

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

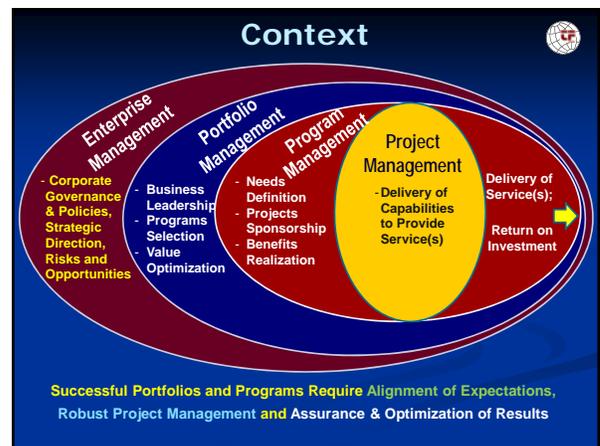
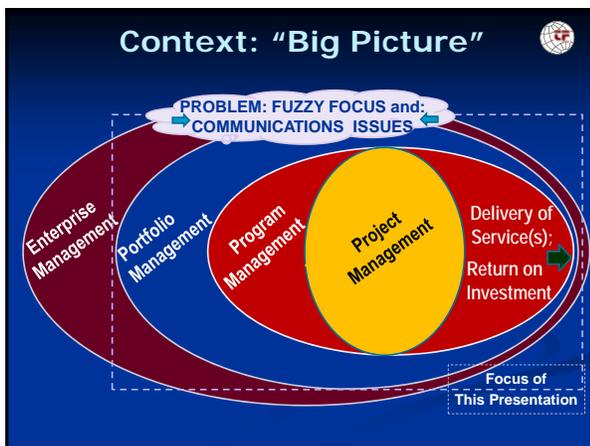
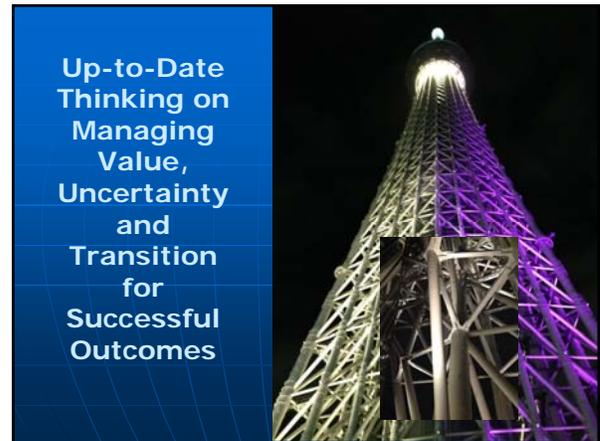
Martyn R. Phillips

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips,
CVS-Life, CVM, FICE, FCIWEM, FHKIVM, P. Eng., PVM,

The Team Focus Group - Canada

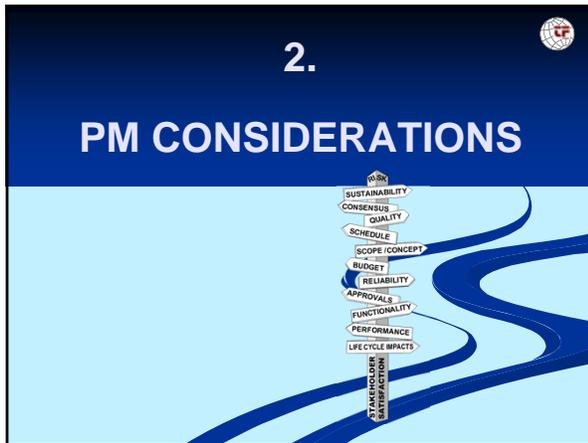
- ### Presentation Themes
1. Context
 2. Project Management Considerations
 3. Value Gap
 4. VM Application Aspects
 5. Oversight Process
 6. Summing Up



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

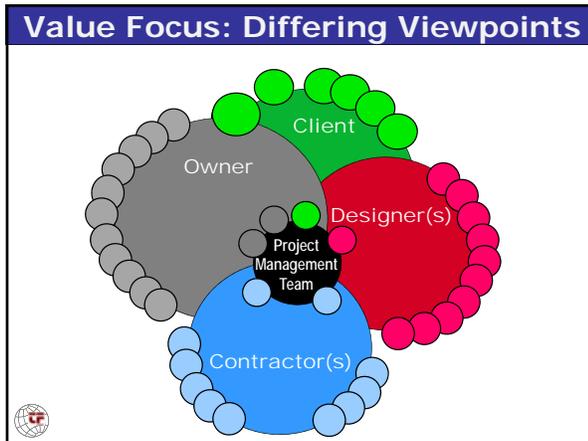
Martyn R. Phillips



Right First Time – Or Else!

Early Performance Criterion
Code of Laws – King Hammurabi Of Babylonia, 1792-1750 BCE

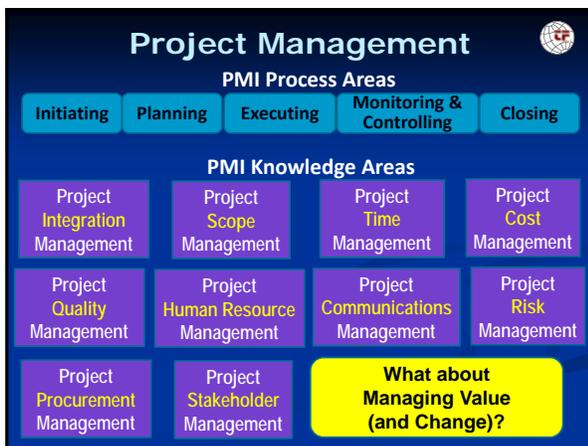
“If a builder build a house for some one, and does not construct it properly, and the house which he built fall in and kill its owner, then that builder shall be put to death.”



Need for Alignment

Alignment of stakeholders and systems is required such that portfolios, programs and projects remain viable in terms of:

- Business aims (benefits, R.O.I., scope and costs)
- User requirements (availability, serviceability, operability, reliability and compliance capabilities)
- Technical merit (feasibility and fitness-for-purpose)
- Supply chain capabilities and compatibilities
- Likelihood of meeting forecast targets



Program & Project Failure

How do programs & projects fail?
Typical Answer: One day at a time.
Most Likely Mode: **From the outset and then step-by-step, thru' inadequate planning and controls**

Why do programs & projects fail?
Typical Excuse: Lack of time, inexperienced staff, changes of mind, slow approvals, poor design / contractor, politically drivers

Most Likely Cause:

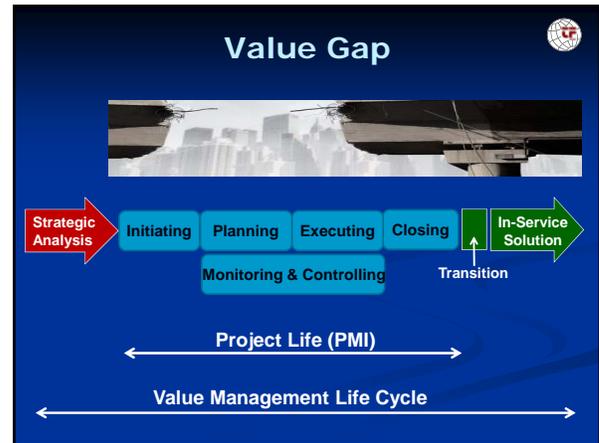
- ➔ **Fragmented use of systems**
- ➔ **Sporadic oversight, or micro managing**
- ➔ **Lack of integration of management focus**
- ➔ **Departmental silos and self interest**
- ➔ **No policy for deriving best overall value**
- ➔ **Poor management of value & risk**



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips



Value Gap

Example 1

VM at contract negotiation stage led to:

- 35% cost savings, increased long-term functionality, less social & environmental disruption, quicker implementation.

This is not an unusual value gap to be closed!

Value Gap (Cont.d)

If VM had been applied in the first place, the project would have saved at least 18 months in design, project development and tendering costs, as well as environmental damage and statutory penalties.

So, what is the WORTH of VM?

Example 2

- Design-build contractor on site; project stalled due to:
- Owner's Capital Budget = X
- Contractor's Estimate = Y
- **Deficit to be overcome = 25%**

After 4.5 days & nights, "Menu" of VM Identified Savings:

Scenario 1: Least visual impact and general works improvements = 10%

Scenario 2: Changes to process units and to buildings configuration = 25% + improved functionality

Scenario 3: Major visual and process changes = 44%

Scenario 4: Radical alternative = not estimated

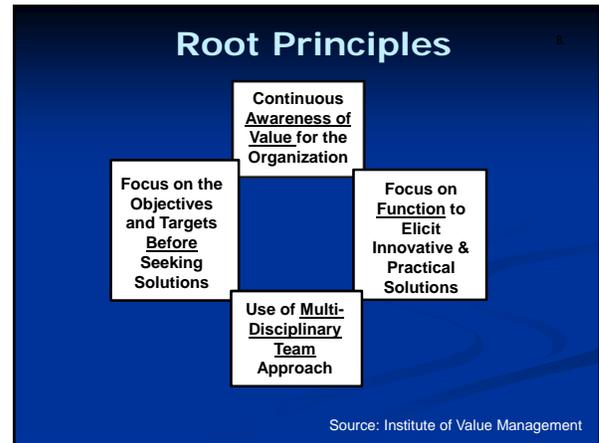
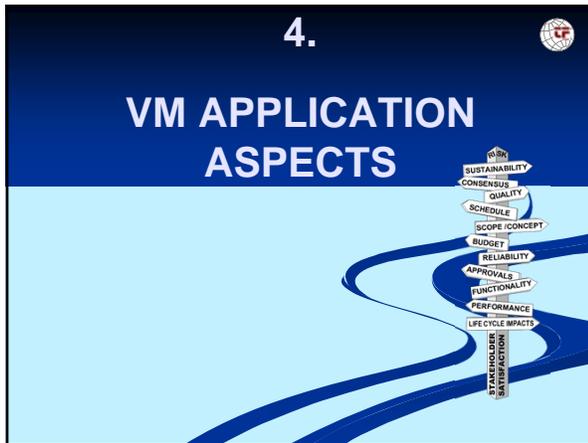
VALUE GAP



