

## MAKING IT MATTER

### CHAPTER 2

#### THE RIFT:

#### BUSINESS IT MISALIGNMENT AND ITS COSTS

The narrative presented in the previous chapter is not fiction. The characters and their stories are composites of many IT practitioners, business managers and tech vendor representatives that you might encounter on any given day in the corporate world. The specific issues may vary, but the central problem in our parable remains: a rift has developed between business practitioners and information technologists in a large number of companies - perhaps the majority. What we do about it will determine the success of any business going forward.

The rift is not (yet) as severe in some companies as it is in others. So, it is the hope of the authors that this book will provide some guidance to enable strategists and decision makers to become proactive in addressing the root causes of Front Office/Back Office strife.

In companies where the schism is already hardwired into the corporate culture, it is our hope that this book will provide some fresh ideas for identifying and addressing the situation effectively, for bridging past issues and ushering in a new era of cooperative strategy and innovation.

This book will go beyond typical "business self help" fare. Expect no Twelve Step Program here, no catchy buzz phrases or mantras - at least none that we have constructed intentionally. If anything, this book proffers a straightforward and commonsensical strategy for realigning business and IT.

Of course, there is truth in the observation by the philosopher Voltaire that the problem with common sense is that it is not so common. Common sense is often buried beneath considerable baggage - opinions, biases and

prejudgments based on direct or vicarious experience - and there is always a risk that it will not be brought to bear evenly or effectively to address problems. Albert Einstein once dismissed common sense as "a collection of prejudices acquired by the age of 18," but he also posited this notion: "We can't solve problems by using the same kind of thinking we used when we created them."

So it is with this book: we hope to offer a new way of solving the Business-IT rift that is based on a different logic, in many cases, than what caused it initially. We do not claim to be intellects of Einstein's caliber, but the combined resumes of the authors testify to more than 50 years of experience in business and technology. Perhaps we have learned a thing or two along the way that will serve the reader.

Who is the reader of this book? We expect that you are a business or an IT professional (hopefully, after concluding this tome, both). You may work for a company, consult to companies, or serve companies with products and services that are intended to help them achieve business goals.

In all cases, we expect readers to share a common concern about the health of business, about the relevance of information technology and how it can be made to matter more in the nexus of variables that determine business success and failure. As we will be moving between the domains of business and technology, we are also giving the reader credit for having at least a rudimentary understanding of the concepts of each discipline.

When we must take a deep dive into either economic principles or technological architecture, we will be careful to explain things clearly. This introduces a risk of appearing to talk down to the reader. This is not our intention and we hope that the reader will acknowledge that not everyone is as knowledgeable as is he or she, forgive us our digressions, and use the time honored technique of "skimming" through the pages of content that he or she already understands.

With these rules of engagement established, let us begin the journey with a discussion of how the rift between business and IT has manifested itself and what it is costing businesses (and non business organizations) today. As in the field of medicine, it is useful to know something

about symptomology before settling upon a modality of treatment.

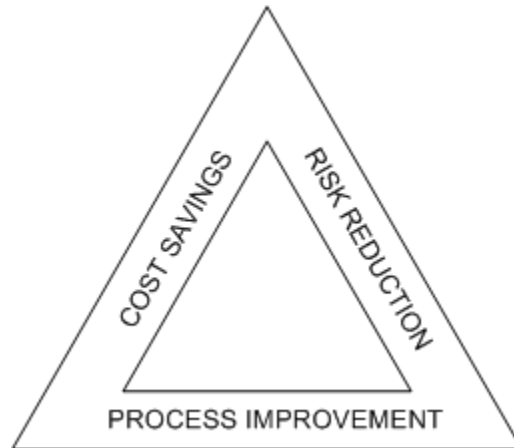
### *The Business-IT Nexus*

It goes almost without saying that business depends on information technology today to a greater extent than at any other time in recorded history. Virtually no work can be accomplished, and certainly no business objectives can be pursued or realized, without the support of information technology.

While this dictum is understood intuitively by just about everyone in business - whether their domain of activity is centered in the Front Office of corporate management, in the Middle Office of business unit operations, or in the Back Office of corporate information technology - it continues to be a subject of considerable discussion and debate. In lean economic times especially, as corporate management seeks to contain spending and drive out unnecessary operational costs, questioning all expenditures is to be expected. This is especially the case when a clear line cannot be drawn between proposed

expenditures of hard-to-come-by budget and the bottom line of profitability.

