Advances in Project Management Series[1]

From Earned Value to Value Realisation

From managing projects to managing business outcomes in change programmes

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One of the most powerful techniques for managing the costs and timelines in a project is through the method of Earned Value Management (EVM). However, it is becoming increasingly important to manage not just cost and timings but also the value outcome to the business stakeholders. This is especially important when it comes to strategic change and business transformation programmes. The track record on this is extremely poor, reflected in research which shows that "69% of top executives think their transformation programs didn't deliver the expected benefits in the business"[i]. Value Realisation takes Earned Value Management beyond tracking the cost and schedule of programme outputs to delivering stakeholder value outcomes that the outputs are intended to realise. This is an essential distinction where there is a need for greater predictability concerning benefits from change.

We start with some definitions to set the scene, after which we will elaborate on the need to move from EVM to Value Realisation, explaining the distinctions from a stakeholder value perspective. We describe the IMPACT Value Management Framework, derived by translating 7 repeating failure patterns into solutions. Finally, we show how EVM can be extended into Value Management for the business by integrating it with Value Realisation using the IMPACT framework.

Definitions

Earned Value Management (EVM) is a technique for tracking the cost and schedule status of programme deliverables by calculating the true progress, Earned Value (EV), in terms of the relationship between planned, actual and projected cost at a given time, normally the reporting period.

Value Realisation concerns tracking stakeholder value delivered and forecast as a result of programme deliverables, where value is defined as the difference between benefits and costs and quantified as the net free cash flows expressed as Net Present Value (NPV).

[1] *The Advances in Project Management series includes articles by authors of program and project management books published by Gower in the UK. Information about the Gower series can be found at http://www.gowerpublishing.com/advancesinprojectmanagement. See the authors' profiles at the end of this article.*

Stakeholders are people, bodies and living entities which have an interest in, influence on or are affected by the change; for businesses these typically include shareholders, customers, staff and suppliers but equally apply to societies and the environment.

Value Management comprises the mindset, process and techniques for precisely targeting, prioritising and aligning programme deliverables to optimise value outcomes across stakeholders.

Why do we need to extend Earned Value to Value Realisation for Change Programmes?

All programmes involve change. In Value Management change programmes refer to business transformation through programmed investment in people, processes and technology. In this context, a shift in culture is treated as much of a deliverable as the launch of a new product, robotic assembly line or Customer Relationship Management (CRM) system, in so much as it is an essential element in a chain of cause and effect needed to realise intended value for stakeholders.

The imperative to transcend from EVM to Value Realisation for change programmes is both critical and urgent. EVM is one of the most powerful tools available for tracking delivered functionality. However, at this point we need to make a distinction between programmes that focus on delivery of a functional output, such as a new fighter aircraft or fleet of warships, and a business transformation programme, which is more concerned with the tangible value realised by stakeholders as a result of the functionality. For example, a payments infrastructure refresh for a bank providing better service to customers, whilst reducing risk and attracting additional revenue for the bank with consequential returns to shareholders.

It follows that change programmes need to be more concerned with delivering stakeholder value. Value Realisation is the process of tracking and delivering stakeholder value, which can only be achieved through the new and/or released capabilities. Therefore, it follows that effective stakeholder value delivery requires the ***integration*** of EVM and Value Realisation, which focus on deliverable and stakeholder value tracking respectively.

(Note that defence assets also have stakeholder value implications, for example through greater national security and protection of trade routes etc. Value Management is also used to quantify these higher level effects. However, this paper focuses on business transformation.)

The Specifics of Earned Value Management

EVM originated and continues to be used most extensively within the Aerospace and Defence sectors because it is particularly well suited to complex, high risk programmes focused on functional output. However, it has also been used within Value Management successfully across both private and public sectors. The technique can be used in combination with, and complements, PRINCE 2™, Managing Successful Programmes (MSP™) or any other programme management framework, and complements leading change

philosophies like Total Quality Management (TQM) and LEAN. The key EVM components are described below with reference to Figure 1:

