

Journal of Information Technology Management

ISSN #1042-1319

A Publication of the Association of Management

MANAGING IT DEMAND

JAMES MCKEEN

QUEEN'S SCHOOL OF BUSINESS, QUEEN'S UNIVERSITY, KINGSTON, ON, CANADA
jmckeen@business.queensu.ca

HEATHER A. SMITH

QUEEN'S SCHOOL OF BUSINESS, QUEEN'S UNIVERSITY, KINGSTON, ON, CANADA
hsmith@business.queensu.ca

PAOLA GONZALEZ

QUEEN'S SCHOOL OF BUSINESS, QUEEN'S UNIVERSITY, KINGSTON, ON, CANADA
pgonzalez@business.queensu.ca

ABSTRACT

IT organizations often struggle with managing the balance between the supply and demand side of IT products and services. IT managers have often been concerned about delivering products and services, faster, better, and cheaper (i.e., supply side) and left behind the crucial aspects of the demand side of the equation. Therefore, the capability to ensure that IT investments are made as effectively as possible has been hindered by the lack of attention and understanding of managing IT demand. To explore and understand this issue, we conducted a research using focus group methodology. The results from our research suggest that IT demand is a developed organizational capability that requires basic tools (e.g., service catalog, chargeback, and project portfolio management) working in concert with five key organizational enablers. The paper discusses the root causes of IT demand, economics of demand management, and identified the five key enablers vital for effective demand management.

Keywords: IT demand, IT strategy, IT planning, IT management, focus group.

INTRODUCTION

The need for demand management is well established in business. Gentile [7] explains that “in order to manage planning, production and delivery, any properly run business has to be able to balance orders for its products and services (i.e., demand) with its ability to produce them in terms of resource and scheduling constraints (i.e., supply). Otherwise it might produce too little of what is required, too much of what is not required, or deliver late,

or have problems with product quality or customer satisfaction”. Based on this, one might assume that IT organizations, being in the business of fulfilling organizational demand for their services, would have developed mature practices for managing IT demand. Nothing could be further from the truth. In fact, IT demand management has only recently been ranked as one of the top four priorities by IT leaders [18].

This lack of attention is explained by the fact that IT managers have been preoccupied with the supply side; that is, delivering products and services faster, better, and

cheaper. Concentrating on the supply side makes perfect sense for two reasons: first, it allows IT organizations to concentrate on the things that they can actually control; and second, most IT organizations interpret any role in manipulating IT demand as a political minefield to be conscientiously avoided. As a result, demand management practices have been underutilized. A study by the Hackett Group as reported by Betts [2] concurs:

“IT has traditionally been more focused on how to meet ever-growing demand than on implementing processes to curb that demand and ensure that the highest value work gets done. As a result, demand management techniques are less mature than other cost control techniques”

What best explains the current interest is that IT demand management offers the means for IT organizations to work more effectively with their business partners. In fact, some see demand management as the next frontier in IT cost efficiency [17]. They argue that focusing exclusively on the supply side of the equation without visibility into demand leaves IT organizations unable to perform effective capacity planning. The reality is that better demand management enables better supply management. In order to make good capacity plans, IT must understand the future needs of the business. According to newScale [17]:

“Demand management not only helps IT organizations to shape demand, it also helps them plan for demand and respond to changes in demand to meet business needs while controlling their IT budgets. This increased visibility into demand can help ensure more accurate and business-driven capacity planning”

So, after years of squeezing incremental costs out of the supply side of IT only to see those gains disappear into the vortex of mushrooming demands, perhaps it is time to turn attention to the demand side. To explore the organizational issue of IT demand management, the authors convened a focus group of senior IT managers from a variety of different industries.

This paper first describes the focus group methodology used in this research. Then, it looks at the root causes of demand for IT services, followed by the economics of demand management and the importance of this issue. Next, the paper reviews a set of standard tools recommended for managing demand and concludes with

identifying five key enablers vital for effective demand management.

RESEARCH METHODOLOGY

A focus group was used as the research method for this study because of the exploratory nature of this research. Focus group is methodology widely used in various disciplines as a qualitative research technique [2]. Although defining focus group is still a debate, a common understanding falls into few characteristics: small group of people (usually 7-12), led by a moderator, discussing a particular topic for 90-120 min [9]. The main advantage of this methodology is that it generates data in a more natural form. These data are categorized as emic data because it arises in an indigenous form whereas the etic data derive from the researcher's imposed view of the situation [12]. While pure forms of data are seldom obtained in practice, focus group data is much more emic than data extracted from other methodologies. Therefore, focus group are usually used in obtaining background information, generating research hypothesis, stimulating creative thinking, gaining insight into how individuals think and talk about a phenomenon, and generating additional insights into qualitative results [9].

