

Earned Value and Agile¹

The Application of Earned Value Management to Agile Development and The Application of Agile Development to Earned Value Management

Introduction

By Ray Stratton

Agile development approaches the task of developing software systems from a new angle. Rather than beginning with fixed requirements which remain the basis for final product delivery Agile begins with a feature list (stories) that may change over the duration of the project. The expectation is that the cost and schedule at final delivery is as planned and thus some of the final list of desired features may not be completed due to lack of time or budget.

Furthermore, as the project is underway the anticipated environment at the time of final delivery may change and thus the initial feature list might change during the project's lifetime to help ensure a product of maximum value at the time of delivery.

Lastly, knowing it's unlikely that all features will be implemented means the priority of each is constantly being evaluated by the user/customer, thus changing plans for remaining work. Agile development continuously reviews both the scope and technical priorities to keep pace with the evolving environment while working within a defined budget and timeline. The goal is to get the most value for the funds spent and time used. Less important features might be left behind.

Earned Value Management (EVM) has traditionally been applied to waterfall type development with fixed scope and fixed technical requirements. EVM's traditional strength has been in monitoring the cost and schedule performance and providing estimates at complete for the final cost and schedule when all the requirements are met. It has relied on the assumption that (1) the requirements are fixed (unless rebaselined) and (2) all requirements must be met in the final delivery.

How can EVM apply when "done" might mean less than "all"? What if the project goal is to get the most bang for buck, not spend whatever time and budget is needed

¹The College of Performance Management (CPM) published a Compendium of articles on Earned Value and Agile based program management in *The Measureable News* in late 2014. The articles are now being republished in the *PM World Journal*, as agreed with CPM and the authors. This introduction by Ray Stratton launches the series. For information about CPM, visit their website at <https://www.mycpm.org/>

to get it all? Given this scenario how can EVM apply to agile development? How can agile development embrace EVM? What is the best way for government programs to enable AGILE development while still obtaining useful EVM data?

The answers are still evolving. EVM and Agile have worked in partnership. But doing so can challenge traditional thinking for both camps.

This collection of papers comes from authors with deep understanding of both EVM and Agile Development. They, or their employers, have offered to submit these papers in an effort to share ideas and successes in the use of EVM in agile development. Their ideas may not fit your needs but should stimulate thoughts about how to apply EVM and Agile in concert.

If you have not tried Agile, do so. If you have not tried EVM on your agile project, do so. Only then can you help to contribute to the growing body of experience and ideas to share.

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About the Author



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Ray Stratton, PMP®, EVP®, is founder and president of Management Technologies, an earned value management training and consulting firm. He provides his clients EVM training, ANSI 748 process engineering, third party EVM assessments, and application of EVM to their projects and programs. He has taught earned value management to US and foreign governments, educational institutions, and commercial and defense companies. He is the author of The Earned Value Management Maturity Model®, published by Management Concepts, and Ray Stratton's Earned Value Professional (EVP) Exam Study Guide. Mr. Stratton is also the editor of the monthly "The EVM Newsletter™"

Ray W. Stratton has over twenty five years' experience as a software program manager with a major aerospace defense firm. While there he managed the development of radar, communication, and command and control systems. Mr. Stratton retired from the Naval Air Reserve at the rank of Captain. He last commanded an Engineering Unit that supported a variety of studies and projects on behalf of the Naval Air Systems Command, laboratories, and ranges.