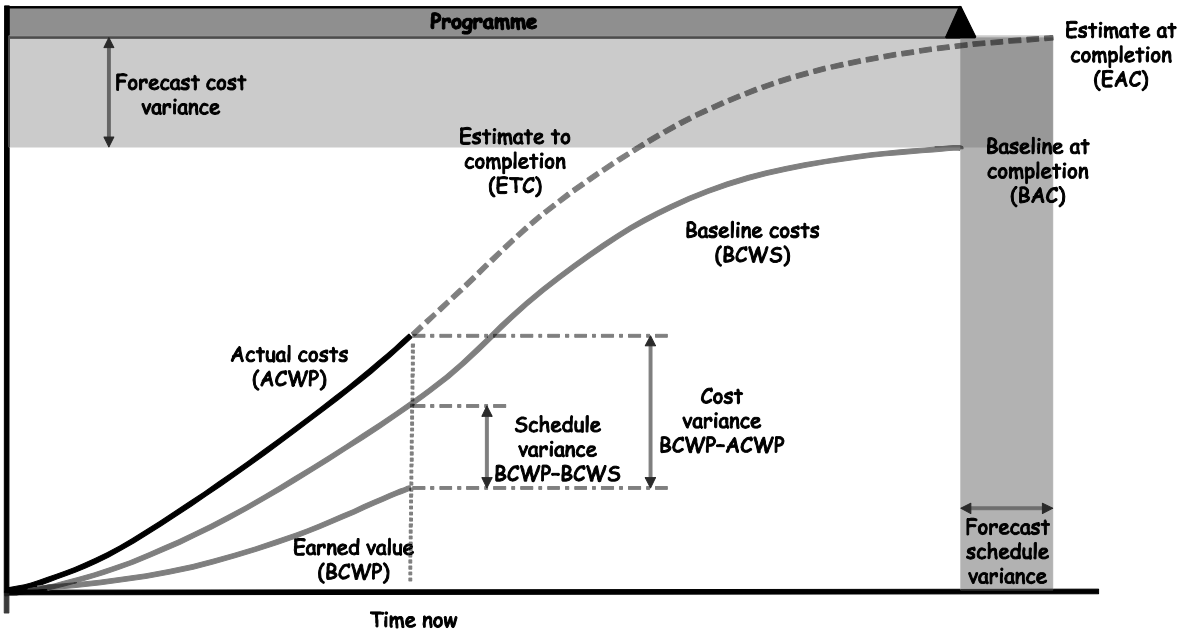

Figure 1: Earned Value Management

A cumulative cost curve, usually an S-curve plotted over time, is first derived for the programme and defined as the Baseline Costs, full term Budgeted Cost of Work Scheduled (BCWS), and the total designated Baseline at Completion (BAC) which corresponds in time to the end of the programme. The end of the programme is achieved with the operational functioning of the newly created deliverables.

The expenditure up to the current point, Time Now, is plotted as Actual Costs, full term Actual Cost of Work Performed (ACWP). The entire remainder of the programme is re-planned to determine the Estimate to Completion (ETC) costs, and the actual plus forecast total designated Estimate at Completion (EAC). For each reporting period the Earned Value, full term Budgeted Cost of Work Performed (BCWP) is calculated to reflect the real proportion of valuable work completed at Time Now. The difference between Actual Costs and Earned Value is called Cost Variance, and provides an acid test of the degree to which the programme is on budget.

The difference between Baseline Costs and Earned Value is called Schedule Variance and represents the degree to which the programme is on track, in terms of cost. The difference between BAC and EAC is the Forecast Cost Variance of the programme. The relative positions on the time axis provide the Forecast Schedule Variance. Two programme performance indicators, Cost Performance Index (CPI) and Schedule Performance Index (SPI) are derived as:

$$CPI = BCWP / ACWP$$

$$SPI = BCWP / BCWS$$

The key to using EVM effectively is assessing EV accurately. There are numerous ways to determine the Earned Value, a common example being estimates by the team of value added work completed to-date. The problem with this, and similar assessments of work done, is that it tends to encourage wishful thinking. A number of techniques are then used to assess progress to date or each reporting period. However, we have found that by far the most effective is to work from completion, not what has been done. This imposes the healthy discipline of considering what must be done to complete the programme, which maintains a future focus in the reporting cycle. Consequently, in Value Management, we favour compute Earned Value as a relationship between EAC and BAC as follows:

$$Earned\ Value = Actual\ Costs \times BAC / EAC$$

This simple calculation derives Earned Value by factoring the actual spend by the degree to which the latest expectation of cost to complete varies in relation to the original baseline. The key to achieving an accurate Earned Value is realistic and truthful estimates of the outstanding work, which must take into account changes, error corrections etc., to be meaningful. It is important not to fall into the trap of simply re-baselining the programme to obscure negative variances (This is a common trick and renders the technique worthless, even dangerous). It is far more effective to expose the full extent of variances and deal with them accordingly, even if this means terminating the programme.

