TRANSPORT AND INFRASTRUCTURE COUNCIL

Australian Transport Assessment and Planning Guidelines

F5 Prioritisation and Program development

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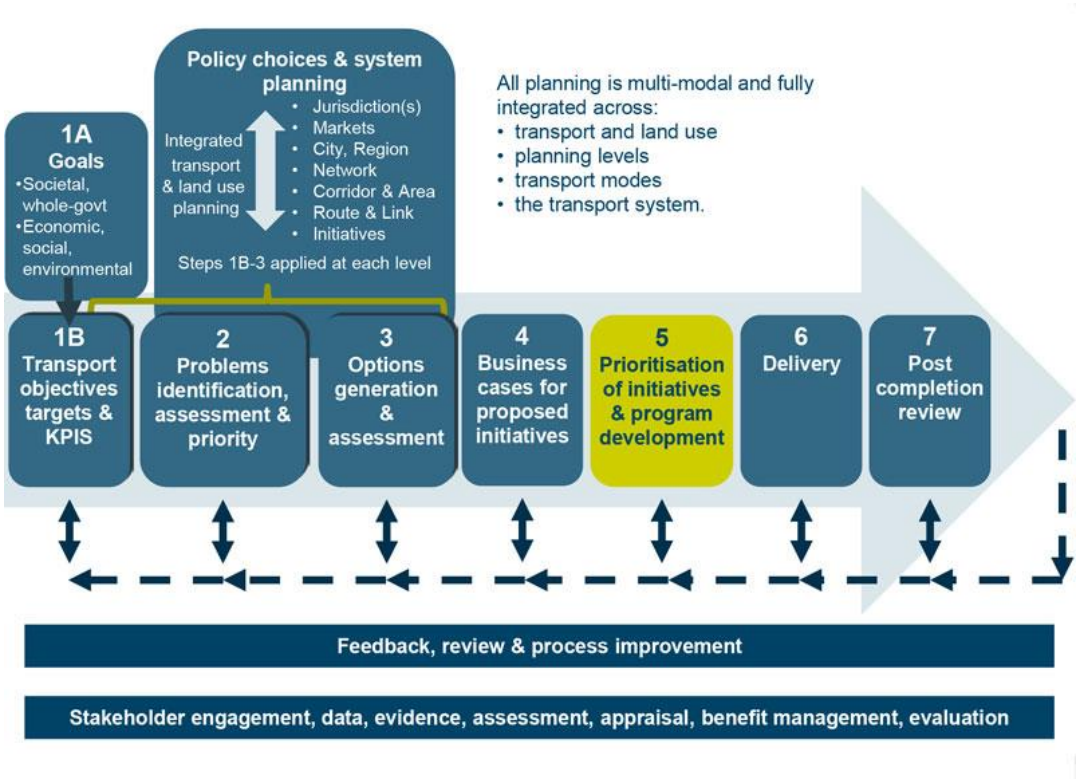


At a glance

Step 5 involves prioritising the list of proposed initiatives and developing a forward program.

Proposed initiatives arise from four sources:

- From the objectives-led strategic planning front end of the ATAP Framework
- Other areas of government agencies
- The private sector
- Political processes.

Before commencing prioritisation, ensure that each proposed initiative has been subject to the rigorous ATAP Guidelines assessment process, resulting in a documented Business Case. Unsolicited private sector approaches should be subject to an agreed approval process.

An initial broad prioritisation can assist the decision-maker manage the overall prioritisation task. It could involve several categories of priorities (for example, A, B and C). Jurisdictions may then decide to undertake more detailed prioritisation.

The prioritisation process can make use of the range of information reported in the Business Cases of the proposed initiatives:

- Results from the Strategic Merit Test (showing alignment with transport system objectives, targets strategies and policies)
- Results from the cost-benefit analysis (including any non-monetised benefits and costs). The (subjective) influence of any non-monetised benefits and costs on prioritisation should be assessed by the decision-maker.

Where governments have made policy choices on funding splits, account of these will need to be taken in prioritisation and program development. Timing and bundling are also important program development considerations.

If a government intends to contribute financially to private sector initiatives, these should be included as individual initiatives in the prioritisation and program development processes (once their suitability has been assessed).

Development of the forward program is usually an iterative process. Ministers have the final say over the content of the program.

1. Introduction

By the end of Step 4, a preferred solution is determined for a given problem through a robust options generation and assessment process. That solution can then be referred to as a justified initiative. Once this process is repeated across the full range of identified problems, a list of justified individual initiatives will exist.

Step 5 involves decisions about the order and timing of implementation of those initiatives within budgetary and other constraints (while at the same time considering opportunities through alternative funding mechanisms). This involves two considerations: prioritisation of the initiatives and development of a forward program.

Where government chooses to provide financial support to private sector initiatives because of economic or social merit, such interventions should also be considered as individual initiatives and included in the prioritisation and program development processes.