Good business management pays attention to profit, which is seen as a product of three key components: cost-savings, risk reduction and process improvement. This simple framework, which may be represented using a triangle (like the many triangles found regularly in the pages of the *Harvard Business Review*), provides a straightforward way to assess the business value of virtually any initiative or investment undertaken by a company.



For any proposed initiative or investment to make business sense, it must make a strong case in all three value categories.

- o Cost-savings refers to the promise of a new business initiative to reduce operational costs and/or to forestall future cost growth.
  
- o Risk reduction refers to the value of an initiative to reduce exposure to clearly defined threats ranging from early investment obsolescence to smoke and rubble facility disasters to lawsuits stemming from product failures or regulatory non-compliance.
  
- o Process improvement goes to the promise of the initiative to make existing processes more efficient or to expand revenue opportunities by enabling new processes.

This triangle of business value is the metric by which initiatives or investments are judged. Any initiative undertaken by the business must provide a compelling story in each of the three categories - cost-savings, risk reduction and process improvement - or it should not be funded. That is the gospel of contemporary business.

Information technology is not, and should not be, excluded from this essential business value analysis. In

common parlance, no entity within the company should get a "free ride" or be exempted from the business value metric. The roots of the Business-IT rift are too often found in this simple assertion and in the perception on the business side of the house that the IT department is getting a free ride.

*Origin of the Rift: Perception*

In many companies, perhaps the preponderance, the perception often holds that IT is simply an "overhead expense" that companies must shoulder. Put another way, IT investments are part of the price that a contemporary company must pay just for doing business.

This point of view leads inevitably to a question: what value does IT deliver that legitimates all of the money companies are spending on it? Does information technology deliver any measurable advantage to a company? In many firms, the question drives considerable debate.<sup>1</sup>

If it were the case that information technology investments were a significant determinant of a company's profitability, you would think that there would be



considerable and consistent evidence that those companies that allocate more money to information technology tend to be more profitable than those that allocate less. Such a correlation has never been demonstrated.<sup>2</sup>

Indeed, there are as many cases of companies succeeding or failing with small IT budgets as there are cases of companies succeeding or failing with huge IT budgets. The only truth that can be discerned from the historical record is that a company can't exist, can't compete, can't perform work today without information technology support, whether from an internal IT organization or an external service provider.

This might bolster the often heard analogy that IT spending by companies is like governmental spending on nuclear weapons: an arms race. Even if technology itself is highly commoditized and two competing firms have the same enterprise resource planning (ERP) system or the same server, network or storage infrastructure - and, hence, derive little competitive value from tech investments, competing firms must BOTH have this technology *if they wish to compete at all*.

This argument would seem to lend credence to the notion that IT is exceptional, that it responds to a different set of dynamics than other business investments, and perhaps more to the point, that, at least in terms of its contribution to corporate competitiveness, IT really doesn't matter. Bristle though they might at the price tag of technology, business managers must simply bite the bullet and embrace what they cannot change: the reality of IT cost.

Arguably, it is this deeply rooted view, which has been vocalized by nearly every business manager at one time or another, that set into play the rift that currently exists between the Front Office and the Back Office in many organizations. Where IT has been treated as an exception to the standard to which all other business units are held, this has engendered a combination of envy and disdain. It is a fact of life: perceived inequality tends to foster resentment.

The situation is exacerbated when IT costs are charged back to business users. Imagine if technology costs appeared as a line item in your budget, but, you, as the business manager, had little or no say over the allocation

of IT resources to support your specific requirements? The predictable result is frustration and anger.

These feelings grow even more intense if the quality of service rendered by IT is perceived as "substandard" - which is very often the perception, whether validated by actual performance measures or not. Truth be told, most business units have nothing with which to compare service levels delivered by their IT service providers to those that might be forthcoming from external providers.

Regardless, the intensity of negative feelings directed against IT grows over time. Each instance of unplanned application downtime, each time that a traveling employee can't get the Virtual Private Network (VPN) to his workplace to connect through hotel Internet services, each occasion that getting to a file at the home office incurs something approximating the World Wide Wait, frustration grows. At some companies, a savvy entrepreneur could make a fortune selling t-shirts emblazoned with the one liner: "Have you smacked your IT guy today?"

From the initial perception of inequity in the budgetary process to the real or imagined deficits in IT

performance, an increasingly negative view of IT has been permitted to grow in too many firms. And this IT-as-whipping-boy view becomes embedded in the corporate culture isolating IT from the rest of the company.