Contact: info@teamfocus.org

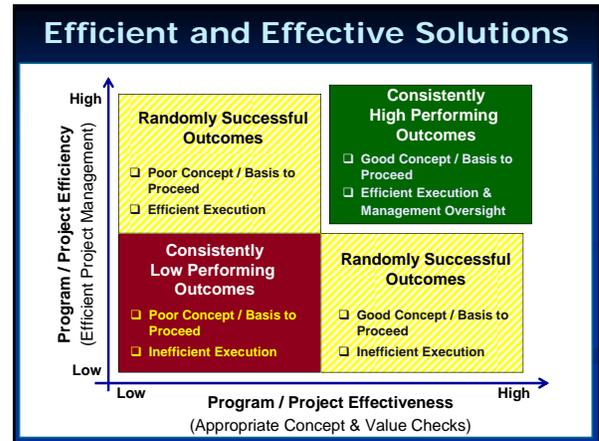
In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips



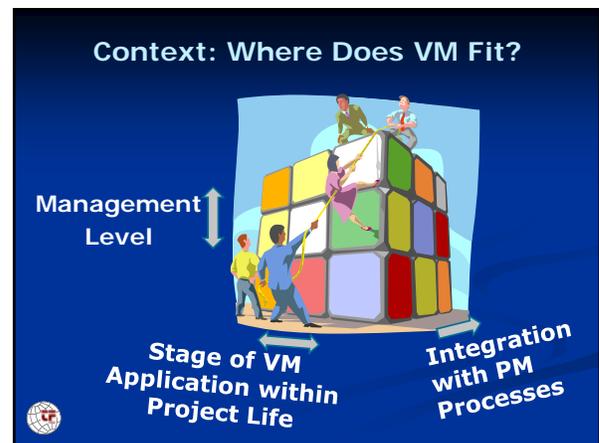
Traditional VM is Constrained

- One or two short, isolated workshops are generally not sufficient to:
 - Ensure best value is obtained in practice
 - Especially for the entire duration of a program or major project.



VM Application Aspects

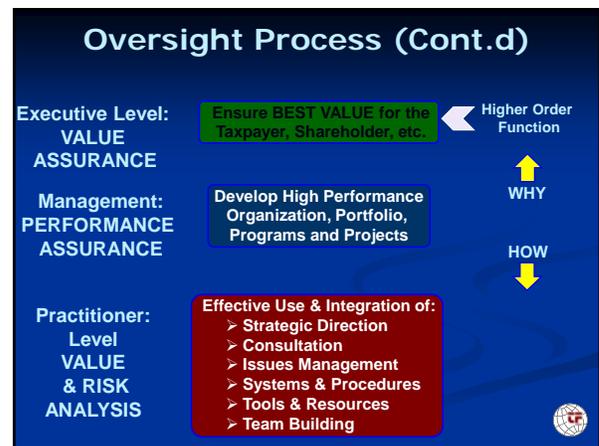
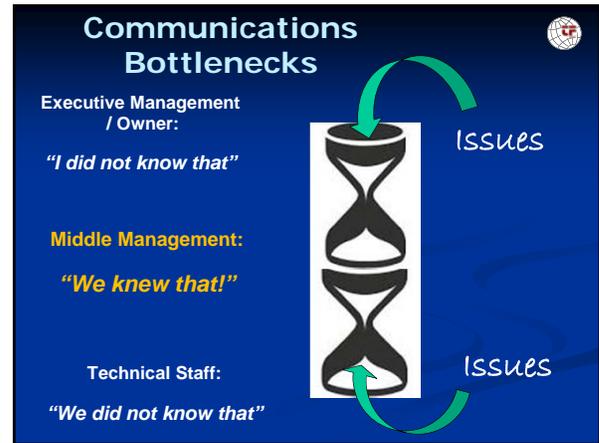
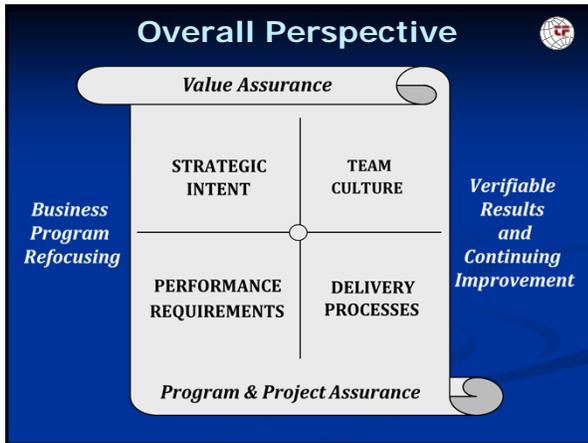
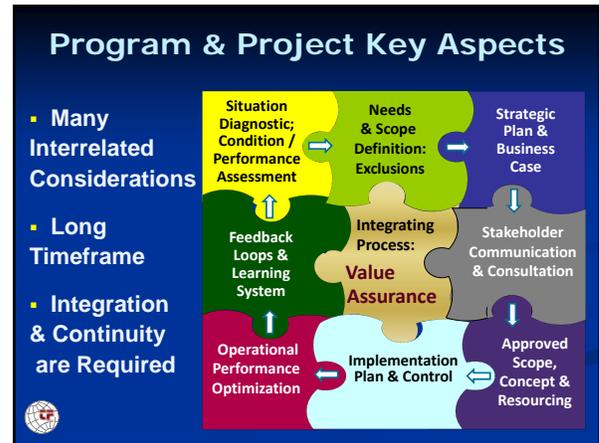
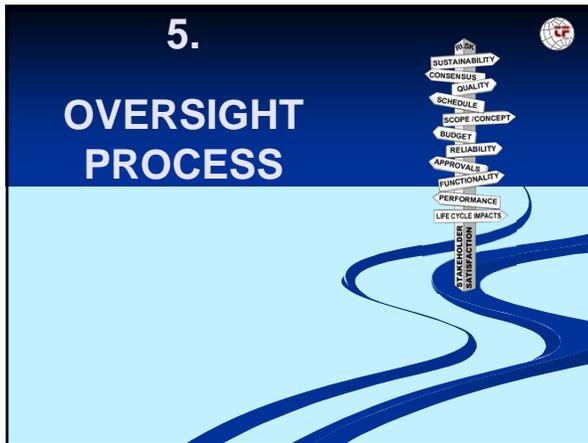
- Defining and enhancing value is not a "quick fix", but an integral part of the project initiation & continuing development process.
- Project interfaces are managed at more than one level.



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

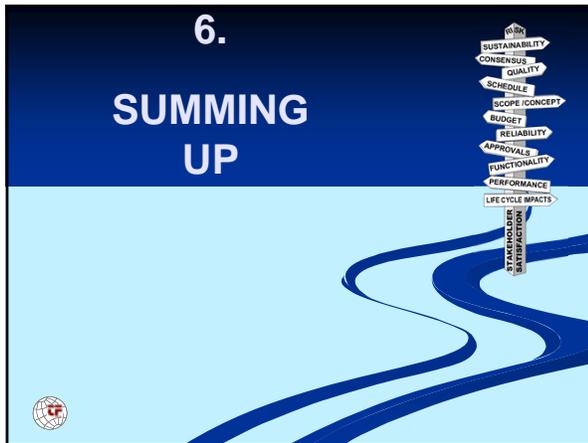
Martyn R. Phillips



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

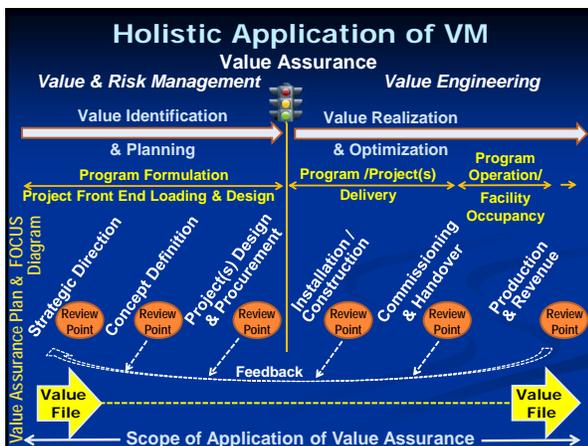
Martyn R. Phillips



- ### Common Organizational Traits
- ❖ LACK OF: continuity of resources, consistency of approach, communication of requirements, common understanding of priorities, e.g.
 - Business goal-setting persons and their performance criteria are often absent during project development
 - Return on investment (R.O.I.) criteria are not clearly disseminated and therefore not necessarily attained
 - Key knowledgeable people are lost to the next critical program or project; information may not be passed on and assumptions are then made by the next wave of staff.
 - ❖ Single Solution Fixation

- ### Summing Up
1. VM more effective when fully integrated with project management procedures
 2. Functions and value metrics established from the outset, for the duration of the project life

- ### Summing Up (Continued)
3. Combined value and risk approach incorporated within the original project plan
 4. Higher level, Performance & Value Assurance (PVA) used for integration of process and provide executive oversight.



