

Web Customer Quality of Experience Analysis: ACME On-line Accounting

Executive Summary

The purpose of this assessment is to analyze ACME On-line Accounting for the purpose of improvement with respect to quality of experience from the view point of subscribers in the context of normal business hours. The approach taken was to measure service quality the same way customers use services: from the "outside-in" by verifying that customers are able to accomplish the tasks they need to accomplish.

To improve customer satisfaction, loyalty, retention, purchase decisions and the financial performance of ACME On-line Accounting requires monitoring and diagnosing subscribers perception and expectation of ACME On-line Accounting:

- HOW subscribers perceive service quality (using scientifically accurate assessment techniques)
- WHAT subscribers find important (and discovering communities of interest)
- WHY subscribers feel as they do (through examining value aspects and quality dimensions)
- WHERE subscribers use the service (with open access to a social web portal)

There are eight Web Customer Quality of Experience (CQoE) factors which directly affect customer satisfaction, loyalty, retention, purchase decisions and thus the profitability of ACME On-line Accounting. Improving these CQoE factors is critical to getting and keeping increasingly savvy and choosy subscribers -- who have many alternatives to ACME On-line Accounting. The goal of this assessment is to determine which combination of factors matter most to subscribers of ACME On-line Accounting.

Once armed with this information the provider can determine where and how best to invest within the service lifecycle in order improve quality and focus on delivering value. The following summary comprises an analysis of ACME On-line Accounting Web Customer Quality of Experience (CQoE) for Subscribers:

- Service quality scores 67% out of a possible 100% -- customers are not getting the quality of experience they desire and are not satisfied with the service. Note that 100% is the MINIMUM expected performance for quality, so all scores less than 100% need investigation. For example a CQoE score of 80% is still 20% below customer MINIMUM expectations. Strive to meet customer expectations and that means attaining a score of 100%.
- ACME On-line Accounting is a service of Moderate value to subscribers, with a valuation of 60 out of a possible 100 points. Note that this score relates to how important the Utility -- or what the service does for them -- is. Service value often moderates expectations for quality.

The following CQoE Chart™ chart is an easy way to visualize and understand service quality and value scores -- a visual representation of Web Customer Quality of Experience. The location of the point provides a quick synopsis of how subscribers feel about ACME On-line Accounting.

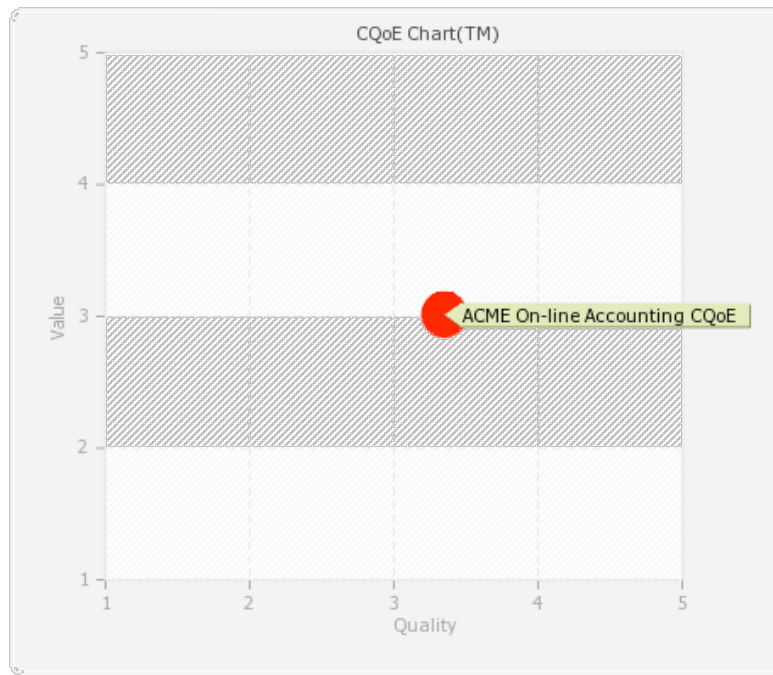


Figure 1. CQoE Chart™

The point represents CQoE. The Y-Axis shows service value. The X-Axis shows service quality (utility and warranty). Color coding helps explain the data as follows: Green indicates that the service is meeting consumer requirements, Red indicates that it is not, and Yellow indicates that it exceeds requirements. In general a red point means you may need to take action to improve, and a yellow point can mean that there are opportunities to reduce costs or that there may be a competitive advantage.