The isolation of IT is both cultural and physical. Technologists speak a different language, one full of mysterious acronyms and shorthand expressions. Often, tech workers are held to a less stringent dress code than their fellow non-tech employees - partly a reflection that they do not need to interact with customers or shareholders. In some cases, they even have different grooming and hygiene habits. It could be safely assumed that pony-tailed or even bearded men are much more common in the data center, the kingdom of technology, than in the corporate boardroom.

That technologists are different is often taken by detractors to mean that they are less business oriented, more lacksidical in their use of company funds, and less disciplined than the average middle office or front office worker. Bottom line: when the Protestant Work Ethic was being handed out, the techies took the day off to go to a *Grateful Dead* concert.

*The CIO: Solution or Stopgap?*

In many companies, the rift between the technologist and the business practitioner is palpable. Some have sought to address it by promoting a technical person to the role of board advisor: the Chief Information Officer (CIO).

The CIO is a contemporary construct, a hybrid creature invented to blend knowledge of technology with a deep appreciation of business. Shared Business-IT DNA is supposed to enable the CIO to bridge the gap between Front and Back Office.

The short life expectancy of CIOs - less than 13 months on average - suggests that the CIO invention is a brittle one at best. At worst, the insertion of a CIO is a band aid fix to the rift.

If the CIO's heritage is rooted in business rather than technology, he too often carries some of the biases and preconceptions about the Back Office that are common in the Front Office. To the IT practitioner, such a CIO is perceived as a "suit," a bureaucrat, or simply the official

representative of the anti-IT culture dedicated to making life in IT nasty, brutish and short.

In those cases where the CIO came to maturity in the Back Office, he is quite often held in suspicion by business management. He must prove himself by implementing myriad controls over the operation of the technologists, becoming the "axeman" whose job is only to operationalize the edicts of the board, whether they make any technical sense or not. In many companies, CIO compensation is tied explicitly not to service improvements that he or she can bring about, but to how many dollars he or she can carve out of the IT budget.<sup>3</sup>

Given the frequency with which CIOs leave companies, it seems evident that this experiment in Business-IT cross pollination hasn't worked very well in many firms. Perhaps what is required is a less artificial and more natural jointure between the Front and Back Offices, one built on commonalities, rather than differences. This will require some perceptual reality checks on both the part of business managers and IT professionals.

## *What You May Not Know About IT*

"Technical savvy" is the measure of a person in the Back Office to the same degree that "business acumen" is the preferred measure of skill of the Front Office. Yet, both groups have a tendency to dismiss the skills of the other.

Just as some in the business side of the house view IT workers as inept business practitioners, the IT folk disparage the Front Office as technologically incompetent - "Flashing 12s." This may be, on the part of the IT worker, a natural response in the face of blatant hostility toward IT in the corporate culture. It most certainly has nothing to do with the technology practice itself.

Contrary to what the business manager might think, IT professionals are thinking beings. Most have a work ethic that is every bit on par with that of the Middle or Front Office worker.

Think about the extraordinary level of mental discipline that is required to design, roll out and manage a complex network or operating systems environment. While

taken much for granted, the modern IT plant is nothing short of miraculous, supporting trillions of messages per day, delivering them to their destinations without error, and storing them reliably. Building such infrastructure requires skills and knowledge. Doing it on a budget and with short staff is a task suited to Hercules. But it gets done.

Application development is even more taxing when you consider what is involved: programming alone is a mind-bendingly iterative process that seeks to create software that gets the most work done in the most elegant fashion possible. "Elegance," in tech speak, refers to building a function or process using an economy of operational statements and a bare minimum of system resources. It is every bit the tech equivalent of "efficiency" in the Front Office.

While paying attention to elegance, programmers must also ensure that standards for resiliency, security, performance, scalability and manageability are manifest in the final product and that the product itself is delivered according to a schedule. As a practical matter, products need to be developed in teams, fostering a team ethic and



management and workflow models that rival those found in any non-technical business unit. Truth be told, the IT worker and the business worker share much in common.

The all too common view of IT as the profligate spender of corporate cash flies in the face of reality in most cases. IT may, in fact, be more conservative about new technology, more circumspect in its selection and acquisition of cutting edge products, than are Front Office personnel who sometimes take on the task of IT procurement.

From the IT professional's perspective, this conservatism is in large part a "quality of life" issue. IT folks know too well that the diversification of technology, with the inherent complexities that such diversification manifests, merely increases the management burden that they must shoulder. Their presumed predilection to covet the newest gear and the latest toys flies in the face of quality of life as they understand it: with each new product comes a new set of administrative hassles and management pain.

