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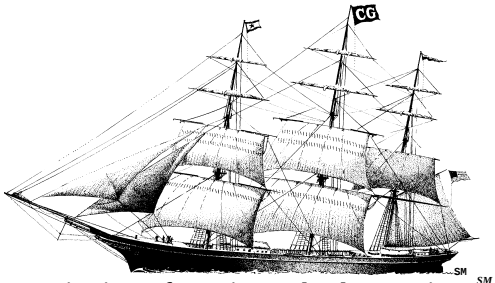

Navigating Information Technology Horizons℠

Published Since 2007 | Report #TCG2009003R | January 16, 2009

The New Rules for IT Management — Building Service-Centric IT

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Management Summary

In the past, the role of the IT department was to provide technology to users, but the emphasis today is shifting to the delivery of services to customers. What is the difference? In simplified terms, it is like the difference between a pile of lumber and a house. Customers do not want pieces and parts; they want IT to deliver specific outcomes that further the goals of the business. For instance:

- *I want to access real-time information about our supply chain so I can minimize inventory while making sure manufacturing has what they need.*
- *I want to see everything about a customer on one screen, including order history, sales interactions, and marketing contacts, so I can service them more effectively and maximize their value.*
- *I want to access email, voice mail, and text messaging remotely when traveling so I can continue to work closely with my team.*

These are all examples of technology-enabled business outcomes. Customers rely on the IT department to assemble the right technology infrastructure, processes, and people to deliver them. They are not really interested in the details of how it is delivered – not any more than you or I think about how electricity is generated and distributed when turning on a light switch. Managing the myriad technical details is the job of the IT department. Customers just want to know what the service will provide, how much it costs, and that it will be available when they need it. In a world where people have come to expect a dial tone when picking up a phone or cash to be dispensed when going to an ATM, IT service reliability is also expected.

The term *customers* here refers to other departments or individuals within an organization, such as sales, accounting, human resources, and engineering, though it can also refer to arms-length third parties for a service provider. We say *customers* instead of *users* because of its different connotation. In a sense, a user simply uses what he or she is given. *Here you go. Call me if you have a problem.* Customers, on the other hand, specify what they need and ascribe a value to it. *Let me tell you what services we need, how they should be delivered, and what it is worth to us.* Customers have choice and exercise a degree of control. In the new way of IT, the definition and implementation of IT services must begin with customer needs in the broader business context.

The shift to delivering IT as a business-focused service is well underway. It is a major theme in *ITIL v3*, the most well-known framework for best practices in service-centric IT management. Business's growing reliance on technology is driving this trend forward, as is the need to verify compliance with industry regulations. Furthermore, many vendors now supply products that facilitate service-centric IT management, and systems integrators and consultants offer professional services for implementing it. Read on for insight into the new rules of IT management.

IN THIS ISSUE

The New Rules of IT Management

Delivering IT as a business-focused service has profound implications for the IT department. The old ways of manual, ad hoc, and fragmented IT operations fall short of the mark. Below is a list of the new, fundamental rules for service-centric IT management.

Align IT with the Business

Information technology is essential. IT reaches into all aspects of a business as it supports other functional areas, such as accounting, sales, and manufacturing, in performing their roles. It facilitates communication, collaboration, insight, decision-making, and productivity. A modern business needs IT to run efficiently, and if done well, it can lend a competitive advantage by driving growth, profitability, and sustainability.

Since the purpose of IT is to support the business, its first and foremost priority is to align with business requirements, goals, and strategies. IT has to make sure it is relevant and drives the business in the direction it wants to go. This means connecting to the broader context. Otherwise, how can it propel and streamline the business? Technology for technology's sake is likely to miss the mark. To be truly "cool" today, a technology must also be relevant.

All levels of the IT department must endeavor to understand and align with business needs. This can mean the following, in practical terms.

- Business and regulatory compliance training for IT personnel.
- Communication and dialog with other functional areas.
- A system for receiving feedback about services rendered.
- IT leadership that bridges the gap between the data center and the boardroom, ensuring IT performs a strategic role while promoting its value to the organization.