Just 36% of all e-service customers industry-wide are satisfied with their service, and customers of ACME On-line Accounting seem to be in this group. The service is probably experiencing churn, low conversion rates, dropped transactions and there may be an increased volume of support calls due to the CQoE.

ACME On-line Accounting is not meeting customer requirements. Possible reasons for this failure are many, but usually due to failing strategy (Gap 1), incorrect service design (Gap 2), failure to transition and deliver (Gap 3) or incorrect service marketing and communications (Gap 4.)

The balance of this document includes details of CQoE: the three components of service value and the five dimensions of service delivery. It concludes with a recommended course of action. Following the summary are detailed analysis and recommendations pertaining to specific dimensions of service delivery.

Service Value

We measure value using the generally accepted asset valuation system based on customer perception of Confidentiality, Integrity and Availability risks related to using the service. The service value survey indicates that ACME On-line Accounting is a service of Moderate value scoring 60 out of a possible 100 points.

When asked to choose the highest value component of the service subscribers chose as follows. (More points means higher value, note that total did not need to equal 100.)

- Integrity (80/100) *** Most important component
- Availability (52/100)
- Confidentiality (49/100)

The most important value component is Integrity -- the requirement that this service and its data be protected against changes by unauthorized personnel and activities. In other words, customers of ACME On-line Accounting consider the most valuable aspect that the data and information related to this service be highly accurate.

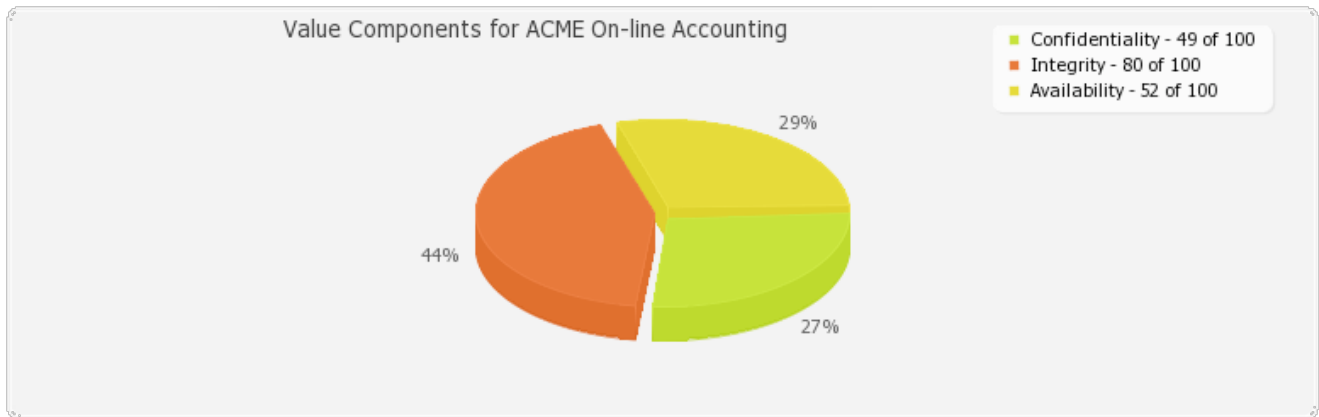


Figure 2. Analysis of ACME On-line Accounting Value Components for subscribers.

This information is critical since it sets the stage for what subscribers base their perceptions of value. Understanding what aspect of a service customers find valuable allows the service provider to focus in that area.

Service Delivery

The quality of service delivery (Web Customer Quality of Experience or CQoE) is determined based on measuring customer perceptions and expectations. We measure experience quality based on its Utility (what it does) and Warranty (how it does it) across five dimensions of service quality: reliability, responsiveness, assurance, empathy and tangibles.

When asked to distribute 100 points between the following service dimensions subscribers ranked them as follows. (More points means higher importance, note that total had to equal 100.)

