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City and County of Denver

Performance-Based Infrastructure Program

Business Case Development Guidelines



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1 Introduction

1.1 Purpose

A business case analyzes alternative project procurement methods to determine their viability. It is a tool for the City and County of Denver (the City) to decide on a procurement method.

The business case also identifies the key issues that should be considered in the procurement strategy to achieve a successful procurement.

Guided by a range of assessment parameters regarding the project, development of the business case requires compiling and analyzing a significant amount of information on the project. The assessment parameters include the enabling legal framework, technical feasibility, socioeconomic desirability, commercial viability, value for money, bankability, and other similar factors.

An effective business case is used to substantiate one delivery method over another, relative to at least the following evaluation criteria:

- Affordability (the City's threshold for public contribution) and fiscal responsibility
- Optimum price for the desired risk transfer
- Value for money (VfM)

Additional evaluation criteria, such as acceleration of delivery and improved level of service of the infrastructure, are often desirable. The business case establishes a comprehensive and tailored set of evaluation criteria to form the basis for deciding on the preferred procurement option.

Procurement evaluation criteria are discussed in more detail in Section 4.1.

This Business Case Development Guidelines document describes how to develop an effective business case. It provides an overview of the chapters that should be included in the business case, the objectives for the content of each chapter, the sources of information to be used, and the questions that should be addressed.

The Value for Money Guidelines and Project Risk Assessment Guidelines should also be consulted while preparing a business case.

This document should be referred to in preparation for and during Stage 3: Structuring (see Figure 1).

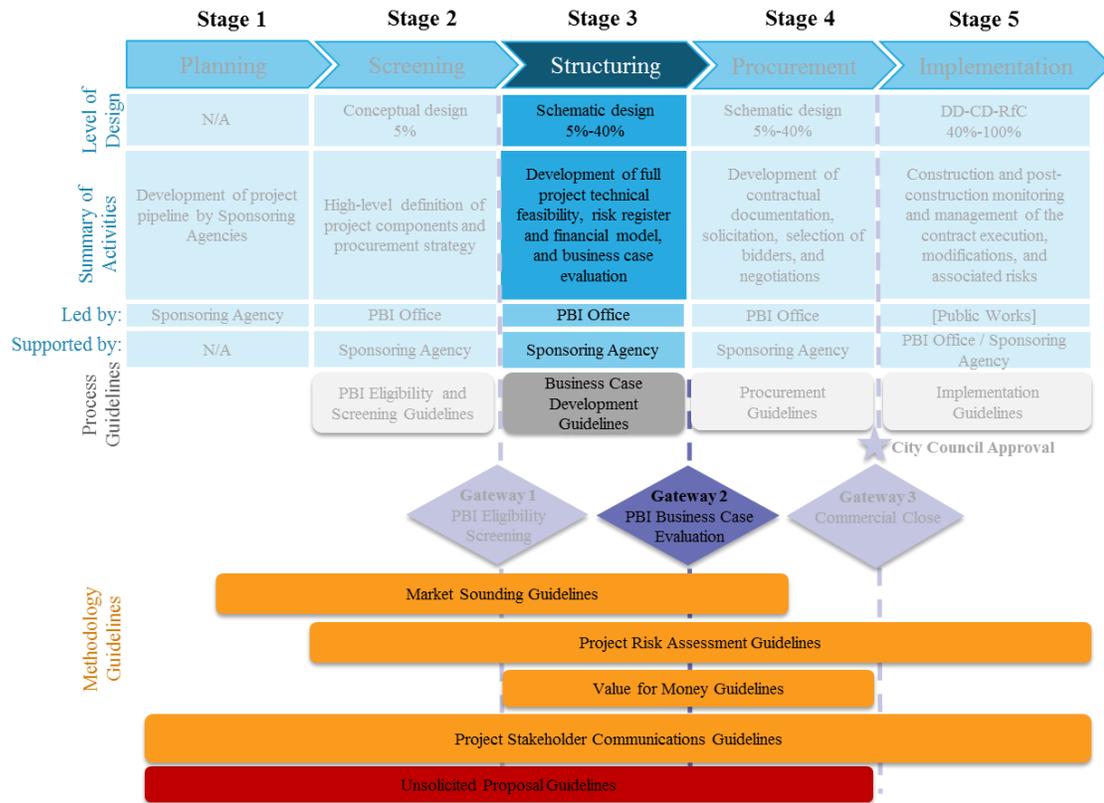


Figure 1: Structuring Stage of the PBI Program

1.2 Intended Audiences

This document is intended for the following audiences to develop a project’s business case:

- The Performance-Based Infrastructure (PBI) Office, as it leads the development of the business case in coordination with the Sponsoring Agency
- Sponsoring Agencies, as they assist the development of the business case for each of the projects they submit that pass the PBI Eligibility Screening (Gateway 1)
- Proposers developing Unsolicited Proposals
- The general public and other project stakeholders, as a transparent overview of the process by which the PBI procurement of projects is evaluated on an ongoing basis

1.3 Process of the Structuring Stage

The PBI Office is responsible for leading the development of the business case, in close coordination with the Sponsoring Agency for guidance and assistance. The Sponsoring Agency must first submit an Intent to Submit Form to notify the PBI Office of potential resource needs.

A Project Liaison from the PBI Office is then assigned to help guide and support the risk assessment and business case development. The Project Liaison supports communication and cooperation among the Sponsoring Agency, the Performance Infrastructure Committee (PIC), the City Attorney's Office, and the Department of Finance.

The Sponsoring Agency works with the Project Liaison to identify its needs for business case preparation and specialized external advisors for pre-feasibility/feasibility studies and business case preparation.

Relevant City departments should be engaged in the same way as in traditional project development, e.g., the Real Estate Division to assist with assessing site availability, Public Works to help with designs and constructability, and the City Attorney's Office to develop the draft Term Sheet.

Significant effort is required to develop a business case and submit it for evaluation. Therefore, it is highly recommended that a preliminary business case be developed and shared with the PIC for feedback and direction during Stage 3 of the Program.

These preliminary findings can be used to determine whether to continue developing the business case. For projects that do not show promise delivering VfM if pursued as a PBI, the Sponsoring Agency may elect to further develop the business case with new project information and move forward through the traditional Capital Improvement Plan process.

Once the business case is complete, the PBI Office submits it along with a summary recommendation to the PIC for review and comment. If the PIC accepts the PBI Office's recommendation, then the PBI Office prepares the Notice of Intent to Procure PBI Services, which includes the following:

1. Business case executive summary and findings
2. Staff report and recommendation
3. Draft Term Sheet
4. Form signed by each member of the PIC and the head of the Sponsoring Agency validating their review and approval of the materials contained in the Notice of Intent to Procure PBI Services package

The PBI Office also recommends the proposed members of the Procurement Team and the entities that see the project through implementation, as well as the authorities of these members and entities.

These documents are then submitted to the Mayor for approval to proceed to Stage 4: Procurement (Gateway 2). The PBI Office subsequently briefs the City Council on the decision.

Figure 2 illustrates the basic structuring process in a flow diagram, with optional steps surrounded by a dashed line.