Manage IT as a Process for Delivering Services

An IT department is like a mechanical watch. On the face of the watch, the hour and minute hands show the time. Remove the cover and you will see an intricate set of interconnected gears and springs that drive the hands at precise speeds, independent of environmental temperature, humidity, and physical movement. If any component of the watch ceases to operate or is misaligned, the watch will stop, and if any part moves too quickly or slowly, the time will not be accurate.

The gears and springs represent the technology, people, and processes that deliver services to the business, and the hands on the face indicating time are the services themselves. The business simply wants to tell time and is not much concerned with the inner workings. It just expects the watch to always be accurate. The job of IT is to make sure the intricate system of gears and springs operates properly and reliably.

An IT department should function as a *business within a business*, providing services that achieve outcomes its customers want. For instance, this might mean processing customer transactions, sending and receiving email, or analyzing and reporting financial data. Service level agreements (SLAs) characterize and define its catalog of services. Functioning as a sort of contract between IT and the business, they allow customers to understand what will receive and at what cost, and IT to know what it must deliver. An SLA specifies what a service is and how it is delivered; for instance, with 99.9% uptime, remote access, and recovery in less than one hour.

Delivering consistent, high-quality services depends first and foremost on good governance and control – namely, adopting a process-oriented approach. This is why service-centric IT management frameworks, such as COBIT, ISO/IEC 20000, and especially ITIL, have become popular and widely adopted. They specify best practices for structuring consistent and repeatable processes, including:

- Configuration management
- Change management
- Incident management
- Problem management
- Release management
- Asset management

While ITIL is, by far, the most widely adopted framework, which framework you choose is less important than the underlying premise: *Adopt a process-oriented IT culture and manage exceptions.* Informal, ad hoc procedures and relying on "tribal" knowledge and the memory and skills of specific IT personnel are costly and risky and do not lead to consistent, high-quality outcomes. Good processes are the better approach.

Effectively delivering IT services implies an integrated infrastructure. Like the moving gears and springs in a watch, all of the server, network, storage, and application components must interconnect, interoperate, and work together in a

precise, fluid manner. As each component does its part in the right way and time, the whole system functions as intended.

To manage an integrated infrastructure built from many heterogeneous components, it is critical to have a clear and singular view of it, like a radar screen at an air traffic control tower. *What components are out there, how are they configured, and what are their dependencies and relationships?* A CMDB (configuration management database) provides a singular repository and common source for this information. It enables the IT department to work effectively in unison based on a common view of the infrastructure and associated configuration items.

According to current best practice, a federated CMDB is the most practical way to structure it, where domain-specific management tools feed basic configuration data to a common CMDB, while retaining in-depth details about its domain locally. This approach offers a reasonable trade-off between a centralized view and the integration challenges associated with trying to load it with unique, non-standardized data from many different sources.

Continuously Improve Service Levels and Efficiency

By necessity, continuous improvement is a way of life for IT, because the business is always pressuring it to do more with less. There always is a greater need for processing power, storage capacity, network bandwidth, tighter security, faster recovery, more sophisticated applications. Driven by information growth, the need to stay competitive in a fast-paced global economy and complying with industry regulations, like Sarbanes-Oxley, PCI, ISO, and HIPAA, these requirements will continue to spiral upward for as far as the eye can see. But IT does not have the luxury of throwing money at this problem. Budgets remain relatively constant and tight. Therefore, the only recourse is committing to a path of continuous improvement, driving toward improved service levels rise and cost reductions through greater efficiency.

Pushing forward on the twin fronts of service quality and efficiency starts with governance and control. IT processes always can be streamlined further, even if only incrementally. (Just look at Japanese automakers, like Toyota and Honda. Over decades, they have *continuously improved* their way to dominance in the global auto industry.) Periodic technology refreshes also help, because it rides the natural technology growth curve – servers and networks are always getting faster, disk drives and tapes store more capacity, and software applications get more sophisticated. In addition, the following specific technologies and practices will help IT improve quality and efficiency.

Consolidation

Physical consolidation of IT resources leads to higher utilization, simpler management, better availability, and lower consumption of electricity and floor space. The era of distributed computing led to a proliferation of servers, storage, and network devices. While this approach offered significant flexibility, it also introduced complexity and inefficiency. It is easier to manage a few large devices than hundreds of smaller ones. The savings in space and power also make it a more sustainable or "green" approach. In short, there is a strong link between consolidation and cost reduction.

