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# Does project management really add value?

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The core philosophy of focusing on value is defined by the client and reducing or eliminating waste.

In recent years project management has been applied as a matter of course to projects where the key measures of success are defined by the PCTS (performance, cost, time and scope) factors under control. Variance analysis has become a very sophisticated tool during the process of establishing the project with no or little cognisance of how well the undertaking is functioning after the project is handed over.

This is the area I want to explore, and to look at its value in forecasting the likely outcome of the project

Very often the undertaking functions suboptimally as the result of poor project management in the initial stages.

Often we are rolling out the project spectrum with clearly measurable results, yet with intangible effects. I will describe the general value proposition in this paper with a focus on the performance of the project once handed over. I shall also look at the success rate of projects done by RSV.

In practice, project management is too often considered simply as a toolbox to be opened occasionally based on individual desires or only when things go wrong. All companies, even the most prestigious, have their own issues in assessing failures. A natural tendency would be for an organization to deny any responsibility for failure and to look instead for external factors to explain it. An audit to analyse the real causes would only be undertaken in case of an extreme negative impact on the organization; however, such information is absolutely critical to learn and to improve.

The object of the paper will be to establish a model for identifying and pursuing the value trajectory at both tactical and strategic levels that can be used by both the internally driven and externally driven needs of the organization and its stakeholders.

## Introduction

The value of project management has different meanings when viewed from different vantage points. At a strategic level the profession and its institutions will be the focus of analysis. At the tactical level the business and unit processes form the subject of the analysis.

Furthermore, the value of project management will have different outcomes when viewed along the scalar chain of project stakeholders. The stakeholders who occupy the internal environment, the project team, the owner's team, contractors, suppliers and clients will have quite a different view from the stakeholders who occupy the external environment—society, politicians, lawmakers, labour unions and environmentalists.

This paper is the product of an extensive review of relevant literature published internationally (cited in references), research conducted by the Project Management Institute, Inc. and personal experience gained through some forty-five years of executing mining related projects.

In addition, 28 projects, completed over the last five years by the firm Read, Swatman & Voigt (Pty) Ltd, have been analysed in the context of the subject matter. These projects cannot be specifically named, as confidentiality agreements, proprietary rights and client privilege prevent such reference.

The paper is organized in three main sections:

Firstly, the notion of value in general and in the context of project management, is analysed.

Secondly, a project management maturity model is presented as a way of assisting stakeholders to predict more accurately the outcome of their projects.

Thirdly, project management as a concept is readily accepted by senior executives, but the imperative of a systematic, integrated and unfragmented project management model does not always find favour with those who see project management simply as a tool to accomplish an immediate goal; therefore, it is essential that the global concept of project management be explained to senior executives. The evidence is laid out under the sub title of: 'Selling project management to senior executives'

Finally, the main ideas of the paper are summarized.

## What is value?

The notion of value has perplexed human thinking for many centuries and means different things to different people. The verb 'to value', and the adjective 'valuable', have a wide range of meanings in ordinary speech because they are used in different contexts. But all of these meanings and all of the uses of these words build on one central idea: value is

an aggregation or a series of actions. This suggests that in the context of project management, value is actually a verb (doing word). We speak most clearly, in other words, if we consider the verb 'to value' as the primary guide to the meanings of these words.

Aristotle, considering this problem in the year 350 BC, named seven classes of value:

- Economic
- Moral
- Aesthetic
- Social
- Political
- Religious
- Judicial.

Of these, however, only the economic classification can be considered to be objective. It is the only one that can be measured in external units. All the other classes must be viewed subjectively.

Within the class economic value, there are also to be found subjective and objective qualities. Economic value, in fact, comprises four specific kinds of value:

- Use value
- Esteem value
- Cost value
- Exchange value.

From this it can be seen that only use value is wholly objective. Use value alludes to the functional characteristic of the term value and finds expression in the classical value equation.