- Reliability (50/100) *** Most important dimension
- Responsiveness (25/100)
- Assurance (15/100)
- Empathy (5/100)
- Tangibles (5/100)

A service delivery survey consisting of 2 completed interviews indicate that subscribers consider Reliability - how closely the level of service provided matches any promises, guarantees, or formal statements made - to be the most important aspect of delivering service, and their satisfaction with the service.

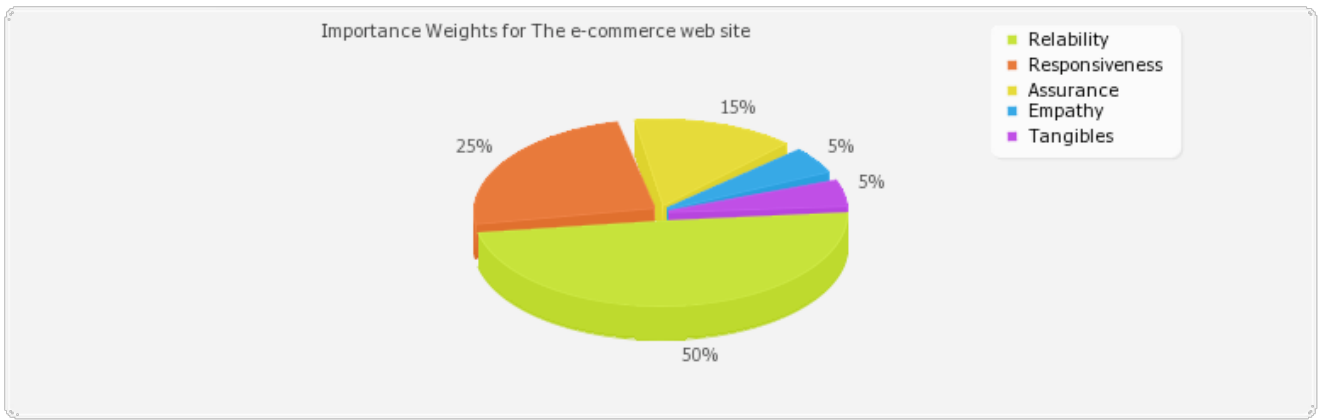


Figure 3. Analysis of ACME On-line Accounting Dimension Weighting for subscribers

Importance shows what matters to subscribers and represents which service aspects or qualities they consider significant -- and what the provider must deliver to satisfy customers. After measuring the relative importance of dimensions to customers, the next step is to understand current perception of performance -- the Zone of Tolerance or ZOT.

The Zone of Tolerance

For each of the five dimensions the specialized survey instrument collects specific information. The way this information is collected produces three values for each dimension. The three values are: MINIMUM SERVICE LEVEL, DESIRED SERVICE LEVEL and PERCEIVED SERVICE LEVEL:

- MINIMUM SERVICE LEVEL is the minimum level of performance the respondent considers adequate. Below this level and he or she could not complete their assigned jobs.
- DESIRED SERVICE LEVEL is the performance the respondent desires, and what he or she considers to be the best available anywhere from any provider.
- PERCEIVED SERVICE LEVEL indicates how the respondent considers the current level of service provided to him or her.

These three measures work together to create a box bound on the top by desired service level and the bottom by minimum service level. This box is referred to as the Zone of Tolerance. The last measure, perceived service level, positions ACME On-line Accounting provided within the Zone of Tolerance. If perceived service falls below the Zone of Tolerance, subscribers do not believe the service meets minimum adequate requirements--and often indicates that the provider needs to focus improvement efforts more in that particular dimension. If perceived service falls above the Zone of Tolerance, the service is providing more than required--and often indicates either a competitive advantage to market, or opportunities to reduce costs on the provider side.

