Job Number @ Type here

Functional Specification Template

C7526 – Economic Analysis (Deliverables and Reporting)

* To be used as a guide when compiling project-specific specifications.
* @ = project-specific detail required.
* For clauses/items not required – insert text “Not Required” in clause heading, do not delete clause.
* Delete this table when document finalised.

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# Introduction

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| Delete this table before issuing:  Project Managers: This Functional Specification primarily focuses on cost-benefit analysis (CBA) and other related types of economic analysis. If conducting problem / opportunity monetisation (also known as, cost of the problem) for a Strategy Assessment of Service Requirements (SASR) and/or Infrastructure Australia Infrastructure Priority List Stage 1 (Problem Identification and Prioritisation) submission, it is strongly recommended you seek additional advice from Project Evaluation Unit (PEU) Economics Team (Ph: 3066 4016 Email: [PEU.Economics@tmr.qld.gov.au](mailto:PEU.Economics@tmr.qld.gov.au)). Problem and opportunity monetisation is subject to the requirements of a separate guide and will need to be included in the ECS Project Brief and/or this Functional Specification accordingly, if required.  Feedback: This Functional Specification is a dynamic document and will be periodically reviewed by the department to ensure it incorporates the most recent and relevant information. The District Project Manager is encouraged to provide feedback to the PEU Economics Team to improve the structure, content and overall usefulness of the document. Please direct your queries and feedback to the PEU Economics Team mailbox or call using the details above.  To delete these guidance boxes, right-mouse click within this box and select Delete Rows. |

This Functional Specification aims to assist the pricing of relevant Calculation of Benefit-Cost Ratio (BCR)/Cost Benefit Analysis (CBA) (or related economic analysis) as seen in [insert relevant Clause / Item No.] of Functional Specification [insert relevant Functional Specification (for example, C7522 - Business Case)].This Functional Specification applies to the Transport and Main Roads' (the department) requirement for the Consultant to conduct CBA in a rigorous and consistent manner and that meets the relevant analytical detail and reporting requirements for the [insert project phase] of the [insert project name].

The Economics Consultant is to follow the guidance, principles, assumptions and methodologies outlined in this Functional Specification where possible. Project-specific requirements and considerations are based on the relevant estimated project capital cost thresholds and funding arrangements being sought (see Appendix A). If this Functional Specification seemingly contradicts another source of project information or guidance, the Economics Consultant shall first seek clarification from the department's Project Team and Project Evaluation Unit (PEU) Economics Team before proceeding.

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| Feedback – from the Consultant  This Functional Specification is a dynamic document and will be periodically reviewed by the department to ensure it incorporates the most recent and relevant information. The Consultant is encouraged to provide feedback to the department to improve the structure, content and overall usefulness of the document. The Consultant must ensure that their feedback is constructive and provides a suggestion / recommendation to address the identified issue. Please direct your queries and feedback to the PEU Economics Team at: [PEU.Economics@tmr.qld.gov.au](mailto:PEU.Economics@tmr.qld.gov.au) |

## Definitions / abbreviations / acronyms

Below is a glossary of the definitions, abbreviations and acronyms used in this document.

| Terms, abbreviations and acronyms | Meaning |
| --- | --- |
| ATAP | Australian Transport Assessment and Planning Guidelines |
| BC (also DBC) | Business Case (Detailed Business Case) |
| BCR | Benefit-Cost Ratio |
| BQ | Building Queensland |
| CAPEX | Capital Expenditure |
| CBA | Cost-Benefit Analysis |
| ES | Economic Studies |
| FYRR | First Year Rate of Return |
| IA | Infrastructure Australia |
| IAAF | Infrastructure Australia Assessment Framework |
| IRR | Internal Rate of Return |
| NPV | Net Present Value |
| OA | Options Analysis |
| OnQ | OnQ is the department's project management framework |
| OPEX | Operational Expenditure |
| PAF | Project Assessment Framework |
| PE | Preliminary Evaluation |
| PEU | Project Evaluation Unit |
| PPR | Project Proposal Report |
| SASR | Strategic Assessment of Service Requirements |
| TfNSW | Transport for New South Wales |
| the department | Department of Transport and Main Roads |
| VOC | Vehicle operating cost |