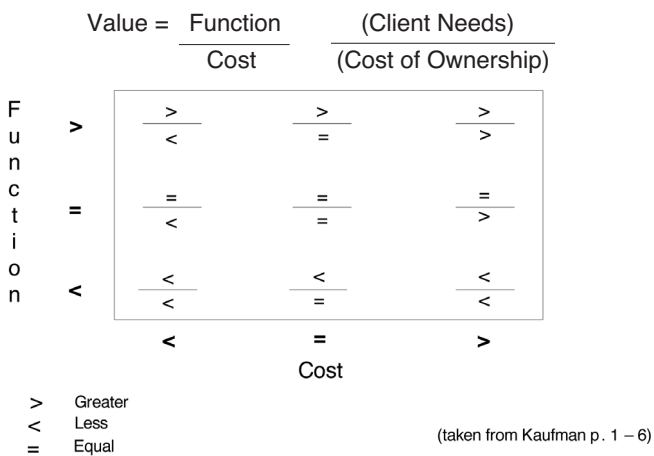
$$\text{Value} = \frac{\text{Function}}{\text{Cost}}$$

In terms of the commercial application of this equation, function is anything that makes an item or system work or sell. Therefore, value can be expressed as:

$$\text{Value} = \frac{(\text{Esteem}) + (\text{Exchange}) + (\text{Utility})}{\text{Cost}}$$

Although function cannot be quantitatively expressed, the relationship of function to cost and how it affects value is illustrated by the matrix in Figure 1.

This very simple concept of value underlies the more sophisticated methods of value calculations presented by modern business science.



**Figure 1. Value = Function/Cost (Client needs)/(Cost of ownership)<sup>1</sup>**

In our increasingly results-orientated environment, investors and their agents demand reliable financial justification based on the principles of a corporate financial model. These methods range from simple cost/benefit analysis and return on investment, to economic/market value-added approaches.

Investors are primarily concerned about:

- *Safety*—the return of their capital
- *Profitability*—the return on their capital
- *Discounted value*—the timing of that return.

These measures are interdependent and below-average return in one or more of the elements must be offset by superior performance by the others.

From a quantitative perspective, these financial models give the illusion of absolute correctness. However, there are problems that are immediately apparent when one looks at the input assumptions on which the models are based.

Firstly, return on investment (ROI) calculations are more useful when it is possible to track directly influence of the investment on the output, as in manufacturing, for example<sup>2</sup>. In project management, there are too many variables in the input side of the equation to attribute a particular business result to a specific intervention; for instance discount rates, cost of capital and future cash flows are not individually an exact science but are open to manipulation to force a desired result.

This financial management view of 'valuation' is not as useful in project management, which is a service-based industry operating in the so-called 'knowledge based economy', where it is commonplace for a company to be valued as much for its intangibles—its business procedures, client networks, trademarks, patents and brands, knowledge and skills and business relationships—as for its financial and physical assets.

These value generators must be seen on a collective basis and are therefore more difficult to measure individually and comprehend.

So therefore, secondly, ROI would not be of much value to a project manager in the performing of his day to day tasks.

Thirdly, economic value added (EVA) (and the corresponding market value added—for listed companies) is difficult to apply in a project setting because investments in project management do not always directly and exclusively contribute to a company's market capitalization<sup>3</sup>. EVA determination is a very meticulous procedure, where capital costs must be authorized and pooled costs distributed to the appropriate business unit or project. Also, EVA is dependent on macroeconomic factors, such as cost of capital, which are not tightly linked to project management effectiveness.

Although these measurements of financial value are fundamentally important, they do not tell the whole story.

As shown in the simple value equation, there are intangibles that can have a significant influence on the real and sustainable value of project management. In the knowledge based economy, issues such as client relations, employee relations, business processes, knowledge management, client base and networks, trademarks, patents, talent and human capital and brand position are hugely important in determining the value of project management processes.

