More on Measuring Project Performance [1]

LETTER TO THE EDITOR

24 June 2024

Ref: (1) Ozoux, J. L. (2024). Better progress measurement is the secret to successful projects - and a crucial objective for IT in project-driven organisations, PM World Journal, Vol. XIII, Issue V, May. Available online at https://pmworldlibrary.net/wp-content/uploads/2024/05/pmwj141-May2024-Ozoux-better-progress-measurement-is-the-secret-2.pdf
and
(2) Smith, K. F. (2024). On the Subject of Better Progress Measurement, Letter to the Editor, PM World Journal, Vol. XIII, Issue VI, June. https://pmworldlibrary.net/wp-content/uploads/2024/06/pmwj142-Jun2024-Smith-on-better-progress-measurement-Letter-to-Editor.pdf

Dear Editor

My last month's letter on the subject of better progress measurement only addressed measuring **work performance** with ***unweighted milestones*** in terms of the project **schedule.** Subsequently, however, I was involved in a couple of discussions on **Earned Value analysis**, which – *as we all know* -- entails ***integrated*** **work, schedule & cost performance assessment**. During one meeting[2] I revisited and reiterated my **integrated 13-point Project Performance 'IPPSTAT' scale[3]** based on project status possibilities in terms of EVM variables. I subsequently **updated the related** '*quick & easy*' **template** to share with conferees, incorporating traditional **SPI** and **CPI** indicators, and also **renamed the 13-point indicator** '**IPPI'** to clarify and emphasize its integrated stance. These changes are shown herein as Figures 1 and 2 on the following pages.

As a 'NIH' (i.e. *Not Invented Here)* nonentity, there is little likelihood the US Government will adopt or adapt **IPPSTAT** *in toto*. Nevertheless, other organizations unbounded by such strictures &/or beyond my immediate reach may still find **IPPSTAT** useful. [Copies of these updates are therefore available for free from kenfsmith@aol.com, on request.] To emulate Alexander Pope's admonition:[4] '***For means of measurement let fools contest. That which measures best is bes***t.'

[1] How to cite this work: Smith, K. F. (2024). More on Measuring Project Performance, Letter to the Editor, *PM World Journal*, Vol. XIII, Issue VII, July.

[2] **FYI,** US government authorities are currently reviewing – *with intent to update* -- age-old EVM guidelines. However, whether or not they 'double down,' or even extend extant EVM measurement, monitoring & reporting practices – *despite some current concerns about their utility* – or incorporate new features is beyond my purview here.

[3] An approach which I researched, developed and presented to PMI -- and others -- some 24 years ago; have since advocated and taught to participants in my workshop seminars, propounded in several previous PMWJ articles available amid other articles at www.pmworldlibrary.net; and now explicated and currently conveniently consolidated in the Earned Value Section of my recent book ***MUSINGS on Project Management***; available on Amazon**.**

[4] "*For forms of Government let fools contest. Whate'er is best administered is best*." Alexander Pope: ***An Essay on Man***' 1733

Figure 1a

INTEGRATED PROJECT PERFORMANCE STATUS (IPPSTAT)
for On-going Implementation Performance Assessment

In Monitoring Project Schedule, Cost and Quality* Implementation Performance, Thirteen (13) combinations of the Triple Variables PV AC & EV – – are possible.

	Planned Value (PV)	Actual Cost (AC)	Earned Value (EV)	Budget at Completion (BAC)	PERFOR-MANCE INDEX
	Budgeted Cost of Work Scheduled (BCWS)	Actual Cost of Work Performed (ACWP)	Budgeted Cost of Work Performed (BCWP)	Total Cost Planned for the Project (BAC)	IPPI
ENTER:	100	105	106	200	4

SCHEDULE	SCHEDULE Performance Index SPI	COST Performance Index CPI	COST
Well Ahead	1.06	1.01	*On Track*

*NOTE: Quality is implicit in successful Milestone attainment

IPPSTAT analyzes a **Project's current Schedule & Cost performance status** (on a numeric scale from *1 = High to 13 = Low*) as an ***Integrated Project Performance Index (IPPI),*** highlighted with a **"Traffic Light" color code,** based on the **Four adjacent Variables (PV, AC, EV & BAC),** for project management review and possible corrective action. *The **IPPI** is compatible with the "**Best Practice**" **Earned Value** Methodology advocated by the international **Project Management Institute (PMI).*** **The traditional Schedule Performance Index (SPI) and Cost Performance Index (CPI) are also computed.** Other analyses for Planning, Monitoring & Evaluating Projects are contained in my Book **PROJECT MANAGEMENT PRAXIS** while Issues are discussed in my Book **MUSINGS;** both of which are *Available from Amazon*), and **PM&E Tool Kit** available from : *kenfsmith@aol.com*

