WHAT OUR BEST BUSINESS THINKING CAN TELL US ABOUT THE FUTURE OF IT

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ABSTRACT

Managers of profit centers have a wealth of assistance on running a successful for-profit business organization available from thousands of articles, papers, and books by some of the best business minds in the world. Cost-center managers have to settle for considerably less guidance, usually from less well-known authors, on managing an effective overhead organization. This is particularly true for information technology (IT) organizations, where the level of business acumen is often less than found in other cost centers such as finance, accounting, and human resources.

This paper proposes that the situation can be at least partially remedied by adapting and applying the best state-of-the-art for-profit business thinking to the overhead organization.

Keywords: IT management, IT strategy, profit center, cost center, overhead, supply chain, competitive advantage, value added, value chain, core competency, disintermediation

INTRODUCTION

This is a particularly difficult time for information technology (IT) organizations. Budgets are stagnant, if not being cut, users are often unhappy with the service they receive, senior management does not know why IT costs so much, and some authors are telling IT that it is irrelevant and has no future. [1] [2]

When IT gets advice, it is often unactionable. Telling the chief information officer (CIO) he or she needs to think more strategically is like telling a student to get smarter—useless advice unless accompanied by some credible plan on how to achieve it.

And help is often not directly available—particularly frustrating given the plethora of materials on managing a business. Budding or struggling business professionals have a treasure trove of sources to help with business strategy, finance, product development, marketing, customer management, and competitive analysis.

Unfortunately, the common thread of most of these materials is the for-profit enterprise, helping the profit-center manager run his or her organization. Considerably less material is available to help the overhead side of the business and the struggling cost-center manager. The evidence is everywhere. Go into any bookstore, in any university or shopping mall, and look at the shelves. There will be shelf after shelf offering profit center advice but nearly nothing on running an efficient and effective cost center. The big names in business books (Drucker, Prahalad, Porter, Kaplan) focus almost exclusively on revenue-generating functions. If an overhead area is mentioned or brought more deeply into the business equation, the discussion usually stresses cost containment.

For example, *The Harvard Business Review* compendium *of the best* business articles [4]—marketed as "10 seminal articles by management's most influential experts, on topics of perennial concern to ambitious man-

agers and leaders hungry for inspiration," [1]—does not mention issues specific to cost centers much less advice on their effective or efficient management. [2]

The subject area is not completely barren. There are books for human resource managers, accountants, and even CIOs, but the focus is more on the procedural running of the organization than on the strategic nature of the function. Overhead managers can find help on personnel issues, budgeting, and reporting, but almost nothing on customer management (for example segmentation or support) or maximizing the business value of the function.[3]

To be effective, an overhead manager needs to understand corporate issues; be aligned with business development, marketing, support, and other business plans; and apprised of the competitive environment in which it exists. [5] All are, or should be, traits common to running a successful organization, *profit or cost* label notwithstanding.

If the cost-center manager wants business help, particularly from the best business minds of the day, then he or she will have to look to profit-focused publications for that help. This paper tries to tackle the dual challenges

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[1] This quote was found on the sites of Amazon, Books.Google, Barnes & Noble, among others. Interestingly it is not on the *Harvard Business Review*'s site, which says, "If you read nothing else, read these 10 articles from HBR's most influential authors."

[2] Of the 10 articles only 2 mention the word "overhead," and one mentions "cost center"—none of them in the context of running an overhead organization.

[3] The author could not find credible research on the number of materials focusing on profit centers versus cost centers, nor was there research on the caliber of the authors who write for each group. A very incondite look at *Google* turned up some limited information. Results of searching for "profit center" and "cost center" using *Google* and *Google Scholar* were:

Using *Google* with the search arguments "business book" and "profit center" resulted in 86,000 hits
Using *Google* with the search arguments "business book" and "cost center" resulted in 9,240 hits

More than nine times as many books for profit center as for cost center.

Using *Google Scholar* with the search argument "profit center" resulted in 21,000 hits
Using *Google Scholar* with the search argument "cost center" resulted in 16,100 hits

More than 30 percent more hits for profit center than cost center.

Searches were conducted over multiple days in April 2013.

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of supplying the IT cost-center manager with the best business thinking available while exploring what that advice might be saying to such a manager.

