A business-back approach to technology consumption

The business of payments hinges on processing and storing large volumes of transaction data. To perform these activities well or at all, payments companies can spend as much as 10 percent of their total revenue on technology infrastructure. Reducing these costs even by a fraction of a percent can release millions of dollars that can be reinvested in growth and innovation or applied to the bottom line.

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In most payments organizations, business demand drives technology costs. "Right-sizing" this demand to the technology supply can be a significant challenge: the economics of infrastructure investments are not always obvious; costs are not transparent; and it is difficult to tie the business decisions that create demand to the cost of the technology that satisfies it.

Consequently, many global payments organizations face a demand for technology infrastructure that outpaces the growth of their business. These organizations have gone to great lengths to reduce their technology operating costs by re-engineering processes, shifting to global sourcing models and leveraging virtualized technologies. To find still more savings, they must evaluate how their business consumes technology and find a better way to match supply to demand.

The way to right-size consumption is to engage senior business and application development leaders in taking a "business-back" approach to infrastructure consumption and cost. This approach begins with an evaluation of business technology needs: for instance, how long data must be stored, how soon an application or process must be back online after a failure. It concludes with the implementation of significant governance and organizational changes.

In many institutions, these changes include the creation of a standardized catalogue of technology products and services that prompts the business to pay for the technology it uses under the guidance of a strong governance model. At the same time, new or revised business policies set targets for consumption and optimization and rationalize the use of infrastructure across the enterprise. An organization's information tech-

nology (IT) department takes on a market-making function, complete with product and relationship managers who drive service adoption and bolster the role of IT in technology investment decisions.

When effectively implemented, the business-back approach can reduce technology infrastructure costs by as much as 20 percent. Moreover, the effort makes available additional capacity and funding that can be applied toward new products and services.

The business-back transformation: levers for change

For a business-back approach to take hold, the way in which the business consumes infrastructure must structurally change. Four distinct levers can reduce technology demand in a business-back way:

- **Lever 1: Adjusting end-user entitlements** to match technology supply to user demand.
- **Lever 2: Technical optimization** to address the typical inefficiencies that drive up technology costs at the application level, such as the over-provisioning of storage, processing or network capacity; overstated application performance needs and growth forecasts; and excessive disaster recovery for non-essential applications.
- **Lever 3: Business process and policy changes** to curb wasteful business practices such as retaining data longer than necessary, overusing hardware, misaligning storage media with back-up

Exhibit 1

Wireless plan usage optimization – example analysis

Excess minutes analysis (excluding pooled plans)

Number of devices with unused plan minutes

Unused plan minutes	Monthly plan minutes: Flat	< 450	450	451 - 900	901 - 1350	1350+	Unlimited	Total
Over	10	10	100	20	10	0		**150**
0 - 100	10	30	50	10	5	0		**105**
101 - 250	0	20	10	30	5	5		**70**
251 - 450	0	**20**	**850**	50	10	5		**935**
451 - 900	0			**400**	**50**	**10**		**460**
901 - 1,350	0				**80**	**10**		**90**
1,351 - 2,000	0					**60**		**60**
Over 2,000	0					**20**		**20**
Unlimited	0						15	**15**
Total	**20**	**80**	**1,010**	**510**	**160**	**110**	**15**	**2055**

Potential to eliminate
42% of the devices (870) have low plan minutes with greater than 50% of those minutes unused – these should be reviewed for possible elimination

Potential to downgrade
31% of the devices (630) have high plan minutes with greater than 50% of those minutes unused – these should be reviewed for possible reduction

Source: McKinsey analysis of sample data

and retrieval needs, and maintaining unused applications or unnecessary functionality

- **Lever 4: A new governance model** to ensure complete cost transparency and effective implementation of the business-back approach.

Lever 1: Adjusting end-user entitlements

Employees are often provided with more technology or capacity than they actually use. End-user entitlements such as network storage space and wireless plans can be scaled back to correspond with real, rather than perceived, demand. As an example, employees may consume excessive network storage space by storing files that have not been used in years. Purging users' network storage of obsolete files can yield both capacity and savings, while also mitigating risk.

