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# **SLA Defined Metrics as a Tool to Manage Outsourced Help Desk Support Services**

## **ABSTRACT**

Many organizations implement information technology (IT) service management practices to improve IT operations as it contributes to organizational performance. When outsourcing an IT service such as help desk support for customers, the organization may lose some of its ability to manage the relationship and ensure effective services are provided to the organization and customers. This paper presents the case of the Colorado Community College System's use of specific metrics, defined in the service level agreement (SLA), as a tool to manage the relationship with an outsourced IT help desk support service.

## **Keywords**

IT services, help desk, metrics, service level agreement, SLA.

## **INTRODUCTION**

Improving management of information technology (IT) services is on the minds of Chief Information Officers (CIOs). For each of the past three years, 2007, 2008, and 2009, the Society for Information Management (SIM) survey of top IT executives found ITIL and IT process management practices as one of the top ten technology developments (Luftman and Ben-Zvi, 2010). IT Service Management (ITSM) models such as ITIL and ISO/IEC 20000 encourage best practice of service delivery of IT. ITSM is process oriented and focuses on managing IT operations such as support/help desks, maintenance, education, business continuity, and performance planning (Galup et al., 2009).

Some organizations choose to outsource IT services for several reasons such as cost savings (Sako, 2010), but there are significant challenges involved in managing services that lie outside the boundaries of the organization. Service Level Agreements are fundamental to IT service management and are increasingly common as a mechanism for governing relationships with outsourced IT service provider. This paper presents research in progress using a case study to analyze the interaction between an IT support desk service provider and service recipient, a large community college system in the US. The paper will focus on specific elements of both the promissory contract (i.e., SLA or formal contract) and the psychological contract involved in the relationship between client and vendor (Miranda and Kavan, 2005).

## **SERVICE LEVEL AGREEMENTS**

A Service Level Agreement (SLA) is a written agreement between an IT service provider and customer, defining the key service targets and responsibilities of both parties (Goo et al., 2009). SLAs spell out the measurable levels of service that customers want an IT service to provide. The number of current service level agreements and the extent of the service being provided through these agreements may affect how busy the service desk becomes.

SLAs are both financial contracts and an instrument for managing the customer's expectations (Trienekens et al., 1999). Well structured SLAs provide service providers with a safety net, rather than exclusively relying on trust (Goo et al., 2009; Sabherwal, 1999). Empirical research has shown that well developed SLAs provide a way to measure the service provider's performance as well as enabling effective management of the relationship (Goo et al., 2009).

There are several contractual elements in a Service level Agreement for an outsourced IT service such as objectives, future demand management, feedback plan, and a measurement charter. The measurement charter is the 'tactical measurements for calculating and reckoning of service performance as well as success metrics derived from the service receiver's strategic plan' (Goo et al., 2009).

The following case will demonstrate an example of outsourcing an IT help desk support service in the setting of a statewide community college system. While the case example is a community college system, the use of metrics in the 'measurement charter of the service level agreement to manage the outsourced service provides an example that may be replicated in other business, education, or organizational setting.

## **OUTSOURCED HELP DESK SUPPORT SERVICE CASE STUDY**

### **Background**

The Colorado Community College System (CCCS) serves more than 128,000 students annually. The CCCS oversees career and academic programs in the 13 state community colleges and career and technical programs in more than 160 school districts and seven other post-secondary institutions.

CCCS made a decision to develop a 24/7 Support Desk to support distance education students and faculty in accessing and using the learning management system. Over time the support desk services evolved to include support for student email, college portals, basic admission and registration processes, and changes in the learning management system.

The request for proposals (RFP) and vendor selection process was conducted in Fall 2007 with the contract awarded to a vendor in early December 2007. Representatives from each community college were involved in the initial preparation phase to ensure both unique and common practices were in place when the 24/7 Support Desk went live. Prior to the April 2008 pilot phase, two CCCS representatives conducted live agent training at the vendor's location. During the pilot phase and early in the live coverage, CCCS representatives were available during regular business hours to answer agent questions while on live student calls. The 24/7 Support Desk developed naturally from over 14,000 contacts during FY 08-09 (July 1, 2008 – June 30, 2009) to over 43,000 contacts from July 1, 2009 through March 31, 2010.

### **Communications Plan**

The main mode of communication is email between CCCS' Manager of Help Desk Services and the vendor's CCCS Subject Matter Expert (SME). The communication includes routine daily activities such as changes for the agents' knowledge base (KB), requests to coach agents on processes, upcoming system outages and maintenance, and schedule meetings. Urgent matters such as unexpected outages generally require a phone call between the Manager of Help Desk Services and the SME during regular business hours or another supervisor outside of normal business hours. Once contact has been made about an unexpected system interruption, email is the mode of communicating updates.