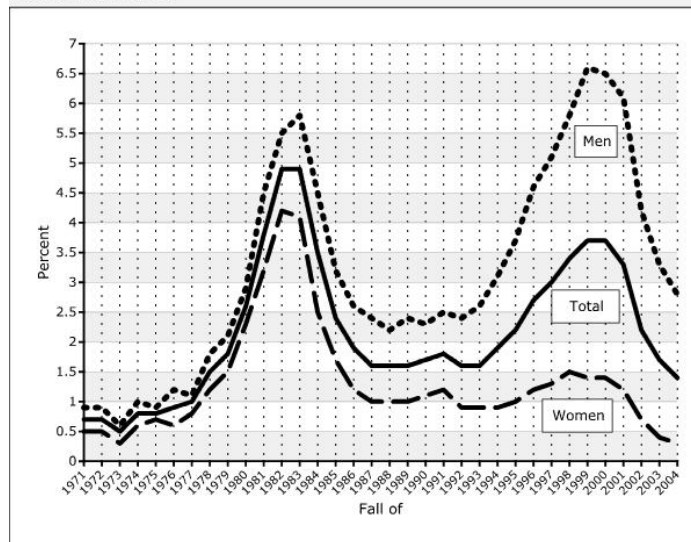
Most of the time, the technologist's management-and-administration workload does not stop at the door of the

data center. Every network or system or storage administrator you speak to can probably cite numerous instances when his or her personal time was interrupted by an urgent call to return to work and rectify a problem. Burnout is a key reason cited by IT folks who are seeking to change jobs...or even careers.<sup>4</sup>

Business folk may not perceive this burden, but most IT professionals do. Most certainly, the students entering colleges and universities do.

Witness the significant falloff in registrations in technical degree programs by college freshmen.<sup>5</sup> Researchers are concerned that a crisis situation will confront businesses by as early as 2010, with a substantial percentage of IT jobs going unfilled because the necessary IT skills are simply not available in the pool of candidates.<sup>6</sup>

Figure 1. Computer Science Listed as Probable Major Among Incoming Freshmen  
Source: HERI at UCLA



The collegians perceive, rightly or wrongly, that IT is not a career that any sane person would want. Not only are the work hours lousy, there is no logical career path through the ranks of the company for technical professionals. Pay raises are minimal within the IT organization, and are, as a rule, poorly aligned with actual job requirements. In many cases, the only path to higher wages is through "lateral transfers" from one company to another.

And who, in their right mind, would aspire to take a job that does not match responsibility with authority? Students who know IT professionals hear war stories about their plight: decisions about the technology products and

services that are purchased and deployed in the company are increasingly made by non-IT folk, and often over the explicit objections of IT itself.

This is in part a testimony to the acumen of vendors, who have seized upon the Front Office-Back Office rift to insert their products into the data center, whether they make any business or technology sense or not. It also reflects the success of "independent" technology analyst houses. The analyst community has built a cottage industry on the Business-IT rift itself, capitalizing on the mistrust of IT decision making and business acumen by the Front Office. Analysts wrap themselves in the flag of business to sell their "insights" to tech consumers, while at the same time leveraging their "influence over consumers" to cajole vendors into buying their services. The analyst business is an interesting admixture of extortion and pay-per-view: there is little objectivity involved.

Bottom line: the authoritative opinion of a company's own IT organization is rarely consulted when making buying decisions in a growing number of shops. This is painful to

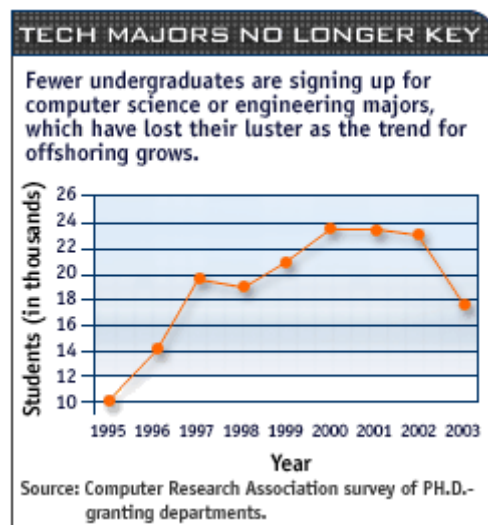
IT professionals and clearly understood by those considering a career in the field.

Additional factors inhibiting IT careerism include (1) the collateral impact of the dotcom bubble burst, and (2) the ongoing threat of job loss to offshoring and outsourcing.