OBJECTIVES

The hypothesis of this paper is that the IT manager who wants help running his or her overhead organization, and is frustrated by the lack of material focusing on cost centers, can be better served by studying and adopting the best advice given to profit-center managers.

Specifically, the goals are to:

1. Adapt two of the most popular for-profit oriented business documents, produced by respected business authors and academics, to the cost center.

…And…

2. Apply the lessons learned from these two publications to a typical IT organization to see whether they can provide some functional clarity and directionality for IT's overall mission.

IT'S ROLE IN THE ENTERPRISE

A supply chain[4] is the system or process for moving products or services from raw materials to finished goods in customer hands. In the process, goods pass through manufacturers, distributors, and retailers before winding up with the eventual consumer. (Figure 1)

In the 1980s, Michael Porter [7] studied the competitive advantage[5] successful companies had over their rivals. This advantage took the form of either having lower costs than competitors did—thus being able to offer their products or services at a better price—or providing superior products or services for which customers are willing to pay a premium.

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[4] Supply chain—According to Investopdeia's financial dictionary, a "supply chain encompasses the steps it takes to get a good or service from the supplier to the customer… The companies manufacturing parts for the product, assembling it, delivering it, and selling it." (Investopedia financial dictionary, Investopedia US, http://www.investopedia.com/dictionary).

[5] Competitive advantage—For Michael Porter, competitive advantage is a firm's ability to sustain above-average performance through successfully pursuing a strategy focusing on either low cost or product/service differentiation from competitors. [7]
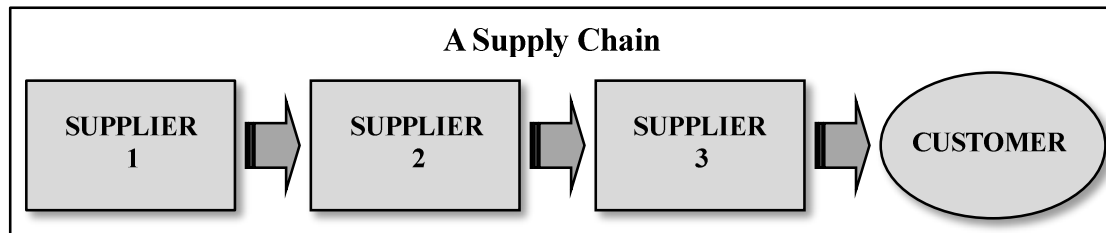
Figure 1: A Supply Chain

Porter noticed that each link of the supply chain added features to the product or service increasing its value. However, value is not all that is added; so is cost. In addition, one could measure the value each link in the chain adds to the product or service and the costs incurred in doing so. Porter introduced a new framework, called a value chain,[6] to help identify and understand competitive advantage.

Value Chains

One can see value chains at work almost everywhere. The mining company digs up the mountainside, extracting the iron ore that it sells it to the foundry. The steel works adds value to the ore by turning it into steel bars and sheets. The car company buys the steel bars and sheets and turns them into SUVs. The car dealer buys the SUVs from the car manufacturer and adds value through showrooms, advertising, financing, and pre- and post-sales service. Every link in the value chain purchases materials from its suppliers, adds some value to the product/service, and then sells it to the next link in the chain. With the exception of the first and last links of the chain, each is both a customer (of the previous link) and a supplier (to the subsequent link).

Looking within an organization, Porter used the value chain model to highlight the value and cost of each step in the company's internal processes. Materials, information, and even people can be seen as entering the organization at one end, passing from department to department, or position to position, each adding value and cost.

What happens when a link gets weak? Well, it is cut out or replaced. Because each link also adds costs, those that do not add sufficient value to mitigate their cost are dropped or replaced by a link that can. Early in its history, Dell, the computer manufacturer, decided that it did not need the retail store link in its value chain if it could sell PCs directly to the consumer. [3] Carmakers, computer manufacturers, and many others decided that, although the American worker added value, he or she did so at too high a cost. Korean, Chinese, and Indian labor, they felt, could add the same value at a lower cost, so they moved their operations overseas.

Applying Porter to IT

What is interesting about value chains is that they tell us as much about cost-centers as profit-centers. Like their for-profit cousins, overhead links provide value while adding costs. Those that add more value or provide the same value but at lower cost have an advantage over less competitive ones.