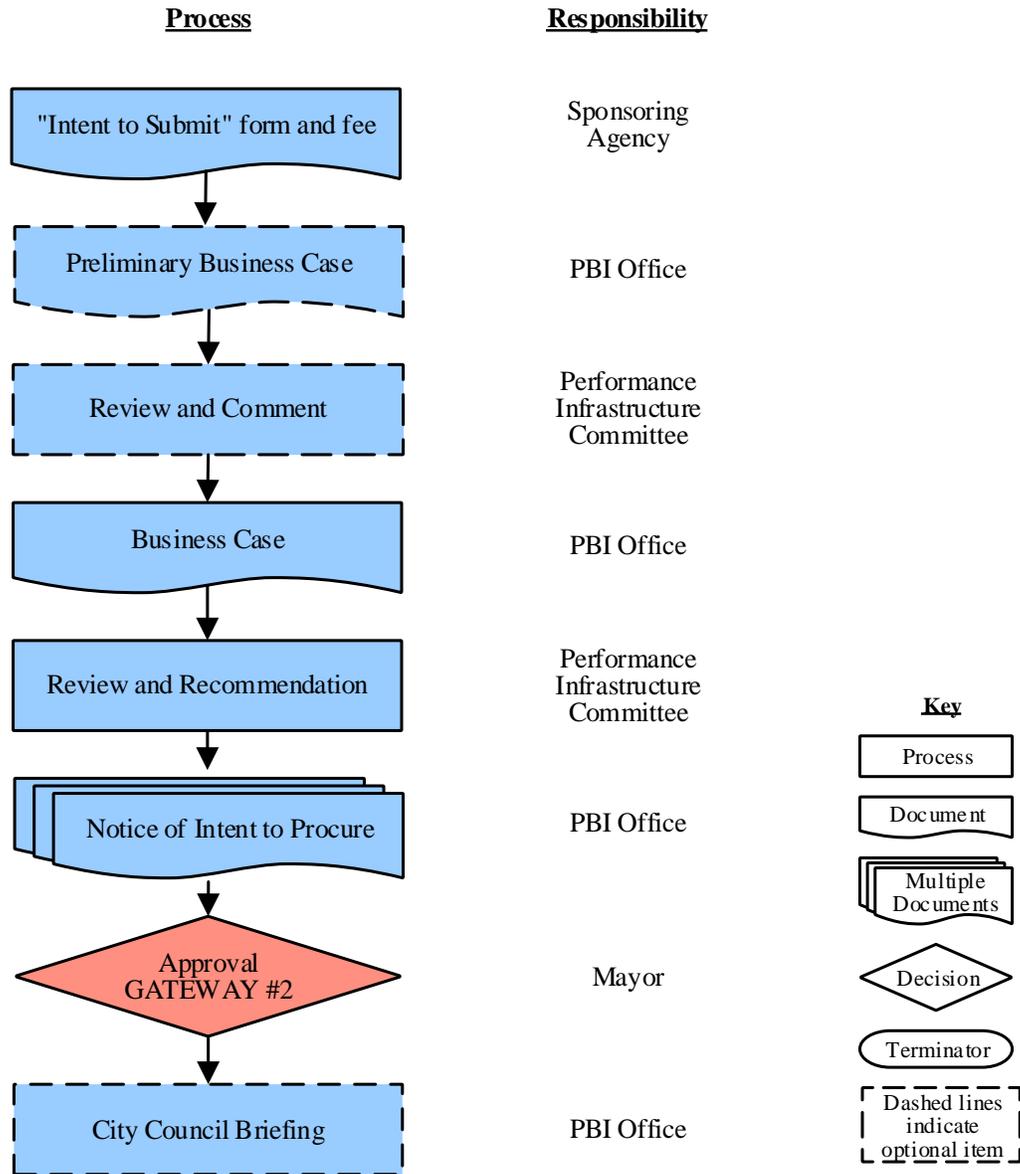


Figure 2: Structuring Stage process flow diagram

Table 1 lists potential data sources needed to develop the business case, along with the parties responsible for providing and analyzing the data sources. The analyses listed are not exhaustive, and additional applicable analyses should be adequately developed for the business case.

Table 1: Recommended level of development of business case inputs and responsibilities

	Level of Development		Responsibilities	
	Preliminary Business Case	Comprehensive Business Case	Sponsoring Agency	PBI Office
Project Scope, Desirability, Feasibility				
Determine project fit with municipal plan	●	●	Lead	Support
Review institutional capacity of Sponsoring Agency	●	●	Lead	Support
Define project scope	◐	●	Lead	Support
Conduct cost-benefit analysis	◐	●	Lead	Support
Conduct environmental analysis	◐	●	Lead	Support
Conduct demand and market study	◐	●	Lead	Support
Conduct jurisdictional studies	●	●	Lead	Support
Conduct stakeholder engagement	○	◐	Lead	Support
Develop technical reports (engineering, design, geotech.)	◑	◐	Lead	Support
Conduct funding and financing study	◐	◑	Lead	Support
Provide investment recommendation	◐	●	Lead	Support
Qualitative Procurement Assessment				
Determine compliance with PBI legislation	●	●	Support	Lead
Determine procurement objectives and goals	◑	●	Lead	Support
Qualitative trad. procurement option assessment	●	●	Lead	Support
Qualitative PBI assessment	●	●	Support	Lead
Engage industry (market sounding/RFI)	○	●	Support	Lead
Prepare risk register	◐	◑	Shared	Shared
Provide qualitative procurement recommendation	◐	●	Support	Lead
Quantitative Procurement Analysis				
Prepare capex	◐	◑	Lead	Support
Prepare opex	◑	◑	Lead	Support
Prepare construction schedule	◑	◑	Lead	Support
Conduct funding and revenue analysis	◐	◑	Lead	Support
Prepare risk allocation and mitigation analysis	◑	◑	Shared	Shared
Conduct affordability analysis	◑	●	Support	Lead
Financing structure and model inputs	◑	●	Support	Lead
Value for money analysis	◑	●	Support	Lead
Provide quantitative procurement recommendation	◐	●	Support	Lead
Integrated Recommendation				
Provide integrated recommendation	◐	●	Support	Lead

2 Business Case Outline

A business case comprises five key chapters:

- **Executive Summary** – Explains how the project relates to the City’s policies and strategic and operational plans, details how it complies with the legal authorizations and framework, and provides an overall justification to move forward with the project. A summary of the project’s compliance with the PBI Screening Application (PSA) criteria may be included, as well as a summary of the critical path to take the project all the way through Procurement Stage, highlighting schedules and resources needed.
- **Chapter A: Project Scope, Desirability, and Feasibility** — Determines whether the project is feasible, affordable, and desirable, irrespective of its procurement method. This chapter clearly defines the project and substantiates its importance. The work in this phase is the responsibility of the Sponsoring Agency, with the support and guidance of the PBI Office. The outcome of this chapter is a decision from the Sponsoring Agency to pursue the project.
- **Chapter B: Qualitative Procurement Analysis** — Defines the evaluation criteria for the selection of a preferred procurement method and evaluates the procurement options from a qualitative standpoint, based on the project’s technical features and the Sponsoring Agency’s procurement objectives. Responsibilities in this phase are shared between the Sponsoring Agency and the PBI Office, with the Sponsoring Agency largely providing supporting information and the PBI Office conducting the evaluation. This chapter ends with a qualitative procurement recommendation.
- **Chapter C: Quantitative Procurement Analysis** — Evaluates the procurement options from a quantitative standpoint, based on the Sponsoring Agency’s affordability limit, fiscal responsibility, and risk appetite. Responsibilities in this phase are shared between the Sponsoring Agency and the PBI Office, with the Sponsoring Agency largely providing supporting information and the PBI Office conducting the evaluation. This chapter ends with a quantitative procurement recommendation, which includes the VfM.
- **Chapter D: Integrated Recommendation** — Summarizes the findings from Chapters A, B, and C, and applies the evaluation criteria defined in Chapter B to the procurement options. Using an evaluation matrix of the options, this chapter presents an informed recommendation for the preferred procurement method. This chapter ends with an integrated procurement recommendation and identifies the key strategic issues that need to be resolved in the next stage to successfully implement it.

The following sections address in further detail the specific objective, sources of information, and questions to consider for each chapter. Figure 3 illustrates the outline of the business case.

Throughout this document, “chapters/subchapters” refers to chapters of the business case to be developed and “sections/subsections” refers to sections of this specific guideline.