The dotcom years from the mid 1990s until 2001 saw an uptick in freshmen choosing computer science and computer engineering degrees. Arguably, some of this surge in interest reflected the exuberance of the era. In the late 1990s, freshmen pursued tech careers for the same reason that they pursued journalism careers in the post-Watergate Era, or MBAs during the Wall Street boom years of the 1980s. The popularity of these careers was linked to anticipated financial outcomes.

Dotcoms were making millionaires out of IT grads overnight. When the dotcom bubble burst in 2001, such quick returns on investment became less realistic and enrollments in tech programs ground almost to a halt.

Add to the collapse of dotcom era exuberance, the growing concern about job security in technology. Throughout the first decade of the New Millennium, significant media attention has been paid to a trend toward “offshoring” -- exporting technology jobs to countries like India, China, and elsewhere where skills are plentiful and salary expectations are well below par for IT workers in the USA and Europe.<sup>7</sup> Leading companies, including Microsoft, have added fuel to the fears about IT career volatility in their public statements and polemics aimed at reforming worker visa rules in the United States. A straight reading of their statements suggests that US workers lack necessary skills and work ethic that Canadian, Indian or Chinese workers apparently have in abundance.<sup>8</sup>



Not surprisingly, collegians are seeking career paths today that are not as vulnerable as the IT profession to poor hours, low wages, and job instability. Quality of life matters.

Women are even more hesitant to join the ranks of the technologists<sup>9</sup>, which continues to be viewed as a male-dominated career field, according to researchers. Given that women now outnumber men as enrollees in colleges and universities in the US and worldwide, the tilt away from tech careers threatens to become institutionalized and systemic.<sup>10</sup>

While debates over the veracity of a burgeoning "IT labor skills shortage persist," one cannot argue with statistics on collegiate enrollments. At the end of the day, this trend alone might determine the capability of corporate IT organizations to support their businesses.

Spending more on continuing professional education and internal job skills development must certainly become a component of any thoughtful strategy for healing the Business-IT rift. For that to happen, however, the rift itself must first be acknowledged, and both the Front and

Back Office need to abandon what are, in many cases, long standing misperceptions.

Whatever the cost, it must be less than the costs that the company is already enduring as a function of Business-IT misalignment.

*What are the Costs of Misalignment?*

The average proportion of spending on IT as a percentage of corporate earnings varies by industry segment. The average across all industries is between 3 and 10 percent, depending on the analyst one consults.

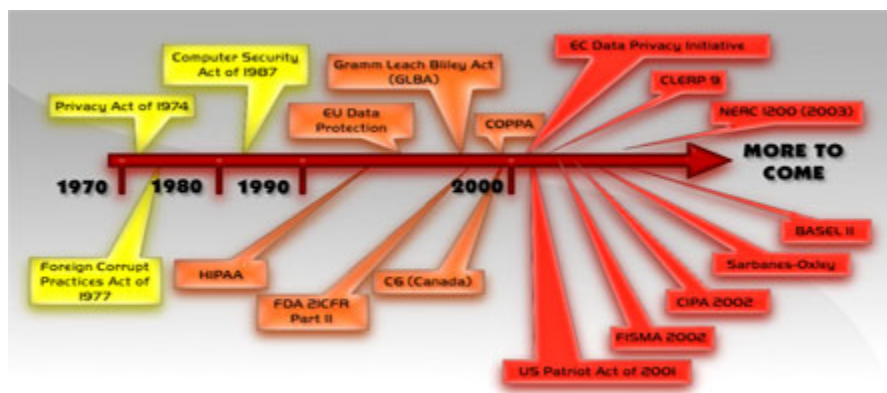
Spending has slowed in recent years, in part as a consequence of overspending with little demonstrable return on investment that characterized the dotcom years, but also as a by-product of a slowing economy. What growth that is occurring in IT spending today appears to have three basic drivers:

- o Regulatory compliance
- o Information security and data protection



- o Data center greening (utility power consumption and cost management)

Regulatory and legislative action effecting business information are not new, but they have accelerated in the wake of high profile cases of corporate financial scandals. SEC rules, laws such as Sarbanes-Oxley, and rules of evidence changes in the courts system have imposed requirements to retain certain types of data for a protracted period of time, to make them available in an expeditious way following a subpoena or summons, and to delete data only in a manner conforming to a pre-stated policy.



Partial timeline of regulatory and legal activity impacting corporate data assets.

Data security and protection initiatives have also been bolstered by legal and regulatory requirements. In the healthcare field, patient data must be protected and preserved to ensure both that it remains private and also that it can be transferred among whatever healthcare service providers that a patient prefers to use. As modified by state laws in many cases, requirements for preserving and protecting patient data extend to the lifetime of the patient, far outstripping the longevity of any storage medium other than rock or papyrus.

