM is experienced in building digital platforms as a service (PaaS) across the globe.

IBM helps enterprises more efficiently deliver the three core objectives of an EITaaS environment:

1. Optimize IT performance to continuously improve business outcomes
2. Manage IT operations to help keep the environment secure, healthy and always on
3. Design superior IT solutions to more rapidly and effectively deliver on business objectives

Within IBM Services Platform with Watson, Watson serves as the brain that optimizes the automation in EITaaS, with automation delivering on the goal of cost savings through efficiency gains. It provides a new way for enterprises to manage IT environments with this new agility, delivering on the goal of achieving competitive advantages. Taken together, enterprises can enjoy agility and flexibility while still maintaining reliability and resiliency.

To deliver more power and efficiency, enterprises must employ a common layer of brokerage, orchestration and operations that runs through all operational environments, enabling management through an integrated service management layer.

For example, in the traditional IT world, incident, problem, change, capacity and performance management would be updated on one IT platform. Then, on a public or private cloud environment, the same types of changes would be repeated. But now, all these changes can be made just once across an environment, using advanced automation and predictive analytics.

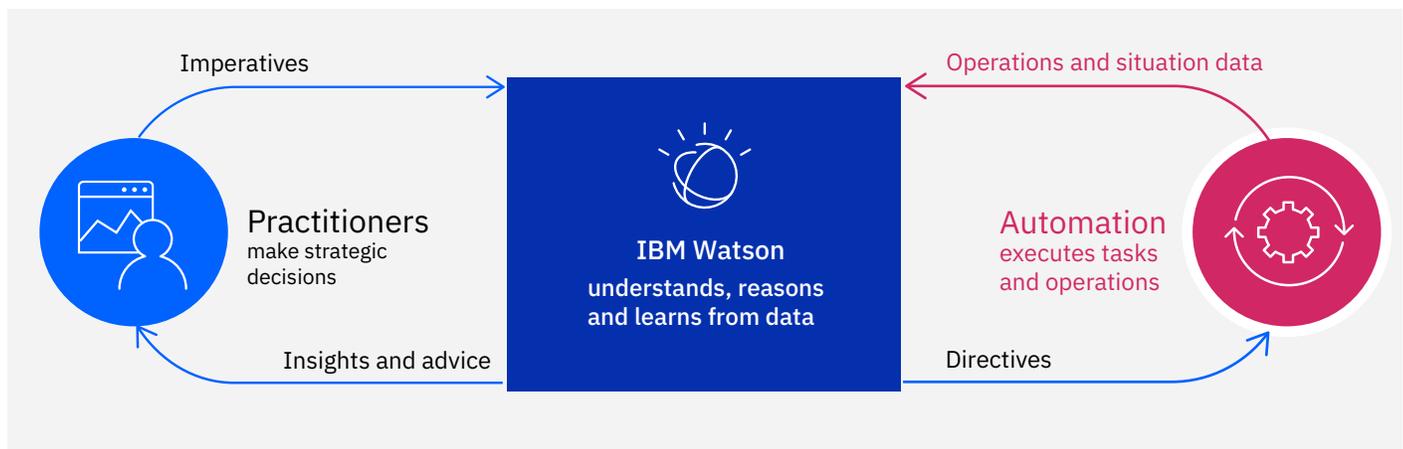


Figure 2: Watson is the brain that directs the muscle of automation, helping to free staff to focus on strategic or complex decisions.

This automation and cognitive services delivery can also help enterprises make better use of all resources with a new division of labor across IT.

The automation provided by Watson—to optimize, manage and design—is the prime enabler of EITaaS. This process introduces a new triad of responsibilities.

- First, Watson sifts through incoming data to almost instantly deliver the insights that previously required additional or manual analysis.
- Second, decisions that are entirely routine can be fully automated.
- Third, the IT staff and practitioners can evaluate the data from Watson to make strategic or complex decisions with increased confidence.

The IBM Services Platform with Watson has already been deployed to over 1,600 clients across the globe, on approximately 500,000 devices across industries—including retail, manufacturing, government, education, aerospace, financial and banking services.

IBM believes that the power of the IBM Services Platform with Watson approach is confirmed in numerous analyst reports. IBM was named a Leader in the Gartner Magic Quadrant for Data Center Outsourcing and Hybrid Infrastructure Managed Services, Europe. (Authors: Claudio Da Rold | Robert Naegle | David Groombridge, Publication Date: 14 June 2018).<sup>2</sup>

Additionally, Everest Group has recently named IBM as a Leader in its IT Infrastructure Services Automation—Market Trends and Services PEAK Matrix™ Assessment report for 2018.<sup>3</sup>

## Conclusion

Enterprises that want to win are looking for every possible advantage. CEOs need to rethink how technology can be used as a competitive asset. An EITaaS platform provides the flexibility to meet the shifting demands of disruption, and enables a robust platform to support core applications. This platform can optimize value by combining the power of automation and cognitive services delivery to augment human intelligence and deliver higher service quality.

