

Performance Report

Tips for Data Entry

When preparing a Performance Report, the Appraisal Team Leader (ATL) needs to recognize that there is a direct relationship between the Performance Report and the Managing Performance and Measurement (MPM) Practice Area (PA). The Performance Report is independently validated by appraisal teams as part of Benchmark and Sustainment Appraisals, and the Performance Report must align with the MPM PA results in the Final Findings brief. Additionally, Performance Report data contributes to the larger CMMI-maintained community database that quantifies the performance improvement results achieved by organizations adopting CMMI.

CMMI Institute's review of Performance Report data identified the following five most common data entry issues that ATLs should avoid:

1. Inconsistent or Missing Units of Measure
2. Excessive Verbiage and Numbers
3. Multiple Data in a Single Entry
4. Misalignment of High Maturity Data
5. Inconsistent Data Across Performance Report Fields

Examples of these issues and how to avoid them are detailed below.

Issue #1: Inconsistent or Missing Units of Measure

The following fields are mandatory to complete within the Performance Report, and the *before* and *after* complementary fields must always reflect consistent information:

- *Before Results: Measurement or QPPO**
- *After Results: Measurement or QPPO**
- *Before Results: Measurement Description**
- *After Results: Measurement Description**

Examples:

The example rows for **Line A** and **Line B** below, from Table 1, are incorrect for the following reasons.

- *Before Results: Measurement Type** - value is missing. (Line A)
- The following *before* and *after* fields are inconsistent:
 - *Before Results: Measurement Type** is inconsistent with *After Results: Measurement Type** (Line A, Line B)
 - *Before Results: Measurement Description** is inconsistent with *After Results: Measurement Description** (Line A, Line B)
- *After Results: Measurement or QPPO** should only reflect the actual results, with no additional verbiage. (Line B)

Table 1: Incorrect Example for Issue #1

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
A	6		Development and delivery time per epic for agile projects. Measured in months.	3	Time	Development and delivery time per epic for agile projects. Measured in weeks.
B	56	Percent	Percent of tickets closed within 30 days of submission.	96% of tickets closed in less than 25 days	Number	Percent of tickets closed within 25 days of submission.

The example rows for **Line C** and **Line D** below, from Table 2, reflect correct example data entries on the performance report. In Table 2, consistent information is reflected in the *before* and *after* fields.

Table 2: Correct Example for Issue #1

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
C	6	Time	Development and delivery time per epic for agile projects. Measured in months.	3	Time	Development and delivery time per epic for agile projects. Measured in months
D	56	Percent	Percent of tickets closed within 30 days of submission.	96	Percent	Percent of tickets closed within 30 days of submission.

Issue #2: Excessive Verbiage and Numbers

The following fields should be a short, concise description of the measure and its purpose. The values across the two fields should reflect consistent information.

- *Before Results: Measurement Description**
- *After Results: Measurement Description**

Examples:

The example rows for **Line E** and **Line F** below, from Table 3, are incorrect for the following reasons.

- The *measurement description* fields include numerical values. (Line E, Line F)
- The *measurement description* fields are wordy. (Line F)

Table 3: Incorrect Example for Issue #2

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
E	2766	Mean	Project productivity in 2864 LOCs/Man- month	3150	Mean	Project productivity in 3055 LOCs/Man- month
F	1.04	Mean	The remaining defect density before improvement was 1.14bugs/KLOC	0.98	Mean	The remaining defect density after improvement is 0.98 bugs/KLOC

The example rows for **Line G** and **Line H** below, from Table 4, reflect correct example data entries on the performance report. In Table 4, the *measurement description* fields provide clear and concise information, no numerical values, and reflect consistent *before* and *after* information.

Table 4: Correct Example for Issue #2

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
G	2766	Mean	Project productivity in LOCs/Man- month	3150	Mean	Project productivity in LOCs/Man- month
H	1.04	Mean	Defect Density in defects / KLOC	0.98	Mean	Defect Density in defects / KLOC

Issue #3: Multiple Data in Single Entry

Each data entry must be on its own line.

Examples:

The example row for **Line I** below, from Table 5, are incorrect for the following reasons.

- Multiple data points in a single row. (Line I)
- Inconsistent dates between the *before* (Jan 2018) and *after* results (Jan 2017) fields. (Line I)

Table 5: Incorrect Example for Issue #3

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
I	Large: +/-22% Medium: +/-31% Small: +/-15%	Standard Deviation	Jan2018 - Dec2023, N=126, 8 exclusions. Before range: - 73% to +132%	Large: +/-28% Medium: +/-28% Small: +/-20%	Standard Deviation	Jan2017 - Dec2023, N=107, 12 exclusions. After range: -73% to +169%

The example rows for **Line J, Line K, and Line L** below, from Table 6, reflect correct example data entries on the performance report. Each data point is reflected in an individual row, and the dates are consistent across the *before* and *after* fields.