2. Sources of candidate initiatives

2.1 From the ATAP Framework

The ATAP Framework presents an objectives-led strategic planning process for identifying transport strategies and plans, from which arise consistent proposed initiatives. This was discussed in F1 to F3. Justified proposals arising from that process will have:

- Been based on a systematic, rigorous and evidence-based assessment of problems and options
- Demonstrated strategic alignment with transport system objectives and targets
- Demonstrated their triple bottom line economic justification.

In practice, proposed transport initiatives often also arise from three other sources: other areas of government agencies, the private sector and the community through the political process. It is essential that these other proposals also be developed with exactly the same level of assessment rigour before they are considered in any prioritisation processes. Proponents outside the strategic planning process should be clearly advised of this requirement.

The three other sources of proposals are briefly discussed below.

2.2 Other areas of government agencies

Operational areas of government transport agencies sometimes submit ‘bottom-up’ proposals for transport initiatives outside the strategic planning process. Agencies often have regional offices that are aware of local conditions and requirements. However, these agencies may not necessarily be directly involved in broader strategic planning processes, except for being consulted as stakeholders.

Government agencies without direct involvement in transport may also seek support and funding for transport initiatives. For example, a regional development agency might propose upgrading a road to a remote community as part of a strategy to improve living standards in the region. In these circumstances, proposals should be considered in the context of the broader strategic planning process. However, the extent to which an integrated approach can be achieved may be affected by factors such as the involvement of multiple ministers and agencies and the relative importance of non-transport objectives (e.g. defence).

2.3 Private sector

In Australia, governments were traditionally the major provider of transport infrastructure services. However, the private sector now has a substantial role in infrastructure provision and associated transport activities and service provision.

Private sector organisations or individuals (singly or in partnership) may prepare transport proposals for their own investment or submit proposals to government for approval or a funding contribution. These proposals may be based on an examination of transport system strategies or on perceptions and aspirations independent of these strategies.

The activities of private sector organisations necessarily include a focus on objectives such as revenue and profit maximisation that may differ significantly from government objectives such as equity and environmental quality. Private sector proposals that require government approval or funding should therefore be required to meet the same standards of assessment as those that arise through the ATAP Guidelines. Consistency will be maximised if the private sector is aware of, and has access to, relevant objectives, policies and strategies, and the ATAP Guidelines process.

It is also important to have specific procedures for the submission and consideration of private sector proposals (see Appendix B). State and territory government jurisdictions have well-developed procedures for private sector participation in the delivery of public infrastructure services and for assessing unsolicited proposals that may or may not require additional government funding. These procedures also provide guidance for financial assessment by government of proposals submitted on a solicited or unsolicited basis by the private sector. Appendix B provides a discussion on unsolicited private sector proposals.

Appendix B provides a further discussion on the reasons why governments may wish to support an initiative that is not financially viable, and procedures for handling unsolicited proposals.

2.4 Political process

Ministers have the final say over the composition of transport programs funded by their jurisdictions. Councils have the final say over of transport programs funded by their local government areas.

In some cases, priority proposals will be identified through, for example, policy commitments made as platform responses to community demands. Initiatives may also be proposed if the objectives identified in Step 1 are not specified in sufficient detail to reflect all of the government's objectives and priorities. Objectives and priorities may sometimes change so rapidly (e.g. following a change of government) that they initially outpace the adjustment of the system planning process.

Other areas of the political system may generate transport proposals. For example, local government may identify initiatives that reflect the perspectives of the local community. In addition, parliamentary committees examining transport or other issues (e.g. regional development, defence) may recommend particular transport initiatives. Finally, ministers may receive transport proposals from other stakeholders as they interact directly with the community.

3. Prioritisation

Prioritisation[1] determines the relative priority of individual initiatives. [2] Prioritisation enables decision-makers to identify and fund the most beneficial initiatives first, recognising that funding limitations mean that not all initiatives can be undertaken at once.

As an example, Infrastructure Australia makes recommendations on prioritisation across initiatives in creating its published *Infrastructure Priority List* advising the Australian Government on the funding-readiness of proposed initiatives – see Box 1. A priority list provides a pipeline of initiatives that can be delivered as funding becomes available.

Box 1 Infrastructure Australia's Infrastructure Priority List

Infrastructure Australia undertakes a prioritisation process of the proposed initiatives it receives, resulting in its *Infrastructure Priority List* (IPL) (IA, 2014). IA publishes the IPL and updates it at appropriate intervals.

The IPL rates proposed initiatives greater than $100 million under four categories of funding-readiness for the Australian Government:

- Ready to Proceed
- Threshold
- Real Potential
- Early Stage.

Proposed initiatives must proceed to the top rating (Ready to Proceed) before IA can recommend it for funding.

IA undertakes its prioritisation on the basis of several criteria including:

- National significance
- Economic justification.

IA is also required under legislation to prioritise across proposed initiatives that it rates as Ready to Proceed.

[1] Prioritisation leads to a short-list of highest priority initiatives.