Figure 2 shows a simple value chain. The value-added[7] box is IT's place in the value chain. IT purchases products from suppliers. It then adds value and passes the output on to its customer (user).

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[6] Value chain—A term created by Michael Porter, a value chain "disaggregates a firm into its strategically relevant activities in order to understand the behavior of cost and the existing and potential source of differentiation." [7] The value chain is the necessary ingredient to understanding Porter's competitive advantage.

[7] Value added— "The enhancement a company gives its product or service before offering the product to customers. Value added is … a feature or add-on that gives it a greater sense of value." (Investopedia financial dictionary, Investopedia US, http://www.investopedia.com/dictionary). The term can sometimes refer only to the value the supplier adds or, more commonly, both the value and the cost.

A Value Chain

Sourcing

Distribution and
Customer Service

SUPPLIER
Suppliers provide
raw materials or
components (parts)

VALUE ADDED
Value is added (new or
integrated parts or
service) producing a new
product or service

CUSTOMER
Customers
purchase the
finished product or
service

**Sourcing is the process of selecting and
procuring the components (parts) to
create new products or services**

**Distribution is how the products or
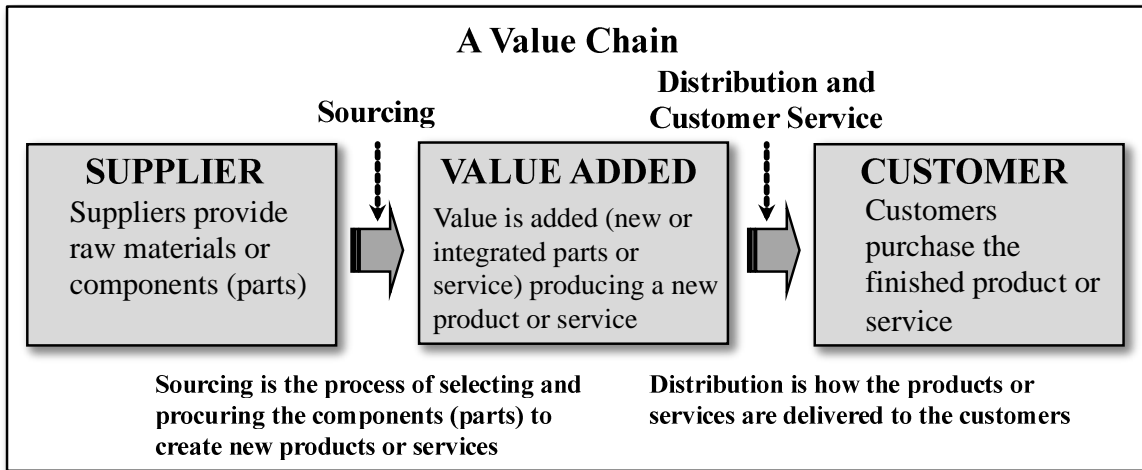services are delivered to the customers**

Figure 2: A Value Chain

Computer-based applications are the easiest value-added service to understand. IT buys computers and system software, hires programmers and operators, and then gives the enterprise an order-entry system. The programmers add value to the hardware, compilers, and file systems when they create the order-entry application. Operations adds value when it runs the application, delivering functionality to the data entry clerks and status reports to management.

IT adds value, but at what cost? This leads to the pivotal question: What is, or should be, IT's value added?

This crucial question becomes clearer if you look at IT's position in the value chain. Like car dealers, supermarkets, and airlines, IT is situated near the end of the value chain, next to the customer (Figure 3). Most manufacturing goes on at the beginning of the chain, where the raw materials are processed. The front end of the chain does the heavy lifting while, in most cases, the back end provides service. Auto dealers do not manufacture cars, supermarkets do not grow corn, and airlines do not build airplanes. Auto dealers provide a service by finding buyers, taking the orders, arranging financing, acquiring the car in the right color, providing pre-delivery service, and fixing things that go wrong. Supermarkets establish relationships with hundreds of food suppliers (so the consumer does not have to), move the stock to a convenient store, offer a satisfaction warranty, and provide the stock in a pleasant atmosphere.