- ### Conclusion
- ❑ Integrated project, risk & value management process
 - ❑ Alignment of business strategy, programs & projects to maximize corporate performance
 - ❑ Communication with executive management and other stakeholders that business expectations are being met
 - ❑ Auditable trail as the basis of key decisions and changes
 - ❑ Certification of best value; confident approvals
 - ❑ Continuing involvement throughout program / project; continuous value improvement



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips,
CVS-Life, CVM, FICE, FCIWEM, FHKIVM, P. Eng., PVM,

The Team Focus Group - Canada



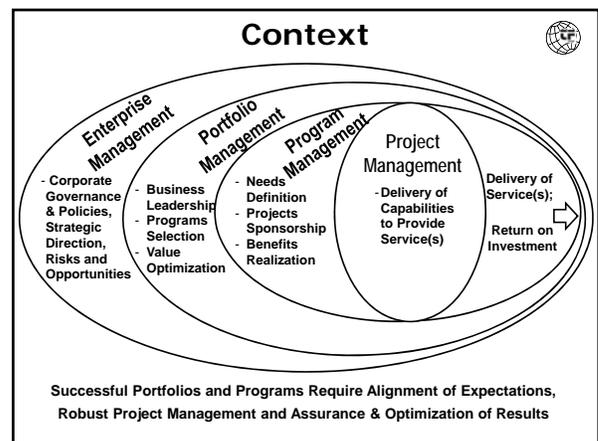
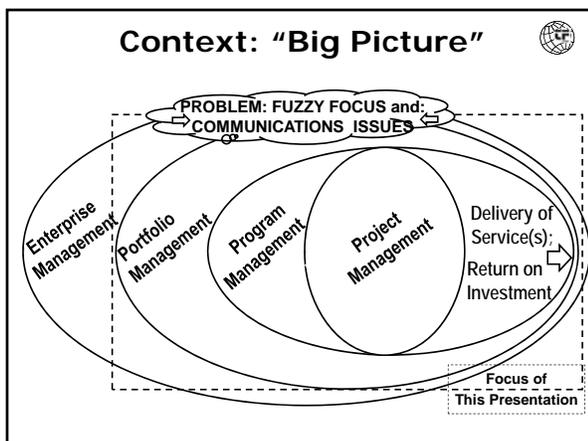
Presentation Themes

1. Context
2. Project Management Considerations
3. Value Gap
4. VM Application Aspects
5. Oversight Process
6. Summing Up

1. Context



Up-to-Date Thinking on Managing Value, Uncertainty and Transition for Successful Outcomes

Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips

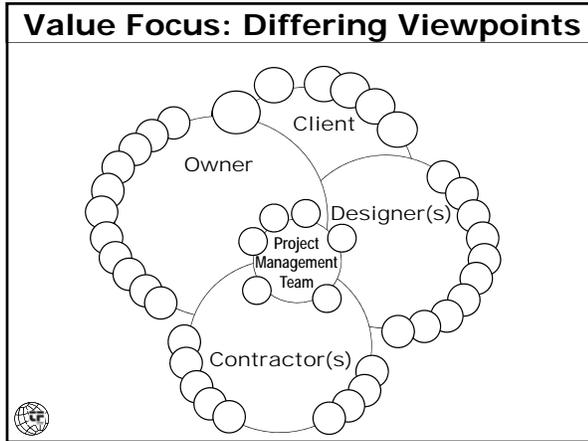
2.

PM CONSIDERATIONS

Right First Time – Or Else!

Early Performance Criterion
Code of Laws – King Hammurabi
Of Babylonia, 1792-1750 BCE

“If a builder build a house for some one, and does not construct it properly, and the house which he built fall in and kill its owner, then that builder shall be put to death.”



Need for Alignment

Alignment of stakeholders and systems is required such that portfolios, programs and projects remain viable in terms of:

- Business aims (benefits, R.O.I., scope and costs)
- User requirements (availability, serviceability, operability, reliability and compliance capabilities)
- Technical merit (feasibility and fitness-for-purpose)
- Supply chain capabilities and compatibilities
- Likelihood of meeting forecast targets

Project Management

PMI Process Areas

Initiating	Planning	Executing	Monitoring & Controlling	Closing
------------	----------	-----------	--------------------------	---------

PMI Knowledge Areas

Project Integration Management	Project Scope Management	Project Time Management	Project Cost Management
Project Quality Management	Project Human Resource Management	Project Communications Management	Project Risk Management
Project Procurement Management	Project Stakeholder Management	What about Managing Value (and Change)?	

Program & Project Failure

How do programs & projects fail?
Typical Answer: One day at a time.
Most Likely Mode: From the outset and then step-by-step, thru' inadequate planning and controls

Why do programs & projects fail?
Typical Excuse: Lack of time, inexperienced staff, changes of mind, slow approvals, poor design / contractor, politically drivers

Most Likely Cause:

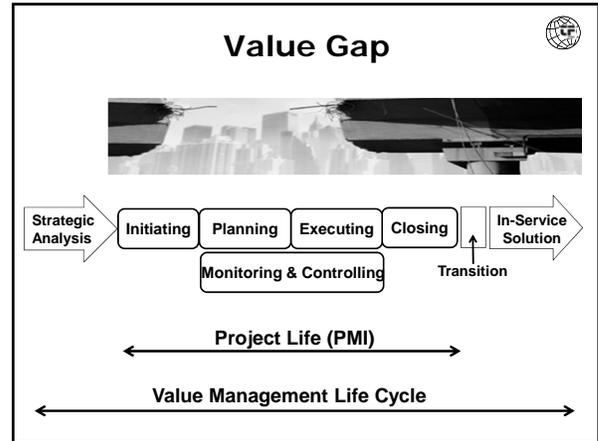
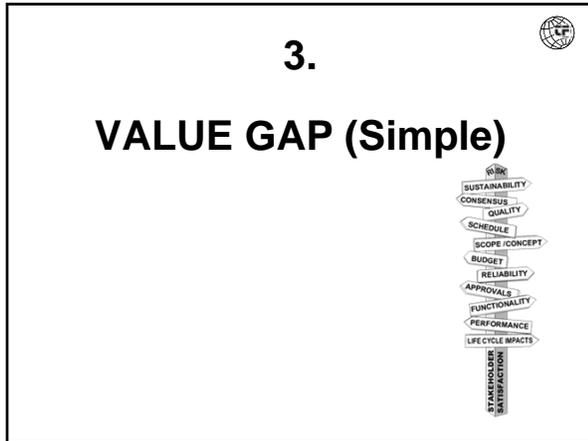
- ➔ Fragmented use of systems
- ➔ Sporadic oversight, or micro managing
- ➔ Lack of integration of management focus
- ➔ Departmental silos and self interest
- ➔ No policy for deriving best overall value
- ➔ Poor management of value & risk



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips



Value Gap

Example 1

VM at contract negotiation stage led to:

- 35% cost savings, increased long-term functionality, less social & environmental disruption, quicker implementation.

This is not an unusual value gap to be closed!

Value Gap (Cont.d)

If VM had been applied in the first place, the project would have saved at least 18 months in design, project development and tendering costs, as well as environmental damage and statutory penalties.

So, what is the WORTH of VM?

Example 2

- Design-build contractor on site; project stalled due to:
- Owner's Capital Budget = X
- Contractor's Estimate = Y
- Deficit to be overcome = 25%

After 4.5 days & nights, "Menu" of VM Identified Savings:

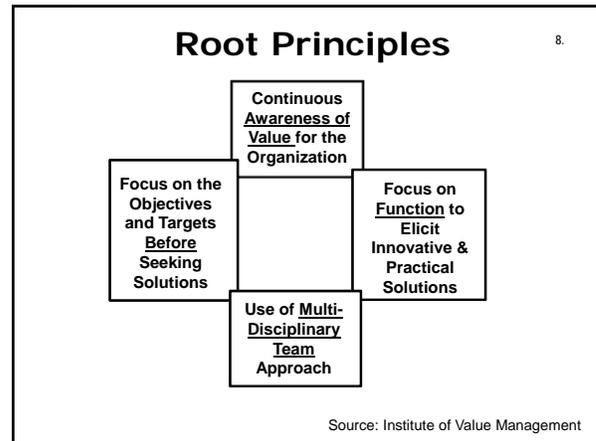
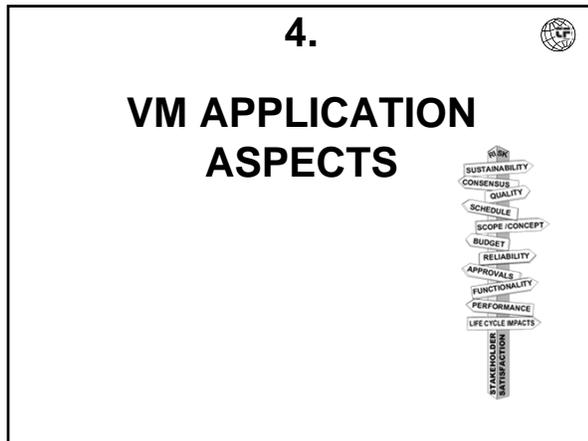
Scenario 1: Least visual impact and general works improvements	=	<u>10%</u>	V A L U E G A P
Scenario 2: Changes to process units and to buildings configuration	=	<u>25% + improved functionality</u>	
Scenario 3: Major visual and process changes	=	<u>44%</u>	
Scenario 4: Radical alternative	=	<u>not estimated</u>	



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

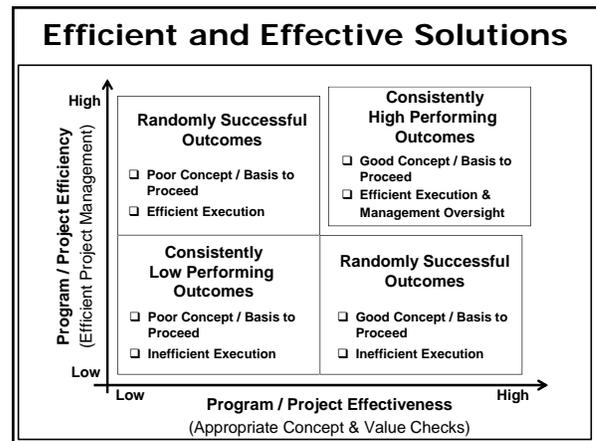
Martyn R. Phillips



Traditional VM is Constrained

- One or two short, isolated workshops are generally not sufficient to:
 - Ensure best value is obtained in practice
 - Especially for the entire duration of a program or major project.

