

## EzEVM™ Product Description

The EzEVM family of MS Excel workbook EVM templates provides smaller firms, or smaller projects in large firms with an EVM solution. For example, Boeing selected our EzEVM templates as an EVM solution for their internal IT department even though they have an ANSI 748 compliant EVMS using commercial EVM specific software. Other customers include construction projects and energy providers.

EzEVM also provides Earned Schedule analysis, schedule adherence (P-factor), and statistic prediction of final SPI (t) and CPI).

A simple version of the EzEVM templates are used in our Earned Value Experience™ hands on workshop for CAMs, PMs, and others. More complex versions of the templates address cost collection from a variety of sources including internal labor costs, estimated and actual vendor labor, planned versus actual rates, subcontract costs, and material costs. Our simplest versions allow only summary-level project performance.

Regardless, all versions of the template produce the same EVM analysis and graphs. This includes the cost and schedule Performance Management Baseline (PMB) chart showing earned value (EV), actual cost (AC), and planned value (PV) over time. Analysis of these data provides current and cumulative cost and schedule variances, cost performance index (CPI), schedule performance index (SPI), to-complete performance index (TCPI), and three cost estimates-at-complete (EAC)s.

EzEVM also performs Earned Schedule analysis. This relatively new analysis product provides a time-based schedule variance, an SPI that is useful to the project's end, and an estimate of the project completion date. Earned Schedule analysis has been proven by both practitioners and academics to be the most accurate and useful means of schedule prediction using EVM data.

In addition, EzEVM performs Schedule Adherence analysis, or "P-factor" calculation. This produces a percent or index (0-1.0) showing how much of the cumulative EV has been earned according the original scheduled plan. This index can alert management to work that has been done prematurely in an effort to gain EV, but not following scheduled precedence and successor relationships. This, of course, represents risk to the project and potential rework.

EzEVM statistically predicts the range of likely final values of SPI (t) and CPI. This is done by examining the excursions of these values to-date and the remaining reporting periods on the project.

The EzEVM templates are tailored for each customer based upon their sources of schedule and cost data. This tailoring simplifies the collection of these data in the EzEVM spreadsheet. In addition the tailoring can produce custom graphs and charts for briefings to management and customers. CPR format 1 or 2 can also be prepared using the EzEVM templates.

Since ANSI 748 certification addresses processes, not tools, EzEVM can be a part of an ANSI 748 compliant EVMS as well.

Tailoring of the templates is best done on-site with opportunities to meet with your project staff, EVMS process engineers, and senior management to understand these stakeholders' goals. Tailoring is done through a series of prototype implementations, trial usage, additional tailoring as needed, and a final version. Briefings on how the EzEVM templates can also be provided to train staff on their use, using the final version. On-site visits are usually three to five days in duration. Follow-on support including updating templates is provided via e-mail and conference calls.

Samples of some of the graphical outputs follow this discussion.

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Once tailored the EzEVM template MS Excel workbook is provided under a perpetual site license. The license allows unlimited use of the analysis charts and graphs for use in management and customer reports and briefings.

EzEVM templates are a great way to incorporate EVM into smaller projects, train PMs and CAMs on the principles of EVM, and prepare individuals and organizations for ANSI 748 compliant EVM.

Clients in construction, IT, and energy have found our EzEVM excel based EVM solution a good start and possible final solution to their EVM software needs.

By using Excel all the data and calculations are explicit, allowing for better understanding and catching data errors. Also Excel allows new reports, formats, and graphs to be easily developed. Lastly, minimal training is needed. Any PM, scheduler, or financial analyst can use the tool. No designated "system administrator" is needed.

Past tailoring has provided:

- Two Level WBS data
- Detail cost categories
- Macros for checking data validity
- Summary Level Analysis Only
- Custom charts and graphs
- Other customer requested changes

I hope you find this information useful. If you would like more information or a quote for tailoring the EzEVM templates to your needs please contact Management Technologies.