[2] Note that the concept of prioritisation also plays a role earlier in the Framework. In Step 2, priority is assessed across identified problems. Then in Steps 3 and 4, solution options are assessed on their merits, effectively prioritising them. Governments may also choose to specify the relative importance, or priority, of individual policy matters. Governments may also choose to state a preference, or priority, for some types of measures relative to others. For example, non-infrastructure solutions may be preferred to infrastructure solutions in some circumstances.

Key considerations in prioritisation should include (but not necessarily be limited to):

- The contribution of initiatives to jurisdictional and national goals, and transport system objectives
- The jurisdictional and/or national significance of initiatives
- Alignment with government strategies, plans, policies and priorities
- Expected benefits and costs (ideally expressed in monetised terms or in non-monetised terms for those benefits and costs where monetisation is not feasible).

3.1 Information requirements

A principle of the Framework is to ensure that decision-makers have all the information required to make fully informed decisions. This is also an important requirement for prioritisation.

There must also be a high level of consistency between the information that guided problem and option assessments and the information that guides prioritisation. This means that the assessment information generated in Steps 1 to 4 should ideally be the starting point for the prioritisation process. This will allow prioritisation to be based on the evidence-based expected impacts of proposals.

The evidence-based nature of that information will allow the prioritisation process to be as objective as possible. However, the benefit and cost information will not all be easily comparable, being a mix of quantitative, qualitative, monetised and non-monetised information. Weighing up the different types means the decision-making process is not straightforward. Inevitably, there will be an element of subjectivity, making it difficult to list proposals in a precise order of priority (i.e. from best to worst) in a purely objective manner.

Despite the difficulty of prioritisation, the Guidelines aim to assist by providing guidance on how to compile relevant and rigorous information to aid the decision-maker.

3.2 Broad prioritisation

Given this complexity, an initial broad prioritisation of initiatives may assist decision- makers. This could involve several categories (e.g. priorities A, B and C), with prioritisation based on:

- The potential contribution of an initiative to jurisdictional objectives, and policies, from the Strategic Merit Test (SMT) (from Steps 2 and 3)[3]. For example, Infrastructure Australia rate proposed initiatives on the basis of *national significance*
- Outputs of cost-benefit analysis (CBA) (from Steps 3 and 4) – both monetised and non-monetised benefits and costs (from Steps 3 and 4)[4]

[3] Prioritisation of small initiatives is likely to involve only the SMT.

[4] Without double-counting benefits or costs.

- Government policy choices on funding
- Government statements on priorities.

3.3 More detailed prioritisation

Some jurisdictions may undertake more detailed prioritisation of initiatives. This should be guided by the decision-maker's subjective interpretation of any non-monetised impact information and political considerations.

Several analytical approaches can be used to assist decision-makers with more detailed prioritisation. They include ranking by:

- Benefit–cost ratio (BCR) – see Appendix A
- BCR plus the degree of 'pass' of the SMT – see Appendix A
- Adjusted BCR (from adjusted CBA discussed in Part T2). This optional alternative method reflects more explicitly the relative importance government may place on different objectives.

Each of these techniques still require manual adjustment of rankings to incorporate any non-monetised impacts.

Other detailed prioritisation techniques referred to generally as 'multi-criteria analysis' (MCA) are also sometimes used. They involve numerically scoring impacts and possibly using weighting criteria. That information is then converted into either multiple scores (one for each of the criteria) or a single overall 'weighted' score, as indicators of the merit of an initiative.

F3 discussed MCA approaches in options assessment and recommended that they be limited to the first step of assessment for early options filtering. It noted problems with and criticisms of MCA, particularly the use of the 'single (weighted) score' approach, suggesting it preferably be avoided. The same level of caution applies with the use of MCA in the prioritisation of initiatives.

Detailed prioritisation may also incorporate other information such as staging options, interactions between initiatives, borrowing options and the possibility of private sector contributions.

Prioritisation will also need to be mindful of policy choices made by governments, including about the structuring of funding (see section 4.1 below).

4. Program development

Program development aims to deliver a clear, well thought out and deliverable pipeline of initiatives over a given horizon taking into consideration a broad range of constraints.

Following prioritisation, an actual program (see Box 2) is developed from the list of prioritised initiatives. The content of the first years of the program is firm, and the content of later years is indicative. Individual initiatives may be scheduled in either earlier or later years of the program, depending on perceived urgency and other aspects of the program development process. Ministers generally have the final say over the initiatives that are included in the program.

Program development is a complex process that links the delivery of individual initiatives with a budget process. It must be transparent, and founded on sound economic and business investment principles that can accommodate the many and varied practical considerations that characterise transport initiatives.

Box 2 What is a program?

A program is defined here as a suite of initiatives to be delivered within a specified timeframe, sequence and budget.

Programs may apply over a number of time horizons. The most common is the annual budget cycle where a program of initiatives are funded for the next 12 months, with indicative funding identified for the subsequent three years (out-years) as well.

Also quite common is the medium term investment plan that typically identifies a medium term (3-10 years) program of initiatives and can also set the direction for a package of initiatives that are of crucial important for the nation, state, region or city.

The infrastructure audit currently being undertaken by IA for the Australian Government aims to develop a 15 year program of initiatives.