In order to explore the organizational issue of IT demand management, the authors conveyed a full-day focus group of senior IT managers from 15 different organizations. Focus group participants represented various industries such as manufacturing, pharmaceutical, finance and banking, government, retail, telecommunication and consulting. The managers were asked to respond to a series of questions including:

- How critical is the need for demand management at your organization?
- If there is interest/pressure for demand management, where is this pressure coming from?
- What are the key drivers behind the demand for IT services in your organization?
- How does demand management impact the existing business-IT relationship?
- What steps have you taken towards managing IT demand? How effective have these been?
- Overall how successful has your organization been in managing the demand for IT services?

On the day the focus group was convened, the discussion was structured so that these questions could be addressed. One author moderated the discussion while the

others recorded the discussion independently. The authors pushed for clarification of discussion points and prompted participants to share detailed experiences of specific events. This provided the details necessary to make arguments and concepts more concrete. The authors found that participants were very forthcoming with examples to support their observations. When further clarification was needed during the analysis of data, few participants were contacted by e-mail and telephone. The data derived from the focus group discussion was compared against the published literature on the topic. Our goal was to let practice inform theory and vice versa.

The results of this exploratory study are readily generalizable due to three key factors: the diversity of the firms within the focus group, the exclusive focus on a single issue (i.e., IT demand management), and the reinforcement of observation by real-world example. The analysis of findings and conclusions are discussed in the sections below.

UNDERSTANDING IT DEMAND

In order to better understand demand management, the focus group first discussed the root causes of IT demand. One focus group member suggested that IT demand is driven by two forces in her organization: “IT initiatives that deliver new capability to the business in support of the broader corporate strategy, and IT initiatives that are required from within to sustain IT’s ability to deliver future work or new capabilities”. She explained that “although these drivers mostly represent market and investor pressures, IT is also driving change with its own renewal goals after years of underfunding”. Another organization identified “historical autonomy, proliferation, lack of structured architecture and weak standards” as the key drivers of much of her organization’s current demand for IT services. This particular organization was deluged with duplicate and, in some many cases, redundant applications that collectively produced a “black hole” for IT resources.

Clearly IT demand needs to be considered from a development as well as an operational point of view. From an operational perspective, organizations need to “run” the business and this translates into baseline demand for IT. Organizations also need to “maintain” their IT assets and this too represents significant demand for IT resources. From a development perspective, IT is called upon to deliver new capability to enable the business to remain competitive in the marketplace. So, whether it is a “keep the lights on” or a “new channel to market” initiative, both place demands on (and compete for) available IT resources. One organization simply classifies IT de-

mand as discretionary (i.e., strategic), maintenance (i.e., keep the lights on) and regulatory which his organization light-heartedly refers to as “I want”, “I need” and “I must”, respectively.

IT demand management is best understood within an organizational context. First, the need to automate business processes and operations is unrelenting and, once automated, automated processes must be supported on an ongoing basis. Hence, the workload grows proportionally with the demand and increases year over year. Second, at any point in time, the level of IT capacity is relatively fixed which limits IT’s ability to satisfy demand (i.e., the supply side). Third, one way to increase capacity (again the supply side) is to offload certain tasks to third party suppliers (e.g., outsourcing network management). Most organizations exercise this option regularly in order to satisfy increased and increasing demand. Finally, the only way for organizations to “get ahead” of this dilemma is by proactively managing the demand for IT services. Ultimately this will do a better job of satisfying business needs for IT.

According to a Gartner survey [18], 84% of IT organizations simply do not have the resources to meet enterprise expectations which leave only two possible responses. IT organizations can either “do more with less” which focuses on supply side activities (e.g., virtualization, data centre consolidation, benchmarking, contract renegotiation) or they can “do less with less” which focuses on demand side activities (e.g., demand management, IT performance management, IT portfolio management, running IT like a business)¹. The first approach (i.e., doing more with less) is the quest for increased productivity and the reality is that IT organizations will continually pursue enhanced productivity to remove costs from the business.

The second approach (i.e., doing less with less) differs dramatically from the pursuit of productivity and thus introduces a different set of challenges for IT organizations. Implicit within a strategy of “doing less with less” is the notion that perhaps not all of the requests for IT services are prudent and that, by rationalizing these demands for IT services, the organization might benefit. So, where the goal of productivity is “doing things better” (i.e., internal efficiency), the goal of demand management is “doing the right things” (i.e., business effectiveness).

¹ Gartner [18] actually suggests four possible options. In addition to “doing more with less” and “doing less with less”, IT organizations can “do more with more” and/or “do less with more”. These two latter strategies, however, are only available to expanding economies or to growth markets respectively.

