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2008

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ABSTRACT

In recent years, the growth in popularity of frameworks such as the IT Information Library (ITIL®), the Control Objectives for Information and Technology (COBIT), and the Capability Maturity Model Integrated (CMMI) have caused IT organizations to begin to develop specific service processes for their organizations. This research surveys IT managers on their understanding and practice of service management in IT operations. The results found significant conceptual confusion across the several IT service management models, indicating a need for better definitions, clearer terminology, and broader dissemination of framework information.

Keywords: ITIL, IT service management, COBIT, CMMI, service, service level management, SLM

INTRODUCTION

Information Technology Service Management (ITSM) focuses on defining, managing, and delivering IT services to support business goals and customer needs, usually in IT Operations. ITSM is broad, encompassing IT planning, delivery, support and security. In contrast to the traditional technology-oriented approaches to IT operations, ITSM is a discipline for customer-defined, process-oriented IT services, and is a move toward managing IT "like a business." ITSM seeks to align IT operations-related activities and the interactions of IT technical personnel with business customer and user processes (Finden-Brown & Long, 2005). Providers of IT operational services must consider the quality of the services and customer relationships, ensuring the delivery of value through IT operations (van Bon, 2002). ITSM supports this change in focus.

Management of IT operations is important because it accounts for 60% - 90% of total cost of IT ownership (Fleming, 2005). Companies around the world are recognizing an opportunity to use ITSM to improve their organizations in ways that may translate to improved organizational competitiveness in response to increasing pressure on CIOs to speed service delivery (Cash & Perlson, 2004). One estimate states that 90% of U.S. companies have one or more ITSM processes implemented (Lynch, 2006). Much of the academic literature on ITSM to date focuses on definitions and prescriptive actions; meanwhile much of the business world has already adopted some kind of service management. Further, academic research relating to services does not help describe either the actual implementation of ITSM or IT managers' perspectives on service management. This paper reports on a survey designed to examine the state of art in managing IT operations with a service perspective.

SERVITIZING IT OPERATIONS

The concept of services and service management evolved from the increasing complexity of IT systems and the growing maturity of IT management. In the 1980s, IT organizations moved away from management of mainframes and into management of local area networks, with multiple servers providing multiple applications. As the layers of technology increased, management problems spread until operations managers were compelled to search for a more integrated management approach. At the same time, C-level executives became increasingly frustrated with the seemingly insatiable appetite of IT for more memory and more storage and with little IT management accountability

for improving performance. Both levels of management needed different methods of managing and reporting IT performance.

In the 1990s, enterprise-wide applications such as ERP, budding Internet applications, and outages affecting whole organizations drove the growth of service management as a way to better manage how IT was provided to business units. Companies developed a service perspective toward IT, defining customer-oriented services and service agreements (e.g. for email, order entry, and so on). IT services aggregate technology across functional silos, requiring new definitions to describe end-to-end availability and performance. Service level agreements in business language replaced earlier IT-defined agreements that utilized lower-level measurements (e.g., network or system uptime, dropped packets, or megabytes of data storage). Once business services were defined, the next necessary step was an improvement in service delivery. Today, the desire to improve capacity planning, the need for high availability of Web services, an imperative to "run IT like a business," and the push to do "more with less" have raised significant interest in IT service management.

IT SERVICE MANAGEMENT OVERVIEW

ITSM has grown primarily from two earlier approaches to IT management: The British Government's Information Technology Infrastructure Library (ITIL©) and an independent development in the U.S. called Service Level Management or SLM (Forrester, 1998). In England, the Office of General Commerce (OGC) recognized a need for improving integration and support for computing services within the British government. The resulting initiative resulted in a set of more than 40 books describing best practices in most areas of IT management. This library, now in its third version, has been distilled to five core books. In ITIL, service level management is a subset of processes describing the development of a "service catalog" to detail IT services and service level agreements (SLAs) offered to customers (ITIL, 2007). The parallel SLM movement in the U.S. was an operational evolution that focused on end-to-end definition and delivery of IT availability that developed before ITIL was broadly known within U.S. industry. Sturm, et al. (2000) chronicle the service level management concept and catalog 55 vendors of SLM products, some of which were well established in 2000.