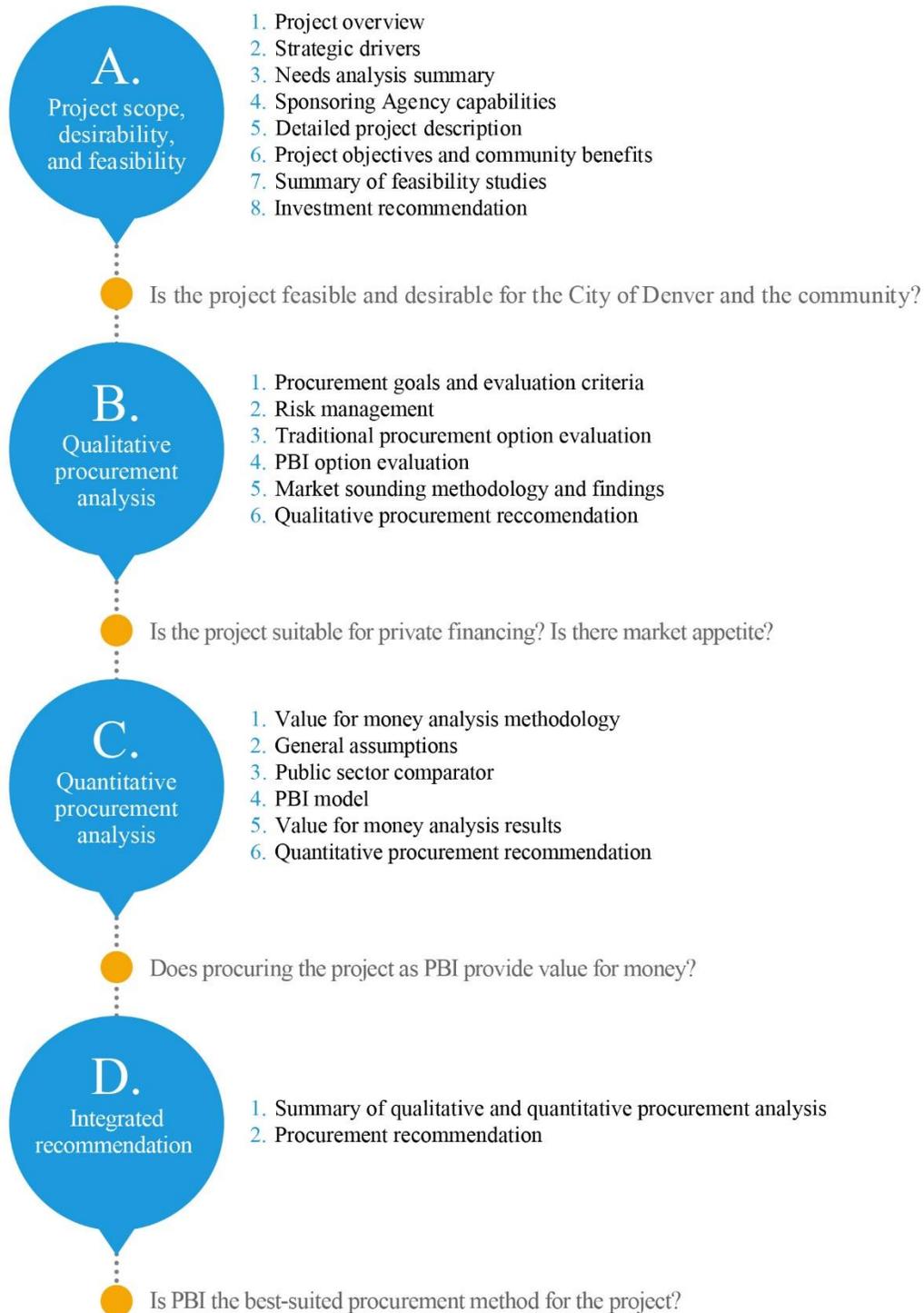


Figure 3: Business case outline

3 Chapter A: Project Scope, Desirability, and Feasibility

Chapter A of the business case provides the PBI Office with background information regarding the project and its desirability for both the City and the community. Overall, this chapter of the business case justifies the need for the project and demonstrates the adequacy of the project based on the issues at stake.

Chapter A is broken down into eight subchapters, which altogether analyze the suitability of the project.

- **Subchapter A.1: Project Overview** — Provides a summary description of the project parameters listed in Subchapters A.5, A.6, and A.7. Additionally, it may include information pertaining to project location and images/maps so the reader quickly understands what is being proposed.
- **Subchapter A.2: Strategic Drivers** — Discusses the project’s strategic alignment with the City’s policy and priorities for capital investment projects and shows how the project can address specific needs or gaps related to the current provision levels of relevant public service(s) and infrastructure.
- **Subchapter A.3: Needs Analysis Summary** — Describes the community’s needs for the project and quantifies these needs whenever possible. A solid needs analysis demonstrates the short-, medium-, and long-term impacts of maintaining the status quo and describes how the project provides solutions to the stated challenges. This subchapter also identifies and evaluates, at a high-level, the risks associated with the project’s development.
- **Subchapter A.4: Sponsoring Agency Capabilities** — Describes the Sponsoring Agency’s capabilities for implementing the project, from an administrative, legal, managerial, and financial perspective. This subchapter must demonstrate the Sponsoring Agency’s ability to manage, process, evaluate, negotiate, and implement the project.
- **Subchapter A.5: Detailed Project Description** — Details the scope of the project being considered. It describes the project’s engineering features and technical elements, detailed program, cost estimates, funding plan, site issues, legal and regulatory aspects, and detailed schedule.
- **Subchapter A.6: Project Objectives and Community Benefits** — States the Sponsoring Agency’s general and project-specific objectives, and evaluates the project’s economic, social, and environmental impacts with regards to these goals.
- **Subchapter A.7: Summary of Feasibility Studies** — Summarizes all the feasibility studies (technical, commercial, fiscal, environmental, legal, etc.) conducted in earlier phases of the project formulation. It discusses the project’s impacts against the Sponsoring Agency’s objectives and

affordability, as well as against the community's potential support for such a project.

- **Subchapter A.8: Investment Recommendation** — Summarizes the key findings of this chapter and discusses the rationale for pursuing the project and advancing to a qualitative procurement assessment.

3.1 Subchapter A.1: Project Overview

Objective

This subchapter of the business case provides the executive summary of the project.

Sources of Information

Sources of information include but are not limited to planning documents, screening documents, technical studies, and the funding plan.

Questions to Consider

- Who is the Sponsoring Agency?
- Where is the project located and what jurisdictions are impacted?
- What are the components of the project? Phasing?
- What is the estimated time period for development of the project?
- What is the total project cost? By phase?

3.2 Subchapter A.2: Strategic Drivers

Objective

This subchapter of the business case addresses the following:

- The project's fit within the City's relevant strategic plans and objectives
- The policy, business, and/or socioeconomic issues the project aims to address and the expected impacts of each driver

Sources of Information

Sources of information include but are not limited to legislative and policy documents, environmental studies, stakeholder input, public studies, media coverage, and research studies.

Questions to Consider

- Is the project consistent with public policies and priorities of the City and Sponsoring Agency?
- Does the project align with the City's long- and/or medium-term strategic plan?
- Does the project address public service and/or infrastructure needs?
- What is the estimated time period for development of the project?
- What entities need to be involved with the development of the project?

3.3 Subchapter A.3: Needs Analysis Summary

Objective

This subchapter of the business case addresses the following:

- The need for the project from the community's perspective
- Qualitative and quantitative impacts of maintaining the status quo, and expected project outcomes
- High-level assessment of the risks associated with the project's development and potential mitigation measures

Sources of Information

Sources of information include but are not limited to economic impact studies, research analyses, media coverage, community publications and inputs, risk assessment, panels of experts, and advisors.

Questions to Consider

- Is the project coherently linked with the drivers and needs assessment?
- Does the project effectively address the community's needs?
- Is the project likely to be supported by the community?
- What are the risks inherently associated with the project's development, and can these be effectively mitigated?

3.4 Subchapter A.4: Sponsoring Agency Capabilities

Objective

This subchapter of the business case addresses the following:

- Experience and qualification of the project team and its advisors, with regards to delivering similar capital projects
- Governance structure and decision-making processes within the project team
- Legal rights of the Sponsoring Agency for delivering capital projects
- Statement of leadership and authority for undertaking the project
- Applicability of using an affordability limit for the procurement, e.g., developing ring-fenced budget dedicated to the project
- Consolidated project budget and potential alternative funding sources
- Future budgetary commitments of the Sponsoring Agency and potential impacts on the project's budget
- List of the project's stakeholders (including public agencies), describing the project's impact on and the Sponsoring Agency's relationship with each stakeholder

Sources of Information

Sources of information include but are not limited to mission and vision statements, staff resumes, legislative and policy documents, operating and capital budgets, planning documents, panels of experts, and advisors.

