

A CATEGORIZATION OF BUSINESS-TO-BUSINESS SERVICE ATTRIBUTES

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Abstract

The increasing use of outsourcing and Service Agreements motivated a new method of specifying and measuring service quality. This method, incorporating the expression of a service as a hierarchy of sub-services, is especially appropriate when complex services are outsourced. At each node of the hierarchy are specified service attributes and ways in which service performance will be measured. The use of a hierarchy minimizes replication, important when writing and negotiating voluminous Service Level Agreement underpinning an outsourcing relationship. A categorization of service attributes analogous to SERVQUAL but appropriate to Business-to-Business relationships is proposed.

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Outsourcing is 'The act of transferring some of a company's recurring internal activities and decision rights to outside providers as set forth in a contract' (Greaver, 1999, p 3). The terms *client* and *vendor* are the firms¹ (or departments) respectively obtaining and supplying services through an outsourcing agreement. Users may be the vendor's staff and/or customers. Information Technology (IT) applications are the most frequently outsourced services but the constantly increasing scope of outsourcing includes HRM services, payroll, security, delivery, printing and distribution, back-office processing, training, call center services, catering, cleaning, professional services such as legal and accounting, promotion, and market analysis.

Constant advances in digital technology drive outsourcing. The World Wide Web (WWW) allows organizations to interchange digital data instantly, without regard to distance, with perfect fidelity, and at nearly zero marginal cost. Internal functions such as payroll have thereby lost their natural monopolies and are forced to compete with specialist, external providers such as ADP. Offshoring gives access to labour costs of about 15% of American labour costs (Overby, 2003) and is consequently burgeoning (McKinsey&Company, 2003, p. 5). The data underlying this article was obtained from formal interviews with executives of vendors and informal discussions with numerous executives involved in or considering outsourcing.

Marketing literature on measuring the quality of service to consumers is voluminous, several categorizations of attributes used to define and measure the quality of goods and services have been proposed; SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988), that stresses the gap between expectations and actuality, is the best known. There is less literature germane to measuring the quality of inter-organizational services. Some exceptions are: Lu (2003) (shipping), Homburg (1999), Kumar (2004), Landrum (2004) (Information Technology), Babakus (1995), Holmlund (1995) (a technology), Moore (1994), and Hopkins (1993)(transport).

Business-to-business (B2B) relationships differ from Business-to-Consumer (B2C) relationships in that:

- They emphasise tangible measures of performance.
- Psychological 'gap' analysis is not germane.
- They usually comprise repetitive delivery of a bundle of related services.

When writing and negotiating an outsourcing contract, it is necessary to precisely define the services to be provided by the vendor. The bulk of the contract comprises a Service Level Agreement (SLA) (Sturm, Morris, & Jander, 2000) which in turn comprises Service Level Clauses (SLCs). Each SLC pertains to a single service (or group of services) applying to one (or several) groups(s) of users and will specify:

- *The service provided.* If the agreement pertains to delivery to households, aspects such as: packaging; allowed times of delivery; the delivery information to be provided by the client; procedures triggered if delivery cannot be made; and appearance and politeness of delivery staff must be specified.
- *Client obligations.* The client must usually provide timely and accurate data (e.g. on deliveries to be made) to the vendor.

¹ For brevity, the term firm encompasses all organisations: profit and non-profit.

- *The payment per service* (if applicable).
- *Performance targets and methods of measuring performance*: For a service such as the maintenance of an in-house computer network, a complex set of measurements of aspects of performance (e.g. response times, down time, and security violations for individual applications and locations, and overall performance) will be required (Buco et al., 2004). There will be a corresponding set of performance targets.
- *Computation of penalties and/or bonuses*: The agreement must specify how penalties and/or bonuses are calculated (Buco et al., 2004, Table 1).
- *Other clauses* pertaining, for example, to security and privacy may be required.

Writing these detailed clauses is laborious but necessary and beneficial especially when critical internal processes are outsourced, what was implicitly agreed with an internal supplier must be made explicit. The exercise is also beneficial because it may uncover no longer necessary or embarrassingly inefficient business processes.

ANALYSIS OF SERVICES

Defining services and their attributes is a necessary preliminary to writing SLCs. It is convenient to analyse and specify the services to be provided through outsourcing hierarchically. The units of analysis are service, user group (a group of users with homogenous needs) and service element (an element of the service). For baggage handling, services elements include check in, scanning, loading, unloading and return to customer. Other services, e.g. lost baggage may be triggered.

The hierarchical approach should be used flexibly, in the context of airline baggage handling, it may be appropriate to classify baggage services by customer type (first class, business class, frequent flier etc). For different purposes, it may be fruitful to initially classify luggage as cabin or checked, then by customer type.

