

Digital Transformation Begins with Infrastructure Automation

**Serious about exploiting the opportunities of the digital age?
Better get serious about automating everything.**

Paul Hammond, Vice President, Cloud Infrastructure Services



People matter, results count.



It's ironic. Everyone sees how technologies are converging in the digital age. Everyone is drooling over the incredible opportunities this creates. Yet almost every company is pursuing these opportunities in an ad-hoc, piecemeal, inefficient way. A one-off analytics project. A toe-in-the-water attempt at DevOps adoption. An experiment with a self-service IT portal.

Why not do the one thing that gives you full-on access to all of these opportunities while also streamlining operational efficiency and cutting the cost of current IT operations? Automate your IT infrastructure so that you can automate your business processes. Not just one of them. Not just some of them. ALL of them.



Why Automate? Because the Future Belongs to the Fast.

At its core, the digital era is all about speed. Everything needs to go faster—from application release cycles to customer service to managing incidents and other internal support issues. Competitive differentiation, customer loyalty, and superior business outcomes all depend on hitting the accelerator on business processes. And all of those processes depend on infrastructure. Your business can only go as fast as its IT infrastructure.

Simply put, infrastructure automation doesn't just accelerate infrastructure. It accelerates the business processes you apply it to. It accelerates the entire business transformation initiative. It accelerates your ability to explore and exploit opportunities. For example, infrastructure automation can help you expedite:

- **DevOps adoption.** DevOps is the key to the agility required in building and releasing high-quality software faster, and getting DevOps processes—and DevOps adoption—moving faster requires infrastructure automation. Many companies have implemented automation in a limited way, and that is why they are not seeing the full benefit they expected. Recent research by Forrester shows that

of DevOps teams that were doing any release automation, just 20% had achieved full release automation.¹ Making DevOps practices work requires I&O pros to abandon partial scripts in favor of full automation and participate in the entire life cycle; they must also get comfortable with failing fast and learning from those failures, according to the Forrester report.

- **Self-service portals with a fantastic user experience.** Service catalogs are expanding beyond IT into new areas of the business, such as HR (onboarding, benefits, compensation packages), supplier management (bid reviews, renewal management, contracts), and more. These service catalogs accelerate business processes by increasing employee productivity. And automation accelerates service delivery. To fully exploit the potential of the self-service portal, companies need to shift from service catalog fulfillment initiatives to business service automation—for example moving beyond simple tasks such as password resets to full workflow automation. To achieve the full business value of the self-service portal, every repeatable workflow should be automated.
- **Harnessing the cloud.** There is still plenty of untapped value in the cloud model, and smarter infrastructure automation provides a way to exploit cloud opportunities quicker and in a more controlled manner through provisioning and workload allocation among public/private/hybrid clouds.
- **“Bi-modal IT.”** IT is expected to serve as an innovator and strategic partner to the business—while continuing to meet SLAs, maintain operational capability, tight security controls, perform resiliency planning, and minimize costs. The result is a delicate balancing act that some refer to as “bimodal IT,” which requires cutting cost and risk from legacy IT processes while introducing new capabilities. Yet while innovation and agility are prized, 80% - 99% of the IT budget is still spent on keep-the-lights-on activities. Automation is the catalyst for transitioning to bimodal IT, because automation can both accelerate IT processes and create cost savings that can be used to fund transformational capabilities.
- **Programmable infrastructure:** The nature of the data center is changing rapidly. Today the data center isn't really a “place” anymore; it's everywhere: in the cloud, at a hosted site, on social platforms, at a service provider facility, in a traditional brick-and-mortar building, or in some combination of these. That means what's important is the ability to automate and orchestrate infrastructure services in the best possible way—the ability to program infrastructure

¹ “Predictions 2016: Automation Drives Growth,” by Forrester Research, November 2015.