ITSM is not strictly aligned with either ITIL or SLM. In fact, there is ongoing debate in the IT community as to the exact scope and overlap of several IT frameworks, such as ITSM, Service Level Management (SLM), ITIL, Capability Maturity Model Integration (CMMI), Microsoft Operations Framework (MOF), and COBIT. In 2005, the International Standards Organization (ISO) ratified the global standard ISO/IEC 20000, which subsumes ITIL version 2, and also the main concepts of SLM. ISO/IEC 20000 brings together these several streams under a common set of principles, which is generally labeled IT Service Management (ISO/IEC, 2005).

ITSM requires an understanding of two concepts: *service* and *process.* A service is some combination of IT resources -- hardware, software, people, and processes -- that deliver value to an organization. As previously discussed, a service orientation spans organizational and technology boundaries. A process is a set of steps taken by participants in a work activity to accomplish some goal. Well-defined processes streamline troubleshooting, standardize solutions, and guarantee the repeatability of outcomes.

SLM is the component of service delivery that deals most directly with identifying and meeting users' needs. SLM starts with the definition of services provided by IT. IT services are defined from the user's point of view, and might include eMail, PC repair, order entry availability, or an online shopping cart. Service level indicators (SLIs), or measures of service quality, are defined for each service. SLIs might include measurements of response times, cumulative downtimes of service, or the mean time between incidents. These measures remain within the IT area, while higher-level measures are included in user reports. For example, order entry application uptime would summarize components including CPU, disk, database, Internet, telecomm, and possibly other resources.

Different service levels might be defined, with names such as Platinum, Gold, and Silver, allowing for differing quality and cost of service. Having multiple service levels allows business units to trade-off the costs and benefits for the level of service they require. For instance, different levels of PC provisioning services may be offered to clerical staff versus managers; or trade-offs on the cost of 15-minute recovery time versus two-day recovery can be made and incorporated into different service levels.

An organization's service offerings and service levels are then embodied in Service Level Agreements (SLAs), which are contractual obligations to users, and may offer penalties for non-compliance. SLAs, along with costs associated with each level of service, are documented in a service catalog and made available to users. SLAs form the basis for IT and business interaction, specifying the services needed by the business, the cost for maintaining those services, and how the services are to be provided.

SLM also includes the processes necessary to ensure SLAs are met, including monitoring to detect service outages, calculating actual service levels, comparing actual performance to SLA guarantees, and reporting on these results. In the U.S., the term SLM also may include managing availability, capacity, and continuity, which in ITIL and ITSM are separate areas from service level management.

Adoption of SLM and a service perspective indicates an understanding of service provisioning and delivery as it relates to IT Operations. One industry survey found that SLM is considered very important or critical to the success of IT Operations by 100% of IT Managers; however, only 56% had embarked on SLM process management (EMA, 2006). IT service delivery management has little-to-no published academic research. This lack of research prompted this survey, which sought to determine the maturity of IT Service Management and its perception in IT organizations. This research focuses on documenting current use, knowledge and understanding of the various frameworks that embody ITSM.

RESEARCH DESIGN AND DATA COLLECTION

Enterprise Management Associates (EMA), a Denver, CO systems and network consulting organization, undertook the survey reported in this paper. An initial set of sixty questions was developed by two of the coauthors, as employees of EMA and experts in survey design and service management. The survey was then submitted to six representatives of three large software vendors in the ITSM market. These experts edited wording, adding and deleting several questions. The review resulted in a total of 66 questions, which the EMA author again reviewed and edited. A final quality review by the contracted call center's quality control department was conducted to yield consistency of results.

The sample was selected from a purchased database of 5,000 U.S. systems and network managers' names and telephone numbers. The list provider was requested to provide companies with more than 500 employees to increase the likelihood of service management practice. Telephone numbers from the purchased list were dialed randomly until 100 respondents "managing IT from a service perspective" agreed to be surveyed. The final data set reported in this paper is representative of U.S. companies with 200 or more total employees that have IT departments large enough to have an employee identified as a systems or network manager. No stratification was used to select specific industries according to their representation in U.S. industries; however, information is given within an industry as to the number of users and non-users of ITSM.

Demographics of the Sample

A total of 364 individuals were asked if they practiced service management and, if not, if they had plans to use service management. Figure 1 shows the breakdown of responses to that initial qualifying question. Forty-five percent (45%) of the companies were using service management, with another 15% in the planning stages, while 37% were not using it.