Programs come in different sizes and styles. A smaller program may be a ‘routine maintenance’ program that consists of a collection of similar initiatives, each one involving routine maintenance, say, across a network. A similar example is a ‘railway crossing black spot’ safety program, which involves a collection of railway crossing improvements at different locations.

Initiatives in a program may arise from any of the levels of the hierarchy of planning levels (see Step 1 - strategic, corridor/area, route/link). By forming a program consisting of initiatives identified through an integrated and comprehensive planning process, programs will consist of strategically identified interventions aimed at achieving jurisdictional stated goals and objectives.

This section of the Guidelines discusses the entire collection of initiatives to be funded within a single and/or multi-year budget. A program can consist of both investment/infrastructure initiatives, as well as reform/non-investment initiatives. Within this setting, smaller programs can be thought of as sub-programs.

4.1 Level and structure of funding

Governments may make policy choices on funding prior to program development. Relevant funding policy choices may include:

- Establishing pools of funds by purpose, category or sub-program
- Providing priority funding for particular corridors, areas, regions or outcomes (e.g. safety)
- Specifying minimum funding levels for jurisdictions or parts of a jurisdiction to address equity issues
- Specifying minimum funding levels for maintenance activities
- Providing specific funding for certain initiatives (e.g. road widening, bridges, landscaping, rest areas and noise barriers).

Where such policy choices are made, they will need to guide program development from the outset. These policy choices may also require prioritisation to be undertaken within sub-programs or categories.

The choice of initiatives to be included in a program is influenced by a number of factors:

- The total level of available funding is a major factor in choosing the initiatives to be included in a program.
- Normally, the highest level of commitment, and the first call on funding, is funds to complete existing initiatives with a contractual commitment (e.g. works in progress or a binding contract).
- The next level of commitment is usually for initiatives that have had funds allocated in agreed budgets or forward estimates, but for which no delivery contract has been signed. While it would no doubt cause problems if these initiatives did not proceed in accordance with previously agreed timetables, they could nevertheless be cancelled or deferred by agreement between agencies if absolutely necessary for policy or other high-level reasons (e.g. a sudden change in a jurisdiction's financial circumstances).

It is also important for alternative funding scenarios to be considered and negotiated between the delivery agency and the funding agency. For example, prevailing weather conditions on a site may enable construction to be organised under a single contract, but spread across several financial years for funding purposes. Alternatively, it may be practical to adjust the cash flow of one or more initiatives to iron out peaks that occur in years when the requirements of multiple large initiatives overlap.

The level of discretionary funding becomes clear only when all of these considerations have been taken into account.

4.2 Timing and corridor and network considerations

A detailed, preferred strategy for the timing of delivering initiatives should be prepared for a corridor and for the whole network. Such a strategy provides some certainty to stakeholders, delivery agencies and contractors. It also allows orderly planning by all parties, including identifying relationships between corridor strategies. Programs should be developed with the aim of providing this certainty.

Key considerations may include, but are not limited to, the availability of skilled work force, specialised equipment and financing for delivering initiatives. Efficiencies may be achieved through the geographical proximity and sequencing of requirements for skilled work and the utilisation of specialised equipment. It is also generally more desirable to time the financing of initiatives to avoid significant peaks and troughs of varying magnitudes, and encourage a steady flow of spending that better matches the program's funding.

Corridor and area strategies will largely determine the preferred delivery strategy for maintenance and improvements to transport assets within a corridor or area. These strategies may include plans for systematic, incremental improvement. They identify individual initiatives and their needs, which in turn facilitate the creation of discrete packages of works, where appropriate, to progressively upgrade relevant parts of the corridor or area. Program development should consider the impact of alternative funding allocation scenarios on corridor or area strategies. Efficiencies may be achievable from combining the delivery of new initiatives with the maintenance of existing elements of the network.

4.3 Bundling opportunities

Preferred delivery strategies can highlight relationships between individual initiatives and help to identify potential opportunities for bundling initiatives.

For example, improving the weight-carrying capacity or width of a bridge may appear to improve a route's freight capacity. However, other works such as road widening or pavement strengthening may also need to be addressed before the whole route can be opened up to heavier freight vehicles. While the initiatives are not strictly interdependent, they are related and the relationships need to be considered as part of an overall program to improve the route[5].

It may not be possible to fund a whole bundle of works in a single budget period. Nevertheless, it should be acknowledged that committing funds to one or more initiatives in a bundle requires the completion of the other works in as short a time frame as possible, to maximise the return on the initial investment.

[5] Provided both initiatives have merit, which should be the situation if they have reached the program development stage.

Bundling can also be an appropriate method to implement transport system strategies in a more cost-effective manner. In contrast, implementing individual initiatives may create scattered activities without any perceptible improvement in the overall performance of any single corridor, area or route.

Furthermore, bundling initiatives for delivery as a single, large-scale package has the potential to provide cost savings from economies of scale and community benefits from co-ordinated delivery of some initiatives. These savings need to be balanced against the likely delay caused to initiatives elsewhere, due to funding the larger package of works. Detailed program development should investigate bundling opportunities.

