Local Government Victoria

Local Government **Asset Investment** Guidelines

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A Victorian Government



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Further copies

These guidelines and software in the form of a business forecasting excel spreadsheet is also available for downloading at <u>www.dvc.vic.gov.au</u> under "local councils".

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Foreword

Planning for future infrastructure requirements is a key challenge facing all levels of government. Councils must balance competing demands for investment to renew existing infrastructure assets such as roads, bridges and drainage as well as providing expenditure for new infrastructure assets to meet growing service delivery demands.

The preparation of sound asset investment proposals by council officers and their appraisal by councillors within a rigorous appraisal framework is essential for due diligence and should enable more effective service delivery.

These guidelines update and expand the *Guidelines for Evaluating Local Government Capital Projects* produced by the former Victorian Office of Local Government in partnership with the sector in 1996. Although these guidelines principally address infrastructure investment, the principles discussed are applicable to all capital investment decisions and a range of asset investment examples are provided throughout this guide.

Importantly, these guidelines include a section for councillors to assist them and provide a robust process in their undertaking of asset investment appraisal. Examples have been provided by councils of their investment appraisal approaches and business case design. Software in the form of a business forecasting excel spreadsheet is also available for downloading with the guidelines at <u>www.dvc.vic.gov.au</u> under "local councils" to support councils in financial forecasting.

These guidelines form part of a suite of best practice guidelines developed or facilitated by the Department for Victorian Communities, local government peak bodies, the Auditor-General and the Valuer-General, to provide support to local governments in their asset management. Other guidelines in this suite include:

- Guidelines for Measuring and Reporting the Condition of Road Assets (Department for Victorian Communities, Local Government Victoria)
- Accounting for Non-current Physical Assets (Department for Victorian Communities, Local Government Victoria)
- Fair Value Asset Valuation Methodologies for Victorian Local Governments (Valuer-General's Office)

All guidelines released complement one another and will assist to bring accountants, engineers and valuers to a closer shared understanding of the complex issues surrounding management of and accounting for assets in local government.

I would like to thank all those that participated in this important project.

Prue Digly

Prue Digby Executive Director Local Government Victoria & Community Information

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Introduction

1. About these Guidelines

These guidelines reflect the Victorian Government's commitment to working in partnership with the local government sector to encourage and support sound asset management. They are designed to assist councils with their asset planning, appraisal and delivery.

Whilst these guidelines essentially cover infrastructure investment, the principles outlined are applicable to all capital investment decisions and a range of asset investment examples are presented throughout this guide. They set out a step by step approach to planning and selecting proposals for initial appraisal, detailed business case analysis and appraisal through to asset investment delivery. To assist councils in all phases of the asset investment process, practical examples have been provided by councils to illustrate how investment proposal appraisal is being conducted.

The guidelines provide analytical tools to value the economic, social and environmental impacts of a proposed investment. They also set out the techniques used to compare the costs and benefits of projects of different sizes and with different timelines and income and expenditure streams, providing a consistent methodology.

These guidelines update and extend the *Guidelines for Evaluating Local Government Capital Projects* that were produced by the former Office of Local Government in 1996 with particular emphasis on infrastructure investment. It should be noted that the guidelines set out a suggested asset investment process which is not the definitive or only approach to project planning and evaluation. The suggested framework and techniques may need to be customised by councils to suit individual needs and circumstances.

Included with the guidelines and available for downloading from the website <u>www.dvc.vic.gov.au</u> is software in the form of a business forecasting excel spreadsheet which can be used by councils to assist in their financial modelling.

2. Scope and Application

These guidelines are concerned with investments in assets that are called "capital investments" that have ongoing benefits greater than 12 months rather than "operating investments" that are expensed within a year, often called "recurrent expenditure".

Fig 1.	Local government	investments	covered by	these Guidelines
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Council Investment Expenditure									
Rec	urrent	Capital							
Operating	Maintenance			Other					
				New	Upgrade	Expansion			

The procedures and practices set out in these guidelines can generally be applied to projects of any scale. However, most councils have policies that require proposed investments exceeding a certain expenditure threshold level to be assessed in accordance with formal procedures. It is recommended that councils consider adopting such a policy, if they have not already done so. The appropriate investment threshold level will vary with the size of each council's budget.

There are a number of technical terms used throughout these guidelines. They are defined in the Glossary of Terms in Appendix E of these guidelines.

3. Structure of the Guidelines

These guidelines have been developed in two parts:

- Part A is designed to assist Councillors in their duties as the elected Council. It includes a high level overview of the asset investment appraisal process and highlights key issues for Councillors to consider when making decisions.
- Part B is designed for Council management and officers preparing capital investment proposals for appraisal by the Council.

Throughout the guidelines, examples provided by councils of their appraisal approaches, have been included.

The appendices include further examples, case studies and templates, as well as a glossary of key terms.

The asset investment process is described as eight phases commencing with planning and criteria selection for initial appraisal through to post project evaluation. The eight phases and their relationships are shown in Fig 2.



Part A Councillors' Overview

1. Why do Councils invest in Assets?

Local governments make investment in assets solely to provide services to their communities.

Investment in assets can be used for:

Sustaining services (providing services from existing assets)

- Renewal of existing assets (including rehabilitation and replacement)
 (capital renewal)
- Maintenance recurrent expenditure (not discussed in these guidelines)

Growth (providing additional assets for improved and new services)

- Enhancing service levels (capital upgrade)
- Expanding services (capital expansion)

These guidelines are concerned with significant investment in capital expenditure rather than relatively small operating expenditure, as defined in Appendix E.

Capital expenditure is classified into the categories of renewal, upgrade and expansion because each category has a different effect on council's future budgets.

- capital renewal will generally have no impact on future revenue, as existing assets are being replaced, but may reduce future operating and maintenance expenditure if well designed and completed at the optimum time.
- other new assets (expansion or upgrade) will add operating and maintenance costs because it increases the asset base. Expansion may also increase revenue, whereas upgrade is not likely to add new revenue.

The decision to invest in assets imposes a responsibility on councillors to provide the requisite funds for operating, maintenance, renewal and disposal of that infrastructure asset over its life cycle. Asset decisions cannot be made in isolation and Government capital and recurrent outlays should be considered within council's overall budget and the impact these assets will have on the future costs and revenues of the Council.

2. Councillors' Role in Asset Investment

Councils have significant holdings and require prudent investments in assets to provide services to their communities.

Victorian councils are responsible for over 128,000 km of local roads valued at over \$14 billion.¹

The total value of local government infrastructure in Victoria was estimated at some \$20 billion at June 2002. This equates to approximately \$4,100 per head for each of estimated population of 4.8 million.²

Councillors are responsible for the overall allocation of funds to provide services to their community. This may be achieved by establishing levels of service and through funding strategies such as the setting of rates and charges to generate the revenue required to provide the services. This process generally starts with the Council Plan including the Strategic Resource Plan, which gives the longer term direction for council priorities and is fine tuned in the annual budget, which provides more detail on council activities and resource allocation. These initiatives are then reported on in the Annual Report.

Resources are limited and councillors are accountable to consider, in all investment decision making, community need within available resources and a long term outlook.

Section 136 of the *Local Government Act 1989* requires Councils to implement the principles of sound financial management which are to:

- a) manage financial risks faced by the Council prudently, having regard to economic circumstances;
- b) pursue spending and rating policies that are consistent with a reasonable degree of stability in the level of the rates burden;
- c) ensure that decisions are made and actions are taken having regard to their financial effects on future generations;
- d) ensure full, accurate and timely disclosure of financial information relating to the Council.

¹ DoTaRS, '2002-03 Local Government National Report', Table 4.3, p64

² DoTaRS, '2002-03 Local Government National Report', Calculated from Tables 4.1 and 4.2, p63.

3. Councillors and the Investment Appraisal Process

Fig. 2 on page 2 outlines eight phases in the asset investment process. These phases are summarised as follows with particular emphasis on the responsibilities of councillors within each phase:

	This phase involves Councillors:
Phase 1	Establishing priorities through:
Planning & Criteria Selection	 Council Planning – The Council Plan reflects community priorities for council action and resource allocation. Understanding the priorities of communities assists councillors to shape resource allocation. Best Value Services Reviews – Best Value principles require councils to consult with the community about services to be delivered and to what standards. Community input helps determine the nature of services to be delivered. Asset Management Planning – Asset Management Plans document the services to be provided and the service levels, the assets required to provide the services and funding required for operations, maintenance, renewal/replacement and demolition. Selecting criteria for Investment Appraisal Rarely are there sufficient funds available to meet all the needs of the council. Councillors need to be vigilant to ensure essential requirements are being addressed (and over the long-term). Therefore councillors may determine what will be funded in the Strategic Resource Plan and the Budget both in terms of maintenance and renewal, operating and capital. This can be achieved by setting criteria for appraisal of investment proposals within the context of community priorities. The criteria could be reviewed annually by councillors.
Phase 2	Councillors have an important role in nominating investment
Proposal Identification & Definition	proposals as well as scrutinising those put forward for further consideration.
Phase 3 Preliminary Appraisal	Approval of proposals for business case analysis is generally a responsibility of councillors. This phase involves the conduct of a preliminary appraisal of investment proposals and shortlisting of priority proposals for business case analysis.
Phase 4	Preparation of Business Cases consistent with agreed guidelines is
Business Case Analysis	generally a role for council officers. It could also involve a review of asset management plans following budget adoption to recognise the availability of resources and changes in projected service levels and costs.
Phase 5 Business Case Appraisal and Ranking	This could involve an appraisal of the business cases for investment proposals and prioritisation of the proposals by councillors for funding.
Phase 6	This is principally a role for council officers, which includes
Asset Investment Delivery	the asset register and recognition of capital expenditure as assets in the financial records.
Phase 7	Monitor progress on capital investment program from the regular
Project Monitoring	standard statement of capital works.
Phase 8	Evaluate investment projects after implementation to see if the
Post Project Evaluation	what went wrong' and identify areas for improvement of the capital investment process.

Councillors have prime responsibility for the governance and resource allocation aspects of asset investment. Council officers are generally responsible for proposal identification and definition, scoping, benefit/cost analysis, risk analysis, evaluation, project delivery and project management. The roles and responsibilities of the councillors and officers for each phase of asset investment are shown in Table I. Each Council could clearly assign responsibility and/or delegation for these phases to assist in the asset investment process.

	Phase	Councillors	Officers
1.	Planning and Criteria Selection	Approve appraisal and evaluation criteria	Develop investment appraisal and evaluation criteria and process
2.	Proposal Identification and Definition	Nominate and/or prioritise proposals	Nominate proposals, define proposals for preliminary appraisal
3.	Preliminary Appraisal	Approve proposals for business case analysis	
4.	Business Case Analysis		Business case preparation and analysis
5.	Business Case Appraisal and Ranking	Approve projects for council investment program and prioritisation	Making recommendations for approval
6.	Asset Investment Delivery		Project management and delivery
7.	Project Monitoring	Evaluate project delivery performance	Monitor and report on project delivery
8.	Post Project Evaluation	Evaluate investment benefit performance	Report on investment benefit performance and lessons learnt.

Table I. Asset Investment Appraisal Roles and Responsibilities

The following section covers each of the above eight phases in more detail.

3.1 Phase 1 - Planning and Criteria Selection

Community priorities

3.1.1 Planning

Councillors have a key role in establishing priorities for investment through:

- Council Planning The Council Plan (Section 125 of the Local Government Act 1989) reflects community priorities for council action and resource allocation. Understanding the priorities of communities assists councillors to shape resource allocation.
- Best Value Services Reviews Best Value principles require councils to consult with the community about services to be delivered and to what standards. Community input helps determine the nature of services to be delivered.
- Asset Management Planning Asset Management Plans document the services to be provided and their service levels, the assets required to provide the services and funding required for operations, maintenance, renewal/replacement and demolition. It is through these plans that councillors may determine capital and recurrent funding requirements for assets and the impact of any compromises or tradeoffs to continue to provide key council services. The funding information from these plans assists to determine requirements in the annual budget and strategic resource plan.

Councillors may consider the allocation of both recurrent and capital funds to sustain their assets. However, it is capital investment expenditure which is the focus of these guidelines. This includes asset renewal (replacement/refurbishment of existing assets), expansion and upgrade (new assets). Terms such as recurrent funding, operating and maintenance expenditure, and capital investment expenditure are explained in the Glossary in Appendix E. Fig 3 illustrates how the different expenditures relate to each other.

Detailed examples of capital renewal such as sealed road resurfacing, building renewal and upgrade of an existing road are also included in Appendix E.

If council cannot afford the renewal expenditure required to sustain assets to deliver the desired service levels, then it is important that the service levels be reviewed or council officers advise on the options available to councillors.

Council Investment Expenditure									
Rec	urrent	Capital							
Operating	Maintenance			Other					
				New	Upgrade	Expansion			

Fig 3. Local government investments covered by these Guidelines

3.1.2 Allocation of capital investment funds to renewal

Your council's asset management plan would generally document the funds required for asset renewal and what is achievable for which outlays. Funding for asset renewal is required to sustain service delivery. If funding for asset renewal is not provided, a decline in service levels may occur. This may not always be clearly evident until irreversible impairment sets in over the longer term. In addition, recurrent expenditure (for operating and maintenance) may increase. Older assets generally cost more to repair each year than newer assets.

Funding requirements for providing services from assets are generally detailed in your Council's Asset Management Plan. The detailed information in your Council's Asset Management Plan should feed into your council's strategic resource plan and budget. If council cannot afford the desired service levels, the service levels may need to be reviewed to ensure that the service levels provided by council can be sustainable in the long term.

It is good policy to consider sustaining service delivery with asset renewals detailed in asset management plans as Council's highest investment priority. With such a policy, asset renewals detailed in asset management plans could be regarded as nondiscretionary and automatically approved in capital works programs, though availability of funds may require that these works are spread over several years.

3.1.3 Allocation of capital investment funds to community priorities

Capital investment funds can be allocated in accordance with community priorities. Community priorities can be determined using Best Value Victoria principles and documented in the Council Plan, which is developed in consultation with the community.

The funds available for capital investment are those funds generated by council operations, capital grants and loans (borrowings). These sources of funding are further explained in the Glossary of Terms – Appendix E. The total available funds from these sources have to be matched with needs (required proposals) as opposed to wants (desired proposals) and should be assessed against criteria for investment appraisal determined by the council. This matching of funds with potential expenditure, or prioritising, should be done at the strategic (highest) level in the long term financial plan having regard to funding (revenue and debt) and cost reduction strategies, and is then refined further in the Council Plan and Strategic Resource Plan.

