Údarás Náisiúnta Iompair
National Transport Authority

The Most Common Mistakes in IGs Deliverables

Capital Programme Office
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This note, provided by the Capital Programme Office (CPO), outlines the most common mistakes identified during Infrastructure Guidelines (IGs) reviews supporting the NTA's role as approving authority. These mistakes, while eventually rectified, emphasize the importance of thorough preparation of IGs deliverables by Sponsoring Agencies and project teams before submission for NTA approval. This note is intended to support Sponsoring Agencies and project teams in the preparation of their IGs deliverables prior to submission to the NTA for approvals. Given the recent inception of the Infrastructure Guidelines, the landscape of common mistakes is evolving. This guide serves as a proactive measure to anticipate and address potential pitfalls arising from new IGs requirements. While standardized templates like the Preliminary Business Case offer a structured framework, vigilance is key to avoiding oversights. It is worth noting that this list is subject to change, reflecting ongoing observations from CPO's IGs reviews.

Contents

1. Not including Value Added Tax (VAT) in financial appraisal.
2. Not including VAT, contingency, risk and inflation in total project costs.
3. Fail to provide reasonable explanations of why rates of inflation and contingency are applied.
4. Not using demand forecast at the opening year to calculate Benefit-Cost Ratio (BCR).
5. Using complex methodologies for demand forecast of active travel schemes.
6. Objectives are not SMART (Specific, Measurable, Attributable, Realistic and Timely) at the Preliminary Business Case stage.
7. Not attaching the executive summary / submitting the document with a draft watermark.
8. Not considering the impact of operating cost.
9. Incorrect treatment of the shadow price of public funds
10. Not reporting cost ranges particularly at early project stages
11. Not undertaking Cost Benefit Analysis (CBA) for projects with an estimated cost greater than €30 million / Over reliance on Multi-Criteria Analysis (MCA) and Cost Effectiveness Analysis (CEA)
12. Overspecification of design prior to options assessment
13. Lack of detail in Ex-Post Evaluation Plans
14. Not Confirming the Approval Gate 1 assumptions in the Detailed Business Case (AG2)
15. Not including a "Climate and Environmental Performance" section in the Preliminary Business Case

1. Not including Value Added Tax (VAT) in financial appraisal.

Because VAT is excluded from the economic appraisal, it is sometimes excluded from the financial appraisal in error. Given that it is important to assess affordability from the point of view of the Sponsoring Agency and VAT is usually paid by the Sponsoring Agency, VAT should always be included in the *financial* appraisal. Exclusion leads to an incorrect Net Present Value (NPV) of the project and an underestimation of the total project cost. Thus, it is recommended that the project team should be familiar with detailed guidance for financial analysis of the Infrastructure Guidelines and use an appropriate template such as financial analysis templates for proposals which can be found on the Infrastructure Guidelines webpage.

2. Not including VAT, contingency, risk and inflation in total project costs.

At the submission stage, the project team is likely to report capital cost only rather than total costs including all cost elements such as VAT, contingency, risk and inflation. This can cause misunderstanding about the total costs of the project to the review team and confusion about the review and approval process. Thus, the project team should ensure that all cost elements are included in a table

in the final version of the business case. It is also recommended to use templates provided as part of the Cost Management Guidelines to avoid mistakes.

3. Fail to provide reasonable explanations of why rates of inflation and contingency are applied.

The NTA provide a contingency calculator and inflation bulletin for deriving contingency and inflation rates applied to the business case and the Sponsoring Agencies (SAs) are advised to use these guidelines. In particular, when the SAs do not adopt the inflation rate from the inflation bulletin, the NTA advise them to provide a reasonable explanation of why the SAs apply the other values. However, in some business cases, how the contingency rate is calculated or why the specific inflation value other than the inflation bulletin was not clearly suggested. Thus, the project team should ensure to include the source of inflation and contingency rates applied (e.g., NTA Inflation Bulletin, NTA Contingency Calculator). In particular, in case the project team applies the inflation and contingency rates whose sources are not NTA published guideline, the project team should ensure to provide the reasonable explanations and grounds.

4. Not using demand forecast at the opening year to calculate Benefit-Cost Ratio (BCR).

In the Transport Infrastructure Ireland's (TII) TEAM active travel appraisal tool, demand from the scheme's opening year is used to calculate the BCR as well as evaluate the scheme's impact. However, some projects included demand from the end of the appraisal period. This can cause overestimation of BCR of the scheme. Therefore, the project team should ensure that the demand at the scheme's opening year is applied to calculate BCR.

5. Using complex methodologies for demand forecast of active travel schemes.

Similarly, some active travel schemes often used overly complex methodologies to forecast demand that do not represent a coherent analysis of the uplift over and above the base case. This adds only complexity to the demand forecast rather than contributes to improving the demand forecast process. Relatively simple coherent approaches (e.g., Royal Canal Greenway Phase 4) can be used to forecast base case demand and the uplift due to the project using case study evidence.

6. Objectives are not SMART (Specific, Measurable, Attributable, Realistic and Timely) at the Preliminary Business Case stage.

The Infrastructure Guidelines and Transport Appraisal Framework advise that objectives should be structured in a manner that reflects SMART attributes. The Transport Appraisal Framework (TAF) also describes that it is vital that objectives are framed in a SMART manner as this informs other key aspects of the appraisal process including option development. However, in some business cases, objectives are high-level and lack of specification. High-level and less specified objectives can be a reason for insufficiently quantified and specified key performance indicators. TAF Module 4 provides detailed guidance and useful tools with examples to develop SMART objectives (please refer to 4.4 Objective Setting of TAF Module 4).