How can Value Management add to EVM?

As previously stated, the power of EVM in tracking costs and schedules has naturally resulted in the technique being most used in the defence and aerospace arenas. The issue of interest here is that although much less applied, it is potentially equally powerful for managing strategic change programmes for business transformation. However, there is a fundamental issue in this context; EVM is really earned cost in relation to time. It does not extend to consequential stakeholder value, which is implicitly assumed in change programmes, yet very rarely realised. Value Management addresses this disconnect by linking programme tracking using EVM with changes in performance drivers and consequential free cash flow outcomes expressed as Net Present Value (NPV).

Much has been researched and documented concerning the failure of change programmes to deliver any, let alone intended, stakeholder value, together with the magnitude of waste that this failure represents; it is huge. Similarly, there is has been a great deal documented in response the question, “Why do change programmes fail to deliver value?” The most common reasons include loose specification, poor buy-in, cultural resistance and weak programme management. The problem is, these amount to broad excuses rather than causal definitions against which improvements can be precisely targeted. In order to address the challenge we must first understand the causal structure of the problem at an altogether more profound level and this starts with the questions we ask.

In Value Management we ask different questions, such as, "In how many ways are we preventing value delivery?" or "What capabilities do we need and how do we turn them into stakeholder value?"

30 years of experience and research have shown us that the biggest challenge preventing successful stakeholder value delivery lies in a fundamental disconnect between what the programme delivers functionally and the purpose of the strategic vision. What this ultimately boils down to is that the stakeholders, key performance indicators and the programme are not properly aligned and connected causally.

Through precise causal questions and associated modelling, we identified 7 causal repeating failure patterns upon which we developed the key principles and phases of a resolution, the IMPACT framework for Value Management as shown in Figure 2. IMPACT is embedded throughout the Enterprise Value Journey which specifies purpose and transforms it into performance. IMPACT phases are:

1) **Intention**: Precise specification of stakeholder outcomes, in the context of the strategic vision. Keep in mind there is a fundamental difference between output (a system that enables mobile banking) and outcomes (the customer enjoying the new way of communicating with his/her bank) from a value realisation perspective

2) **Model**: Model cause and effect of inherently wicked problems using systems thinking and dynamics modelling to get grip on complexity and be able to quantify the dynamics as Net Present Value (NPV)

3) **Programme**: Precise, dynamic causal linkage of specific programme deliverables, or phase deliverables, to value expressed as NPV

4) **Alignment**: the program with business KPI's in order to establish a clear line of sight between the program and the strategic vision

5) **Certainty**: Precise definition of criteria that will lead to the desired outcomes and the outcomes that are achieved. We call this Certainty Management

6) **Track**: Tracking 3 aspects of each programme:
    a. The deliverables
    b. The performance drivers and benefits, normally structured in a performance management framework, such as a balance scorecard
    c. The NPV of the overall programme to ensure that in addition to stakeholder benefits overall business value is delivered

7) **Leaning Framework**: Integrating the above into a validated learning framework, **IMPACT**