3.1.4 Selecting criteria for Capital Investment Proposal Appraisal

Rarely are there sufficient funds available to meet all needs of council. Therefore councillors should be provided with adequate information that is fit for purpose to be able to determine what will be funded in the Budget and the Strategic Resource Plan both in terms of maintenance and renewal, operating and capital. This may be achieved by setting criteria for appraisal of investment proposals within the context of community priorities. The criteria could be reviewed annually by Councillors.

Councillors may set criteria for appraisal of investment proposals within the context of community priorities. A number of approaches are used by councils in establishing criteria. Part B of these guidelines contains examples of appraisal criteria based on:

- Vision and Strategy (from the Council Plan)
- Triple Bottom Line (TBL) sustainability objectives
- Service Activity Performance Measures
- Asset Category objectives

An example of the Triple Bottom Line approach to investment appraisal is shown in Table II. This approach considers social, environmental and economic criteria in assessing proposals and therefore applies a holistic framework.

TBL Criteria	Evaluation criteria	Weighting
Social Factors	Diversity	5%
	Amenity	8%
	Public Health & Safety	10.3%
	Cultural and Heritage Values	8%
	Community Services	2%
Factor weighting		33.3%
Environmental Factors	Energy consumption	7.3%
	Greenhouse emissions	7%
	Resource Use	6%
	Waste Generation	5%
	Water Consumption	8%
Factor weighting		33.3%
Economic Factors	Life Cycle Costs	13.3%
	Cost Recovery	3%
	City Assets	5%
	Key Business Sectors	7%
	Infrastructure	5%
Factor weighting		33.3%
		100%

Table II. Sample TBL Asset Investment Appraisal Criteria

Note: The above weightings are examples only and should be determined by each council to suit their community priorities. Source: Adapted from City of Melbourne TBL Toolkit

Use of appraisal criteria enables councillors to be presented with a list of investment proposals ranked in order of the Council's priorities.

3.2 Phase 2 - Proposal identification and definition

3.2.1 Proposal identification

Investment proposals can be generated from a range of sources including:-

- Councillors;
- Community requests/submissions;
- Resident/visitor service requests;
- Officer requests;
- Operational reports;
- Asset management plan; and
- External partnership proposals.

Councillors may contribute to the identification and prioritisation of investment proposals for further consideration or to the criteria to be used to draw up short lists. Council officers then generally compile a preliminary list of potential proposals that could meet the identified service delivery needs.

The objective is to compile a list of all known asset investment proposals that are consistent with service requirements before the council for preliminary appraisal. Preliminary appraisal determines whether the proposal goes forward for business case analysis.

3.3 Phases 3 & 4 - Preliminary appraisal & business case analysis

The preliminary appraisal phase enables councillors to shortlist investment proposals in order of best fit with Council's appraisal criteria for business case analysis. This allows Council managers to allocate staff resources to the business case preparation and analysis for investment proposals that are most likely to be approved (ie ranked highly in the preliminary appraisal phase). This avoids council resources being used to prepare detailed business cases for proposals that may not meet preliminary criteria.

Council policy could determine whether decisions to proceed to investment appraisal are to be made by officers, councillors or a combination of the two. They may also establish threshold value limits that determine the level at which such decisions are to be made.

Questions that Councillors may canvas to assist in investment proposal appraisal?

- 1. What is the purpose of this proposal and where does it fit within the council plan, asset management strategies and/or budget?
- 2. Who benefits (which demographic, geographical, etc, groups) and what are the benefits that each group receives?
- 3. Is there any expected future revenue from this investment from rates or charges?
- 4. What are the future annual costs of the proposal?
- 5. What are the future costs per use/beneficiary?
- 6. Looking ahead, what are the likely additional demands on other council resources that this proposal will create?
- 7. Who will be disadvantaged by this proposal, how and by how much?
- 8. What alternatives would achieve all/most of the benefits?
- 9. What effect will this proposal have on future rates and the strategic resource plan?
- 10. What are the risks of proceeding or not proceeding with this project?
- 11. What is the most appropriate service delivery option for this proposal?³
- 12. Has this proposal been put forward previously? If so, why wasn't it accepted?

³ Adapted from Strategic Asset Management, Issue 100 Nov 1 2002, p381.

3.4 Phases 5, 6 & 7 – Business case appraisal, asset investment delivery & project monitoring

These phases generally involve the preparation of business cases and analysis, evaluation of the proposals by councillors, prioritisation of proposals for funding, asset delivery and project monitoring.

Councillors may allocate capital funding in accordance with their council's priorities initially to asset categories such as roads, recreation, buildings, etc. Proposals can be listed within each program by priority ranking with risks and operating budget commitments identified. Projects could be approved by rank order, taking into account risk and operational budget commitments until capital and operational funding limits are reached. The longer-term impact of proposals below the cut off must be tested and consequences made clear to councillors.

Sample format for asset investment data presentation

A sample format for presenting investment proposals in summary form is shown in Table III. This shows the investment proposals listed in order of ranking by Council's appraisal criteria and with the following information.

- Risk indicator showing the present risk to Council of 'doing nothing'
- Annual Service Cost. This is the annual cost if the service was to be provided by the private sector under a Build Own Operate contract. It is the economic cost of the service. Council should ensure that the community obtains benefits of greater annual value than the Annual Service Cost.
- Operating expense. This is the additional operating funds required for each year of the life of the service if the proposal is approved.
- Additional revenue percentage. The additional revenue required for the operating expense is expressed as a percentage of council rate revenue. This additional revenue may be provided from new external sources, an increase in rate revenue or savings in operating expenditure/reduction in service levels in a targeted area.

The investment proposals are presented in a form that allows councillors to consider each investment proposal using an estimate of the capital funds required, the present risk of 'doing nothing', the value of benefits to be obtained from the investment and the ongoing cost to council of the investment proposal.

Table III uses an example of parks and reserves capital works investment proposals. Investment proposals are shown in two sections, non-discretionary and discretionary. The non-discretionary items are those that could be identified in an Asset Management Plan approved by council and are needed to sustain service provision. Discretionary investment proposals could be listed in order of ranking under the Council's appraisal criteria. The investment proposals are sub-totalled at the limit of available funds.

Councillors may assess the investment proposals using the following process.

- Proposal 'River Park Skate Park' in Table III will require the allocation of \$130,000 in capital funds,
- The present risk of 'doing nothing' is Medium. Does Council have any higher risks that should be addressed ahead of this proposal?
- Is it our value judgement that the community will get benefits greater than the \$37,400 Annual Service Cost (How many users will there be and what is the cost per use)?

• We will need to find additional revenue or savings in operating expenditure equal to 0.09% of council rates to cover the proposal's operating costs. How does this compare with the benefit/cost service impact of competing bids?

Provided the investment proposals meet these tests, investment proposals 1 - 6 may be approved in the context of all bids. The additional operating expense requiring funding in next and subsequent years parks & gardens budgets is \$113,000, which requires additional revenue or operating cost savings expressed as a percentage of the council rate revenue (0.23%).

For a Council with a significant new capital works program, a broad rule-of-thumb for the sum of the additional revenue percentage column for the total capital works program may be in the range of some 2-3%.

Table III. Sample Format for Asset Investment Data Presentation

Proposal Description		Estimate			Cumulative	Appraisal	Risk	Annual	Operating	Additional	Cumulative
		Renewal	Upgrade/ Expansion	Total	Estimate	(1)	(2)	Cost (3)	(\$/pa) (4)	%age * (5)	Add. Rev. %age * (6)
Parks & Reserves											
NON DISCI	NON DISCRETIONARY (Essential to sustain services and identified in an Asset Management Plan approved by Council)										
1	Playground renewal	\$50,000	\$0	\$50,000	\$50,000						
DISCRETIC	DNARY										
2	Snowy Park upgrade	\$0	\$105,000	\$105,000	\$155,000	92.50	L	\$30,600	\$22,100	0.04%	0.04%
3	River Park skate park	\$0	\$130,000	\$130,000	\$285,000	92.50	М	\$37,400	\$22,600	0.05%	0.09%
4	Bridge Park toilets	\$0	\$50,000	\$50,000	\$335,000	91.00	Н	\$27,667	\$21,000	0.04%	0.13%
5	Long Park cycleway	\$0	\$350,000	\$350,000	\$685,000	87.50	L	\$55,400	\$27,000	0.05%	0.19%
6	Fish Park landscaping	\$0	\$15,000	\$15,000	\$700,000	86.50	L	\$22,333	\$20,300	0.04%	0.23%
Available F	unds	\$50,000	\$650,000	\$700,000				\$173,400	\$113,000	0.23%	
7	Civic Park pathway	\$0	\$70,000	\$70,000	\$720,000	85.00	L	\$30,333	\$21,400	0.04%	
8	Top Lake car park	\$0	\$55,000	\$55,000	\$775,000	85.00	L	\$27,200	\$21,100	0.04%	

Note: (1) Ranked in order of Councils investment appraisal criteria

(2) The risk to Council of the present situation, ie 'doing nothing' (L – Low, M – Moderate, H – High, VH – Very High. See Section P4.5.7)

(3) Benefits should be greater than the Annual Service Cost (ie what is the cost per user. See section P4.5.6)

(4) Annual operating revenue required to operate and maintain the service from the asset

(5) Annual operating revenue required expressed as percentage of council rate revenue

(6) Annual operating revenue required expressed as cumulative percentage of council rate revenue

Source: Developed from Howard, 2001.

Councillors' adoption of the capital works program can commit more than 2 - 3% of any revenue increase or operational savings in next years budget to fund the increase is operating expenses for services from new assets.

Regular performance reports on capital investment delivery

Regular performance reports on the delivery of the capital investment program assist to inform councillors. This may be by regular (quarterly or monthly) performance reports for routine projects and more detailed monthly reports for major projects. In considering these reports, councillors may consider not only the percentage of total funds expended, but also the percentage of the project completed and any remedial action. Council officers would generally advise on how to get problem projects back on track.

The format of the standard statement of capital works (financial statement required under the Local Government Act 1989) may provide a suitable basis for basic reporting especially as it will then be easily comparable with the standard statement of capital works in the budget.

Project documentation and capital expenditure recognition

Councillors could ensure that performance reports on capital expenditure delivery include progress reports on documentation of 'what work was done' in 'as constructed' plans, updating of asset register and recognition of capital expenditure in financial accounts. The balance in the Work in Progress (WIP) accounts is a good indicator of attention to the capital expenditure recognition process.

3.5 Phase 8 - Post project evaluation

Post-project evaluation

The purpose of post project evaluation is to review whether the purported benefits of the investment proposals have been delivered and to look at "what went right" and "what can be improved" and improve the investment appraisal policy and procedures and to inform the next investment cycle.

An annual post project evaluation and review of the Council's investment proposal appraisal and evaluation criteria may be conducted by council officers for consideration by councillors.

Post-project evaluation reports may be prepared by the investment proposal sponsor and approved by their manager, before being reported to the Council.

4. Sources of Investment Appraisal Information

There is a range of information available to Councillors to assist in each phase of the asset investment process. Examples are shown in Table IV.

What information you may need	What information is available?
Information to ensure that community priorities are considered	Best Value Community Consultation Reports, Council Plan.
Renewal funds required to sustain services from Infrastructure	Asset management plan.
Criteria to allocate capital investment funds to all forms of investment, including renewal	Asset management plan
Criteria to allocate capital investment funds to reflect community priorities	To be developed by Council and reviewed each year.
Criteria to appraise capital investment proposals against community priorities	To be developed by Council and reviewed each year.
Regular performance reports on capital investment delivery	Regular (monthly) capital investment performance reports submitted to Council.
Post-Project Evaluation Performance Report to see if project benefits were realised.	Annual post-project evaluation performance reports submitted to Council

Table IV. Sources of Investment Appraisal Information for Councillors

5. Processes to follow

The Phases of the investment appraisal process and the role of councillors and council officers are shown in Fig 4.



Fig 4. Typical Investment Appraisal Process

6. Timing of the Investment Appraisal Process

The investment appraisal process would generally spread over the full year commencing with a review of the previous year's investment program right through to adoption of the investment program and review of service levels in asset management plan. Fig 5 illustrates the timing of a typical investment process for years 2 and 3 of the council election cycle. Year 1 of the 4 year council cycle is the preparation of the 4 year Council Plan followed by annual reviews. Years 1 and 4 timing may be varied to suit the council election cycle.

PHASE	TASK	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1. Planning & Criteria Selection	Councillors set capital budget parameters and appraisal criteria for next year		•										
2. Proposal Identification & Definition	Prepare renewal program from Asset Management Plans												
	Prepare capital investment proposal schedule			•									
3. Preliminary Appraisal	Councillors undertake preliminary appraisal for business case analysis												
4. Business Case Analysis	Prepare business case for shortlisted investment proposals						•						
5. Business Case Appraisal & Ranking	Councillors appraise capital investment proposals and adopt capital program												
	Prepare Budget in light of Council Plan and Strategic Resource Plan												
	Councillors consider Council Plan and Strategic Resource Plan and adopt Budget for year												
	Revise asset management plans and service levels in line with Budget												
6. Asset Investment Delivery	Delivery of asset investment program												
7. Project Monitoring	Councillors and staff monitor asset investment program												
8. Post Project Evaluation	Councillors undertake post implementation review of last years investment projects												

Fig 5. Timing of the Investment Appraisal Process

Part B Guidelines for Officers

7. Introduction

7.1 Asset investment planning in local government

Local governments face increasing challenges to plan expenditure to sustain and develop its assets. Councils need to balance competing demands for investment to sustain services (providing services from existing assets) and for growth (to provide additional assets for improved and new services).

These Guidelines are one of a series of support tools produced by the Department for Victorian Communities (Local Government Victoria) under the State Government's *Sustaining Local Assets* policy for local government asset management. This policy and the associated support tools address the skills and capabilities development, performance monitoring and alternative service delivery and financing options that are required for a comprehensive approach to local government infrastructure asset management.

7.2 Scope and application of these Guidelines

Councils make investments in services from capital and operating (or recurrent) budgets. These Guidelines have been developed for local government capital investment in assets as shown by the shaded areas in Fig 6.



