Opportunities for Service Providers to Drive Enterprise Digital Transformation

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About this paper
A Pathfinder paper navigates decision-makers through the issues surrounding a specific technology or business case, explores the business value of adoption, and recommends the range of considerations and concrete next steps in the decision-making process.

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Executive Summary

Technology is radically changing many aspects of daily life, as the digitization of processes and tasks are transforming the way we bank, use transportation, monitor and manage our health, and leverage technology in the workplace. ‘Digital native’ entrants in nearly every market are driving this shift. Digital transformation is being empowered by modern business process re-engineering and new application-centric cloud service models.

However, the vast majority of enterprises are not digital-native. As a result, one of the most significant and persistent challenges facing enterprises today is how to respond to a new generation of technology that competitors are employing to disrupt or even destroy their core profit engines. Such technologies give end users a better experience, often at a lower price – consequently, most organizations need to respond in order to compete more effectively in the evolving digital economy. Digital transformation is no longer just a ‘nice to have’ differentiator; it is now a business imperative.

The digital transformation of businesses is placing new and increased demands on IT organizations. Concurrently, technology innovations and evolved consumption models are changing the way IT is accessed and delivered. Foremost among these innovations is cloud computing, which provides the flexibility, agility and scale required to service the demands presented by this new landscape.

For most enterprises, digital transformation involves embracing new technologies while incorporating them into existing IT investments. We are entering a period where hybrid IT – a mix of legacy systems and cloud delivery – is becoming the new normal. Cloud-based infrastructure also provides a fertile environment for process innovations such as DevOps, which leverages automation to tightly couple software development and IT operations. Navigating this rapidly changing environment is difficult, and many organizations are struggling.

Guiding enterprises through this digital transformation is a key opportunity for service providers to move up the value chain with their customers. The technology pillars of IaaS, PaaS and SaaS provide the basic cloud building blocks; however, the technology itself is not sufficient. Even at the core infrastructure level, enterprises need help to design and manage hybrid IT environments, and to embrace DevOps. Moving up the stack, value-added services such as managed security, application hosting and managed application services will be increasingly important, as infrastructure itself becomes ‘table stakes.’ The final frontier will be in addressing applications and business processes, where service providers can play a key role in helping enterprises achieve true digital transformation.
Support Needed as Digital Transformation Drives Hybrid IT

Within many organizations, the momentum toward the cloud for production application deployments is growing, as cloud computing is evolving beyond its initial function as a space for development and test environments. Enterprises are now using the cloud to deploy new digital applications and services that they did not have before, as well as migrating existing applications to cloud infrastructure in order to reduce running costs. Enterprises are also modernizing existing applications to enable them to move to hosted software or SaaS delivery models.

Given the fact that CIOs need to operationalize ‘best execution venue’ (BEV) strategies, their attention is focused on the application layer and the application-centric cloud. These BEV strategies are centered on the notion that every class of IT-related business need has a deployment environment that will provide the best balance of performance and cost.

IT organizations should be able to select the BEV environment, have the application select it automatically, or rely on the guidance of service-provider partners to decide what the BEV should be as part of the general practice of IT. There’s a strong element of associated business value in assessing BEVs because it presents the IT practitioner with an opportunity to improve efficiency and time to market with the available IT infrastructure options.

Figure 1: Best Execution Venue by Cloud Type in Next Two Years


Figure 1 illustrates where IT professionals think the BEV will be for different types of applications over the next two years. This varies widely, both within application categories and between them. The key takeaway is that organizations are moving to a hybrid IT application-delivery model. This is an increasingly complex environment for enterprises to manage as growth in demand for multiple cloud types gathers pace, requiring the mixing and integration of old- and new-style IT services.

Most IT organizations are on the road to digital transformation; however, few are anywhere near their destination right now. As such, it is important to understand this market shift and the fact that it is increasingly motivated by the application economy. Enterprises need guidance and support around hybrid IT environments in terms of managing a mix of infrastructure services and finding the best way to designate and manage BEVs for business apps.
To support enterprises in managing hybrid IT environments, service providers should consider offering the following:

- **Consulting services to help IT organizations develop and execute cloud strategies.** Services can focus on helping organizations inventory and classify applications and workloads according to operating requirements and constraints, and mapping workloads to appropriate execution venues.

- **Software and services to help organizations on-board or ‘lift and shift’ applications to cloud-based platforms.**

- **A software layer to facilitate connections from private clouds to public clouds.**

- **Software to help organizations deploy and manage workloads across multiple environments.** This may be as simple as providing a unified console for provisioning and configuring resources, and starting and stopping workloads; or it may be as complex as dynamic policy-based workload placement and orchestration.

- **Application performance monitoring (APM) services, including tools to help organizations monitor and analyze performance of applications deployed across multiple execution venues.**

### Support for DevOps Transformation

Transformation to the more agile, efficient and automated tenets of DevOps requires both technical and cultural changes. The reality for most enterprise organizations, both large and small, involves the consideration of and integration with existing infrastructure, application release processes and people. DevOps requires that development and operations resources work as one to ensure continuous service improvement; that infrastructure configuration is automated to support rapid deployment; and that processes and infrastructure are flexible enough to accommodate new technologies as needed.

Most organizations have homegrown, custom, and ad hoc efforts toward automation. This is an area where service providers can provide expert guidance on best practices and software needs such as configuration, provisioning and infrastructure automation tools, and continuous integration. Service providers should also consider the nature of DevOps, which is somewhat familiar territory for developers, but is a dramatic change for IT administrators and operations teams. By considering and supporting what’s already in place, service providers can make new cloud-first, cloud-only and DevOps initiatives seem less threatening to leaders and teams that must be part of wider digital transformation efforts.