Response	Percent
Using IT Service Management	45%
Planning Stages Only	15%
No IT Service Management	37%
Don't know	3%

Figure 1. U.S. Service Management Implementation, N=364

Some individuals were unwilling to continue the survey after answering the initial qualifying question. A total of 100 respondents using ITSM completed the entire survey and 201 respondents not using ITSM completed a shortened survey (See Figure 2). Demographic information was gathered from both those who were using ITSM and those who were not. As the cross-tabulation in Figure 2 shows, company size, in terms of the number of employees, seems to be related to the use of IT Service Management. Roughly 25% of companies with 20,000 or fewer employees reported using ITSM, compared to 60% of companies with over 20, 000 employees.

		Less than 500	500 to 2499	2500 to 4999	5000 to 9999	10,000 to 20,000	Over 20,000	Don't know	Total (N)
Using ITSM	N	17	19	8	9	8	38	1	100
	%	28%	23%	29%	26%	28%	60%	17%	
Not Using ITSM	N	43	62	20	25	21	25	5	201
	%	72%	77%	71%	74%	72%	40%	83%	
Total		60	81	28	34	29	63	6	301

Figure 2. Participants by Company Size (Number of Employees)

The participants in the survey represent a cross-section of U.S. industry. Figure 3 shows the organizational participation by NAICS Code (U.S. Census Bureau, 2008). Manufacturing and education were most heavily represented in the sample.

The great majority of respondents worked in IT positions (84%). One-third of the respondents were IT Managers, 22% were CIOs or other IT executives. Other IT workers included operational staff (13%), project managers (10%) or other IT titles (8%). The largest category of non-IT respondents was CEO/Owners (8%). Also included were small percentages of other business executives (3%), and other business management (2%).

NAICS Code	Category	NOT Using ITSM (Frequency)	Using ITSM (Frequency)
31-33	Manufacturing	55	20
61	Education	53	22
52	Fin/Acc/Ins	21	8
92	Government	14	3
62	Healthcare/Medical	10	8
33.4	Technology/HW/SW	9	13
22	Utility	7	0
48-49	Wholesale/Transportation	5	6
71	Hospitality/Entertainment	4	0
54	Consulting	3	5
44-45	Retail	3	1
51	Telecommunications/ Service Providers	3	6
51	Media/Publishing	2	2
81	Non-Profit	1	3
	Other	11	3
	Total	201	100

Figure 3. Participants by Industry

RESULTS

The questions reported in this paper cover familiarity with service management frameworks and terminology, as well as drivers and barriers to use. The research further investigated the use of service management techniques. These questions are covered below.

Service Management Familiarity

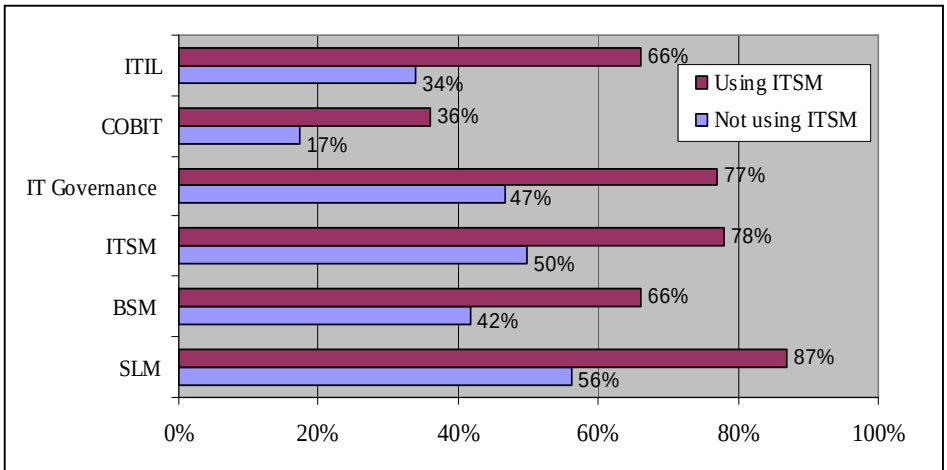

Figure 4. Recognition of Standards and Frameworks
Using ITSM N=100, Not using ITSM N = 264

Respondents were asked to indicate their familiarity with several concepts and frameworks used to manage the IT function, including Service Level Management (SLM), IT Service Management (ITSM), IT Governance, the IT Infrastructure Library (ITIL), and Control Objectives for IT (COBIT). The response set included answers for

"Very familiar," "Somewhat familiar," "Not familiar," and "Do not know/No response." Responses in the "Very familiar" and "Somewhat familiar" categories were combined to develop Figure 4, which compares the responses from ITSM users and non-users.