In another example, some segments of wireless plan users consume far fewer minutes than their plan allows, opening the opportunity to reduce or eliminate those minutes (Exhibit 1).

End-user entitlements govern supply and thus can be allocated among various user segments based on type and level of use (Exhibit 2). The new entitlement plan may assign a maximum number of minutes or a maximum reimbursement amount to certain user segments. For example, only executive users who spend more than 75 percent of their time traveling would be allowed the maximum 1,500 minutes or the maximum reimbursement of $150.

Exhibit 2

Mobile phone usage can be managed by segmenting users

Qualification requirements	User level	Reimbursement levels				
		Example requirements	Maximum minutes	Maximum reimbursement	Estimated number of users	Comments
Executives (manager and above)	**Significant user**	Executives >75% travel	1,500	$150	TBD	Significant users by executive approval only
On-call personnel (e.g., emergency responders, personnel with responsibility for services which require 24-hour access)	**High-end user**	50-70% travel	900	$150	TBD	
Frequent travelers (e.g., above 25% travel)	**Mid-level user**	25-50% travel	600	$150	TBD	
Other personnel Demonstrated business need (business case required) and executive sponsorship	**Low-level user**	<25% travel	300	$150	TBD	

Source: McKinsey analysis

Wireless entitlement policies can then be amended to manage how wireless minutes are used, to assign responsibility for controlling wireless usage, to establish procedures for managing exceptions and to mandate consequences for non-compliance.

Lever 2: Technical optimization

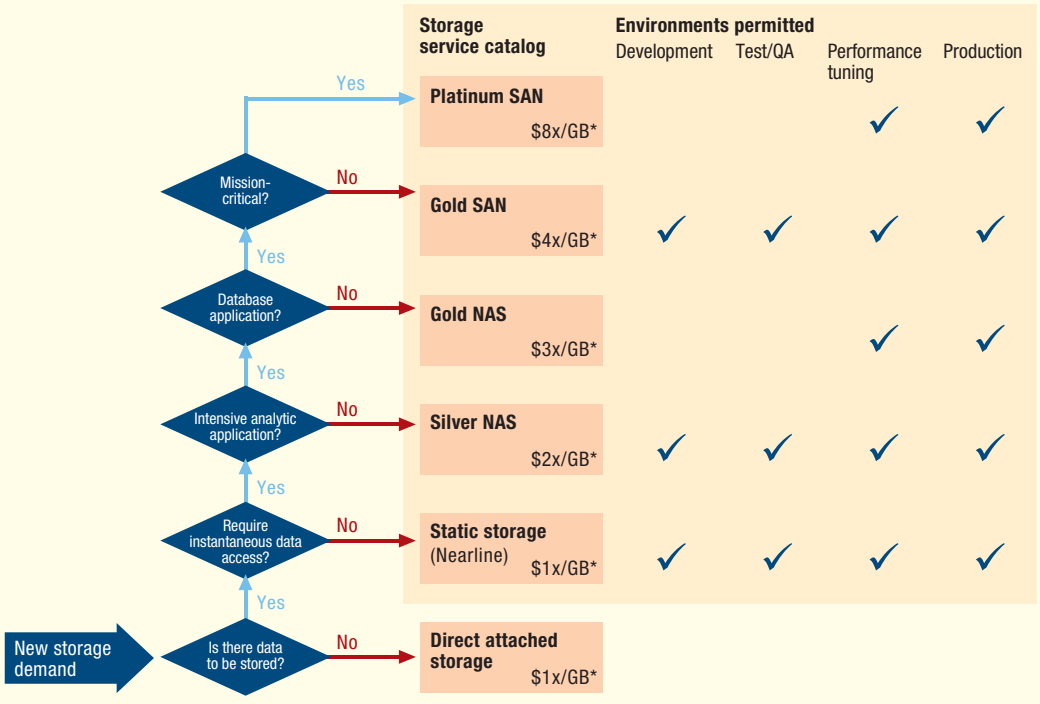
Opportunities for technical optimization abound in most IT shops. Storage provisioning, production server utilization and disaster recovery provisioning are all potential candidates for optimization.

