ISRC *Notes* - January 1998

Building and Managing a Service Oriented IT Organization

Based on a Roundtable Discussion of ISRC Participants

Information systems have become pervasive in today's organizations. As a firm's dependency on IS increases, so does its need for high quality service and support from the IS unit to its internal and external customers. An emphasis on IS service quality is important to a customer's (or end user's) view of the value of IT to the organization. However, there are a number of issues associated with delivering quality service that can quickly entangle the unwary. At the January ISRC Roundtable, representatives from BFI and Dell Computers shared their specific experiences and approaches in providing high quality service to their constituents. ISRC members then discussed some of the service quality challenges and solutions they have encountered in their organizations at a roundtable discussion. The goal of this exchange was to uncover ways to improve IS service quality. As part of this process it is useful to identify major service challenges. We canvassed the roundtable participants about their service challenges.

1. Service Delivery Challenges.

Understanding the customer's needs. This includes a variety of more specific issues such as:

- understanding the company's business;
- knowing and understanding the user community's service requirements;
- determining appropriate training requirements of users;
- supporting remote users;
- coping with the demands of continued technological change;

Many of these problems may be rooted in a lack of effective communication with the user community surrounding service requirements.

Managing service delivery. This includes a variety of issues related to being able to consistently deliver desired service levels across organizational units and over time. Among the most common challenges cited by the firms are:

- managing and meeting customer expectations with limited resources;
- providing consistent service levels across applications and business units;
- providing customized service delivery;
- fragmented control of the support functions;
- always keeping promises;

Resource allocation. This includes acquiring and allocating necessary resources for service support and the problems associated with providing differential support across the organization. Among the key resource challenges are:

- providing service to geographically disbursed locations;
- having insufficient resources to meet customer expectations;
- providing resources to support virtual teams;

- measuring service value, and reconciling costs and benefits associated with service delivery

Staffing for services. Perhaps the most critical issue expressed by our participants. The difficulty in staffing the service organization with the right type of people and developing a service culture among the staff. Some key issues included

- staff selection, finding people with the right skill mix
- staff retention, keeping people in the service function which is often viewed as a jumping off point to more exciting and demanding IT occupations
- development and training of service staff.
- downsizing/outsourcing (new people and culture)

Taken together these challenges point the way to issues that need to be addressed in improving IS service quality.

2. Understanding Service Quality.

To begin a process of service quality improvement is important to answer the question, what is "Service Quality?" One definition defines it as the gap between a customer's expectation of what he/she thinks the level of service **should be** and what he/she thinks the level of service **actually was**. Take the example of a user calling the technical support desk with a minor problem and no pressing concerns. A two-minute wait might seem reasonable to this user, especially if the problem is resolved. However, the same user calling with an urgent problem and facing an impending deadline would probably consider the same two-minute wait intolerable, even if the problem is quickly corrected. In other words, your level of service quality delivery is exactly what your customers perceive it to be.

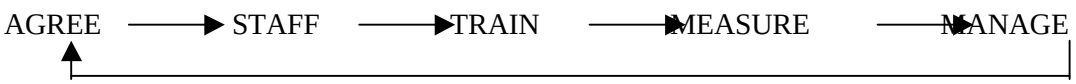
To further understand service quality, it can be divided into two components; technical quality (i.e., what is done), and functional quality (i.e., how it is done). For example, our user on hold waiting for technical support might hear only dead air while he waits. Thirty seconds later, someone picks the line up, listens to the problem, says "Hold on", fixes the problem, tells the user "It's okay now", and hangs up. A second user on hold hears soothing music interspersed with a periodic message reassuring him that he hasn't been forgotten and telling him the approximate time until his call will be handled. Thirty seconds later a technical support representative picks up the line, listens to the problem, says "I can take care of that right now," fixes the problem, explains to the user what happened, what was done, and what will can done to prevent re-occurrences. In each case the technical quality was identical: the problem was fixed. However, the functional quality was different and the user or customers view of service quality may be radically different. This suggests that it is not enough to be technologically proficient and efficient in your service delivery.

These admittedly simplistic examples illustrate two keys to service quality; the *perception* of the user, and his or her *expectations*. Managing perceptions and expectations can have a significant impact on how users discern service quality. User perceptions of service quality are typically driven by their assessment of functional quality. Among the key dimensions they will consider are the responsiveness of the service and the reliability of the service delivery. In addition to that they are often influenced by the degree to which the service provider empathizes with them,

provides assurances that the problem will be handled and makes the service seem tangible to the user. All of this implies the need to build trust with the customer. That trust comes largely from communication throughout the service delivery process. The process needs to be viewed as extending beyond the actual service encounter.