Virtualization

If physical consolidation is good, then logical consolidation is great. Virtualization applies an abstraction layer to IT resources (i.e., servers, storage, networks), making them much easier to partition, allocation, grow, shrink, and even move. A single server might host dozens of virtual machines. A single storage array might host dozens of applications. A single network port might accommodate hundreds of users. While virtualization performs wonders for resource utilization, its greatest strength is perhaps flexibility. For instance, if a department requests a new server, it can be provisioned in minutes as a virtual machine instead of waiting days or weeks for a physical server. A "thin" storage volume does not need to be periodically expanded because the system automatically allocates physical capacity as needed and without downtime. From the customers' perspective, virtualization delivers a higher quality of service because they can get what they need, when they need it, even as requirements change and grow unpredictably. Virtualization transforms infrastructure from a hardwired monolith to a fluid and adaptable resource pool.

Automation

As IT infrastructure grows in size and complexity, it becomes challenging if not impossible to provide fast, accurate answers to questions like these.

- *What assets do you have and what are their relationships and dependencies?*

- *What is the root cause of a problem users are experiencing?*
- *Are you meeting service levels as agreed in SLAs? Is your track record improving with time?*
- *Are you keeping up with day-to-day management tasks?*

This situation is not the fault of IT personnel. They do their best with the finite time and skills at their disposal. The problem is that the infrastructure is too complex to manage with manual approaches. You now need automated, policy-driven tools to do the job effectively.

Automation can assist in many areas of IT administration:

- Discovery and mapping
- Monitoring, metrics, and reporting
- Root cause analysis
- Provisioning, configuration, and process execution
- Compliance
- Recovery

In short, automation provides greater leverage for your IT personnel and much tighter control over the quality of services delivered.

Standardization

When it comes to the number of unique products and configurations deployed in an enterprise, *less is more*. Using standardized configurations and minimizing drift will reduce complexity, provide greater leverage in procurement, and reduce administration and support costs.

Balance Process Controls with Flexibility and Efficiency

It is wise to have balance, and this includes balance in your approach to service-centric IT management. Process controls are important because they ensure best practices are followed, minimize mistakes that cause downtime or data loss, and help ensure consistent service levels. At the same time, make sure controls do not become too slow, cumbersome, or rigid, so they detract from the flexibility and efficiency of the IT organization. Maintaining a balance will help create a well-oiled IT machine, while avoiding the entrapments of bureaucracy.

Continuously Innovate New IT Services

Returning to the mechanical watch analogy, what if a customer said, "Telling the time accurately is great, but I also want to see the date." For a watch designer, such a feature would require a whole new set of gears and indicators. It requires innovation.

Innovation is different from improving service levels and efficiency by degree and magnitude. While continuous improvement means incremental progress, continuous innovation suggests major leaps forward that involve greater risk, cost, and potential benefit. Innovation is the creative application of IT to solve business problems in new, powerful ways. For example, email is an innovation over fax and mail. Wireless networks are an innovation over wired networks. E-commerce is an innovation over onsite purchasing.

Just as businesses innovate to stay competitive and relevant, so must IT, especially as it transitions from a backroom operation to a more strategic role. Think of IT as a mini-business within a business. Innovation is how IT can continue to make powerful, unique contributions to the strategy, capabilities, and success of an enterprise.

Conclusion

Enterprise IT is more strategic than ever. It has a prominent seat at the boardroom table, and before it lays tremendous opportunity for contributing to business success. The challenge is to make the mental and organizational shift from being a provider of technology to a provider of high-value, customer-focused services.

The essential questions for this journey are threefold.

- *Are you aligned with the needs of the business?*
- *Are you continuously improving service level quality, efficiency, and cost-effectiveness?*
- *Are you continuously innovating IT services?*

There is no silver bullet or quick and easy way to address the challenges of service-centric IT management. It is an evolution. But all IT organizations would do well to adopt a process-oriented framework like ITIL and take advantage of consolidation, virtualization, and automation. In so doing, you will be stepping into the shoes of modern service-centric IT management.

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