Laws such as Gramm Leech Bliley (GLB) extend requirements for data security beyond the healthcare realm into the mainstream of publicly-traded firms. GLB requires companies to publicly disclose any instance of an accidental data release of personal financial data. Basically, this amounts to a public mea culpa by the offending company that may end up on the front page of the *Wall Street Journal*. The law does not require a company to explain how the disclosure occurred or what is being done to prevent subsequent disclosures of the same ilk. Presumably, lawmakers thought that the threat of public humiliation would compel companies to take better care with the financial information in their charge.

Since the law was passed, there has been an almost weekly "fessing up" about accidental data disclosures by companies, whether in the form of backup tapes falling off the back of offsite storage delivery trucks or missing laptops brimming with customer data. Were it not for state laws, which tend to bring more financially punitive remedies to bear, GLB might not have had the impact it is having on the sale of security and disaster recovery technology today. Some states, such as California, have augmented GLB provisions to require individual notification of each person whose data has been lost in the wild. A substantial financial impact accrues to such requirements.

While it can be argued that a commonsense case has always existed for protecting information assets against accidental disclosure or catastrophic loss, nothing is more compelling, it seems, than concern over the risk of legal or regulatory action. After many years of understanding the threats from disasters, hackers, viruses and malware, and human error, only in the last two years have good intentions begun to translate into action by companies.

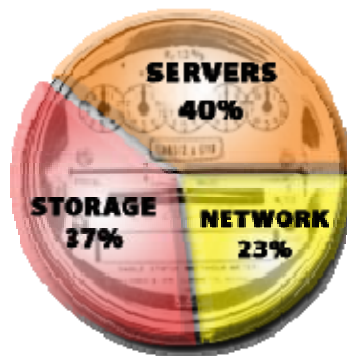
The "Green IT" phenomenon is comparatively new. Ostensibly, it refers to a concerted effort of government, business and individuals to reduce the amount of carbon released into the atmosphere by the burning of fossil fuels - a goal fed by concerns about global environmental change. In the corporate world, however, data center "greening" often has other motivations.

Data centers live on electrical power, both to charge equipment itself and to provide cooling and heat dissipation. Heat, after all, is a common cause of server, network equipment, and storage media failure.

In recent years, costs for electrical power have surged (some say disproportionately) with increases in the costs of fossil fuels. In other cases, additional utility power capacity is simply not forthcoming, owing to the limitations of the existing power distribution grid or the simple fact of grid saturation.

Whatever the reason, whether eco-consciousness or economics, the quest is on to reduce IT power demands and to substitute greener technology. For now, attention is focused on server technology, which is the leading consumer

of energy in the data center. Shortly, however, the focus of green initiatives will come to light on storage technology because of the acceleration in digitally created information that must be stored for an increasingly lengthy period of time. Storage, for the most part magnetic disk technology, will ultimately become the power pig of the data center.



Data Center Power Consumption by Equipment Type

Source: Dell Computer Corporation.

The technology industry has responded with a dizzying array of products and techniques designed to drive down power consumption and heat generation. Most of these are self-serving tactical fixes to the problem that will not make any sort of permanent change in power demands. Ultimately, data itself must be managed to curb effectively the power appetite of technology.

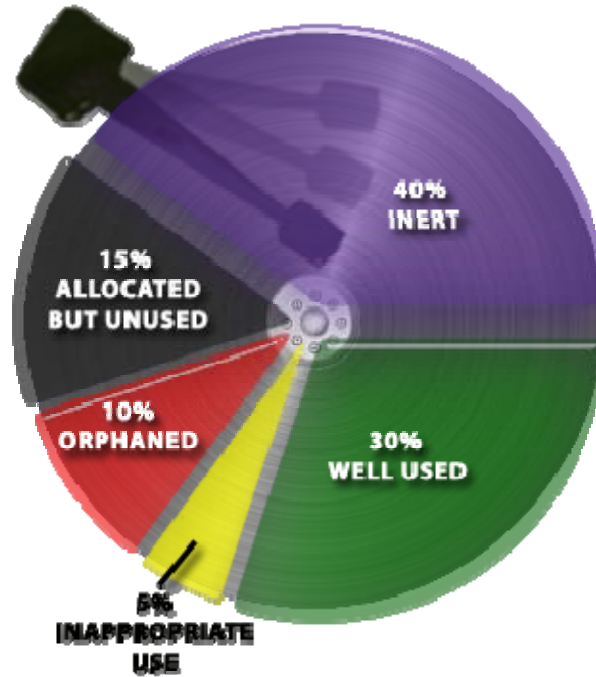
*Fundamental Connection Among Top Initiatives: Data*

In point of fact, all three of the above initiatives - compliance, data protection, and data center greening - are fundamentally connected. The root cause of non-compliance is the mismanagement of stored data assets. The root cause of improperly secured and protected information is the mismanagement of stored data assets. And the greening of IT cannot be undertaken effectively or realistically without first managing stored data assets.