For all standards and frameworks, the respondents managing with a service perspective had greater familiarity than those not utilizing service management. Service management adopters were about twice as aware of frameworks and concepts relating to IT management. Interestingly, the rank order familiarity level was the same across all concepts in both respondents groups. SLM was the most recognized term to these U.S. IT managers, with 87% of the service management users and 38% of non-users indicating familiarity. While it may not be as "sexy" as some newer terms, most IT managers still understand SLM best.

ITSM and IT Governance were the next most familiar terms, reaching about three-quarters of ITSM users and one-third of non-users. ITIL was familiar with only two-thirds and one-third, respectively. Notably, COBIT was by far the least recognized framework in both groups.

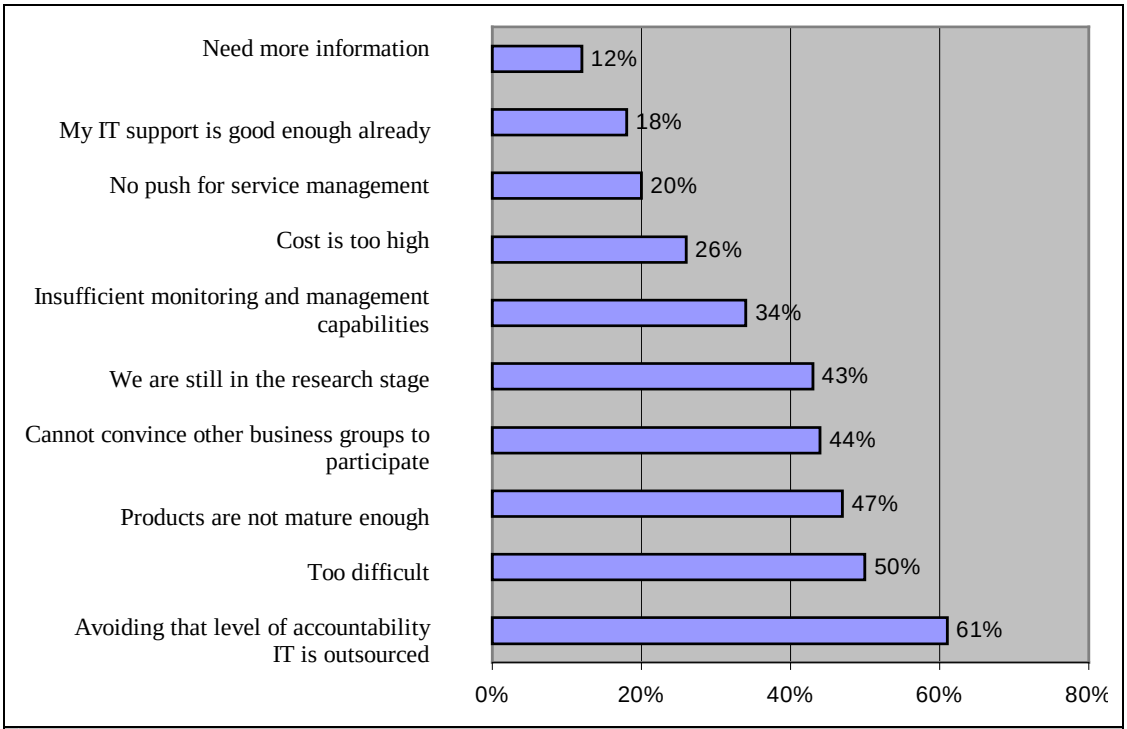

Figure 5. Barriers to ITSM Adoption in Organizations Not Practicing Service Management N=201

Respondents not utilizing service management were asked one more follow-up question before they exited the interview. This group was asked to describe barriers to service management use in their organizations. Respondents selected any barriers applicable to their situation from a presented list (see Figure 5). The most common response (61%) was the need for more information about service management. This corroborates the earlier finding that service management is not a familiar concept to a large portion of U.S. IT managers, even though service management products have been available and ITIL has been in use for over a decade (EMA, 2006).

