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■ White Paper

Value Management As A Successful Project Intervention Strategy

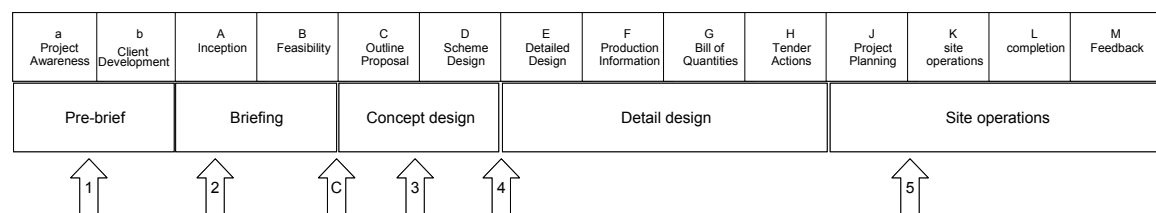*A D Crossley – BSc, MBA, Ceng, MICE, MCIM – Managing Director ServQ Ltd.*

This paper assesses value management as a project intervention strategy. More than ever clients want to deliver 'best value' into their projects. Value Management has been used in the manufacturing and infrastructure sector for some time. It was not until the late 1990s that a benchmark framework was proposed for infrastructure, following extensive international research by Male, Kelly et al. This paper builds on some of their findings and methods and looks at relationships in the supply chain that are so important for any successful project.

1   Introduction

Value Management has significant potential to improve value for money on infrastructure projects. Early adoption and buy in of the VM approach will have the largest influence on its degree of success. This paper examines how VM can have the biggest impact with reference to:

■ Intervention points and the project life-cycle
■ The Value Management process
■ Workshop challenges
■ Projects or programmes

2   Intervention Points and the Project Lifecycle

The value opportunity points:
1 pre-briefing workshop
2 briefing workshop
C Charette (undertaken in the place of workshops 1,2,3)
3 outline sketch design workshop
4 final sketch design workshop
5 operations workshop

Figure 1 – VM Intervention Opportunities (Male & Kelly)

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2.1　Need for Early Adoption

The VM best practice research by Male, Kelly et al (ref 1), concluded that there are 6 potential intervention points in the VM process (see figure 1). In general, early adoption of the process delivers the biggest potential benefit. Getting clients and professional advisors to understand this is a major challenge for the process promoter, especially if he/she is down the supply chain.

2.2　Establishing VM as Best Practice

Competing interests for scarce resources (especially, time, people and funding) at the conceptual (pre-design) stage means that clients need a degree of education to buy into using VM coming from:

- previous experience, particularly if the study was successful
- professional marketing by the VM fraternity
- astute professional advisors who appreciate VM's benefits

Competition for VM and its advocates comes from formal/financial business planning teams e.g. management consultants working the 'business case'.

3　The Value Management Process

There are many texts explaining the benefits of Value Management. The key issues are listed below.

3.1　Context of VM

VM drives into the centre of project procurement, focusing on using shared knowledge, skills and information to deliver best value outcomes on end use and 'whole life cost'.

3.2　Inputs Required

Major inputs required are:

- background interviews
- right team selection
- support documentation

3.2.1　Background interviews

Interviews help establish the:

- strategic/tactical issues
- agendas of potential workshops participants
- background politics
- personalities and team dynamics.

Facilitators should use checklists to cover stakeholder issues, especially where multiple interviewers are needed e.g. compressed timescales, large projects or a geographically dispersed team.

3.2.2 Right team selection

Getting the correct attendees is critical to a successful VM intervention. (see 4.1 for more detail).

3.2.3 Support documentation

Documentation aids assimilation of information. Early VM intervention deals with "strategic" documentation. In the first instance it may be an outline project description or output specification. The later the intervention, the more comprehensive the documentation available. At the Value Engineering stage outline drawings and draft quantities are usually available.