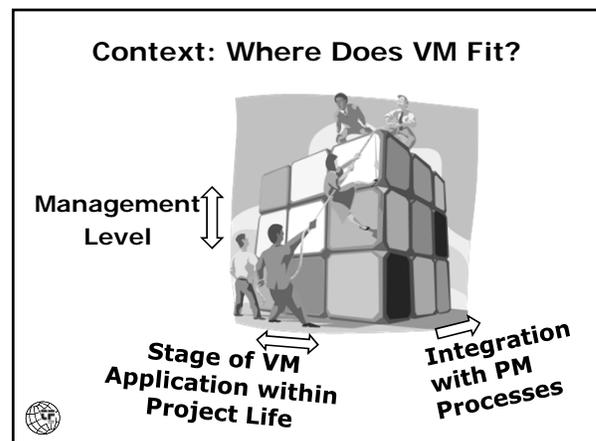




VM Application Aspects



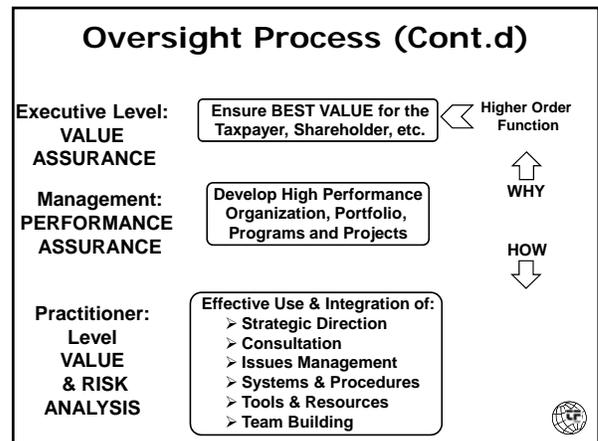
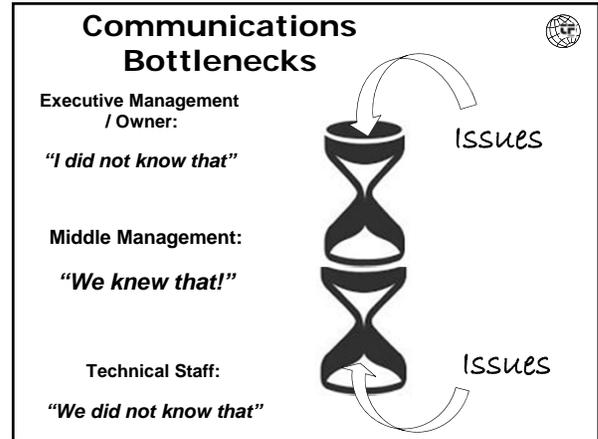
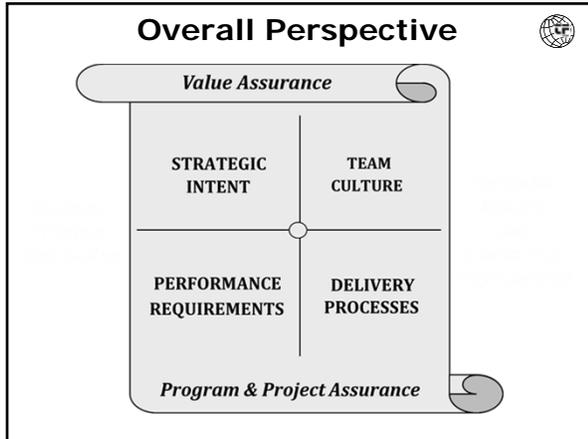
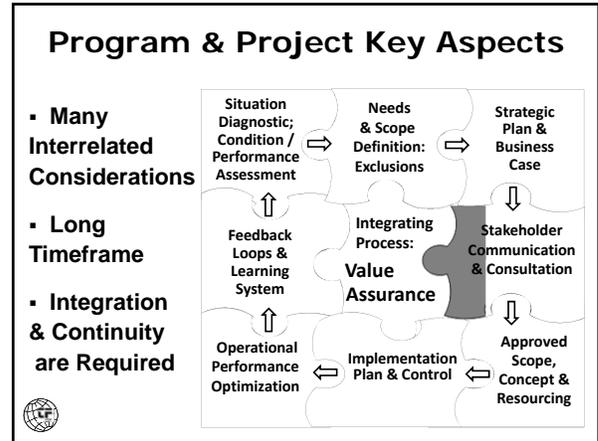
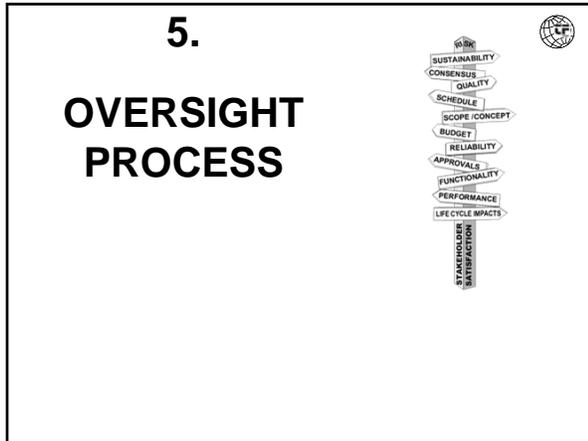
- Defining and enhancing value is not a "quick fix", but an integral part of the project initiation & continuing development process.
- Project interfaces are managed at more than one level.



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips



Contact: info@teamfocus.org

In Search of Value - Closing the Gap to Achieve High Performance Programs, Projects and Services

Martyn R. Phillips

6.

SUMMING UP




Common Organizational Traits

- ❖ **LACK OF:** continuity of resources, consistency of approach, communication of requirements, common understanding of priorities, e.g.
 - Business goal-setting persons and their performance criteria are often absent during project development
 - Return on investment (R.O.I.) criteria are not clearly disseminated and therefore not necessarily attained
 - Key knowledgeable people are lost to the next critical program or project; information may not be passed on and assumptions are then made by the next wave of staff.
- ❖ **Single Solution Fixation**

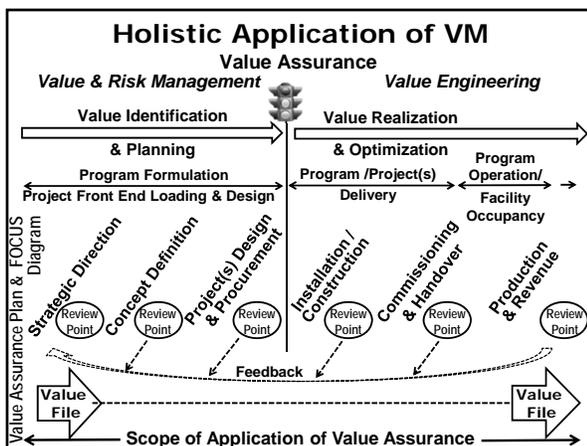


Summing Up

1. VM more effective when fully integrated with project management procedures
2. Functions and value metrics established from the outset, for the duration of the project life

Summing Up (Continued)

3. Combined value and risk approach incorporated within the original project plan
4. Higher level, Performance & Value Assurance (PVA) used for integration of process and provide executive oversight.



Conclusion

- Integrated project, risk & value management process
- Alignment of business strategy, programs & projects to maximize corporate performance
- Communication with executive management and other stakeholders that business expectations are being met
- Auditable trail as the basis of key decisions and changes
- Certification of best value; confident approvals
- Continuing involvement throughout program / project; continuous value improvement



Contact: info@teamfocus.org

IN SEARCH OF VALUE - CLOSING THE GAP TO ACHIEVE HIGH PERFORMANCE PROGRAMS, PROJECTS AND SERVICES

**Martyn R. Phillips, CVS (L), CVM, FICE, FCIWEM, FHKIVM, P.Eng, PVM
and**

Shamsi B. Shishevan, MA, PMP, RMP

The Team Focus Consulting Group, Canada



Martyn Phillips is a management consultant living in Alberta, Canada and he assists organizations achieve their business goals. He is qualified as both an Engineer and a Value Specialist in Europe and in North America. In addition to having a vast repertoire of project management experience, he conducts strategic, program and project alignment consulting assignments, as well as performance improvement training / coaching, for a broad range of clients and topics worldwide. His leadership of group problem - solving situations and organizational effectiveness assignments has resulted in significant savings of time and cost, together with functionality enhancements, for a number of high profile projects and services for both the public and private sectors.



Shamsi Shishevan is a project, risk and value management consultant based in Alberta, Canada. She has been involved in research, project planning, development, execution, controls and training. Fields of practice have included construction, manufacturing, petrochemicals and public service. Shamsi is experienced in the design and implementation of quality management systems for various manufacturing companies for sustainable process improvement programs. Her particular interests lie in strategic, project, risk and value management, along with business process improvement and staff development.

ABSTRACT

As to be expected, project management standards and methodologies have evolved over time to provide a great deal of guidance on how to manage projects. Management of risk has long been incorporated within these formal approaches. As a result, risk management tends to be incorporated within the project plan with less resistance, or oversight, than there is for the value methodology (VM) which is often treated as something like an orphan. Further, value practitioners know well that the powerful VM approach would be even more effective if it were to be integrated properly in project management procedures, rather than being conducted as a sometime add-on (that is often treated as a "check-in-the-box" process). One example of a commonly missed opportunity is not initiating the program/project with strategic function analysis and establishment of agreed value drivers (with performance measurement) to set the better guidance framework. It is little wonder that when we apply such effective techniques retroactively, part-way through project development, that VM can be viewed as being somewhat intrusive.