GOOD: Work is ahead of schedule, with cost savings, but may have a cash flow problem if funds are released incrementally

53% Complete	Schedule Variance :	6%	Cost Variance :	-1%
	Ahead of Schedule		-1	Under Budget

***NOTE: Schedule Assessment is based on Project* Earned Value vs Planned Value;**
NOT Completed Milestones

	Project Start Date (DDMMMYR)	Current Date (DDMMMYR)	Scheduled Completion Date (DDMMMYR)
ENTER:	3/Feb/24	25/Sep/26	19/Jan/27

SCHEDULE FORECAST 1: IF Work Performance rates are Regular, Linear Extrapolation of the Schedule Variance from the % Complete Date is OK. **28/Jan/29**

EARNED SCHEDULE FORECAST 2: **However, IF Work Performance rates are Irregular, % Variance from the Plan TO DATE added to the Scheduled Completion Date may be more realistic. COMPARE BOTH OF THESE FORECASTS with a detailed '*Work vs. Schedule Status*' S-Curve to detect irregularities, AND THEN USE YOUR OWN JUDGEMENT.** **12/Jan/27**

COST FORECAST: Based on Project Performance to date, the Budget Estimate at Completion (EAC1) is UNDER RUN **198**
and Variance at Completion (VAC) is: -2

See Graphs Below:

Figure 1b

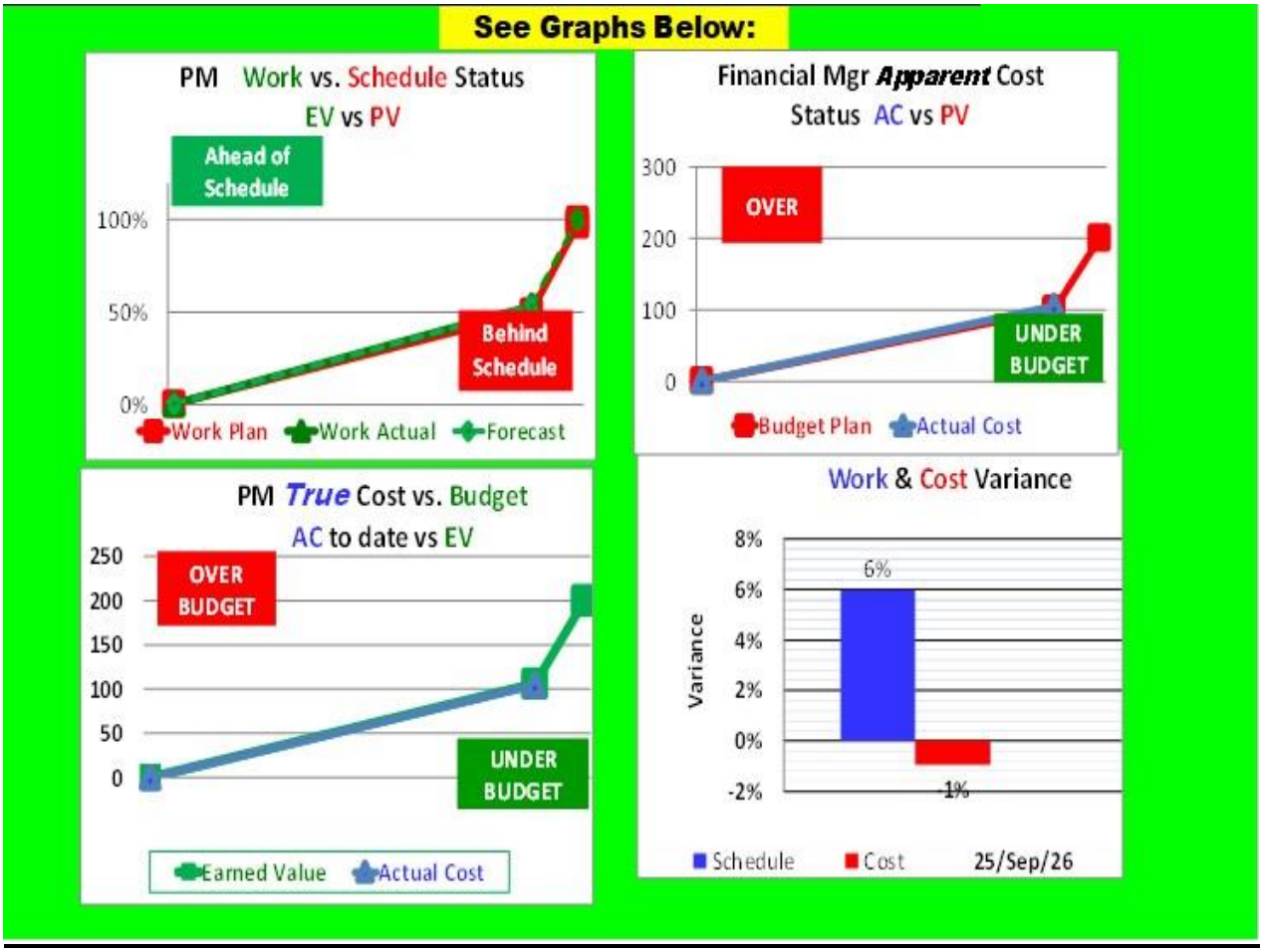
See Graphs Below:
PM Work vs. Schedule Status
EV vs PV
Ahead of Schedule
100%
50%
0%
Behind Schedule
Work Plan
Work Actual
Forecast
Financial Mgr Apparent Cost
Status AC vs PV
300
200
100
0
OVER
UNDER BUDGET
Budget Plan
Actual Cost
PM True Cost vs. Budget
AC to date vs EV
250
200
150
100
50
0
OVER BUDGET
UNDER BUDGET
Earned Value
Actual Cost
Work & Cost Variance
8%
6%
4%
2%
0%
-2%
Variance
6%
-1%
Schedule
Cost
25/Sep/26