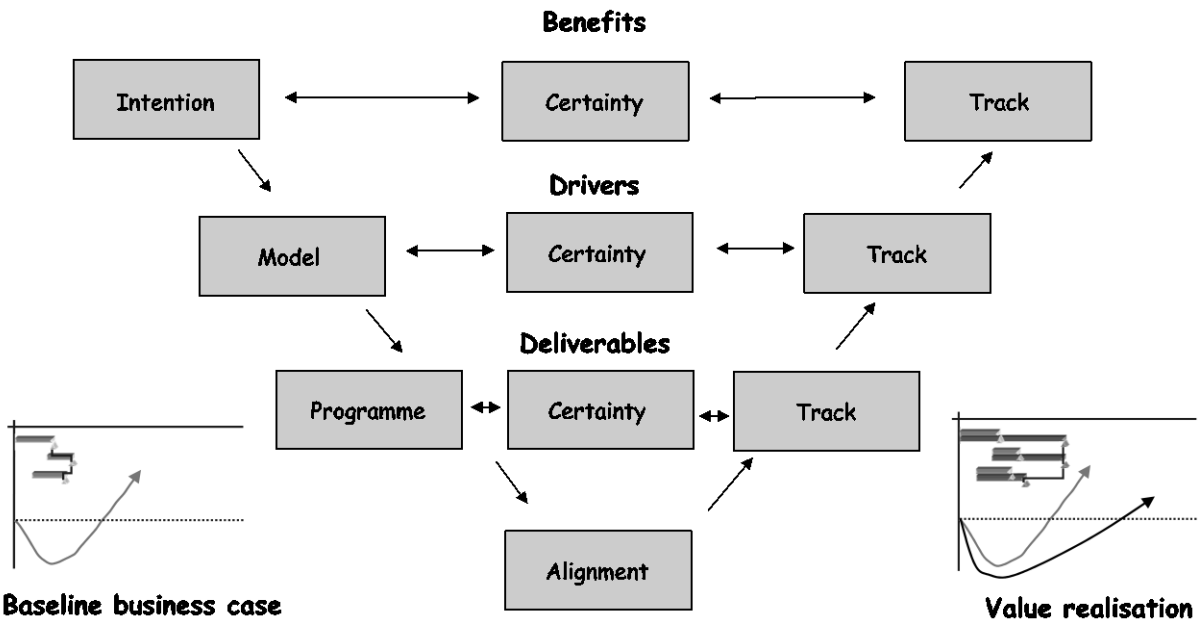

Figure 2: IMPACT Value Management Framework

What to add to get from EVM to Value Realisation?

In this approach to Value Management there are three aspects to the integration needed to move from EVM to Value Realisation from a monitoring perspective:

- Deliverables Tracking
- Benefits Tracking
- Value Tracking

Deliverables Tracking

This is concerned with tracking the programme deliverables through the programme phases, which output the deliverables. This includes: development and support costs, timing of whole and/or partial deliverables, compliance of whole and/or partial deliverables with specification and capacity to generate intended benefits, taking into account any changes. Deliverables tracking focuses on ensuring that business capabilities are delivered on time and budget. EVM is arguably the most effective technique for supporting deliverables tracking.

Benefits Tracking

Sound project management is essential but not sufficient to ensure that intended value is delivered from change. Benefits tracking and management is also a critical element of programme management and involves measuring the resultant change in performance drivers and financial outcomes against a baseline using a performance management

framework, such as a Balanced Scorecard. An example of benefits tracking output from a Balanced Scorecard is shown is shown in Figure 3:

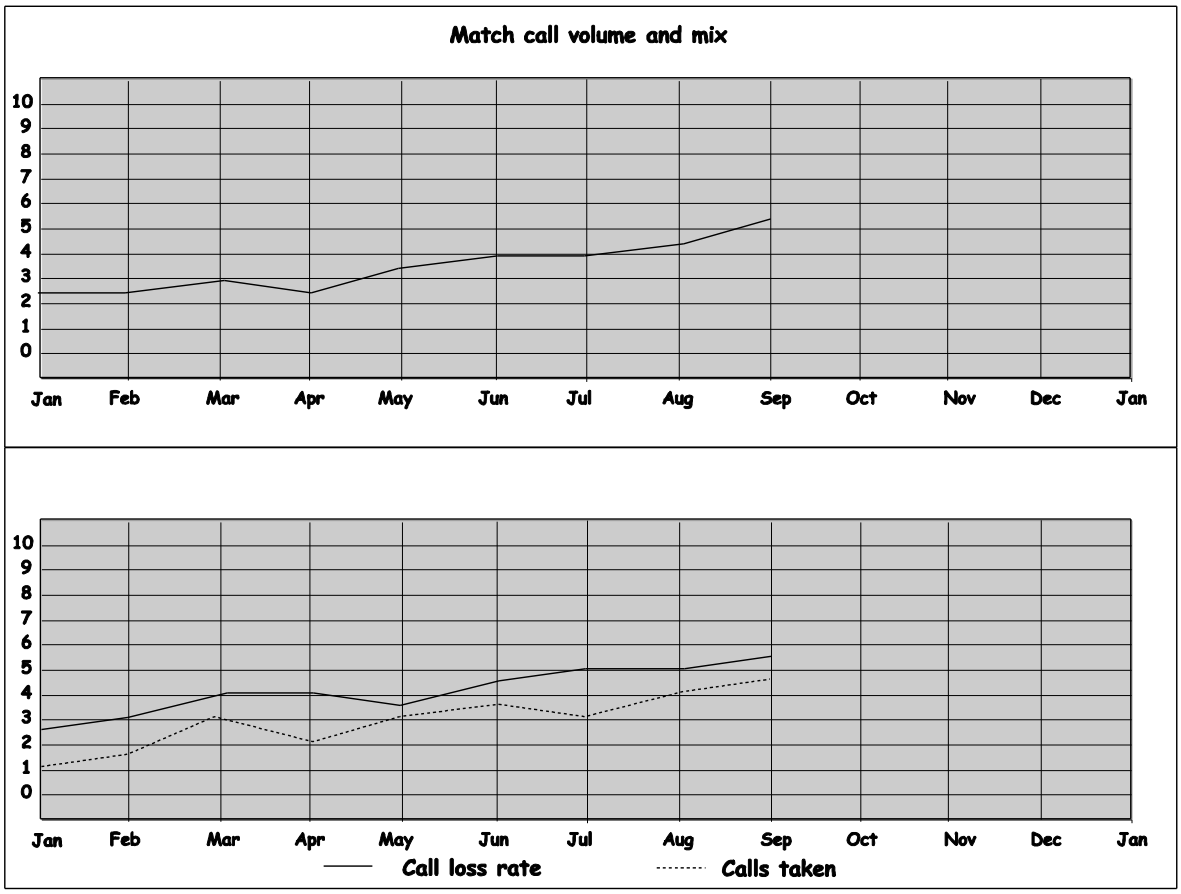

Figure 3: Benefits Tracking using a Balanced Scorecard

Value Tracking

Deliverable and benefits tracking concern the monitoring and correction of variances in programme costs and benefits, respectively. Value Tracking combines these two techniques to track overall programme value which is measures as an NPV. Therefore, Value Tracking is concerned with the status of the causal linkage between programme phases and the benefits, attributable to deliverables output by the phases, together with costs of developing and supporting the deliverables. Programme value is expressed as a NPV J-curve.

Just as good EVM tools model the status dynamics in terms of cost, so in Value Management we need to capture the relationship between the status of deliverables and actual and projected NPV for the programme. This means that any changes in costs, benefits, timing, compliance or risk are reflected dynamically in terms of their impact on NPV, together with the causal traceability that enables effective interventions to ensure that the programme remains on purpose and performance. This is achieved using the Value Management Toolset™ shown in Figure 4.