**IT is at the Customer (Demand)
Side of the Value Chain**

SUPPLIER — SUPPLIER — SUPPLIER — IT — CUSTOMER

Supply Side

Demand Side

Of the Value Chain

Of the Value Chain

*Supplies raw
materials to
manufacturers*

*Manufactures
components such as
chips and disk drives*

*Builds PCs
and writes
software*

*Supplies a complete
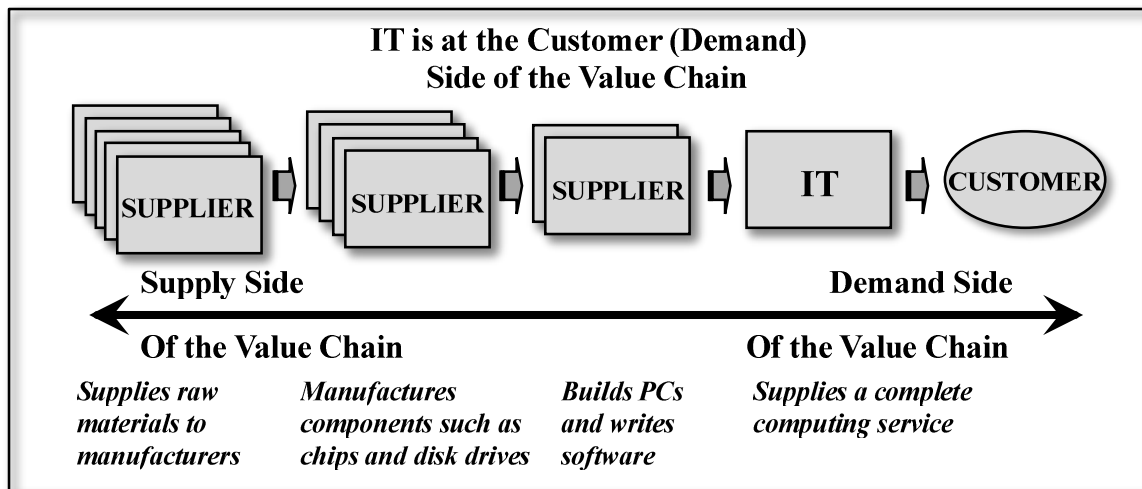computing service*

Figure 3: IT is at the Customer (Demand) Side of the Value Chain

This gets to the fundamental issue for many IT organizations: *IT sells technology, but IT's customers buy service*. This disconnect is perhaps the major cause of user dissatisfaction with IT. More than anything else, it is the primary reason IT and its customers do not see eye to eye. [6]

Anyone who has spent the night before a child's birthday trying to assemble a bicycle, swing set, or computer components, knows that buying the best product available can be almost as frustrating as getting the worst. For most people, a BMW you have to assemble yourself is less useful than a Yugo ready to go. The same is true with IT customers who want their IT department to supply them with solutions to their problems and not a Rubik's cube on a power cord. The common IT skill, knowing technology, is important, but it needs to be supplemented with the less common IT skill of knowing how to make technology useful for internal customers.

The number one lesson learned from value chains is that IT is a provider of services, not technology products. Most IT customers can get technology products on their own. AT&T is willing to provide them with network access and smartphones, CDW will sell them servers, tablets, and PCs, and SAP is willing to provide the applications.

What exactly then is it that IT does that anyone would want? In most cases, the answer is that IT's value added is the service it provides its customers bundled with the products IT purchases from its own suppliers. Dell might provide the PC, but IT will load the needed software on it, test it, deliver it to the customer's desk, explain how to use it, fix it when it breaks, upgrade it when it is outdated, and replace it when its life is over. To do that, IT needs suppliers, staff, tools, training, and a clear vision of what value they add to the value chain. In the final analysis, IT is not a technology organization, or even a product organization, but a service organization. Virtually everything else users can get from others at a cheaper price.

This will be a surprise for those IT staff who see themselves as delivering technology. [10] For them, providing technology is an arduous task made all the more difficult by whiney users. Many IT staff do not see IT as a service organization, even if service is something IT must (perhaps reluctantly) provide. However, the reality is that if IT has any place at all in the corporation, it will be as a service provider, not as a technology provider.[8]

Many CIOs know this. More than one IT chief has discovered that the trusted telecommunications supplier, or enterprise software vendor, has gone over the CIO's head, trying to sell products or services directly to the business unit leaders or the CEO (Figure 4). These vendors argue that the enterprise can get the same or better service at a cheaper price by cutting IT out of the value chain. This is called disintermediation.[9] When is this sales ploy successful? When IT does not supply sufficient value to cover its own costs.