More sophisticated measures have been developed to account for these complex but intangible variables. By far the most used of these expanded approaches is the balanced scorecard (BSC) approach developed by Kaplan and Norton<sup>5</sup>

The BSC essentially uses integral performance measurement to monitor and adjust business strategy. In addition to the financial methods of evaluation mentioned earlier, it forces the project manager to incorporate the client perspective, operations and the organization's innovation and learning ability.

The balanced scorecard (BSC) makes it possible to see aggregate financial consequences of non-financial measures that drive long-term financial success:

- What is important for the shareholders?
- How do clients perceive project management?
- Which internal processes can add value?
- How does innovation create the future?

In the project environment, the BSC can suffer from inadequacies:

- It often fails to link the metrics to corporate strategy – often because commonly available or easy-to-acquire measures substitute for the more difficult but appropriate strategic measures. In addition, attempts to quantify intangible benefits fall prey to criticisms of how they are estimated.
- The single-minded focus on a small number of relatively rigid measures results in a 'tyranny' of measurements that conflict with creativity, innovation and adaptation.
- Also, executive management often see estimates of these metrics as speculative and debatable, rather than being the hard numbers for which they are looking<sup>3</sup>.

These and other methods of evaluating project management performance have found limited application because as Voelpel *et al.*<sup>6</sup> assured, 'All of the traditional business performance measures suffer to some degree because of the underlying and increasingly invalid assumptions rooted in the industrial economy.' They suggested that what is missing in these measures is a contextual understanding of the complex web of interrelated factors, relationships and activities that need to be taken into account in a holistic manner in order to assess an organization's performance in the knowledge economy.

In the final analysis most of these evaluation methodologies, when rigidly applied, yield good but limited results. Some of the drawbacks include a requirement for a large amount of input data that is not always readily available. Short-cut systems are developed to generate this data and are often based on invalid assumptions and open to manipulation. Investors, therefore, become suspicious of the results.

Project management organizations, therefore, started looking for other methods to convince and persuade investors of a more predictable outcome.

One such method is the project management maturity model.

### Project management maturity model (PMMM)

The concept of project management maturity assesses an organization's probability of successfully executing a project. This model provides best practices to ensure management organizations' effectiveness at performing project management tasks. Therefore, it gives investors and their agents the best assurance that their projects will realize the benefits that were the basis for undertaking in the project in the first place.

Meg Charter<sup>6</sup> says that 'the challenge in defining and pursuing value based on maturity or process improvement models, is that the ultimate value of project management is in its integration with other processes and an organisation's ability to embrace a project life cycle that extends through the realization of the benefits that were the basis for critically moving forward with the project'.

Several research initiatives had shown that organizations with higher PMMM tend to deliver projects that fulfil the initial investment criteria to a higher degree, (PMI research, C.W. Ibbs and Young Hoon Kwak 1997, Pennypacker and Grant 2003, Rad and Levin 2006)<sup>8</sup>

There are many project management or organizational management maturity models available from which to choose on the market. One such model, the Berkley Project Management Process Maturity Model, captures both the