A TAXONOMY OF SERVICE ATTRIBUTES

The following proposed categorization of service attributes should be used in the SLA to specify B2B services and ways in which their quality is measured. This categorization deemphasizes intangible measures such as customer satisfaction. It is the client's obligation to design and negotiate a system that satisfies internal or external customers. Attributes' relevance varies amongst services and customers classes.

Accessibility

A service is accessible if, assuming that it is working perfectly and to schedule, it is usable by customers. Access to an automatic teller machine (ATM) may be restricted because there is no ATM within a reasonable distance; an ATM operates for limited hours; not knowing English precludes use; or physical handicaps prevent use. Accessibility differs from availability in that it implicitly expresses client policies.

Availability

Availability is the fraction of the scheduled up time that the service is actually working. An ATM scheduled to work from 6am to midnight but is down for 30 minutes has availability

97.2%. In complex system such as an in-house computer network, the calculations of availability is multidimensional; at a given time it may be working at some locations, some applications may be malfunctioning, some databases or email addresses may not be accessible or the response time may be so slow as to preclude use. Several measures may be combined to give an aggregate measure of availability.

Performance

Performance criteria vary with the kind of service. It is important to consider the variance as well as means of performance measures. An apparently satisfactory average response time may conceal a small number of clients suffering long waits. Some common aspects of performances are:

Time

Components of time include:

Response: How long does it take to talk to a call centre operator? Long waits for call centre service imply that a customer is unimportant. Long response times may discourage use of a computer system and be tantamount to unavailability.

Duration: The time taken to perform the service once started. Some services are not performed immediately on request but are regularly scheduled. Delivery to a suburb may be scheduled each second day, and computer systems generating reports may be run overnight.

Turnaround: The turnaround time is the time between requesting work and the work being performed and delivered.

Competence

The vendor's competence is manifestly important but may have difficult to measure components exemplified by:

When a repair is performed it may be impossible to determine whether the repaired item will continue working for several years or fail prematurely.

A recruitment agency presents a shortlist of three candidates; it is difficult to compare the shortlist's quality with the pool of potential candidates. Has the process not attracted (or failed to eliminate) some suitable (or hopeless) applicants?

Is a computer system "user-friendly"?

Accuracy

Was tax calculated accurately? Were the goods ordered correctly packaged and delivered to the right address? Was a diagnosis correct?

Capacity and Flexibility

The number of transactions per hour a network or call centre can manage per hour; the number of patients that seen per hour; or the number of deliveries that can be made each day may be relevant. The vendor may have enough capacity to meet normal demand but not enough to cope with peaks caused by marketing campaigns or Christmas orders.

Flexibility is the vendor's ability to customise services and to cope with exceptional cases. Although a recruitment agent and client may have agreed on a standardised methodology of filling staff vacancies, the detail will differ amongst vacancies to be filled. The parties may acknowledge the impossibility of defining in advance every possible job description and agree to rely on the vendor's expertise to create job descriptions when necessary. This implies that some aspects of service cannot be definitively expressed in legally binding terms and that the client must rely on the vendor's commitment and professional competence. Most organisations have products or customers whose importance warrants special treatment.

Other

Security and privacy (of customer data), *empathy and ambience* (in emergency wards and restaurants), *status and prestige* (in corporate travel) may also be important attributes.

Intangible attributes are (by definition) difficult to measure unambiguously. Customer surveys are popular but may not be reliable: many people do not fill them out; believe that critical comments staff will result in dismissals; or complain of being "surveyed out and return facetious responses. It may be better for managers to "manage by walking around". By visiting a delivery depot, hospital ward or helpdesk a manager may be able to sense that staff are neatly dressed, positive and answer inquiries cheerfully.

EXAMPLE: SUPPLY OF PATIENTS' MEALS

A hospital, perhaps dissatisfied with current internal arrangements, decides to outsource the supply of patients' meals. There are many aspects of meals and their delivery to patients that were informally or implicitly agreed with the internal department but must now be negotiated formally and explicitly with a vendor. Prior to negotiating, hospital managers decide that the following attributes are critical:

- Cost
- Times at which meals are served
- Nutritional and calorific value
- Palatability
- Choice and variety at each meal and over a period: It is desirable for patients to have a choice of breakfasts but, even if there is no choice at an individual breakfast, patients should have a variety of breakfasts over a week.
- Ambience: Are meals to be served on paper plates with plastic cutlery or on china with cloth serviettes?
- Temperature: how hot does an ostensibly hot meal have to be when served?
- Food texture: Some patients cannot manage normal food.

Each criterion's importance varies amongst kinds of patient: e.g. nutritional value and variety are less important for short-term patients. Hospitals have to provide different diets for diabetic, renal, aged, cardiac, and surgical patients; and some patients require vegetarian, halal, or kosher food. The SLA will reflect laws pertaining to safe preparation, storage and handling of food.