Questions to Consider

- Can the project be delivered on time given the project team's qualifications and budget?
- Does the Sponsoring Agency have sufficient resources to cover prefeasibility and feasibility studies?
- Do City departments, including the Sponsoring Agency and General Services, have the capacity to continuously perform operations and maintenance of the project during the project's lifespan?
- Does the project team have the leadership and authority required to sponsor the project?
- If applicable, is the Sponsoring Agency's affordability limit reasonable?
- Is the Sponsoring Agency's budget ring-fenced for the project?

3.5 Subchapter A.5: Detailed Project Description

Objective

This subchapter of the business case addresses the following:

- Project relevance with regards to the strategic drivers and needs analysis
- Engineering and technical elements
- Site issues (land use rights, zoning rights, geotechnical risks, environmental issues, planning or municipal requirements, etc.)
- Project timeline (planning, design, construction and operating horizons, and timing-related risks)
- Risk evaluation (project-related, procurement, environmental, approval/licensing, etc.)
- Estimated capital expenditures, maintenance and operational costs over the project lifecycle, etc.
- Funding and affordability considerations (funding sources, funding gap analysis, potential payment mechanisms, etc.)

Sources of Information

Sources of information include but are not limited to capital and asset management plans, operating and capital budgets, technical studies (geotechnical, archaeological, design, engineering, etc.), planning documents, legal parcel descriptions, environmental assessment process, cost estimating studies, functional program studies, stakeholder input, panels of experts, and advisors.

Questions to Consider

- Is the project relevant for the City and the community given the needs assessment?
- Given the supporting studies and findings, is the project likely to be accepted by the community?
- Was there enough planning and due diligence performed at this point of the business case?
- Is the project's cost adequate given the Sponsoring Agency's affordability considerations (including use of an affordability limit, if applicable) and funding gap analysis?
- Have key risks been identified, and can they be reasonably mitigated?

3.6 Subchapter A.6: Project Objectives and Community Benefits

Objective

This subchapter of the business case addresses the following:

- Sponsoring Agency's general objectives with regards to the project, from a policy, political, economic, and/or social standpoint
- Sponsoring Agency's desired outcomes specifically related to the project
- Project economic and social benefits, both quantitative (e.g., economic output growth, fiscal revenue generation, employment creation, travel time savings, traffic reduction, CO₂ emissions avoidance) and qualitative (e.g., economic development considerations, promotion of soft transportation modes)
- Project environmental benefits
- Preliminary community outreach plan describing the project's effects on the neighborhood and the city

Sources of Information

Sources of information include but are not limited to cost-benefit analyses, economic impact studies, fiscal impact studies, environmental assessment reports, jurisdictional studies, stakeholder input, panels of experts, and advisors.

Questions to Consider

- Are the objectives for the project clearly stated and the process for their development clearly described?
- Are the objectives realistic and achievable?
- Have communities and interest groups that the project affects been identified?
- If so, what are the negative and positive impacts to these groups? Does the project create economic disparity?
- Has a process been planned to track and measure benefits, impacts, and outcomes?
- Is the project increase jobs and economic opportunities for residents?
- Does the project enhance the economic climate and attract or retain businesses in the city?
- Is the project increase fiscal revenue for the City?
- Does the project comply with the City's requirements regarding workforce and environmental standards?

- Is there public support for or opposition to the project? Could public outreach increase public support for the project?
- Is there business community support for or opposition to the project? Could public outreach increase business community support for the project?
- Is the project of regional significance? If so, have relevant external jurisdictions been engaged and do they support the project?

3.7 Subchapter A.7: Summary of Feasibility Studies

Objective

This subchapter of the business case provides a summary of the following feasibility studies and evaluation of the project's fit with the Sponsoring Agency's objectives:

- Fiscal and financial feasibility study (projects costs, revenue sources, funding sources, and funding gap analysis)
- Legal feasibility study (rights of the Sponsoring Agency and analysis of regulatory matters — tax legislation, labor legislation, environmental legislation, competition legislation, building codes, etc.)
- Technical feasibility study (engineering studies, conceptual design, geotechnical study, etc.)
- Environmental and entitlement feasibility study (environmental impacts, zoning rights, land ownership, land availability, etc.)

Sources of Information

Sources of information include but are not limited to feasibility studies, cost-benefit analyses, environmental assessment reports, jurisdictional studies, council resolution, legal opinion, technical reports (engineering, geotechnical, design, etc.), risk assessment, funding and affordability plan, and financial model.

Questions to Consider

The questions to consider are listed in Table 2.

Table 2: Feasibility study questions for consideration

Feasibility theme	Questions to consider
Demand/market study	<ul style="list-style-type: none"> Does the project generate revenue? Are there revenue sources that could support the project throughout the entire lifecycle?
Funding and financing	<ul style="list-style-type: none"> What is the estimated range of total capital expenditures? Does the project have enough revenue generation to potentially offset public funding requirements? Can any public funding requirements be structured to not increase the City's debt? Is the project consistent with federal requirements and agreements for federal funding?
Technical analysis	<ul style="list-style-type: none"> Is the project's technical approach based on proven technology? If so, can performance be measured? Does the project require the use of technology that is evolving constantly? Is the size and scope of the project fully understood by the Sponsoring Agency?
Environmental analysis	<ul style="list-style-type: none"> Has the project received any environmental approvals? If not, is it in the environmental review phase and can it be completed in a reasonable time? Is the project consistent with state and federal environmental statutes and regulations? Does the project have unusual or special entitlement requirements or issues?
Legal analysis	<ul style="list-style-type: none"> Would delivering the project through a PBI comply with all local, state, and federal laws? Would legislative additions or changes be needed to successfully procure the project, such as user fees, use of public funds, limits on concession terms, and a mixture of funds?

3.8 Subchapter A.8: Investment Rationale

Objective

This subchapter of the business case addresses the following:

- Project fit with strategic drivers
- Project fit with needs assessments

- Technical, financial, administrative, legal, and managerial capabilities of the Sponsoring Agency, the City, and the project team for delivering, implementing, and managing the project
- Project description
- Project fit given the Sponsoring Agency’s objectives and benefits for the community
- Project feasibility

Sources of Information

This summary builds on the documents, studies, and analyses referred to in Chapter A.

Questions to Consider

- Is the rationale for the investment decision clear?
- Is the project desirable and feasible to advance to consideration of procurement options?

4 Chapter B: Qualitative Procurement Analysis

The purpose of **Chapter B** of the business case is to conduct a qualitative comparative procurement analysis. It is divided into six subchapters, which altogether analyze whether the project is well-suited for PBI delivery. This analysis may also be called qualitative value for money.

- **Subchapter B.1: Procurement Goals and Evaluation Criteria** — Illustrates how the procurement options under consideration help accomplish (or not) the defined project objectives. This subchapter summarizes the intended qualitative impacts addressed in the rest of the chapter. As an optional approach, each project objective may be weighted according to its associated level of importance.
- **Subchapter B.2: Risk Management** — Outlines the risk registers for the two procurement options considered. This subchapter consists of an iterative exercise between the Sponsoring Agency and the PBI Office throughout the qualitative VfM. The final risk allocation matrices for each procurement option considered are critical inputs when selecting a procurement method for the project.
- **Subchapter B.3: Traditional Procurement Option Evaluation** — Describes the processes, risks, and potential project impacts of the traditional delivery method throughout the design, engineering, procurement, construction, and

operation phases of the project. It describes how these phases are generally managed and flags relevant issues with similar projects procured traditionally.

