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Managing the demand for IT infrastructure

Infrastructure functions can reduce costs and improve service delivery through better demand management.

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The top priority in 2014 and beyond for many IT infrastructure leaders is to reduce their operational costs through efficiency gains. By doing so, they can meet tight budgets at a time of economic uncertainty and fund new investments without requiring increased budget allocations. Based on 50 discussions with Fortune Global 500 heads of infrastructure, it's clear that one key initiative to improve the cost and delivery of IT services is to adopt a more commercial-style model of interacting with internal business partners, such as application-development teams, lines of business, and support services.

We often see frustration between IT and business partners because the partners don't have the means to understand clearly the cost drivers of the IT services they use and therefore find it difficult to influence their infrastructure expenditure. As a result, some organizations struggle to manage demand for IT infrastructure, which includes all the hardware, software, and operational support required to provide application hosting, network, and end-user services.

To save costs and prepare for adoption of next-generation infrastructure technology and hybrid-cloud models, leading organizations are adopting commercial-style demand and service management that has two key characteristics. The first is a standard services catalog with clearly priced offerings that can be consumed on a price-times-quantity basis. Such a catalog requires creating bottom-up unit costs for each service based on a detailed bill of materials. This means that unit costs should be an aggregation of all the components making up the service and not an arbitrarily stipulated cost mostly based on averages and allocations. The second charac-

Takeaways

To save costs and prepare for next-generation infrastructure technology, leading organizations are using commercial-style demand and service management.

Effective demand and service management rests on elements such as a well-defined services catalog, accurate cost allocations, and supporting processes and tools.

Issues related to change management, as well as consumption reporting and cost transparency, must be addressed, but players that move quickly will prepare themselves well for tomorrow's challenges.

teristic they share is that roles have been established for IT to interact with business partners in a more commercial way—including roles for product managers who can define standard offerings and solutions and architects who can help developers combine the right mixture of them to meet a business need.

These changes are tough to make. But if an organization can introduce a new model for demand and service management, it can usually realize 10 to 20 percent cost savings. While these changes are well aligned with deployment of next-generation infrastructure technologies such as private-cloud platforms, several of the efficiency benefits, including shorter provisioning time, can be achieved with legacy infrastructure as well. The savings come, for example, from reduced tension between IT and business partners, leading to less costly service-level agreements (SLAs), as well as from steering demand toward lower-cost standard platforms and simplifying IT procurement.

Attributes of effective demand and service management

A commercial IT infrastructure organization is based on several essential building blocks:

- Well-defined services should be described by a strong, comprehensive service catalog that presents a range of infrastructure offerings defined by functionality, service levels, and unit costs. The catalog should include five to ten services in each service area: for example, databases, application platforms, and web platforms, covering 80 to 90 percent of infrastructure requests and costs. As many services as possible should be delivered through a self-service portal with automated provisioning. A service catalog could also include external services, such as public-cloud computing.

- Detailed pricing, including a bottom-up price model with granular cost drivers such as type of server, storage, software, and labor required to maintain the service, must be linked to demand choices, and measurement of consumption by business units should be automated as much as possible.

- Accurate cost allocation with automated reporting allows organizations to clearly present consumption and cost data to business partners so they have the information they need to manage and improve their own cost structure, for example, by choosing a lower SLA that results in lower IT costs.

- Supply-and-demand metrics and benchmarks should be normalized for differences in SLAs. For example, the service catalog could enable SLA-adjusted benchmarking with external cloud providers and offer practical business rules for when additional internal services are required—such as when higher security is needed to meet regulatory requirements for sensitive data.

- A service-oriented organization is necessary and should include a product-management team to incorporate unmet business needs into future service offerings, forecast demand, and manage capacity.

- Supporting processes and tools are essential and include work flows and utilities (for example, to automatically collect usage across the infrastructure at a fine-grained

level), demand-management processes and new role descriptions (for instance, service owner, delivery owner, service financial analyst), demand-forecasting models, consumption reporting, and cost-transparency tools that can compile usage, cost, and price metrics across services and provide aggregated views across customer units.

Making it happen

We have observed companies successfully taking either a demand-led or services-led path to implementation, depending on their starting point (exhibit). Both approaches enable savings by taking out "fat" in existing infrastructure and reducing the cost of new investments. Regardless of the path they take, successful companies usually observe certain guidelines (see sidebar, "Seven principles of demand management").

Transformation challenges

The biggest challenges in implementing effective demand and service management

Exhibit
Both demand- and services-led approaches can be successfully implemented.

Demand-led approach	Services-led approach
Applicability	**Applicability**
• Significant potential for efficiency improvement exists in the current infrastructure environment • Strategic need and management wish to capture efficiencies in the short term • Need to improve service levels of existing services • Low demand for new services	• Significant demand for new services • Little potential for efficiency improvement in the existing environment or less urgency to capture the opportunity • Harder to get buy-in from application groups to make changes in existing environment • Lack of granular data on infrastructure assets and costs
Approach	**Approach**
• Identify main demand drivers, clean-sheet costs, and cases of overprovisioning to capture savings early; over time, develop a services catalog and build a new interface and processes between the IT function and the business side	• Define the services catalog, create a granular costing/pricing model, and create the redefined business-interface organization and processes; begin shaping demand decisions with business customers
Typical impact	**Typical impact**
• 15–20% efficiency improvement in existing environment over 2–3 years • 10–15% immediate efficiency improvement for new investments	• 15–20% efficiency improvement in existing environment over 3–4 years • 15–20% immediate efficiency improvement for new investments

Changes in demand- and service-management models have impact across the organization, and so it is critical to build support from business, finance, and application-development teams.

include managing change across business and IT organizations and designing an effective approach to consumption reporting and cost transparency.