3. The Service Delivery Process

One version of this process, as it has evolved at BFI, is presented below.



Agree

As part of the process of service delivery it is important to set user or customer expectations in advance. This can be accomplished by setting either formal or informal service level agreements. Such agreements spell out both what the user expects and what the IS group will deliver in terms of service. Prior to setting these agreements it is important to determine who the recipients of that service are, or who are the customers. Internal customers might consist of other business units and corporate management. External customers could include what we normally think of as customers (i.e., revenue sources), along with suppliers, vendors, and other business partners. It is important to recognize that different customers may have different service expectations.

In thinking about who your customers are in an internal IS organizations it is important to think about terminology. Traditionally, IS groups have refereed to “end users”. By calling the ultimate consumers of IS products and services "customers" instead of "end users", a subtle but significant shift in attitude is encouraged, resulting in a more service-oriented mindset among the IS staff. In part it helps you to reflect more fully on service need as IS customers have evolved. Initially, customers were looking for an IS product that met their needs. Then they began searching for IS services that fulfilled their requirements. Today, customers are in the market for solutions to their business problems. These solutions must include the service and support that accompanies IS products and services. The IS unit that provides quality service can add value to its organization. For example, one of the factors that helps sell Dell computers is the company’s reputation for top flight technical support and service after the sale.

Once the customers have been identified, agreement should be reached with them regarding what services are to be offered, what level or degree of service will be provided, how service delivery will be prioritized, what the services will cost, how it will be paid for and how service performance will be measured. This may involve learning about customer needs and educating the customer and managing his or her expectations. For example, if the customer wants a thirty second response time from the help desk, the implications of staffing and training for this requirement, along with their impact on cost, can be discussed. Further, it is important to work out agreement on service priorities. Dell has addressed this by working in conjunction with their internal customers to pre-define different levels of criticality for different types of problems. They then agree to a desired response time for each class of problems. For example, if a problem directly affects

production, it moves to the top of the list and gets instant response. If it affects an individual user, it is prioritized based on the pre-defined criteria. This illustrates one approach to customer education and expectation management.

Staffing And Training

Staffing levels are affected by the service level agreements between IS and its customers. Staffing and training should be adequate to support the desired level of technical support, combined with a customer-friendly attitude on the part of the service representatives that allow them to be responsive, reliable and empathetic. Staffing the IT organization today is a major challenge. Staffing your service operations is no different, and in some cases more challenging as it requires finding people with both technical and people oriented skills. Some organizations use individuals with technical backgrounds in their IT service organizations and try to instill a service orientation in them. An alternative approach is to hire individuals with "people skills", and often a background in the social sciences or humanities, and give them the technical training required to provide IT services. In either case, the objective is a technically qualified staff with the ability to serve customers.

One way to get the right mix of technical skills and customer orientation is to rotate new hires through the help desk and others aspects of the service operation. This gives them a general overview of the business and typical problems encountered by the customers. As they move into other positions they take with them a heightened level of customer service awareness that has long run payoffs for the entire IS organization.

Measure

Recall the two components of service quality: technical quality, and functional quality. Technical quality can be tracked using standard industry measures, or "hard" data (e.g., system availability, programmer man-hours required to correct a problem, etc.). However, customers often cannot evaluate the technical quality of IS services, so they focus on functional quality, typically measured through a customer satisfaction survey or similar methodology. This affords the IS unit an opportunity to manage the customer's perceptions (a cynic might say it doesn't matter how good the service is; what really matters is how good the customer *thinks* it is). Most IS organizations concerned with service quality will monitor both types of measures. For example, BFI not only measures how long customers are on hold when they call the help desk, they also ask the customers "How long do you think you were on hold?" By noting the difference between customer perception and reality, BFI can anticipate and address minor discrepancies before they become major problems.

More formal measures of the dimensions of service quality can be found from marketing. In particular, an instrument called SERVQUAL can be used to measure both customer expectations and their perceptions of actual service delivery along the dimension of service responsiveness, reliability, empathy, assurance and tangibility. Gaps between performance and expectations on these dimensions can help you to redesign service processes to more closely match user expectations.