Slightly over one-half of the IT managers not using ITSM said they were generally satisfied with their current levels of IT service delivery and that no one was asking them to initiate service management activities. A slightly smaller number felt that it was too expensive to move to service management (47%) or that their monitoring and management capabilities were not up to the challenge (44%). Less than a quarter of respondents said they were unable to convince other business groups to move in the direction of service management (34%), while ITSM product immaturity was cited as a barrier by 26%.

Organizations Practicing Service Management

This section summarizes responses of the 100 organizations who answered that they were "utilizing a service perspective" to manage IT (the initial qualifying question). Respondents were asked to judge the extent to which IT was managed. Figure 6 shows that within these 100 organizations the largest number of respondents stated that many or most of IT services were managed (combined total of 45%). Another large portion was using service level agreements (SLAs) (38%) to support service delivery.

No SLM	6%
Still planning	9%
Some SLAs	38%
Many services managed	16%
Most of IT in service mgmt	29%
Not sure	2%

Figure 6. Extent of SLM Processes N=100

ITIL Process	Count	Percent
Service level management	60	83%
Change management	60	83%
Incident management	59	82%
Problem management	59	82%
Availability management	58	81%
Capacity management	58	81%
Configuration management	57	79%
IT asset management (Financial management of IT services)	57	79%
IT service continuity management	57	79%
Service desk	55	76%
Release management	54	75%
Chargeback and/or billing (Financial management for IT services)	53	74%

Figure 7. Extent of ITIL Process Adoption

Respondents were asked whether they were familiar with ITIL or using the ITIL framework. Slightly over one-quarter (28%) did not use ITIL or were unfamiliar with the term. Those respondents that were utilizing ITIL or were at least familiar with the terminology (72%), were further asked which ITIL processes they felt were most important to business service management. Responses included "Critical," "Important," "Not very important," and "Not important," with a category for "Don't know/ Refuse to answer." Figure 7 shows the summed responses for "Critical" and "Important" ratings. Change management and service level management were considered critical or important by 60 of the respondents. Financial management, in the form of chargeback and billing, was the least used process. In general, all of the practice areas enjoyed broad usage in 75+% of the 100 organizations practicing some kind of ITIL management.

When asked an open-ended question about the IT department's main objective, operational concerns topped the list. The largest group of responses (36%) could be categorized as improving service delivery. Simply managing outages and downtime is the most important business for many IT managers. Similar operational improvements such as infrastructure changes, increasing capacity and streamlining services accounted for another 20% of the main objectives listed. Cost reduction and containment was most important for another 19% of the respondents. Only 23% mentioned high-level IT goals such as expanding services (13%), business alignment or goals (8%), or strategic initiatives (2%).

Next, respondents were asked to list all drivers of SLM in their organizations, utilizing an open-ended question with no limit on number of responses (see Figure 8). The most frequently cited drivers were better service for critical applications (27%), improved responsiveness to customers (26%), improved management of IT investment costs (25%), aligning IT and business (19%),

Better service for critical applications	27%
Customer responsiveness	26%
Cost of IT investments	25%
Alignment of IT and business	19%
Increasing IT efficiency	16%
Chargeback or cost allocation	7%
Integrate business and IT metrics	7%
IT Governance, Sarbanes-Oxley, HIPAA, accountability/compliance	7%
SLAs	7%
Business units pressures	5%
Improve IT delivery	5%
Executive visibility/transparency into IT	4%
Availability	4%
Quantitative cost/benefit measures	3%
Competitive pressures	2%
24x7 services	2%
ITIL, COBIT, Six Sigma, process initiatives	1%
Other single mentions	11%
Don't know / Refused	16%

Figure 8. ITSM Drivers N=100

and increased IT efficiency (16%). These comments were cited more than twice as often as other motivators.

Respondents reported that lack of budget is the greatest impediment to moving forward (35%). About 16% of respondents cited each of the following constrained SLM improvements: Immaturity of their IT staff, need for better network and systems management, need for specific training, and higher priority of other issues. About 10% found there was too little executive support or interest in service management.

"Services" mean different things to different people. To see how IT managers define IT services, an open-ended question was used: "What are the two most important services that your IT group must deliver to your enterprise?" Some organizations gave only one response. The resulting multiplicity of answers was categorized and the top responses are shown in Figure 9.

