

**TIA QuEST Forum**

**TL 9000**  
**Quality Management System**

**Measurements Handbook**

**eSPR Examples**

## 8.2 eSPR Examples

### 8.2.1 Example 1 – eSPR

- 1) Consider one month’s data for an organization of an Operational Support System (OSS) reporting into Product Category 4.2.1.1. It has only one software release in operation that is less than 12 months old. As of the end of the reporting month, there are 30 customers that have reported problems on the release since the release became generally available. The organization received no critical, 3 major and 45 minor software problem reports during the reporting month.
- 2) The data reported is shown in Table 8.2-1.

**Table 8.2-1 Example 1 – eSPR Data Table Report**

Identifier	Value
MeasurementID	eSPR
eSPa	12
eSPs	30
eSp1	0
eSp2	3
eSp3	45

- 3) The calculation of the measurement is shown in Table 8.2-2.

**Table 8.2-2 Example 1 – eSPR Source Data and Measurement Calculations**

Problem Reports	Severity	Afactor	Normalization Factor	eSPR Measurement Result – Early Problem Reports per customer-release per year
eSp1 = 0	Critical	12	30	eSPR1 = 0
eSp2 = 3	Major	12	30	eSPR2 = 1.2
eSp3 = 45	Minor	12	30	eSPR3 = 18

### 8.2.2 Example 2 - Multiple Active Releases

- 1) Consider one month’s data for an organization of an Operational Support System (OSS) reporting into Product Category 4.2.1.1. There are three software releases active in the field: R1.0, R2.0 and R3.0. R1.0 is 18 months old, R2.0 is 10 months old and R3.0 was released 2 months ago. The problems reported on R1.0 and customers reporting problems on R1.0 are not included since the release is over 12 months old (outside its eSPR-period). As of the reporting month, 30 customers have reported problems on releases R2.0 and R3.0 since the releases have become generally available: 15 customers reported problems on R3.0, 5 customers reported problems on R2.0 and 10 customers reported problems on R2.0 and on R3.0. eSPs would be

$15+5+10+10 = 40$  (the 10 customers counting twice, once for R2.0 and once for R3.0). The organization received 2 critical, 6 major and 60 minor software problem reports during the month on R2.0 and R3.0 releases or their updates.

2) The data reported is shown in Table 8.2-3.

**Table 8.2-3 Example 2 – eSPR Data Table Report**

Identifier	Value
MeasurementID	eSPR
eSPa	12
eSPs	40
eSp1	2
eSp2	6
eSp3	60

3) The calculation of the measurement is shown in Table 8.2-4.

**Table 8.2-4 Example 2 – eSPR Source Data and Measurement Calculations**

Problem Reports	Severity	Afactor	Normalization Factor	eSPR Measurement Result – Early Problem Reports per customer-release per year
eSp1 = 2	Critical	12	40	eSPR1 = 0.6
eSp2 = 6	Major	12	40	eSPR2 = 1.8
eSp3 = 60	Minor	12	40	eSPR3 = 18.0

### 8.2.3 Example 3 - Multiple Active Update Releases

1) Consider one month's data for an organization of an Operational Support System (OSS) reporting into Product Category 4.2.1.1. There are two software updates active in the field:

- Update R1.0.4, GA'ed 4 months ago
  - R1.0 has been GA for 15 months
- Update R2.0.1, GA'ed 2 months ago
  - R2.0, its associated software release, has been GA for 6 months

Even though the software update R1.0.4 is only 4 months old, it's associated software release, R1.0, has been GA for over 12 months (outside its eSPR-period), and so, the problems reported on update R1.0.4 and customers reporting problems on R1.0,4 are not included in the monthly eSPR data.

Since the software release, R2.0, associated with update R2.0.1 is only 6 months old, the problems reported on update R2.0.1 and customers reporting problems on R2.0,1 are included in the monthly eSPR data.

### 8.2.4 Example 4 – Use of Fiscal Months

If the data in Example 1 above were collected over a four-week fiscal month instead of a calendar month then the Afactor is 13 and

$$eSPR1 = 0 \times 13 / 30 = 0.0$$

$$eSPR2 = 3 \times 13 / 30 = 1.3$$

$$eSPR3 = 45 \times 13 / 30 = 19.5$$

### 8.2.5 eSPR or Not?

There are five calls from customers discussed below. Each call is the result of a software defect the customer has experienced.

1. Customer is using the most recent GA software (major) release, for which the organization does not yet have a fix.
  - a. If the software release is less than 12 months old, the problem counts in eSPR (and NPR). If the software release is over 12 months old then the problem still counts in NPR, but not in eSPR.
2. Customer is using the most recent GA software update (maintenance) release for the most recent software (major) release, for which the organization does not yet have a fix.
  - a. Whether or not a problem counts in eSPR depends on the age of the associated software (major) release, not the age of the software update. If the associated software (major) release is less than 12 months old, the problem counts in eSPR (and NPR). If the software (major) release is over 12 months old then the problem still counts in NPR, but not in eSPR, regardless of how old the software update is.
3. Customer is not using the most recent software release.
  - a. If the software release the customer is using is over 12 months old, the problem would not be counted in eSPR. If it is a software release and less than 12 months old, it is counted in eSPR. If it is a software update and less than 12 months old, but its associated software (major) release is over 12 months old, then it is not counted in eSPR (but still counts in NPR).
4. Customer is using the most recent GA software release. The organization has fixed the bug and the release (or update) that contains the fix is in beta testing with another customer.
  - a. Since the fix is not yet generally available, the problem would count in eSPR if the release is less than 12 months old. If the

release is over 12 months old, it still counts in NPR but not in eSPR.

5. Customer is using a GA release, which is several years old. There have been many subsequent releases, each of which contained the fix that the customer had ignored.
  - a. This release is outside of the 12-month initial usage window for the release and the problem report is not included in the eSPR calculation. Furthermore, the organization had fixed the bug many years ago and notified the customer when the release (including the fix) became GA (several years ago). The customer ignored all these notifications and continued to use the very old release. Therefore, this problem would not be included in the NPR calculation either, assuming the fix had been provided at no cost.