Storage provisioning, for example, can be adjusted by reserving the most robust and therefore most expensive storage media exclusively for the most critical and analytics-intensive applications. Applications can be assigned to various tiers of storage media based on a set of criteria such as data storage needs, data access requirements, level of analytics, database functionality and mission-criticality (Exhibit 3). One financial institution saved 5 percent in storage costs by rationalizing and reclassifying its storage supply.

The utilization and unit cost of production servers, meanwhile, can be improved through virtualization and the removal of unneeded capacity based on peak and average utilization rates. For disaster recovery provisioning, costly real-time, synchronized data replication should be reserved only for mission-critical applications that cannot be permitted to sustain any data loss or downtime. Savings can then be realized by moving all other applications to cheaper replication options.

Exhibit 3

Applying a decision tree to standardize storage demand



Source: McKinsey analysis

Lever 3: Business process and policy changes

To develop business processes and policies that support the business-back approach, the payments organization should analyze technology consumption and cost to discover the particular business rules and functionalities that generate end-to-end infrastructure costs. Costs may have to be manually allocated to applications using an imprecise methodology closely akin to variable costing, but the importance of linking costs to business decisions trumps precision in this situation. The analysis should reveal that particular business decisions can lead to infrastructure costs' outpacing business growth. The IT and business sides of the organization can then work together to develop policies that revise costly business requirements and rationalize application functionality, data retention and disaster recovery against real value to customers and the business.

IT must take on a "market-making" function that drives service adoption and bolsters the department's role in the investment dialogue.

As an example, revising the policies and processes related to storage can yield 5 to 10 percent in savings when coupled with the tiered storage approach described above. Since only 5 to 10 percent of users typically use 80 to 90 percent of allocated storage space, implementing usage cap and retention period policies can free up significant capacity. Storage supply can be further tailored to demand if a standardized, repeatable process for capacity forecasting is in place, as uncertain capacity forecasting and long procurement cycles often lead to the over-provisioning of storage by 30 to 50 percent.

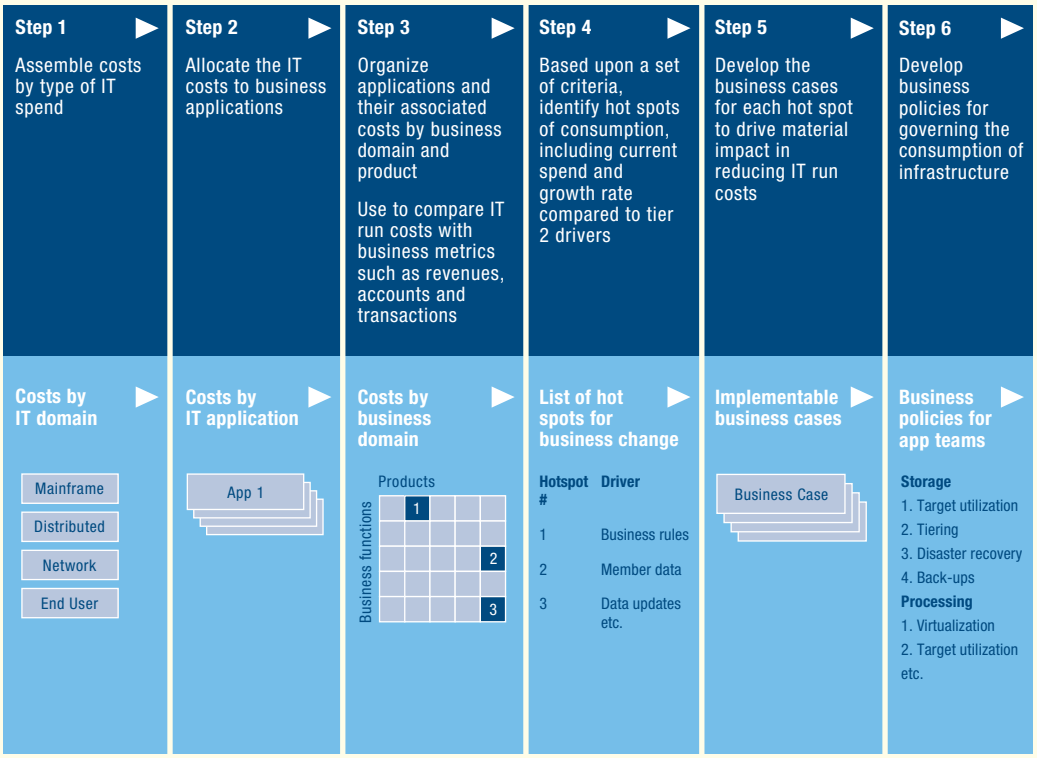
The consumption and cost analyses will help application teams understand how every click, page view, transaction and data element retained requires processing and storage. Without that knowledge, the business will always opt to give the customer more – more availability, more uptime, more real-time data, more views and greater transaction capabilities – even when customers are not demanding those capabilities. A customer-facing business unit, for instance, may provide customers with access to 24 months of account history with one click – even though the vast majority of customers only require 2 months of history. In one such situation, a financial institution reduced its storage costs by over 25 percent by segmenting its customers and designing customer-facing storage policies around unique client needs.