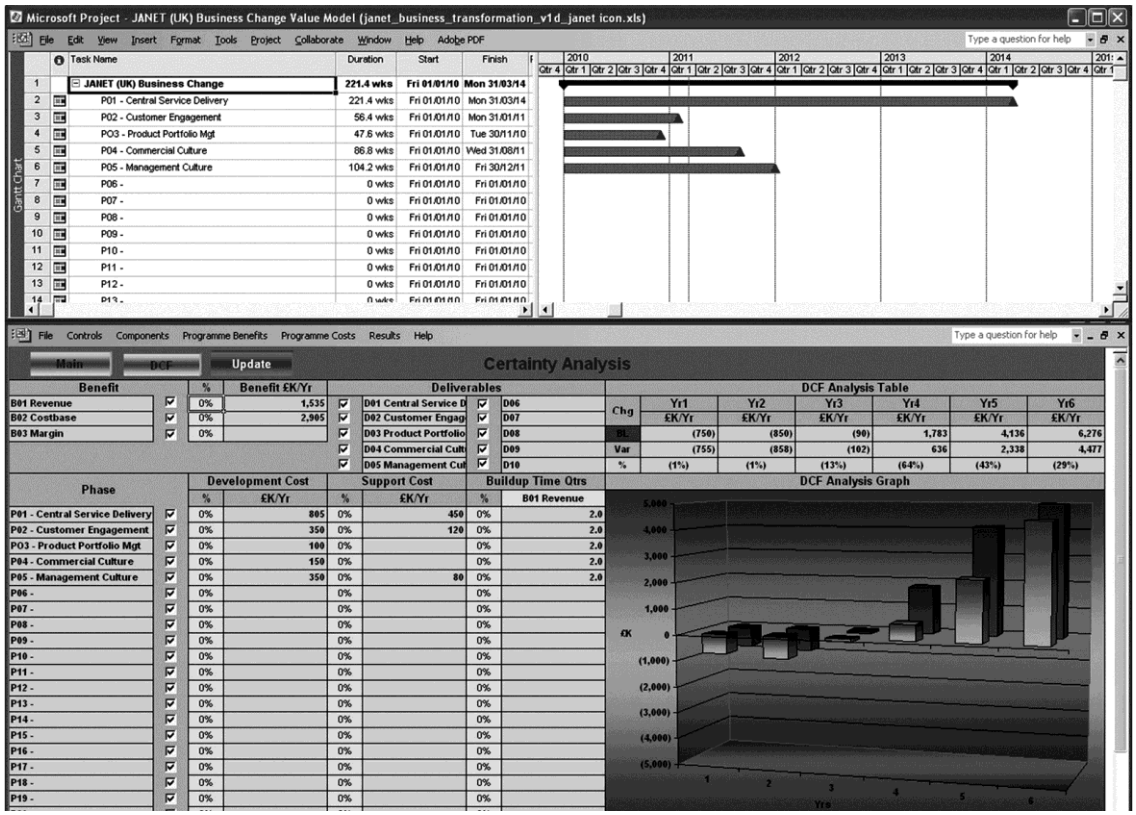

Figure 4: Value Management Toolset™

Conclusion

When companies realise that despite being advanced in project and programme methodologies, that there is still significant room for improvement in realising more value from change programmes, they can choose to extend Earned Value to Value Realisation under a Value Management mindset and framework for change programmes.

As this article explains, you can improve business results from change by tracking value, benefits and deliverables as an integrated process which will expose opportunities for improvement, and the IMPACT framework can help you address newly arising challenges, normally unseen in your organisation. In essence, Value Management represents and demands fundamental changes in how companies approach change programmes.

Further Reading

Davies, R., Davies A. 2011. *Value Management: Translating Aspirations into Performance*. Farnham, Gower.
Webb, A. 2003. *Using Earned Value: A Project Manager's Guide*. Aldershot: Gower.

Notes

i. PwC; CEO survey 2012-13

About the Authors

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Roel Wolfert is a change leader, strategist, innovator and senior international executive with more than 20 years of experience in disruptive innovation and strategic change. He's specialised in finding, creating and delivering measurable value to organizations. Roel enjoys helping organizations and executives to make a 'turn around' in their business (models) and a mind shift in their thinking and acting. Roel is an investor, entrepreneur, lecturer and performance coach. He is co-founder of VGrip and works on projects across different industries in Europe, whilst also guest lecturing in Value Management at HZ University of Applied Sciences.

Roger Davies

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Roger Davies is consultant, trainer, author and speaker with 35 years' experience in transformational change. A Chartered Engineer, he began his career in manufacturing and, as a Chief Engineer with Plessey, led major Computer Integrated Manufacturing (CIM) programmes, the learning from which he integrated into Value Management as his Master of Business Administration thesis. He subsequently grew the value proposition for several large management consultancies, applying it across virtually every sector, both private and public, before founding Impact Dynamics in 2002 and, more recently, co-founding VGrip, a thought leadership company in Value Management. Roger is a Master Practitioner in NLP and provides Breakthrough Coaching. Currently, he is undertaking doctoral research in Value Management with the University of Bristol.

Value Management: Translating Aspirations into Performance, by Roger Davies and Adam Davies was published by Gower in 2011.