This helps to explain why IT organizations have preferred to address the supply side of the demand-supply gap. Certainly it is much easier for IT organizations to exercise control over the supply side and, in fact, it is their prerogative to do so. But is IT in a position to shape the demand for IT services? According to Potter [18], this “conjures up uncomfortable feelings among many IT leaders regarding the political process involved with chargeback and the behaviors created by approving or disapproving emotionally charged IT projects”. So, perhaps the reason for the failure to address the demand side of the equation is due to a reluctance to say “no” to the business. The question is, after years of effort to support the business and to be seen as being supportive, how does an IT organization tackle demand management whose goal is to question and ultimately rationalize the demand for IT services? As Cramm [5] asks, “What right does IT have to tell the business what they can and cannot have?”

THE ECONOMICS OF DEMAND MANAGEMENT

The field of economics has used the concept of demand management for years. In its most elemental form, demand management is the “art or science of controlling economic demand to avoid a recession” [22]. The notion of demand management has also been focused to control consumer demand for environmentally sensitive goods. The economic notions of demand management that are most applicable for IT organizations, however, are those which apply to the “management of the distribution of, and access to, goods and services on the basis of needs” [22]. Here the tools are policies that allocate existing resources according to a hierarchy of neediness and the underlying idea is for “the government to use tools like interest rates, taxation, and public expenditure to change key economic decisions like consumption, investment, the balance of trade, and public sector borrowing resulting in an ‘evening out’ of the business cycle” [22].

This latter view suggests how to approach demand management. Instead of asking IT organizations to act as “traffic cops” and/or imposing sanctions on capital spending to artificially curtail demand, the economics approach is to create a system of policies and procedures coupled with adequate governance to ensure that the allocation of scarce IT services goes to the highest-value opportunities [5]. The goal is to capture and prioritize demand, assign resources based on business objectives, and engage in projects that deliver business benefits. But, as is frequently the case, what appears simple conceptually in reality presents a formidable set of challenges. To address

these challenges, the focus group discussed three commonly used tools for demand management and identified what they considered to be five critical key organizational enablers for the effective management of IT demand.

THREE TOOLS FOR DEMAND MANAGEMENT

Most articles advocate the use of tools for managing the organizational demand for IT resources, including project portfolio management, service catalogs, and chargeback [2]. These are described briefly with an accompanying explanation of how they work to shape demand.

1. Project portfolio management (PPM)

The project portfolio management is processes designed to rationalize and prioritize IT investment decisions based on objective criteria. PPM allows an organization to understand and quantify business needs and the investments needed to deliver software to achieve those benefits [10]. With effective PPM, demands for IT resources are vetted in accordance with governance procedures that result in a justified list of IT investments that satisfy the needs of business leaders. IT demand is limited and shaped to the extent that only those projects that succeed in passing through the PPM process are funded. According to Cram [5], PPM results in a “multi-year forecast of IT spending that constrains overall demand and results in increased project scrutiny.”

2. Service catalog

In the service catalog, discrete IT service offerings are associated with a price per unit. As an example, hardware services might include costs for a standard desktop/laptop/tablet configuration and a standard smart phone configuration; application services might include costs for developing a business case, designing a solution, building a solution, and/or implementing a solution. According to Young [21], a service catalog is a “service order- and demand-channeling mechanism intended to make it easier for end consumers to request and buy things from IT”. Knowing what is available and what it costs allows business managers to make informed demands for IT services and, to the degree that these services are standardized, shapes this demand appropriately. According to one manager, this clarification of IT services affects

demand by “allowing managers to order from a menu rather than saying I’m hungry”.

3. Chargeback

The Chargeback is a financial management technique that charges consumers according to the volume of IT services consumed (i.e., operations) or IT work done on their behalf (i.e., new development). Thus IT demand is controlled through direct price-based allocation to business consumers as motivation to act rationally and to discourage unnecessary demands. This approach to demand management results in a set of IT investments that are justifiable and affordable by business managers.

The adoption of these strategies appears to be widespread. As a case in point, the organizations in the focus group have long deployed chargeback and PPM and most are in the process of building service catalogs. The benefits of these three strategies, according to newScale [17], accrue independently and collectively:

“Best practices for demand management start with defining standardized services, exposing those services to customers via an IT service catalog, controlling and shaping demand through guided self-service, and providing cost transparency through showback or chargeback. The results: great adoption of cost-effective service options, consumption choices that result in lower IT costs, and effective planning to meet business needs and minimize over-capacity.”

While acknowledging the usefulness of these three tools, the focus group characterized them as “necessary but insufficient”. They argued that the benefits derived from these tools are often more IT-related than business-related. Focusing on lowering IT costs through self-guided service and minimizing over-capacity makes sense from an IT-perspective but neither of these guarantees that IT investments are focused on the “highest value” opportunities – the ultimate goal of demand management. In order to manage IT demand effectively, these tools must be accompanied by mechanisms which the group referred to as organizational enablers.