Lever 4: A new governance model

Key to the success of the business-back approach is a strong governance model that enables informed risk-cost trade-offs and assigns accountability for implementation and results. The payments organization must designate roles and responsibilities for setting and enforcing policies, and it must devise ways to measure and report consumption to promote transparency. The organization could, for example, build and maintain an inventory of applications and assets with asset-to-application mapping that would enable productivity tracking.

Exhibit 4

Business-back approach to reducing IT consumption



Source: McKinsey analysis

An essential tool in the new governance model is a catalogue of standardized technology products and services. The business can use the catalogue to select among standard applications and packages at a fixed price, while customized solutions would come at a premium. Over time, use of the catalogue would foster uniformity in the business's technology environment and reduce the number and level of resources needed to manage that environment. The process of buying infrastructure would become more consistent, with appropriate technology specifications assigned to specific business requirements.

As part of the new governance model, IT must take on a "market-making" function that drives service adoption and bolsters the department's role in the investment dialogue. IT now claims ownership of the complete product lifecycle and manages relationships just like any other line of business. IT's product managers design and build reusable services that align with business needs, and IT's relationship managers translate business demand into specific services to be ordered. The payments organization must thus establish a relationship management structure that enables communication and incentive alignment among infrastructure components, application architects and business owners. IT will have to equip itself with new skills in areas such as expense and product management, which will necessitate building current employees' skills as well as recruiting new talent.

Business-back in six steps

The business-back approach to reducing IT consumption can be implemented in six sequential steps (Exhibit 4).

- **Step 1:** Gather and categorize costs by type of technology expense: mainframe expense, distributed expense, network expense, etc.
- **Step 2:** Allocate these costs to the various business applications.
- **Step 3:** Organize these applications and their associated costs by line of business or product, and then evaluate the cost of running the applications against business performance metrics (e.g., revenues, number of accounts or number of transactions).
- **Step 4:** Based on a predetermined set of criteria, pinpoint "hot spots" where spending substantially exceeds return. Examine the drivers behind those hot spots, such as business rules and data updates.
- **Step 5:** Develop a business case for reducing consumption and run-costs in each hot spot.
- **Step 6:** Formulate a set of business policies to govern technology consumption and to guide the business in assigning infrastructure to support business needs.

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Implementing the business-back approach to IT consumption is organizationally challenging and time-consuming, but the potential cost savings and business benefits make it worth the effort. Organizations that successfully manage technology consumption using a business-back approach can expect to reduce their IT run costs by 10 to 25 percent, with potential to realize a savings of 5 to 10 percent in the first year.

Moreover, the business-back approach can inspire product innovation. Through the business-back exercise, product developers may discover data and capabilities in their infrastructure that they never knew existed. Such discoveries, along with the funds saved and capacity gained from eliminating superfluous functionality, may give rise to a host of new customer services.

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