3.3   Strengths and Weaknesses

The strengths of the VM process are in:

- formalising business planning and management processes,
- getting strategic/political issues into the open in the earliest time-scale
- forming positive business and interpersonal relationships (see 5.1).
- effective teams brainstorming good ideas focused on value for money and business applicability
- changing pre-conceptions

VM's potential weaknesses are:

- in creating unhealthy tensions and rivalries amongst project parties (if the facilitators are not professional in managing the human dynamics)
- where it becomes too "ritualised"
- in developing friction over changes (where credibility is at stake and the VM or VE process begins late in the project cycle)
- where no champion exists to adopt and promote the workshop outcomes
- indavertently excluding important stakeholders

3.4   Outputs Delivered

Relevant outcomes demonstrating value are essential otherwise the workshops are viewed as a waste of time/money. It is therefore important to get collective agreement of the participants on the proposed report/outcomes, especially the action plan. Facilitator and sponsor credibility is also vested in these outputs. Participants must sign up to the actions.

Outputs will vary depending upon the intervention stage. Based on the VM Framework (ref 1), typical outputs are:

Workshop Type	Likely Output
Pre-brief Workshop (1 in fig 1)	Project mission statement, decision to build or criteria for doing so, Project Execution Plan (PEP) (mission, organisational structure etc), workshop report
Briefing Workshop (2 in fig 1)	Performance spec, detailed definition of component parts, PEP, workshop report
Charette (C in fig 1)	Validate the brief, concept design, updated PEP, workshop report
Outline Sketch Workshop (3 in fig 1)	Validated concept design, updated PEP, workshop report
Final Sketch Design Workshop (4 in fig 1)	Validated final sketch design, refined PEP and activity plan to tender stage, workshop report
Operations Workshop (5 in fig 1)	Production programme validation and workshop report
Implementation Workshop (any time during project)	Presentation/Reports on progress against previous action plans, problem solving, Sign-off report

3.5 Value Engineering Subset

VE is useful in establishing and verifying hard outputs for the project. The use of the appropriate tools, such as:

- facility walk though maps
- process flow charting
- functional space analysis
- adjacency matrices
- element function analysis
- component analysis
- REDReSS
- supply chain analysis (mapping and planning)

all bring a systematic approach to analysis and help to in formulating conclusions. The skill of the facilitator is in knowing which tools are appropriate, when to use them, and getting the workshop team to agree on their conclusions i.e. facilitators facilitate, they do not direct.

4   Workshop Challenges

Having advanced diagnostic/planning tools to enable VM is fine, however, a project invariably brings together a team. Team dynamics and client education are critical elements of a successful VM intervention.

4.1 Team Dynamics

Looking firstly at the team dynamics

4.1.1 Choosing the right team

A team needs to cover the stakeholder community and supply chain. It needs:

- the right skills mix - balancing end users, design, procurement, construction, and management
- decision taker presence to speed up progress, lend credibility, understand project issues and team inter-relationships.

4.1.2 Facilitator skills

A skilled and qualified facilitator is essential. Someone independent of the project is the best option, accepting this means extra cost and time in briefing his team. Parallel research on effective partnering processes (ref 2) also confirms the need for workshop leadership skills and experience. Where the client is looking to establish a programme (i.e. many projects with the same team) or framework/alliance, investing in the relationship in advance of task orientation is often highlighted.

4.1.3 Management support

Management of each participant needs to be kept aware of the process and outcomes. This requires a communication programme with a circulation list for a summary progress reports (assuming client agreement). The teams working with each stakeholder "back at the ranch" need to be kept on board.

4.1.4 Client support

Clients need to buy into the benefits and outcomes of the VM intervention and the sponsor a senior decision taker. This helps prevent politics from derailing VM workshop decisions.