Quality metrics	26%
Business goals	19%
Email, collaboration	10%
Network transport	8%
Vertical services	6%
Internet-based transactions and store	4%
Security	3%

Figure 9. Most Important Services N=180

The first two items in the table, representing almost half of the responses (45%), are not IT services but byproducts (metrics) and determinants (goals). About 8% and 3% of respondents listed low-level statements of technology services such as network transport and security, respectively. Customer-defined IT service applications accounted for a total of 20% of the responses, including email, collaboration services (10%), and vertical services such as banking, clinical support and manufacturing services (6%), and Internet-based transactions (4%). Other IT services mentioned by more than one person were order entry, voice over IP, CRM, ERP, help desk, and Internet access.

In an effort to further understand how IT managers define and understand service management, the respondents were asked to specify the components of service level management. Eighteen items, comprising many common IT management concepts, were read to the respondents, who indicated whether each item was part of SLM, according to their own definition. The listed items were chosen to be deliberately broad, including many concepts that are outside the ITIL definition of SLM. Figure 10 summarizes which functionalities were most and least frequently chosen as "true" components of SLM.

Not surprisingly, the top item was service level agreements, which stood out above all other concepts at 86%. However, beyond that agreement, IT managers seem to have either an extremely broad or an extremely vague approach to defining service level management. Service catalog, a definitive part of SLM according to ITIL, came in relatively low (67%); dashboards and scorecards were relatively high (73%), even though they can be considered a "nice-to-have" component rather than an absolute requirement. Only one item, "SLAs that address non-IT functions" was chosen by less than half the respondents. The rest of the items were included by 60% to 78% of the respondents. This "everything but the kitchen sink" approach to service management succinctly characterizes the approach most often voiced: Whatever works.

Service level agreements	86%
Manage services that cross technology silos	78%
Service impact reporting	78%
Technology-centric metrics	77%
Dashboards and scorecards	73%
Define and manage business services	73%
Policy-based management	72%
Map services to technology components	71%
End-user monitoring	69%
Service catalog	67%
Business-oriented metrics (or KPIs)	66%
Incorporate business process management	65%
IT governance or risk management	64%
Define and manage workflows	63%
Role-based service delivery	63%
Auto-discover application infrastructure	60%
Bill business for IT usage	57%
SLAs that address non-IT functions	45%

Figure 10. Components of SLM N=100

Many items included in the list more appropriately fall into categories other than service level management. Service impact reporting, technology-centric metrics, business-oriented metrics, and role-based service delivery are certainly part of SLM but are also part of every other service delivery and support area. Auto-discovery of infrastructure is part of configuration management, necessary for continuing to upgrade and manage a configuration management

database. Application management would include end-user monitoring, and technology-centric metrics. Billing of business for IT usage is a finance function. Yet all were included in a definition of service level management by almost two-thirds of the respondents.

Thus, the respondents indicate that IT managers either don't understand the SLM concept, or define it much more generally than ITIL or ITSM proponents. Included in these respondents' definition of SLM were many components more appropriately called IT governance, workflow management, and policy-based management. Several financial concepts (KPIs and billing) also don't often figure in "classic" SLM. This notion is discussed further in the next section.

DISCUSSION

The survey found some expected and some unexpected results. Perhaps the single greatest discovery may be that U.S. IT managers are still fairly unaware of ITSM and are therefore not receiving its benefits. This seems dependent on the size of the organizations, with the largest organizations more frequently adopting service management practices.

Lack of Familiarity with Frameworks and Terminology

There is limited awareness of the standards and frameworks by which IT organizations could be managed. Even the most widely known term was described as "very familiar" by less than one-third of all the respondents. There were pronounced differences between organizations that do and do not practice service management, with much higher levels of awareness across all standards and frameworks in companies that have implemented some form of service management.

One of the great conundrums of IT researchers and software vendors alike is what to call service management. Older terms such as IT management or operations management are often familiar to IT managers, but newer terms such as ITSM, IT governance and ITIL have become more popular in trade journals. Since conceptual confusion is a barrier to developing understanding of new concepts, the Service Management movement would be well served by a concerted effort in education. Terminology confusion also implies that companies might actually be practicing some form of service management without calling it that.

One surprising finding is that SLM is the most recognized term in both users and non-users of service management. Conventional wisdom would have us believe that ITSM should be the most recognized practice. COBIT, the standard used to develop Sarbanes-Oxley and other audit questionnaires, was the least recognized framework for all respondents. This is surprising in light of the push by the Information Systems Audit and Control Association (ISACA) and the IT Governance Institute (ITGI) to proselytize COBIT as the practice best suited to IT organizations and organizational compliance. It may be that IT professionals view COBIT as primarily an audit framework, since it is associated with ISACA, and are therefore less likely to adopt it as a framework for organizing IT.