Fig 6. Local government investments covered by these Guidelines

The procedures and practices set out in these Guidelines can generally be applied to proposals of any scale and provide guidance on how to prioritise between proposals by assessing their position/relevance to the Council Plan direction, vision, objectives and strategies.

8. Local Government Asset Investment

8.1 Purpose of asset investment

Local governments make investment in assets solely to provide services to their communities.

Investment in assets can be used for:

Sustaining services (providing services from existing assets)

- Renewal of existing assets (including rehabilitation and replacement) (capital renewal)
- Maintenance recurrent expenditure (not discussed in these guidelines)

Growth (providing additional assets for improved and new services)

- Enhancing service levels (capital upgrade)
- Expanding services (capital expansion)

Investments required for sustaining services and for enhancing and expanding services would generally be documented in the asset management plan. The asset management plan may identify the service levels desired by the community for service from infrastructure assets and the funds required to operate, maintain, renew and enhance/expand the asset stock.

Councils would generally have asset management plans for all major asset categories including roads, bridges and drainage. Further information on asset management planning and plans may be obtained from Local Government Victoria's, Guidelines for Developing an Asset Management Policy, Strategy and Plan⁴ and the International Infrastructure Management Manual⁵.

8.2 Nature of asset investment

Asset investments can be considered in terms of their capacity to generate revenue. This is an issue in considering the funding of different types of assets.

Non-Revenue Generating Investments are investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to the Council. (Examples include roads, footpaths, bridges, playgrounds and libraries).

Revenue Generating Investments are investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs. (Examples include public halls and theatres, sporting and recreation facilities, and tourist information centres).

Commercial Investments are investments for the provision of goods and services to sustain or improve services to the community that are expected to generate a return equivalent to or better than a private sector return for an investment in a similar industry. (An example would include commercial property). Councils need to ensure such investments are not in conflict with their charter and test the appropriateness of investing in such ventures.

⁴ DVC, 2004

⁵ IPWEA, 2006

For non-revenue and revenue asset investments providing or improving service delivery, benefits accrue to the certain members of the community, eg installing a new children's playground in an existing park may reduce travel time for a number of families to access the playground from a 5 minutes drive to a 2 minutes walk.

Users of the new or improved service generally do not directly pay for the benefits they receive and Councils would fund the operating costs from revenue sources such as general rates and user charges for the life of the service.

It is important that councillors, officers and the community understand the on-going costs associated with asset investments to provide services.

8.3 The asset investment process

The asset investment process can be considered as eight phases





In these guidelines a *proposal* is the term used for an investment initiative until it is approved by council. At that point it becomes a *project* in the capital works program.

8.4 Roles and responsibilities in asset investment

Councillors are responsible for the governance and resource allocation aspects of asset investment. Council officers are responsible for proposal identification and definition, scoping, benefit/cost analysis, risk analysis, evaluation, project delivery and project management. The roles and responsibilities of the councillors and officers for each phase of asset investment are shown in Table V.

	Phase	Councillors	Officers
1.	Planning and criteria selection	Approve appraisal and evaluation criteria	Develop investment appraisal and evaluation criteria and process
2.	Proposal identification and definition	Nominate and/or prioritise proposals	Nominate proposals, define proposals for preliminary appraisal
3.	Preliminary appraisal	Approve proposals for business case analysis	
4.	Business case analysis		Business case preparation and analysis
5.	Business case appraisal and ranking	Approve projects for council investment program and prioritisation	Making recommendations for approval
6.	Asset investment delivery		Project management and delivery
7.	Project monitoring	Evaluate project delivery performance	Monitor and report on project delivery
8.	Post project evaluation	Evaluate investment benefit performance	Report on investment benefit performance and lessons learnt.

Table V. Asset Investment Appraisal Roles and Responsibilities

8.5 Types of investment proposals

Council's asset investments may be routine renewal requirements, that continue to provide an existing service such as road resealing, gravel resheeting and playground replacements that individually may not be significant but may be part of sizable programs for council. Investments may also be individually significant community assets such as multi-purpose leisure centres.

The degree of analysis and appraisal that may be required for each investment proposal, routine or program, may vary depending on the regular cycle, value and complexity of the investment proposal and desired community benefits.

8.6 Form of investment analysis

Investment proposals could be assessed to determine the community benefits and alignment with the Council Plan, however, the degree of analysis may differ:

- For routine renewal projects, a summary listing is generally sufficient. However, a program should be subjected to the same rigour as individually significant proposals.
- For investment proposals creating new assets (upgrade and expansion), a basic business case analysis is suggested.
- High value and commercial proposals may benefit from a detailed business case.

The threshold between the form of analysis will vary depending on the impact that the anticipated project or program is expected to have on the council's recurrent budget ie the estimated additional revenue required to fund it. A guide to the level of analysis required for proposals is shown in Table VI.

Table VI. Form of Investment Analysis

Form of analysis	Description	Proposal type
Summary Investment Listing	Investment Proposal Summary	Renewal of existing assets, as identified in asset management plans approved by council in the Council Plan and funded in Strategic Resource Plan and long term financial plans.
Basic Business Case	Investment Proposal Summary, Scoping Report and Annual Service Cost analysis	All renewal/upgrades and new assets where the revenue required for additional operating expense is less than 0.5% of general rates.
Detailed Business Case	Basic Analysis plus full business case, benefit/cost and financial analysis	All commercial investments. Major renewal/ refurbishments and new assets where the revenue required for additional operating expense is more than 0.5% of general rates. These investment proposals should be planned 2-3 years in advance and include a pre-feasibility study.

Summary investment listing

A summary listing is generally adequate for routine asset renewal investment where the proposals are identified in asset management plans and long term financial plans and approved by Council as being resourced in the Strategic Resource Plan such as;

- Sealed road resurfacing/resealing,
- Unsealed road gravel resheeting,
- Other asset renewals including footpaths and cycleways.

Summary investment listing is further discussed in Section P4.4.

Basic business case

A basic business case is prepared to assess the project scope, estimated benefits and costs, ongoing operating budget commitments and relative priority within the council's Council Plan of an investment proposal.

It involves the following steps:

- Proposal definition and scoping,
- Proposal benefit assessment,
- Basic benefit cost analysis,
- Risk assessment,
- Ranking of proposals.

Proposals are ranked in order of compliance with the council's investment appraisal criteria and listed with the risk indicator and the on-going operating budget commitment expressed as a percentage of general rate revenue. The preparation of a basic business case is further discussed in Section P4.5.

Detailed business case

A detailed business case would generally be prepared for high value and commercial investments. This includes a financial analysis and may include wider analysis techniques of economic analysis and multi-criteria analysis.

Financial analysis considers the financial costs and benefits flowing to and from the council making the asset investment.

Economic analysis techniques of cost-benefit analysis and cost-effectiveness analysis address the issues of the 'Triple Bottom Line', which seeks to measure progress towards sustainable rather than narrow economic development by quantifying and assigning monetary values to non-financial impacts.

Multi-criteria analysis identifies non-financial criteria (as well as financial) and subjectively ascribes values to them, albeit with judgement. These are then used to develop a decision-making matrix. This matrix typically has no monetary values. Multi-criteria analysis may also involve economic analyses, so that the results of cost-benefit or and/or cost effectiveness analyses are included amongst the criteria by which a proposal is appraised.

While a Council may seek to achieve a Triple Bottom Line outcome, the **financial effects will directly affect the Council's future budgets** and could be identified and considered in all detailed project analysis.

The *Investment Evaluation Policy and Guidelines* on the Department of Treasury and Finance website ⁽⁶⁾ is a good reference for economic analysis and multi-criteria investment analysis. Relevant chapters are:

Chapter 2	Comprehensive Investment Evaluation
Chapter 6	Financial Impacts
Chapter 7	Socio-Economic Impacts
Chapter 8	Integration of Financial and Socio-Economic Impacts

The method of investment analysis should be selected to suit the level of financial risk, complexity, value and nature of the service supported by the investment proposal. Major investment proposals may need to be planned over a 2-3 year planning horizon and be the subject of a pre-feasibility study to determine whether the investment proposal is worthwhile of detailed investment analysis.

Detailed business case preparation is further discussed in Section P4.6.

Investment Appraisal Process within the Budget Process

The investment appraisal process is part of the council's annual budget preparation process. It commences with councillors reviewing the previous year's investment program, and setting capital budget parameters and appraisal criteria for the following year through to an evaluation of project outcomes to see if the assessed project benefits were realised.

A typical program for investment appraisal and budget preparation extends over the full year as shown in Fig 8. This illustrates the timing of a typical investment process for years 2 and 3 of the council election cycle. Year 1 of the 4 year council cycle is the preparation of the 4 year Council Plan followed by annual reviews. Years 1 and 4 timing may be varied to suit the council election cycle.

⁶ DTF, 1996 http://www.dtf.vic.gov.au

Fig 8. Typ	oical Investmen	t Appraisal and	d Budget Ad	loption (Cycle.
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PHASE	TASK	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1. Planning & Criteria Selection	Councillors set capital budget parameters and appraisal criteria for next year		•										
2. Proposal Identification & Definition	Prepare renewal program from Asset Management Plans												
	Prepare capital investment proposal schedule												
3. Preliminary Appraisal	Councillors undertake preliminary appraisal for business case analysis												
4. Business Case Analysis	Prepare business case for shortlisted investment proposals						•						
5. Business Case Appraisal & Ranking	Councillors appraise capital investment proposals and adopt capital program												
5	Prepare Budget in light of Council Plan and Strategic Resource Plan												
	Councillors consider Council Plan and Strategic Resource Plan and adopt Budget for year										•		
	Revise asset management plans and service levels in line with Budget												
6. Asset Investment Delivery	Delivery of asset investment program												
7. Project Monitoring	Councillors and staff monitor asset investment program												
8. Post Project Evaluation	Councillors undertake post implementation review of last years investment projects												



Phase 1 - Planning & Criteria Selection

Assets are acquired or constructed to meet service delivery needs. The investment planning process therefore begins by identifying relevant community needs and aspirations including identifying what community interests (such as heritage assets) need to be preserved. How these needs and aspirations may change over time also needs to be understood and estimated. The Council Plan (Section 125 of the Local Government Act 1989) reflects community priorities for Council action and resource allocation.

Service delivery needs would generally be ascertained, and service delivery levels defined, in consultation with local communities and stakeholders (taking into account relevant demographic, social, economic, technical and other considerations).

Best Value Victoria, sets out broadly the types of considerations and processes involved in defining and determining service needs.⁷ More detailed guidance for application of the Best Value Victoria Principles in local government consultation has been has been published by the Victorian Local Governance Association and Department of Infrastructure, Local Government Division⁸.

P1.1 Council Plan

The Council Plan sets out the council's vision, strategies, policies, outcomes and priorities for its community for the next four years. While it is not the function of these Guidelines to provide detailed guidance on municipal strategic planning, it needs to be noted that an effective Council Plan could be formulated after consideration of:

- community service needs and aspirations;
- infrastructure requirements set out in the council's Asset Management Strategy and Asset Management Plan and long term financial plan;
- council's strategic visions and policies;
- · demographic composition and trends;
- community service and legal obligations; and
- financial resources and constraints.

A clear and informed intended policy direction in the Council Plan assists to steer investment proposal selection.

⁸ Victorian Local Governance Association, *Community Consultation Resource Guide*, 2001, Local Government Consultation and Engagement Website, http://www.vlgaconsultation.org.au/

⁷ Department of Infrastructure, *Best Value Victoria*, 2000. http://www.doi.vic.gov.au/localgov/bestvalue

P1.2 Appraisal criteria

Defining proposal appraisal criteria can assist councillors to finalise their requirements that ultimately leads them to allocate capital investment funds in a transparent manner. Examples of proposal appraisal criteria are shown below.

P1.2.1 Allocation to asset categories

The first selection process may be to broadly allocate available capital funds to asset categories. The indicative allocation envelope of available funds to asset categories should be based on outcomes (services) rather than inputs (expenditure).

In setting budgets, councillors generally define levels of service based on available resources and the community's 'ability to pay'.

Most councils have a historical allocation of asset investment available funds to asset categories. This should be premised on requirements rather than unchallenged practice. Councillors should review the allocation of funds to asset categories during the annual budget preparation process and adjust the allocation to suit current priorities and requirements. Past allocations will be either revised to reflect current council priorities or maintained at current distribution levels if underpinned by reliable data. An example of past capital funding allocation to asset categories⁹ is shown in Tables VII and for revised allocation to suit current priorities in Table VIII.

Asset Category	Capital Funding Allocation 2004/05
Sealed Roads & Kerb & Channel	30%
Unsealed Roads	25%
Footpaths & Cycleways	5%
Bridges	5%
Off Street Car Parks	2%
Aerodromes	N.A.
Parks, Open Space, Streetscapes ^	10%
Recreation, Leisure and Community Facilities *	15%
Drainage	7%
Waste Management	N.A.
Other Infrastructure **	1%
Total	100%

Table VII. An Example of Capital Funding Allocation to Budget Programs Framework

Note A Parks includes Outdoor Furniture and Signage and Public Lighting

- * Includes building assets in these services
- ** Other Infrastructure includes Piers & Jetties, Caravan Parks and Markets & Saleyards

⁹ Local Government Victoria, Asset Management Performance Measures Annual Survey Asset Categories 2006

The percentage capital funding allocations shown in Tables VII and VIII are examples only and may be developed by each council to suit their renewal requirements and community priorities.

Asset Categories	Capital Funding Allocation 2004/05	Capital Funding Allocation 2005/06
Sealed Roads & Kerb & Channel	30%	25%
Unsealed Roads	25%	25%
Footpaths & Cycleways	5%	5%
Bridges	5%	8%
Off Street Car Parks	2%	2%
Aerodromes	N.A.	N.A.
Parks, Open Space, Streetscapes ^	10%	10%
Recreation, Leisure and Community Facilities *	15%	17%
Drainage	7%	7%
Waste Management	N.A.	N.A.
Other Infrastructure **	1%	1%
Total	100%	100%

Table	VIII.	An Example of	Capital	Funding	Adjustment fo	r Revised	Priorities	Framework
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In this example, the council has made a judgement in its annual review of allocation of capital funds to asset categories to adjust capital funding by increasing the allocations to bridges by 3% and to buildings by 2% and reducing sealed roads & kerb & channel by 5% (shown shaded).