Today's storage environment in most of the corporate world is the equivalent of a junk drawer. This metaphor is understood throughout the world because everyone has a junk drawer - a place where the children's macaroni Mona Lisa's are stored when they arrive home from school, where batteries are collected when flashlights lose power (they all can't be exhausted), where pieces of things are stored though the things themselves have been lost forever. Everyone has a junk drawer. And so do most corporations: their storage infrastructure.

In a longitudinal analysis of thousands of storage assessments performed by Sun Microsystems and StorageTek,

the depth and breadth of the problem was laid bare. For every disk drive used to store data in a business, the following proportions applied:



Typical Breakdown of Data Storage by Disk Drive

Source: Sun Microsystems

Only about 30 percent of the space on a given disk is well used (e.g., current and historical data regularly accessed by applications and human decision makers to perform useful work). Another 40 percent is inert data that is rarely accessed but that may need to be retained for business or regulatory/legal reasons. It does not need

to occupy space on expensive production disk arrays (an array is an assemblage of disk drives organized inside an equipment cabinet and typically coordinated by a disk controller). The balance of the data on the drive is:

- o **Orphan data:** The creator of the data or the server controlling its access no longer exist, so no one is using the data at all. Orphan data wastes on average about 10 percent of disk capacity.
- o **Inappropriate or contraband data:** Data that has no business value and should not be stored using company resources. Contraband MP3 music files, video files downloaded from the Internet, and other inappropriate use data consumes on average about 5 percent of every disk drive in the corporate infrastructure.
- o **Reserved but not allocated:** This refers to space on the disk platter that stores no data currently, but that is being held in reserve by applications, operating systems, or storage array vendors for future use. Percentages of reserved-not-allocated space vary, but the average capacity of any disk drive so used is about 15 percent.



The ramifications of this extraordinarily poor utilization efficiency of disk storage are far reaching. A sampling, using the earlier business value triangle metrics:

- o Productivity declines as disks become full of undifferentiated files that cannot be readily found and accessed once they are written to magnetic storage. Time is wasted looking for files or recreating files from scratch because originals cannot be located.
- o Risk (inclusive of regulatory non-compliance, security threats, disastrous loss) increases because the burgeon of anonymous and undifferentiated information assets overwhelms retention, deletion and protection services and infrastructure.
- o Costs accelerate because, lacking the means to effectively control and manage the data burgeon, companies simply throw more capacity, bandwidth and processing at the problem. Bigger disks, bigger arrays, bigger servers, bigger network pipes, and

more equipment soon translate into blown hardware acquisition budgets and greater power requirements.

In point of fact, acquisition expense is only the proverbial tip of the iceberg, a fraction of the total cost of ownership (TCO) of information technology. The rule of thumb in the industry is that roughly 80 percent of Information Technology TCO can be attributed to management and administration expense. The more equipment that is deployed, the more administrative effort it requires and the higher the labor costs of IT.

There are mitigators to this simple calculus, of course. Deploying technologies that enable the management of more capacity, bandwidth and processing with less manual intervention is such a mitigator. There are two flavors of management theory:

1. Buy all systems from a single vendor who has spent time and effort to integrate all hardware and software components into a coherent whole. Then, use on-board management tools to monitor system resource allocation and utilization. In such a

model, the vendor defines all integration standards and component suppliers must conform to the vendor's management approach.

2. Buy a cross-platform management product to monitor and shape the interaction of heterogeneous components so that they interoperate as a coherent whole and enable fewer staff to manage more capacity. In such a model, the management product vendor is tasked to keep its product up to date with the on-board management and control techniques of all of the products in its domain. Companies need to select the management product they wish to use, and to articulate conformance with the management product as a criterion in component acquisition.

It can be persuasively argued that doing either of the above will chase as much as 40 percent out of the management and administrative expense associated with IT. However, there has been little uptick to date in acquisitions of homogeneous infrastructure or heterogeneous

management tools. Instead, organizations have grown infrastructure in a mostly stove-piped manner, deploying specialized systems for department A, others for departments B, C and D, with little attention paid to how the much greater bill for disjointed infrastructure management will be bourn over the longer term.

