



Government of **Western Australia**  
Department of **Treasury**

Strategic Asset Management Framework

# Value Management





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# Contents

<b>INTRODUCTION .....</b>	<b>1</b>
<b>Focus .....</b>	<b>1</b>
<b>Function Analysis .....</b>	<b>1</b>
<b>Responsibility.....</b>	<b>3</b>
<b>Benefits.....</b>	<b>3</b>
<b>Summary.....</b>	<b>4</b>
<b>PART ONE: APPLICATION.....</b>	<b>5</b>
<b>Stages .....</b>	<b>5</b>
Business Case.....	5
Project Definition.....	6
Delivery .....	7
<b>Hazards .....</b>	<b>8</b>
<b>Summary.....</b>	<b>8</b>
<b>PART TWO: APPROACH.....</b>	<b>9</b>
<b>Phases .....</b>	<b>9</b>
<b>Participation .....</b>	<b>9</b>
<b>Facilitator.....</b>	<b>10</b>
<b>Duration .....</b>	<b>11</b>
<b>Summary.....</b>	<b>11</b>



## Introduction

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This module clarifies how to maximise the benefits of value management during the development of an asset investment business case, a project definition plan (PDP) and subsequent work to design and deliver an asset.

## Focus

In its broadest sense, value is the benefit to the community provided by an asset.

Value management is an analytical method that is used to define the utility and the essential functions of an asset within quality, time and cost constraints. The method involves clearly identifying what the asset components must do in order to achieve the State's service delivery objectives.

Value management is applicable to all types of asset, including social and economic infrastructure and ICT projects.

Value is seen primarily from the perspective of the community members who will benefit from the operation of the asset, for example, the patients in a hospital, visitors to a museum and students at a college. Value management also focuses on the practical requirements of the people who will use the asset to deliver services, such as nurses, curators and teachers.

Value management is not a cost-cutting exercise to achieve savings, for example, by using less or cheaper construction materials. Instead, creative ideas and benchmarks are used to maximise the potential for value to be achieved over the life of an asset – which will often span decades and involve significant capital and recurrent costs.

## Function Analysis

At the core of value management is the analysis of functions. In the SAMF context, a function is: the purpose or activity that an asset and its components will perform or enable.

The following table provides examples in the context of a museum project.

**Table One: Museum Functions**

Level	Function
<b>Strategic</b>	<ul style="list-style-type: none"> <li>Promote cultural and historical understanding among Western Australians and visitors from inter-state and overseas.</li> </ul>
<b>Related Projects</b>	<ul style="list-style-type: none"> <li>External plaza: two-way integration between the museum and surrounding facilities (arts centre, theatre and library).</li> <li>Storage: refresh museum exhibitions via the preservation and delivery of artefacts from an offsite location.</li> </ul>
<b>Project-specific</b>	<ul style="list-style-type: none"> <li>Access: primary and secondary entries connected to internal orientation points and avenues for efficient visitor arrival, circulation and departure.</li> <li>Galleries: spaces to host international and national exhibitions involving high-value fragile and large items.</li> <li>Back-of-house: loading dock and distribution channels which enable the discrete movement of exhibits, personnel, equipment and supplies for maintenance and retail events.</li> </ul>

Given that there are many ways to achieve a function, the objective examination of alternatives will produce better-value solutions. For example, comfortable room temperatures for museum visitors and staff can be achieved by including environmentally sustainable design elements such as thermal labyrinths, building orientation and natural shading (rather than relying entirely on air conditioning).

Examples in other contexts include:

- locating security offices in a prison complex at centralised and dispersed points to minimise incident response times;
- locating acute care patients in adjacent wards in a hospital to optimise specialist and back-of-house support;
- creating multi-function courtrooms in regional areas to address peaks and troughs in demand and in the availability of court officers;
- centralising laboratories and storage areas in a research facility to achieve greater productivity and operational efficiency; and
- shared offices, video conferencing and reception areas among different agencies in the same or nearby buildings.



Function analysis allows the identification of primary and secondary functions. The former are essential to achieving the project objectives and effective asset operations. The latter are not essential, offer less benefit and may be foregone. Both the primary and secondary functions may involve unnecessary costs that can be reduced or eliminated to achieve higher value.

## Responsibility

It is essential that senior agency decision-makers, including the chief executive officer, are actively involved in value management to ensure that high quality advice is provided to the Minister and the Economic and Expenditure Reform Committee (EERC), that the asset functions are well defined and arranged, and that maximum asset value is achieved.

## Benefits

Value management produces significant results, including:

- higher asset quality and innovative service delivery; and
- practical asset design based on expertise shared among stakeholders, including local government and members of the community.