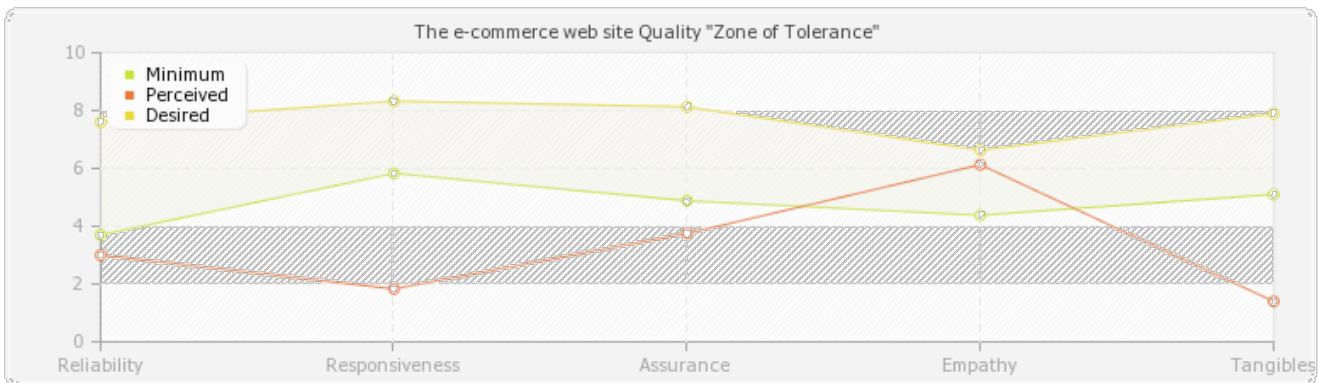


Figure 4. Analysis of ACME On-line Accounting Service Quality for subscribers.

In all cases delivering outside the Zone of Tolerance requires investigation. The Zone of Tolerance is used to describe the upper and lower boundary thresholds of acceptable service quality. It is important to note that falling below the level determined as adequate generally means a negative impact on customer outcomes. However, in some cases, exceeding customer expectations can indicate customer delight and reflect opportunities that the provider can use in marketing towards competitive advantage. In other cases exceeding the upper bound may be undesirable as delivering service at a level higher than that which is been deemed desired by customers often means the provider may be ignoring other situations which require attention, possibly in balancing resource allocations, and potentially wasting money.

The values that form the Zone of Tolerance also produce two metrics: MSA and MSS. MSA (Measure of Service Adequacy) is the difference between the minimum level of service customers are willing to accept, and their perception of current service. MSS (Measure of Service Superiority) is the difference between the desired level service customers would ideally prefer, and their perception of current service. MSA and MSS provide an easy to understand scoring and benchmarking system for quality. Simply put if MSA is less than zero then the service is under-performing, is not meeting expectations and may present improvement targets; if MSS is greater than zero then the service is over-performing -- and may represent opportunities for savings.

Because each of the primary characteristics has its own Zone of Tolerance and perception values, it becomes very easy for the service provider to understand which particular dimension is the cause of service quality issues.

Importance Moderates Performance

The Zone of Tolerance shows how well the provider meets customers expectations by dimension. However, it is most useful to also know which dimension customers think is most important. Using these two data points together helps produce a very accurate understanding of what the provider must deliver to satisfy customers.

The next chart (Analysis of ACME On-line Accounting performance) compares perception of service quality with what customers consider important. This graph is useful to understand at a glance how well service delivery meets customer expectations.