7. Not attaching the executive summary / submitting the document with a draft watermark.

The CPO informed the project managers at the internal presentation that a separate Executive Summary document should be provided which will be included in the main Board papers where the deliverable exceeds 10 pages. Also, the CPO asks to submit the final version of the documents without a draft watermark after the quality assurance process by the project team and preparers. However, one or two projects per month do not submit the executive summary with the business case and remove a draft watermark from the document for submission. This results in a delay in the review process and reporting preparation to the Capital Programme Committee and the Board. The project team should ensure that a draft watermark is removed from the final IGs deliverable to be submitted and the executive summary is included in submission email to the CPO.

8. Not considering the impact of operating cost.

Schemes often focus on the capital cost of the project and do not consider the operating cost implications over and above the base case. This can understate the overall cost implications of the project in both the economic and financial cases. The TAF clearly mentions that operating costs is one of typical costs which might occur in a transport investment (please refer to 7.1 General Principles of the Appraisal Process of TAF Module 7). Thus, the project team should check all requirements about costs in the TAF. The Infrastructure Guidelines also provides a template for financial analysis which includes operating expenses and maintenance costs. To consider their impacts, it is recommended to use the templates.

9. Incorrect treatment of the shadow price of public funds

Schemes sometimes do not accurately apply the shadow price of public funds in the economic appraisal. The shadow price of public funds should be applied to the net public financial cost of a project. However, some schemes have applied the shadow price of public funds to the non-labour costs and applied the shadow price of labour to labour costs separately. This is incorrect, both the shadow price of public funds and the shadow price of labour should be applied to publicly funded labour costs. Module 8 of the TAF provides clear guidance and cost multiplier on the shadow price of public funds (please refer to 8.3 Shadow Price of Public Funds of TAF Module 8). The project team should ensure that the use of the shadow price of public funds corresponds to this guidance.

10. Not reporting cost ranges particularly at early project stages

The NTA Project Approval Guidelines (PAGs) recommend the use of cost ranges, rather than single point estimates, particularly at early project stages, when the level of unknowns about the project/programme are at their maximum. This provides an inappropriate point of reference for subsequent cost comparisons on the project as it matures, and its full implications are better understood. The use of a cost range instead of a single point estimate should provide a higher certainty of later costs aligning with earlier estimates. A cost range can helpfully be used throughout the project life cycle, with the extent of the range narrowing as the project develops and the number of uncertainties and risks decrease.

11. Not undertaking Cost Benefit Analysis (CBA) for projects with an estimated cost greater than €30 million / Over reliance on Multi-Criteria Analysis (MCA) and Cost Effectiveness Analysis (CEA)

The TAF advices that where possible CBA should be undertaken for the economic appraisal of projects/programmes with an estimated cost greater than €30 million. However high value schemes do not always take this approach instead relying on MCA and CEA for the economic appraisal. The MCA/CEA approach is highly subjective and results in an absence of any meaningful quantified assessment of benefits. This has the potential to raise eyebrows and undermine the scheme, particularly where the MCA appears to have been poorly specified (for example by including highly correlated variables) or where the specification of the MCA is changed giving the impression that it has been adjusted to achieve a specific outcome. TAF Module 7 provides detailed guidance on appraisal techniques.

12. Overspecification of design prior to options assessment

Deliverables are sometimes submitted where it appears, from the reporting of project scope and strategic and policy alignment, that key decisions about the design of the project or programme have already been made prior to the optioneering phase. Both the IGs and TAF recommend that a range of modal/service delivery options should be considered which will address the issues and opportunities identified, with justification provided for the exclusion of certain types of intervention if applicable. Similarly project or programme objectives should not be over engineered to influence the optioneering.

13. Lack of detail in Ex-Post Evaluation Plans

Schemes are often submitted which lack detail in the planning for the Ex-Post Evaluation phase of the project. Key Performance Indicators (KPI) are usually provided however they do not always relate back to the project/programme objectives. Both the IGs and TAF recommend the development of a Logic Path Model to set out how the objectives are intended to materialise. Additionally, data

sources for measuring progress against the KPIs are not always identified. The Ex-Post Evaluation plan should set out a schedule for the evaluation exercise including specifying the timing of the baseline data collection. TAF Module 9 provides advice on Ex-Post Evaluations.

14. Not Confirming the Approval Gate 1 assumptions in the Detailed Business Case (AG2)

The IGs highlight the role of the detailed business case (DBC) in confirming the assumptions upon which the approval gate 1 approval in principle was based. This is a new requirement for approval gate 2 which is often missed. The DBC should revisit the rationale for intervention and policy alignment and confirm that it is still valid. The assumptions underpinning the economic appraisal should also be reviewed and confirmed. Assumptions include, but are not limited to, budgetary estimates (including inflation forecasts), the specification of the do minimum, the choice of scenario and changes to parameters in updated guidance.

15. Not including a "Climate and Environmental Performance" section in the Preliminary Business Case

A new requirement of the IGs is that a "Climate and Environmental Performance" section is included in the Preliminary Business Case (PBC). This new requirement is often missed. The section should assess the project/programme from a climate perspective and include an assessment of its impact on greenhouse gas emissions and the resilience of the project/programme to impacts of climate change. Climate related risks should also be discussed.