Quality Excellence for Suppliers of Telecommunications Forum (QuEST Forum)

TL 9000 Quality Management System

Measurements Handbook

SQ Examples

9.1 SQ Examples

In product categories 7 and 9, there is just one named service quality measurement, SQ, for all of the product sub-categories. However, the unit measured varies by product category. The individual numerators and denominators are defined in Appendix A, Table A-2.

9.1.1 **Installation** (R5.1 Product Category 7.1.1)

The data collected and calculation results for this example are shown in Table 9.1.1-1.

Table 9.1.1-1Source Data for Installation SQ

Item	Jan	Feb	Mar	Apr
Number of Non-conforming Installation/Engineering Audits (SQd)	5	1	0	6
Total Number of Installation/Engineering Audits (SQt)	100	50	75	80
Service Quality Measurement (SQ)	5%	2%	0%	7.5%

The computation for the month of January is

SQ = 100 x SQd/SQt = 100 x 5/100 = 5% defective audits in January

The data reported for January are shown in Table 9.1-12.

Table 9.1.1-2 Data Table Report for Installation SQ

Identifier	Value
Product Category	7.1.1
MeasurementID	SQ
SQt	100
SQd	5

9.1.2 – **Maintenance** (R5.1 Product Category 7.3.1)

The data collected and calculation results for this example are shown in Table 9.1.2-1.

Table 9.1.2-1 Source Data for Maintenance SQ

Item	Jan	Feb	Mar	Apr
Number of Maintenance callbacks (SQd)	2	0	1	4
Number of Maintenance Visits (SQt)	30	20	75	120
Service Quality Measurement (SQ)	6.7%	0%	1.3%	3.3%

The computation for the month of January is

SQ = 100 x SQd/SQt = 100 x 2/30 = 6.7 % defective visits

The data reported for January are shown in Table 9.1.2-2.

Table 9.1.2-2 Data Table Report for Maintenance SQ

Identifier	Value
Product Category	7.3
MeasurementID	SQ
SQt	30
SQd	2

9.1.3 – Repair (R5.1 Product Category 7.4)

SQ for Product Category 7.4 is basically a re-return rate. The numerator is the number of units returned in the report month that were shipped from repair within the last 12 months. So, when reporting SQ for January 2014, a unit is included in the numerator if it was received in January 2014 and it was shipped out by the repair organization less than12 months before. For example, a unit shipped on January 20th, 2013 and returned on January 18th, 2014 would count as a return. If it were returned on January 21st, 2014, it would not count as a return.

For PC 7.4, the denominator of the SQ measurement is the total number of units shipped during the 12 month period prior to the current month. Thus, for January 2014, a unit is included in the denominator's count if it was shipped out by the repair organization anytime between January 1, 2013 and December 31, 2013.

The data collected and calculation results for this example are shown in Table 9.1.3-1.

Table 9.1.3-1 Source Data for Repair SQ

Item	Previous 12 Months	Jan
Number of Defective Repaired Units (SQd)	n/a	30
Total Number of Repaired Units (SQt)	714	n/a
Service Quality Measurement (SQ)		4.2%

The computation for the month of January is

SQ3 = 100 x SQd/SQt = 100 x 30/714 = 4.2% defective repairs%

The data reported for January are shown in Table 9.1.3-2.

Table 9.1.3-2 Data Table Report for Repair SQ

Identifier	Value
Product Category	7.4
MeasurementID	SQ
SQt	714
SQd	30

9.1.4 – Technical Assistance and Customer Support Centers
(R5.1 Product Category 7.5.1)

The data collected and calculation results for this example are shown in Table 9.1.4-1.

For Service Category 7.5.1, only service requests which relate to customer requests for services directly provided by the call center itself are counted. Calls received which are considered problem reports that are appropriately routed to support staff for products and/or services in product categories other than 7.5.1 should be excluded from this measure.

Table 9.1.4-1 Source Data for Customer Support Service SQ

Item	Jan	Feb	Mar	Apr
Number Of defective Customer Support Service transactions which did not become Problem Reports (SQd)	15	40	10	4
Total Number Of Calls Which Came Into Customer Support Service	4400	6500	2750	3000
Number Of Calls Which Came Into Customer Support Service which became Problem Reports	2000	3500	1000	2200
Total Number Of Customer Support Service Transactions (SQt)	2400	3000	1750	800
Service Quality Measurement (SQ)	.625%	.833%	.571%	.500%

The computation for the month of January is

SQd = 15

SQt = (4400) – (2000) = 2400

SQ = 100 x SQd/SQt = 100 x 15/2400 = 0. 625%

The data reported for January is shown in Table 9.1.4-2.

Table 9.1.4-2 Data Table Report for Customer Support Service SQ

Identifier	Value
Product Category	7.5.1
MeasurementID	SQ
SQt	2400
SQd	15

9.1.5 – General Support Services Example (R5.1 Product Category 7.9)

This example references a cable locator service with a defined defect as a cut cable due to incorrect identification.

The data collected and calculation results for this example are shown in Table 9.1.5-1.

Table 9.1.5-1 Source Data for Support Service SQ

Item	Jan	Feb	Mar	Apr
Cut Cables (SQd)	5	2	0	4
Number of Cables Identified (SQt)	1000	500	750	300
Service Quality Conformance Measurement (SQ)	0.5%	0.4%	0%	1.3%

The computation for the month of January is

SQ = 100 x SQd/SQt = 100 x 5/1000 = 0.5%

The data reported for January is shown in Table 9.1.5-2.

Table 9.1.5-2 Data Table Report for Support Service SQ

Identifier	Value
Product Category	7.9
MeasurementID	SQ
SQt	1000
SQd	5