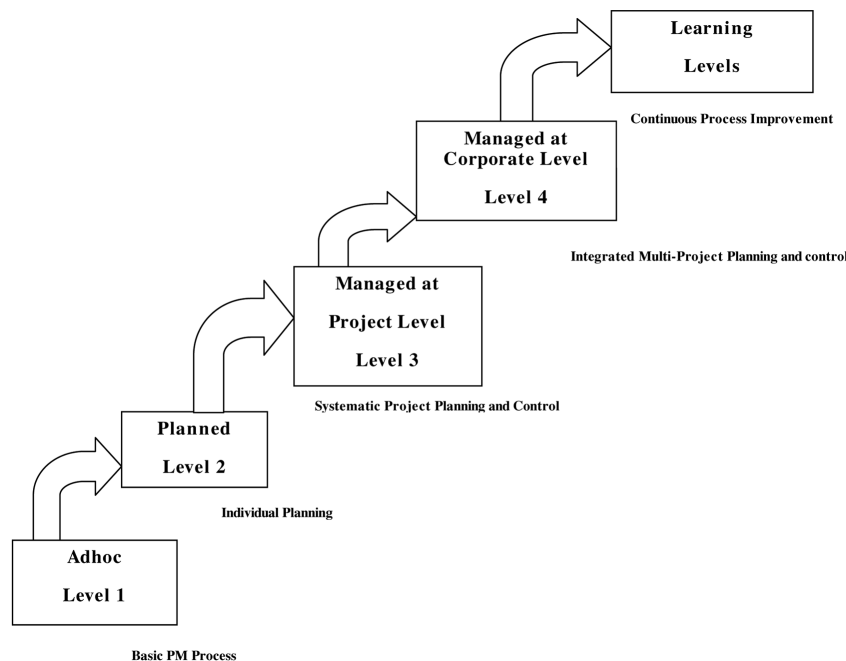


Figure 2. Berkley project management process maturity model

Cost Performance Index (CPI)	=	$\frac{\text{Earned Value}}{\text{Actual Value}}$
Schedule Performance Index (SPI)	=	$\frac{\text{Earned Value}}{\text{Planned Value}}$

Figure 3. Equations determining CPI and SPI

knowledge areas and project life-cycle phases from a *Guide to the Project Management Body of Knowledge (PMBOK®4 Guide)* and includes them in the equation when determining PMMM.

No matter which maturity model is preferred, the fact is, establishing a metrics programme is key to all preferred models.

Metrics are basic to sound project management activities, such as planning and cost control. Higher PMM corresponds to increased schedule performance index (SPI) and cost performance index (CPI). SPI and CPI are ratios of total original authorized duration or budget versus total final project duration or cost.

### Ranking project maturity

In order to assess an organization's current level of project maturity, a detailed description of its strengths and weaknesses must be made. Project management maturity can be quantified and expressed as a metric that measures whether the effort associated with improvement in project management process is increasing, decreasing or staying about the same.

This metric would quantify whether the culture of project management is permeating through the organization and whether project management processes are effective.

Such a formalized maturity evaluation will establish a baseline for improvement in the success of projects.

A ranking scale for an organizations project maturity provides a plateau for purposes of continuous improvement of organizational project management capability. The indicators of the maturity model highlight the sophistication of key practices in the organization, particularly those in need of improvement.

Rad and Levin (2006)<sup>7</sup> use metrics to group the maturity levels of the model:

- *Initial level*—At level 1, metrics focus is on the things aspects of the project, not the people aspects. There are few formalized procedures and typically there is no guidance on how to use them. Because managers must invent their own practices, processes depend on each project manager's personal orientation, experience and people skills. At this level, over the life of the project, various team members use miscellaneous project management tools sporadically.
- *Developed level*—At level 2 most projects use metrics and follow procedures for some project elements. The organization emphasizes effective project performance and there is sporadic use of best practices. Relatively meaningful metrics emphasize things, and issues are sometimes specified, documented and reported
- *Evolved level*—At level 3, best practices and their accompanying metrics are integrated into organizational policies and team members receive training in these best practices. Procedures and metrics reflect indications of widespread consistency. There is also a culture of

common practice, because a general trust exists in the common practice. While it is recognized that the same practice may be conducted differently in different areas to reflect unique circumstances and situations, organizationwide structure exists for these practices. Finally, project progress data are routinely collected, analysed and achieved.

- *Advanced level*—At level 4, organizational performance is viewed as being interwoven with project performance. Project performance is characterized and analysed on numerous projects. Corrective actions are prescribed across the organization, based on data analysis within specific knowledge areas and pre-established success factors. Performance assessment relies on quantitative data, and project planning data and project performance data is readily available. The organisation focuses on continuously improving and aligning personal and organizational capabilities. Equally important, the organization empowers its competent people to conduct continuous improvement in their work processes and propose organizational changes to support those successful improvements.
- *Leader level*—At level 5, the organization regularly evaluates the latest practices and sophisticated metrics, participates in benchmarking forums and learning communities and uses widespread performance data to forge future improvements. Furthermore, improvement actions are readily identified and quantified. Improvements are either modifications to existing procedures or entirely new procedures. Carefully collated data are used to isolate problems and recommend corrective actions in a seamless fashion. Change management is a consistent organizational process.