The contract allows for meetings between vendor and client representative. Over the course of the service partnership, routine meetings were established. The first routine meeting is a weekly status meeting conducted by phone to discuss daily activities, status of ongoing activities, and upcoming system changes which will affect coverage. The main two attendees are the vendor's CCCS' SME and CCCS' Manager of Help Desk Services. Meeting notes are distributed after the meeting to provide a tracking mechanism of discussion and activities.

The second regular meeting is a bi-monthly quality assurance meeting conducted by phone with the vendor's quality assurance (QA) Specialist and CCCS' Manager of Help Desk Services. The purpose of the meeting is to discuss the quality of recorded calls and provide information to improve agents' performance when assisting students. The meeting activities include:

- QA Specialist emails one to four recorded calls and associated service ticket information at least one day prior to the meeting to Manager of Help Desk Services
- Each attendee individually reviews and scores the call(s) based on an established evaluation sheet.
- Individual notes and scores are compared and recorded during the meeting to determine the agent's score on the call and action items.
- Outcomes from the meeting include action items such as modifying the KB, agent coaching, and CCCS system or process modifications.

Another regular meeting is a bi-monthly meeting to discuss mid-level management related topics such as reviewing current status of the vendor's Enterprise Service Center (ESC) operations, staffing updates and process changes. The phone meeting is primarily between the vendor's Director of ESC and CCCS' Manager of Help Desk Services. The final regularly scheduled meeting is the monthly phone call to discuss mid- to high-level management related topics such as future goals and plans and a review of current performance status. The meeting is between the vendor's General Manager of Unified Service Centers Operations and CCCS' Manager of Help Desk Services.

There are occasional ad hoc meetings conducted as needed. One meeting is the working meeting to complete activities such as KB review and modification, new projects (e.g., self help site upgrade), and report mock-ups. Another periodic meeting is an executive meeting sometimes requested to address high-level topics such as an overview of overall performance. Typical

attendees to an ad hoc executive meeting include vendor's General Manager of Unified Service Centers Operations and VP of Client Relations and CCCS' CIO, Co-Director Learning Technology, and Manager of Help Desk Services. Annual visits are conducted to provide some face-to-face interaction between all interested stakeholders. Either the vendor representatives visit the client site or the client visit the vendor's site.

### **Metrics and Service Levels**

CCCS has five queues handled by the vendor. Two of the queues are for incidents received by *phone* where one queue is for login assistance and the other phone queue is for all other issues. The other three queues are for *email requests*, *chat requests* and *priority requests* respectively. A variety of reports are generated to track incidents and present overall usage to multiple stakeholders within CCCS. For approximately the first year of the contract, the routine daily, weekly and monthly reports were created by the vendor's SME and delivered electronically to the Manager of Help Desk Services for review and distribution within CCCS. Since the implementation of a new reporting system in SharePoint, the CCCS Manger of Help Desk Services has access to generate routine reports as needed. Additional reports are available to the client by request.

An open ticket report is generated at the beginning of each week for distribution to each college. The purpose of the report is a review of Remedy tickets that were escalated to Tier 2 at the student's home college and have not been handled. Initially, the vendor SME created the report in Excel and forwarded a copy to the Manager of Help Desk Services. Currently, the Manager of Help Desk Services generates the report. The format of the report remains as a spreadsheet.

The weekly and monthly phone system reports are generated by the vendor's SME and delivered to the Manager of Help Desk Services via the reporting system. The PDF formatted reports include:

- *Queue by Date* - Reports each of the five client queues alphabetically with the number of incidents answered, average daily talk time, average speed to answer, average time for incidents to be abandoned, percent of incidents abandoned, number of incidents abandoned, and maximum time to answer.
- *Negative Abandons* - Reports each of the five client queues alphabetically with the number of incidents received, number of incidents abandoned, thresholds during which incidents were abandoned between 0 and 60 seconds, average abandon time, and average speed to answer.

During the service period, customized reports developed by the vendor and client exhibit monthly and quarterly performance and ticket summaries. One customized report is the monthly Executive Summary report, which is delivered as a spreadsheet to the Manager of Help Desk Services by the SME. The contents consists of a summary of incidents by queue, average speed to answer, average negative abandons, average customer satisfaction, total number of tickets created, first call resolution, total number of incidents, and maximum wait period. Other sheets within the report display the number of incidents by category and by college, actual customer survey comments and scores, CTIs (category-type-item) available in Remedy for agents to select per ticket, and call data from the phone system. The Executive Summary report is distributed to the client's CIO and Co-Director of Learning Technology.