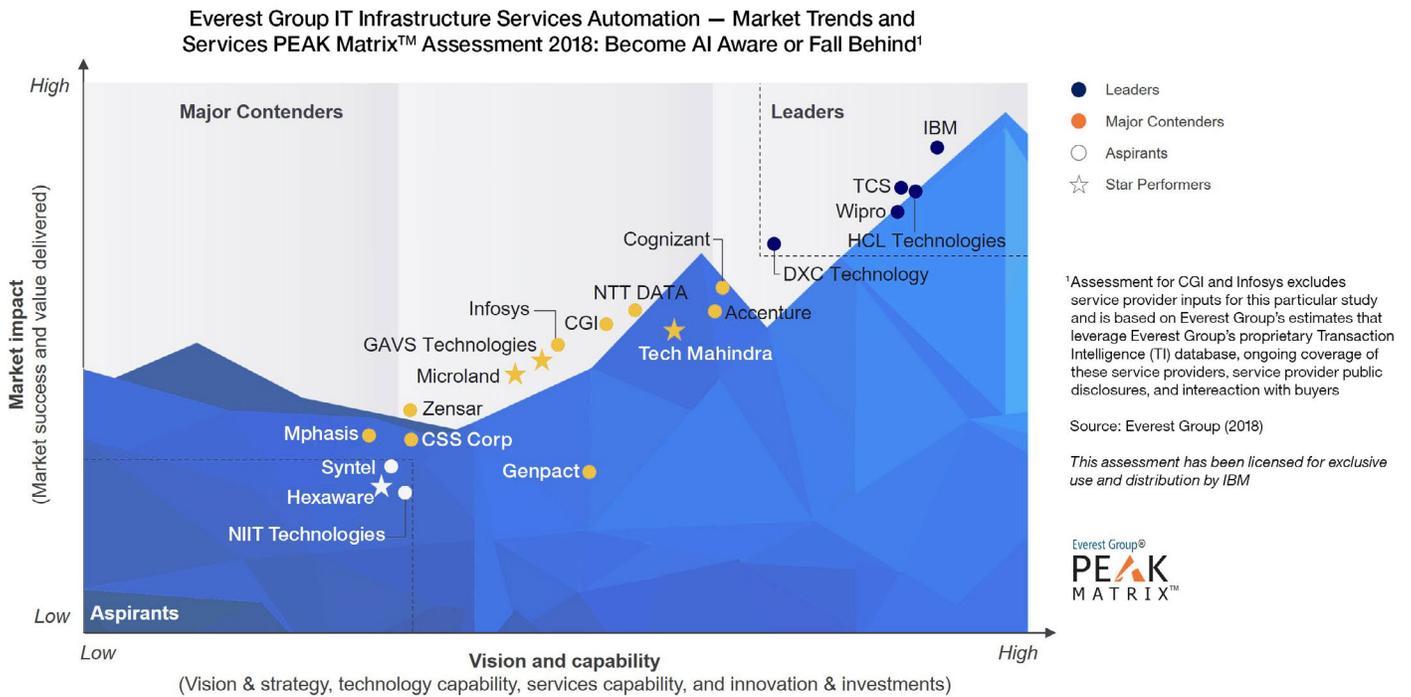


Figure 3: IBM has recently been named a Leader in IT Infrastructure Services Automation.

IBM Services Platform with Watson provides the foundation that can make autonomous decisions, manage IT operations to keep the environment healthy and always on, and help ensure IT performance is continually optimized. More than a better way to run IT, it's a new way of doing business.

**For more information**

To learn more about IBM Services Platform with Watson, please contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/services/technology/platform-with-watson](http://ibm.com/services/technology/platform-with-watson)

Learn how leading IT organizations are capitalizing on cognitive technologies and automation to optimize the business value of hybrid cloud. Read [Discover IT as a Service, the next generation of IT service delivery and consumption](#).

**Acknowledgments**

**Bridget Karlin**

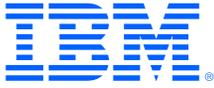
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- 3 Everest Group, IT Infrastructure Services Automation – Market Trends and Services. PEAK Matrix™ Assessment 2018: Become AI Aware or Fall Behind, EGR-2018-29-CA-2718. ([www2.everestgrp.com/Files/previews/Everest%20Group%20-%20IT%20Infrastructure%20Services%20Automation%20PEAK%20Matrix%202018\\_CA.pdf](http://www2.everestgrp.com/Files/previews/Everest%20Group%20-%20IT%20Infrastructure%20Services%20Automation%20PEAK%20Matrix%202018_CA.pdf))



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