## Prequalification Requirement

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| --- |
| Delete this table before issuing:  Project Managers: Consultants contracted or sub-contracted should be registered and prequalified to the appropriate level for particular types of Economic Studies (ES) – Refer to the department's Consultants for Engineering Projects Manual.  Section 6.3 Economic Studies of the Prequalification of Consultants for Engineering Projects, form C7511 – Information Brochure states, “Economic Studies and analysis will require involvement from the Project Evaluation Unit of the Portfolio Planning and Investment Division.” This directive should be followed to ensure the contracted consultants are appropriately skilled.  The PEU Economics Team can also assist with the drafting of the Engineering Consultant Scheme (ECS) Project Brief / invitation to offer and/or assist in the procurement of the relevant consultant.  To delete these guidance boxes, right-mouse click within this box and select Delete Rows. |

The Economics Consultant must only use prequalified personnel and/or sub-contractors to undertake CBA that meet the Economic Studies (ES) level that is appropriate for the work to be undertaken. The Economics Consultant must be prequalified to ES level [insert relevant ES level] to undertake the relevant work.

# General

CBA is a widely-used, methodical and logical approach to economic evaluation and is the primary method of economic evaluation and assessment used for infrastructure proposals by the Australian Government and state and territory jurisdictions, as well as state and national infrastructure bodies, including Building Queensland (BQ) and Infrastructure Australia (IA). CBA can be undertaken at any stage of the project planning process, including options analysis, preliminary evaluation and business case, as well as ex-post (after project competition).

## Objective

Several principles underpin a quality, impartial and robust CBA. The Economics Consultant is to ensure that these principles are incorporated in all CBAs conducted on behalf of the department.

The CBA must be:

* evidence-based and reliant on an impartial, unbiased and independent approach to the collection and analysis of relevant data inputs
* fit-for-purpose, with the required level of analytical effort tailored to the level and grade of the investment decision that the analysis is supporting (see Appendix A for economic analysis and modelling expectations)
* scalable, with an increasing level of detail being required depending on where the project currently resides in the context of the department’s decision and evaluation frameworks
* complete in its identification, quantification and/or assessment of the relevant project impacts (costs and benefits), such that it aligns with other project documentation
* well-documented, using a high degree of evidentiary rigour and transparency to summarise each aspect of the process
* comparable and consistent with complementary and similar types of projects, and
* able to provide the reader of the CBA report with the confidence that the information contained therein has been gathered in a logical, consistent and rigorous manner in terms of its technical approach, analysis, inputs and parameters applied to a CBA.

## Scope

The scope of this activity covers the work necessary to:

* offer a rigorous approach in assessing the economic viability of investment proposals (calculation of the relevant decision criteria)
* assist in the establishment of a realistic base and project case for the economic analysis
* quantify all relevant benefit and cost streams
* enable expected costs and likely benefits of projects and alternative project options to be compared
* allow for direct comparison between options, combinations of options, other projects and further development (if required)
* sensitivity test uncertainty in the assumptions and parameters
* ensure that costs and benefits have been assessed based on a whole-of-system, whole-of-life and whole-of-state basis
* support the evaluation of various alternative options to achieve the project’s objectives
* provide evidence understood by decision makers to inform choices about the potential investment of funds across competing proposals
* ensure the analysis and data is fully transparent and justified to avoid the need for internal or external clarification or amendment, and clarify / rectify the analysis, where required
* produce all deliverables listed under Clause 4, and
* produce an analysis and supporting material, which includes use of 'best practice' approaches and parameters, and satisfy the department's expectations in terms of quality, content and objectives.

## General requirements

The Economics Consultant is to:

* be familiar with the relevant guidance and manuals as specified in Clause 2.4 of this Functional Specification
* review project background and supporting documentation (see Clause 3.1)
* identify gaps/limitations and recommend improvements to be made on past analysis (see requirements under Clause 3), including but not limited to consideration of:
  + scope (included/quantified costs or benefits)
  + available data or modelling
  + base / project case(s) definition
  + parameters and/or applied methodologies
  + risks or uncertainties in objectives, data, modelling or assumptions.
* recognise the iterative and overlapping nature of the relevant [insert project phase] work streams, and the importance of consistency between the economic analysis and other project components
* understand the form, nature and timing of information required to undertake the CBA
* attend meetings and workshops, as required
* prepare inputs into briefing notes, correspondence and reports, as required and in the appropriate templates and format, and
* provide adequate and thorough responses to all questions and concerns raised in the review process and make the recommended changes as per the department's preferences, as required.

## Reference material

The Economics Consultant is to **reference the Australian Transport Assessment and Planning (ATAP) as the default guidance in the first instance** for all aspects of the appraisal process, parameters and approach, unless applying the exceptions (see Clause 2.4.1 below) or the deviation has been discussed with and approved by the PEU Economics Team.