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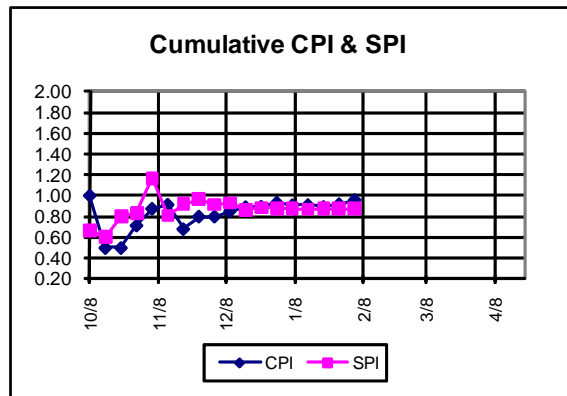
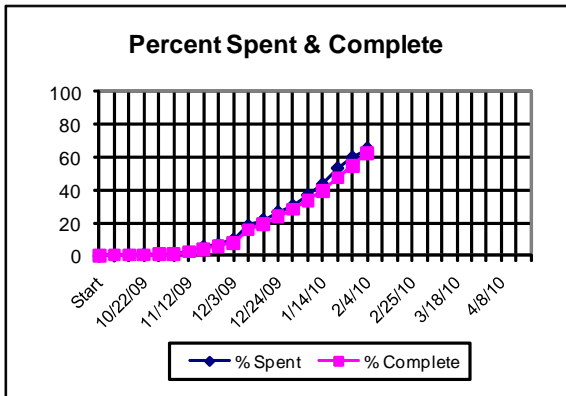
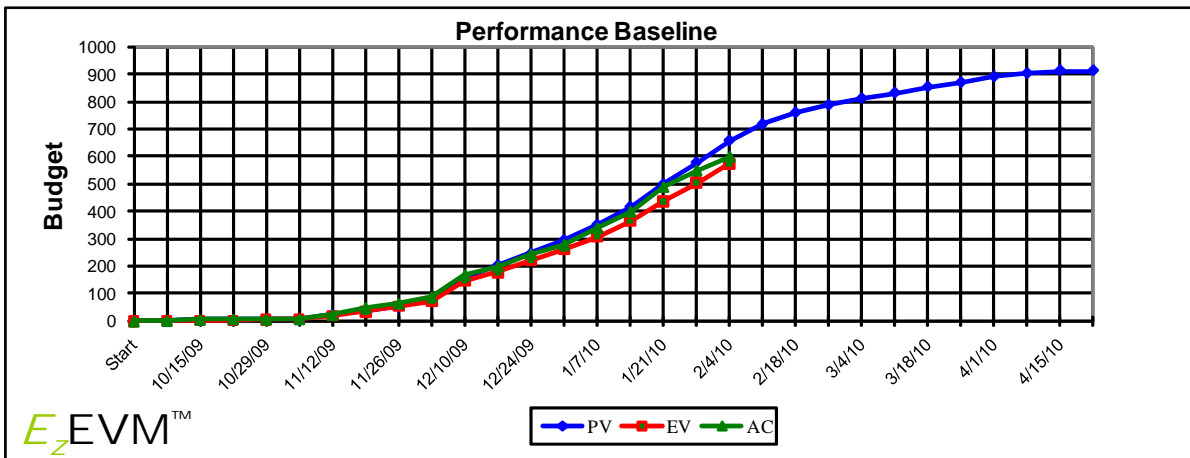
Examples Follow

## SUMMARY CHART FOR REPORTS AND BRIEFINGS

Earned Value Baseline Budget

921 K

Status Through 2/4/10



CPI	0.96	SPI(t)	0.83	CV%	-4%	CV	-25	EAC(\$)	990
SPI(\$)	0.87	Sch. Adherence	87%	SV%	-13%	SV	-84	ECD	5/25/10

This chart summarizes all the major EVM analysis products, project history, and project trends. It shows the BAC, most recent status date, PV, EV, AC, and PMB. It also shows the percent spent and percent complete. The cumulative CPI and SPI (\$) are also shown.