Large capital projects are generally funded from external sources and/or loans and may be considered as additional to the allocations shown in Tables VII and VIII. Where council revenue is required for large proposals, this will have to be accommodated within the capital allocations shown above.

The capital funding resources and allocations to asset categories could be reviewed annually by councillors as the first stage in the strategic resource planning process.

P1.2.2 Identification of commitments

Identifying commitments allows council to sustain service delivery from infrastructure assets by recognising the on-going requirement to renew existing assets by regular works such as sealed roads resurfacing/reseals and unsealed roads resheeting.

Commitments may include routine renewals as identified in asset management plans. Care must be taken to ensure that the asset management plan reflects justified needs based on service delivery after consultation with the community.

Other commitments may include those required to complete projects extending over more than one financial year, and proposals committed in joint funding and partnership agreements with governments and the private sector.

A process recognising commitments as non-discretionary is shown below.

In this example, a council has adopted a policy that routine renewals identified in approved Asset Management Plan and funded in Strategic Resource and long term financial plans are nondiscretionary and approved in capital works programs under the policy. Council's selection criteria is applied to the discretionary proposals, which are ranked in order of meeting the appraisal criteria until the available funding limits (\$850,000 in the example below) are met. The impact on non funded proposals must be tested to ensure the long term impact is acceptable to councillors.

Proposal ID	Description	Estimate	Cumulative Estimate	Appraisal Criteria Rank
	NON-DISCRETIONARY *			
	Sealed road resurfacing	\$200,000	\$200,000	NA
	Unsealed road resheeting	\$300,000	\$500,000	NA
	DISCRETIONARY			
	Proposal A	\$125,000	\$625,000	85
	Proposal B	\$55,000	\$690,000	74
	Proposal C	\$70,000	\$760,000	72
	Proposal M	\$20,000	\$850,000	58
	TOTAL	\$850,000		

Table IX An Example of Capital Funding Allocation with Non-Discretionary Commitments

Note * Required to sustain services and identified in an Asset Management Plan approved by Council

P1.2.3 Appraisal criteria

Appraisal criteria within asset categories

Appraisal criteria within asset categories may be either council wide, where the one appraisal criteria is applied over all investment proposals in all asset categories or asset categories specific, where appraisal criteria are applied to one or more asset categories. Typical examples of appraisal criteria framework are shown below.

Councillors should be provided with adequate information to robustly review appraisal criteria within asset categories in the annual investment appraisal and budget preparation process.

Council-wide appraisal criteria

A council wide appraisal criteria uses the one appraisal criteria across all projects in all asset categories. The appraisal criteria can be developed from Council's vision and strategies, performance measures for service areas or triple bottom line (TBL) objectives.

Vision and strategy appraisal criteria

This method uses appraisal criteria based on the council's vision and strategies outlined in the Council Plan. The appraisal criteria are specific to each individual council and should be developed to suit local community needs and priorities identified in the Council Plan.
Table X.	Sample Vision	and Strategy	Asset Investment	Appraisal	Criteria
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Evaluation criteria	Weighting
Community benefit	15%
Organisational benefit ^	10%
Fit with Council Plan	15%
Risk	25%
Financial Issues	15%
Part of adopted strategy	10%
Environmental impacts	10%
	100%

Note A Includes benefits to the organisation, consideration of core functions and enhancements to operational efficiency and effectiveness

Source: City of Darebin Capital Works Planning Process 2004/05

Each investment proposal is 'scored' by value judgement against the evaluation criteria using a 1-5 or 1-10 scale to differentiate proposals. A generic 1-5 scoring method is illustrated in Table XI.

Score	Descriptor
5	Meets evaluation criteria in all aspects
4	Satisfies most of the evaluation critical
3	Satisfies some of the evaluation criteria
2	Some alignment with evaluation criteria
1	Does not meet any aspect of the evaluation criteria

Table XI. Generic Scoring against Evaluation Criteria

Triple Bottom Line (TBL) appraisal criteria.

TBL is a framework that underpins and reviews environmental, economic and social performance. TBL shifts the focus from the purely financial bottom line to encompass the outcomes of all three elements. TBL can be a vehicle to achieve sustainable development, as this goal is reliant on compatible environmental, economic and social outcomes.¹⁰

An example of TBL appraisal criteria is shown in Table XII. Equal one-third weightings are allocated to the three TBL factors. Weightings to appraisal criteria within the TBL factors are allocated so that the factor weightings total to 33%. Weightings within the TBL Factors are allocated to reflect local priorities eg, in low rainfall areas, water consumption may have the highest local priority within the TBL environmental factor.

TBL Factor weightings should be determined and reviewed annually by each council to reflect their community priorities.

¹⁰ City of Melbourne TBL Toolkit, http://www.melbourne.vic.gov.au/info.cfm?top=166&pg=1194

TBL Criteria	Evaluation criteria	Weighting
Social Factors	Diversity	5%
	Amenity	8%
	Public Health & Safety	10.3%
	Cultural and Heritage Values	8%
	Community Services	2%
Factor weighting		33.3%
Environmental Factors	Energy consumption	7.3%
	Greenhouse emissions	7%
	Resource Use	6%
	Waste Generation	5%
	Water Consumption	8%
Factor weighting		33.3%
Economic Factors	Life Cycle Costs	13.3%
	Cost Recovery	3%
	City Assets	5%
	Key Business Sectors	7%
	Infrastructure	5%
Factor weighting		33.3%
		100%

Table XII. Sample TBL Asset Investment Appraisal Criteria

Note: The above weightings are examples only and should be determined by each council to suit their community priorities. Source: Adapted from City of Melbourne TBL Toolkit

b) Asset category specific appraisal criteria

Service activity performance measures appraisal criteria

Appraisal criteria can be related to the service/activity performance measures. These asset investment appraisal criteria are based on measures used to record the performance of the council's service activity delivery. Asset investment proposals are selected using this form of appraisal criteria with the objective of improving the quality of service delivery of that service. The evaluation criteria are specific to the service/activity or asset category.

Table XIII. Sample Service Activity Performance Measure Asset Investment Appraisal Criteria.

Service/Activity	Evaluation criteria	Weighting
Access around the City	Connectivity	50%
 Bicycle Transport Traffic Facilities Bicycle Schemes 	Accident History	20%
	Traffic Volume	15%
	Vehicle Speed	10%
	Sight Distance	5%
		100%

Source: Blacktown City Council (NSW) Works Improvement Program.

Asset category specific appraisal criteria

Appraisal criteria to address local priorities can be used to select asset investment proposals. These criteria are specific to individual councils and individual asset categories. An example for Parks & Recreation, Active Reserves, capital upgrade and expansion is shown in Table XIV.

Program/ Service Activity	Evaluation criteria	Weighting
Active Reserves – New Infrastructure	Corporate Planning – Strategic planning for the site includes Corporate Strategy i.e. Leisure Strategy, Open Space Strategy, and management plan or concept plan. Planning to include issues of supply/demand and hierarchy	30%
	Usability Development of site enhances 	30%
	 Amenity Safety Health Accessibility 	
	Diversity – Development of site enhances	20%
	 Increasing function Range of experiences Contribution to surrounding community provision 	
	Cost – \$ value of work	20%
		100%
Passive Parks - New Infrastructure	Corporate Planning – Strategic planning for the site includes Corporate Strategy i.e. Leisure Strategy, Open Space Strategy, and management plan or concept plan.	30%
	Usability – Development of enhances amenity, safety and accessibility and is appropriate/contributes to/ consistent with capacity of the site	30%
	Diversity – Development of site enhances range of experiences and contributes to surrounding community and/or city wide provision.	20%
	Cost – \$ value of work; support proposals that are small scale and funding would complete an investment site.	20%
		100%

Table XIV. An Example of Asset Category Specific Asset Investment Appraisal Criteria

Source: Outer Metropolitan Council

The appraisal criteria are addressed by scoring each criteria against performance measures. The weighted score can be used to rank investment proposals for each asset category.

An example of performance measures and weighted score assessment is shown in Table XV.

Asset Category	Appraisal Critoria	Woighting	Performance Measure and Score Descriptor					Weighted Score
e alle get j		Weighting	High (10)	Medium (7)	Low (5)	Low (3)		(x 10)
Passive Parks – New Infrastructure	Corporate Planning – Strategic planning for the site includes Corporate Strategy i.e. Leisure Strategy, Open Space Strategy, and management plan or concept plan.	30%	Identified as a high priority in Council Plan and/or is an identified Corporate commitment.	Master plan and/or an identified priority within corporate strategy that requires more detailed planning	Identified community priority. No planning undertaken to date.	Project identified but not a current priority.	7	21
	Usability - Development of enhances amenity, safety and accessibility and is appropriate/ contributes to/consistent with capacity of the site	30%	Substantially increases and enhances opportunities	Provision of opportunities where none exist	Expansion of opportunities to participate	Enhancing of existing opportunities	10	30
	Diversity Development of site enhances range of experiences and contributes to surrounding community and/or city wide provision.	20%	Substantially increases and enhances	Substantially increases and enhances	Some increase and/or enhancement	Single purpose or minor enhancement	5	10
	Cost; - Support projects that are small scale and funding would complete project.	20%	Up to \$100,000	\$100,000 to \$250,000	\$250,000 to \$500,000	Over \$500,000	10	20
	Weighed Score	100%						81.00

Table XV. Use of Appraisal Criteria in Ranking Asset Investment Proposals

Note: The figures shown in the dark shaded columns are examples of the Assessed Score and Weighted Score calculation (out of 100) for a particular investment proposal.

Source: Outer Metropolitan Council



Phase 2 - Proposal Identification & Definition

P2.1 Proposal identification

After determining investment priorities and selection criteria, investment proposals can be generated from a range of sources including:-

- Councillors;
- Community requests/submissions;
- Resident/visitor service requests;
- Officer requests;
- Operational reports;
- Asset management plans; and
- External partnership proposals.

Council officers may compile a preliminary list of potential proposals that could meet the identified service delivery needs.

The objective is to compile a list of all known asset investment proposals before the council for preliminary appraisal. Preliminary appraisal generally determines whether the proposal goes forward for business case analysis.

P2.2 Proposal definition

The proposal definition may commence with documenting 'the problem' and why it needs to be addressed.

P2.2.1 Proposal information

Strategic questions that councillors could choose to consider about asset investment proposals are shown below. The investment appraisal process should assist to address these questions:

- 1. What is the purpose of this proposal and where does it fit within the council plan, asset management strategies and budget?
- 2. Why is the proposal required and what is its urgency in terms of timing?
- 3. Who benefits (which demographic, geographical, etc, groups) and what are the benefits that each group receives?
- 4. Is there any expected future revenue from this investment in terms of rates or charges.

- 5. What are the future annual costs of the proposal?
- 6. What are the future costs per use/beneficiary?
- 7. Looking ahead, what are the likely additional demands on other council resources that this proposal will create?
- 8. Who will be disadvantaged by this proposal, how and how much?
- 9. What alternatives would achieve all/most of the benefits?
- 10. What effect will this proposal have on future rates and the strategic resource plan
- 11. What are the risks?
- 12. What is the most appropriate service delivery option for this proposal?¹¹

The following questions may be asked to gain basic information about the investment proposal.

Project objectives

- What is the community service need to be addressed?
- What are the proposal objectives?
- What is the 'do-nothing' or base case?

Project classification

- Is the council fully bound to invest under an agreement? ie Is it already an approved commitment?
- Is the council bound to invest because of specific policy commitment?ie Has Council already made a policy commitment to this proposal?
- Is it required because of a safety risk?
- Is it designed to maintain existing service levels to existing users (i.e. a renewal project)?
- Is it designed to increase service levels to existing users (i.e. an upgrade project)?
- Is it designed to provide new services to new users (i.e. an expansion project)?
- Is the proposal an entirely new investment?

Link to other council plans

- Is the proposal specifically mentioned in the Council Plan? If not, is the proposal otherwise linked clearly to the Council Plan?
- Is the proposal specifically mentioned in Council's Asset Management Strategy or Asset Management Plan? If not, is the proposal otherwise linked clearly to Council's Asset Management Plans?
- If the proposal is not mentioned in the Council Plan or Asset Management Plan, would it produce above average benefits justifying the proposed investment?
- If the proposal is not linked specifically mentioned in or linked to a council strategic plan, does it offer significant benefits that would warrant its being appraised?

Appropriateness

- Council ownership of this investment is appropriate, it is critical or at least essential?
- Should Council deliver this investment alone or in partnership with the private or community sector or other levels of government?

¹¹ Adapted from *Strategic Asset Management*, Issue 100 Nov 1 2002, p381.

Service delivery needs (economic and social justification issues)

- What is wrong with the status quo?
- What non-investment options are available?
- What are the investment proposal's objectives?
- What are the desired service outcomes?
- Who are the intended beneficiaries of the proposal? Why would they benefit? When would they benefit?
- Are there groups that would be made worse off as a result of the proposal? Why would they be made worse off? When would they be made worse off?
- Who are the key stakeholders and what is the nature of their interest in the proposal?
- Is the problem being addressed the most critical problem in achieving the highest objective in the broad service delivery area?

Financial and timing issues

- Will the investment reduce council costs or lead to efficiencies?
- Why should the project be implemented now and not later?
- Are there alternative sources of funding in the public or private sectors that could meet the service delivery need?
- What would the proponent do if only half the funds sought were available?
- What other problems will remain unattended and/or other actions are delayed in the proponent's areas of responsibility as a result of this project taking priority?
- What is the impact of a delay to the project of up to 1 year?
- What is the impact of a delay to the project of 1-2 years or longer?

Potential constraints

- What are the constraints to proposal implementation?
- Is there a formal environmental or planning review process required?
- Is the proposal's timing or benefits dependent on the actions of other parties or Government?

Risks and performance measurement

- · Are there any technological factors that may cause proposal risk?
- What are the cost and other implications of failure to achieve the proposal benefits?
- What performance measures will be enacted against each objective?
- How will achievement be verified?

Answers to these questions may assist to form the basis for both preliminary appraisal, and, if the proposal is approved for further appraisal, the business case appraisal.



Phase 3 - Preliminary Appraisal

Assessment and approval of preliminary appraisal and detailed appraisals is generally the responsibility of councillors. Preliminary appraisal is undertaken generally around the month of December and allows managers time to prepare a business case for selected investment proposals for consideration by councillors around March.