The department encourages innovation and the development of new and improved methodologies, which enhance the quality and rigour of the analysis. Where improved methodologies or data have been identified, the Economics Consultant shall, in consultation with the department, use their professional judgement to make appropriate recommendation(s) to improve the analysis based on contemporary research and guidance. See Clause 2.5 for identified gaps in current guidance and common clarifications for CBA.

The Economics Consultant **shall not** apply parameters and approaches from the Transport and Main Roads (2011) Cost-benefit Analysis Manual Road projects or parameters from the Transport for New South Wales (2017) Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives without prior discussion and approval from Transport and Main Roads PEU Economics Team. See Clause 2.4.1.

The department's current sources and preferences for particular parameters and methodologies are as shown below (note that these preferences are constantly changing due to feedback received from relevant stakeholders and updates / improvements to the associated research areas and guidance material).

### Exceptions

Table 2.4.1 – Additions / exceptions to default guidance

| Reference | Appraisal aspect | Commentary |
| --- | --- | --- |
| 1. (Default) Australian Transport and Infrastructure Council, Australian Transport Assessment and Planning (ATAP) Guidelines, Tools and Techniques (<https://www.atap.gov.au/tools-techniques/index>)    1. *T2 Cost Benefit Analysis* (<https://www.atap.gov.au/tools-techniques/cost-benefit-analysis/index>) 2. Alternative frameworks for CBAs include (not exhaustive):    1. Infrastructure Australia (2018). *Assessment Framework: For initiatives and projects to be included in the Infrastructure Priority List ('the IAAF')* (<https://www.infrastructureaustralia.gov.au/publications/assessment-framework-initiatives-and-projects>)    2. Building Queensland (2020). *Cost Benefit Analysis Guide* (<https://www.statedevelopment.qld.gov.au/industry/infrastructure>)    3. Queensland Treasury (2015). *Project Assessment Framework Cost-benefit analysis* (<https://www.treasury.qld.gov.au/programs-and-policies/project-assessment-framework/>) | CBA framework | In general, the CBA should follow the appraisal framework detailed in ATAP's T2 Cost Benefit Analysis guidance. Elements of other frameworks may be suitably incorporated into this framework, if appropriate. Transparency for the approach(es) used should be explicit within the CBA.  These frameworks and tools include guidance on:   1. theoretical foundations of transport economics 2. steps in a CBA 3. base case definition (see IAAF for major projects) 4. demand forecasts 5. inclusion and treatment of costs in CBA 6. estimation of user benefits (including induced and generated demand) 7. discounting and decision criteria, and 8. sensitivity and scenario testing. |
| Austroads (2012). *Guide to Project Evaluation, Part 4: Project Evaluation Data* (AGPE04) (<https://austroads.com.au/publications/economics-and-financing/agpe04-12>) | Vehicle operating costs (VOC) model and coefficients | For projects subject to IA assessment or required to be compared to these types of projects, the VOC model and coefficients from Austroads (2012) must be applied or included as a sensitivity. Care should be taken to not double count freight-costs as these are an element of the Austroads (2012) VOC model.  If an alternative VOC model is applied, clear justification must be included in the economic analysis report (note that this does not negate the need to include Austroads (2012) VOC model as a sensitivity). |
| Transport for New South Wales (TfNSW) (2020). *Transport for NSW Technical Note on Calculating Road Vehicle Operating Costs* (<https://www.transport.nsw.gov.au/projects/project-delivery-requirements/evaluation-and-assurance/technical-guidance>) | Relevant VOC approach / additional guidance | Contains supporting guidance in the application of VOC modelling for varying analytical effort. The approach to the application of the VOC modelling in the CBA should be described in the economic analysis report.  Where induced / generated demand is being modelled and resource corrections are required, the approach must be discussed with the department. |