FIVE ORGANIZATIONAL ENABLERS FOR EFFECTIVE DEMAND MANAGEMENT

Members argued that IT demand management is not a single process that an organization can identify. That is, in response to the question “How do you manage demand?” no organization could say “we use this process”. Instead, the group suggested that demand management is a “developed organizational capability” that results from five key organizational enablers: strategic initiative management, application portfolio management, enterprise architecture, business-IT partnership and governance and transparency. These key factors working synergistically with the tools previously described to enable effective demand management (see Figure 1). Having a successful application portfolio management (APM) initiative, for example, does not guarantee effective IT demand management but the absence of APM would definitely jeopardize the efficacy of demand management. Each of these key organizational enablers is described below.

1. Strategic Initiative Management

Strategic initiative management is the organizational mechanism for prioritizing and funding IT investments at the enterprise level. Although the focus is primarily on large discretionary/strategic investments, as the name implies, this process also adjudicates large infrastructure projects. One organization established a strategic project office (SPO) with a mandate to provide “governance and direction over enterprise-wide project approvals and planning to ensure these investments are aligned with the organization’s core strategies”. With a membership consisting of the head of each line of business plus the head of technology, the SPO meets monthly to review all projects that exceed \$1 million, that are unplanned², or whose incremental annual operating expenses exceed \$500M. The SPO, not only approves these projects, but directly governs them through their life cycle.

² According to Gentle [7], unplanned demand “corresponds to the huge amount of unpredictable work that IT does which is not contained in well-defined project structures. These include things like change requests, feature requests and bug fixes which arise from changing business and regulatory environments, changes in strategy, company reorganizations, mergers and acquisitions, and insufficiently tested systems”.

The effective management of strategic initiatives is a crucial step for overall demand management. Without this capability, organizations are left with no structure for prioritizing IT funding opportunities at the enterprise level which leaves them unable to align their IT investments with corporate strategy. According to one manager, the absence of a strategic initiative management initiative is a “siloeed approach which results in ad-hoc decisions, increased cost

and complexity, redundancy of applications all of which increase the overall demand for IT services”. The cost of the legacy environment this creates further restricts the investment in new IT capabilities and innovation. The absence of an effective strategic initiative management capability is a double-edged sword: it drives up the demand for IT resources while reducing the ability to conduct capacity planning to take advantage of a rationalized demand.

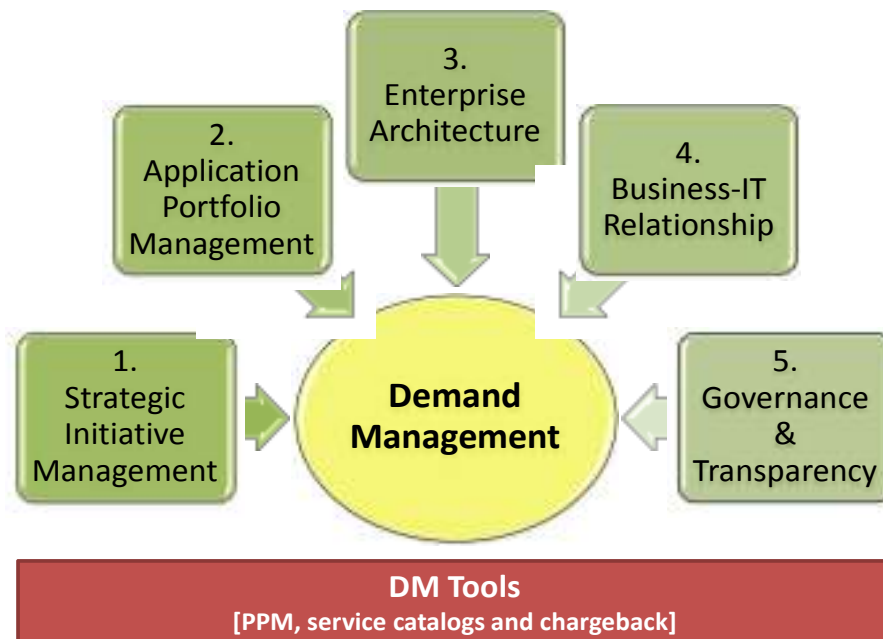


Figure 1: Tools and Key Enablers of Demand Management

2. Application Portfolio Management

Unlike PPM which deals on future projects, application portfolio management (APM) focuses on established applications, trying to balance expense against value [4]. These applications may be assessed for their contribution to corporate profitability, and also on non-financial criteria such as stability, usability, and technical obsolescence. McKeen and Smith [15] provide strategies for effectively implementing an APM initiative. The existing portfolio of applications (sometimes referred to as the asset portfolio) must be continually maintained in order to support the organization effectively. This need for continual maintenance creates demand for IT re-

sources. Allowed to grow in response to the needs of separate lines of business, a legacy environment soon becomes highly complex, difficult to change, and expensive to maintain.