- **Subchapter B.4: PBI Option Evaluation** — Describes the processes, risks, and potential project impacts of PBI procurement throughout the design, engineering, procurement, construction, and operation phases of the project. Similar to the previous subchapter, it explains how these phases would be managed and describes relevant issues with similar projects procured under PBI. This subchapter also expands on the overall fit of the project for private financing, based on its technical, engineering, technological, and commercial merits.
- **Subchapter B.5: Market Sounding Methodology and Findings** — Describes the methodology and the results of the outreach effort conducted to evaluate the private sector’s interest in and parameters for the project. The input from the private sector is a critical step when conducting a qualitative VfM. This subchapter demonstrates that the feedback collected on the project results from a well-organized, high-quality sounding exercise.
- **Subchapter B.6: Qualitative Procurement Recommendation** — Summarizes the findings of the previous subchapters and evaluates both procurement options against the evaluation criteria. The recommendation stems from the results of the comparative analysis of the two delivery methods.

4.1 Subchapter B.1: Procurement Goals and Evaluation Criteria

Objective

This subchapter of the business case addresses the following:

- Summary of the Sponsoring Agency’s goals, as defined in the Detailed Project Description (see Sections 3.5 and 3.6)
- Definition of the Sponsoring Agency’s evaluation criteria for the selection of a preferred procurement method (e.g., risk transfer, acceleration of delivery, introduction of new technologies and innovation, construction cost and schedule certainty, use of public funds, optimizing lifecycle costs, level of service for operations and maintenance)

Sources of Information

Sources of information include but are not limited to policy documents, academic literature, procurement guidelines, feasibility studies, risk analysis, technical studies, stakeholder input, panels of experts, and advisors.

Questions to Consider

- Are the evaluation criteria clearly stated?
- Are the evaluation criteria and the scoring methodology well articulated? Can an informed decision be made on this basis?

4.2 Subchapter B.2: Risk Management

Objective

This subchapter of the business case addresses the following:

- Summary of data output from workshops and meetings held to develop the risk register for the procurement options considered
- Risk-allocation matrices for each procurement option

Sources of Information

Sources of information include but are not limited to the Project Risk Assessment Guidelines, academic literature, market sounding findings, risk allocation matrices for similar projects, panels of experts, and advisors.

Questions to Consider

- Is the risk register comprehensive? Have all the risks been identified?
- Are the risk allocation matrices detailed enough to reflect the current state of the development of the project?
- Are there clear procurement options that best mitigate and/or transfer risk?

4.3 Subchapter B.3: Traditional Procurement Option Evaluation

Objective

This subchapter of the business case addresses the following:

- Benefits and drawbacks of a traditional procurement option based on the Sponsoring Agency's objectives for the project
- Implications of the traditional procurement method on the design, engineering, procurement, construction, and operation phases of the project based on the Sponsoring Agency's historical performance

- Benefits and drawbacks of a traditional procurement option based on the Sponsoring Agency's objectives related to the procurement of the project
- Preliminary risk mitigation measures and processes that could prevent the traditional procurement method's negative impacts on the project
- Assessment of the traditional procurement option based on the evaluation described in Subchapter B.1

Sources of Information

Sources of information include but are not limited to Sponsoring Agency and relevant public entities staff, procurement documents, historical procurement data, academic literature, survey of traditional procurement approaches used by other agencies, panels of experts, and advisors.

Questions to Consider

- What are the benefits of traditional procurement for the project itself? What are the disadvantages?
- What are the impacts of traditional procurement delivery on the project in the short, medium, and long run?
- How does traditional procurement align with the Sponsoring Agency's objectives for the delivery of the project?
- Can the risks associated with traditional delivery be efficiently managed and mitigated?
- Is the evaluation of the traditional procurement method against the evaluation criteria balanced, fact-based, and transparent?

4.4 Subchapter B.4: PBI Option Evaluation

Objective

This subchapter of the business case addresses the following:

- Benefits and drawbacks of a PBI procurement method based on the Sponsoring Agency's objectives for the project
- Implications of a PBI procurement method on the design, engineering, procurement, construction, and operation phases of the project
- Suitability of the project for private financing
- Preliminary risk mitigation measures and processes that could prevent the negative impacts of a PBI procurement method

- Assessment of PBI procurement option(s) based on the evaluation in Subchapter B.1

Sources of Information

Sources of information include but are not limited to precedent transactions, external research, academic literature, experience with and knowledge of reputable transactions, panels of experts, and technical/financial advisors.

Questions to Consider

- Is the evaluation of the PBI procurement method against the evaluation criteria balanced, fact-based, and transparent?
- How can criteria from the PSA in Stage 2 be more comprehensively assessed? Expanded PSA questions are provided in Table 3.

Table 3: Expanded PSA questions for the business case

Evaluation theme	Questions to consider
Risk transfer	<ul style="list-style-type: none"> • Would a PBI procurement method allow for effective risk transfer to the private sector? • Can risk be allocated to the party best able to mitigate it at an affordable cost to the City? • Are there risks that cannot be transferred to the private sector? • Are there risks that a PBI procurement method could help transfer to the private sector over the project’s lifecycle? • Are there any risks unique to the project that may create a significant financial risk for the City?
Service availability and quality	<ul style="list-style-type: none"> • Have key performance indicators and specifications regarding the availability of the service and project performance, as well as a system of payment deductions been identified?
Potential advantages of PBI over traditional procurement	<ul style="list-style-type: none"> • Is there sufficient evidence to evaluate the benefit in terms of cost and schedule to develop a project with a PBI procurement method? • Is there sufficient evidence to evaluate the benefit in terms of operations and lifecycle maintenance to develop a project with a PBI procurement method?
Private sector capacity and appetite	<ul style="list-style-type: none"> • Is the project financially viable such that it can attract private financing? • Does the market include private firms with the capacity to participate in a PBI procurement? • Is there private sector interest in similar projects? • Is the project size appealing for the private sector? • Is there sufficient private sector interest to generate a competitive environment for PBI procurement?

Evaluation theme	Questions to consider
Project size	<ul style="list-style-type: none"> • What is the estimated investment amount? Is the project of sufficient size to justify its transaction costs?
Self-financing	<ul style="list-style-type: none"> • Could the project potentially generate enough revenues to be self-financing (i.e., without or with limited public contributions)?
Potential to bundle	<ul style="list-style-type: none"> • Has the project been broken up due to funding challenges? • If so, is combining the projects into a larger, bundled PBI procurement more beneficial and/or feasible?

Table 4: Additional PBI procurement considerations

Evaluation theme	Questions to consider
Lifecycle cost analysis	<ul style="list-style-type: none"> • Would a PBI procurement method create efficiencies that would optimize the project's lifecycle cost? • Can project revenues support the project's lifecycle cost? • Does the project involve unique elements that innovation and a lifecycle asset management approach can help solve?
Funding and financing	<ul style="list-style-type: none"> • Would PBI procurement require a contribution of public funds? • Does a PBI procurement method allow public funds to be redirected to other projects of public value? • Are external sources of funding or financing available for a PBI procurement and not through a traditional one, such as Transportation Infrastructure Finance and Innovation Act (TIFIA) loans or Private Activity Bonds (PABs)? • What are the sources of revenue to pay back the project's financing? Are user-paid fees feasible and/or desirable? • Is the project financially attractive to the private sector?
Hiring requirements	<ul style="list-style-type: none"> • What proportion of the jobs expected to be created by the project would be local? What proportion would be during the construction phase versus during the operations and maintenance phase? • What proportion of the jobs expected to be created by the project would meet living wage standards? • What is the potential participation of Small, Women/Minority, and Disadvantaged Business Enterprises in the project?

4.5 Subchapter B.5: Market Sounding Methodology and Findings

Objective

This subchapter of the business case addresses the following:

- Market sounding plan
- Feedback from the private sector regarding the project's structure, assumptions, and procurement outcomes
- Evaluation of the market's appetite for the project

Sources of Information

Source of information include but are not limited to the Market Sounding Guidelines, expressions of interest and requests for information of similar projects, previous contacts with the market, industry research and academic literature, benchmarking studies, proposers of precedent transactions, panels of experts, and advisors.