It is the authors' experience that the VM approach is more effective when fully integrated with project management procedures such that:

- (i) program/project functions and value metrics are established and referenced from the outset, for the duration of the project life

- (ii) a combined value and risk approach for proactive application between specified milestones is incorporated within the original project plan
- (iii) a higher level, performance & value assurance (PVA) approach is used to provide proactive oversight of an organization's programs and projects from an executive perspective.

This paper addresses the above aspects from the combined perspectives of an internationally practicing Certified Value Specialist (CVS) & Professional Engineer (P.Eng.) and a PMI registered Project Management Professional (PMP) & Risk Management Professional (RMP).

INTRODUCTION

As compared with days bygone, we are privileged today to have a vast arsenal of tools and techniques at our disposal for the management of virtually anything. Yet, the adage (Meskimen's law) "there is never enough time to do it right the first time, but there is always time to do it over (again)" still seems to be particularly apt in the management of programs and projects. Similarly, there is often insufficient budget allocated to project planning, yet the organization has a history of paying small fortunes for contractor claims

Examples abound of estimates of cost and schedule inadequately researched and hurriedly produced (or even "massaged" for political expediency) causing major problems at a later time. One might even argue that the correct cost and timing will eventually emerge and no real harm, other than embarrassment, has occurred. Furthermore and surprisingly often, the near catastrophic risks that are dismissively judged as "it will never happen" actually come to fruition and cause much trouble for all concerned. The formal six-stage, risk management process is a requirement of a PMI based project management process, but there is still sometimes just "lip service" paid to going through the risk process, - with disingenuous acceptance of the recommendations (until things have gone wrong and then the battle cry is "why didn't you do something about it?"). Quite often there is a "disconnect" between management levels and the essence of an important message about risk or value is not understood (until too late for appropriate action). The context of this paper is that there are three main areas for consideration to ensure best overall performance and hence value for the stakeholder (taxpayer, shareholder, etc.): integration of VM with recognized project management processes; information appropriate to the particular management level; stage of VM application within the overall project life.

BACKGROUND

Within the PMI's 5 process areas and ten knowledge areas areas (project integration, scope, time, cost, quality, human resource, communications, risk, procurement and stakeholder management), there is no explicit mention of managing for best value. Does this mean that the management of value is assumed to occur implicitly through the dozens of project management activities?

Value methodology (VM) sessions typically uncover quicker, less costly and more functional solutions. When this occurs at a late stage of project development or design, there is implicitly a significant cost of lost time and aborted design that seems to be written off as a typical cost of doing business. Ultimately, such unnecessary costs are passed on to the consumer or society, rather than being absorbed by those who are responsible. With everything we know today in the world of efficient project management practices, how can this still be happening? Quite often, project managers look to VM for a "quick fix" after the project has gone awry. VM typically obliges in this regard, but changes would be less awkward if the exercise were conducted much earlier in the applicable process.

Interestingly, comprehensive applications of the VM process cut across all ten of the PMI knowledge areas and can be applied during the five process areas (of initiating, planning, executing, monitoring & controlling and closing). VM is an excellent tool for identifying improvement opportunities to various projects, products and systems. However, the effectiveness of VM can be significantly

constrained by the circumstances within which it is applied (e.g. structure, policies and culture of the organization[s] involved and contractual arrangements). Further, VM is most often applied as a relatively short-duration intervention and quite often with limited follow-through, ultimately resulting in some loss of the anticipated value improvement.

CONTEXT

Successful portfolios and programs require alignment of expectations, robust project, risk and value management, plus assurance & optimization and reconfirmation of results. There are various levels of focus:

- Enterprise Focus: MAXIMIZING SHAREHOLDER VALUE/STAKEHOLDER SATISFACTION.
 - Corporate governance & policies,
 - Strategic direction,
 - Risks and opportunities.
- Portfolio Focus: BENEFITS e.g. environmental improvement & lower unit production costs.
 - Business leadership
 - Programs selection
 - Value optimization.
- Program Focus: OUTCOMES, e.g. change of process for power generation.
 - Needs definition
 - Projects sponsorship
 - Benefits realization.
- Project Focus: OUTPUT, e.g. provision of a new power station.
 - Delivery of capabilities to provide service(s).
- Service Delivery Focus: providing SERVICE and ensuring timely RETURN ON INVESTMENT.
 - Operations and maintenance
 - Optimizations of systems and services.

THE VALUE GAP

The performance of programs, projects, products and services is inextricably linked with quality, value and risk. Despite the availability of an abundance of project management techniques and training, together with a plethora of professionals in most large organizations, many projects fail to satisfy all shareholders and users. There is often a missing link between the day-to-day administration of projects to satisfy institutionalized procedures and the objective, strategic thinking required to achieve best overall value and stellar performance for the corporation, stakeholders and external partners. Missed deadlines, overspent budgets, reduced functionality, commissioning and operational “hiccups”, together with shareholder dissatisfaction and other stakeholder concerns are all part of an unacceptable value gap. It is clearly inappropriate for management to deny the problem or to shuffle the problem off to the next phase of the project development and execution. A comprehensive, but easy to interpret, system of “cradle to grave” checks and balances is required to maximize corporate performance. Thinking outside their comfort zones requires people to be receptive to new ideas and to those of others. This calls for broader and less defensive thinking, such that the end result is not merely “more of the same”. Re-skilling of organizations and individuals may be necessary to produce

the dramatic improvements in value that major corporations are demanding. A thorough understanding of the value chain (or value stream) and functional requirements is necessary.

An example of proceeding too far with project management and design before applying the functional thinking of VM is that of a medium-to-large, "flagship", design-build project that required significant cost reduction after the receipt of four pre-qualified bids. The owner wanted to cut costs by 30%, but application of typical cost cutting efforts yielded less than 10%. After a number of months of minor re-designs had elapsed, the functional thinking approach was applied to the "no-go" area of the project and led to a breakthrough of 35% in total project cost savings, quicker implementation, less environmental & social disruption, plus significantly enhanced, long-term functionality. The winning solution was developed using a value and risk managed approach.

Observations on the this example: firstly the no-go area should not have been designated as such; secondly **if the thinking of VM had been applied in the first place, the project would have saved at least 18 months in design, project management and tendering costs.** Rework is so unnecessary, yet it sometimes seems to be something of an accepted project "fact of life"! Other such examples are not uncommon. So if there is a significant cost to inadequate program and project development, what is the worth to do it properly? This then begs the question of what is the worth of the VM? With proven, identified cost savings of 20-30% of multi-million projects, then VM must be a very high value management technique. Presumably then, those program and project managers who ignore or actively resist the application of a process that very effectively ensures best value are being irresponsible in their wasting of other peoples' time and money. Surely their jobs are to close the performance/value gap and avoid rework. Procedures should be enforced to ensure that value for the organization is not lost. Program and project management processes should formally include VM, which in turn, should be combined with risk management; (this latter point is starting to happen).

MANAGING PROJECT INTERFACES

Project staff members are expected to be adept at alternating their focus back and forth from "big picture" to detailed "nuts and bolts" issues, as well as deal well with a range of immediate and longer term priorities. They have to manage tight timelines and high expectations of output. This includes having to manage the dilemma of dealing with the conflicting demands of interpreting "fuzzy" and intangible direction versus controlling performance tightly and reporting factually.

Deep within many organizations there are key persons who have the capacity to a) accelerate progress and contribute significantly to the corporate good, or b) obstruct progress and delay anticipated performance gains, thereby reducing the real return on investment. Senior management makes recommendations for investment decisions only to be surprised many months or perhaps years later that things did not work out as expected. We have probably all seen and heard of excellent ideas that have been thwarted by lack of testing, follow through and loss of individual sponsors, champions or key designated project staff. Personnel often consider themselves to be much further ahead in the program, project or product development process than they really are. Many projects "leapfrog" too quickly toward a fixed solution that has worked elsewhere. Despite a plethora of formal project management practices, procedures and certified professionals, there are still instances of significant program and project difficulties, leading to stakeholder frustration and disappointment over late delivery, wildly exceeded budgets and unsatisfactory quality of the end product.

Management of interfaces, wider communications and succinct reporting, as well as dealing with "fuzziness" and uncertainty are areas for particular attention between each management level. The fundamental issues of project need, scope, exclusions, values, priorities, constraints, organization, roles, responsibilities and control procedures should be addressed early, with a robust framework in place to ensure strategic performance alignment and delivery to plan. Due to tight time pressures, the application of many of today's management practices can be compressed to the point of becoming dangerously ineffective. The key to proper time allocation is to demonstrate that defining and enhancing value is not a "quick fix", but an integral part of the project initiation and continuing development process. Project interfaces must be carefully managed at more than one level.

ASSURANCE OF RESULTS

As business dynamics shift, an organization's needs may change before project completion. Particularly in complex business environments, it is important that managers and other stakeholders are able to have a reference framework for ensuring confidence in program and project delivery to suit changes in circumstances or events. As well, technology now tends to change quite quickly.

Organizations go through cycles of change of staff, culture and program focus. In so doing, the organizations can lose their collective memory and expertise, thus sometimes having to learn again some fairly basic, corporate project management skills.

Assurance is required such that portfolios and their programs and projects remain viable in terms of:

- Business aims (benefits, scope and costs)
- User requirements (availability, serviceability, operability, reliability and compliance capabilities)
- Technical merit (feasibility and fitness-for-purpose)
- Supply chain capabilities and compatibilities
- Likelihood of meeting forecast targets
- In-service continuing effectiveness and financial efficiency; preserved value.

Executives need reliable processes to ensure that their organization's current efforts and proposed changes are truly cost-effective and meet corporate objectives. They also need to ensure that the most appropriate aspects have been addressed adequately and that best value for money is obtained within controlled risk parameters. The following are integral considerations of the value assurance approach.