In one organization, it was not until they had instituted an application portfolio management (APM) initiative that they discovered that they had significant overlap and duplication across applications (e.g., 70 management information systems, 51 order management applications, and 27 regulatory reporting systems). The costs of maintaining this environment were driven up substantially and needlessly. Furthermore, their ability to deliver new applications

was jeopardized due to the inherent complexities within the application portfolio itself.

With an effective APM initiative now in place, this same organization has reduced its technology-related operating costs and realized significant business value through reduced staff and maintenance requirements, reduced cycle times for process execution, a thorough rationalization of their application portfolio with a 40-50 percent reduction in size, and realized technology cost improvements through application retirement. Furthermore, the organization was able to re-orient their technology cost profile to value creating activities and away from maintenance. Most significantly resultant savings were applied to new initiatives without increasing the overall IT budget. This example demonstrates how application portfolio management (APM) can be effective at reducing overall demand as well as reshaping it.

3. Enterprise Architecture

Enterprise architecture (EA) is the “continuous practice of describing the essential elements of socio-technical organization, their relationships to each other and to the environment, in order to understand complexity and manage change” [11]. Enterprise architects work with stakeholders in both leadership and technical matters to build a holistic view of the organization’s strategy, process, information, and information technology assets. The enterprise architect can connect the business mission, strategy, and processes of an organization to its IT strategy. This work is then documented in different architectural models that illustrate how the current and future needs of an organization will meet in an efficient, sustainable, agile, and adaptable manner. This process occurs across the enterprise and the goal is to deliver an architecture that supports the most efficient and secure IT environment [19].

In this role, an EA is strategically placed to bridge the two worlds of business and technology. According to McKen and Smith [14], EAs are “able to take a view across business change programs, assessing their combined business and technical risk, overlap/dependencies and business impact on the staff and customers of an organization”. Over the years, the role of enterprise architecture has become even more business focused and this has drawn EAs into increasingly senior management discussions. The

organizational advantages of this are immediate. It has enabled EAs to influence the demand for IT resources by vetting strategic choices in light of what is possible from a business AND technical solution perspective. According to one manager, this allows his enterprise architecture group to “get ahead of the business which helps them to manage IT demand proactively”.

The ability of EAs to shape demand depends on two leverage points. The first is the establishment of a “future state architecture” or “end state architecture blueprint” (see McKen and Smith [13]) which identifies the current architecture, the future architecture, and outlines a current-to-future transition plan. Combined with effective governance and transparency, this mechanism is highly effective at shaping IT demand by ensuring that everything aligns with the architectural plan. At one organization, it was their adoption of common enterprise architecture that tightly integrated business and technology enable “informed enterprise-wide transformation planning and drive effective development across all business units”. The second key leverage point provided by enterprise architecture is the ability to promote enhanced business capability from a top down perspective. Rather than depending solely on “bottom up” demand from the lines of business, the enterprise architecture team at one organization was able to “identify and champion enhanced business capabilities because of their ability to link the organization’s technical architecture to business strategy”. Deploying these two leverage points allows the IT organization to shape demand by aligning new initiatives with the architectural plan and by highlighting enhanced capabilities enabled by the same architectural plan.

4. Business-IT Partnership

Managing IT demand runs counter to the well ingrained role of IT – to be an order taker – to do whatever the business needs and whatever is sent its way [16]. For years, the accepted wisdom has been: if the business wants it and is willing to pay for it, then it is not the role of the IT organization to question these decisions. The members of the focus group debated this issue. It was evident that no organization represented within the focus group subscribed faithfully to the “order-taker” role for IT; everyone felt that their IT organization needed to be more proactive in order to be most effective within their or-

ganizational service role. However, lively disagreement with regard to the degree of IT “proactiveness” emerged.

On one side of the issue, a manager stated adamantly that “IT should definitely take a leadership position in managing demand ... and that IT was well positioned to identify, analyze and recommend potential applications of IT to the business”. At her organization, the IT executive team had built strong relationships with their business partners over time especially at the highest levels of the organization. Their CIO was a valued member of the executive committee, was requested to present to the board at every meeting for ten minutes (previously the CIO had presented once a year), and carried substantial influence in terms of the future application of IT in discussions about how best to leverage the business.

At another organization, the relationship between IT and the business was not nearly as well established and lacked the requisite foundation of mutual trust [15]. According to this manager, their IT organization was “struggling with the business to close knowledge gaps in terms of what the business was asking for and what IT was able to deliver”. Some newly formed committees were in the “process of aligning IT with the business to enable prioritization of work across the different business units”. A lack of business strategy and/or a clear understanding of business requirements had led to a vacuum that IT was attempting to fill. Demand management was described as the oscillation between “technology push” and “business pull” which produced a lot of business resentment. The lack of a mutual trusting relationship clearly hampered the effectiveness of their demand management initiative.