Not all is lost if IT can exploit its position in the value chain. IT can not only survive in this value theory environment, it can do quite nicely. However, first it needs to sit down and examine each and every product or service it provides users to determine exactly the value IT adds to that product or service. Then IT needs to calculate the costs it incurs providing that value and add them to the final price the enterprise must pay for it. That $1,200 PC from a vendor might end up costing $3,200 when the IT costs of labor, spare parts, facilities, purchasing, storing, preparing, testing, and delivering it to the user are added. This is a time for brutal honesty. Does IT really provide a worthwhile service to its users when it teaches word processing classes? Should the enterprise build a new disaster recovery site or use the cloud? Does backing up user PCs to the corporate data center make more or less sense than using an outside, and perhaps remote, service? IT has to be ruthless when it asks these questions because business unit and corporate management certainly will be when they eventually ask…and they will. Maybe not today, but sometime soon, someone in corporate headquarters will get the idea to use an outside vendor for some service currently provided by IT.

Porter's value chains show that IT's correct role is as a service provider. Unfortunately, it does not tell us what services IT should be offering. Luckily, business science also has an answer for this question.

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[8] The notion that IT's critical role centers around service and not technology will probably not only be a surprise to some in IT, but also to many vendors, trade press authors, and academics who consistently push IT's technology role almost to the exclusion of any mention of it's service role.

[9] Disintermediation—A term originally applied to the financial industry, it describes the event of one organization displacing another in the supply chain. It is also used to describe when a link in the supply chain is dropped, not replaced, and its function is supplied by other, usually adjacent, links, cutting out one or more middlemen.
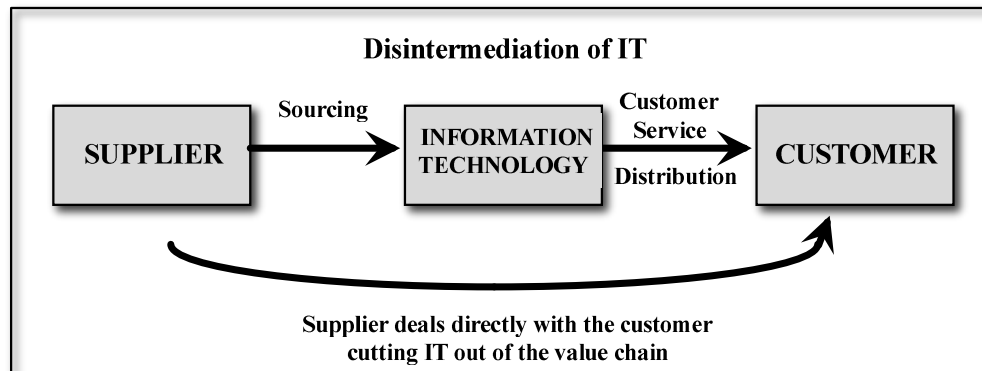
Figure 4: Disintermediation of IT

IT'S SERVICE OFFERINGS

The 1960s was the age of the conglomerate, when the best and the brightest believed that economies of scale and good solid, if only general, management skills were all a company needed to excel. Large conglomerates, supported by armies of MBAs, entered industries formerly dominated by small to mid-sized companies. The result was some rather strange bedfellows. For example, ITT, originally named the International Telephone and Telegraph Company, bought more than 300 businesses during the 1960s, including a bakery, a car rental company, a hotel chain, an auto parts supplier, and a cosmetics company. Textron, a yarn manufacturer, bought companies that produced radar antennas, chain saws, plywood, cruise ships, helicopters, photocopy paper, and pharmaceuticals. Gulf and Western started out as a stamping and plating company but later bought a movie studio, a publishing house, and the Miss Universe contest, among other properties. [9]

Some companies, such as GE, did it right, but most lost considerable sums of money when the economy turned sour during the late 1960s and early 1970s. The lesson learned from the era of the conglomerates is that size and raw brainpower are not enough; you also have to know what you are doing. Expertise, be it in the manufacture, sales, or support of a product, is needed to be successful.