| 1. United Kingdom Department for Transport (2017). *TAG Unit A1.3 User and Provider Impacts* (<https://www.gov.uk/government/publications/webtag-tag-unit-a1-3-user-and-provider-impacts-march-2017>) 2. New Zealand Transport Agency (2018). *Economic Evaluation Manual* (<https://www.nzta.govt.nz/resources/economic-evaluation-manual>) 3. New Zealand Transport Agency (2020). *Monetised benefits and costs manual* (<https://www.nzta.govt.nz/resources/monetised-benefits-and-costs-manual/>) | Travel time reliability | Methodologies from either source can be used to quantify travel time reliability for road users. Note that the reliability ratio should be based on project-specific travel behaviour / purpose or based on contemporary Australian guidance – for example, N. Douglas and J. Legaspi (2018) Estimating the value of private car travel time and reliability for NSW, which recommends 0.43.  The choice of reliability ratio should be confirmed with the PEU Economics Team through the proposed methodology paper. |
| Austroads (2020). *Guide to Traffic Management Part 3: Traffic Studies and Analysis (AGTM03-20)* (<https://austroads.com.au/publications/traffic-management/agtm03>) | Treatment of latent demand | Specific guidance for manual adjustment of latent demand for input into the economics. |
| TfNSW (2018). *Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives* (<https://www.transport.nsw.gov.au/projects/project-delivery-requirements/evaluation-and-assurance/resources>) | Expansion factors | An expansion factor may be applied in a sensitivity where the transport modelling inputs are not available for the entire day. In the first instance, the volume expansion should be based on project- specific observations. The relationship between volume and cost can then be determined from the TfNSW guidance. The TfNSW volume and cost expansion factors should also be applied to ensure consistency in the application of the relationship between volume and cost expansions. |
| 1. Austroads (2015). *Guide to Road Safety, Part 8: Treatment of Crash Locations (AGRS08)* (https://austroads.com.au/publications/road-safety/agrs08) 2. Guidance referenced in ATAP (various)    1. For example, *Austroads (2010). Road Safety Engineering Risk Assessment – Part 7: Crash Rates Database (AP-T152-10)* (<https://austroads.com.au/publications/road-safety/ap-t152-10>) | Safety analysis | The approach chosen to conduct safety analysis may vary based on the project scope and objectives. Where combining multiple safety treatments, guidance from Austroads (2015) may assist. In all other aspects, the guidance referenced in ATAP or provided by the department (if requested) should be used as default. |
| 1. As specified by the department. 2. Australian Transport Council (2006), National Guidelines for Transport System Management in Australia. Urban Transport (Volume 4) (<https://www.atap.gov.au/technical-support-library/index>) | Asset life | Asset life should first be requested from the department for the elements of the project – otherwise, asset life assumptions from the National Guidelines for Transport System Management (NGTSM) may be applied subject to approval from the department.  This is relevant to the calculation of residual value, which should be based on (Default) ATAP Guidelines, Tools and Techniques (<https://www.atap.gov.au/tools-techniques/index>), T2 Cost Benefit Analysis (<https://www.atap.gov.au/tools-techniques/cost-benefit-analysis/index>). Residual value must be included as a benefit stream in the analysis. |
| Transport and Main Roads (2011). *Cost-benefit Analysis Manual Road projects* (superseded) (<https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Cost-Benefit-Analysis-Manual.aspx>) | Rural link based CBA | Superseded. The Theoretical Guide and some elements of the Technical Guide in the manual have since been superseded, primarily by the Australian Transport Assessment and Planning (ATAP) Guidelines, as well as several other supporting and complimentary manuals, guides and frameworks.  The parameters and some of the assumptions contained in the manual no longer represent the department's preferences and expectations and should not be used in CBAs conducted on behalf of the department without prior discussion and approval.  The primary purpose of the manual is to inform low-cost, rural link-based CBAs. In this context, the majority of the methodologies contained in the manual are fit-for-purpose and represent the methodologies applied in the department CBA model. For more information, please contact the PEU Economics Team.  This manual is not intended to be a reference for CBAs of major projects, particularly in urban settings. |