Council policy may determine whether decisions to proceed to investment appraisal are to be made by officers, elected councillors or a combination of the two. They may also establish threshold value limits that determine the level at which such decisions are to be made.

Projects, which have already commenced but may have been curtained at a specific stage due to funding constraints, may be re-appraised.

P3.1 Appraisal against appraisal criteria

The purpose of preliminary appraisal is to assess which proposals are considered suitable to be progressed further and be selected for business case analysis.

Section P1.2 covers the establishment of appraisal criteria for appraisal of asset investment proposals.

The preliminary appraisal could be carried out using the following method.

- Councillors approve appraisal criteria.
- Council officers compile list of all known asset investment proposals.
- Officers conduct preliminary appraisal and ranking of proposals against appraisal criteria and identify proposals that should be taken to the step of business case analysis.
- Councillors consider preliminary appraisal and approve proposals for business case analysis.

An example of preliminary appraisal for the example used in Table XV is shown in Table XVI. Both the non discretionary and discretionary proposals need to be approved by Council.

Rank Proposal Cumulative Description Appraisal Criteria (1-10) and Weighting Appraisal Risk Comments Score (x 10) Preliminary Indicator Expenditure Estimate Usability Corp. Planning Diversity Cost (30%) (30%) (20%) (20%) Playground renewal \$105,000 \$105,000 Irrigation renewal \$130,000 \$235,000

NON DISCRETIONARY (Required to sustain services and identified in an asset management plan approved by Council)

2	inigation renewal							φ100,000	φ200,000	
DISCRE	ETIONARY									
3	Central Park upgrade	7	10	10	10	91.00	М	\$50,000	\$285,000	
4	Sportsground lighting	10	10	10	5	87.50	М	\$350,000	\$635,000	
5	Lambert Park upgrade	10	7	7	10	86.50	L	\$15,000	\$650,000	Est available budget
6	Judith St Park toilets	5	10	10	10	85.00	Н	\$70,000	\$720,000	
7	Smith St Park playground	5	10	10	10	85.00	М	\$55,000	\$775,000	Budget + 20% cutoff
8	Glenelg Park rotunda	7	10	10	7	83.50	М	\$150,000	\$925,000	
9	Yarra Park cycleway	5	10	7	10	79.00	L	\$100,000	\$1,025,000	
10	Loddon Park fencing	7	7	7	10	77.50	L	\$20,000	\$1,045,000	
11	Murray Park toilets	7	7	7	10	77.50	L	\$50,000	\$1,095,000	
12	Tambo Park car park	7	7	7	10	77.50	М	\$100,000	\$1,195,000	
13	Buchan Park clubroom	7	10	10	3	73.50	L	\$590,000	\$1,785,000	
14	Dargo Park fencing	7	7	5	10	73.50	L	\$10,000	\$1,795,000	
15	Cann Park grandstand	7	7	5	3	73.50	L	\$900,000	\$2,695,000	
16	Barwon Park pathway	7	5	7	10	72.50	L	\$50,000	\$2,745,000	
17	Tyrell Park toilets	7	7	7	7	70.00	М	\$150,000	\$2,895,000	
18	Avoca Park playground	7	5	5	10	68.50	L	\$70,000	\$2,965,000	
19	Hopkins Park upgrade	7	5	7	7	65.00	L	\$200,000	\$3,220,000	

Table XVI. Preliminary Appraisal of Parks & Recreation Active Reserves, Upgrade & Expansion Investment Proposals.

1 2 Table XVI shows an example with non-discretionary (renewals identified in asset management plans) and discretionary proposals.

The two non-discretionary proposals are for renewal of playgrounds and irrigation systems. These proposals are required to sustain services and are identified in asset management plans approved by Council. The Council may have a policy to classify renewal proposals identified in asset management plans approved by Council as non-discretionary and automatically approved in capital works programs.

Discretionary investment proposals with appraisal score, risk indicator and preliminary estimate of cost in this example are ranked in order of appraisal score. The estimated available funds are \$650,000. An allowance of 20% is made to provide for flexibility in the budget process giving a preliminary appraisal limit of \$780,000. Investment proposals within this limit are approved to progress to business case analysis.

Proposals for Central Park, Sportsground, Lambert Park, Judith St Park and Smith St Park are approved to go for business case analysis.

In the example in Table XVI, proposals ranked below the budget cutoff are maintained on the potential project list for consideration in future budgets.



Phase 4 - Business Case Analysis

P4.1 Forms of business case analysis

Section 8.6 discussed three forms of investment analysis.

- Summary investment listing for routine renewal proposals;
- Basic business case for upgrade and new asset proposals;
- Detailed business case for commercial investment and high value upgrade and new asset proposals.

Large projects would generally need to be planned 2-3 years in advance. These are often initiated by a pre-feasibility study to identify the benefits and costs (both capital and operating) of the investment proposal. Capital and operating costs in the pre-feasibility study could be estimated within a $\pm 20\%$ target accuracy. Pre-feasibility studies are an important part of investment analysis. Specific funding of up to 3% of the estimated capital cost is a broad rule of thumb that could be provided for pre-feasibility studies and other investigations for major proposals.

P4.2 Analysing the renewal of existing assets

Reuse of existing assets or the renewal of existing assets may be tested when proposal options for new services are being generated. The importance of capital renewal, and managing any 'renewal gap' between Victorian council's projected renewal expenditure and long term needs to sustain existing assets have been highlighted in several recent reports.^{12 13}

P4.3 Distinguishing different types of investment

Asset investment is generally capital expenditure, which is relatively large (material) expenditure which has benefits expected to last for more than 12 months. Capital expenditure includes renewal, upgrade, expansion and new. Where capital projects involve a combination of renewal, expansion and upgrade expenditures, the total project cost should be allocated accordingly.

¹² Department of Infrastructure, *Facing the Renewal Challenge*, 1999

¹³ Auditor General Victoria, Management of Local Roads, 2002

Capital renewal expenditure is expenditure on an existing asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or subcomponents of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, e.g. resurfacing or resheeting part of a road network, replacing a section of a drainage network with pipes of the same capacity, resurfacing an oval.

Capital upgrade expenditure is expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretional and often does not result in additional revenue unless direct user charges apply. It will increase operating and maintenance expenditure in the future because of the increase in the council's asset base. e.g. sealing a gravel road, widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility.

A proposal may contain renewal and upgrade components. For example reconstructing an existing 5 metre wide sealed road and widening to 8 metres is a combination of renewal and upgrade. Assuming a cost estimate of \$100,000 for the full proposal, 5/8ths (\$62,500) of the estimate is apportioned to renewal and 3/8ths (\$37,500) is apportioned to upgrade

Capital expansion expenditure is to extend an existing asset, at the same standard as is currently enjoyed by residents, to a new group of users. It is discretional expenditure, which increases future operating, and maintenance costs, because it increases council's asset base, but may be associated with additional revenue from the new user group. e.g. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

P4.4 Summary investment listing

A summary investment listing is generally sufficient for routine renewal proposals identified in an asset management plan and approved by Council as being resourced in the Strategic Resource Plan and long term financial plans. These include proposals such as sealed road resurfacing, unsealed road resheeting and playground replacements where council has determined that these proposals are commitments and to be considered as non-discretionary in capital budget preparation. These proposals could be approved by policy in the capital works program.

Renewal investment required to sustain service levels is identified in asset management plans. Renewal investment funding needs may vary considerably over successive years.

Summary listing requires detailing of the following information.

- Proposal Title
- Description
- Location
- Proposal justification reference to asset management plan
- Proposal estimate (to ± 10% accuracy)
- Sponsor (responsible proponent)
- Proponent
- Date approved for summary listing

A suggested template for summary investment listing is shown as Appendix A.

P4.5 Basic business case

P4.5.1 Objectives

The objectives of a basic business case are to

- define the proposal and service outcomes;
- estimate the capital resources required to some ± 10% accuracy where possible;
- estimate the resources required for operation, maintenance and renewal;
- estimate the source and timing of funds;
- estimate the Annual Service Cost of the proposal;
- estimate the budget commitments for operating expenses;
- assess the risks associated with the present situation;
- develop a proposal appraisal score for priority ranking of proposals;
- define the project monitoring plan;
- define the criteria to be used on post-project evaluation.

P4.5.2 Proposal definition

The proposal definition can be taken from the proposal identification and definition (Sec P2.1-2). A check could be made to ensure that the proposal 'problem to be solved', proposal scope, desired outcomes and assumptions made in the preliminary analysis are still relevant and required.

All viable service delivery options could be identified, tested against the "do nothing" option and evaluated including non-asset service provision.

The option analysis could begin with the identification of the widest range of conceivable scenarios. Sufficient alternatives may be developed to ensure that no potentially worthwhile options for meeting service delivery needs and standards are excluded.

A specialist or multi-disciplinary team may be required to collect and analyse the technical, economic, financial, and operational data on as wide a range of options as may meet the intended service objectives. Within each option, sub-options may be able to be generated to reduce the risk of accepting 'second-best' solutions.

Options could include:

- the 'do-nothing' or base case particularly where non-investment actions can be listed;
- consideration of the renewal of existing assets, where possible;
- recognition of the different types of renewal proposals and their longer term revenue and expenditure implications; and
- new asset options, with differing scales of investment and time horizons.

P.4.5.3 Capital resources required

The next stage may involve estimating the resources required to deliver the proposal and achieve the desired outcomes. The resources estimate could include:-

- Investigation;
- Community consultation;
- Survey and design;
- Professional fees;
- Property acquisition;
- External changes including headworks, application fees, etc
- Site preparation; and
- Construction/acquisition of the asset.

Costs associated with opening of a new facility, introducing a new service (inc advertising) and administration and general overheads could be excluded from the capital resource estimate but may be separately identified where relevant.

The capital resource estimate could include an allowance for:

- Proposal development (3%)
- Project management and delivery (10%), and
- Contingency (up to 30%)

The objective is to generally have the capital resource estimate accurate to some \pm 10% of the final project cost where possible.

P4.5.4 Operational resources required

Operations resource requirements could include:-

- Finance costs (where investment is funded from loans)
- Depreciation (capital resource estimate divided by estimated useful life)
- Operating costs including direct staff costs to the proposed asset, on-costs and overheads, cleaning, utility services, telecommunications, etc. and
- Maintenance costs.

Records of operating costs from similar projects operated by the council or from another like managed council may assist to estimate operational costs.

P.4.5.5 Source and timing of funds

Sources and timing of funds should be identified. Where external funding from government grants or developer contributions are involved, any conditions of the grant or contribution should be recorded in the proposal file for project management use.

P4.5.6 Annual Service Cost

The basic benefit-cost analysis is undertaken to determine the "Annual Service Cost", which is the sum that would be tendered (less profit) if the required service is provided under a Build Own Operate contract by the private sector. In this case, a contractor owns the asset required to provide the service and council pays him/her a regular (annual/monthly) sum. The benefits gained from the service can then be directly assessed against the annual service cost of the service.

The Annual Service Cost¹⁴ is a method of identifying life cycle costs of a capital proposal. The Annual Service Cost expresses life cycle costs as an annual sum.

Examples of the Annual Service Cost for operation of a public barbeque, construction of a new park, redevelopment of a swimming pool, sealing of an unsealed road and construction of a youth centre are shown below.

The Annual Service Cost estimation requires the desired service to be specified in performance terms. An example for a public barbeque is shown in Table XVII.¹⁵

¹⁴ Howard, 2001

Specification - Provide, construct, operate (including daily cleaning) and maintain a public barbeque for a period of 10 years by contract.

	Capital Cost	Annual Service Cost	Remarks
Capital Cost	\$8,000		
Annual Service Cost			
Finance/Opportunity cost		\$ 640	8% pa
Depreciation		\$ 800	10 years
Operations		\$ 7,600	Daily cleaning
Maintenance		\$ 500	
Demolition		\$ 100	\$1,000 @ 10 yrs
Revenue		-\$ 0	
TOTAL	\$8,000	\$ 9,640	

Table XVII. Annual Service Cost for a Public BBQ

The Annual Service Cost for the service of the public barbeque is \$9,640 in current dollar values. This is the annual sum that the council would pay for the service per annum for the required 10 year life. It is the economic cost of the service.

The costs shown in bold are the ongoing operating commitments that the council must fund in future budgets for the service provided by the new barbeque. These operating commitments total \$8,900 per annum for the next 10 years.

The Annual Service Cost is a tool for evaluating capital works projects. The council officers should be satisfied that the council will obtain value or community benefits greater than \$9,240 per annum for this project, otherwise the project should not be approved. The benefits may be assessed by the cost per use, which is calculated by dividing the Annual Service Cost by the number of uses.

If the barbeque in this example is used twice per day, the cost per use is \$13.20. A value judgement can be made as to whether the community benefit of the 'free' barbeque is greater than the cost to the community of \$13.20 per use.

Construction of a new park

A council is planning the development of a new park with a useful life of 30 years. The capital cost is estimated at \$200,000. Annual operation (mowing, power, etc) and maintenance is estimated to cost \$60,000. Annual revenue generated from pay-for–use barbeques is estimated at \$100. Removal of improvements from the land is estimated at \$5,000 at the end of the 30 year period.

The Annual Service Cost is the sum that would be tendered if Build Own Operate tenders were called to provide the service of a new park. In this example, shown in Table XVII, the contractor is responsible for construction, operation and maintenance of the park for the 30 year period. The contractor provides the service, 'owns' and manages the park and council pays him/her the Annual Service Cost each year annum for the 30 year life of service.

	Capital Cost	Annual Service Cost	Remarks
Capital Cost	\$200,000		
Annual Service Cost			
Finance/Opportunity cost		\$16,000	8% pa
Depreciation		\$6,667	30 years
Operations		\$10,000	
Maintenance		\$50,000	
Removal of improvements		\$167	\$5,000 @ 30 yrs
Less Revenue		-\$100	
TOTAL	\$200,000	\$82,734	

Table XVII. Annual Service Cost for a New Park

The Annual Service Cost for this proposal is \$82,734 per annum. It is the economic cost of the desired service in today's dollar values.

The Annual Service Cost can be used to assess benefits and costs from the proposal. The proposal should generate benefits greater than \$82,734 per annum. The cost for each number of visitors to the park can be determined by dividing the Annual Service Cost by the estimated visitors. If 20,000 people per annum visit the park the cost per visit is \$4.13.