### Selling project management to senior executives

All investment is predicated upon a future outcome of the investment proposition. Any event in the future has an uncertain outcome and the longer the future timeline the greater the uncertainty of the outcome. Investors will, therefore, attach much value to a methodology that will reduce uncertainty, give them a better understanding of the nature of the risks involved and suggest better methods to avoid and manage unforeseen disasters.

Project management has evolved over recent years into a fully fledged professional discipline characterized by a formalized body of knowledge and the definition of systematic processes for the execution of a project. The strength of project management lies in the integration of the nine knowledge areas: integration, scope, time, cost, quality, risk, communication, human resources management and procurement/contract management.

Yet, very often senior executives driven by the ever present cost-cutting syndrome, often choose to ignore the whole integrated process of project management and concentrate on the P,C,T,S (Performance, Cost, Time, Scope) items only at the expense of the other five softer but vital issues of the discipline. This practice is perhaps the main reason for project failure and project service providers need to alert their clients to this inherent danger.

In 1999, the Project Management Institute (PMI®), a professional association, identified the need to study the value of project management. Thomas, *et al.*<sup>9</sup> produced a

report that represents the results of research into 'Best Practices for Communicating the Benefits of Project Management to Senior Executives'.

The findings of that report are summarized as follows:

### **Why is it difficult to sell project management to senior executives?**

While senior executives recognize the importance of project management to their organization, they view it as of importance to the operational or tactical level of the organization. Project management only becomes a strategic or senior management issue when there is a crisis in the market or internally in the organization.

Project management is often viewed as a collection of skills and tools rather than as an all embracing philosophy.

Many senior executives are interested only in services that were aligned with their strategic businesses and professional goals. In most contexts, they are more interested in buying tools or techniques that affect tactical outcomes rather than strategic project management solutions aimed at improving or sustaining innovative business operations. However, in crisis situations, project management problems are often elevated to the strategic level (when they really do not belong at that level) and senior executives become more willing to listen to sellers, even to those still selling tactically.

From the selling perspective, the report finds that:

- practitioners do not necessarily view project management as one of their roles, and
- sellers do not convincingly connect project management to business strategy, thus relating it to the operational level of the firm. Often senior executives are not focused on this level as they see it as the domain of middle management.

### **What do very successful sellers do?**

The report finds that successful sellers of project management to senior executives recognize the importance of context in setting and managing realistic expectations. These sellers tend to use arguments that highlight a variety of value statements about financial measures, staff growth, client satisfaction and non-financial performance, and link them to issues/values of interest to senior executives.

The very successful sellers also use project management outcomes and practices as part of important sales arguments.

Their arguments focus on project management as a senior executive decision, framing it in positive business language that speaks to solving problems. In terms of process, very successful sellers focus on exploring the fit between project management and the corporation or organization. Ultimately very successful sellers pay attention to the quality of the relationship and may be more adept at shifting arguments as the business context changes over time, thus creating lasting buyer-seller relations.

### **The South African context—platinum industry in particular**

The findings of the PMI report can be applied, in generic manner, to the platinum industry in South Africa.

There are, however, contextual issues that must be noted. Over the last few decades the mining industry in general and the platinum industry in particular have metamorphosed from a tightly centrally controlled, hierarchical structure to a more modern flat, decentralized

structure. The historic home-office autocratic, if not despotic, model has given way to a more democratic open model driven by the best practices of business science.

Project management methodologies now pervade most of the major mining houses. With the concentration on core business processes, the mining house has made significantly more use of project specialists provided by the evolving project services industry. Much use is being made of the classical EPCM (engineering, procurement, construction and management) model. Lately, the more advanced partnering and alliancing concept, is gaining ground in a number of quarters.