PROGRAM AND PROJECT OVERSIGHT

Despite various management systems, projects still go awry and value is lost to the organization and various stakeholders. A key aspect of governance is the assurance to stakeholders of attainment by the performing organization of good results in the most critical areas. So often, project development and / or implementation teams are unaware of the overall value expected from their undertakings.

For example:

- Business goal-setting persons and their performance criteria are often absent during project development
- Return on investment (R.O.I.) criteria are not clearly disseminated and therefore not necessarily attained
- Key knowledgeable people are lost to the next critical program or project; information may not be passed on and assumptions are then made by the next wave of staff
- Program productivity/yield no longer matches stakeholder expectations.

A well-communicated, strategic framework is necessary for deriving balanced solutions to complex and divisive issues, also taking into account financial, legal, political, regulatory, schedule, resource and technical implications. A comprehensive, but easy to interpret, system of "cradle to grave" checks and balances is needed to maximize corporate performance and key supporting initiatives.

Accountability and processes must be clearly defined. This is accomplished through refocusing business programs and resources - by proper identification and understanding of the issues, stakeholder values and strategic intent at an early stage, together with involvement and clear focusing of the appropriate team members at the right times.

VA encourages collaborative, performance-driven working and is applied over the whole program / project life. The approach ensures that the expectations or results gap between management levels is closed, and that commitments are followed through. Independent, formal certification of proposals as good value for money is an additional benefit, especially to effectively engage additional resources and partners.

PROJECT MANAGEMENT

Many programs and projects cause surprises to senior management, due to scope increases, cost overruns, schedule delays and general stakeholder dissatisfaction. Yet many organizations already have project management policies and procedures!

Program and project woes are often built-in from the start, due to lack of proper planning and hasty projections of costs and schedule. Ultimately the true implications emerge and the project image suffers accordingly; taking with it the reputation of the project staff involved.

Project management seeks to formalize, define and constrain that which can sometimes be quite vague or ambiguous. There is a need to reconcile the conflicting aims of:

- a) users trying to retain flexibility of options, and
- b) implementers requiring certainty of scope, data, schedule, cost, etc.

Outcomes must be based on a common understanding of needs, constraints, key concerns, major risk areas, life-cycle impacts and shared/negotiated team values. Traditional VE/VM and risk management workshops conducted as "snapshots" or "interventions" may not otherwise capture all of this adequately.

MANAGING UNCERTAINTY

An understanding of risk and formal ways to manage uncertainty is being seen increasingly as an essential part of smart business and project management. While neglect to identify a risk can be expensive, so can unnecessary allowance to avoid each and every possible risk that may be envisaged. Further, once identified, risk may be examined creatively and turned into a scheduling or economic opportunity. Risk management is applied at the levels of: enterprise, portfolio, program, and individual projects including critical systems & components. Risks may be present due to limited experience, lack of information and general uncertainty regarding future conditions and viewpoints.

Risks, both negative and positive, may also occur as parties, personnel and relationships change during the course of a long duration project. In particular, inaccuracy of projections and other basic assumptions can lead to major areas of uncertainty. A balanced approach is advocated to identifying and specifying methods to address risks at different levels. There are several risk management protocols issued by various authoritative bodies globally. Risk and value management are complementary and should be coordinated as a joint effort; however some organizations still seem to treat them in a separated / disjointed manner.

APPLYING VM

There can be some confusion over value process terminology. Value analysis, value engineering and value management are sometimes viewed as being synonymous. For some people value management is the early and broad application of a value related processes, while value engineering is applied later and quite specific. The US developed value methodology (VM) is typically the universal core process, although variations in application may vary slightly between jurisdictions and from country to country. Added to this, some of the larger processing industries use value improving practices (VIPs), of which one is value engineering.

The overall aim of VM is, usually, to develop stakeholder consensus on how to optimize life cycle value. Differently focusing VM may be applied very effectively during the following stages, (as shown in Figure 1):

- Strategic Direction (to optimize a portfolio; develop a business case and master plan)
- Concept Definition (for the most appropriate concepts to deliver a program of improved services)
- Projects Delivery (design & procurement optimization, schedule acceleration and project rescue)
- Systems Optimization (for in-service process, productivity gains and benefit-cost enhancement).

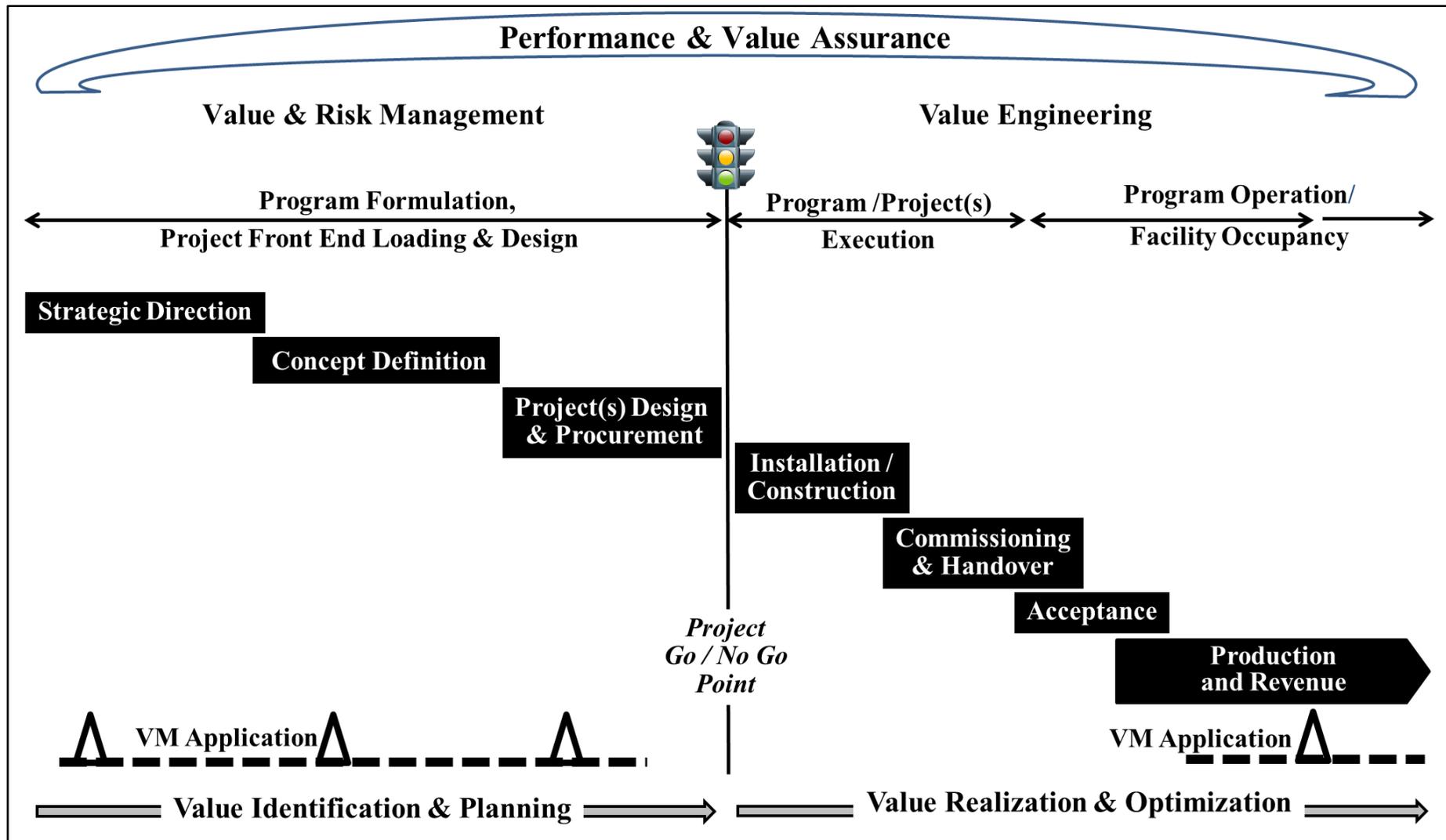


Figure 1. Scope of Application of Oversight Process

Typically, organizations that experience VM for the first time do so through application at a late stage (e.g. within the Projects Delivery stage) with exciting savings of cost and/or time. The organization then applies VM next time at an earlier time and applications to other projects may occur somewhat randomly. Eventually a VM program might be instituted such that using VM procedures could be mandated routinely. This sounds attractive, but there can be pitfalls without proper guidance, not least a) mechanisms for properly capturing the identified value improvements and risk reductions, and, b) the ensuring of longevity of application of the VM program.

It is probably fair to say that for most people involved in VM, their primary recollections are of the workshop. However there is much more to VM and managing value than just the workshops. Well run workshops are important, but there are several, other aspects to be incorporated in the overall plan and then actioned. Figure 2 illustrates the three levels of involvement necessary to ensure the expected performance gains.