In rare circumstances, cost savings may be obtained by bundling like-type initiatives for different corridors or areas in a particular region to reduce mobilisation costs. In these instances, the strategies for each corridor or area need to be taken into consideration.

An initiative's BCR can be affected by assumptions made about the status of other initiatives (see F3 for discussion of interrelationships between initiatives). In extreme cases of interdependence, one initiative is worthless in the absence of another. In this situation, initiatives should be bundled together and treated as a single initiative. Corridor and area studies provide opportunities to explore relationships by testing 'what if' scenarios.

CBAs may include sensitivity testing, guided by the findings of corridor and area studies, to show the effects of changed assumptions about the status of related initiatives. Different combinations of related initiatives should be tested to find the best combination.

5. Considering private sector initiatives

As noted in section 2.3, government may provide financial support to private sector initiatives where the initiatives are desirable on economic or social grounds, but unprofitable for the private sector (see section B.1 in Appendix B). Other reasons for government to support private sector initiatives include optimal risk transfer, and use of entrepreneurial skills and innovation. Private sector participation may also offer a means to increase the funding for transport initiatives.

5.1 Evaluating proposals for public funding

If a government intends to contribute financially to private sector initiatives, the proposals should be included in the prioritisation process and program development. This will ensure funding is directed to the most worthwhile initiatives.

To ensure consistent treatment of proposals, a process for assessing and prioritising each unsolicited proposal should be developed (see section B.2 in Appendix B). The process should consider evaluation criteria such as:

- *Originality:* Does the proposal represent a fresh idea or a fresh approach?
- *Depth:* How extensive is the research supporting the proposal? Have financial models and forecasts been prepared?
- *Innovation:* Are new engineering, financial, environmental or other techniques being put forward in this proposal?
- *Benefit:* What is the actual and perceived benefit to the relevant governments, the travelling public and the proponent?
- *Finance:* How are returns to the government achieved? When does the asset revert to the state? How will refinancing gains be dealt with?
- *Viability:* How have the commercial and economic risks been dealt with? What are the implications for the initiative of financial failure in operation (i.e. bondholders and stakeholders overall - relevant governments)?

These criteria could be converted into a numerical score such as those shown in Table B.2 in Appendix B. The extent to which the criteria are satisfied can be used to identify possible actions and outcomes for the unsolicited proposals. For instance, consider a situation where a way of converting the criteria to numerical scores has been devised. If 80–100 per cent of the criteria are met, a request for tender can be issued or an untendered contract can be negotiated with the unsolicited proponent. If the proposal meets only 40–60 per cent of the criteria, the relevant government agency can offer to buy the intellectual property embedded in the proposal. If less than 40 per cent of the criteria are met, the proposal is declined altogether.

5.2 Involvement through PPPs

There has been increasing private sector participation in the financing and operation of transport infrastructure initiatives in Australia. This participation has often involved joint arrangements between the public and private sectors through public private partnerships (PPPs)

Private sector involvement through PPPs should be considered by government if such involvement is consistent with specified principles and standards.

For guidance on public private partnerships see the National Public Private Partnership Policy and Guidelines (Australian Government, 2016).

Finalisation of the program

Developing a forward program is usually an iterative process. The scope and timing of initiatives may be adjusted several times before there is agreement on a final program that is affordable within available funding.

An initiative will be added to the program once funded. Its scope, timing and cost is then progressively refined to a high degree of confidence. This refinement requires development of the initiative to move through the concept, planning, design and implementation stages (involving some overlap of phases). At each stage of the development of an initiative, there may be a re-assessment of priorities and financial commitments, including scope, cost and benefits.

Risk assessment is an essential component of program development. It is important not to overlook an agency's and local contracting industry's capacity to deliver if a number of large initiatives are funded over a short period, in a single marketplace. Are there likely to be any cost increases or time delays arising from a lack of competition due to the amount of work on offer if all of these initiatives are funded?

The draft program will involve considerable liaison with Treasury Departments and other central agencies, and will usually require ministerial approval before it is finalised. The final program may be tabled in parliament. Consultation with key stakeholders may be required so that people understand priorities across proposed initiatives and the rationale underlying those priorities.

As a final step in the program development process, a final reasonableness test should be applied to ensure the initiatives chosen for funding are consistent with government transport policies, strategies and objectives. This should have been done in Step 4 in the development of the business case for each initiative, but a final check is recommended to complete the process.

Appendix A Ranking by benefit-cost ratio

Chapter 3 suggested a broad initial prioritisation of initiatives (e.g. priorities A, B and C) for program development. It also pointed to several possible approaches that could assist jurisdictions if they choose to undertake more detailed prioritisation. Ranking by benefit–cost ratio (BCR) was one of those techniques. BCR is the ratio of economic benefit to economic cost of a proposed initiative.

