Six things' people don't get!

You would think in the 55 years since Earned Value Management (EVM) was introduced in its current form, most project and program managers would understand its basic principles[1]. Unfortunately, this does not seem to be the case.

The purpose of this article is to define the purpose of EVM in basic terms:

1. **EVM is a performance management system based on measuring the value of work performed**. Its primary purpose is to provide management with timely and accurate performance information within a few days of the end of each reporting period (typically each month). An effective EVM system has useful information available to management within 2 weeks maximum of the month-end, to allow management action to be taken to lock in gains and mitigate losses. There's no point telling someone there was a problem 6 weeks ago – it's too late! For controls purposes, approximately right today is far more useful than precisely correct a month later.

2. **EVM is NOT a financial accounting system**. The focus of an accounts system is precision and compliance, both of which are vitally important in this sphere of business. This means accounts information is always several weeks behind the actual performance of the work. The EVM System (EVMS) needs to know the total amount of money spent (actual cost) as at the end of the month, within a couple of days. This requires the accounting information to be augmented and adjusted to align with the month end. Pre-payments need to be discounted, missing payments need to be estimated (some invoices may not even have been sent at this time), and processes are needed to replace the estimated adjustments with factual accounts information as this comes available over the following weeks. The EVMS and accounts systems need to be aligned, but cannot be integrated.

3. **EVM is NOT a scheduling system**. The schedule is a vital input to developing the Performance Management Baseline (PMB) in the EVMS, you cannot have a sensible time phased budget without a schedule to define when the work in each 'work package' is planned to occur. But once work on the project starts, the focus of the schedule is on measuring progress in terms of percent complete across multiple activities, optimizing resource usage, and recalculating the work to completion and the project completion date – these are time-based calculations. The focus of the EVMS is on assessing the value of work achieved based on the 'assigned measure of performance' used to create the PMB. This is a value-based assessment that allows direct comparison with the actual cost information. Comparing the updated schedule information with the EVMS information provides a valuable cross check but the two processes are based on totally different metrics.

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[1]   For more on the *history of EVM* see: https://mosaicprojects.com.au/PMKI-ZSY-020.php#Process1

4. **The Work Breakdown Structure (WBS) is the heart of the EVMS**. The WBS is a hierarchal decomposition of all of the work of the project; expressed in terms of deliverables/outputs, and measured in terms of value[2].
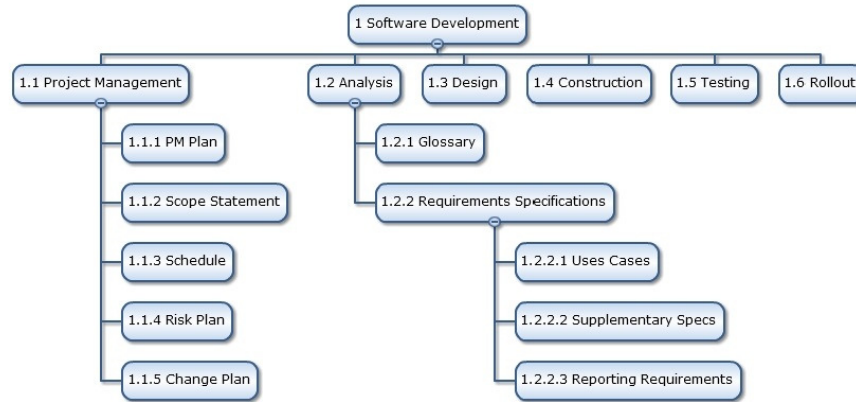
The WBS breaks the project down through several layers to identify management control points (control accounts, linked to the organization breakdown structure OBS) and the work packages that define the actual work to be performed. 90% of the information held in the WBS, is in the WBS Dictionary[3], not the WBS chart. Linking to the accounts system depends on the alignment of the two systems and is often complicated. The WBS needs to be able to import and process all of the project related costs, which means a number of WBS elements will be needed for pure cost items, while others that involve physical work will need to be linked across to the schedule. Reporting occurs at different levels in the WBS depending on the purpose of the report.

5. **EVM is more than simple 'S-Curves'.** The value of EVM is the ability to identify variance at the work package level to allow management to take quick action to fix the emerging issues. The traditional 'S-Curves' are only useful for high-level management reporting.

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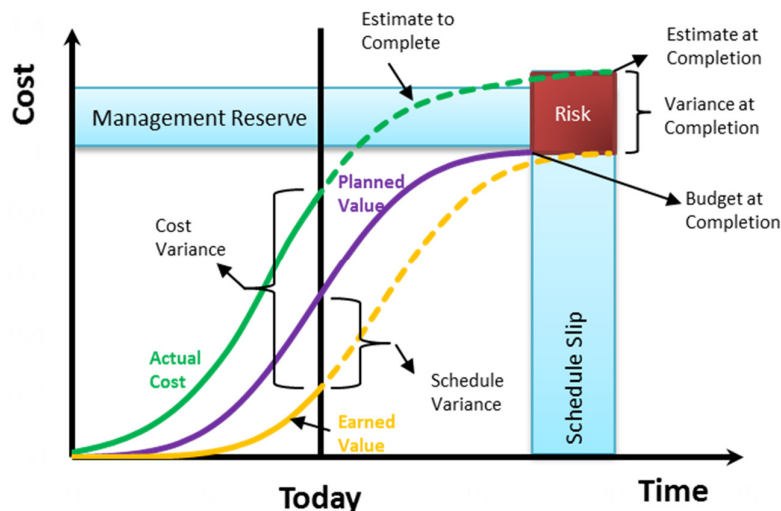
2   For more on the **WBS** see: https://mosaicprojects.com.au/PMKI-PBK-015.php#Process3

3   For more on the **WBS Dictionary** see: https://mosaicprojects.com.au/Mag_Articles/AA011-WBS_Dictionary.pdf

6. **EVM requires traceability and auditability**. Projects are not static, as changes occur the EVMS must be capable of recording each of the changes made to the system with explanation. This is to facilitate developing and maintaining the best view of the project's current status and its likely outcome.

For the reasons outlined above, it is nearly impossible to run an EVMS in either a scheduling tool, or accounting software. The EVMS needs to be able to draw information from both the schedule and the accounts system but its structure and purpose are different to both.

Some modern integrated tools do have separate functional areas for scheduling, EVM, project cost controls, etc.[4] These tools have the advantage of almost seamless data transfer, while retaining the integrity of each of the different functions. More traditional EVM software[5] is built to import the needed data from a wide range of external systems.

However, attempting to run a proper EVMS in a scheduling tool will result in either a uselessly complex and unwieldy schedule, or a severely compromised EVMS. Our book *Easy EVM*[6] was written to provide guidance on implementing EVM in a way that will deliver valuable management information in return for the effort involved in setting up an EVMS. But to be successful, you do need the right tools for the job and this includes proper EVM software.

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4   See a partial list of *integrated project management tools* at https://mosaicprojects.com.au/PMKI-SCH-030.php#PPPM, *construction industry specific tools* at: https://mosaicprojects.com.au/PMKI-SCH-030.php#Const (**Note**: inclusion in this list is not a recommendation)

5   See a partial list of *EVM tools* at https://mosaicprojects.com.au/PMKI-SCH-030.php#Cost (**Note**: inclusion in this list is not a recommendation)

6   To preview and buy *Easy EVM* see: https://mosaicprojects.com.au/shop-easy-evm.php