Manage

The overall goal of managing service quality should be to constantly improve it, within budgetary constraints. One way to achieve this is by constantly stressing the customer's perspective to the IS group. An example of looking at things from the customer's point of view can be illustrated by the help desk call from a frustrated user. The user complained that his PC was just sitting there, with a message on the screen saying "Hit Enter When Ready". When the customer service representative asked what the problem was, the user replied "How do I know when it's ready?" Although this may seem humorous to most of us, a programmer attuned to his customer might have changed the message to read "Hit Enter To Continue." This trivial change would have prevented at least one phone call to the help desk. In other words process design is critical to good service delivery. Processes should be developed:

- to make customers as independent and self-reliant as possible,
- to deliver support when needed that is rapid, responsive and reliable,
- to admit and correct mistakes quickly when they occur and
- to capture information to change processes and eliminate system and service errors.

To do this you need to begin with actual systems design. It may be helpful in some instances to think out of the conventional service design and delivery box. For example, rather than thinking about how to make your help desk more effective you might think about what would be required to eliminate the help desk all together. While perhaps not a practical short term outcome, thinking about way to design to prevent and preempt problem can be a useful element of your service delivery strategy.

In the short term it is important to instill a proactive attitude in IS staff. Help desk personnel, for example, can be directed not just to solve the immediate problem, but probe for its underlying cause. When this approach is combined with feedback to both the customer (educate the customer) and the system design staff (stress the customer's perspective) the number of repeat calls should diminish over time and satisfaction with IS should rise.

Two examples of service delivery approaches at large organizations should help to bring the process of service delivery management to life.

4. BFI

BFI is a leading North American waste management company which provides collection, recycling, and disposal services for residential, commercial, industrial, and medical waste. BFI has over 43,000 employees worldwide, in thirteen market areas. Revenues for 1998 are estimated to be in the $6 billion range.

BFI's IT group considers itself in the service business, working in cooperation with both internal and external customers. Their objective is to balance customer expectations with the cost of delivering service. This is done through a combination of educating the customer and managing his expectations. One method IT uses to accomplish this is to hold quarterly service quality meetings with their customers. Topics discussed typically include the customer's perception of

service quality, customer needs, and the cost of delivering the requested level of service. For example, if a business unit feels it needs instant response from the help desk, the implications of this in terms of staffing and training are examined, along with their impact on the customer's IS bill.

BFI's customer expectations arise from three sources; company culture, traditional expectations, and management agreements. BFI is a service company, so it is sensitive to internal service issues. In addition, BFI's internal service expectations are tempered by the historical relationship between IS and the business units, which, although rocky at times, has traditionally been good. Consequently, the IS unit faces high expectations from its users. This is reflected in the service level agreements between IS and the business units. While there are a number of formal, written management agreements, there are also important informal and unwritten agreements related to service quality.

To meet the expectations built into these agreements, BFI has instituted a number of specific procedures for measuring and managing service quality.

- Calls, problems, and *promises* are tracked.

- Whenever a problem is not resolved within service level guidelines, automatic escalation procedures are triggered inside the IS unit.

- Service indicators are measured and reported daily and service level measures are tracked over time to show trends.

- Individuals and groups which consistently exceed service standards are rewarded.

- Problems are not just fixed, but traced to their root cause to eliminate the source of the problem.

- IS staff are provided with both internal and external customer service training.

- Regular meetings are held with customers to discuss service quality, customer needs, and IS costs.

- Regular customer surveys are conducted to monitor service perceptions. For example, customers might be asked "How long do you think you are on hold when you call the help desk?" This is then compared to actual hold times to see if there is a difference between the customer's perception and the actual level of service.

- The cost of customer service is included in the overall IS costs, based on the size and revenue of the business unit.

BFI provides a good illustration of the agreement-measurement-management model outlined above and stresses the importance of measurement and communication in effectively managing the service delivery process.

5. DELL Computer

Dell Computer is the world's leading direct computer-systems company. Headquartered in Round Rock, Texas, Dell generated $11 billion in revenue over the last four quarters, this includes an average of $3 million per day in sales via the Internet.

As an IT vendor, Dell provides services to both internal and external customers. As part of a strategy to develop an internal IT service culture Dell has shifted from referring to its internal service customers as "end users" to referring to them as business partners. This helps to stress the importance of cooperative work for internal IT service delivery.