ITIL also had a low recognition factor relative to other concepts. Lynch (2006) has claimed that as many as 90% of U.S. companies have implemented one or more ITSM processes; however, that is not supported in this research. If these numbers are representative, only 45% of the organizations interviewed were familiar with ITIL concepts. It seems probable that the true number is even lower, since many of the organizations that were not practicing service management declined to rate their familiarity with ITSM terms. Of course, ITIL and ITSM are not synonymous; therefore, the true impact of these frameworks on U.S. industry is unclear at present.

Broad Definitions

It is clear that this survey's respondents consider *service level management* synonymous with *IT service management*. Further, respondents in companies that practiced service management had a very expansive definition of SLM that included broader IT functions, such as application, configuration and financial management, as well as IT governance and risk management. Several items not specific to the IT function were also included in the SLM definition, including business services, business process management, and workflow management. When a definition becomes very broad, it ceases to be a useful management concept. One of the more attractive aspects of ITSM is that it helps break the mammoth of IT management into more discrete and manageable parts. This decomposition can help IT managers make headway in their effort to deliver better IT services, yet it is being lost.

Similarly broad or confused statements were made in respect to what constitute IT services. Most respondents still view the term "service" the same way the public might define it: something that helps or benefits the business. The term "service management" is quite possibly still mistaken for meeting or managing adequate customer service. It was perhaps an unfortunate choice of wording made in the 1980s, for which we are still garnering repercussions.

This conceptual confusion again seems to indicate immaturity of the discipline of ITSM and a general lack of understanding of ITSM practice areas. It appears that IT service management is defined "in the eyes of the beholder," with each organization determining what the term means in its own context. Processes tend to be implemented piecemeal, regardless of how frameworks or standards define them. Keeping in mind that the goal of any IT Operations organization is to maintain its operational status, good management practice dictates that some level of service management be implemented regardless of what it is called. The results support this notion.

FUTURE RESEARCH

Service management as an IT discipline is in its infancy in the U.S. While there are some visible successes reported, such as Proctor and Gamble (Galup, et al., 2007), Unilever (Sherman, 2006), and Auto Nation (Drucker, 2006), there are many more companies for which service management is a multi-year, difficult transition that meets resistance at every step. As an academic discipline, ITSM is even less mature. Therefore, the needs for future research in the area are wide open.

This survey reports on the ideas and opinions of U.S. managers; undoubtedly European and Australian IT managers, who are more steeped in ITIL, would answer differently. Global comparisons of terminology, usage, and maturity would be useful. The confusion of terminology reported in this research makes it difficult for academics and practitioners alike to communicate, share knowledge, and develop best practices.

Case studies to help understand the differences between successful and unsuccessful ITSM implementations would be extremely useful for IT managers. Identifying good and bad methods of handling the cultural issues and IT organizational structures should yield a set of best implementation practices that could benefit any company embarking on a service management improvement project. Other questions of interest include measuring the return on investment from service management activities, and how to identify an organization's areas of highest potential payback.

Books such as ITIL purport to be "best practices," however, the books present the subject matter without providing a clear mental map for how all of these practices fit together. Further, there are few generic process maps that help a reader gain a quick understanding of the knowledge areas involved in a given process area. As a result, managers and practitioners struggle to understand what ITIL is even saying, and then they struggle to determine how ITIL fits into their own organization. Academic research could facilitate this understanding by developing mental maps and case studies to serve as starting points for learning ITSM.

It should be further noted that ITIL version 3, released in 2007, moves beyond the original orientation on operation management, and brings ITIL more into a broad, lifecycle focus on creating business value with IT. This "refresh" of the model, and the growing U.S.-based IT Service Management forum (itSMF), may cause faster uptake of the service management paradigm. Surveys on actual use will need to continue to assess how this model is being adopted.

CONCLUSION

This research sought to understand service management practice in the U.S. The survey identifies some conceptual confusion on exactly what constitutes an IT service and confounds service management with many other management concepts. From a standards and frameworks perspective, little familiarity was found. Additional research is suggested on how different organizational sizes affect ITSM adoption. Analyzing contextual definitions of SLM and ITSM would be helpful in determining how frameworks and standards for improved management of IT can help organizations.

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