Core Competencies

Formalizing this sound advice would have to wait until the 1990s when Prahalad and Hamel [8] probably coined, but most certainly popularized, the phrase, "core competency." They argued that corporations could not do everything well. Rather, a company should focus on what it does best, where its skills are unique, and where it can beat its competitors. They called this sweet spot the core competency, the place where senior management should put all of its energies.

An organization's core competency is: (1) attractive to a sufficiently large market, (2) perceived by customers as generating products or services that provide a significant benefit, and (3) not easily imitated by competitors.

Prahalad and Hamel gave two examples in their 1990 paper, one of doing it right and one of doing it wrong. NEC, the Japanese technology giant, worked to "exploit the convergence" of the communications and computer technologies. It recognized its core competency, communications, melded well with the emerging semiconductor market and would provide a powerful combination that had market potential, could generate great products, and would be difficult for competitors to copy. NEC is still a worldwide technology player with revenue around $70 billion.

Prahalad and Hamel also cited the larger GTE, the U.S. communications giant that had, according to them, lacked "clarity" in its strategic goals. GTE did not adequately identify and exploit its core competencies. Some years after the publication of Prahalad and Hamel's paper, GTE was acquired by Verizon.

The message from Prahalad and Hamel is clear. Identify, protect, and grow core competencies. Produce core products or services that rely on the core competencies. Identify end products or services that do not rely on core competencies or can be produced easily by competitors. Consider outsourcing, subcontracting, or divesting the production of non-core competency-based products or services. Never, never let others produce your core products or services.

Applying Prahalad and Hamel to IT

IT can exploit the work of Prahalad and Hamel by following three simple steps. IT management should:

First, *Identify IT's core competencies.* IT should list all of its competencies, such as application development, network design and management, the Help Desk, etc. From this list, IT should identify, using Prahalad and Hamel's three rules, its *core competencies*, i.e., the competencies that are recognized as critical to the enterprise and fundamental to IT.

Second, *Identify IT's core service offerings.* IT should list all of its services, such as collaboration, desk side support, report distribution, PC training, etc. Then IT management should study the list and identify the *core service offerings* that are derived from their core competencies.

Understanding core competencies and core products and services is not always black and white. Apple designed the iPhone but other companies manufacture the components and assemble the pieces. Canon might make the camera, but it does not manufacture many of its electronic components. Even core products have components that are commodity items.

Third, *Answer some soul-searching questions* about IT's competencies and services.

- *Do the core service offerings flow from the core competencies?* If the answer is No, then there is a disconnect. IT does not know what its core competencies are, or it does not know what its core service offerings are, or IT has no core competency in the production of its core services.
- *Does IT have the right core competencies?* If not, how does IT plan to acquire them (recognizing that, according to Prahalad and Hamel, acquiring a core competency can take a decade)?
- *Is IT providing the right core service offerings given its core competencies?* What other services should IT be providing that could emanate from its core competencies? Of special note, what core services might derive from the intersection of its core competencies?
- *What are IT's non-core services? Should IT be providing these non-core services or should IT obtain a better service elsewhere? At a better price? Would subcontracting or outsourcing non-core services allow IT to focus additional resources on core competencies and core services?* The non-core

services are candidates for subcontracting or outsourcing. This can be an IT Rubicon, because, as Prahalad and Hamel point out, once a competency (core or non-core) is given away, it is very difficult to retrieve. However, it is also very attractive to allow IT to place all its energies where it can make the most difference.

The result might be surprising. For example, we can imagine a fictional IT shop that discovers it has two core competencies:

1. Knowledge of how to apply technology to the parent organization's businesses.
2. Ability to maintain a relationship with the business's internal technology consumers that allows IT to understand their needs and to develop and deliver the technology to support their work.

The example above would likely be a surprising discovery for many IT organizations that imagined more technical core competencies than these. However, any outside vendor would love to have these competencies. With them, it could probably push IT aside and deal directly with corporate or the business units. IT would be totally disintermediated. Luckily, outside vendors do not have these competencies. Their only hope of supplanting IT is if IT does not exploit its core competencies with efficient and effective core services.

IMPLICATIONS FOR IT

The above provides a number of interesting implications for IT.