If an additional 10,000 visitors are attracted to the council area to visit the park and each spends \$10.00 in local businesses, the economic impact of the investment in the new park can be assessed. For an Annual Service Cost to the council ratepayers of \$82,734 per annum the new park is estimated to generate an additional \$100,000 in revenue to local businesses.

For the case of council providing the service of the new park, council will be faced with an increase in budget expenses for deprecation and maintenance less revenue generated for each of the 30 year life of the park asset. This budget impact for next year is the items shown bold in Table XVII of depreciation (\$6,667) plus operations (\$10,000) maintenance (\$50,000) less additional revenue (-\$100) totalling \$66,567 in current dollar values. This assumes that the project is funded from internal funds or external grants and interest/opportunity cost on the \$200,000 investment is foregone.

For a council with annual general rate revenue of \$2.8 million, this is equivalent to a revenue increase of 2.4% of council rate revenue and is additional to any inflationary cost increases facing the council.

This increased level of revenue will need to be maintained for the 30 year life of the service.

The new park will provide additional community benefits such as greater recreation opportunity, improved fitness and well-being and may lead to reduced demand on health and medical services.

Consideration of non-financial benefits is discussed in Section 8.6.

Redevelopment of a swimming pool

A council is planning the re-development of its swimming pool. The existing pool has a current replacement cost of \$2.5 million. The pool attracts 30,000 paying entry admissions each year, paying an entry fee of \$3.00 per entry. Council subsidises the pool operations at an annual cost of \$120,000 or \$4.00 per entry.

The re-development is estimated to cost \$7,000,000, which will include

- Refurbishment of and covering the existing pool,
- A new covered training pool
- A new covered water playground,
- New change rooms,
- New swimming club clubrooms
- Replacement of the existing heating system
- Refurbishment of water treatment plant
- Upgrading of car parking areas
- Estimated useful life of 40 years

The re-developed complex is estimated to increase visitations by 25%. Operating expenses are estimated to increase by \$250,000 to cover increased costs for heating, power, supervision, cleaning and maintenance.

Council can look at the impact of the redeveloped pool complex on its Budget. For the purpose of this analysis, it is assumed that the upgrade project is funded from a mixture of Council reserves, grants and loans as follows.

Renewal component	\$2.5M from renewals Reserve (Assumes that council has identified the need to redevelop the pool and has approved a funding plan to make the required funds available when required)
Upgrade component	\$2M from Federal and State grants
	\$2.5M from loans

The additional operating expense is shown in Table XVII.

Table XVII. Annual Operating Expense for Redevelopment of Swimming Pool.

	Capital Cost	Operating	Remarks
		Expense	
Capital Cost			
Renewal – reserves	\$2,500,000		
Upgrade – grants	\$2,000,000		
– Ioans	\$2,500,000		
Budget Impact			
Loan interest (on \$2.5M)		\$200,000	8% pa
Depreciation (on \$4.5M)		\$112,500	40 years
Operations		\$200,000	
Maintenance		\$50,000	
Demolition			NA
Less Additional Revenue		-\$60,000	Increase entry
			fee to \$4
TOTAL	\$7,000,000	\$502,500	

Under the assumptions made, the additional revenue required to fund the operating expense for the pool upgrade is \$502,500 in each year for the next 40 years.

For a council with annual general rate revenue of \$17.7M, this is equivalent to a revenue increase of 2.8% of council rate revenue and is additional to any inflationary cost increases facing the council.

If the renewal component of the proposal is not funded from a Reserve, additional loan funds of \$2,500,000 will be required, which will add \$200,000 to the annual Redevelopment of a swimming pool may realise social benefits to the community. These benefits may include increased participation in water recreation, increased water safety through more people learning to swim, greater opportunities for family outings, increased health and well-being of the community, leading to reduced demand of health and medical services.

Assessing non-financial benefits is discussed in Section 8.6.

operating expense and increase the additional revenue percentage from 2.8% to 3.96% of council rate revenue.

The change in Service Delivery for the Swimming Pool Service Activity is shown in Table XIX for loan funding options of \$2.5M and \$5.0M.

	Existing Pool Complex	Redeveloped Pool Complex with \$2.5M Loan Funding	Redeveloped Pool Complex with \$5.0M Loan Funding
Operating deficit	\$120,000	\$622,500	\$822,500
Users	30,000	37,500	37,500
Community Service Obligation per use	\$4.00	\$16.60	\$21.93
Fees paid by users	\$3.00	\$4.00	\$4.00
Total cost per use	\$7.00	\$20.60	\$25.93
Proportion of total cost paid by users	43%	19%	15%
Proportion of total cost paid by Council	57%	81%	85%

Table XIX. Changes in Service Delivery for Redevelopment of Swimming Pool

Sealing of an Unsealed Road

A council has a request to seal 3 km of an unsealed road serving the Cemetery, Motor Sports Club, Pony Club, Sewerage Treatment Plant and Rubbish Tip. A hard rock quarry is located a further 2 km along the road. This section of the road is maintained by the operators of the quarry.

Sealing of the first 3 km of the road to the rubbish tip is estimated to save approximately \$18,000 per annum on unsealed roads maintenance.

The preliminary estimated cost for construction and sealing of 3 km with 8.0m pavement and 6.0m seal is \$345,000.

The Annual Service Cost for the sealing of 3 km of unsealed road is shown in Table XX.

	Capital Cost	Annual Service Cost	Remarks
Capital Cost	\$345,000		
Annual Service Cost			
Finance/Opportunity cost		\$27,600	8% pa
Depreciation			
Pavement		\$5,280	50 years
Seal		\$6,750	12 years
Maintenance		\$3,000	\$1,000/km
Sub total		\$42,630	
Less Savings on Unsealed Maint.		-\$18,000	
TOTAL	\$345,000	\$24,630	

Table XX. Annual Service Cost for Sealing 3 km of Unsealed Road

The proposal should generate benefits greater than \$24,630 per annum. This is the annual sum that would be tendered if tenders were called to construct and maintain the road for a 50 year period.

Council will experience a change in operating expenses for deprecation and maintenance less savings on unsealed road maintenance for each year of the 50 year life of the road asset. If the work is funded from loans, the net budget impact is + \$24,630 per annum (the Annual Service Cost). If the work is funded from grants, developer contributions or Council revenue (with interest/opportunity cost foregone), there will be a net budget saving of \$2,970 (items shown bold in Table XX).

Construction of Youth Centre

A Council is proposing the construction of a Youth Centre estimated at \$250,000, funded from loans.

Annual operating costs are estimated at \$60,000, which includes a part-time youth worker plus cleaning, cooling and associated utility services. The Annual Service Cost is shown in Table XXI.

	Capital Cost	Annual Service Cost	Remarks
Capital Cost	\$250,000		
Annual Service Cost			
Finance/Opportunity cost		\$20,000	Loan at 8% pa
Depreciation		\$5,000	50 years
Maintenance		\$2,000	
Operations		\$60,000	
Demolition		\$200	\$10,000 @ 50 yrs
TOTAL	\$250,000	\$87,200	

Table XXI. Annual Service Cost for Youth Centre

A decision to construct a Youth Centre will commit the Council to funding ongoing finance, depreciation, maintenance and operations expenses of \$87,000 for the next 50 years.

For a council with annual general rate revenue of \$2.8M, this is equivalent to a revenue increase of 3.1% of council rate revenue and is additional to any inflationary cost increases facing the council.

The Annual Service Cost is a tool to determine the annual life cycle cost of the proposal to assess estimated benefits and the additional revenue required to fund operating costs for the life of the service. It can assist councillors and staff in investment proposal analysis and appraisal.

The Annual Service Cost is one method of assessing investments proposals. Other methods include Net Present Value (NPV), Benefit Cost Ratio (BCR), Internal Rate of Return (IRR) and Payback Period. These methods are discussed in Section P4.6.2.

P4.5.7 Risk assessment

Basic analysis includes a risk assessment of the current situation to the council and the community. Risk is assessed after consideration of two factors, the likelihood of a risk occurring and the consequence should the risk event occur.

Likelihood Factor

Table XXII. Likelihood Factor Assessment

If the works do not occur, what is the likelihood of there being an injury, financial loss or other issues exposing council to risk	Probability of occurrence	Selection
Rare – May occur only in exceptional circumstances	More than 20 yrs	
Unlikely – Could occur at some time	Within 10-20 yrs	
Possible – Might occur at some time	Within 3 – 10 yrs	Х
Likely – Will probably occur in most circumstances	Within 2 yrs	
Almost Certain - Is expected to occur in most circumstances	Within 1 yr	
Occurrence Adapted from Otto of Demokin Occurrent Manha Ochurring	0004/05	

Source: Adapted from City of Darebin Capital Works Submission 2004/05

Consequence Factor

Table XXIII. Consequence Factor Assessment

What is the consequence of not undertaking the work?	Selection
Insignificant – No injuries, low financial loss (less than \$10,000)	
Minor – First aid treatment, on-site release immediately contained, medium financial loss (\$10,000 - \$50,000)	
Moderate – Medical treatment required, on-site release contained with outside assistance, high financial loss (\$50,000 - \$200,000)	Х
Major – Extensive injuries, loss of production capability, off-site release with no detrimental effects, major financial loss (\$200,000 - \$1,000,000)	
Catastrophic – Deaths, toxic release off site with detrimental effect, huge financial loss (more than \$1M)	
Source: Adapted from City of Darebin Capital Works Submission 2004/05	

Risk Assessment

Risk is assessed by combining the likelihood and consequences factors in an assessment matrix. A risk indicator is derived that gives an indication of the management resources required to be applied to manage the risk. Four risk indicators are used in this example shown in Table XXIV.

Risk Indicator					
	Consequences				
Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Rare	L	L	L	М	Н
Unlikely	L	L	М	Н	Н
Possible	L	М	М	Н	VH
Unlikely	М	М	Н	Н	VH
Almost Certain	М	Н	Н	VH	VH

Table XXIV. Risk Indicator

The relationship between risk indicators and typical risk management treatments is shown below. The risk assessment factors and risk treatments should be determined by individual councils taking into account service levels and available resources.

	Risk Indicators	Typical Risk Treatment	
VH	Very High Risk	Immediate corrective action	
Н	High Risk	Prioritised action required	
М	Moderate Risk	Planned action required	
L	Low Risk	Manage by routine procedures	

In the example above, the likelihood was assessed as Possible, the consequences at Moderate and the Risk Indicator as a Moderate Risk. The risk management treatment is to take corrective action through a planned maintenance program.

A council may determine that the appropriate treatment for a high risk is to include the investment proposal associated with risk reduction in the next years capital works program.

A more detailed method of risk analysis is to prioritise business risk exposure (cost of consequences x probability of a failure). Further details on this risk assessment method may be obtained from the International Infrastructure Management Manual.¹⁶

P4.5.8 Post project evaluation criteria

The basic business case should include a project monitoring plan including as a minimum, regular project performance reports on costs, percentage of total funds expended, percentage of project completed and any remedial actions

¹⁶ IPWEA 2006, Section 3.4. pp 3.53–76

P4.5.9 Post project evaluation criteria

The proposal appraisal should include the nomination of post-project evaluation criteria to be used by councillors and officers in evaluating whether the desired benefits from the asset investment were obtained. The post-project evaluation criteria are developed from the proposal benefits defined in the proposal scoping report.

The post-project evaluation criteria should be specified in the proposal scoping report.

Examples of post project evaluation criteria are:

Usage

- Did the project increase visitations by the estimated 25%?
- If not, why not?

Operating expense

- Did the project generate the projected savings of 20% in operating costs, without reducing service levels?
- If not, why not?

Community satisfaction

- Did the project result in an increase in customer satisfaction levels as reported in the Victorian Local Government Indicators community satisfaction survey?
- If not, why not?

P4.6 Detailed business case

A detailed business case could include the basic business case as outlined in Section P4.5 including the following process tasks.

- define the proposal and service outcomes;
- estimate the capital resources required to a ± 10% target accuracy;
- estimate the resources required for operation, maintenance and renewal to a ± 10% target accuracy;
- estimate the source and timing of funds;
- estimate the Annual Service Cost of the proposal;
- estimate the budget commitments for operating expenses;
- · assess the risks associated with current situation;
- develop a proposal appraisal score for priority ranking of proposals;
- define the project monitoring plan;
- define the criteria to be used on post-project evaluation.

And conduct a more rigorous financial and risk analysis of the investment proposal

Investment proposals subject to Grant funding may have the matching Council funding contribution included in subsequent capital works programs and operating budgets.

P4.6.1 Financial analysis

A detailed investment appraisal requires financial analysis. The level of the analysis to be performed may vary with the size, complexity and significance of the proposed investment for the Council:

- at a minimum, financial analysis involves producing a Statement of Cash Flows and a Financial Impact Statement. The function of a minimum financial analysis is to determine the proposal's direct (attributable) impacts on the Council's cash flows and financial resources; and
- larger and more significant investments may also require a Discounted Cash Flow (DCF) analysis. DCF analysis enables meaningful comparisons to be made between the net cost and benefits of proposals of different sizes and timeframes. It may be particularly appropriate where there is a commercial aspect and/or revenue stream from the proposed investment.

Key financial information

Before financial analysis can begin, certain key financial information about the proposed project needs to be gathered. This will include:

- realistic and complete proposal costing (or estimates if detailed design work is not completed);
- detailed time-lines for the major events in the proposal, including the timing and extent of income and expenditure (cash flows);
- on-going operational and maintenance costs for the proposal; and
- the source(s), extent, and timing of funding for the proposal.

Statement of cash flows (inflows and outflows)

The Statement of Cash Flows identifies the amount and the timing of cash inflows and outflows over the life of a proposal. The cash flows that need to be considered are the incremental cash inflows and incremental cash outflows resulting from the proposal. Only those cash flows, which occur because of a proposal, should be included – not those, which would occur whatever option, is selected. The key considerations when preparing the Statement of Cash Flows are:

- incremental approach;
- timing of cash flows;
- cash inflows; and
- cash outflows.

Incremental cash flows

Investment analysis is concerned with estimating the impacts of a particular investment. It follows that only the cash inflows and outflows that arise from the investment decision should be measured. These incremental, additional, cash flows (positive and negative) arising from the investment option should be measured against those that would occur under the 'do-nothing' option.