Proposed sources of methods, assumptions and parameters are to be included in the Economic Consultant's proposed methodology paper. Sources of guidance outside of the prescribed list are to be specifically highlighted in the methodology paper for discussion with the department (see Clause 4 of this Functional Specification).

## Gaps in guidance and common clarifications

It is recognised that some impacts / benefits are often sources of major clarifications as they do not have specific guidance relating to their monetisation / quantification. These approaches may require the use of experimental methodologies and additional engagement with the department or other relevant stakeholders (e.g. Infrastructure Australia). Common impacts / benefits with gaps in guidance or that commonly require clarification include (this list is not exhaustive):

* road user behaviour in flooding / road closure assessment
* climate change and sustainability considerations
* construction disbenefits
* active transport
* decongestion impacts from transport initiatives
* induce/generated demand impacts – particularly vehicle operating costs
* land use impacts
* Wider Economic Benefits
* new technology (e.g. electric vehicles and automated vehicles), and
* COVID-19 implications.

Where these (or similar gaps) are relevant to the project or initiative, the Economic Consultant is expected to use their professional judgement to provide the department with the following advice:

* the relevance and availability of the required data and/or guidance
* the expected impact to the results if included / excluded, and
* a proposed methodology.

# Background

## Project background

A [insert project phase] was completed by the department in [insert Month Year], including [insert analysis type undertaken (e.g. the cost-benefit analysis of the two preferred options...)].

The Economics Consultant is to review and confirm the analysis and findings of this previous work, as well as other relevant source documents and information (e.g. safety audits, transport modelling, project background / strategic context, and so on.) and identify and address the limitations, gaps and areas for improvement for the current economic analysis. These considerations are to be reflected in the methodology paper and final detailed economic analysis report (see Clause 4.1 of this Functional Specification).

## Benefits and costs

|  |
| --- |
| Delete this table before issuing:  Project Manager: modify the following as appropriate and ensure "(if required)" is removed from the relevant deliverables.  Note: "(if required)" is for your reference and is not at the discretion or able to be negotiated by the consultant.  All benefits and cost streams from any previous analysis conducted should be included in this section, as well as any previous key unquantifiable benefits / costs noted as 'areas for improvement' or that align with significant project objectives. Please contact the PEU Economics Team with any queries (Ph: 3066 4016 Email: [PEU.Economics@tmr.qld.gov.au](mailto:PEU.Economics@tmr.qld.gov.au)) and see Appendix B for a generic overview of benefits by project type.  To delete these guidance boxes, right-mouse click within this box and select Delete Rows. |

The Economics Consultant is to (at a minimum) monetise the following benefits and costs:

[Insert relevant benefits and costs] See Appendix B / contact PEU Economics to discuss.]

The benefits should align with the key objectives and service requirements of the project. The Economic Consultant is to also provide the relevant analysis, commentary and caveats to the monetised benefits to allow for further understanding and interpretation by a layperson in the final detailed economic analysis report. The Economics Consultant is to quantitatively (using metrics) and/or qualitatively describe all other relevant benefits and costs.

### Areas for improvement

The Economics Consultant is to address these specific areas for improvement (if required):

[Insert other areas for improvement noted in previous analysis (like in the OA or PE)]

# Key activities and deliverables

|  |
| --- |
| Delete this table before issuing:  Project Manager: modify the following as appropriate and ensure "(if required)" is removed from the relevant deliverables.  Note: "(if required)" is for your reference and is not at the discretion or able to be negotiated by the consultant.  The following is a comprehensive list of potential deliverables the consultant should price for in the 'Calculation of the BCR' / 'Cost Benefit Analysis'. Amend the following as required, noting the relevant estimated project capital cost thresholds and funding arrangements being sought (see Appendix A) and reporting requirements.  It is the department's preference that CBA models (unlocked, soft-coded) are a 'must include' item in the deliverables of major projects (see Deliverables in Clause 4.1 below). To ensure the models are available to the department, it is imperative that Clause 1.12 ‘Intellectual Property Rights’ on form C7585 Invitation for Offer for Consultant Services has been changed from vested 'with Consultant' to vested 'with Principal' and that the deliverable is included below and/or in the ECS Project Brief.  Obtaining the CBA model from a consultant may result in some additional cost for the project. However, the impact on cost should not be significant. Some negotiation may also be required to establish governance of the model or suitable indemnity agreements.  Ensure you are familiar and comfortable with the last dot point in Clause 4.3, where consultants may be required to be engaged for long periods so they can address clarifications from IA. Consider an approach most appropriate to the project / available resources.  One approach may be to include an ‘if required’ clause in the (ECS) Project Brief or this Functional Specification, allowing the Consultant to price-in the potential of additional engagement throughout the evaluation process. Alternatively, the Consultant may be requested to provide a fixed hourly rate in the schedule of costs and ensure availability to answer any potential clarification questions issued by IA. The duration of the support will be subject to IA processes.  Note: When Infrastructure Australia assessment is required, the CBA model developed by the consultant will be requested to support the submission.  To delete these guidance boxes, right-mouse click within this box and select Delete Rows. |

The scope for this engagement includes the preparation and completion of all works detailed in Clauses 4.1, 4.2, 4.3 and 4.4 below but may also include additional items, which can be negotiated if required / when discussed.

