

**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

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

Table 9.1.1-1 Source 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

$$SQ = 100 \times SQd/SQt = 100 \times 5/100 = 5\% \text{ defective audits in January}$$

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

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

$$SQ = 100 \times SQd/SQt = 100 \times 2/30 = 6.7\% \text{ defective visits}$$

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

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	Jan	Feb	Mar	Apr
Number of Defective Repaired Units (SQd)	3	1	2	3
Total Number of Repaired Units (SQt)	51	63	45	72
Service Quality Measurement (SQ)	5.9%	1.6%	4.4%	4.2%

The computation for the month of January is

$$SQ3 = 100 \times SQd/SQt = 100 \times 3/51 = 5.9 \text{ defective repairs\%}$$

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	51
SQd	3

9.1.4 – Customer Support Service

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

Table 9.1.4-1 Source Data for Customer Support Service SQ

Item	Jan	Feb	Mar	Apr
Number Of defective Customer Support Service transactions (SQd)	15	40	10	4

Total Number Of Calls Which Came Into Customer Support Service (SQt)	2000	5000	2750	3000
Service Quality Measurement (SQ)	0.75%	0.8%	0.4%	0.1%

The computation for the month of January is

$$SQ = 100 \times SQd/SQt = 100 \times 15/2000 = 0.75\%$$

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
MeasurementID	SQ
SQt	2000
SQd	15

9.1.5 – Support Service Example

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

$$SQ = 100 \times SQd/SQt = 100 \times 5/1000 = 0.5\%$$

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