A third organization suggested that value was driven at many levels within the enterprise requiring alignment between IT and the business leadership on objectives, investments and outcome. Her organization had articulated three levels of partnership required to effectively shape demand. The first level is as a utility partner which focuses on table stakes; that is, keeping operations running as effectively as possible. The goal is competitive cost alignment and containment where IT partners with the business to reduce the operating costs of the business through such means as labor arbitrage and com-

petitive sourcing. The second level is as a technology partner. The goal here is continuous improvement such as accelerated time to market through new or enhanced processes. The third level is a business partner. This type of partnership is focused on business results through such mechanisms as improved market share, revenue growth, profit improvement and cycle time reduction. The group agreed that demand for IT resources does originate at different levels within the organization and therefore IT organizations must be effective at each of these different levels. In addition to senior IT executives, other key relationship players are business analysts, account/relationship managers, and business architects.

One organization mapped out a set of generic attributes for an effective IT-business partnership capable of shaping demand for IT resources. According to this manager, effective demand management requires the following:

- **Relationship management** – where collaboration and partnership are key to identifying business capabilities and requirements. Continuous communication is essential. In fact, some have argued that relationship management has to transform into the role of demand management [3].
- **Leadership** – a technology manager’s leadership style has significant implications for the success of the partnership; for example, is he or she driven by collaboration? Is the business a key partner or kept at arm’s length?
- **Clear business requirements** – without clear business requirements, the technology group will struggle. Even under the best of cases, high level requirements may drastically change when digging into the details of business needs.
- **Marketing skills** – with the ever changing technology landscape, selling/marketing technology capabilities becomes critical. Thus instead of talking about technology, the conversation should be about business capability.

These partnership traits would take on different degrees of importance depending on whether the relationship called for a business partner, technology partner or a utility partner.

5. Governance and Transparency

It is customary for organizations to have a process for vetting IT project proposals (i.e., a business case³). Furthermore, the business is normally expected to pay for new development as well as a pro-rata share of the technology costs to run the business (i.e., chargeback). Together these two forms of governance shape the demand for IT resources. They do this by encouraging and/or sanctioning investment behavior on the part of the business. For example, we would expect that business managers would be reluctant to request and pay for anything non-essential. Nevertheless, organizations find themselves having to manage IT demand. As a result, are we to conclude that these governance mechanisms are inadequate? The focus group made two arguments: first, they suggested that IT demand will always exceed supply due to the myriad potential applications of information technology in the workplace; and second, they felt that existing governance structures were indeed lacking. We explore the latter of these two issues below.

Business managers continuously seek to leverage their business with technology whether that happens by streamlining processes, offering self-serve options, implementing enhanced information/reporting systems, or implementing dynamic pricing systems. Provided they have the money, their only challenge is to win approval for the requisite IT resources. IT managers are equally motivated to provide such systems as are desired by the business. Specifically, IT managers are rewarded by delivering systems on time and within budget. In sum, both parties are highly motivated to deliver new capabilities to the business. The resulting effect, according to members of the focus group, is encouragement to overstate the short term benefits of delivering the desired capability and to understate the long term costs of maintaining it. Without a countervailing governance structure to reinforce different behavior, IT demand expands to overwhelm supply⁴.

Recognizing the need for a remedial governance mechanism, two separate organizations adopted similar approaches. Both mandated the adoption of a standard business case template combined with compulsory training for all business managers in business case development. Both organizations also mandated that the finance organization must sign off on the acceptability of benefits proposed in all business cases. The third and arguably most important process change was to track the delivery of project benefits following implementation in order to hold business managers accountable for realizing anticipated benefits. The combination of these three initiatives produced significant behavioral changes. Training business managers in the process of preparing business cases had the immediate effect of raising the overall quality of submitted business cases and sharpened the focus on benefits identification. Assigned accountability for realizing benefits countered the tendency to overstate benefits and understate costs. All in, these governance procedures reduced overall demand for IT resources but, more importantly, focused limited IT resources on the “right” systems. Both firms expressed confidence that their IT investments were effective strategies for managing IT demand.

Transparency goes hand-in-hand with governance. A well-articulated process that is understood by everyone and adhered to by all managers is the goal. Information needs to be understood, consistently interpreted, and applied correctly for there to be any hope of effective decision making. A byzantine chargeback allocation algorithm, for example, provides little guidance in terms of appropriate action and usually fails to produce its intended behavioral effect. In like fashion, allowing “unplanned” or “off-plan” activity to enter the service queue quickly undermines even the best demand management initiatives. One manager claimed unplanned demand is like “getting bitten to death by ducks” – no single bite will kill you but one thousand bites later you are dead! As mentioned

³ Typical business cases require a business sponsor, risk analysis, architectural plan, business requirements, detailed design, project management plan, vendor RFP (if applicable), work schedule, and project manager.