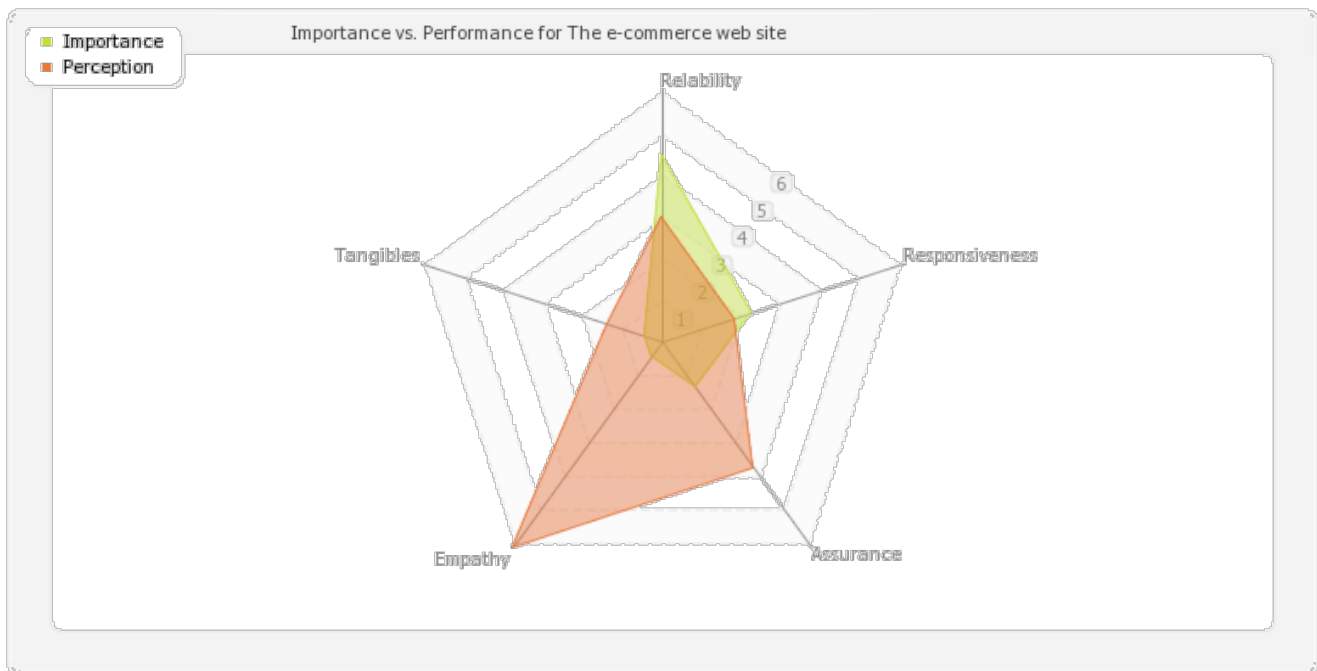


Figure 5. Analysis of ACME On-line Accounting performance .

- **Reliability** perception is 33% below importance thresholds*
- **Responsiveness** perception is 19% below importance thresholds*
- **Assurance** meets or exceeds importance thresholds**
- **Empathy** meets or exceeds importance thresholds**
- **Tangibles** meets or exceeds importance thresholds**

*Check those dimensions falling below importance levels as they may represent improvement areas.

**Check those dimensions exceeding importance as they may represent either competitive advantage or an opportunity to reduce costs.

Service Quality Assessment Summary

Service quality is a measurement of current service performance mapped against expectations. If perceptions of current performance are below minimum requirements, customers consider the service quality low. Perceived service levels show the relative satisfaction the interviewee has with the service. Higher is better; lower is worse. Service quality comes from its Utility (functional aspects) and Warranty (supporting aspects).

- Utility scores 81% out of a possible 100% -- the service is failing to deliver the required functionality to meet customer needs.
- Warranty scores 65% out of a possible 100% -- the service is not meeting the pledge made in terms of how it works, how it's delivered and/or how it's supported.

Failing to meet subscribers' service Utility perceptions is a significant concern. Utility refers to the base or core functionality of the service. Failing to meet Utility requirements means customers do not think ACME On-line Accounting does what it is supposed to do for them.

Failing to meet service Warranty perceptions is also a concern since it indicates that customers do not think how the service is delivered meets expectations. Failing to meet Warranty expectations means subscribers feel that the experience and interaction with the provider is less than acceptable.

ACME On-line Accounting for subscribers has a service level score of 67% -- earning a value of 3.22 on a scale of 4.78 (adequate service level) to 7.72 (desired service level). The Measure of Service Adequacy or MSA (service level score - minimum adequate service level required) is 33% below acceptable limits at -1.6. Customers of ACME On-line Accounting do not feel that the service provider is meeting their needs with this service. The lower the MSA score, the worse subscribers feel about the ACME On-line Accounting service.

The data indicate that you should examine first the Reliability Dimension of the service, focusing on those aspects of its service delivery that relate or pertain to service Integrity. You should perform a gap analysis on the Integrity of the Reliability dimension to uncover the causes of this failure within the service provider organization. Click to start your gap analysis of the Reliability dimension.