If the BCR accounts for all benefits and costs, economic efficiency (i.e. net economic benefit to society, where net benefit is benefits less costs) is maximised by undertaking initiatives in descending order of BCR until the budget is exhausted. This approach identifies the package of initiatives that yields the maximum combined net benefit out of all the possible packages of initiatives that fit within the budget constraint. Objectives other than economic efficiency will be advanced if they are consistent with economic efficiency.

This appendix discusses some issues related to ranking initiatives by BCR.

A.1 Combinations of initiatives

Ranking by BCR is not guaranteed to give the best economic efficiency outcome if initiatives are large relative to the budget constraint and, after funding the last initiative that can be afforded, there are still some funds left over. To demonstrate this: consider an example where after funding higher-BCR initiatives, there is $100 million left in the budget. The next three proposals in the BCR order of merit are A (cost $50 million, BCR 4.0), B (cost $100 million, BCR 3.5) and C (cost $50 million, BCR 2.0).

After funding initiative A, the remaining $50 million is insufficient to pay for initiative B. Initiative C, however, could be included. The total benefits from implementing initiatives A and C together would be [$50m × 4.0] + [$50 million × 2.0] = $300 million. However, if the $100 million were used instead to fund initiative B, the total benefits would be $100 × 3.5 = $350 million. Different combinations may have to be tested to find the best (maximum net present value) combination out of all possible combinations that fit within the budget constraint.

A.2 Borrowed funds and marginal BCR

Under a budget-constrained approach, government agencies should seek to shift funds through time by borrowing or lending at the discount rate to fund projects where the BCR for the marginal initiative (or the cut-off point) is consistent over time.

To demonstrate this, say that the marginal BCR is 2.0 this year and will be 3.0 next year. If $1 of capital spending was shifted from this year's budget to next year's budget, society would forgo $2 in benefits. The $1 could be invested elsewhere for the year so it would be worth $1 × (1 + r) next year, where r is the discount rate. The benefit from investing this amount in next year's initiatives would be $3 × (1 + r), which is worth $3 when discounted back to this year. The net gain to society is $1 in benefit in present value terms. As more funds are shifted from this year to next year, the marginal BCR this year will rise and the marginal BCR next year will fall. When the point is reached at which the marginal BCRs are equal, no further gains can be made by shifting funds through time.

The implication for governments is that investment budgets should be expanded in times when there is a strong demand for funds (expressed in greater numbers of initiatives with high BCRs) and contracted in times when demand is weak, with a view to maintaining a fairly constant cut-off BCR over the long term.

A.3 Incremental BCR and staged initiatives

A further source of complexity is staged initiatives. There may be a choice to delay a stage or stages of an initiative until a later period. For ranking in the present period, subsequent stages of the initiative may be treated as separate initiatives with the incremental BCR used for ranking.

A.4 Combining BCR and SMT results

A government might give a more (or less) strategically meritorious initiative a higher (or lower) score (or ranking) than the initiative would receive from consideration of the BCR alone. Such decisions might be facilitated by having multiple levels of pass for the SMT. For example, there could be a 'high pass' and a 'low pass'. An initiative with a 'high pass' on the SMT could be accorded preference over an initiative with a higher BCR but a 'low pass' on the SMT. For proposals where non-monetised factors are likely to play a greater role in decision-making, having multiple levels of pass for the SMT is a useful method.

The advantage of multiple levels of pass for the SMT is that this approach can be used to highlight initiatives that score particularly well on achieving government objectives. Examples include small initiatives or initiatives in less-populous areas that cannot be accepted on the basis of the CBA alone. Multiple levels of pass for the SMT can also increase the transparency and consistency of the assessment process.

An enhancement is to link SMT pass levels with BCR hurdle levels. However, if the number of levels of SMT pass is set far above 2, the assessment process may become overly complicated, with considerable subjectivity introduced in determining ratings of initiatives.

A.5 BCR hurdles

The use of hurdles for BCRs is optional. A decision has to be made about whether to employ a hurdle ratio and, if so, whether initiatives with a BCR below the hurdle ratio should be rejected.

When BCR hurdles are used, a ratio of 1.0 implies that uneconomic initiatives (i.e. initiatives with negative net present value) should be rejected. When funds are scarce relative to the supply of initiatives with BCRs above 1.0, the hurdle ratio should be set well above 1.0 if it is to be an economically efficient rationing mechanism.

It is important to decide whether the assessment process should include the flexibility to accept initiatives that are assessed to be poor on economic efficiency grounds, whether in absolute terms (that is, BCR<1.0) or relative to other initiatives. Presumably, those initiatives would be attractive on other grounds if they were to be accepted. The trade-off of greater flexibility to accept less efficient initiatives is that the program will be tilted in a way that gives less weight to the economic efficiency objective. BCR hurdles provide a safeguard against this.