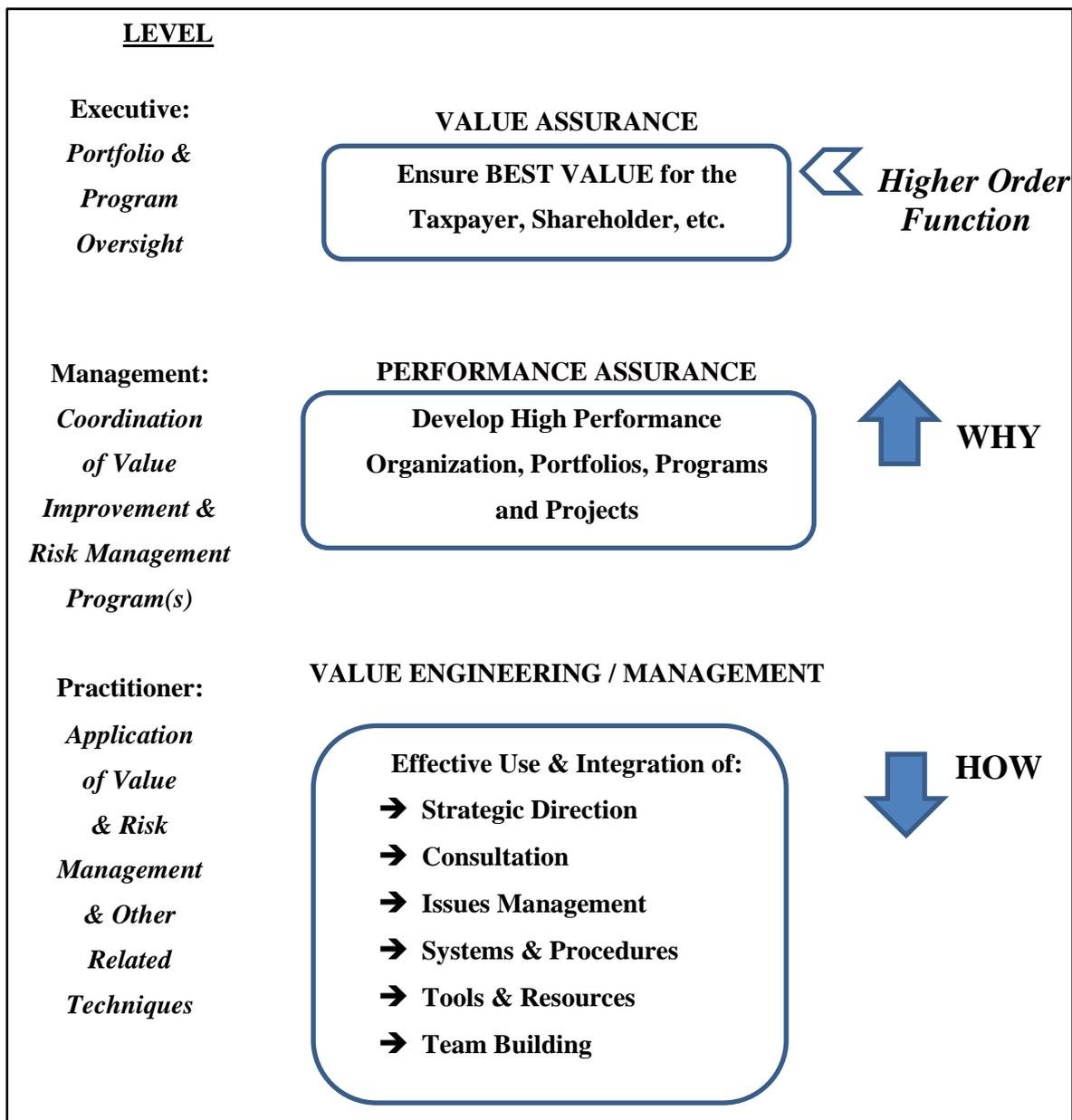


Figure 2. Premise for Performance & Value Assurance Process

VM APPLICATION ISSUES

Common issues with the implementation of VM are listed below. It will be noted that the largest numbers of issues and required solution is with the coordination and executive oversight of the VM studies, rather than with the conduct of the studies themselves.

VM Study Level /Practitioners. *Focus: Project Definition & Improvement - Functionality, Cost & Schedule*

Issues

1. Inadequate preparation of participants and workshop(s) input information & analysis
2. Inadequate analysis and identification of best target areas for improvement
3. Lack of a continuing, common thread of thinking by function
4. Lack of strict focus and scope control of VM study topics
5. Inability to keep participants' interest.

Solution. Ensure:

- a) Suitably qualified VM facilitators as appropriate to the task and condition's and,
- b) Properly oriented VM team members, well experienced in their field
- c) Adequate pre-workshop preparation: research, analysis and summarization.

Coordination of Program of VM Studies. *Focus: Optimal Performance of Program; Project VM Support*

Issues

1. No overall VM plan for individual programs and projects
2. Non-selective, rigid, over-application of VM such that it loses its impact as a special process and it is not taken seriously and becomes a "check in the box" exercise
3. Lack of flexibility in how the VM process phases are applied
4. Micro managing of the VM facilitator by inexperienced staff
5. Inexperienced VM program manager, lack of guidance, no procedures
6. Inadequate training of staff in function analysis
7. No value file or multi-criteria assessment profiles and performance index
8. Lack of follow-through from workshops and continuity from workshop to workshop.

Solution.

- a) Appoint a seasoned manager to develop and run the VM program which should be part of an integrated value, risk and project management process.
- b) Set performance parameters for the VM study program and for individual VM studies.
- c) Develop roster of completed VM applications, results and follow-up requirements
- d) Ensure adherence to all VM procedures
- e) Ensure maintenance of the VM training program over the long term
- f) Maintain handbook of procedures for management of the VM program.

Portfolio & Program Executive Oversight. *Focus: Optimal Performance & Value of the Portfolio of Programs & Project; Stakeholder Satisfaction*

Issues

1. Lack of integration of value management with, risk, change and project management processes
2. Lack of clear mandate / directive from senior management for implementing VM
3. No management sponsor champion or to support the VM process
4. Resistance of project staff to incorporate VM within the PM activities
5. No staff training in obtaining best value from programs and projects
6. No familiarization of staff and consultants in the application of the value methodology and expectations of requirements for information and related analysis
7. No overall VM plan for individual programs and projects

8. VM sometimes conducted as a "check in the box" exercise because it has been mandated from "on high". Clear direction and defined objectives are required
9. Lack of meaningful performance metrics for a) VM program, b) project planning attributes, c) projects selection for VM study, d) project improvement requirements, e) VM study and implementation of recommendations.
10. VM being restricted to only a single stage of various projects, e.g. solely to project scoping; single application viewed as being sufficient
11. No clear, auditable trail of key decision-making and performance requirements
12. No formal certification of best value proposition, concepts and developed solutions.

Solution.

- a) Establish a portfolio/program oversight board to guide key decisions at strategic milestones
- b) Designate a senior champion for the integrated value, risk and project management oversight process
- c) Introduce a clear directive (policy) to initiate, enforce and maintain an integrated performance & value assurance (VPA) process with designated support processes. Audit effectiveness of application
- d) Allocate sufficient training funds and mandate that certain project staff receive adequate training in VPA and sub-set processes
- e) Develop procedures for the executive level portfolio and project oversight VPA process
- f) Approve procedures for management of an integrate value & risk management (VRM) process within the overall VPA process
- g) Institute the requirement for formal value certification of programs and projects as a condition of approval for implementation funding.

When looking at the above lists of issues, it is hardly surprising that the 65+ years old value methodology has problems in gaining acceptance in all circles. This is especially so, as project managers tend to be judged on their ability to spend money, whereas the value management profession has an image of cost cutting. It should also be clear that the responsibility for the majority of actions for ensuring a successful VM program lie with senior management; these responsibilities should not be delegated to a lower, less influential level. Similarly, it should not be assumed that a project management plan will be successful just because it has been assigned to a Project Management Professional; it is essential that senior management be involved with the appropriate activities; experienced practitioners can facilitate the processes at each of the three levels.

OVERSIGHT PROJECT CHECKLIST

To ensure VM program longevity and to attain the goal of fully implementing VM for achieving greater performance gains, better management involvement and discipline are required. This requires a holistic management approach such as value assurance. Examples of the review milestones and check list items for the *Performance & Value Assurance (PVA)* program & project oversight process are shown below.

I. Strategic Direction - *Program / Project Initiation*

1. Business need
2. Key result areas
3. Stakeholders & drivers
4. Stakeholder consultation
5. Function analysis
6. Needs prioritization
7. Performance profiles
8. Value file initiation
9. Innovation
10. Options comparison
11. Life cycle value analysis

12. Strategic risks review.

Outcome: Clear mandate to proceed and performance parameters available for concept selection and definition. Master Plan.

II. Concept Definition - *Planning and Approval*

1. Standards
2. Benefit-cost ratio and return-on-investment
3. Consensus building
4. Performance specification
5. Risk assessment
6. Organization and roles
7. Scope definition
8. Project plan(s)

Outcome: Defined and specified program/project/product available to proceed to design on agreed best value option.

III. Projects Delivery - *Executing, Monitoring & Controlling; Closing*

1. Project baselines
2. Procurement strategy
3. Value enhancement
4. Stage readiness
5. Contracts control
6. Quality audit
7. Change readiness
8. Start-up and fine-tuning.

Outcome: Optimized design. Program/project/product available for use by customer.

IV. In-Service Optimization - *Lessons Learned & Systems Performance Improvement*

1. Post completion evaluation
2. Function costing
3. Cost of ownership
4. Monitoring of efficiencies
5. Productivity gains
6. Continuous Improvement.

Outcome: Enhanced operational efficiencies and return-on-investment.

Note: This list is not exhaustive. Organizational efficiencies, scope, cost, schedule and quality control are implicit throughout the process. These and other various activities may occur at other times or concurrently; some (e.g. consultation and risk management) may continue throughout. Some organizations include Initiation, Planning, Execution, Monitoring & Controlling and Closing in every key stage.

VALUE ASSURANCE IN A NUTSHELL

Value Assurance (VA) is an overarching, business and function-based management process. It stimulates a pro-active, holistic and systematic way of group thinking and drives best value through an end-to-end, firmly anchored, planning, monitoring and control mechanism for programs and projects. VA is an opportunity-based approach derived by integrating various management methods, based around the function orientated, philosophy of the value methodology. The essence of the VA approach is a continuum of participatory strategic planning, group problem solving, the explicit management of risk and value; along with stage readiness assessments, effective change management and a system of linked, multi-level performance reporting and course correction. VA is particularly useful for guiding business change initiatives, such as new systems to increase performance, as well

as complex capital endeavours that will bring about significant or rapid change. Value assurance is accomplished through holistic, longer-term thinking and application of a suite of universal and interconnected "best practices".