Another customized report is the quarterly metrics report which is delivered as a PDF file converted from a Powerpoint presentation to the client by the SME. The quarterly metrics report provides a high-level summary of monthly activity cumulating in an annual report. The report is distributed by the Manager of Help Desk Services to college representatives who distribute the report to appropriate college administration. The report graphically displays monthly figures for incidents, number of incidents per queue, average quality assurance score, total tickets per college, top 5 ticket categories, monthly ticket status open versus closed, and the key performance indicators of average speed to answer, negative abandon rate, customer satisfaction score, and first contact/call resolution.

In addition to the routine and customized reports, ad hoc reports are available through requests to the vendor or by the client. The data is from the ticketing system, phone system, and/or the reporting system. Resource availability and data requirements determine who is responsible for pulling the data for the report. Typical ad hoc reports are number of incidents per student at the request of the student's college, tickets by college during a specific time period, tickets by category with the details that are not part of quarterly and annual metric reports, research related reports to determine root cause, and time of CCCS system performance issue (e.g., LMS unavailable to students and faculty). The format of the reports is usually comma delimited converted to spreadsheet.

The service level agreement with the vendor includes specific metrics and performance levels at which service will be measured. Metrics included in the SLA that the Service Provider reports include:

- **Average speed of answer (ASA)** is the “time a caller rings or is queued in the system before reaching a ‘live’ agent.” The monthly average is to be less than 60 seconds 95% of the time
- **First call resolution (FCR)** – is defined as the “Percent of calls resolved by the [vendor] Help Desk, thereby eliminating the need for escalation to Tier 2.” The monthly rate is to be greater than 75%
- **Call Abandon Rate** (aka Negative Abandon Rate) – which is defined as “Customer hangs up without reaching a Help Desk agent. Calls abandoned <60 seconds are excluded from this metric.” The monthly average is to be less than 6%.
- **Customer Satisfaction** – based on survey results “On a scale of 1-5, minimum acceptable value would be 3.5.” The monthly average should be equal to or greater than 3.5 points. The survey contains five questions where each question allows for the caller to add comments.
- **Online Help Desk Tracking System** (aka Remedy ticketing system) has a benchmark of “99.99% uptime on a monthly basis, excluding scheduled system maintenance and ‘acts of God.’”
- **System uptime** of telephone, web and email system availability for the initiation of Help Desk tickets by client constituents has a benchmark of “99.99% uptime on monthly basis, excluding scheduled system maintenance and ‘acts of God.’”

The vendor is willing to address client concerns and accommodate appropriately in order to improve support services. No enforcement threats have occurred during the contract’s life to date. Negotiations occurred on two separate occasions when SLAs were missed. The first event was related to vendor technical difficulties with a third party vendor, which caused a significant impact on SLAs. The result of the negotiations was successful and the partnership continued to expand. The second event was associated with staff schedules, which caused a minor impact on SLAs for two consecutive months. Around the same period, the client requested an exchange of services, and exchange request was accepted.

The threat of enforcing contract termination remains an option for the client if a resolution cannot be negotiated with the vendor. The service level metrics provide the client with performance-based evidence to help better manage performance of the outsourced help desk support services from the vendor.

## REFERENCES

1. Galup, S., Dattero, R., Quan, J., and Conger, S. (2009) An Overview of IT Service Management. *Communications of the ACM*, 52, 5, 124-127.
2. Goo, Jahyun; Kishore, Rajiv; Rao, H. R.; and Nam, Kichan. (2009) The Role of Service Level Agreements in Relational Management of Information Technology Outsourcing: An Empirical Study, *MIS Quarterly*, 33, 1, 119-145.
3. Luftman, J., and Ben-Zvi, T. (2010) Key Issues for IT Executives 2009: Difficult Economy’s Impact on IT, *MIS Quarterly Executive*, 9, 1, 49-59.
4. Miranda, S., and Kavan, C. (2005) Moments of governance in IS outsourcing: conceptualizing effects of contracts on value capture and creation, *Journal of Information Technology*, 20, 3, 152-169.
5. Sabherwal, R. (1999) The Role of Trust In Outsourced is Development Projects, *Communications of the ACM*, 42, 2, 80–86.
6. Trienekens, Z., and B. (1999) Specification of Service Level Agreements, Clarifying Concepts on the Basis of Practical Research, *Proceedings of the Software Technology and Engineering Practice*, 169.