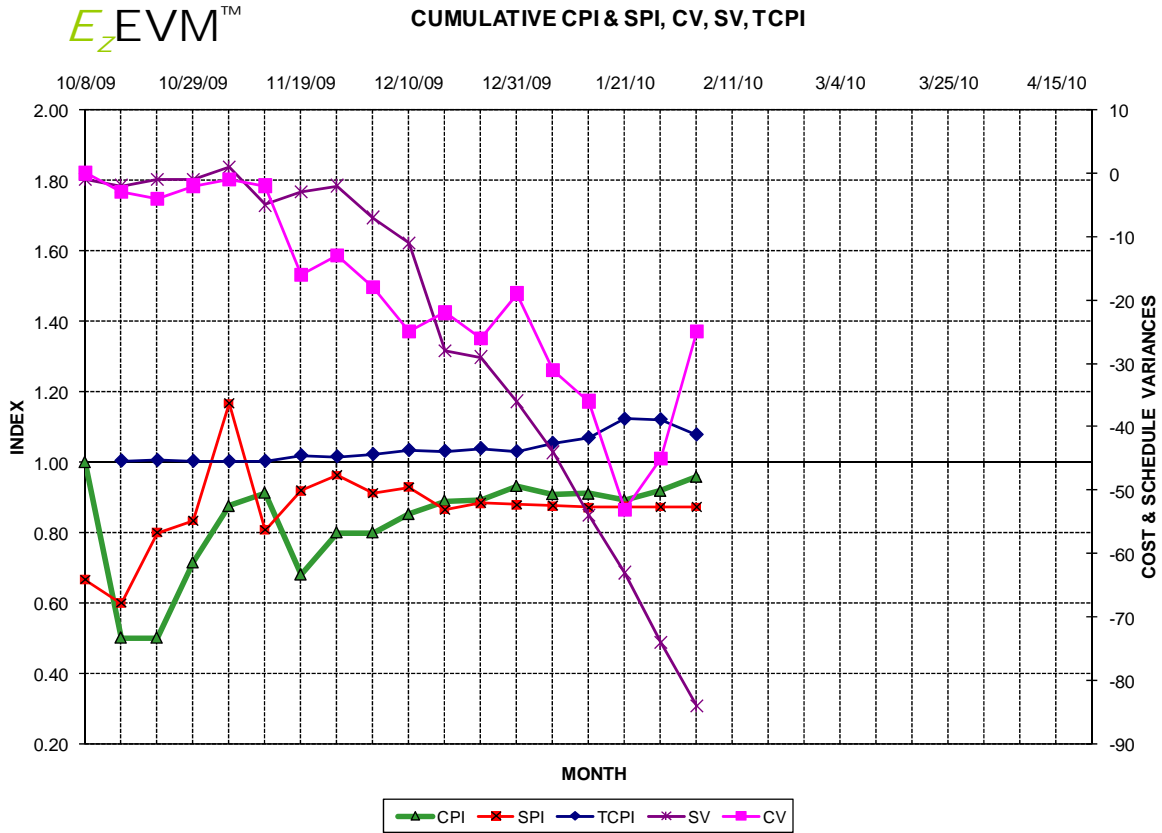
In the bottom margin are the numerical values of SPI (\$), CPI, SPI (t)\*, Schedule Adherence (P-factor)\*, CV%, CV, SV%, SV. CPI, SPI (\$), and SPI (t)\* are color coded red/yellow/green per your thresholds.

Schedule Adherence is a measure of how much of the work completed is per the schedule, and how much might have been done prematurely thus leading to possible rework.

The cost estimate at complete (EAC) is given as well as an Estimated Completion Date (ECD)\*.

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\*Earned Schedule analysis product