Questions to Consider

- Is the market sounding plan adequate?
- Is the outreach diverse enough to provide a realistic and unbiased assessment of the market's appetite for the project?
- Does the market include private firms with the capacity to participate in the delivery of the project?
- Have there been any signs of interest by the private sector for similar projects?
- Do some features of the project (technical, financial, technological, social, economic, legal, etc.) impact the project's appeal to the private sector? Can these issues be resolved?
- Is the private sector interest significant enough to generate a competitive environment for PBI procurement?

4.6 Subchapter B.6: Qualitative Procurement Recommendation

Objective

This subchapter of the business case addresses the following:

- Summary of previous subchapters' findings
- Results for each procurement option considered against project's objectives
- Recommended procurement options to be conducted in the quantitative VfM analysis

Sources of Information

Sources of information for this subchapter are drawn from the supporting documents and findings from the previous chapters.

Questions to Consider

- Is the evaluation of each procurement method against the evaluation criteria balanced, fact-based, and transparent?
- Are the appropriate procurement methods evaluated?
- Is there potential value in procuring through a PBI method?
- Should a quantitative procurement analysis be performed?

5 Chapter C: Quantitative Procurement Analysis (Value for Money)

Chapter C of the business case explains the development and assumptions behind the risk-adjusted financial models of a Public Sector Comparator or equivalent (PSC) and a PBI Model. The cash flows of the financial models are then discounted to determine the relative VfM of the PBI and traditional procurement methods at a common point in time. The results are then translated into a recommendation on the procurement approach providing the best value to the City.

Chapter C of the business case is divided into six subchapters:

- **Subchapter C.1: Value for Money Analysis Methodology** — Describes the methodology used to conduct the VfM analysis, in particular the development of the PSC, or its equivalent, and the PBI Model or models being considered.

- **Subchapter C.2: General Assumptions** — Lays out the decisions, assumptions, and logic for the financial model and focuses on the selection of the appropriate discount rate and indexes.
- **Subchapter C.3: Public Sector Comparator** — Presents, describes, and justifies the development of the cost components of a PSC. These represent the cash flows of the project procured with a traditional method, or an equivalent alternative.
- **Subchapter C.4: PBI Model** — Presents, describes, and justifies the development of the cost components of a PBI Model, including any variants. These represent the cash flows of the project procured with this method.
- **Subchapter C.5: Value for Money Analysis Results** — Presents the result of the VfM analysis and the sensitivity of key inputs and assumptions.
- **Subchapter C.6: Quantitative Procurement Recommendation** — Provides a recommendation and the rationale for why the project should be delivered through a particular procurement option, based on the results of the VfM analysis.

5.1 Subchapter C.1: Value for Money Analysis Methodology

Objectives

This subchapter of the business case addresses the following:

- Methodology used to conduct the VfM analysis and the development of the PSC (or equivalent) and PBI Model(s)
- Any deviation in assumptions and methodology from the Value for Money Guidelines provided by the City

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, PBI Office advice, experienced financial and transaction advisor recommendations, and studies from reputable institutions and agencies.

Questions to Consider

- Are the methodology and assumptions used in the analysis consistent with the Value for Money Guidelines? If not, are deviations clearly justified and referenced from reliable sources?
- Are all key components of the methodology and assumptions presented? If not, why are certain key components excluded?

- Does this chapter provide enough information to understand the rationale behind conducting a VfM analysis?

5.2 Subchapter C.2: General Assumptions

Objective

This subchapter of the business case addresses the following:

- General model inputs such as PBI contract term and periodic definition (annually, quarterly, etc.)
- Correlation of certain indexes to components of the cash flow, e.g., linking the operation and maintenance cost to the Consumer Price Index, if appropriate
- Discount rate and the rationale behind using certain methodology

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, PBI Office advice, experienced financial and transaction advisor recommendations, panels of experts, advisors, credible macroeconomic databases and forecasts, and industry and local benchmarking.

Questions to Consider

- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?
- Are the assumptions consistent with the Value for Money Guidelines and within appropriate ranges stated in the guidelines, if applicable?

5.3 Subchapter C.3: Public Sector Comparator

The PSC is developed to represent the cash flows through the life of the project delivered through a traditional government procurement process (see Section 4.3). The traditional delivery is typically the design-bid-build (DBB) method, but if the public sector were to deliver through a different traditional method, such as a design-build or another standard process, the PSC would need to reflect that approach.

To adequately compare the PSC with a PBI Model, the PSC should capture costs incurred beyond the base costs of construction, operations, and routine maintenance. These costs typically include lifecycle costs, financing cost, transaction costs, efficiency/inefficiency adjustments, residual value adjustments, and retained risk adjustments.

For more details on the development of the PSC, refer to the Value for Money Guidelines.

5.3.1 Base Cost Objective

This subchapter of the business case addresses the following:

- Base costs developed for the PSC, such as construction costs (hard and soft costs), contingency, facility management costs, operation and maintenance cost, lifecycle costs, and other costs such as utility connections and land acquisition
- Layout and description of the timing of cash flows, such as construction schedule (S-curve), funding, operation and maintenance, lifecycle replacement, and revenue
- Key assumptions that feed into quantifying base cost components
- Quantified inefficiency and risk premium adjustments related to residual value, operation and maintenance, revenue, and lifecycle, when applicable

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, cost and schedule estimates, feasibility studies, lifecycle assessments, PBI Office advice, external studies from credible institutions and agencies, and advisor recommendations.

Questions to Consider

- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?
- What level of accuracy are the cost estimates?
- What are the cost estimates derived from (schematic design, output specifications, etc.)?
- Do the assumptions comply with the Value for Money Guidelines, and are they within appropriate ranges stated in the guideline, if applicable?

5.3.2 Funding Assumptions

Objective

This subchapter of the business case addresses estimated funding amounts and sources used in the VfM analysis, such as state and federal grants used to help offset the initial capital cost of the project.

Sources of Information

Sources of information include but are not limited to communication with funding agencies, precedent transactions, and PBI Office advice.

Questions to Consider

- Is the full amount of funding used in the analysis likely to be obtained?
- Are there precedent projects that received similar funding (preferably for projects of similar project cost, industry, and location)?
- Are the sources of funding obtainable only through a traditional procurement approach?
- Are there other potential funding sources that are not included because they are less likely to be obtained?

5.3.3 Revenue Sources

Objective

This subchapter of the business case addresses the following:

- All potential sources of revenue used in the analysis
- Key assumptions that feed into the revenue projections, such as user-paid fees, demand, and growth rates

Sources of Information

Sources of information include but are not limited to economic studies, demand studies, market comparables, external studies from credible institutions and agencies, and advisor recommendations.

Questions to Consider

- Are the revenue sources likely to be realized?
- Are the revenue projections realistic and achievable?
- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?

- Are there certain revenue sources that can be utilized only through a traditional procurement approach?

5.3.4 Transaction Costs

Objective

This subchapter of the business case addresses public sector ancillary costs of procuring the project, such as cost of preliminary studies, advisor fees, internal project team and governance costs, project management, and procurement costs.

Sources of Information

Sources of information include but are not limited to PBI Office advice, precedent projects, and industry and local benchmarking.

Questions to Consider

- Are all key transaction costs accounted for?
- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?

5.3.5 Financing Structure and Costs

Objective

This subchapter of the business case addresses the following:

- Methodology to quantify the financing cost, typically quantified with either dedicated municipal bonds or an unfinanced PSC cost to reflect the uncertainty of government revenue sources and its associated costs
- Key assumptions for the methodology chosen

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, PBI Office advice, Sponsor Agency recommendation, precedent projects, and industry and local benchmarking.

Questions to Consider

- Are the assumptions clearly described and justified?
- Is the financing cost accurately estimated?
- Do the assumptions comply with the Value for Money Guidelines, and are they within appropriate ranges stated in the guideline, if applicable?