External customer sales and support services are provided through various business units, so by providing quality service to these units the IT group is able to contribute to Dell's primary mission. The core services the IT operations unit is responsible for include problem management (reporting, routing, escalating, and resolving problems), work order management (supporting equipment, telephone, facilities, and IT services additions or modifications), and change management (managing changes to the production environment). A key challenge faced at Dell with respect to IT service delivery is keeping up with the rapid pace of growth in the organization. Even such seemingly straightforward issues as making sure new employees have the right computer accounts when they arrive can be a significant challenge in such a high growth environment. Dell has in large measure turned to service automation to support these processes.

Problems are reported through a variety of methods. Each problem generates a trouble ticket, which is used to track the problem to resolution. To report a problem, customers can send an e-mail or call the help desk (staffed by seventeen full-time operators). An automated network management facility monitors telecommunications and creates trouble tickets as necessary. Some of these facilities alert the service group to problems before the user is aware of them, stressing the value of a proactive approach to managing services.

Problems are tracked and status monitored on a corporate Intranet, which enables the business partner to monitor it. This has helped reduce the volume of calls to the help desk requesting updates and provides users with a greater sense of control. Of course automated problem management is only effective if appropriate business processes are in place to determine how problems should be addressed.

Problems at Dell are categorized as to their severity, ranging from an individual user forgetting his password to production outages to organization-wide implementation of new technology. These categorizations are based on joint agreements between this IT group and teach of their business partners. Problem management meetings are held to review and discuss problems by level, with the emphasis on identifying and eliminating the root cause of the problem. Various metrics are used to monitor service delivery levels. Internal escalation procedures are in place to address problems which are not resolved according to pre-defined criteria. There is always a senior

IT operations manager on call who has the ultimate responsibility to ensure that service problems are addressed. Dell has determined that unresolved problems become more costly as they are escalated, so a review procedure is in place to determine if the problem was resolvable at a previous level. These items are consolidated and reviewed so that any necessary changes can be made to prevent re-occurrences.

Dell's IT group has worked with their business partner's to agree upon problem severity levels, business partner responsibilities, service level agreements, and escalation procedures. Take the case of an individual facing a critical deadline who encounters a problem with his PC. Normally, problems affecting only one individual receive a low priority. However, individuals can request an escalation in severity level. If they do so, they are subject to certain increased responsibilities such as staying at the PC until a service representative is available. This flexible approach to problem resolution helps manage customer expectations and perceptions.

The Dell approach to IT service combines high levels of automation to carry out service requests, along with a cooperative process for determining the requirements and expectations as well as audit processes designed to uncover and eliminate the root cause of service problems.

6. Closing Notes and Coming Attractions

These two examples and our discussion at the roundtable re-enforce the notion that while IT service delivery is a challenging task in most organization there are strategies that will help to improve service quality. At the root of those strategies is realistic communication with the customer, that helps to set realistic expectations, a service delivery process that is proactive, responsive and reliable to customer needs and a measurement process that takes into account customer perceptions of service quality. By doing this and continually working to refine service processes the delivery of high quality IT service can become a less daunting challenge.

Our next ISRC seminar is scheduled for Thursday February 26th, beginning at 8:30 at the UH Hilton on the UH Main Campus. This will be a special full day session on Managing in an Era of Disruptive Technology, with a special focus on the Energy Industries. We are offering this program jointly with the College's Energy Institute. Our morning session will provide a strategic overview of how business strategy is increasingly shaped by new information technology. Our featured speaker is Annette Tonti, Executive Director of the Vanguard Group. In the afternoon we will have additional presentations focussed on issues related to designing a flexible IS organization and implementing new technologies in the Energy Industries. We hope you will join us.

7. For further information:

articles

Berry, L., and Parasuraman, A. (1997) "Listening to the Customer: The concept of a service-quality information system", Sloan Management Review, Spring 1997, 38(3): p. 65-76.

Ferguson, J., and Zawacki, R.A. (1993) "Service Quality: A critical success factor for IS organizations", Information Strategy: the Executive's Journal, Winter 1993, 9(2): p. 24-30.

Melville, Garrey (1995) "From DP Department to EDS - It is time for IT Departments to consider branding", Managing Service Quality, 1995, 5(6): p. 6-8.

Pitt, L., Watson, R., and Kavan, C. (1995) "Service Quality: A measure of information systems effectiveness", MIS Quarterly, June.

web sites

www.duke.edu/~pverghis/hdeskfaq/htm

www.hug.co.uk/about/index.htm