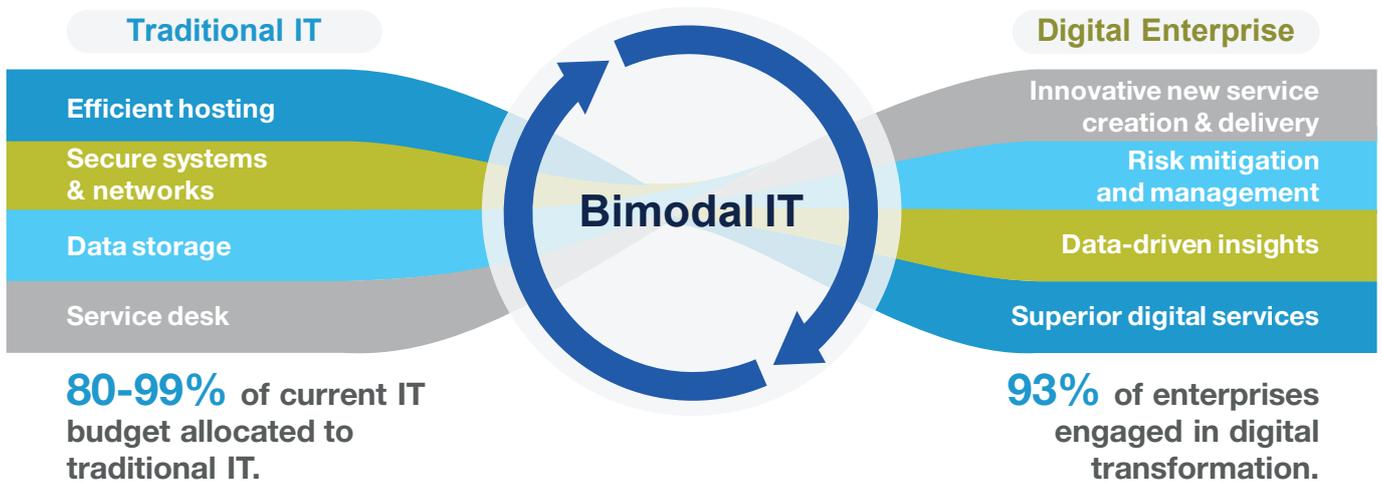


Figure 1: Bimodal IT requires a difficult balance between traditional IT and digital enablement.

as a service: via public clouds, hosted sites, PaaS, IaaS, SaaS, secondary data centers, social platforms, and so on.

- **Cost-cutting.** Infrastructure automation is also the key to reducing the total cost of delivering high-quality services and improving the user experience. It helps eliminate

defects and outages, and it enables IT to optimize labor allocation and resource capacity and consumption across the entire IT supply chain.

Automation: Positive impact on financial, operating, and client metrics

- By 2018, 40 percent of outsourced services will leverage smart machine technologies, rendering the offshore model obsolete for competitive advantage.²
- By 2025, automation innovations will assume control over tasks that are now performed by 250 million knowledge workers worldwide, freeing the remaining work force for more creative pursuits. (McKinsey & Company)
- By 2018, 75% of enterprise and ISV development will include cognitive/AI or machine learning functionality in at least one application, including all business analytics tools.³
- 47% of Business Process Optimization (BPO) buyers see automation as a critical component of BPO capabilities. (HfS study)

²Gartner, Press Release, Gartner Says Smart Machine Technologies Will Render the Offshore Model Obsolete for Competitive Advantage. February 11 2016

³IDC FutureScope: Worldwide Big Data, Business Analytics, and Cognitive Software 2017 Predictions, Dan Vesset, David Schubmehl, Dec 2016



The Next Question is How

Once you come to the conclusion that infrastructure automation is the linchpin to digital transformation, the key issue becomes implementation. And here an important distinction must be made: **Automating everything does not imply automating everything at once.** Infrastructure automation is a journey, and should be undertaken after careful consideration of the business objectives and the current maturity level of the organization.

It's also important to understand that "automation" is both a continuum of capabilities and a series of destinations.

At its simplest level, automation is pre-scripting processes to perform specific tasks. By adding ever-increasing levels of intelligence to automation, you can make the business value of automation grow. For example, service integration is "automating automation," or integrating all aspects of the environment—operations, projects, performance, and planning. This enables your enterprise to bring consistency to service delivery, manage the complexities of multi-sourcing, and convert data into intelligence, and shift the focus from operations to innovations. "Autonomics" adds another layer of intelligence to enable self-optimizing infrastructure. "Cognitive autonomics" introduces self-learning, self-adapting infrastructure capabilities. And "artificial intelligence" (AI) adds yet another dimension, making context-based reasoning, planning, and learning possible.

Similarly, the automation journey has multiple levels—from standardized manual tasks, to run book automation, to process automation, to the advanced capabilities delivered by autonomics, cognitive autonomics, and AI.

At Capgemini, we believe three things are needed to expedite a successful automation journey:

