

Project Management Institute

*Practice Standard for*

# **EARNED VALUE MANAGEMENT**



**Global STANDARD**

**Project Management Institute**

***Practice Standard for  
Earned Value Management***

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## Preface

The *Practice Standard for Earned Value Management (EVM)* has been developed as a supplement to *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. The *Practice Standard for EVM* is designed to provide readers who are familiar with the *PMBOK® Guide* with a fundamental understanding of the principles of EVM and its role in facilitating effective project management.

The *Practice Standard for EVM* assumes that the reader has a basic working knowledge of Project Management Process Groups, Knowledge Areas, and other key concepts such as work breakdown structures (WBS) and critical path method (CPM) scheduling, as outlined in the *PMBOK® Guide*. If that is not the case, it is recommended that the reader undertake a review of the *PMBOK® Guide* before reading the *Practice Standard for EVM*.

The *Practice Standard for EVM* is organized as follows:

**Introduction.** A brief overview of EVM, highlighting the key management questions EVM can help answer and exploring where EVM fits into the project management universe.

**Basic Elements of Earned Value Management.** This section discusses the three cornerstones of EVM: **Planned Value (PV)**, **Earned Value (EV)**, and **Actual Cost (AC)**. It examines how these three data points are determined and how they relate to one another.

**EVM Performance Analysis and Forecasting.** This section describes variances, indices, and forecasts that can be developed using **Planned Value (PV)**, **Earned Value (EV)**, and **Actual Cost (AC)**. The chapter also examines how these variances, indices, and forecasts can be used to answer essential management questions.

**Guidance for the Use of Key EVM Practices.** This section outlines basic EVM practices in their project management context and shows how EVM practices facilitate project planning and control for better management of project cost and schedule performance.

**Glossary.** This section provides concise definitions of key terms used throughout this Practice Standard. Most of these terms also appear in the *PMBOK® Guide—Third Edition's* glossary. Note, however, that many of the *PMBOK® Guide's* definitions are broader and more inclusive, since they apply beyond the scope of the *Practice Standard for Earned Value Management*.

**Appendices.** These offer additional sources of EVM concepts and methods for further study and information related to the development of the Practice Standard.

## Chapter 1

# Introduction

### 1.1 THE ROLE OF EARNED VALUE MANAGEMENT

Feedback is critical to the success of any project. Timely and targeted feedback can enable project managers to identify problems early and make adjustments that can keep a project on time and on budget.

Earned Value Management (EVM) has proven itself to be one of the most effective performance measurement and feedback tools for managing projects. It enables managers to close the loop in the plan-do-check-act management cycle.

EVM has been called “management with the lights on” because it can help clearly and objectively illuminate where a project is and where it is going—as compared to where it was supposed to be and where it was supposed to be going. EVM uses the fundamental principle that patterns and trends in the past can be good predictors of the future.

EVM provides organizations with the methodology needed to integrate the management of project scope, schedule, and cost. EVM can play a crucial role in answering management questions that are critical to the success of every project, such as:

- Are we ahead of or behind schedule?
- How efficiently are we using our time?
- When is the project likely to be completed?
- Are we currently under or over our budget?
- How efficiently are we using our resources?
- What is the remaining work likely to cost?
- What is the entire project likely to cost?
- How much will we be under or over budget at the end?

If the application of EVM to a project reveals that the project is behind schedule or over budget, the project manager can use the EVM methodology to help identify:

- Where problems are occurring
- Whether the problems are critical or not
- What it will take to get the project back on track.