Data Center Transformation: The Foundation for Business Growth

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Data Centers Provide a Foundation for Business Growth

Leading CIOs realize that IT will only be successful once it is viewed as an enabler of the business, rather than a cost center. The CIO's challenge is to build IT services with measures metrics that support business objectives such as revenue growth, customer retention and regulatory compliance. IT needs a reliable underlying infrastructure that enables agile decision-making. Data center transformation is a key element of this strategy.

Data center transformation provides cost savings, reduces energy consumption, improves space utilization and optimizes IT assets. By both virtualizing and consolidating data centers, a business can reduce future capital investments, shrink support costs and mitigate risk. It also supports the CIO's goal of enhancing service quality by improving infrastructure reliability. Today, many companies focus on data center consolidation to solve issues with capital and human resource constraints. While new data center technologies provide profound cost savings, it would be a mistake to believe data center evolution is only about saving money. Next generation data centers create agile architectures that support multiple goals but one of the most important goals for any organization is growth. The data center's evolution will help businesses grow by:

- **Delivering a resilient environment that scales transaction volume.** Today's data center technology, such as virtualization, provides flexibility and scalability through the ability to quickly add server and storage capacity. Today's data center technologies enable businesses to rapidly adjust to changes in demand for resources. With new data center technologies that shrink deployment cycles by up to 90%, margin-sensitive industries like retail can conserve capital but rapidly scale operations as demand escalates. Simply moving an application from an older server core at a slower speed, to a newer core at a higher speed, will make an application perform better. Virtualization can also increase the speed of traditional backups. Data center transformation also delivers transaction resiliency by allowing a business to distribute resources and seamlessly reroute compute power to maintain operations through outages. Industries, like financial services, that are sensitive to even short outages will benefit from improved uptime as well as the ability to scale the infrastructure to meet peak volumes without outages.

- **Improving customer analytics to increase market share.** To grow revenue, CIOs must focus on turning data into actionable customer intelligence. The success of today's business intelligence efforts hinge on IT's ability to embrace an infrastructure which consolidate databases and applications to improve the quality of the existing data sources. Today's data centers provide a way for companies to scale server and storage capacity to quickly acquire as well as analyze more sources of customer data. For example, a software company may be interested in capturing and analyzing the usage of its prod-

uct on various mobile devices to improve the mobile version of its product. By giving business units access to better customer intelligence, CIOs directly impact the firm's decision-making ability and hence its growth.

- **Creating infrastructure that supports product innovation.** Faster time to market is a key initiative for most firms. Virtualization can centralize management and automate many manual functions that will enable IT to focus on providing tools that capture innovative ideas within the firm. CIOs can use data center technology and private clouds to drive innovation through business processes, customer connections, and the creation of new business models. For example, a pharmaceutical company can use virtualization to streamline the firm's test and development environment internally as well as extend it to external parties through private and hybrid cloud environments. The flexibility of the evolved data center allows a company to develop quickly at a lower cost.

- **Merging or acquiring companies to provide new revenue**. In addition to new products, companies are also looking to grow by acquiring or merging with other companies. CIOs are tasked with delivering both financial efficiencies and business synergies through consolidating architecture and reducing overall IT complexity. A consolidated data center environment delivers an agile infrastructure to support acquisition integration. Once a company merges or acquires another business, its important to understand each firm's processes and integrate as quickly as possible. A flexible data center environment facilitates information sharing across the new entity and makes it easier to gain efficiencies through application and database consolidation.

- **Shrinking the IT cost to enter new geographies**. In the past, companies that wanted to expand had to build infrastructure in each location. Data center cooling, power and floor space also increased linearly as companies added dedicated hardware with each new application. Today, virtualization, private clouds and cloud computing allow a business to achieve the benefits of dedicated computing resources without the need to build physical infrastructure in each office location. Regardless of geography, most companies have reduced physical server counts by 50-60%. For example, a company that is entering a new country, such as China, only has to build one data center in the Mainland to deliver virtualized IT across the continent or it can use a data connection with WAN optimization to tap into a data center at the company's headquarters or a cloud-based solution.

To gain these benefits, IT should:

- **Establish the proper performance requirements first and then set your budget.** In many cases, firms set out to overbuild or build a data center that exceeds the company's required performance characteristics. While it is important to plan for future requirements, the design should be scalable not over engineered. IT should define what design tier the firm actually requires. For example, what

kilowatt per square footage figure is needed? Once the requirements are understood, IT should build a budget based on the total cost of ownership (TCO) model instead of a capital expense model. A TCO includes the cost to buy the equipment, the cost to operate and maintain the center including any maintenance contracts and the energy costs.

- **Plan its resources and define success metrics:** In addition to planning the proper capacity for data center consolidation or expansion, IT must plan how long will it take to migrate to the new system, what skills are required and what are the interdependencies between the software and the systems that support these applications. IT must get a comprehensive inventory of its existing assets. An accurate inventory is critical for proper capacity planning within the company and will streamline the consolidation process during a merger or acquisition. IT should also work with business leaders to define success metrics in advance. For example, IT's goal could be to consolidate from 20 data centers down to 8 to save money while the business desires an infrastructure that scales to peak loads of four times the normal transaction volume. Both of these can be achieved through data center transformation but IT and the business units must agree on what metrics indicate success. Either way, the goal must be represented as a business value, such as transaction scalability, that can be measured by IT.

- **Build a virtualization management strategy and adopt tools to support it.** The benefits gained through virtualization can be lost without an effective virtualization management strategy. Virtual server management requires changes in policies surrounding provisioning, naming conventions,chargeback, security and skills. While many server and desktop virtualization technologies come with their own sets of management capabilities, businesses should also evaluate third-party tools to augment any gaps in management. These tools should answer question such as "How much capacity do I have?" and "How resources will change under various workloads?"

With proper planning, new data center technologies will help IT and the business units to respond to changes in business demand by providing an agile architecture. Data center transformation will help CIOs to drive growth by delivering the best technology services to the business at the best value.