

PUBLIC-PRIVATE PARTNERSHIPS GUIDING PRINCIPLES AND P3 FRAMEWORK

The City of Calgary
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1. Introduction

The purpose of this Public Private Partnerships (P3) Guiding Principle and Framework document is to provide you with background information on P3s to help improve decisions in the P3 process. This document is provided as a tool to assist with the implementation of The City of Calgary's Public-Private Partnerships.

This document is intended to be used in tandem with the following policies:

- Council policy CFO011, Public-Private Partnerships (P3) Policy; and
- Administration policy FA052, Assessing and Procuring Public-Private Partnerships (P3)

The goal of the P3 policies is to outline the criteria for considering, assessing, procuring, implementing, and managing P3s in a manner that is applied consistently throughout The City. These documents outline processes that align with The City's commitment to citizens by investing in infrastructure and services in prudent ways in an effort to maximize value for the programs and services The City offers.

The ultimate goal is to provide Administration with a broad knowledge of P3s that will enable Administration to be consistent, competitive, equitable, transparent and timely throughout the P3 process.

2. P3 Background Information

P3s should be considered as one option for delivering infrastructure and services. In the past, access to grants from the other orders of government were contingent on the Project considering a P3 as a method of delivery.

Not all infrastructure and services are suited to P3s and other factors such as market conditions will impact the viability of P3s for the infrastructure and services which would normally provide opportunities for successful P3s.

Great care needs to be taken in the evaluation and structure of any P3 The City undertakes to ensure the maximum benefit accrues to The City, while appropriately mitigating the risks to The City through optimal risk transfer. This is important due to the following:

- Ensuring consistency in its approach to P3 procurement across all business units to establish a streamlined process, maintain a standard across all business units, and allow Administration to understand and follow best and effective practices.
- Establishing and maintaining a reputation as a reliable and "bankable" sponsor of P3 Projects so that Projects will attract competition from the market of service providers.

- Avoiding failed P3 procurements, which typically occur because insufficient analysis and consensus-building among stakeholders has been done prior to initiating the process. Failed procurements can increase the private sector's perceived riskiness of partnering, which will ultimately result in a higher risk premium and thus higher cost of P3s. Failed procurements may arise if bids exceed affordability, or if there is insufficient market interest in the potential P3 Project or its structure.

2.1. P3 Delivery Models

P3s are generally categorized according to the degree and type of private sector involvement. The names of the various models indicate the scope of the services that are bundled together under each structure. The Canadian Council for Public-Private Partnerships has prepared a list of terms and definitions commonly used to describe partnership agreements in Canada.

- **Operation & Maintenance Contract (O&M):** A private operator, under contract, operates a publicly-owned asset (e.g. water/wastewater treatment plant) for a specified term. Ownership of the asset remains with the public entity.
- **Design-Build-Finance (DBF):** The private sector designs, constructs, and finances an asset. Financing is for the capital cost only during the construction period.
- **Design-Build-Finance-Maintain (DBFM):** The private sector designs, builds and finances an asset and provides hard facility management or maintenance services under a long-term agreement.
- **Design-Build-Finance-Maintain-Operate (DBFMO):** The private sector designs, builds, finances and provides maintenance services under a long-term agreement. Operation of the asset is also included in Projects such as bridges, roads and water treatment plants.
- **Concession:** A private sector concessionaire undertakes investments and operates the facility for a fixed period of time after which the ownership reverts to the public sector.

Ownership of the asset always remains with The City, with the exception of a Concession P3 delivery model.

This list should not be considered a definitive or complete listing as each P3 is unique and is subject to legal agreements negotiated between parties.