VALUE ASSURANCE APPLICATION

Value assurance is a business and functional performance improvement process that is used to establish strategic direction and optimum use of corporate resources. VA pertains to deriving, confirming and maintaining best overall value along with managed risk, for the whole life of portfolios, programs and individual projects. An example of the scope of application of value assurance is illustrated in Figure 1, below.

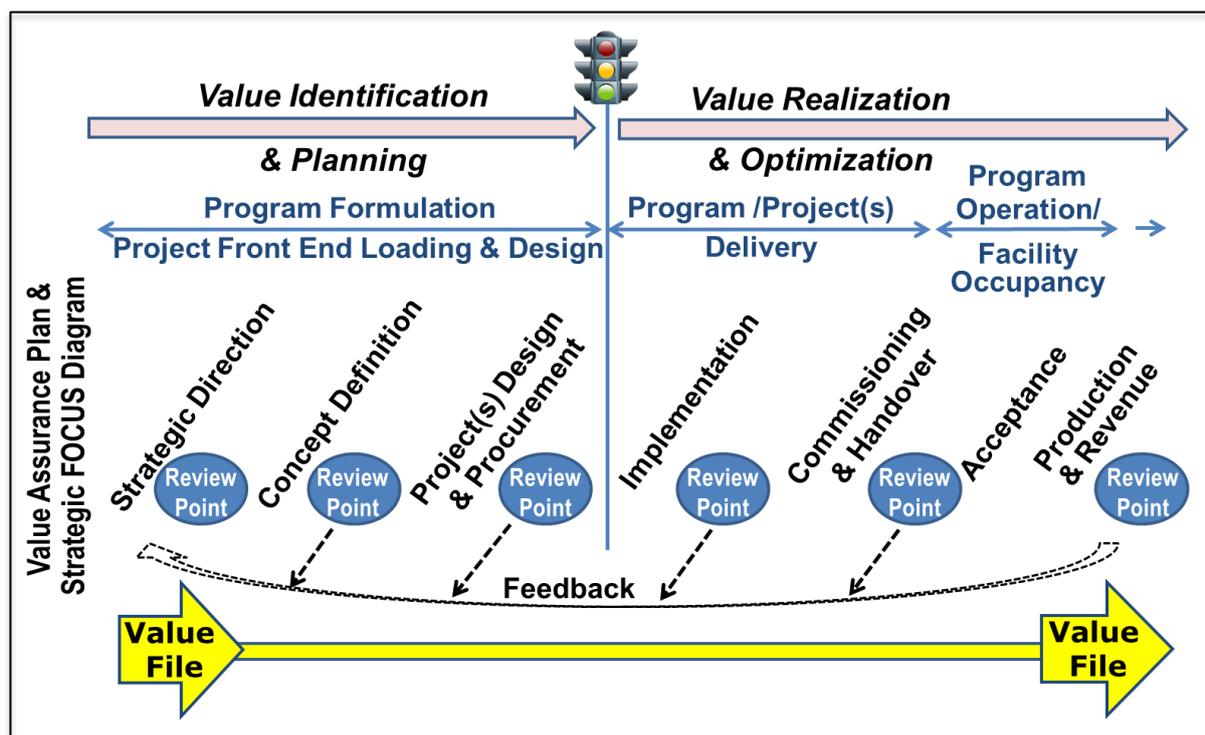


Figure 3. Scope of Application of Value Assurance: Example

The VA process starts as early as needs analysis, development of the service delivery model and formation of alliances. Tasks extend across a broad range of activities and timescales, from alignment of stakeholder expectations and business plans, through confirming the best overall fit of developing project proposals, to optimizing an in-service system or facility. A formal value file is established at the outset of each program and project, and is maintained on a consistent basis throughout the life of the program.

Key components of VA are strategic alignment, concept engineering, risk management, decision analysis, stage readiness assessments, value profiling & indexing, value improvement, program/project assurance, change management and systems optimization, along with other management tools as appropriate. Use of VA streamlines the processes for multi-level reporting and key decision-making, thus allowing project staff to focus on their day-to-day duties. Regular VA reports provide the means to communicate well to executive management and stakeholders that portfolios, programs and projects will realistically:

- a) yield best value and return-on-investment, and,
- b) be delivered within the specified timeframe and allocated budget.

The VA process is results oriented and is scalable for applications of various sizes and complexity. In essence, the value assurance process provides a:

- i. strategic navigational aid for portfolios and programs
- ii. stakeholder consensus building aid for complex situations

- iii. set of program / project analytical and remedial tools and techniques
- iv. continuing “health check” for reviewing program and critical project capabilities for meeting stakeholder expectations throughout the entire life-cycle.

A "value assurance and strategic advisory" stream works in parallel to the day-to-day program/project development and implementation stream. A suitably experienced and well-rounded VA coordinator reports directly to executive management on a regular basis.

SELECTION OF PROGRAMS AND PROJECTS

While program and project selection is often made based on largely economic or financial terms, it has become extended to include aspects such as environmental friendliness and certainty of performance. In this regard "value drivers" (project characteristics that are most important to stakeholders) are critical to identify and apply. Use of value drivers brings issues into sharp focus. Strategies focused through value drivers bridge, or eliminate, the “performance gap” and guide the implementation of effective change programs. A value-focused, turnaround strategy addresses where value and performance are being inhibited or slipping away from the organization.

Management of a portfolio should drive a path toward achieving stated strategic objectives and, ideally, the route of continuous improvement gains across the whole enterprise. Programs and projects should clearly support attainment of the corporate vision statement, principles and forecast outcomes. Most performance / value enhancement gains are made through strategic decisions and in conjunction with stakeholder input. The key to aligning performance is through recognition and appropriate attention of stakeholder perspectives and values.

Tools for the selection and sorting of programs and projects include use of:

- Financial projections -net present value analysis, payback analysis, return on investment
- Multi-criteria profiling and performance/value index
- Needs prioritization.

CONSENSUS DEVELOPMENT

It is crucial to understand the context and ramifications of a far-reaching decision before implementing the resultant change(s). VM workshops are excellent for consensus building, but typically much longer periods of time are required to build lasting consensus among influential stakeholder groups with disparate interests

Decision-making for complex situations can be fraught with pitfalls if a logical and consultative framework is not used. Common problems with decisions are that they are formulated before all the facts are available, too narrowly based and unable to withstand the scrutiny of an audit. There may be multiple objectives and preferences to be aligned for a variety of stakeholder groups. As well, the groups may well have different attitudes toward the key decision criteria of cost, time, risk, return-on-investment, and socio-environmental aspects. Accordingly, as most situations are unique, it is crucial to understand the context and nature of the surrounding circumstances before arriving at any particular decision.

Consensus building and careful attention to both process and people aspects are becoming ever more necessary, along with formal change management. Multi-criteria decisions require careful treatment; this is where structured consensus building has particular application. The consensus building process has to be carefully designed and managed to suit the unique circumstances of various situations

CHANGE MANAGEMENT

Managing a portfolio, large program of projects or mega project requires a quite different skill set and experiences from those for running most projects. With dynamic leader-follower interaction, it is more likely that suitable change management can be accomplished. Most new programs, projects and value engineering will lead to change and for the outcomes to be fully realized, the change must, typically, be carefully managed. Change may be effected through different approaches, ranging from a dictatorial directive through to a high degree of collaboration. For complex and sensitive situations affecting a wide diversity of stakeholder groups, it can be useful to treat the process of managing change as a separate project in parallel with the technical project - each with its own tools and techniques.

Effective change may well take longer to effect than expected. The schedule and communication plan should take into account a number of considerations and specific steps. This requires an estimation of the stakeholders' relative degree of readiness for, and commitment to, the proposed change(s). As with everything else in business and project management, a good reference framework is vital to:

- Keep stakeholders informed of proposals and progress
- The project/initiative with other initiatives
- Gauge the degree of support or resistance to the initiative
- Avoid misunderstandings and develop active support
- Enable appropriate allocation of resources..

SUMMING UP

The currently established "business as usual" mode often exhibits programs and projects that suffer from implementation delays, stakeholder frustration and requests for additional (unbudgeted) expenditure. Sound, long-lasting decisions are pre-requisites for business success and the reputations of all involved. Effort spent in developing unambiguous, acceptable strategic direction is undeniably a good investment. To guide sustaining decisions, participants should view the whole picture before focusing on specifics. It is critical that project staff and supervisors are more aware of the value gap and how it can be closed.

There is a significant "missing link" in project management as currently practiced in many jurisdictions. Just plugging the gap with an edict to include value management is insufficient. There is a need for applying an integrated approach to the practice of project, risk and value management. Above this, there needs to be implemented a formal senior management oversight approach to managing strategic decision-making throughout the complete life-cycle of programs and projects. The all-encompassing Performance & Value Assurance process addresses these needs. The long-established value methodology that is at the core of most value engineering/management processes is modified to suit, along with being combined with the application of risk management.

The main characteristics of this integrated approach that fully integrate VM within the project management process are listed as follows:

- ☑ Alignment of business strategy, programs & projects to maximize corporate performance
- ☑ Integration of value methodology (management) with the risk, change & project management processes
- ☑ Increased speed of program/project development and decision-making
- ☑ Communication with executive management and other stakeholders that business expectations are being met
- ☑ Auditable trail as the basis of key decisions and changes
- ☑ Enabling of key approvals & stakeholder endorsements
- ☑ Certification of best value; confident approvals
- ☑ Continuing involvement throughout program / project; continuous value improvement.

The formal project management plan should include a value and risk management plan. A value file (containing essential business and functional performance parameters) is developed at the start of the project and is maintained throughout the project life. The performance & value assurance approach should already be embedded within the organization's procedures.