APPENDIX 1. Service Quality Assessment Detail

Services have five primary dimensions of measurable quality: Reliability, Responsiveness, Assurance, Empathy and Tangibles.

Reliability

Reliability describes the ability to perform the promised service dependably and accurately.

Reliability is the ability of the system or component performance required functions under stated conditions for a specified period. Service reliability is the ability to deliver promised service dependably inaccurately. While service intensifiers can moderate expectations, reliability is usually the most important dimension of any service.

From one perspective reliability includes a strong component of "uptime". Another strong component contained within the concept of the reliability dimension is capacity. It is critical to have sufficient capacity in order to have reliable and consistent service operation. We have all experienced Web e-services that have variable performances. One day the service is very fast, perhaps web pages load quickly. A little bit later in the day as usage increases the system slows down to a crawl, loading web pages might take forever.

Also included within the concept of reliability is integrity. Integrity refers to the accuracy of information. Service consumers require confidence that if they for example create and store document, that document will be there--intact and as they left it--the next time they need it.

If the provider is unable to quickly resolve outages, consumers will decide the provider is unreliable. Likewise, if one outage takes a long time to restore, and a similar outage is restored very quickly, consumers will again come to the conclusion that the service provider is of low quality and unreliable.

An analysis of service quality found the following signs and symptoms relating to Reliability:

- It is the worst performing dimension identified.
- This is the most important dimension identified.
- Reliability generally represents about 33% -- and in this case it represents 50% -- of consumer satisfaction.
- The perception score (quality) for Reliability is 81% (3.00 with a 3.70 minimum.) (0.7 points lower than consumer expectations.)
- The Zone of Tolerance for this dimension has a minimum (lowest) requirement of 3.70, a desired (highest) level of 7.60.
- Optimal quality will probably occur within the range of 5.16 to 6.63.

The unweighted or raw Measure of Service Adequacy (MSA) and Measure of Service Superiority (MSS) scores are -0.70 and -4.60; the weighted scores are -0.35 and -2.30.

Since MSA for Reliability is negative, consumers of ACME On-line Accounting in subscribers may not feel that the provider is meeting their needs. The lower the score -- and the higher its importance -- the worse consumers probably feel about this attribute. This is concerning because users indicate that Reliability represents 50% of consumer satisfaction (that is, quality).

Quality appears to be poor -- below requirements. Since consumers do not perceive service as meeting their expectations for the Reliability dimension of ACME On-line Accounting, to obtain a prescription you should start a Gap Analysis on it.

Reliability primarily concerns whether the provider delivers the service, in other words, its functional utility or what it does. Reliability encompasses timeliness and accuracy in delivering service. Reliability specifically pertains to meeting agreed delivery dates, achieving project deadlines, delivering services accurately the first time, responsibly handling customer complaints, and maintaining accuracy in records. As well as service delivery, Reliability includes downtime due to systems failures or software problems, processing delays and insufficient capacity.

The prognosis for Reliability failures often depends upon:

- Providing service as promised
- Dependably handling service problems
- Performing services right the first time
- Providing services at the promised time
- Maintaining error-free records
- Following specifications
- Error-free statements and reports

Responsivness

Responsiveness is the willingness and readiness to provide service -- help consumers and provide prompt service and support. Key components of responsiveness include telling service consumers exactly what services will be performed. Responsiveness includes keeping service consumers apprised of when they will receive service and also of the status of tickets etc.

Responsiveness includes the concept of competence, courtesy, credibility, and security. It also enters into the infrastructure -- if data transmission rates do not meet customer expectations they feel the provider is unresponsive. Consumers also may find failing to respond to quickly to email or online queries is also being unresponsive. Responsiveness is generally measured to be second in importance to reliability. Service managers should emphasize responsiveness and reliability if there are real quality issues or there are limited resources to improve quality.

An analysis of service quality found the following signs and symptoms relating to Responsiveness:

- Responsiveness generally represents about 23% -- and in this case it represents 25% -- of consumer satisfaction.
- The perception score (quality) for Responsiveness is 31% (1.83 with a 5.83 minimum.) (4 points lower than consumer expectations.)
- The Zone of Tolerance for this dimension has a minimum (lowest) requirement of 5.83, a desired (highest) level of 8.33.
- Optimal quality will probably occur within the range of 6.77 to 7.71.