There are several ways to use a BCR hurdle, with at least five options being available:

- *Hurdle BCR:* A hurdle BCR is specified and any proposal that falls below the hurdle is rejected outright. It might be decided to set a higher hurdle ratio for the rapid CBA than for the detailed CBA, because of the greater likelihood of optimism bias in projections of costs and benefits for the rapid CBA. A lower hurdle ratio might be set for off-network initiatives in low-demand regional areas.
- *Hurdle BCR = 1.0:* No uneconomic initiatives will be accepted.
- *Multiple hurdle ratios:* This option is linked with the idea of having multiple levels of pass for the SMT. For example, under a two-tier system, there would be a lower hurdle ratio for initiatives that achieve a high pass on the SMT and a higher ratio for initiatives with a low pass. Table A.1 illustrates the concept.
- *No hurdle ratio:* Governments may accept low-BCR initiatives, including uneconomic initiatives, in preference to high-BCR initiatives where they are considered to have high strategic merit or perform well on the adjusted CBA or are particularly effective in meeting certain objectives favoured by the decision-maker.
- *Quota system:* An upper limit could be imposed on the percentage of funds applied to initiatives with BCRs below the hurdle ratio (1.0 if the quota is to prevent economically inefficient initiatives). Some jurisdictions impose a percentage target (e.g. 95 per cent) for funds spent on economically justified initiatives (BCR above 1.0).

Some of these options allow equity considerations to be injected into the decision-making process.

Table 1 Two-tier Strategic Merit Test pass - BCR hurdle system

	SMT		
BCR	Fail	Low pass	High pass
Below lower BCR hurdle	Reject	Reject	Reject
Between lower and upper BCR hurdle	Reject	Reject	Accept
Above upper BCR hurdle	Reject	Accept	Accept

Appendix B Private sector considerations

B.1 Rationale for government support

As noted in section 5, government may decide to provide financial support to private sector initiatives. Such initiatives might pass the SMT and the CBA but fail the financial appraisal, or fail all of these tests.

If the government wants the initiative to proceed for other reasons, it will need to contribute at least the minimum amount necessary for the commercial operator to receive an acceptable return on the investment. Potential forms of support include a one-off capital contribution, tax concessions, contributions of assets and subsidies.

Where a government contributes financially to such an initiative, robust financial and economic (cost–benefit) appraisals are required. Governments accept the need for commercial investors to make a fair and reasonable return on funds, commensurate with the level of risk. However, they do not support investors making excessive returns at the expense of taxpayers or the paying users of transport infrastructure.

There are several reasons why a government may wish to support an initiative that is not financially viable. They include the existence of externalities, distortionary effects of taxation, the impact of consumers' surplus and/or the cost of meeting government objectives.

Externalities

The inclusion of non-priced impacts such as externalities in a CBA is one reason why an initiative might pass a CBA test, but fail a financial test. For example, if a rail initiative results in a transfer of freight from road to rail, there may be a net saving in externality costs. However, this net saving would typically not accrue to the rail operator, and hence would be excluded from the operator's financial appraisal.

Taxation

Taxation makes it more difficult for an initiative to pass a financial appraisal compared with a CBA. Financial analysis takes account of the effects of corporate income tax, while taxes from non-labour inputs are deducted from prices in a CBA.

Consumers' surplus

CBAs include gains in consumers' surplus, which can make a significant difference where an initiative involves a new transport service or generates new demand. The effect can be particularly pronounced where there is lumpiness in investment. With a downward-sloping demand curve, the larger the initiative, the lower the price that must be charged to ensure that capacity is fully used.

For example, in the case of a new railway line, the smallest scale of investment is the cheapest possible track. If the price that ensures near-full utilisation of the line is too low to cover capital costs, it is still possible that the value to users is greater than the total cost of providing the service. This is because the value to users in a CBA is estimated on the basis of willingness to pay, which exceeds the amount actually paid (the difference being called consumers' surplus).

Railway operators may capture part of the consumers' surplus by using market power to set different prices for different tasks and customers (price discrimination). However, in most cases, competition from other modes severely limits the market power of railways. Another means is to purchase land close to proposed stations or terminals to capture increases in land values resulting from the railway initiative.

Costs to meet a government objective

Government contributions to private sector initiatives may be justified where the government, through legislation or negotiation, requires the private investors to modify initiatives to meet government objectives. Without a government contribution, the cost is borne by investors or users.

B.2 Unsolicited private sector proposals

Private sector proposals that are unsolicited[6] should go through an initial government review process. Such a process may be applied when a private sector proponent is seeking government funds to build and/or operate infrastructure or when government approval is required for an initiative that will be self-funded on a commercial basis (e.g. a tollway).