⁴ From an economics point of view, a potential countervailing strategy would be a pricing mechanism. That is,

demand could be curbed by increased pricing of IT services. Although this might dampen demand in the short run, according to the focus group, such a strategy would introduce so many new and different impediments to the adoption of IT that it would be difficult to predict what long term effects it might have on IT demand.

earlier, the solution adopted by one organization was to shuttle off all unplanned activity to their strategic project office in order to make it visible and force it to compete with other demands for IT resources thereby ensuring an open and transparent process.

McKeen and Smith [15] argue that effective application portfolio management can impact demand management due to the increased transparency provided by accurate information. In fact, providing information can on occasion make governance unnecessary. A vivid example of this was provided by one organization. Having made a significant investment in an application portfolio initiative to track IT expenditures, senior IT executives were able to present the following information to their senior business partners:

- The annual investment in systems designated as surplus by the business⁵.
- All investments to add components to these surplus systems.
- Annual investment in systems misaligned with overall strategy. For example, it was discovered that only 20 percent of their IT investment was directly focused on “improving the customer experience and driving revenue” despite the fact that these two areas were designated as the enterprise’s top priorities.
- Investment in systems at odds with future state architecture.

Highlighting these expenditures resulted in almost immediate managerial action... something that had been lacking previously. Redundant systems were retired and investments in surplus systems were stopped. Of particular note is that these significant savings were obtained without the introduction of any additional governance mechanism. According to the focus group member, what called business executives to action was seeing these numbers on the charts denoting unnecessary expenditures. Business executives simply “did not want to have their stuff in the red boxes”.

⁵ This organization identifies all applications as either “buy”, “hold” or “sell”. Surplus systems are those marked as “sell”.

CONCLUSIONS

While attention on supply side issues will continue (i.e., to ensure that the IT organization is run as efficiently as possible), future management activity must increasingly focus on the demand side to ensure that IT investments are made as effectively as possible. IT demand management, however, is not a single process but rather a “developed organizational capability”. This capability requires basic tools (e.g., service catalog, chargeback, and project portfolio management) working in concert with five key organizational enablers (strategic initiative management, application portfolio management, enterprise architecture, business-IT relationship, and governance and transparency). Together these mechanisms enable organizations to allocate capital and human resources to the highest-value IT opportunities. Of equal if not greater benefit is that active demand management enables IT organizations to forge more effective working partnerships with the business. Instead of being relegated to the role of order-taker, IT organizations can now engage in proactive discussions with their business partners to establish a future agenda for IT. And because the supply side works in unison with the demand side, this enables enhanced capacity planning of benefit to both. For the first time, many IT organizations will be able to get a step ahead of the business and build capability to enable new strategic business initiatives with shortened time to market. This has been the prized but elusive goal of IT. In organizations where IT is recognized for its strategic importance and/or IT processes have reached a level of maturity, managing IT demand has likely begun; for all others, the time to manage IT demand has arrived.

REFERENCES

- [1] Bellenger, D., Bernhardt, K., and Goldstucker, J., *Qualitative Research in Marketing*, American Marketing Association, Chicago, 1976.
- [2] Betts, M., “Business Demand for IT is outstripping the budget”, *Computerworld Blogs*, http://blogs.computerworld.com/business_demand_for_it_is_outstripping_the_budget, May 2009,
- [3] Cameron, B., “From Relationship to Demand Management: IT’s Relationship Managers will be Focus for Aligning Business and IT”, *Forrester Research*, October 2006.
- [4] Caruso, D., “Application Portfolio Management: A Necessity for Future IT”, *Manufacturing Business technology*, Volume 25, Issue 10, October 2007, pg. 48.