The unweighted or raw Measure of Service Adequacy (MSA) and Measure of Service Superiority (MSS) scores are -4.00 and -6.50; the weighted scores are -1.00 and -1.63.

Since MSA for Responsiveness is negative, consumers of ACME On-line Accounting in subscribers may not feel that the provider is meeting their needs. The lower the score -- and the higher its importance -- the worse consumers probably feel about this attribute. This is somewhat concerning because users indicate that Responsiveness represents 25% of consumer satisfaction (that is, quality).

Quality appears to be poor -- below requirements. Since consumers do not perceive service as meeting their expectations for the Responsiveness dimension of ACME On-line Accounting, to obtain a prescription you should start a Gap Analysis on it.

Responsiveness includes the concept of competence, courtesy, credibility, and security. It also enters into the IT systems -- if data transmission rates do not meet customer expectations they feel the provider is unresponsive. Consumers also may find failing to respond to quickly to email or online queries is also being unresponsive. Responsiveness is generally measured to be second in importance to reliability. Service managers should emphasize responsiveness and reliability if there are real quality issues or there are limited resources to improve quality.

The prognosis for Responsiveness failures often depends upon:

- Keeping customers informed as to when tasks will be performed
- Providing prompt service to consumers
- Willingness to help consumers
- Willingness and readiness to respond to consumers requests
- Responding quickly when there is a problem
- Being willing to answer questions
- Giving specific times for service accomplishments
- Treating consumer situations with care and seriousness
- Telling consumers exactly what services will be performed
- Providing prompt service to consumers
- Willingness to help consumers
- Readiness to respond to consumer requests

Assurance

Assurance is the knowledge and courtesy the service provider expresses during interactions with consumers, and the ability of the provider to inspire trust and confidence. The dimension of Assurance measures the level of safety and confidence felt when using the service or working with the service provider. Assurance includes concepts such as security of transactions, sensitive information and risk. If security precautions do not measure up to expectations trust and confidence can be lost. Assurance also extends into technical systems as well, sometimes requiring physical proof of a completed transaction. The importance of the Assurance dimension increases in proportion to the risk consumers feel regarding the service or service provider.

Assurance reflects the competence of the service provider, the courtesy extended to its consumers, and the security of its operations. Assurance has to do with knowledge and courtesy of employees and their ability to inspire trust and confidence in the consumers they serve (security, confidentiality, integrity, etc.) Assurance makes customers feel confident in the service provider employees serving them, and safe in their transactions.

An analysis of service quality found the following signs and symptoms relating to Assurance:

- Assurance generally represents about 19% -- and in this case it represents 15% -- of consumer satisfaction.
- The perception score (quality) for Assurance is 77% (3.75 with a 4.88 minimum.) (1.13 points lower than consumer expectations.)
- The Zone of Tolerance for this dimension has a minimum (lowest) requirement of 4.88, a desired (highest) level of 8.13.
- Optimal quality will probably occur within the range of 6.10 to 7.32.

The unweighted or raw Measure of Service Adequacy (MSA) and Measure of Service Superiority (MSS) scores are -1.13 and -4.38; the weighted scores are -0.17 and -0.66.

Since MSA for Assurance is negative, consumers of ACME On-line Accounting in subscribers may not feel that the provider is meeting their needs. The lower the score -- and the higher its importance -- the worse consumers probably feel about this attribute. This may not be too concerning because users indicate that Assurance represents 15% of consumer satisfaction (that is, quality).

Quality appears to be poor -- below requirements. Since consumers do not perceive service as meeting their expectations for the Assurance dimension of ACME On-line Accounting, to obtain a prescription you should start a Gap Analysis on it.

Assurance reflects the competence of the service provider, the courtesy extended to its consumers, and the security of its operations. Assurance has to do with knowledge and courtesy of employees and their ability to inspire trust and confidence in the consumers they serve. Assurance makes customers feel confident in the service provider employees serving them, and safe in their transactions. Assurance also includes service provider employees being knowledgeable and courteous to consumers.