Figure 2

The 13 Integrated Project Performance Indices (IPPI) & Possible Project Status Conditions

During implementation, thirteen (13) "*performance vs. plan*" scenarios are possible — depending on the interrelationship between Planned Value (PV), Actual Cost (AC), and Earned Value (EV) — which the project's manager should recognize, assess, *and* ***redress*** *if necessary*. These alternatives (with illustrative data) are shown in the table below:

Project Performance Index	Planned Value PV or Budgeted Cost of Work Scheduled	Actual Cost AC or Actual Cost of Work Performed	Earned Value EV or Budgeted Cost of Work Performed	PROJECT STATUS CONDITION	TRADITIONAL EVM PERFORMANCE INDICES — PERFORMANCE INDEX	
					SCHEDULE	COST
IPPI #	BCWS	ACWP	BCWP	PSC	SPI	CPI
1	$100	$80	$120	**Good.** Work is ahead of schedule & with cost savings on the work done, as well as an apparent cost underrun on the budget.	1.20	1.50
2	$100	$100	$120	**Good.** Work is ahead of schedule, with cost savings even though the budget has been spent as planned.	1.20	1.20
3	$100	$80	$100	**Good.** Work is on schedule, with cost savings.	1.00	1.25
4	$100	$120	$140	**Good.** Work is ahead of schedule, with costs savings. *[But may have a cash flow problem if funds are released incrementally.]*	1.40	1.17
5	$100	$120	$120	**Good.** Work is ahead of schedule, with costs as planned for work done. *[But may have a cash flow problem if funds are released incrementally.]*	1.20	1.00
6	$100	$100	$100	**"Ideal". Everything going according to plan – On Schedule & Spending.** ***[Extremely Rare!]***	1.00	1.00
7	$100	$60	$80	**Mixed – Good & Bad.** Saving money on the work performed; but work is behind schedule.	0.80	1.33
8	$100	$120	$100	**Mixed – Good & Bad.** Work on schedule, but cost overrun incurred. *[May have a cash flow problem if funds are released incrementally.]*	1.00	0.83
9	$100	$80	$80	**Mixed – Good & Bad.** Spending as planned; but work is behind schedule.	0.80	1.00
10	$100	$140	$120	**Mixed – Good & Bad.** Work ahead of schedule, but a cost overrun has been incurred. *[May have a cash flow problem if funds released incrementally.]*	1.20	0.86
11	$100	$80	$60	**Bad.** Spending is slower than planned, but the Value is low — indicating a cost overrun; and the work is also behind schedule.	0.60	0.75
12	$100	$100	$80	**Bad.** Although the spending rate is as planned, since the Value is low, there is a cost overrun; and the work is also behind schedule.	0.80	0.80
13	$100	$120	$80	**Bad.** Work behind schedule, cost overrun *[and possible cash flow problem.]*	0.80	0.67

NOTE: Backgrounds of SPI & CPI indicators are further differentiated in the template.

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