The parties must negotiate definitions of terms such as nutritional value and palatability; the way in which they are to be measured; performance targets; and penalties. Some attributes can be measured objectively, for others (palatability and variety) patient surveys, agreed menus or expert opinion may be used. Negotiations will be complicated by having to agree on the resources each party will provide, for example: will hospital staff or vendor staff serve

the meals? Will the vendor be able to use hospital facilities to park vehicles and dispose of rubbish? The parties must negotiate price regimes that may depend on volumes.

Initially, the requirements can be expressed as a natural hierarchy (Fig 1). However, this simple hierarchy must be changed because some attributes such as nutritional value or variety pertain not to individual meals but to the set of all meals or all breakfasts served in a week. The simple hierarchy of Figure 1 must therefore be modified as shown in Figure 2 that shows, for one class of patient, a more elaborate hierarchy of service elements and their attributes. At the node "A week's breakfasts" the parties must negotiate a definition of the attribute "variety"; how it will be measured, target levels, and penalties or bonuses for under or overachievement.

The advantage of recognising hierarchies is that the volume of documentation can be reduced by parameterisation. The service level clauses for each kind of meal should have the same form, but different values of parameters should be inserted to express e.g. requirements pertaining to the different times at which each meal is served, and the required calorific value and nutritional value of a meal or set of meals.

CONCLUSION

Outsourcing, especially offshoring, is becoming a widely used business technique because it can reduce costs and improve service quality by giving clients access to lower labour costs, expertise, and economies of scale. Service level agreements help the parties precisely define requirements, facilitate negotiations, codify agreements reached, and provide a mechanism for changing the agreement and monitoring the vendor's performance. Exact specification of requirements entails precise definition of service attributes. The SERVQUAL model is oriented to consumers' requirements. The proposed scheme is appropriate to contracts between corporations in which attributes such as reliability, competence, unit costs, and turnaround times are likely to be more important than intangibles such as empathy and ambience.

Figure 1: A hierarchy of user groups and service elements.

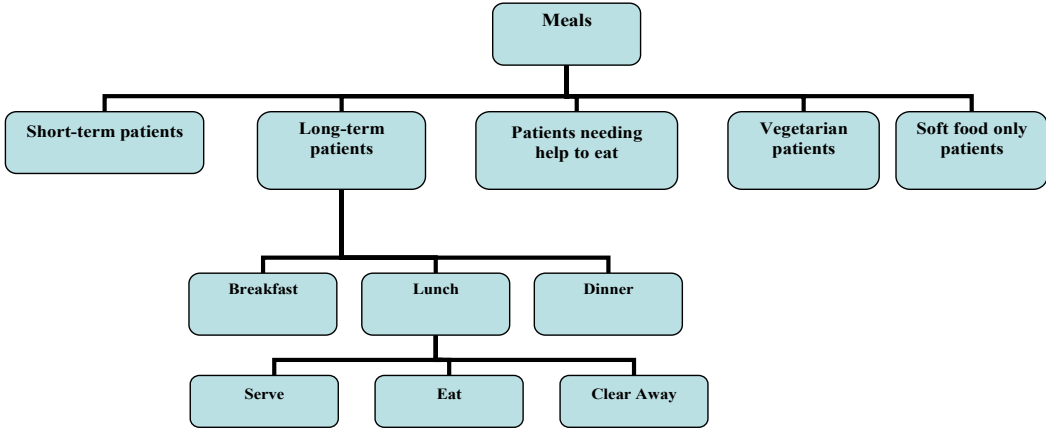
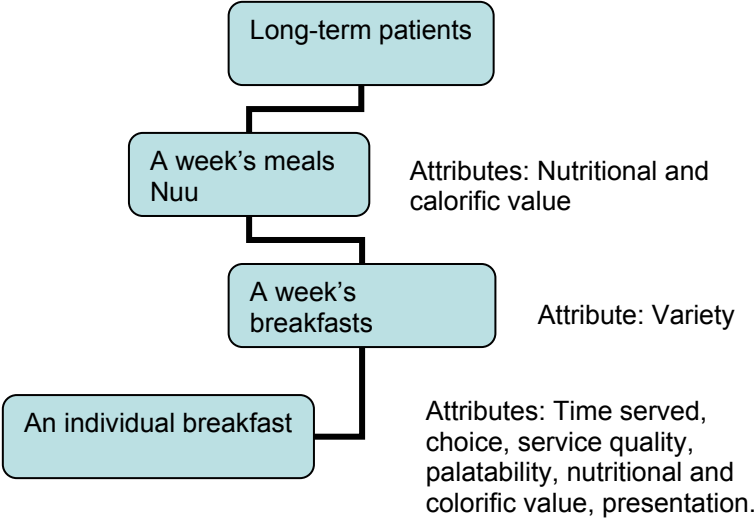


Figure 2: A hierarchy of service elements and attributes



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