ROUTE MAP FOR THE APPLICATION OF VM IN CAPITAL PROJECTS (MAINLY CONSTRUCTION)

INTRODUCTION

The purpose of this *Route Map* is to give an outline of the key stages of the application of Value Management (VM) in capital projects. It provides a framework for guidance. It is not intended as a template to be used in all circumstances: specialist advice should be sought for the most appropriate and cost-effective application for any given project.

CURRENT APPLICATION IN CAPITAL PROJECTS ARENA

The application of VM in the creation of assets in both public and private sectors is widespread.
It is used to great effect in both the demand and supply sides of the market.
The route map outlined here applies to traditionally procured construction projects as well a those procured under PFI or similar routes, where the supply side provide and operate an asset for use by the demand side.

KEY PROCESSES

VM first defines the customer and user requirements, assesses the most appropriate way to deliver them and then provides a means to optimise the solutions and maximise value. The methods are most effective when fully integrated into the overall project process as shown in the *Route Map*. The timing of studies, their number, and the work carried out at each, may vary depending on the circumstances and the type, size, and complexity of the project.

Whilst the *Route Map* illustrates a linear progression from one stage to the next, in practice, progression may be an iterative process.

The programme should involve all relevant stakeholders.

RISK

In all projects there will be a level of uncertainty about both the degree to which business needs are satisfied and the cost of doing so. Management of Risk should be integral part of the Value Management process.

It is important that the appropriate risks are identified and evaluated at high level as part of the development of project options. However, it will usually be necessary to undertake detailed risk planning and analysis at a separate workshop or workshops

BENEFITS OF VM IN CAPITAL PROJECTS

Capital Projects are unique because every project is, in effect, a prototype, unlike other repetitive processes like manufacturing. Traditionally it has suffered from a high level of confrontation resulting from poor communications, low margins and customer dissatisfaction. An effective VM programme addresses all of these shortcomings and leads to much higher levels of satisfaction all round.

Generic Route Map for the application of VM in Capital Projects

Stage	Needs addressed	Methods used	Outputs
VM0 Strategy and Inception	Business needs and objectives Triggers for considering a project/ need Benefits sought Strategic Fit Options available to fulfil the need Strategic risks Business environment	Strategic Planning Value Proposition Value Profile Whole life cost analysis Surveys (Market and other info)	Vision, Mission and Objectives Basis of the business case Success criteria Agreed performance indicators Implementation strategy
VM1 Briefing	Project objectives Value Drivers Selection criteria Performance requirements Constraints and uncertainties Internal and external Stakeholders	Briefing study Develop Value Profile Risk and issue identification Stakeholder analysis Relationship development Skill gap analysis and training/coaching	Prioritised Value Drivers linked to Design Considerations Procurement strategy Output specification/ Statement of Requirements Project strategy Stakeholder map Basis for managing risk
VM2 Concept Design	Concept selection and development Feasibility Efficiency of the Building Project organisation Team alignment Preliminary cost and programme estimates	***Concept Study*** Function analysis Attribute weighting Option selection Option improvement	Preferred concept option Basis for decision making Design brief Initial Project execution plan including communication plan, levels of design information, change management and decision making procedures

Stage	Needs addressed	Methods used	Outputs
VM3 Scheme design	Design proposals Whole life cost information Specification Programme Operational issues Buildability	Value Engineering Risk analysis and management Proposal monitoring and tracking	Optimised designs Refined Project execution plan including communication plan, levels of design information, change management and decision making procedures
VM4 Detailed design & construction	Standardisation Productivity Interface coordination	Value Engineering Design and cost reviews	Refined specifications Basis of tender documentation Clear statement on division/ coordination of responsibilities (performance envelope)
VM5 Handover	Project performance	Project Review Post occupational review	Lessons learned for future projects Record of effectiveness of VM programme
VM6 Use	Building performance Efficiency of activities in building	Surveys Value Analysis Repeat of VM0-1	Proposals for improvement projects