An open environment for private sector and public private partnership (PPP) proposals carries potential risks that should be mitigated through a structured process. Some of the questions to address are:

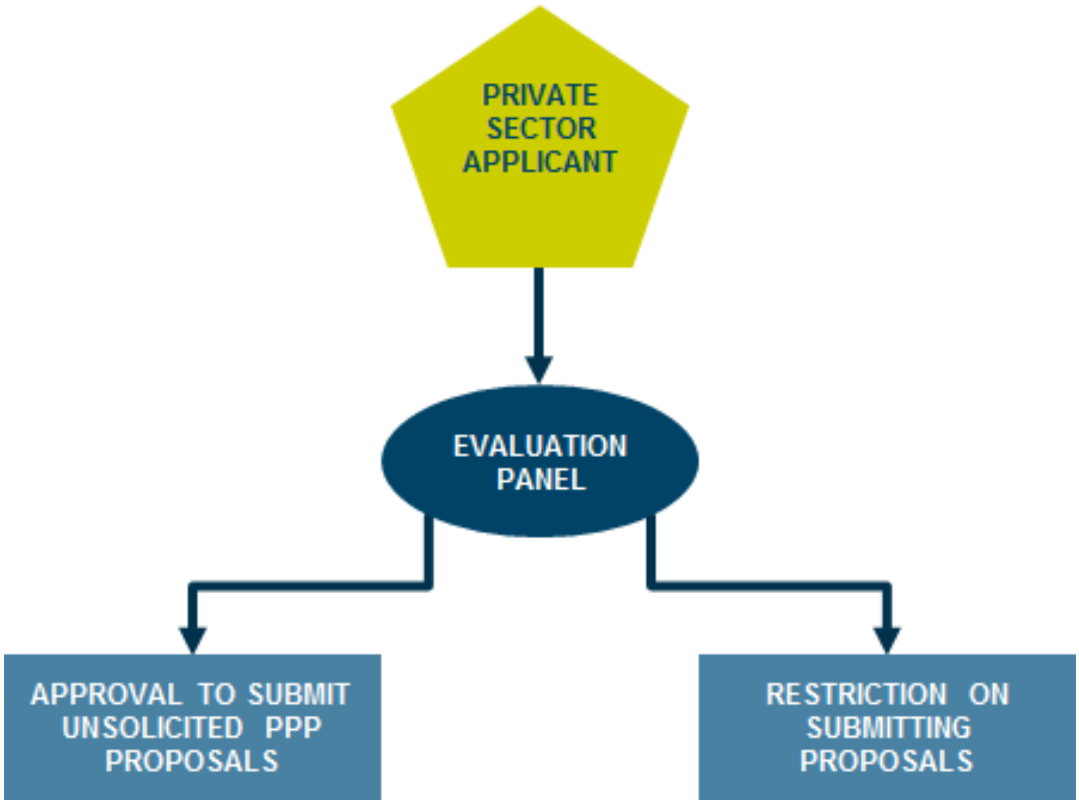
- What guidelines should apply to the submission of an unsolicited proposal?
- Should there be pre-qualification for the submission of proposals?
- How should the intellectual property be managed?
- What process should be followed for unsolicited proposals compared to a PPP expression of interest or request for tender process?
- What probity framework needs to be in place to ensure transparency and ethical conduct?

These are complex questions that need to be addressed before an effective policy and procedural framework for unsolicited private sector proposals can be implemented. They involve examination of the entities that propose to submit proposals and assessment of any subsequent proposals.

[6] A solicited proposal is a private sector response to an invitation from government. In contrast, an unsolicited proposal originates within the private sector without any specific invitation from government.

A possible approval process for private sector applicants is illustrated in Figure B.2.1. Under this process, an entity would submit a pre-qualification application to an evaluation panel. Pre-qualification approval would enable the applicant to become a registered entity for the purpose of submitting unsolicited proposals. Restriction would have the broad impact of disqualifying the applicant from involvement with the supply or management of transport infrastructure for a period of time.

Figure 1 Possible approval process for private sector applicants



The evaluation panel would need a set of criteria on which to base evaluation of the applicants. Suggested evaluation criteria are:

- History of ethical conduct with government
- Understanding and accepting best practice in partnering with government
- Track record in delivering transport infrastructure
- Demonstrated capacity for innovation
- Commercial ability to contract
- Attractiveness of relationship plan and approach to unsolicited proposals.

It is likely that many proposals would be submitted by consortia rather than individual proponents. The pre-qualification rule would apply to consortia in the following way:

- The key (largest) equity participant requires pre-qualification.

- A majority of participants, by equity, require pre-qualification.
- All equity participants with an equity participation of 25 per cent or more require pre-qualification.

Table B.2.1 illustrates application of these conditions.

It should be noted that jurisdictions may also have guidance material for assessing unsolicited proposals.

Table 2 Illustration of application of approval conditions

Consortium	1	2	3	4	5	6	7	8
	30%							**30%**
Pre-qualified	30%	40%	60%	75%	50%	60%	40%	30%
Not pre-qualified	40%	30%	40%	25%	50%	20%	20%	20%
		30%				20%	20%	20%
							20%	
	100%	100%	100%	100%	100%	100%	100%	100%
Acceptable	No	No	No	Yes	No	Yes	No	Yes
Reason	**largest equity participant not qualified**	**equity majority**	**>25%**	**OK**	**no majority**	**OK**	**equity majority**	**OK**

References

Australian Government 2016 National Public Private Partnership Policy and Guidelines:
https://infrastructure.gov.au/infrastructure/ngpd/index.aspx#anc_public-private

Infrastructure Australia 2014, Infrastructure Priority List Update – December 2013:
http://www.infrastructureaustralia.gov.au

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