



## External Reporting



The main Earned Value reports are the [Contract Performance Report \(CPR\)](#). **CPR** reports are generally required on large, risky contracts.

The [Earned Value Reports](#) presentation is an essential supplement to the chapter text. It provides complete descriptions of the reports, and ideas for tailoring them to specific needs. It also describes two other EV-related reports, the **Contract Funds Status Report (CFSR)** and **Contractor Cost Data Report (CCDR)**. A narrated version of this presentation is available at the following web site; [Earned Value Reports](#).

Data item descriptions can be found at:

- [CPR](#)
- [CFSR](#)

**At the conclusion of this lesson you will be able to identify types of, and uses for, external reports.**

## **Cost/Schedule Status Report (C/SSR)**

A performance measurement report established to provide information on smaller contracts.



## **Performance Data Summary**

Performance data collected at the control account level can be summarized for progressively higher levels of the WBS and the OBS to provide program status to management and to the customer. Care must be taken in selecting the appropriate WBS level of summarization to avoid unnecessary amounts of detail.

Typically, a WBS expands at a rate of about six elements per level of indenture. This means that level two would consist of six elements, level three about thirty-six elements, level four about 200 elements and so on. WBS level three is usually selected as the best level for overall reporting with, perhaps, a few elements of special interest reported at level four.

Some support elements may be reported only at level two. It should be no problem for the computer to organize the data for the desired level. Reporting on 20 to 30 WBS elements will provide plenty of visibility into program cost/schedule performance. More detail can be obtained on an exception basis for those WBS elements that are experiencing significant variances.



## **Performance Reporting**

When captured by function or organization (as in Format 2 of the CPR), Earned Value Management data is usually reported at level two, which would constitute the major internal organizations and significant subcontracts. In a contractual situation, the customer is more interested in the WBS orientation because it represents the products or services being purchased, while the contractor wants to look also at organizational performance.

Since the data being reported simply rolls up from the control account, there is usually no need for higher level calculations with one exception—the estimate of cost at completion.

Control account managers' estimates will be reviewed, and possibly adjusted, by managers at higher levels, since a straight accumulation of lower level estimates sometimes results in unrealistically high numbers at the summary level if they are not tempered by management experience and a broader view of the program.



Figure 14-1: Performance Report

WBS ELEMENTS	CUMULATIVE TO DATE					AT COMPLETION		
	Budget	Earned Value	Actual Costs	Schedule Variance	Cost Variance	Budget	Estimated	Variance
Item 3.1	35	39	40	4	(1)	95	95	0
Item 3.2	62	60	68	(2)	(8)	160	172	(12)
Item 3.3	14	13	14	(1)	(1)	72	72	0
Item 3.4	125	127	120	2	7	165	155	10
Item 3.5	41	46	50	5	(4)	63	65	(2)
Undistributed Budget						14	14	
PM Baseline	277	285	292	8	(7)	569	573	(4)
Management Reserve						25	0	25
Total	277	285	292	8	(7)	594	573	21

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The main concern with selecting appropriate levels of detail for reporting is the amount of variance analysis required and the time spent explaining and documenting variances.

It is important that reasonable thresholds or ground rules defining "significant" variances be established to avoid excessive documentation and explanations.

A single [Performance Report](#) depicted in **Figure 14-1**, is essentially a "snapshot" of program status at a point in time.

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## Long Description

Figure 14-1: Performance Report is a spreadsheet that is essentially a "snapshot" of program status at a point in time:

- The Total line indicates that the program is ahead of schedule -- more work was done (285) than was planned (277)
- The program is overrunning cost -- earned value (285) is less than actual cost (292).
- The program is forecast to be underrun at completion -- budget (594) versus estimate (573).
- The cost variance column reveals that WBS element 3.2 is experiencing the largest cost problem -- cumulative cost variance (-8).
- WBS element 3.2 is forecasting improved performance in the future -- at completion variance (-12) versus cumulative cost variance (-8) with less than half the work done. The current rate of cost performance is 0.88 -- earned value (60) divided by actual cost (68) equals CPI (0.88). Dividing the total budget (160) by the CPI (0.88) indicates an estimate at completion of 182 for this WBS element. An explanation for the estimate reported (172) should be requested.
- Performance against the performance measurement baseline indicates an overrun (-4) while the Total line indicates an underrun (21). The difference is the availability of management reserve (25). In this example, the program manager is not forecasting the use of any management reserve; thus offsetting the unfavorable cost variance (-4) and underrunning the program by 21. If, on the other hand, the program manager believes that all of the management reserve will be gone by the end of the program, 25 would be entered in the estimate at completion column and an overrun of 4 would show on the Total line. The program manager should enter in the estimate column the amount of management reserve expected to be used (based on risk analysis, experience, quality of estimates, etc.) to reflect the most realistic projection possible on the bottom line.



Figure 14-2: Baseline Report

PERFORMANCE MEASUREMENT BASELINE -- BEGINNING OF REPORT PERIOD												
Budget cum to date	Budget for report period	Budget for months					Quarters		Years		Undist Budget	Total
		+1	+2	+3	+4	+5	+1	+2	+1	+2		
CHANGES TO BASELINE DURING REPORT PERIOD												
Change no.	Description										Budget	
PERFORMANCE MEASUREMENT BASELINE -- END OF REPORT PERIOD												
Budget cum to date	Budget for months						Quarters		Years		Undist Budget	Total
	+1	+2	+3	+4	+5	+6	+1	+2	+1	+2		
											Management Reserve	
											Total Budget	

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Another report worth considering is a baseline report. Such a report is shown in **Figure 14-2**.

This report reflects how the budget has been time phased by month for 6 months, then by other time periods, such as quarters or years, out to the end of the program. Changes that occur during the reporting period are listed with their associated budgets. The bottom line shows the net adjustment to the baseline as a result of change incorporation. The data on this line will move up to the top line on the next report.

The information can be plotted to visually display the effects of baseline changes on the shape of the curve. The rubber baseline problem can be discerned by comparing successive plots of the performance measurement baseline.

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### Long Description

Figure 14-2: Baseline Report is a facsimile of a report form that reflects a budget that has been time phased by months for 6 months, and then by quarters and years, out to the end of the program. Changes that occur during the reporting period are listed with their associated budgets in the middle frames. The bottom of the form shows the net adjustment to the baseline as a result of change incorporation. The data on this line will move up to the top line on the next report.



## **Schedule Reporting**

The schedule variance reported on the performance report is only an indicator of schedule conditions. It is not intended to be a substitute for the scheduling system.

Schedule reporting will vary from program to program depending on the scheduling system and software being used. The reports should provide a schedule baseline and clearly indicate progress against that plan. They should also show the impacts of problems on the program end date and on key program milestones.

Schedule reporting must be integrated with technical performance measurement to insure that milestones are not reported complete until all technical requirements have been satisfied.





### External Reporting Knowledge Review

The \_\_\_\_\_ provides comprehensive performance information in terms of the WBS, OBS, Baseline, Staffing, and Explanations, while the \_\_\_\_\_ provides comprehensive information on funding allocations and projections.

- CFSR, CPR
- CPR, CFSR
- WBS, SSR
- CPR, WBS

**Correct.** The CPR provides comprehensive performance information, while the CFSR provides information on funding allocations and projections.



### **End of Lesson**

You must click the **Next** button in order to receive credit for this lesson.