This is done by:

- identifying service delivery and resource efficiencies for an individual asset and across related assets;
- collocating, combining and simplifying spaces and areas;
- removing redundant asset features and areas;
- considering whole-of-life costs;
- eliminating potential wastage, duplication and unnecessary expenditure;
- challenging assumptions and generating alternative ideas;
- benchmarking to identify successful innovation; and
- correlating the results of related work such as risk management and cost benefit analysis.

The application of value management also promotes benefits within an agency, including: improved communication, teamwork and cooperation; and time and financial savings from focused effort.

## Summary

Value management is a powerful means to substantiate advice from an agency to the Department of Treasury, the Minister and EERC that high quality planning and analysis has been conducted in support of an asset investment proposal.

For example, the key value management advice can be conveyed succinctly during verbal briefings and in an EERC submission which seeks asset investment approval or to proceed to tender.

## Part One: Application

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Value management is best applied to:

- assets that involve significant project costs and risks;
- assets that are unusual in design, construction or maintenance; and
- a group of assets of similar design.

The benefits are greatest early in the development of a business case when improvement in the potential value will far outweigh the time and effort involved. This is particularly the case during development of the initial master plan and design concept.

## Stages

### Business Case

In the first instance, asset functions are considered in the overall, service delivery context for the investment proposal.

At the start of a value management exercise, stakeholders review the strategic justification for the project as outlined in the agency's strategic asset plan. The main assumptions that drive the proposal are linked clearly to the demand projections and service delivery model in the plan. The assumptions are challenged – for example, that a training facility must operate on a 24/7 basis and that there is no potential to outsource services to providers in the community.

If the assumptions are sound, the position of the asset in its overall context and master plan is then clarified. For example, a proposal to refurbish a hospital would involve options for the reconfiguration of the existing facility and for adjustments to the surrounding road network to facilitate rapid access by patients and visitors.

Based on this strategic approach, a range of project-specific options and functions are generated and evaluated. The issues include asset quality, the effective relationships between and proximity of functions and areas, the site conditions and limits, environmental impacts and whole-of-life funding constraints.

In order to develop, evaluate, compare and refine the options, trade-offs in the functionality of the asset are identified. For example, the complete segregation of the front-of-house and back-of-house functions in a museum may be necessary, or cross-overs may be possible to enable retail outlets to be restocked without significant impact on the visitor's experience, but with reduced space and cost.

Both the capital and recurrent costs are considered when clarifying and measuring the value options and evaluating the trade-offs. For example, for a foreshore development project, visitor safety may be enhanced by selecting materials for beach access paths and structures that are superior to traditional treated pine. The upfront capital cost will be higher but the whole-of-life recurrent cost will be reduced due to the suitability of the alternative materials to coastal conditions and the low maintenance requirements.

## Project Definition

At this stage, value management is used to refine the functions of the project with reference to the service delivery requirements in the approved business case.

The aim is not to develop a final asset design but to test the feasibility of the business case concept and to confirm whether the functions can be achieved within constraints including the approved asset quality, project budget and practical limitations such as the shape, ground levels and size of the site.

Significant changes within the approved parameters are explained. For example, in the museum context, closer investigation may identify the potential to increase the number of multi-function areas that could house exhibitions, increase revenue (for example, from out-of-hours events) and enhance the quality of activities at public rest points.

In addition, the reasons for rejecting proposed changes by stakeholders are explained – for example, to demonstrate that while the extra capital cost of enclosing a library courtyard would be small, the whole-of-life cost of maintaining and cooling the area would be prohibitive, even after passive cooling design features are considered.

Overall, effective value management is important at the project definition stage because the practical feasibility, opportunities, limits and implications receive closer attention as a foundation for further improvement.

## Delivery

During the project delivery stage, value management is generally most effective when developing the design and before contract documentation starts. Key issues include whether the approved project objectives and functions will be met by the design and whether value can be increased by refining the functional aspects within the approved scope, cost, schedule and risk parameters.

The analysis informs the development of the detailed project brief that is used subsequently by the State during contract discussions and project delivery.

For major projects, value management is also useful when contractors are involved at an early stage in the design development. The potential benefits include:

- reduced State exposure to design and construction interface risks;
- flexibility to initiate clearly-understood and jointly-agreed design modifications within the approved project parameters; and the
- potential to start basic elements of the construction program earlier than planned, such as site clearance.

However, where value management is undertaken after contract award, State representatives must be mindful of the potential for scope changes to give rise to contractual claims. Where contractor involvement in value management is desirable, contracts should be structured so as to enable efficiencies to be delivered without exposing the State to undue commercial risk.