5.3.6 Risk Analysis

Objective

This subchapter of the business case addresses the following:

- Methodology used in the quantitative risk analysis
- PSC risk register with allocation of responsibilities, estimated probability of occurrence, and the expected cost and schedule impacts
- Rationale on allocation of key risks that are transferred to the private sector or retained by the public sector
- The results of the PSC risk analysis, presenting the expected value of retained risk by the public sector at a certain confidence level (i.e., using an industry-standard analysis that assigns probabilities of occurrence to each risk and combines them following accepted techniques to calculate an expected value of risk)
- Documentation of the overall risk assessment process, which may include information about the risk workshops, such as key participants, meeting minutes and notes, and dates of the workshops

Sources of Information

Sources of information include but are not limited to the Risk Assessment Guidelines, Value for Money Guidelines, industry-standard risk analysis techniques, professionals trained in risk analysis, subject matter experts, advisor recommendations, and minutes and notes from risk workshops.

Questions to Consider

- Are the inputs in the PSC risk register appropriate and reflective of industry best practices, e.g., probability of occurrence, risk allocation, cost and schedule impacts, and Monte Carlo simulation parameters?
- Are the methodology and key assumptions of the risk analysis reflective of industry best practices and clearly described and justified?
- Does the PSC risk register accurately capture the risks associated with procuring the project through a traditional approach?
- Do the assumptions and methodology comply with the Risk Assessment Guidelines and fall within appropriate ranges stated in the guideline, if applicable?

5.3.7 Competitive Neutrality

Objective

This subchapter of the business case addresses competitive-advantage adjustments used in the VfM analysis, such as private sector tax treatment, insurance coverage, or any other benefits the public sector may receive compared to the private sector.

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, estimates of costs incurred by the private sector, and public sector advantages discussed above.

Questions to Consider

- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?
- Do the assumptions comply with the Value for Money Guidelines and fall within appropriate ranges stated in the guidelines, if applicable?

5.4 Subchapter C.4: PBI Model

The PBI Model is developed to represent the cash flows through the life of the project procured through a PBI procurement method (see Section 4.4). PBI Models often follow either a design-build-finance-operate-maintain (DBFOM) or a design-build-finance-maintain (DBFM) approach, or variants of these approaches. Other alternative procurement methods may be identified in the qualitative procurement assessment phase, including based on input from market soundings.

The PBI Model is not limited to just one procurement option. If there are multiple potentially desirable procurement options, they should be analyzed. The PBI Model accounts for base and lifecycle costs, while taking account of innovation factors, efficiency/inefficiency adjustments, and risk adjustments, as applicable.

For more details on the development of the PBI Model, refer to the Value for Money Guidelines.

5.4.1 Base Cost

Objective

This subchapter of the business case addresses the difference in base costs for the PBI Model compared to the PSC or equivalent, as applicable in each case.

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, cost and schedule estimates, feasibility studies, lifecycle assessments, subject matter expert inputs, PBI Office advice and benchmarking data, external studies from credible institutions and agencies, and advisor recommendations.

Questions to Consider

- Are the base cost differences between the PBI Model and PSC clearly described and justified?

5.4.2 Base Cost Adjustments

Objective

This subchapter of the business case addresses the following:

- All quantified adjustments made to the PBI base cost to account for certain efficiencies and/or inefficiencies, such as adjusting for private sector innovation and performance-based approach
- All private sector transaction costs, such as legal costs, proposal preparation, special purpose vehicle (SPV) costs, and bonding and insurance

Sources of Information

Sources of information include but are not limited to PBI Office advice and benchmarking data, Value for Money Guidelines, industry benchmarking data, credible institutional and agency studies, and advisor recommendations.

Questions to Consider

- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?
- Do the assumptions comply with the Value for Money Guidelines, and are they within appropriate ranges stated in the guidelines, if applicable?

5.4.3 Funding Assumptions

Objective

This subchapter of the business case addresses the estimated funding amounts and sources used in the VfM analysis, such as state and federal grants used to help offset the initial capital cost of the project.

Sources of Information

Sources of information include but are not limited to communication with funding agencies, precedent transactions, and PBI Office advice.

Questions to Consider

- Is the full amount of funding used in the analysis likely to be obtained?
- Are there precedent projects that received funding of similar size (preferably for projects of similar project cost, industry, and location)?
- Are the sources of funding obtainable only through a PBI procurement method?
- Are there other potential funding sources that are not included because they are less likely to be obtained?

5.4.4 Revenue Sources

Objective

This subchapter of the business case addresses the following:

- All potential sources of revenue used in the analysis
- Any differences between sources of revenue and projections in the PBI Model and the PSC
- Key assumptions that feed into the revenue projections, such as user-paid fees and growth rates

Sources of Information

Sources of information include but are not limited to economic studies, demand studies, market comparables, external studies from credible institutions and agencies, and advisor recommendations.

Questions to Consider

- Are the revenue sources likely to be realizable?
- Are the revenue projections realistic and achievable?
- Are the assumptions clearly described and justified?
- Does the PBI Model have differences in revenue sources and projections compared to the PSC? If so, are the differences clearly explained and justified?
- Are there certain revenue sources that can be utilized only through a PBI procurement method?

5.4.5 Transaction Costs

Objective

This subchapter of the business case addresses all public ancillary costs, including cost of preliminary studies, advisor fees, internal project team and governance costs, project management, procurement costs, and stipends for unsuccessful proposers.

Sources of Information

Sources of information include but are not limited to PBI Office advice and benchmarking data, precedent projects, industry benchmarking data, and findings from requests for information and market sounding.

Questions to Consider

- Are all key transaction costs accounted for?
- Are the assumptions clearly described and justified?
- Are the assumptions appropriate and in line with industry best practices?

5.4.6 Financing Structure and Cost

Objective

This subchapter of the business case addresses the following:

- The capital structure used in the analysis and the PBI financing costs associated with use of construction loans (if any), equity, and long-term debt
- Assumptions used in determining the capital structure and quantification of PBI financing costs, including bond or bank financing, base short-term/long-term interest rates, credit spreads, financing fees (arrangement and commitment), reserve account requirements, gearing ratios, debt service coverage ratio, and target internal rate of return
- Timing and amount of cash flows, such as public sector capital contributions, equity contributions and their timing, loan draws with schedules, and debt service payments

Sources of Information

Sources of information include but are not limited to the Value for Money Guidelines, PBI Office advice and benchmarking data, precedent projects, findings from market sounding, and advisor recommendations.

Questions to Consider

- Are the assumptions clearly described and justified?

- Are the key financial assumptions reflective of market conditions at the time of the analysis and in line with industry best practices?
- Are the financial structure and rates achievable in the market at the time of the analysis?
- Do the assumptions comply with the Value for Money Guidelines and fall within appropriate ranges stated in the guidelines, if applicable?

5.4.7 Risk Analysis

Objective

This subchapter of the business case addresses the following:

- Methodology used in the quantitative risk analysis conducted for the PBI Model, which must be identical to the methodology used for the PSC
- PBI risk register with allocation of responsibilities, estimated probability of occurrence, and the expected cost and schedule impacts
- Rationale on allocation of key risks that are transferred to the private sector or retained by the public sector
- Results of the PBI risk analysis presenting the expected value of retained risk by the public sector at a certain confidence level (i.e., using an industry-standard analysis that assigns probabilities of occurrence to each risk and combines them following accepted techniques to calculate an expected value of risk)
- Overall risk assessment process, which may include information about the risk workshops, such as key participants, meeting minutes and notes, dates of the workshops, and whether and how the process differs from the PSC process

Sources of Information

Sources of information include but are not limited to the Risk Assessment Guidelines, Value for Money Guidelines, risk analysis, subject matter experts, advisor recommendations, PBI Office advisors and benchmarking database, and minutes and notes from risk workshops.

Questions to Consider

- Are the inputs in the PBI risk register appropriate and reflective of industry best practices, i.e., probability of occurrence, risk allocation, cost and schedule impacts, and Monte Carlo simulation parameters, if applicable?
- Are differences between the key PSC and PBI Model assumptions of the risk analysis clearly described and justified?
- Does the PBI risk register accurately capture the risks associated with procuring the project through a PBI method?