Timing of cash flows

Cash inflows and outflows should be analysed on the basis of their actual expected timing. Those that occur at the commencement of project should be considered as year zero cash flows. Generally, those that occur over the life of the investment should be assumed to occur at the end of the relevant year. Those that occur at the commencement or near the commencement of a particular year may be considered to have occurred at the end of the previous year.

Cash inflows

Where the investment is expected to generate additional revenues, these should be included as cash inflows. Revenue, which would have been generated, in the current (pre-investment) situation or in the 'do nothing' choice, should not be included

The following cash inflows could be considered.	
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Proposal revenue	If the proposal will generate revenues, the projected revenue streams from the proposal should be included as cash inflows (examples include admission charges, franchise fees, revenues from the sale of products or services, and rentals).
Proceeds from borrowings	The proceeds from Council borrowings should be considered as a cash inflow.
Proceeds from Government grants, donations and contributions	The proceeds from grants allocated to council, developer contributions and/or community donations will be considered as cash inflows.
Release of capital	Where implementing the proposal would result in release of capital (for example, through the sale of a block of land no longer required, the estimated proceeds from the sale of capital assets should be regarded as a cash inflow.
Residual value	The residual value, less any costs associated with preparing an asset for sale, or disposal costs of an asset at the conclusion of its useful life, should be included as a cash inflow in its last year of operation.

Proposal cash outflows

Only incremental cash outflows – those that would not arise with the base case option should be included. The cash outflows required for a minimum financial analysis are as follows.

Asset investment delivery	The initial capital costs of the investment should be included as cash outflows.
Planning costs	Planning costs (design and feasibility studies) should be included as cash outflows. Planning costs should be grouped broadly with capital costs
Renewal costs	Renewal costs – those arising from the need to periodically replace asset components to ensure service delivery to original levels - should be estimated and included at relevant intervals. Renewal costs should also be grouped broadly with capital costs.
On-going maintenance costs	Periodic maintenance costs should be estimated for each year of operation and included as a cash outflow.

Operating costs	All costs associated with the operation of the asset, including the labour (including labour on-costs), materials utilised and overheads (including any additional loads on corporate centres, Council administration, etc).
One-off costs	These include costs that will arise as a result of the adoption of the proposal. These may include, for example, redundancy costs or costs associated with the termination of an existing contract.
Taxes	 Any taxes that may be levied must be taken into account in the financial appraisal and included when significant. Examples of these include: State Government rates and taxes (e.g. vehicle registration, third party insurance, property purchase costs);
	- Sales Tax and Customs duty;
	- Stamp Duty, Land Tax; and
	- Fringe Benefits Tax.
Repayment of borrowings	When a Council repays proposal borrowings and associated costs, this represents a cash outflow.

Impacts on Financial Statements

In addition to the Statement of Cash Flows, the minimum financial analysis should also include details of the project impacts on the Council's Statement of Financial Performance and Statement of Financial Position. Additional items to be considered are as follows:

Depreciation	Depreciation is a "non cash" measure of the use of or consumption of assets in providing services each year. As such, it is part of the cost of providing those services, which is expensed, along with other annual charges such as maintenance, insurance, etc., through a change to the Statement of Financial Performance (operating statement) to calculate the cost of providing the services for the year to the community. Depreciation also affects the Statement of Financial Position.
Opportunity costs	Opportunity costs are the costs of opportunities foregone as a result of undertaking a particular investment. For example, if a proposal was put forward to develop a parcel of land into a park, but there was an alternative to sell the land for cash, then the estimate of cash foregone would need to be considered as a project cost. If it is Council policy to include a capital charge for use of funds, this should also be included in the opportunity cost category.
Sunk costs	Sunk costs are past and irreversible costs that cannot be affected by the decision to accept or reject a proposal. They should not be included in the financial appraisal.
Avoided expenditures	If implementing the proposal can reduce current expenditure, it is reasonable to consider these avoided expenditures as effective income for the project's income and expenditure analysis. Only incremental avoided expenditures should be included.
Savings of on-going expenditure	The savings in on-going expenditure need to be considered as a benefit of the proposal occurring. These will include both once- off and on-going maintenance on assets to be replaced; depreciation charges on assets sold or disposed and similar items. As well as adding the above items (where applicable), it is necessary to remove non-operating items. This will most likely

Capital costs	The capital outlay associated with an investment at the beginning of a proposal and any renewal throughout the proposal's life should not be included as expenditure as it will not affect the Council's Statement of Financial Performance. It is appropriate to disclose costs of financing (applicable to this amount of capital) and a Council imposed cost of using capital (referred to above in opportunity costs). The proposal capital costs will increase the carrying value of assets in the Statement of Financial Position.
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P4.6.2 Discounted cash flow analysis

When all financial inflows and outflows have been identified, further techniques can be employed to select between alternative proposals. Discounted Cash Flow (DCF) analysis is often used to appraise large and complex proposals by comparing projects with different cash flow patterns over different timeframes

DCF analysis may also be particularly important for Council investments that have a commercial aspect and/or revenue stream – for example where a Council may provide services in conjunction with the private sector.

The concept of discounted cash flow analysis is centered on the 'time value' of money. The 'time value' of money recognises that cash has different values depending on when it is received or spent.

\$100 received in two years time has less value than \$100 received today. \$100 received today can be invested in the bank and the interest received, say at 10%, will grow the investment to \$110 in one year and \$121 in two years. The future value of \$100 in two years time is \$121, based on a discount rate of 10%.

Similarly, the promised receipt of \$100 in two years time could be settled today for an equivalent payment of \$82.64, as that is the sum of money which, if invested today at 10%, will yield \$100 in two years time. The present value of \$100 received in two years time is \$82.64.

There are four major DCF measures:

- Net Present Value;
- Benefit/Cost Ratio;
- Internal Rate of Return; and
- Payback Period.

Before discussing these in turn, it is first necessary to hold a common understanding on the concept of the discount rate.

Discounting

Two initial complexities arise in financial analysis:

- · different proposals have different shaped future cash flow streams; and
- analysis may wish to compare proposals of differing sizes.

Discounting is the means to consider both of these problems. The dollar values of future cash flows are discounted to yield present values, so the timing of those future cash flows becomes irrelevant for purposes of comparison.

By estimating cash flows in present values, two proposals with different revenue cash flow streams can be compared directly.

In financial analysis, the discount rate accounts for differing costs of borrowing over time, or the opportunity cost of capital.

Discounting also brings forward benefits to present values. Councillors and officers should have both current (undiscounted) and discounted information to help with decisions.

Selecting discounting rates

Discount rates should broadly reflect the rate of return that would be required for investments of similar risk undertaken in the private sector. They are based on the risk-free investment rate (typically the nominal rate prevailing for ten year Treasury notes issued by Treasury Corporation Victoria), with an additional component selected to reflect the degree of risk embodied in the proposed investment.

For local government, relevant risks arise where the proposed investment is intended to generate revenues, and the degree of risk increases with the extent to which receipt of those determines the viability of the investment.

In the absence of authoritative market information, on investment risk of the proposal, an allowance of up to $2\frac{1}{2}$ % should be made for risk as a rule of thumb. The risk allowance should represent the degree of risk project and operational to the Council. A commercial investment proposal should use the maximum risk allowance.

In the example in Appendix D for an aquatic centre project, a discount rate of 6% has been applied.

Net Present Value

The Net Present Value (NPV) of a proposal is derived by subtracting the discounted net cash outflows of the proposal from the discounted net present revenue stream. A net present value greater than zero indicates that the project will return net financial benefits.

Net Present Value, also referred to as Net Present Worth, is the preferred measure for choosing between mutually exclusive options, because it yields an absolute estimate of project value in constant or current dollars.

A net present value less than zero indicates that the financial returns will be less than costs and Council will be required to *provide an operating subsidy as a community service obligation for the life of the created asset.* A NPV less than zero indicates the value of the total capital investment and community service obligation over the analysis period expressed in current day values.

Benefit Cost Ratio

The Benefit/Cost Ratio (BCR) is the ratio of the present value of cash inflows to the present value of cash outflows.

A proposal with a BCR greater than one indicates that the value of revenue exceeds the value of costs over the analysis period. Considered alone, such an investment is acceptable.

A BCR less than one indicates that the value of revenue from the investment proposal will be less than the value of costs over the analysis period and *an operating subsidy as a community service obligation will be required over the life of the created asset.*

Internal Rate of Return

The Internal Rate of Return (IRR) is the rate of interest at which the net present value of the investment cash flows less the net present value of the returns on the investment equal zero.

In analysing commercial investments, a 'hurdle' rate may be set. The 'hurdle' rate is the rate of return on the investment required before approval of the investment will be given. An IRR greater than the 'hurdle' rate indicates that the proposal displays an acceptable return.

An IRR less than the 'hurdle' rate indicates that the investment proposal has an unacceptable return. (Note: The 'hurdle' rate may be set at the discount rate for public sector entities, but is likely to be much higher for private sector entities.)

Where the IRR is low there should be greater scrutiny of the intangible or social benefits to give confidence that the proposal should be recommended to proceed.

Payback Period

Payback Period is a less sophisticated analysis technique that measures the period of time required for the cash flows from the investment to repay the original capital outlay.

Payback Period has the advantage of presentational simplicity and may provide supplementary information to NPV that is useful in ranking investment options.

For investment proposals with a NPV less than zero, a BCR less than 1 and an IRR less than the discount rate, the revenue flows from the investment will *never recover the capital and recurrent outlay*.

P4.6.3 Applying the measures

Each method has particular application depending on the type of project or the stage of analysis. A summary is shown in Table XXV.

After making the best estimate of each discounted measure of project worth or viability, the analyst is able to advise decision-makers as to the viability and ranking of each project option.

DCF Methods	Use	Proposal is Viable if
Net Present Value	Selecting between mutually exclusive proposals	NPV greater than zero
Benefit Cost Ratio	Selecting between mutually exclusive proposals	BCR is greater than one
Internal Rate of Return	Where return on investment (ROI) is the key criterion for project approval. It is often used where private sector involvement is proposed	IRR greater than the 'hurdle' rate, which may be the discount rate
Payback Period	Measuring period of time required for cashflows from investment to repay original capital outlay	Payback period is 'acceptable' as determined by investor

Table XXV. Discounted Cash Flow Measures of Analysis

If the economic cost of capital is taken as the discount or cut-off rate for selection/rejection, the first three discounted measures of project viability or value will identify the same group of projects for implementation.

If the first three measures show project viability, then the proposal should be recommended as satisfying all base criteria related to the Business Case. If any one measure does not indicate viability, the proposal should be regarded as marginal.

For the example of an aquatic centre in Appendix D, the DCF measures are shown in Table XXVI.

DCF Measure	Result	Comment
NPV	- \$11.04M	This indicates the total sum to be outlaid as a capital investment and community service obligation over the next 25 years expressed in today's values.
BCR	0.52	Revenues from the investment will return 52% of the costs of the investment
IRR	- 21%	The investment will generate returns equal to that of a bank account where the depositor pays the bank 21 % interest.

Table XXVI. DCF Measures for Investment Example in Appendix D

P4.6.4 Proposal risk assessment

The basic business case analysis provides for a risk analysis of the risk to Council of the present situation. It shows the risk of 'doing nothing'.

The detailed business case includes the basic business case analysis plus an assessment of the proposal implementation risks.

The analysis of any proposal (both economic and financial) is based on a range of uncertain future conditions, and requires a range of implicit or explicit judgments of probability. Both costs and benefits are subject to forecasting errors. Detailed appraisal activities must identify the factors that could generate the greatest risks to accurate forecast estimates. The critical variables need to be identified and the extent to which deviations in benefits and costs will result in changes to outcomes.

Uncertainty and risk

Proposal analysis should account for uncertainties and risks. The terms uncertainty and risk are often used synonymously, but there are clear differences:

- **uncertainty** exists when analysts lack basic information. It arises from uncertainty as to future events, and from invalid assumptions, data inaccuracies and measurement errors.
- **risk** is associated with the probability of an outcome, adverse or positive.

Uncertainty is accounted for by sensitivity testing, which involves identifying the uncertain element, and analysing its implications for the study's conclusions. The following questions may be used to gather information to assist is assessing uncertainty.

- Is the data presented with the proposal complete?
- Is the confidence level for base and other data adequate for decision making?
- It this project likely to be affected by unforeseen economic and socio-political developments?
- Is there any limitation on statistical methods that may affect the analysis results and recommendations?
- Is there any unidentified or suppressed factors and relationships associated with the proposal?
- Is there an impact from unquantified factors and relationships?
- Is all assumptions detailed?
- Are all assumptions realistic and of sufficient precision?
- Is the project likely to be affected by technological change?

Project uncertainty is analysed through sensitivity analysis which:

- identifies the nature of all uncertainty relevant to a particular analysis;
- estimates values for these variables; and
- analyses the implications of the uncertainties for the study's conclusions and for the decision-making process.

Risk analysis is concerned with the probability that any given uncertainty may arise, and its implications for outcome forecasting.

Risk is addressed through risk analysis, in which the probabilities of specific occurrences and their consequences for project outcomes are estimated. Risk analysis highlights those events most likely to occur and provides information for the development of risk management strategies.

Identifying risks

Having identified the external and financial impacts of the proposal, it is necessary to identify the risks and uncertainties associated with each of those impacts, which might result in the outcomes of the proposed project not being achieved. To assist in identifying the various risks inherent in a proposal, the following broad categories of risk should be considered:

- investment planning risk;
- design risk;
- external approvals
- demand/market risk;

- completion/construction risk;
- management/operations risk;
- environmental risk;
- private sector risk, or
- other.

Councils should apply these broad categories of risk to each of the external impacts to identify the elements of risk and uncertainty associated with the proposal. An outline of each category is provided below, along with examples.