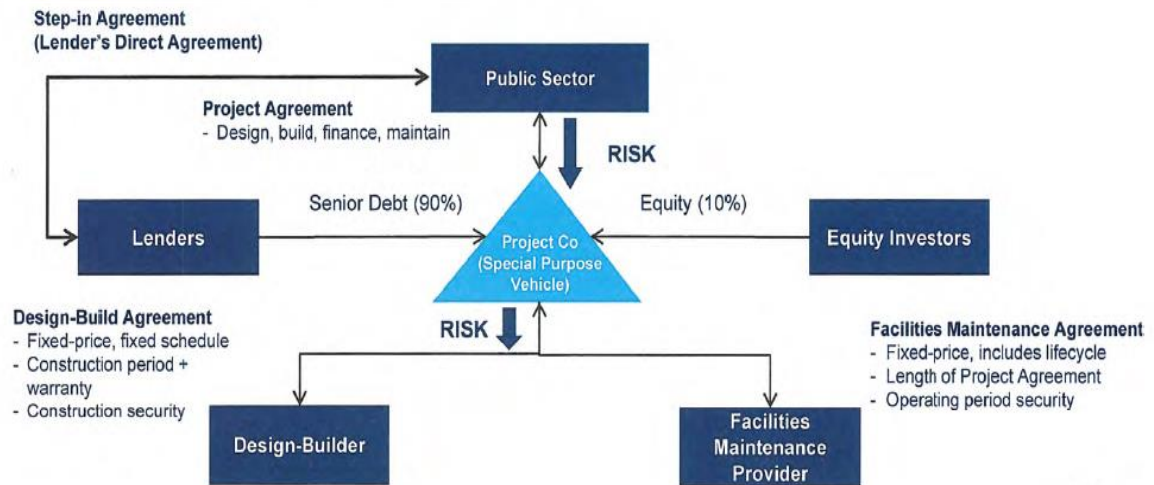
Refer to **Appendix 2** for further details on P3 Models.

2.2. Typical P3 Contract Structure

P3 Projects are financed through a mix of private sector equity and private sector debt. Private financing is an essential component to risk transfer. Illustrated below is a typical

transaction structure used by a private bidder for a DBFM Project. Key contracts and contributions among the parties are highlighted.

Example of Contract Structure:



3. P3 Project Process and P3 Business Case

3.1. Identification of P3 Opportunities

The process of identifying and assessing P3s for infrastructure and service delivery begins with a clear articulation of the goals of the Project, as defined by the Sponsoring Business Unit (SBU). The goals should focus on the desired outcomes of the Project (i.e. the infrastructure and service provided). Based on those goals, an assessment of how a P3 can assist in achieving those goals can be performed.

P3 delivery models should be considered as an alternative to traditional procurement, with suitability determined on a Project by Project basis. As a comparator, the base case should always be the most efficient form of traditional delivery The City would otherwise use.

The criteria outlined in the P3 Administration Policy (FA-052) must be considered when assessing potential P3 delivery.

The P3 evaluation process involves three levels of assessment which are based on best practices. These steps are generally completed sequentially and are described as follows:

Assessment Level	Description	Possible Outcomes
1 - Initial Project Screen	High-level comparison of Project characteristics against criteria to assist in determining potential suitability of a Project for	- Flag as potential P3 Project - Flag for traditional procurement

	P3 delivery.	
2 - Strategic Assessment	A more detailed qualitative examination of the risks, costs, market of service providers, and objectives and constraints to identify, at the strategic level, if a Project should be procured as a P3, which P3 delivery model(s) is most suitable, and whether or not further assessment is justified.	1. Recommendation for traditional procurement 2. Recommendation to procure Project as a P3, including recommended P3 delivery model* 3. Recommendation to undertake VFM Assessment prior to deciding on delivery model.
3 – VFM Assessment	An extension of the strategic assessment, including quantification of Project risks and a preliminary comparison of the relative cost of traditional procurement and P3 procurement through cash flow modelling.	1. Recommendation for traditional procurement 2. Recommendation to procure Project as a P3, including recommended P3 delivery model.

* Best practice is to complete a VFM Assessment when moving forward as a P3 Project. Moving forward to procurement based on a Strategic Assessment should only be considered on an exception basis and requires steering committee approval.