| Category | Activities | Deliverables |
| --- | --- | --- |
| **4.1** – Economic Analysis (CBA) | **Methodology (if required):**   * Provide a proposed economic analysis methodology and detailed work program to the department for review and agreement; the methodology is to incorporate contemporary best practice and may identify areas for further methodological development. * The methodology must include an approach for quantifying each of the benefit streams identified in Clause 3.2 above including identifying and scoping the required inputs (i.e. transport modelling, or other as required) from the project team and any external advisors. * Address any feedback received on the draft methodology from the department and produce a final methodology.   **Economic Analysis – Cost Benefit Analysis (CBA):**   * Work with the relevant advisor to [develop a suitable transport modelling methodology (base case definition) and modelling outputs OR relevant road data] to complete the economic appraisal of:   + Base Case   + [Insert relevant project options / scenarios] * Collaborate with the department and relevant advisors to obtain the inputs required in a suitable format to complete the economic analysis, including but not limited to:   + Risk adjusted cost estimates (CAPEX and OPEX)   + Strategic transport modelling results   + Traffic simulation modelling results   + Road and traffic data   + Demographics data inputs.   Any other data that is required to complete the economic analysis can be discussed and may be provided by the project team. An assumptions register and model schematic is to be produced to support the model.   * Calculate the present value of relevant benefit and costs streams at 7% discount rate in the central case and sensitivity testing at 4% and 10% discount rates. * Conduct detailed economic analysis of the preferred project option(s) to produce economic indicators, such as the Net Present Value (NPV), Benefit Cost Ratio (BCR), Incremental Benefit Cost Ratio (IBCR), First Year Rate of Return (FYRR), and Internal Rate of Return (IRR), as agreed. * Facilitate a workshop(s) to discuss the scope, methodology and assumptions underpinning the economic analysis with the department's subject matter experts, including the PEU Economics Team. * Incorporate into the economic analysis the risk-adjusted whole of life (capital and operating) P90 and P50 cost estimation inputs that will be provided by the Cost Estimator and ensure consistency with the financial analysis. * Include the relevant sensitivity and scenario tests, where suitable or discussed with the department. At a minimum, the consultant must include:   + [insert relevant sensitivity and scenario tests] * Produce a standalone economic analysis report, providing all necessary detail to ensure transparency.   **Other analysis** [insert relevant other analysis]**:** | * Methodology paper including agreed economic analysis approach, parameters, benefits and required inputs (if required) * Draft analysis and findings workshop (if required) * Detailed economic analysis report (draft and final) * Economic Analysis chapter (if required) * Inputs to [Insert relevant submission type and associated deliverables (e.g. IA submission / PPR / Other)] * Unlocked, soft-coded model with scenarios and sensitivity-testing incorporated * Model walk-through workshop (if required) |
| **4.2** – Base Case and Project Case | * Document the Base Case and Project Case(s) intended to be used in the economic analysis, ensuring they align with the broader project documentation and intended project purpose / objectives. * The Economics Consultant will work with the relevant advisors to determine suitable Base Case assumptions and requirements. | * Written advice on Base Case (if required) |
| **4.3** – Stakeholders | * Engagement with key project stakeholders at state and federal government level, where necessary, including Queensland central government agencies, Infrastructure Australia and the Department of Infrastructure, Transport, Regional Development, and Communications (DITRDC). * Payment and pricing should reflect the potential engagement requirements of the project (if required). * For projects subject to Infrastructure Australia scrutiny, the Economics Consultant is to remain available / engaged to provide relevant input or responses to clarification questions (this process generally lasts up to 6 months and will be enacted on an 'as needed' basis). | * Input for briefing notes, meeting agendas and presentation * Detailed responses to relevant clarification questions. * Attendance at relevant meetings |
| **4.4** – Reporting, meetings and ad hoc tasks | * Adequately and thoroughly address all questions and concerns raised in the review and assurance processes. * Prepare inputs for briefing notes, correspondence, reports, as required. * Attend meetings and workshops, including working groups and governance meetings. | * Input for briefing notes, reports and correspondence (as required). * Detailed action comments into issues log. |

# Engagement and assurance

## Engagement

In addition to the requirement of proposed methodology, the Economics Consultant may also engage the PEU Economics Team (subject to agreement from the Project Manager) to clarify and/or workshop complex or uncertain elements of the analysis. The appropriate point of contact for this engagement is the Manager (Economics) in Project Evaluation.

For projects subject to the requirements of IA, engagement with IA can be arranged through contact with the PEU Economics Team (subject to agreement between the Project Manager and Director (Project Evaluation)). The Economics Consultant, in consultation with the department, must clearly articulate the issues and develop potential solutions before engagement with IA will be arranged.

## Assurance

There are two key milestones within the process (as reflected in the key deliverables above) subject to the review and approval of the PEU Economics Team:

* methodology paper
* economic analysis outputs (economic model (if required), results and reporting (detailed report, relevant chapters and submission requirements)).