First, most IT shops have a set of core competencies that allow them to compete with, and beat, most every other technology organization, if they use them correctly. As with our fictional IT organization, these competencies are that: (1) IT knows the business better than any outside technology organization and has decades of experience applying technology to it. It also knows what has worked in the past as well as what has not worked. And (2), IT has worked with the same business managers and staff for decades and knows what will likely satisfy these users. It is familiar with the corporation's culture, its tolerance for risk, what the business' customers want, and how they generate revenue.

Surprisingly, these two areas are often underemphasized and under-funded in many IT organizations. While millions are spent on hardware and software, the average IT organization spends only a few percent of its budget on supporting and improving the IT-user partner-

ship.[10] If IT is to exploit its assets, then it needs to expand its procedures, management, training, and reward systems to focus on the core services it provides its internal customers.

Second, for simplicity we can call these core competencies "generic core competencies" because they are the competencies most, if not all, IT organizations share. In addition to these genetic competencies many IT organizations will have competencies specific to their situation. These "specific core competencies" can vary widely, driven by the business environment, corporate strategy, IT sophistication and skills, etc. For example, Amazon's IT organization has obvious competencies supporting very high volume transaction rates and very large databases giving it a competitive position in the emerging cloud computing market. IT should identity, foster, and capitalize on its specific core competencies strengthening the support it provides the entire enterprise, as well potentially providing, as in the case of Amazon, new business opportunities.

Third, understanding core and non-core competencies raises a new set of questions regarding not only what IT should focus on and invest in, but also on what it might need to deemphasize. Just as, according to Prahalad and Hamel, a company should never outsource its core competencies, IT should protect its core competencies and ensure that they are sufficiently supported, even if it means deemphasizing other areas. For example, while IT should never outsource core services, non-core services should be examined to ensure that they do not detract from core services. Distractions from IT's core activities are candidates for outsourcing or contracting to others whose core competencies are more in line with these functions. This identifies a different, and for many organizations a new, test for which functions to outsource.

CONCLUSION

The goals of this paper were to: (1) demonstrate that the best for-profit business thinking can be adapted and applied to internal overhead organizations, and (2) apply the advice of just two simple but popular business

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[10] Examination of IT budgets collected, analyzed, and published by technology research firms, such as Gartner Inc. and Forrester Research, did not uncovered any line items specifically dealing with the advancement of these two IT core competencies. Project budgets often touch on these issues but not in any way that would provide IT with tactical much less strategic insight. The author instead relied on interviews with five current and experienced CIOs in various US organizations.

concepts to an internal IT organization to see whether they can have a positive impact on its mission and self-image.

A more useful takeaway is the broader implication of the above. Once IT, or any other overhead organization, better understands its role and the value it provides the enterprise it can look to the plethora of for-profit business resources to focus on its strategy, governance, customer (user) segmentation, development of successful (internal) products, (internal) marketing, and customer (user) support, while managing customer (user) expectations. All of these topics, and many more, are widely available on for-profit bookshelves. The cost-center manager just has to look for them.

REFERENCES

[1] Carr, N. *Does IT Matter?*, Harvard Business School Press, Boston, 2004.

[2] Carr, N. "IT Doesn't Matter," *Harvard Business Review*, May 2003.

[3] Evans, P and Wurster, T. *Blown to Bits*, Harvard Business School Press, Boston, 2000, p. 82.

[4] *HBR's 10 Must Reads: The Essentials*, Harvard Business Review Press, Boston, 2010.

[5] Overby, S. "How to Run I.T. Like a Business," *CIO Magazine*, May 1, 2004, pp. 48–83.

[6] Overby, S. "Turing I.T. Doubters Into True Believers," *CIO Magazine*, June 1, 2005, pp. 48–56.

[7] Porter, M. *Competitive Advantage: Creating and Sustaining Superior Performance*, The Free Press, New York, 1985.

[8] Prahalad, C.K. and Hamel, G. "The Core Competence of the Corporation," *Harvard Business Review*, May–June 1990.

[9] Sobel, R. *The Rise and Fall of the Conglomerate Kings*, 2nd ed., Beard Books, Washington, D.C., 1999.

[10] Weinberg, G. *The Psychology of Computer Programming*, Van Nostrand Reinhold Company, New York, 1971, pp. 52–56.

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