The prognosis for Assurance failures often depends upon:

- Instilling confidence in consumers
- Making consumers feel safe in their transactions
- Being consistently courteous
- Having the knowledge to answer customer questions
- Provider staff using technology quickly and skillfully
- Provider staff considering the property and values of clients
- Considerate and polite communications (telephone, email, instant messaging, etc.)
- Giving responses that are accurate and consistent with other reliable sources
- Ensuring the consumer that service provided was done correctly

Empathy

Empathy measures the level of caring, individualized attention provided to consumers. Empathy means service

employees make consumer needs their top priority. It includes listening in a caring fashion, making an effort to understand, and giving individualized attention. Empathy also includes offering convenient business hours and being available for support or service when needed.

Empathy is important to provider management and staff at all levels since most customers complain that the provider (or its people) do not understand their needs. Empathy scores can be improved by addressing Gap 1 issues through improved service strategy.

An analysis of service quality found the following signs and symptoms relating to Empathy:

- Empathy generally represents about 15% -- and in this case it represents 5% -- of consumer satisfaction.
- The perception score (quality) for Empathy is 140% (6.13 with a 4.38 minimum.) (1.75 points higher than consumer expectations.)
- The Zone of Tolerance for this dimension has a minimum (lowest) requirement of 4.38, a desired (highest) level of 6.63.
- Optimal quality will probably occur within the range of 5.22 to 6.07.

The unweighted or raw Measure of Service Adequacy (MSA) and Measure of Service Superiority (MSS) scores are 1.75 and -0.50; the weighted scores are 0.09 and -0.03.

Since MSA is positive, and MSS is negative, quality falls within the zone of tolerance. Consumers of ACME On-line Accounting in subscribers seem to feel that the provider organization is meeting their needs with regard to Empathy.

Quality falls within expectations, so there is no need to perform a gap analysis at this time.

It appears that Empathy is meeting requirements. Take efforts to sustain the current level of performance.

Tangibles

The Tangibles dimension measures how well the physical aspects of the service meet expectations. For most Web e-service customers Tangibles are often the least important. However it must be noted that all e-services have some element of tangibility. In other words, there is always some user interface device through which the customer accesses the service. While the condition of the device may not be important in some situations, it may be critical in others.

An analysis of service quality found the following signs and symptoms relating to Tangibles:

- Tangibles generally represents about 11% -- and in this case it represents 5% -- of consumer satisfaction.
- The perception score (quality) for Tangibles is 27% (1.40 with a 5.10 minimum.) (3.7 points lower than consumer expectations.)
- The Zone of Tolerance for this dimension has a minimum (lowest) requirement of 5.10, a desired (highest) level of 7.90.
- Optimal quality will probably occur within the range of 6.15 to 7.20.

The unweighted or raw Measure of Service Adequacy (MSA) and Measure of Service Superiority (MSS) scores are -3.70 and -6.50; the weighted scores are -0.19 and -0.33.

Since MSA for Tangibles is negative, consumers of ACME On-line Accounting in subscribers may not feel that the provider is meeting their needs. The lower the score -- and the higher its importance -- the worse consumers probably feel about this attribute. This may not be too concerning because users indicate that Tangibles represents 5% of consumer satisfaction (that is, quality).

Quality appears to be poor -- below requirements. Since consumers do not perceive service as meeting their expectations for the Tangibles dimension of ACME On-line Accounting, to obtain a prescription you should start a Gap Analysis on it.

Tangibles relates to physical facilities, equipment; and the appearance of staff, physical facilities and communication

materials. All Web services have some tangible physical component through which services realized. The promised service utility and warranty establish service quality criteria. This criteria often relates to tangibles. For example a credit card must fit into a wallet, a cell phone needs to have a big enough keyboard to allow effective utilization of e-mail, etc. For a web site, Tangibles include visually pleasing page presentations, ease of navigation and so on. Similarly, a software applications layout, colors and so on are tangible. In these cases success may rely on Tangibility factors.

The prognosis for Tangibles failures often depends upon:

- Well maintained and functional equipment
- Visually appealing facilities
- Employees who have a neat, professional appearance
- Materials associated with the service are visually appealing
- Easy to understand written materials
- Software that is intuitive
- Modern systems and equipment
- Systems in good repair