Investment/planning risk	Investment/planning risk relates to the quality of the planning that has contributed to the investment proposal. This may involve a risk that critical issues have not been considered or that the potential costs and benefits have been incorrectly estimated. There is also the risk that the community need has been misunderstood or that the services to be delivered by the project will not meet this need.
	An example of an investment/planning risk would be the construction of a new childcare centre on the basis of the population catchment. This may result in under utilisation and reduced income if the predicted demographic trends failed to materialise.
Design risk	Issues relate to the level of complexity of the project, the extent to which proven technology will be used, and the realism associated with the time period estimated for completion.
External Approvals Risk	Issues associated with obtaining approval for the proposal to proceed including public consultation, planning approval, State and Commonwealth environmental approvals, heritage approvals, etc. Risks include delays in obtaining approvals, appeals by aggrieved persons, costs of the appeal process and failure to obtain all approvals.
Demand/market risk	The demand or market risk relates to whether there is sufficient demand for the proposed project in order for it to succeed, or that the proposed fees and charges will adversely impact on demand.
	An example of a demand/market risk would be the failure of a new community centre to meet demand expectations. This may result from a lack of understanding of the community willingness to pay for facilities - an inappropriate survey sample may have been used during preliminary surveying of the community.
Completion/construction risk	The completion/construction risk relates to the risk that the proposed project will not be completed in accordance with the specifications and within the stipulated timeframe and budget. In assessing such a risk, consideration will need to be given to the potential external and financial impacts of such outcomes.
	An example of a completion/construction risk would be the failure to account for seasonal weather patterns in planning a construction period, which may then result in a delayed completion date and both additional costs being incurred and loss of income from the facility not being open.

Management/operations risk	Management risk relates to the role management plays in ensuring that the investment delivers the expected outcomes. Where the management team named in a proposal has no experience in dealing with similar projects, this increases the risk and lessens the likelihood of success. Operations risk relates to the operational problems that may
	occur if the project is not planned and managed correctly. This can include problems such as industrial relations, community concerns, equipment failures, environmental effects and the availability of suitably qualified staff.
	An example of a management/ operation risk would be an inexperienced project manager who has not managed a project of similar size, failing to recognise the warning signs when problems start occurring on a specific project. These signs could include lagging behind the timetable, cash flow problems with sub-contractors and reduced quality to achieve budget figures.
Environmental risk	Environmental risk refers to the impact of the proposed proposal on the environment and will encompass the criteria previously considered in the environmental issues section of the external impact analysis.
	An example of an environmental risk would be the failure to address the potential effects upon the environment of a construction project fouling a nearby stream. This may result in an injunction against the Council or its contractor, which would halt the construction project while remedial measures are taken.
Private sector risk	In projects where there is participation by private sector organisations, there is a risk that they will not deliver the contracted / required outcomes. Before entering into an agreement with a private sector organisation it is important to look at the track record of the organisation, its financial standing and the competence of its management team.
	An example of a private sector risk would be entering into a contract with a private developer without checking the financial backing of the developer. For example, the original contract could have been drafted in such a way that the Council was forced to bear the total costs of the contract if the private contractor went bankrupt.
Other risks	Any other proposal implementation risks not identified under the above headings should be documented and assessed.

P4.6.5 Identifying key risks

It is likely that there will be many risks and uncertainties associated with undertaking each investment proposal. Therefore, it is important that only the key risks are identified for further analysis. Each risk should be assessed in relation to its possible impact on the successful outcome of the project.

The identification of key risks involves consideration of the risks identified above, with relation to the various elements within a proposed project. Officers should consider providing a brief executive summary of assumptions used so that councillors are clear on what has driven the conclusions made so they are fully informed on the reliability of the business case evaluation.

P4.6.6 Prioritising key risks

Once the key risks have been identified, they should be prioritised in relation to their potential for adversely impacting on the successful outcome of the project.

The prioritisation of key risks involves the prioritisation of the identified risks into categories. These could be low, medium and high depending on the level of perceived risk.

P4.6.7 Risk management

Both risk and uncertainty are rarely able to be removed, but are usually able to be mitigated or managed. The risks should be assessed in detail and strategies developed to reduce or manage them in relation to the preferred option. Where appropriate strategies can be devised to manage the risks, they should be documented and included in the business case. Where strategies cannot be identified to reduce the risks to an acceptable level, a sensitivity analysis should be performed to assess the viability of the project, under a variety of scenarios.

P4.6.8 Sensitivity analysis

Sensitivity analysis is performed to determine the sensitivity of proposed projects to changes in key variables. The sensitivity analysis process is accomplished by changing the key parameters and assumptions of the project and examining the effect on the achievement of the project's desired outcomes. By assessing the impact of changing key project variables, management can be confident that a comprehensive review of the business case has been considered, including the optimistic view and the pessimistic view.

A sensitivity analysis should be carried out for those projects where the strategies for managing specific risks do not result in the project being reduced to an acceptable level of risk, and projects over a Council threshold for significance (normally designated in dollar terms). Where a sensitivity analysis is to be carried out, the key variables should be changed by appropriate margins and the viability of the project reassessed for various scenarios. This should be done both individually and in various combinations.

The key parameters to be manipulated in the sensitivity analysis are identified through assessment of risks associated with the various external and financial impacts on the project. The key parameters to be subjected to sensitivity analysis are those high risks for which no appropriate risk management technique can be realistically or cost effectively applied.

An example is shown in Appendix D for the construction of an aquatic centre. The feasibility of the centre is highly dependent on operating income that in turn depends on the level of usage and fees for usage. Research could be recommended and undertaken before the proposal is further advanced to indicate the potential attendance levels. These estimates are insufficient for business case preparation on their own and sensitivity analysis must be undertaken because of the reliance of the project's viability on this aspect of the proposal. If such concerns are present, officers should make these factors clear to councillors in any recommendations (to proceed or review)

Sensitivity analysis models a range of possible usage and fee generation outcomes, from the best to the worst case scenarios. Confidence limits can be applied to each of the scenarios (i.e. a certainty measure about which the business case preparer feels comfortable).

Examples of sensitivity analysis for two scenarios (revenue – 10% and revenue + 10%) are shown in Appendix D.

P4.6.9 Project Monitoring

The detailed business case should include an project monitoring plan in greater detail than the basic business case project monitoring plan which may use Council's regular project performance reporting format.

Large and complex projects may require a detailed monitoring plan as detailed in Section P7.1.


Phase 5 - Business Case Appraisal

P5.1 Ranking of proposals

Proposals are ranked in priority of total weighted score under asset categories.

P5.2 Presenting the information to councillors

Information provided to councillors for each investment proposal could include:

- Proposal ID and description;
- Proposal purpose and benefits;
- Level of service proposed expressed in terms of community service outcomes and indicators that will be used to measure the service level;
- Does the service provide a new service, sustain an existing service or improve an existing service;
- What is the demand for the service (past, present and future) and how it is measured?
- What alternatives exist for providing the service (including non-asset solutions)
- Proposal ID;
- Proposal description;
- Estimated capital cost apportioned into capital renewal and capital upgrade/expansion;
- Appraisal score;
- Risk Assessment Indicator;
- Annual Service Cost;
- Additional operating revenue required expressed in dollar values and percentage of council rate revenue.

A summary of the asset investment proposal evaluation is submitted to councillors for consideration. Data to be provided in the investment proposals summary could include

- Proposal ID and description;
- Estimated capital cost apportioned into capital renewal and capital upgrade/expansion;
- Appraisal score;
- Risk Assessment Indicator;
- Annual Service Cost;
- Additional operating revenue required expressed in dollar values and percentage of council rate revenue;
- Evaluation assumptions.

This information should assist councillors to consider asset investment proposals under asset investment guidelines set by the council, the risk of 'doing nothing' to the council, the economic value of benefits to be obtained from the investment (the Annual Service Cost) and additional revenue required for annual operating cost of the asset investment expressed in dollars and as a percentage of council rate revenue.

The summary details the proportion of the investment program allocated to sustain service delivery (renewal), new services and improving services (upgrade and expansion).

For a council with a significant new capital works program, as a rule-of-thumb, the sum of the additional revenue percentage column for the total capital works program can be in the range of 2 - 3%.

On this basis, councillors' adoption of the capital works program can commit 2 - 3% of any revenue increase in next years budget to fund the increase in operating expenses for services from new assets on a no policy change basis.

A sample summary format for presenting this asset investment proposal data is shown in Table XXVII.

Table XXVII. Sample Format for Asset Investment Data Presentation

Proposal	Description	Estimate			Cumulative	Appraisal	Risk	Annual	Operating	Additional	Cumulative
ID		Renewal	Upgrade/ Expansion	Total	Estimate	Score	Indicator	Service Cost	Expense (\$/pa)	Revenue %age *	Add. Rev. %age *
Parks & Reserves											
NON DISCRETIONARY (Required to sustain services and identified in an asset management plan approved by Council)											
1	Playground renewal	\$50,000	\$0	\$50,000	\$50,000						
DISCRETIONARY											
2	Snowy Park upgrade	\$0	\$105,000	\$105,000	\$155,000	92.50	L	\$30,600	\$22,100	0.04%	0.04%
3	River Park skate park	\$0	\$130,000	\$130,000	\$285,000	92.50	М	\$37,400	\$22,600	0.05%	0.09%
4	Bridge Park toilets	\$0	\$50,000	\$50,000	\$335,000	91.00	Н	\$27,667	\$21,000	0.04%	0.13%
5	Long Park cycleway	\$0	\$350,000	\$350,000	\$685,000	87.50	L	\$55,400	\$27,000	0.05%	0.19%
6	Fish Park landscaping	\$0	\$15,000	\$15,000	\$700,000	86.50	L	\$22,333	\$20,300	0.04%	0.23%
Available Funds		\$50,000	\$650,000	\$700,000				\$173,400	\$113,000	0.23%	
7	Civic Park pathways	\$0	\$70,000	\$70,000	\$720,000	85.00	L	\$30,333	\$21,400	0.04%	
8	Top Lake car park	\$0	\$55,000	\$55,000	\$775,000	85.00	L	\$27,200	\$21,100	0.04%	

Note: (1) Ranked in order of Councils investment appraisal criteria

(2) The risk to Council of the present situation, ie 'doing nothing' (L – Low, M- Moderate, H – High, VH – Very High. See Section P4.5.7)

(3) Benefits should be greater than the Annual Service Cost (ie what is the cost per use. See Section P4.5.6)

(4) Annual operating revenue required to operate and maintain the service from the asset

(5) Annual operating revenue required expressed as percentage of council rate revenue

(6) Annual operating revenue required expressed as cumulative percentage of council rate revenue

Source: Adapted from Howard, 2001



Phase 6 - Asset Investment Delivery

Included in each business case should be details of the project management arrangements to be used in the project. These will include design and construction arrangements and monitoring and accountability procedures as detailed in Phase 7 and Phase 8.

Asset investment delivery, project monitoring and post-project evaluation are important phases of asset investment process.

P6.1 Project documentation

Asset investment delivery includes documenting what was done and recognising capital assets in council's financial records if the assets are held by council and not by another party.

Recording what work was done in 'as constructed' or 'work as executed' (WAE) plans signed by the project manager is an integral part of asset delivery.

P6.2 Asset recognition

Capital expenditure on new assets or renewal of assets must be recognised in council's financial records.

It is critical that project expenditure schedules and cost recording be set up to collect the required information and facilitate record capital expenditure against assets in a formal 'handover' process from construction to operation.



Phase 7 - Project Monitoring

P7.1 Monitoring plan

It is important that business cases include details of what will be monitored in a project and how this will be undertaken, to ensure that costs remain within budget and that anticipated benefits are achieved. A monitoring plan should be prepared and included in the business case. The monitoring plan should give consideration to the project cost structures, together with the accounting and/or statistical systems to be used in recording the actual costs.

Similarly, the extent and timing of anticipated benefits must be considered, together with the method to be employed for the identification of their achievement. This will assist in identifying the key elements to monitor that will give the best indication of the success or failure of the project.

The elements that should be assessed for monitoring purposes will include:

- key objectives, achievements, milestones or critical dates;
- quantifiable benefits;
- risks;
- demand/usage expectations;
- costs (capital, development expenses, operating expenses);
- revenues or savings;
- Net present value, Internal Rate of Return, payback period; and
- any other items critical to achieving a successful outcome.

The existence of a monitoring plan will enable clear accountabilities for the achievement of outcomes to be established if the project proceeds, and will greatly assist in subsequent project monitoring and reporting.

The business case should also include details of how projects will be monitored once they have been commenced. The two types of formal appraisals and reporting to be used after project commencement are Project Reviews and Post Implementation Reviews (PIR).

P7.2 Accountability

It is important to specify who is accountable for the project and to define any foreseeable circumstances or events that will need to be reported back to the approved delegate, business unit manager or councillors. The methods for assigning accountability in the business case preparation are:

- The 'quality control' check that can be provided through the independent review process;
- The 'sign off' process and the assignment of responsibility for the investment outcomes and success;
- Asset handover to operational status including 'as constructed' plans and documentation, updating of asset register and recognition of capital expenditure in financial accounts; and
- An examination of the post-implementation review proposed for the investment. Consideration of the timing, frequency and source of post implementation reviews should be added to the consideration of the milestones, targets and performance indicators, which will be the subject of the review.

P7.3 Project review

The asset investment review is a comprehensive report on the financial and operating performance of the project and is generally prepared during the implementation phase of the project. It is prepared by comparing the actual financial and operational performance of a project with the performance expected at the time of approval. In such reviews the emphasis should be on identifying the actual expenditure, progress and the benefits achieved. The on-going costs and benefits should be reassessed in light of any revised circumstances or new projections.

The main benefits of project reviews are they:

- provide a statement of benefits and costs as originally estimated at the approval stage, and those achieved or incurred in practice, enabling improved management accountability, especially for performance appraisal purposes;
- ensure documentation of work in 'as constructed' plans;
- ensure updating of asset register;
- ensure timely recognition of capital expenditure in financial accounts;
- allow timely corrective action to be taken or the implementation of contingency plans;
- encourage feedback to be obtained, which can be used to assist in future investment decisions; and
- enable the investment cycle to be closed off (essential for fully effective management and control of investments).

Project Review reports can be prepared on a monthly basis and included in management reports and councillor reports (depending on the size of the project).



Phase 8 - Post Project Evaluation

P8.1 Post implementation review (PIR)

The PIR is similar to a Project Review but should be undertaken after the project has been successfully implemented and/or as soon as it is possible to verify the achievement of the project objectives with a reasonable degree of accuracy.

The PIR emphasis on 'what went right' and 'what can be improved' encourages parties proposing investments to be disciplined in the proposal preparation process with the knowledge that the performance of the investment will be reviewed and that they will be held accountable. The PIR also has the added advantage of enhancing future decision making and improving Council project appraisal procedures.

As a guide, a PIR must be conducted within one year of the project completion, to ensure that the projected benefits were actually realised.

The PIR report must be prepared by the proposal sponsor and approved by his/her manager.

The PIR should be approved by councillors and include a review of the Council's proposal appraisal and evaluation criteria.

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