Managing change across business and IT organizations

Changes in demand- and service-management models have impact across the organization, and so it is critical to build support from business, finance, and application-development teams. The latter, for example, need to make significant changes in their project-planning and approval processes to use standard IT infrastructure services from a services catalog for most new projects. New demand- and service-management models also require solid buy-in and support from business and finance teams to enable cost-transparency reporting and to shift control over IT capital-planning and investment processes to the IT function. Commercial models for demand and service management enable IT to shift to more efficient multiyear investment planning and to adopt lower-cost technology platforms. This is difficult to do if business and finance teams do not see a clear link between business growth and required increases in IT capacity and efficiency and do not trust the IT service-cost model. What's more, new interfaces between IT infrastructure and business units, as well as application-development teams, are often needed to enable streamlined and automated provisioning and application-development processes. IT needs to engage with the business side to help determine the best standardized services for business needs and to understand IT cost drivers for new or existing applications. These new interfaces will often require a change in mind-set so that IT moves from being an "order taker" to a "thought partner"; frequently, new roles or skills need to be added to customer-facing IT infrastructure teams.

The IT function should also account for and embrace the increasing volume of direct procurement of public-cloud infrastructure services. At the same time, it must address associated challenges. This involves creating an external benchmark for the cost and security requirements of cloud services and finding ways to integrate them with internal infrastructure.

Additionally, executive-level sponsorship is critical to communicate the benefits of policy and operational changes to business and application-development teams. High-level support helps drive the use of a consumption and cost-transparency approach when making key decisions. Executive sponsorship also acts as an escalation point for nonstandard or off-catalog requests and is essential to enforcing decisions about the best use of IT capacity to support the business, for instance, when capacity should be reclaimed from low-priority projects.

Designing consumption reporting and cost transparency

Consumption and cost reporting should drive the right behavior by business partners and application-development teams. It should be designed based on costs that these teams can influence and should enlighten them about how their decisions drive costs and complexity. Above all, consumption and cost reporting should be easy to understand.

This vision requires answering some strategic questions and refining how IT collaborates with the business. Examples of such questions include the following:

- How should we allocate costs to services, how should we treat costs of shared IT services such as data centers and corporate networks, and how should we handle the costs of unused capacity?
- How do we price services and determine whether to base consumption and cost reports on capacity reservations or actual usage, should we set flat annual prices or allow prices to fluctuate with actual costs, and how do we "subsidize" early users of new and more cost-effective platforms?
- Should we directly bill costs of IT services via a charge-back mechanism or only use

Seven principles of demand management

1. A well-functioning commercial-style product offering from the typical IT infrastructure department is built around 25 to 30 core services that meet the majority of business demands.
2. Service-level agreements should be defined and managed at the overall service level (based on what the user would value; for example, end-user service availability) rather than just at the individual-component level (for instance, server, database, or storage availability).
3. Establishing accurate infrastructure economics is only half the battle. It takes a significant effort to build a reliable and transparent cost basis that the business will have confidence in.
4. It is critical to prototype the IT costing methodology (including the approach and resulting costs) with the business and collaboratively refine it to ensure long-term adoption.
5. Focus on capturing gradual savings along the way by helping the business make informed trade-offs that reduce overall consumption.
6. Continuous improvement should be led by a focused management team to ensure business partners regularly engage in demand-management planning and implementation discussions.
7. Supporting processes and tools are critical for long-term success.

"show-back" costs to inform business users of the costs they've incurred?

Whether to use charge-backs or show-backs is a good example of how complex these questions can be. There is a range of alternative approaches to the charge-back model:

- show-back of demand and cost
- charge-back of a portion of costs
- charge-back of full costs
- flat annual price for each service

Each approach is designed to address different objectives. For example, an approach that depends on flat annual prices works better when costs fluctuate from month to month or quarter to quarter. In such a scenario, the business sees a predictable service price regardless of when costs are incurred or new capacity is added. Following this model requires clarity about how over- or under-recovery of costs is treated, meaning IT could pay a "dividend" to the business in case of overrecovery, invest the margin to improve services, or transfer the excess back to finance.

Getting started

IT infrastructure leaders should start the process by understanding their company's starting point, including the maturity of the service catalog, the granularity and simplicity

of the costing model, and how effectively the IT organization interfaces with the business. Leaders must set the bar for the aspirations of the transformation to an effective demand- and service-management model based on the size of the prize, the organization's readiness, and business constraints; finally, they need to define a road map for either a demand-led or a services-led model.

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Success means not only an improved balance sheet for the company; with cost transparency in place, IT infrastructure leaders benefit as well. Instead of an annual struggle to fund technology refreshes and add capacity in the near term, leaders can shift to a multiyear investment plan for infrastructure and build a technology-delivery platform for the future.

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