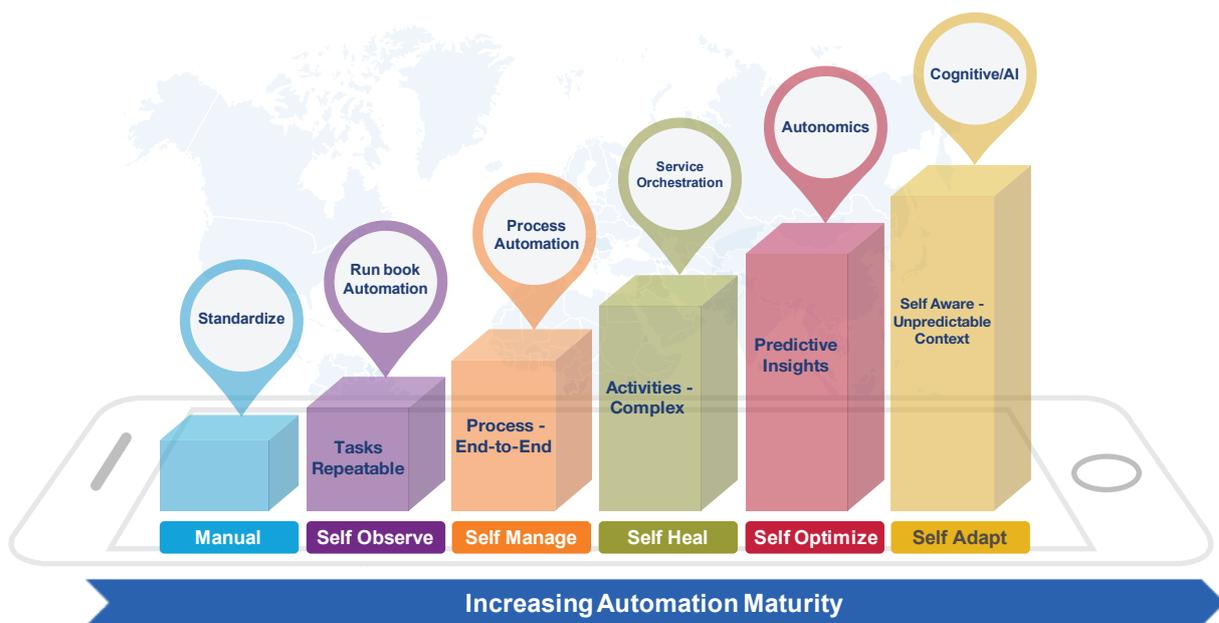
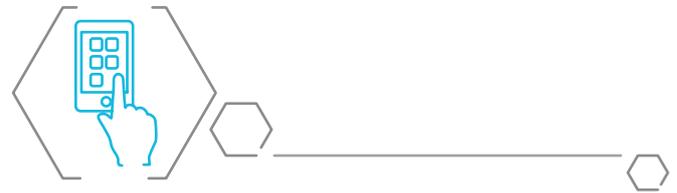


Figure 2: Automation is a journey with multiple phases—from standardized manual processes to AI.



- **An approach** that incorporates a vendor-neutral, collaborative, partner-inclusive strategy for moving from manual processes to more and better forms of intelligent automation.
- **Comprehensive services**, including services that optimize IT process automation, such as run-book automation, automated disaster recovery process and change execution process, server lifecycle management, integrated provisioning, compliance tasks, maintenance tasks, and so on, as well as services that expedite digital transformation—from strategic advisory services to implementation services.
- **A platform** that underpins all services: an integrated, modular, multi-faceted platform populated with best-of-breed integrated technology from world-class suppliers; a platform that continues to evolve based on real-world best practices, client input/feedback, and shifts in technology.

Capgemini also believes that infrastructure automation capabilities should be built-in, not bolted on to service offerings. That is why automation is already an integral part of many of our existing offers in multiple categories, including Cloud Services, Data Services, Workplace Services, Cybersecurity Services, and Service Integration.

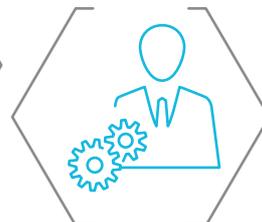
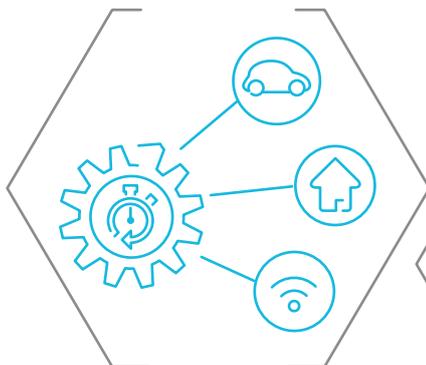
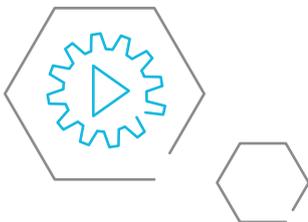


It's amazing what automation makes possible.

When you combine the capabilities above with an “automate everything” mentality, you can accomplish far more with automation than you may have imagined.

You can not only achieve the obvious productivity and efficiency gains of automating manual processes, but you can also increase business agility by getting the right resources to the right teams at the right time; cut labor costs and optimize the workforce for higher-value tasks; improve the user experience by expediting the provisioning of resources that impact service-level performance; accelerate core business initiatives such as DevOps; even snuff out shadow IT by delivering the high-quality services business units used to get by circumventing IT.

In short, infrastructure automation holds the key to both digital transformation and cost-optimizing traditional IT. What used to be a painful trade-off—keeping the lights on or exploring new opportunities—is no longer a dilemma at all. Choose both.







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