In the presence of the Business-IT rift, technology has been deployed in a manner that creates complexity, accelerates cost, and increases, rather than reduces, risk. While the question could be legitimately asked whether it was IT's job to sort out the technology kit and to ensure its manageability, the question that the Front Office might do well to ask itself is even more probative: Did we ever ask for IT's advice?

Of course, neither of the two approaches outlined above (and to which we will be devoting considerable attention in the pages that follow) address the core problem. That is because neither portends to manage data itself, at least not to any degree of granularity.

Capacity management focuses on *allocation efficiency* - how well resources are allocated between those applications

and end users who need them. Storage resource management (SRM), for example, treats files as anonymous bits and does not concern itself with deeper matters such as whether the data is contraband and could be deleted, or whether it is required for retention under Sarbanes-Oxley.

Bits are bits from the perspective of SRM. It is a capacity manager first and foremost whose mission is to ensure that the most efficient use is being made of available space. In some cases, simple hierarchical storage management (HSM) rules are applied by the SRM tool to migrate less frequently accessed bits onto less expensive media over time. However, migration is usually triggered by a timestamp on the data (when it was created?), an access frequency counter (how often has the data been accessed since we last checked?), or a storage watermark (how full is the storage device and should we be thinking about moving some of the data out onto less expensive media?). Thus, SRM products can be useful in realizing tactical goals such as the automation of some labor intensive tasks associated with disk resource management.

What is ultimately needed is more than what capacity management can provide. Information itself must be managed to achieve *utilization efficiency*.

Utilization efficiency is different from allocation efficiency. It focuses on the utilization of system resources based on the value of the information that is being processed, networked or stored. It requires a highly detailed or granular understanding of data from the business process perspective so that appropriate provisioning and protection services can be applied.

Why must data be understood from the business perspective? The answer is simple: data acquires its importance like so much DNA from the business process that creates and uses it. Business processes are subject to regulatory requirements and this impacts how data must be hosted and retained, what security services it needs, what disaster recovery guarantees it requires, and how accesses to the data must be managed and controlled.

Without a granular understanding of data and its business connection, we create junk drawers of anonymous bits and apply expensive data hosting and protection

services indiscriminately to them. This is, in a nutshell, a snapshot description of contemporary Business IT. It is why IT takes such a hefty bite out of corporate budgets and why IT can be reasonably viewed as contributing nothing to the bottom line of corporate profits.

It is a problem that is expanding in scope and impact and one that cannot be addressed without addressing the rift that exists between the Front and Back Office. Sorting out the junk drawer of business information will require a cooperative effort.

IT alone lacks the knowledge of the business relevance of data to classify and manage infrastructure based on information. Similarly, business unit managers may not be fully aware of the legal requirements impacting data, and the legal department may not fully comprehend the operational value of data.

Information management alone can provide utilization efficiency that drives out cost, reduces risk and sets the stage for productivity improvement, innovation and green operations. This is the topic we will be exploring in considerable depth in the following pages.

## ENDNOTES

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- <sup>1</sup> [http://www.cio.com/article/29594/How\\_IT\\_Can\\_Differentiate\\_Your\\_Business\\_from\\_the\\_Competition/1](http://www.cio.com/article/29594/How_IT_Can_Differentiate_Your_Business_from_the_Competition/1)
  - <sup>2</sup> <http://www.strassmann.com/pubs/datamation0297/>
  - <sup>3</sup> <http://www.forbes.com/technology/2003/04/10/0410mckinsey.html>
  - <sup>4</sup> <http://www.cnn.com/TECH/computing/9902/09/career.ent.idg/index.html>
  - <sup>5</sup> <http://www.cbsnews.com/stories/2007/03/09/tech/main2553619.shtml>
  - <sup>6</sup> <http://www.cra.org/CRN/articles/march06/vegso.html>
  - <sup>7</sup> <http://www.computeruser.com/articles/2001,1,3,1,0101,01.html>
  - <sup>8</sup> <http://www.computerworld.com/hardwaretopics/hardware/mainframes/story/0,10801,111202,00.html>
  - <sup>9</sup> <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=298007>
  - <sup>10</sup> [http://www.prism-magazine.org/oct06/print\\_friendly.php?url=www.prism-magazine.org%2Foct06%2Ffeature\\_trouble.cfm](http://www.prism-magazine.org/oct06/print_friendly.php?url=www.prism-magazine.org%2Foct06%2Ffeature_trouble.cfm)