The methodology paper must be reviewed and approved by the PEU Economics Team prior to the commencement of the primary economic analysis (i.e. CBA). This is only a mandatory requirement for projects exceeding $50 million or that require the application of complex or experimental methodologies (also see Appendix A).

The final economic analysis and detailed economic analysis report must action / resolve all issues identified in the review of the draft detailed economic analysis report or provide acceptable alternatives / justification in order to finalise the assurance process. For major projects, the PEU Economics Team will provide confirmation of the outcome of the assurance process to the Project Manager. The Economics Consultant is to allow for up to [insert number of rounds] rounds of feedback to facilitate this process.

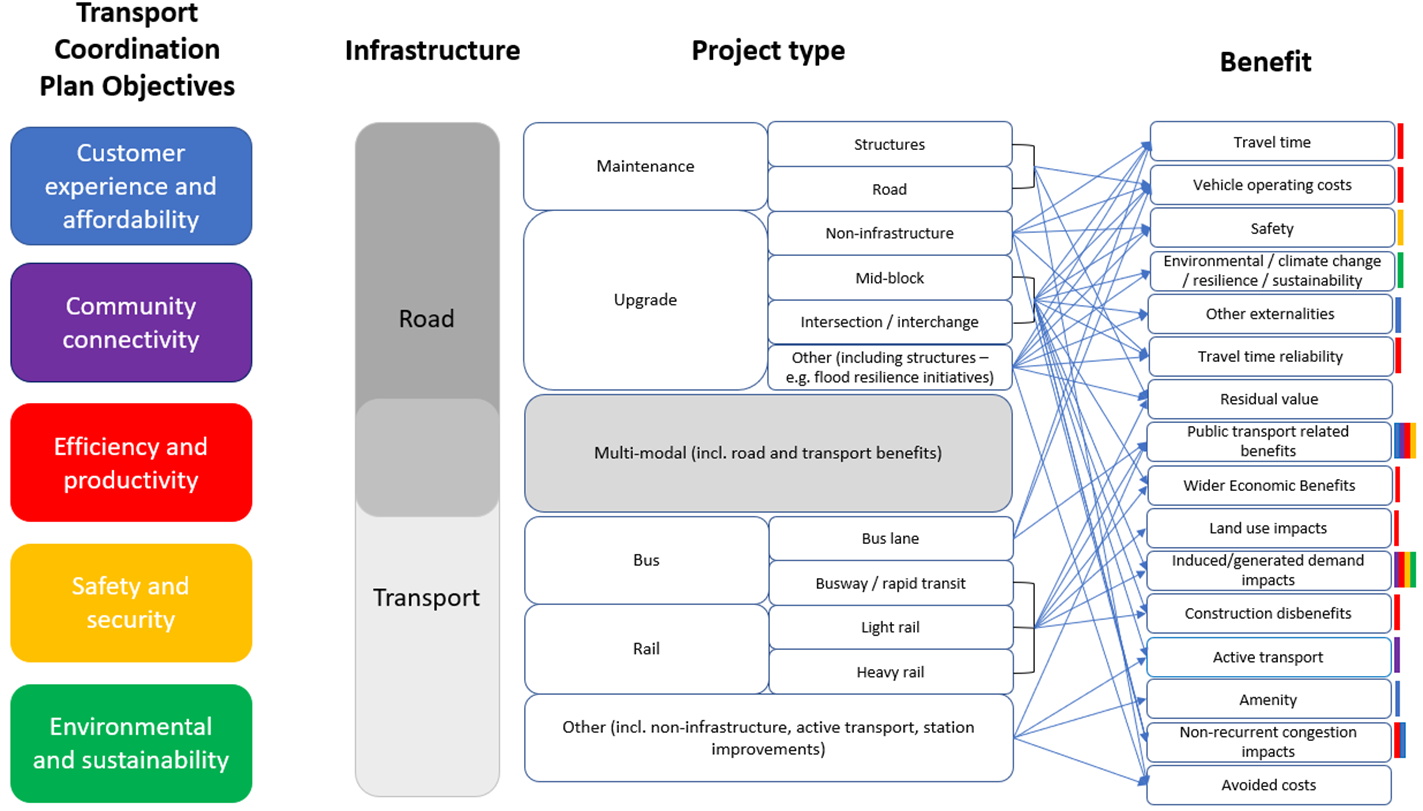
# Appendix A – CAPEX and funding thresholds