- Do the assumptions and methodology comply with the Risk Assessment Guidelines and fall within appropriate ranges stated in the guidelines, if applicable?

5.5 Subchapter C.5: Value for Money Analysis Results

Objective

This subchapter of the business case addresses the following:

- The results from the analysis demonstrating the overall cash flows and the VfM comparison in net present terms for the PSC and the PBI Model or models assessed
- Key modeling and general inputs, especially assumptions that differ among the procurement methods
- The discount rate used in the analysis
- Sensitivity analysis results (changing one variable while holding the other variables constant)

Sources of Information

Sources of information include the PSC and PBI financial models used to conduct the VfM analysis.

Questions to Consider

- Is the methodology for determining the discount rate clearly described? Justify the rationale for selecting this methodology over others.
- Is the financial model logical, well organized, and mathematically sound? Does it produce cash flows and financial statements, if applicable, consistent with the inputs and assumptions? Has it been audited?
- Has there been enough external and internal stakeholder collaboration and benchmarking so that the assumptions and methodology are understood and generally accepted?
- Are the assumptions consistent with the Value for Money Guidelines and within appropriate ranges stated in the guidelines, if applicable?

5.6 Subchapter C.6: Quantitative Procurement Recommendation

Objective

This subchapter of the business case addresses the following:

- Interpretation of the VfM results, e.g., net present value comparison, cash flow analysis, and sensitivity analysis
- Recommendations from the results of the quantitative analysis for why the project should be delivered through a specific procurement option
- Recommendations on timing of future updates to the VfM analysis, e.g., before commercial and financial close

Sources of Information

Sources of information include but are not limited to data described above and PBI Office advice.

Questions to Consider

- Can a clear conclusion of the preferred procurement option be drawn based on VfM?
- Is the preferred procurement option clearly presented, described, and justified by the quantitative analysis?
- Is the preferred procurement option objectively achievable, marketable, and bankable?

6 Chapter D: Integrated Recommendation

Chapter D of the business case consolidates the findings of **Chapter A**, **Chapter B**, and **Chapter C** to provide an integrated recommendation regarding the overall investment decision, preferred procurement method, and the procurement strategy to achieve a successful project.

Chapter D of the business case is organized into two subchapters:

- **Subchapter D.1: Summary of Qualitative and Quantitative Procurement Analysis** — Summarizes the findings from previous chapters and evaluates each procurement method's fit against the Sponsoring Agency's procurement goals, from both a qualitative and quantitative perspective.
- **Subchapter D.2: Procurement Recommendation** — Makes an informed recommendation for a preferred procurement method, based on the results from the previous subchapter.

6.1 Subchapter D.1: Summary of Qualitative and Quantitative Procurement Analysis

Objective

This subchapter of the business case addresses the following:

- Summary of the key findings and conclusions from **Chapters A, B, and C**
- Integrated assessment of each procurement method against the Sponsoring Agency's objectives and the evaluation criteria defined above, considering both qualitative and quantitative elements

Sources of Information

Sources of information include the chapters of the business case.

Questions to Consider

- Do the qualitative and quantitative analyses and findings point to an optimal or preferred procurement recommendation?
- Is the evaluation matrix of the procurement options versus the evaluation criteria consistent and clearly presented?

6.2 Subchapter D.2: Procurement Recommendation

Objective

This subchapter of the business case should recommend whether to advance the project under a preferred procurement option, based on the fit with the Sponsoring Agency's goals and evaluation of the procurement options against the criteria developed in Subchapter B.1.

This subchapter should also identify the key strategic issues that the Procurement Team needs to consider for the appropriate development of a procurement strategy and plan in Stage 4: Procurement.

Sources of Information

Sources of information include but are not limited to the chapters of the business case.

Questions to Consider

- Is the recommended procurement option the result of a transparent, fact-based, and balanced analysis?
- Does the recommendation consider the factors analyzed and evaluated in the business case in an integrated and holistic manner?
- Do the recommendations in the business case provide a clear basis for the development of a sound procurement strategy and plan in the next stage?

7 Approval Requirements

Gateway 2 consists of the approval required to move a project into Stage 4: Procurement. As described in more detail in Section 3, the Mayor is responsible for the final approval.

The PBI Office subsequently briefs the City Council on the business case findings and recommendations, and the Mayor's decision.

Appendix A

Glossary and Abbreviations

A1 Glossary

Term	Definition
City	City and County of Denver.
Co-development Solicitation Process	Solicitation process in which the Procurement Team plans to select a private partner with whom to co-develop the project based on the performance requirements of a Predevelopment Agreement or similar document. The selection can be done based on an RFQ and/or RFP. See Section 10 of the Procurement Guidelines for more details.
Firm-Bid Solicitation Process	A solicitation process in which the Procurement Team issues procurement documents; interested parties respond with a firm bid, generally including firm price and financing commitments; and, proposals are reviewed by the Procurement Team to select a private partner. See the Procurement Guidelines for more details.
Implementation Team	The staff and consultants assigned by the City to manage the implementation of a PBI project following execution of its Project Agreement.
Intent to Submit Form	Form that should be submitted by the Sponsoring Agency once the project passes Gateway 2, indicating their intention to prepare and submit a business case.
Notice of Intent to Procure PBI Services	Notification issued by the PIC to the Mayor / City Council once the PBI Office has reviewed the business case and considers the project suitable and ready for PBI procurement.
PBI Model	The financial model developed by the PBI Office to evaluate the risk-adjusted cash flows of a PBI procurement method during Stage 3: Structuring. It is used to develop the project's business case and the value for money analysis. At Stage 4: Procurement it is updated based on the proposals received and/or the Preferred Proposer's proposal. It may also be used to support evaluation of the financial models received from the proposers.
PBI Pipeline	The portfolio of projects approved by the PIC for evaluation as PBIs.
PBI Screening Application	Form submitted by Sponsoring Agencies along with the CIP Discretionary Funding Form, indicating whether the project passes PBI qualification criteria.
Preferred Proposer	The highest ranked proposer selected by the City after RFP responses are received and evaluated.
Private Partner	The private development partner after execution of the project agreement.
Procurement Team	The staff and consultants assigned by the City to manage the PBI procurement process.

Term	Definition
Project Agreement	The PBI contract signed by the City and the Preferred Proposer.
Project Liaison	The staff responsible for facilitating coordination between the different entities involved in the project development process such as, but not limited to, the PIC, CAO, and the PBI Office.
Public Sector Comparator	A hypothetical scenario representing the standard government procurement method that would be used to deliver a project in the absence of a PBI procurement option.
Term Sheet	The legal document that lays out the key terms of the project. Refer to the Procurement Guidelines for more information on the contents of the Term Sheet.
Sponsoring Agency	The applicable City entity that develops and identifies potential PBI projects during the screening stage. It coordinates with and supports the PBI Office during the project screening, structuring, and procurement stages. And it leads implementation of the PBI project after execution of the project agreement. During the implementation stage it may be referred to as Implementation Agency in instances when the agency in charge of implementing the project is different from the Sponsoring Agency in prior stages.

A2 Abbreviations

Abbreviation	Description
CAO	City Attorney's Office
CapEx	capital expenditure
CAPM	capital asset pricing model
CIP	Capital Improvement Plan
CORA	Colorado Open Records Act
CPP	Capital Planning and Programming
CPR	Capital Project Request Form
DoF	Department of Finance
DSRA	debt service reserve account

Abbreviation	Description
KPI	key performance indicator
MMRA	major maintenance reserve account
NPV	net present value
OpEx	operational expenditure
PBI	performance-based infrastructure
PDA	Predevelopment Agreement
PERT	Program Evaluation and Review Technique
PIC	Performance Infrastructure Committee
PSA	PBI Screening Application
PSC	Public Sector Comparator
PW	Public Works
RFAP	request for alternative proposals
RFAQ	request for alternative qualifications
RFDP	request for detailed proposal
RFI	request for information
RFP	request for proposals
RFQ	request for qualifications
USP	unsolicited proposal
VfM	value for money
WACC	weighted average cost of capital