Table 6: Correct Example for Issue #3

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
J	+/-22%	Standard Deviation	Jan2023 - Dec2023, N=126, 8 exclusions. Before range: - 70% to +130%	+/-28%	Standard Deviation	Jan2024 - Dec2024, N=100, 5 exclusions. After range: -65% to +135%
K	+/-31%	Standard Deviation	Jan2023 - Dec2023, N=126, 12 exclusions. Before range: - 60% to +140%	+/-28%	Standard Deviation	Jan2024 - Dec2024, N=100, 10 exclusions. After range: -65% to +135%
L	+/-15%	Standard Deviation	Jan2023 - Dec2023, N=126, 9 exclusions. Before range: - 80% to +120%	+/-20%	Standard Deviation	Jan2024 - Dec2024, N=100, 8 exclusions. After range: -75% to +125%

Issue #4: Misalignment of High Maturity Data

When mean and median values are provided to demonstrate the improvement, Upper Control Limits (UCL) and Lower Control Limits (LCL) should be included in the *Before Results: Measurement Description** and *After Results: Measurement Description** fields as either variance or range data.

Examples:

The example row for **Line M** and **Line N** below, from Table 7, are incorrect for the following reasons.

- *Before Results: Measurement Type** - value is missing. (Line M)
- *After Results: Measurement Type** - value is missing. (Line M)
- *Before Results: Measurement or QPPO** reflects range information incorrectly. (Line M)
- *After Results: Measurement or QPPO** reflects range information incorrectly. (Line M)
- *Before Results: Measurement Description** reflects High Maturity data incorrectly. (Line M, Line N)
- *After Results: Measurement Description** reflects High Maturity data incorrectly. (Line M, Line N)

Table 7: Incorrect Example for Issue #4 (High Maturity)

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
M	.92±10		By August the result was 96% and achieved the objectives.	.97±10		By November the result was 98% and achieved the objectives.
N	1.24	Number	The remaining FP before improvement was 1.49	1.1	Number	The remaining FP after improvement was 1.25

The example rows for **Line O** and **Line P** below, from Table 8, reflect correct example data entries on the performance report for organizations operating at High Maturity.

Table 8: Correct Example for Issue #4 (High Maturity)

	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
O	.92	Percent	Mean: .94 SD: 0.2	.97	Percent	Mean: .96 SD: 0.2
P	1.24	Mean	UCL: 1.39; Mean: 1.24, LCL: 1.05	1.1	Mean	UCL: 1.14, Mean: 1.1, LCL: 1.08

Issue #5: Inconsistent Data Across Performance Report Fields

The complementary *before* and *after* fields must reflect consistent information.

Examples:

The example row for **Line Q** and **Line R** below, from Table 9, are incorrect for the following reasons.

- *Target Measurement or QPPO** is unclear and inconsistent with other data in the row. (Line Q)
- *Before Results: Measurement Type** is inconsistent with *After Results: Measurement Type** (Line Q, Line R)
- *Before Results: Measurement Description** is inconsistent with *After Results: Measurement Description** (Line Q, Line R)

Table 9: Incorrect Example for Issue #5

	Target Measurement or QPPO*	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
Q	5.5 months	600,000	Monetary	Per quarter for Product A	900,000	Percent	Per quarter for Product B
R	95% closed within 30 days	62	Number	Percent of tickets closed within 30 days.	8,200,000	Monetary	Number of tickets closed within 30 days.

The example rows for **Line S** and **Line T** below, from Table 10, reflect consistently aligned data across each field within an individual row of the performance report.

Table 10: Incorrect Example for Issue #5

	Target Measurement or QPPO*	Before Results: Measurement or QPPO*	Before Results: Measurement Type*	Before Results: Measurement Description*	After Results: Measurement or QPPO*	After Results: Measurement Type*	After Results: Measurement Description*
S	850,000	600,000	Monetary	Per quarter for Product A	900,000	Monetary	Per quarter for Product A
T	95%	62	Percent	Percent of tickets closed within 30 days.	82	Percent	Percent of tickets closed within 30 days.

Questions about this Quality Tip may be directed to quality@cmmiinstitute.com.