The Economic Consultant is to produce deliverables (as applicable), with consideration of the following expectations, funding thresholds and frameworks.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Transport and road projects (100% State funded) | | Transport and road projects (with federal funding component) | | |
| **Estimated project capital expenditure** | **<$100 mil** | **>$100 mil** | **<$100 mil** | **>$100 mil** | |
| **Federal funding contribution sought** | **$0** | **$0** | **<$100 mil** | **<$250 mil** | **>$250 mil** |
| Framework reference (federal funding consideration) | [OnQ](https://www.tmr.qld.gov.au/business-industry/OnQ-Project-Management-Framework/OnQ-tools-and-techniques/OnQ-project-management-proformas-and-worksheets.aspx) | [PAF](https://www.treasury.qld.gov.au/programs-and-policies/project-assessment-framework/) | [OnQ](https://www.tmr.qld.gov.au/business-industry/OnQ-Project-Management-Framework/OnQ-tools-and-techniques/OnQ-project-management-proformas-and-worksheets.aspx) (+[NoA](https://investment.infrastructure.gov.au/about/resources/notes_on_administration.aspx)) | [PAF](https://www.treasury.qld.gov.au/programs-and-policies/project-assessment-framework/) (+[NoA](https://investment.infrastructure.gov.au/about/resources/notes_on_administration.aspx)) | [PAF](https://www.treasury.qld.gov.au/programs-and-policies/project-assessment-framework/) (+[NoA](https://investment.infrastructure.gov.au/about/resources/notes_on_administration.aspx) / [IA](https://www.infrastructureaustralia.gov.au/publications/assessment-framework-initiatives-and-projects)) |
| Proposed methodology paper | Mandatory subject to criteria below¹ | Mandatory | Mandatory subject to criteria below¹ | Mandatory | Mandatory |
| Detailed cost-benefit analysis report | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory |
| Continued engagement | If required | If required | If required | If required | Mandatory |
| **Technical requirements** | | | | | |
| 1. Expected modelling basis of economics to be undertaken | R / TM² | TM | R / TM² | TM | TM |
| 1. Model (unlocked and soft-coded) | If requested/ feasible | Mandatory | If requested/ feasible | Mandatory | Mandatory |
| 1. Worked example | If requested | Mandatory | If requested | Mandatory | Mandatory |
| 1. Annual cost and benefit cashflows, and appraisal metrics / data (as required) – See [IA](https://www.infrastructureaustralia.gov.au/publications/assessment-framework-initiatives-and-projects) / [NoA](https://investment.infrastructure.gov.au/about/resources/notes_on_administration.aspx) for specific requirements | N/A | N/A | Mandatory | Mandatory | Mandatory |
| *OnQ – the department project management framework. PAF – Project Assessment Framework. IA – Infrastructure Australia Assessment Framework. NoA – Notes on Administration (DITRDC)*  *R = rural (link based) modelling, TM = traffic modelling based.*   1. *Mandatory if the initiative / project has greater than $50 million funding and/or includes experimental methods or complex analysis.* 2. *TM if required – for example, modelling for public transport (bus, train or other) or intersection / interchange upgrades (this is not an exhaustive list).* | | | | | |

# Appendix B – Project typologies

Provided below is a broad overview of infrastructure and project types, which connect to commonly attributed benefit streams. This is a generic mapping of these impacts and is not an exhaustive list. As a result, it is possible (if not likely) that a project will have several project types bundled together and therefore will likely overlap and create additional benefit linkages. Identification of the relevant objectives, service requirements and benefits should be completed on a project-by-project basis.



*Note that not all benefit categories have been linked to the Transport Coordination Plan (TCP) Objectives due to generic categorisation and not because they do not link.*

# Appendix C – Additional or specific guidance

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| --- |
| Delete this table before issuing:  Project Manager: modify the following as appropriate.  A project may require additional or specific analysis for comparison / consistency reasons (for example, as a part of a large program or strategy) or due to project-specific complexities. If you suspect the project falls into this category and requires additional or specific guidance, please contact the PEU Economics Team (Ph: 3066 4016 Email: [PEU.Economics@tmr.qld.gov.au](mailto:PEU.Economics@tmr.qld.gov.au)).  Specific guidance on elements of the CBA can be provided to the consultant for a range of elements of the appraisal, including (but not limited to):   * Scenarios and assumptions   + Base case     - The treatment of committed but unfunded projects   + Project case * Evaluation assumptions   + Evaluation period   + Expansion factors   + Indexation   + Discount rate   + Evaluation inputs * Types of economic evaluation * Treatment of project costs * Project benefits   + Monetised benefits   + Non-monetised benefits/costs * Decision criteria * Sensitivity analysis * Other requirements   To delete these guidance boxes, right-mouse click within this box and select Delete Rows. |