4.1.5 Workshop overload

In cultures where people are judged on output rather than process or teamwork, resistance to attendance can occur. Previous negative experience with workshops can engender scepticism - hence the need to evaluate the benefits of having VM workshops, before embarking. The UK water and rail industries have perhaps been too over-exposed to VM to objectively view the benefits.

4.2 Education of Clients

4.2.1 Challenge the status quo

Where the team is starting to challenge perceived wisdoms, such as:

- square footage per employee
- size of common areas
- need for adjacency

a business like sponsor needs to promote the workshop outputs.

4.2.2 Open to ideas

VM will flourish in an environment open to progressive ideas. Enthusiasm for improvement, obtaining best value and driving forward change is essential from the top management or the key stakeholders. It is practically impossible to demand change - change and improvement has to be wanted by the participants.

4.2.3 Buy in and politics

Where people's jobs, reputations or "ranking" are affected - there is often reluctance to buy into the VM process and outcomes. The team and facilitator need to be aware of the political impact of the study - especially where the process is being hijacked and used as a Trojan horse to achieve hidden agendas. This is sometimes hard to spot until the pre-workshop interviews.

4.2.4 Ability to question

An open and trusting climate in the workshop, enabling difficult and objective questioning is critical. People at all levels need to feel comfortable with change. If not then there should be additional pre-workshop relationship building (e.g. afternoon orientation session, dinner/social activity the night before).

4.2.5 Commitment to outcome

The client, stakeholders and participants need to achieve consensus and commit to workshop outcomes.

5 Projects or Programmes

Value Management really pays off where the team is working on a programme as part of a framework or in establishing a supply chain.

5.1 Single or Multi-projects

Investment in establishing relationships and VM activity is significant. This realistically means there is a minimum level of cost benefit. For larger projects, the investment can be handled within the scheme budget. Where multi-projects (programmes) exist there is significant advantage in using the workshop process as a catalyst for good team relations and assessment of multi-project savings. Funding in these situations needs to be provided centrally. Positive examples of outcomes are:

- simplification of installation processes
- reduction in and harmonisation of component types
- capitalising on bulk purchase options
- brainstorming solutions impacting on multiple projects

5.2 Issues and Challenges

The NHS Procure 21 and Defence Estates PRIME contracts embrace a partnership culture to benefit all parties and drive down costs. Typical difficulties that can arise:

- in the procurement process, where one organisation is distilled from a long list of applicants. At what stage is it going to play all the cards? Highly unlikely to be during selection.
- how can the client and auditors reference value for money, especially in the public sector? Hence the need for public sector comparators, shadow bidding teams and fragmentation into competitive elements.
- what happens when supplier management or ownership changes? Will the new team abide by previous agreements and values?

5.3   Competing Interests

Often in PFI/PPP contracts, there are differing needs within the same organisation. This has been noted in the contracting fraternity, where part of the company funds the scheme, part builds the capital works and part operates the final facility. Tensions are often observed based on each part of the value chain's demands for profit (ref 3).

5.4   Frameworks and repeatability

The main advantage of the VM process within frameworks is retained knowledge and establishment of fruitful relationships. There is a role for bonus arrangement based on cost savings - measured in whole life terms. When people are used to working together, with a common goal, major improvements can be derived.

6   Conclusions

VM is a powerful project intervention strategy. The process is focussed on delivering better value and better projects for clients, within a whole life context. This paper has highlighted the many challenges and opportunities that relate to a successful VM intervention. The key requirements are:

- client awareness and education on VM benefits
- decision taker participation
- excellence and independence of the facilitators
- assembling the right workshop team
- having professional recording, reporting and action planning
- getting consensus and buy-in to the outcomes, especially the client

Bring all these together and VM will payback as a positive project intervention strategy - almost every time.

References

1   Male, Kelly et al – The value management benckmark: a good practice framework for clients and practitioners, pp 26
2   Dent S – Why Partnerships Fail – US Research 2000
3   Author's observation whilst working on PFI schemes in 1990s