To support enterprises in managing DevOps transformation, service providers should consider offering the following:

- **Consulting services to help IT organizations achieve the organizational and process changes required to adopt DevOps.**

- **Guidance on DevOps best practices, including systems and tools, as well as ‘how to’ advice for complex processes such as automated deployment or continuous integration, etc.**

- **Tools and APIs to enable monitoring, management and automation of infrastructure (e.g., provisioning and configuration of resources, workload placement, starting and stopping instances, etc.) to facilitate management and seamless operation of development, testing and production environments.**

### Moving Up the Stack

As production applications are increasingly deployed on cloud-based infrastructure, the stakes become higher, and the urgency to select trusted partners for IT services grows. More than ever, the caliber of its applications shapes an organization’s fortunes. To compete successfully, enterprises will increasingly seek value-added services that help speed application innovation. This is where service providers can play a critical role in elevating digital transformation.

Traditionally the opportunity for service providers was mainly in offering basic compute and storage infrastructure. However, according to 451 Research’s Voice of the Enterprise surveys, as much as 70% of the opportunity for service providers going forward will be in managed services further up the IT stack (see Figure 2) – including application hosting (e.g., databases, business applications and virtual desktop infrastructure); managed security services (e.g., endpoint security, encryption, web application firewalls); and managed services (e.g., mobile management, application development tools and platforms, and business continuity).
Figure 2: From Infrastructure Hosting to Managed Cloud

Q. Approximately what percent of your HOSTING & CLOUD SERVICES budget is allocated to the following services? n=1600

- Infrastructure Hosting: 31%
- Application Hosting: 27%
- Managed Services: 21%
- Security Services: 21%

Nearly 70% of cloud spending is now beyond infrastructure services. Security is a core differentiator; expect to pay for it.


Enterprises also commonly cite technical expertise, industry knowledge and trustworthiness as key selection criteria for service providers. They are looking for trusted partners that can furnish information and knowledge in addition to the basic technical capabilities. Such partners will showcase and share new technologies and will provide innovative use cases that can inspire organizations. In summary, enterprises want to engage with providers that are not offering a one-size-fits-all set of services, but are developing the skills of a more strategic ‘go to’ business partner. This is where the key differentiators lie for successful service providers.

Service providers should consider offering the following value-added services in addition to or in lieu of core infrastructure:

**Expertise in running specific workloads or application tasks, whether as SaaS or hosted business processes.**

**Managed services**
- Backup and recovery
- Disaster recovery/site recovery
- Application development tools and platforms
- Mobile services
- Premium 24/7 support services

**Application hosting**
- Database
- Email
- Business applications, including ERP, CRM and industry-specific apps
- Virtual desktop hosting/VDI
- Personal productivity – documents, spreadsheets and presentations

**Security services**
- Endpoint security
- Encryption of confidential data stored in the cloud
- Web application firewall (WAF)
- Advanced anti-malware/anti-APT
- Security information and event management (SIEM)
- Logging/event management.
Beyond Infrastructure – Driving Digital Transformation

The imperative for digital transformation means that service providers need to operate differently in order for enterprises to keep pace with or stay ahead of digital innovation. Many enterprises are shifting attention away from a focus on IT infrastructure and toward investment in customer experience, citizen engagement, employee empowerment and IT-enabled business innovation. Consequently, service providers need to develop a business service model around these goals so they can lead engagements to address them. This requires a different structure than classic managed services because the new opportunity is about developing agile, application-centric transformational services to assist with the delivery of business outputs and outcomes.

A key advantage for service providers is that they already have a trusted relationship with enterprises and are therefore an obvious choice to provide services for the application-centric economy. That said, service providers are challenged by their existing skills base, which tends to be strongest around infrastructure. Those service providers need to build competencies around application development and transformation, while adjusting to agile techniques based on the different customer engagement models required. Particular areas of opportunity to consider are big data and advanced analytics, where demand for managed services is emerging as organizations move to data-driven decision-making, as well as in the SaaS space, which is also growing as organizations deploy customer experience and worker experience projects.

In response to increasing requirements for digital transformation support, many service providers are establishing ‘digital transformation’ practices, bringing together expertise in cloud services, mobility services, social media tooling, analytics and security. Service providers will be more attractive to enterprises undertaking digital business transformation if they develop agile, application-centric services.

Service providers should consider offering the following to support digital transformation:

- **Consulting services for application modernization and transformation, such as converting legacy enterprise applications into cloud-ready services, as well as application lifecycle management.**
- **Consulting services to assist in transforming an enterprise’s traditional business design into the new digital business model, which may include process re-engineering, skills training, etc.**
- **Mobility services, including guidance on developing mobile applications, mobile development platforms and tools, and enterprise mobility management (EMM) tools.**
- **Advanced analytics and real-time analytics platforms and tools with easy access interfaces to the data, resulting in increased productivity and efficiency within the operations.**

**Conclusion**

Digital transformation is no longer an option – it is now a strategic imperative. While most enterprises have a relatively clear idea about the destination, they need help to make the journey successful. Service providers have a unique opportunity to enable a more effective and rapid transition for the enterprise. Service providers that build the best on-ramps to this digital future will be the ones best positioned to attract enterprise customers and become their trusted partner.

In order to drive consideration as a trusted partner for supporting enterprises through their digital transformation, service providers need to raise their software IQs regarding DevOps tools and methodologies. They also need to factor in the impacts of existing infrastructure, application services, release processes and people on the organization’s journey to building a new digital business model. Application modernization SaaS and migration to the cloud will be as important – if not more so – as net-new cloud-native applications and services.

While the move to become the trusted digital transformation partner for the enterprise will require a great deal of effort by the service provider, the potential upside is enormous.
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