3.2. Initial Project Screen

Initial Project Screen is the comparison of capital Projects against relevant high-level criteria to determine if a Project is a candidate for a P3 delivery model. Projects should be screened against the initial Project screening criteria soon after they are identified and added to the queue of potential Projects in each business unit's capital plan, prior to seeking budget approval. This will enable the delivery model business cases to be conducted in a timely manner with integration into the capital planning process.

The criteria against which each Project should be screened include high level descriptions of factors such the stability of demand for the infrastructure, the service life, the market for bidders and legal considerations. It is recommended the SBU use the detailed initial Project screen presented in **Appendix 4**.

The screening criteria may require an understanding of ranges of P3 delivery models, knowledge of the P3 service providers market, and judgment based on P3 experience. The Initial Project Screen is generally completed internally; however, in some cases external advisors may be engaged to assist in the process. The SBU representatives will lead the Initial Project Screen with assistance from the Finance P3 Workgroup. The SBU and the Finance P3 Workgroup should arrive at a consensus on the outcome of the assessment.

If the screening indicates that a Project may be suitable for P3, then it may be examined in greater detail in the strategic assessment.

Refer to **Appendix 4** for the Initial Project Screen.

3.3. Strategic Assessment

The strategic assessment may be thought of as a preliminary delivery model business case. It requires the Project to be relatively well-defined, and a planning-level cost estimate (order of magnitude) should be available.

During this assessment, a communications and engagement strategy should also be developed and implemented. The level of engagement will depend on the nature of the Project.

Depending on the characteristics of the Project, and the findings of the strategic assessment, it may be very clear which delivery model (i.e. traditional, or a specific P3 Model) is most suitable for the Project, and to therefore proceed to procurement without completing a VFM Assessment. However, best practice is to complete a VFM Assessment when moving forward as a P3 Project. Moving forward to procurement based on a Strategic Assessment should only be considered on an exception basis and requires steering committee approval.

It may be determined that more definitive information is required to finalize the decision between traditional delivery and the preferred P3 delivery model resulting in a VFM assessment. This may be the case for very large, highly strategic, or publicly-sensitive Projects, where selection of a delivery model needs the most support possible. It is also more relevant for P3 Models that include a component of private financing (i.e. DBF, DBFM and DBFMO).

Refer to **Appendix 4** for the main components included in the Strategic Assessment.

3.4. Value-for-Money (VFM) Assessment

The VFM Assessment builds on the strategic assessment. The term “Value-for-Money” is used to describe the difference in risk-adjusted cost to The City between traditional procurement and P3 procurement. The premise of the VFM Assessment is that by including the cost of all risks to The City under each model, they can be compared on a financial basis to determine the optimal approach. However, the VFM results should be considered alongside the strategic findings. While the VFM approach is a highly illustrative tool, it should not be considered in isolation.

The VFM assessment will be one of the main indicators used to determine if the Project should proceed as a P3. As such, it is extremely important that it be done carefully and as objectively and transparently as possible.

The VFM Assessment should be based on the best available cost estimates, and may warrant some additional engineering, architectural, and costing work depending on the state of the Project’s estimates. The need to improve upon existing estimates must be examined on a case-by-case basis, but ideally the Project would have been life cycle costed at the preliminary design stage or earlier. There is a need to establish a balance between being specific enough for a good quality cost estimate, while not creating

barriers to private sector innovation. Caution should be exercised in over-advancing Project designs, because design costs can be made partially or fully redundant if a Project proceeds as a P3.

Value may not necessarily mean a savings in cost over traditional procurement. Cost savings are just one of the factors to be considered when determining an appropriate delivery model. Non-cost factors such as increased quality or reliability may be equally important in the assessment of value. In addition, differences in the social and environmental impacts of the Project as a P3, relative to traditional delivery, need to be considered. In this way, a Triple Bottom Line approach to the VFM comparison can be taken.

Refer to **Appendix 4** for more details on the VFM Assessment.