## CUMULATIVE CPI, SPI AND TCPI, DOLLARIZED SV AND CV OVER TIME

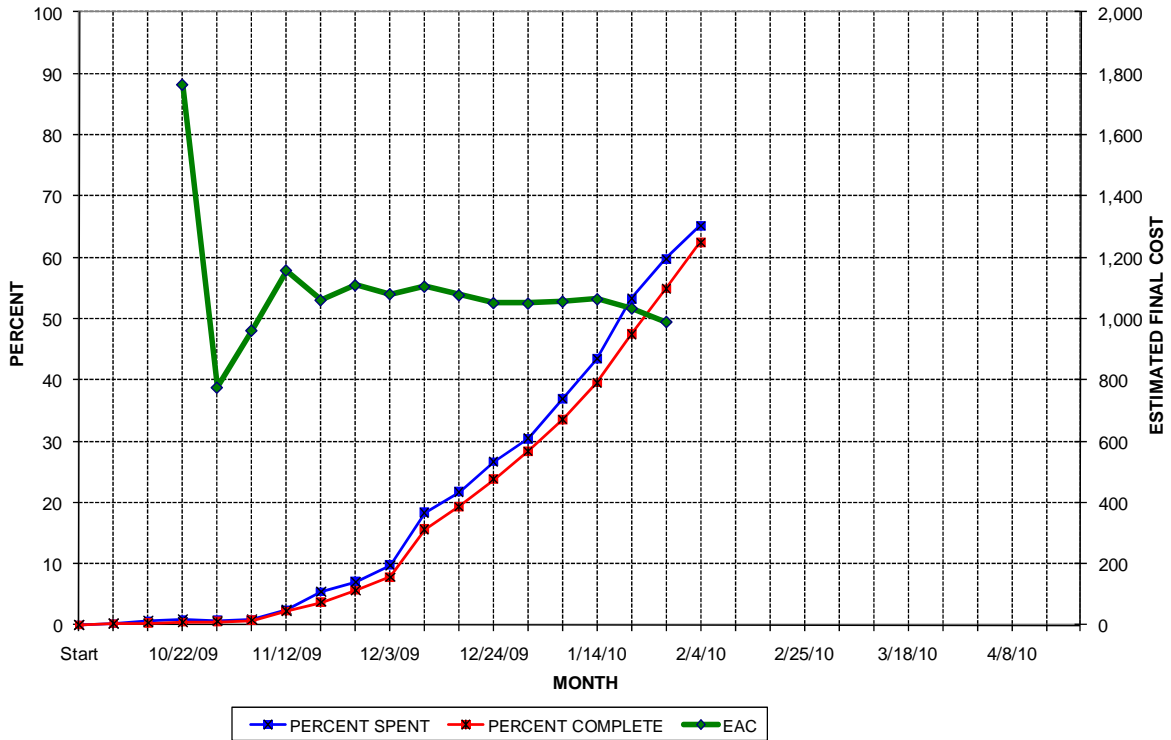


This chart shows related cost and schedule performance. The CPI and SPI are plotted using the scale on the left. The TCPI is also shown. Using the scale on the right the CV and SV dollar values are plotted using the right scale.

# PERCENT SPENT, PERCENT COMPLETE, AND COST ESTIMATE AT COMPLETE OVER TIME

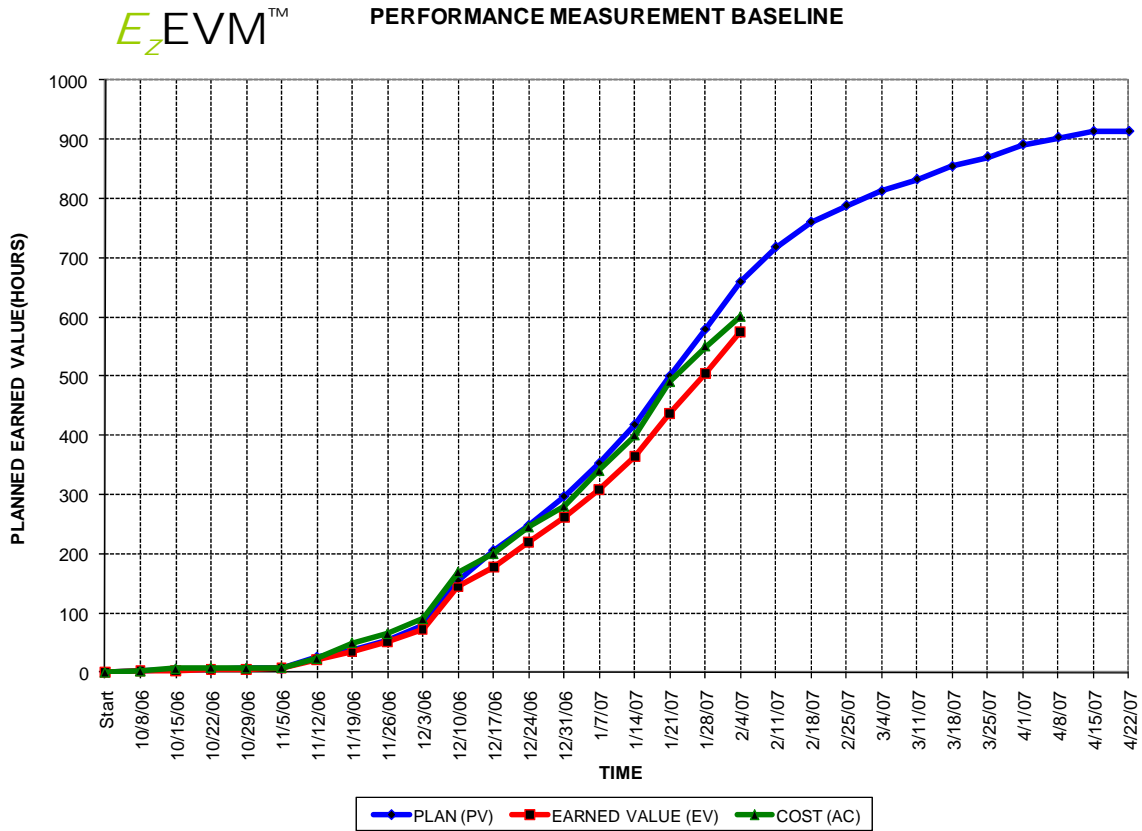
**E<sub>Z</sub>EVM™**

**PERCENT SPENT & COMPLETE  
AND ESTIMATED FINAL COST**



This chart plots cost related information. The percent complete and percent spent are plotted on the left scale. The averages of three Estimates at Complete calculations are plotted using the scale on the right.

# PERFORMANCE MEASUREMENT BASELINE



The traditional Performance Measurement Baseline is plotted over time.