Transforming our mining houses from a totally in-house to a more outsourced based philosophy has in some cases affected the concept of the integrated, modern Project Management model. Traditional, general management operational business processes, which formed the heart of mine management in the previous century, resisted the seamless evolution into the modern era. However, with the introduction of global practitioners from abroad, it is inevitable that global best practices will become the order of the day in the platinum mining industry.

There is much evidence that this is already happening. Professional project management services are beginning to form an integral part of our mining houses project programme and portfolio management methods.

Project services, because of uncertainties in scope and risks, are being estimated and tendered before specific resources are assigned to most tasks. Indeed, some resources may not be assigned until a project is nearing completion. Estimating, therefore, creates a service provider commitment rather than a personal commitment by individual resources. This makes shared services more of a reality than before, when they was much talked about but seldom practised.

Clients are becoming more sophisticated in selecting their professional service provider. No client hires an expert to solve a mundane problem. Sometimes all a client can do is describe undesirable effects and it is up to the service provider to frame the problem and trace its cause. Other times the client has misdiagnosed the problem and it is up to the service provider to reframe the problem and re-orientate the client. Sometimes, however, a client really has a unique problem and the service provider has to figure out a solution without a roadmap.

The clients are now not only expecting this service, but even demanding it.

### **In sum**

The question of project management value is multifaceted. People view project management from vastly different viewpoints. No matter what the viewpoint is, all stakeholders want their projects to be a success. But what is success? The definition of success also differs. In the end success is the degree to which stakeholders' expectations have been fulfilled.

This paper has tried to cast some light on what to expect from appropriately applied project management. What project factors lend themselves to success in the execution of projects, which project management processes are most important and even what project success is, are central to the discussions in the paper. The research has shown that while speculation and anecdotal experience abound, little reliable scientifically developed, factual information is available to guide senior executives when they select the best method to manage their projects.

The author suggests that a more creditable and reliable method would be to entrust project management to a service provider with an appropriate level of project maturity. What research has shown, is that organizations with a higher level of project management maturity perform better and have a higher probability of project success.

In the context of the South African Platinum Industry there are encouraging signs that World Class best practices are beginning to gain a foothold. Once these best practices are assimilated into the local culture and embedded in the hearts and minds of all the practitioners of Project Management in the Platinum Mining Industry, Project Management will truly add value.

### References

1. KAUFFMAN, J.J. *Value Engineering for the Practitioner*. Raleigh. North Carolina State University. 1985.
2. THOMAS, J. and MULLALY, M. *Defining the Value of Project Management: In search of value*. Project Management Institute. Pennsylvania. 2006.
3. IBBS, W. and REGINATO, J. *Quantifying the Value of Project Management*. Project Management Institute. Pennsylvania. 2002.
4. Guide to Project Management Body of Knowledge (PMBOK® Guide).
5. KAPLAN, R.S. and NORTON, D.P. *The Strategy-Focused Organisation: How Balanced Scorecard Companies Thrive in the New Business Environment*. Boston M.A. Harvard Business School Press. 2000.
6. VOELPEL, S.C., LEIBOLD, M., ECKOFT, R.A., and DAVENPORT, T.H. The Tyranny of the Balanced Scorecard in the Innovation Economy. *Journal of Intellectual Capital*, vol. 7, no. 1, 2006. pp. 32–58.
7. CHARTER, M. The Project Management Value Question: In Search of Value at the Expense of Delivering It. *PMI Global Congress Proceedings*. Seattle, Washington. 2006.
8. RAD, P.F. and LEVIN, G. *Metrics for Project Management*. Vienna. Management Concepts. 2006.
9. THOMAS, J., DELISLE, C.L., and JUGDEV, K. *Selling Project Management to Senior Executives*. Pennsylvania. Project Management Institute, Inc. 2002.



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