- [5] Cramm, S., "Managing IT Demand 101", *CIO*, Article 32222, www.cio.com/article/32222, April 2004
- [6] Eason, G., Easton, A., and Belch, M., "An experimental investigation of electronic focus groups," *Information and Management*, Volume 40, 2003, pp. 717-727.
- [7] Gentle, M., *IT Success: Towards a New Model for Information Technology*, John Wiley & Sons, Hoboken, New Jersey, USA, October, 2007.
- [8] Hackett Group Inc., "New Hackett Research Quantifies Growing IT Services Gap; Demand to Increase by 17% through 2010 as Budgets Remain Flat", Research Alerts #05122009, www.thehackettgroup.com/about/alerts/alerts_2009/alert_05122009.jsp, May 2009.
- [9] Higgenbotham, J.B., and Cox, K.K. *Focus Group Interviews: A reader*, American Marketing Association, Chicago, 1970.
- [10] Hotle, M., Duggan, J. and Woods, J., "Drive Application Overhaul Efforts with a Portfolio Approach", *Gartner Inc.*, Research ID No. G00205640, July 2010.
- [11] Kotze, P., "Enterprise architecture definition", *Enterprise Architecture Research Forum*, <http://earf.meraka.org.za/earfhome/our-projects-1/completed-projects>, Feb 2011.
- [12] Krippendorff, K., *Content Analysis: An Introduction to its Methodology*. Beverly Hills, CA 1980.
- [13] McKeen, J.D. and Smith, H.A., "Creating and Evolving a Technology Roadmap," *Communication of the Association of Information Systems*, Volume 20, Article 21, September 2006, pp. 451-463.
- [14] McKeen, J.D. and Smith, H.A., "The Emerging Role of the Enterprise Business Architect," *Communications of the Association for Information Systems*, Volume 22, Article 14, February 2008, pp. 261-274.
- [15] McKeen, J.D., and Smith, H.A., "Application Portfolio Management", *Communications of the Association for Information Systems*, Volume 26, Article 9, March 2010, pp. 157-170.
- [16] Morhmann, G., Schlusberg, C., and Kropf, R., "Demand Management in Healthcare IT: Controlling IT Demand to Meet Constrained IT Resource Supply", *Journal of Healthcare Information Management*, Volume 21, Number 3, Fall 2007, pp. 56-63.
- [17] NewScale, "IT demand management", http://www.newscale.com/solutions/IT_demand_management, April 2010.
- [18] Potter, K., "IT Cost Optimization Round 2: Strategic Shifts and Doing Less with Less", *Gartner Inc.*, Research ID No. G00205937, August 2010.
- [19] Rosen, M., "Ten things an architect does to add value". *Technology Transfer*, http://www.technologytransfer.eu/article/78/2009/9/Ten_Things_an_Architect_Does_to_Add_Value.html, Sep 2009.
- [20] Smith, H.A. and McKeen, J.D., "Building a Strong Relationship with the Business," *Communications of the Association of Information Systems*, Volume 26, Article 19, April 2010, pp. 429-440.
- [21] Young, C., "ITSM Fundamentals: How to Construct an IT Service Catalog", *Gartner Inc.*, Research ID No. G00210792, March 2011.
- [22] Wikipedia, definition of demand management, http://en.wikipedia.org/demand_management, March 2011.

AUTHOR BIOGRAPHIES

Heather A. Smith is Senior Research Associate with Queen's University School of Business, specializing in IT management issues. A former senior IT manager, she is a founder and co-director (with James McKeen) of the IT Management Forum, the CIO Brief, and the KM Forum, which facilitate inter-organizational learning among senior executives, and co-author (with James McKeen) of *Management Challenges in IS: Successful Strategies and Appropriate Action* (1996). She is also a Research Associate with the Lac Carling Conference on eGovernment, the Society for Information Management, and Chair of the IT Excellence Awards University Advisory Council. Her research is published in a variety of journals and books including CAIS, JITM, *Information and Management*, *Database*, *CIO Canada*, and the *CIO Governments Review*. Her book, *Making IT Happen: Critical Issues in IT Management* with James McKeen was published by Wiley in January 2003 and she is co-author of a new book, *Information Technology and Organizational Transformation: Solving the Management Puzzle* published by Butterworth-Heinemann.

James D. McKeen is a Professor of IT Strategy at the School of Business, Queen's University at Kingston, Canada and is the founding Director of the Monieson Centre which conducts multi-university, collaborative research focused on generating value through knowledge in organizations. Jim received his Ph.D. in Business Administration from the University of Minnesota. He has been working in the IT field for many years as a practitioner, researcher, and consultant and is a frequent speaker at business and academic conferences. Dr. McKeen co-facilitates the networking of senior executives in the IT

sector through two well-known industry forums – the IT Management Forum and the CIO Brief. He also has extensive international experience, having taught at universities in the U.K., France, Germany and the U.S. His research has been widely published in various journals including the MIS Quarterly, Knowledge Management Research and Practice, the Journal of Information Technology Management, the Communications of the Association of Information Systems, MISQuarterly Executive, Communications of the ACM, Computers and Education, Canadian Journal of Administrative Sciences, Journal of MIS, KM Review, Journal of Information Science and Technology and Database. Jim is a co-author of three books on IT management with Heather Smith – the most recent being *IT Strategy in Action*, 2nd edition (Pearson Prentice Hall, 2012). He currently serves on a number of Editorial Boards.

Paola Gonzalez is a doctoral student in Management Information Systems at the School of Business at Queen's University. She holds a MASC in Management Sciences from the University of Waterloo and a B. Sc from the Universidad Distrital Francisco Jose de Caldas in Colombia. Prior to starting his graduate studies, Ms. Gonzalez spent time working as entrepreneur and in quality engineering. Her research interests include IS/IT strategy, IS perceptions, health care information technologies, and knowledge management. Ms. Gonzalez has presented and published her research at a number of conferences including International Conference on Information Systems (ICIS), Administrative Sciences Association of Canada (ASAC), American Canadian Conference for Academic Disciplines, among others.