In the absence of a robust project brief and value management, erroneous assumptions may be made concerning the practicality, efficiency and 'buildability' of key design features. Costly inefficiencies may not be addressed, including logistics support complications that will persist throughout the life of the asset. For example, a museum may be built without sufficient back-of-house capacity to move large exhibits within the complex, with disruptive movement instead through surrounding streets and public areas.

In addition, value management can be included in the contracts that govern the asset management and maintenance phases after construction. For example, the State can insist that a company arrange regular value management workshops with the State's project director and the asset user group to identify non-material changes to the approved facilities management works in order to achieve more effective resource expenditure and service delivery.

## Hazards

Key signs of an unsatisfactory approach to value management include:

- its retrospective use to obtain supplementary funding for a proposal that was significantly under bid and which obtained a place in the State's Asset Investment Program based on that advice;
- a cursory review that is used to justify proceeding rapidly to tender or to contract signature after a market response that was more expensive than expected due to poor business case and project definition work;
- reports at the business case and PDP stages that focus on micro details such as architectural finishes, rather than the critical asset functions and efficiencies; and
- the provision of value management reports to Treasury on the brink of major commitments (such as contract signature) without sufficient time for review and for corrective alternative action (such as for revised advice and re-approval to be sought from Cabinet).

Project urgency and short deadlines do not obviate the requirement to undertake value management, particularly for major projects. Rather than being considered an unnecessary burden, value management should be an integrated part of the planning, definition and delivery of an asset given the quality, cost, schedule and risk reduction improvements that can be achieved.

It is important to note that responsibility for the ineffective application of value management lies with the agency head and officers involved, not with consultants who may have provided inadequate advice (and who remained unchallenged) on whether the project design could be achieved within the approved parameters.

## Summary

Value management is part of a proactive, professional approach to business case development and to project definition and delivery. It enables an increasingly strong understanding of the nature and complexities of a project based on input from stakeholders and advisers, as described in the next section of this guidance.

## Part Two: Approach

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Value management involves the preparation of formal reports based on workshops in support of a business case, PDP and subsequent project definition and delivery.

### Phases

Consistent with the Australian value management standard, a workshop involves five phases regardless of when it is conducted.

- Information: confirmation of the scope of the exercise, key issues and concerns, background information, assumptions and cost overviews.
- Analysis: a review of the function analysis and information completed thus far plus new analysis for the particular project and related projects.
- Creation: alternative ideas, brainstorming, lateral thinking and better value solutions.
- Evaluation: ideas are assessed, culled and prioritised to identify viable options.
- Development: options and their rationale are refined and documented in action plans, for recommendation to decision-makers.

### Participation

The success of a workshop and the quality of the report depends on having the right leadership, stakeholders, skills, commitment and attitude among participants.

Key stakeholders who should be involved include:

- senior asset investment planners and decision-makers, including members of the agency's asset investment committee;
- asset/facility operators and managers from the sponsoring agency;
- senior representatives from the project delivery agency;
- design team and specialist consultants (e.g. architects and engineers);

- construction representatives (to consider 'buildability');
- the Department of Treasury; and
- practitioners from related fields across Government or the private sector who bring fresh perspectives.

All participants should have the authority to make decisions on behalf of their agency or work area. The appropriate involvement of stakeholders is crucial in taking a strategic approach, absorbing technical expertise and generating ideas; noting that value management is not an attempt to 'design by committee'. While specialist advisers may not be involved during the entire workshop and reporting period, it is important that they are readily available when required.

The number of participants should be managed so as not to become unwieldy, while maintaining wide representation. By way of example, the appropriate number for a major project may be around 15 people.

To gain the maximum benefit, it is crucial that at least half of the participants are drawn from outside the immediate project team. This helps to ensure that proposals by the team are challenged and alternative ideas encouraged.

## Facilitator

A value management workshop is led by a qualified facilitator who is independent of the business case, PDP and delivery team. The facilitator should be familiar with the planning, design and construction process and with the roles of the team members. The facilitator's key objectives are to:

- maximise the contributions of all stakeholders;
- maximise objective consensus on the intended project value and the essential and discretionary functions;
- draw on the combined knowledge of people from a variety of disciplines;
- maximise the benefits of group dynamics, rather than rely on input from individuals in isolation; and
- help bring the project into perspective as a whole, rather than as a collection of independent elements.



## Duration

There are no set rules for the duration of a value management exercise. However, sufficient time should be allocated to allow all phases to be completed and all key issues to be addressed. For a major asset investment project, the total exercise may take around a month, in tandem with other activities. For a complex project, a workshop generally requires one or two days of dedicated attention.

## Summary

The influence of an agency's chief executive officer, other senior decision-makers, independent participants and the workshop facilitator is crucial in encouraging cooperative thinking, objectivity and focus on the function analysis and advice that is fundamental to successful value management.