4. Risk Assessment and Quantification

Developing the list of risks specific to the Project (referred to as the “Risk Register”), as well as determining the appropriate risk transfer and estimating the risk valuation parameters (likelihood of risk occurrence and potential effect) is typically conducted during a risk workshop.

The ability to share and allocate risk between the public and private sectors in infrastructure and service delivery is a key characteristic of P3s. A brief discussion of the risk assessment process contained within the strategic and VFM Assessments is warranted because of the importance of appropriate risk identification and transfer.

The initial identification and assessment of Project specific risks under both a traditional and P3 delivery model (undertaken in the strategic assessment phase), followed by a quantification of all measurable and material risks to the Project under both delivery models will facilitate the VFM analysis.

While many of the Project specific risks will be known to the Project sponsors (as managers of The City’s assets), detailed knowledge of P3 agreements and of similar Projects is useful to ensure the Risk Register is comprehensive and that the likely risk allocation for the P3 Model is well understood. This step requires careful attention in order to develop and then validate data collection on the likelihood and impact of risks. For this reason, risk workshop participants may include the following:

- SBU representatives; and
- Internal and/or external advisors including legal, finance, supply management (procurement), risk (insurance), technical and cost consultants.

Refer to **Appendix 7** for detailed risk register categories

5. Procurement, Implementation and Contract Management, and Handback

Once the assessment process is complete and a decision to move forward with a P3 has been made, the P3 essentially becomes another contract to be awarded using The City's procurement processes. The contract between The City and the P3 partner is referred to as the "Project Agreement (PA)".

Procurement is governed according to The City's Administration *Procurement Policy*.

Refer to **Appendix 6** for further details on specific P3 procurement components.

Roles, Responsibilities and Resources

Due to the long-term nature of some P3 Models, continuing resources must be available during the contract management phase. The SBU is responsible for monitoring compliance with the PA provisions and any best practices mentioned herein. The SBU will be supported by Law, Finance, Supply Management, and potentially external consultants, as required.

Refer to **Appendix 5** for a detailed list of potential external consultants and advisors.

It is essential to define roles, responsibilities and accountabilities between the P3 partner and The City to ensure there is ongoing consistent understanding as job changes occur and to manage any joint issues that may arise. A kickoff partnering session to discuss this is recommended. P3s are often long-term contracts, and there will be many people involved in the contract during the term; therefore, documenting roles and responsibilities will prevent issues developing related to turnover. These documents also define the interdependencies of both organizations and accountabilities through the term of the PA.

Consideration should be given to developing a comprehensive document to effectively track and monitor compliance to the PA concurrent with the drafting of the PA. The comprehensive document should outline key details of the PA and highlight:

- Important obligations and ongoing rights of all parties;
- Which party is responsible for fulfilling each obligation or enforcing each right;
- Dates each obligation must be fulfilled or when each right may be enforced; and
- A process for dealing with situations that are not specific to the PA, and which could have a financial impact on The City.

The purpose of this document is to aid in the administration of the contract over the life of the agreement; therefore, the document should be kept up to date.

Reporting

Parties must establish the necessary reporting for monitoring the quality of services required by the PA(s), such as financial reporting, building condition reports, property maintenance and lifecycle repairs, and other reports required to satisfy stakeholders. Regular reporting highlights performance issues that may trigger financial remedies for non-performance of service, or issues that need to be escalated to the appropriate staff for resolution.

Compliance Audits

In a P3 PA, The City must retain the right to audit the partner's reports at any time, at its sole discretion. Reports may include financial reports and performance reporting (based on key performance indicators). This is over and above the requirements for regular reporting and the responsibility for the cost associated with a compliance audit will be defined within the PA

Transitioning the Asset or Service Back to The City at Termination

For long term P3s, the PA will ensure that the partner develops and provides The City with a transition plan prior to hand-back, which should, at a minimum, include:

- The proposed transition organization structure, including names, profiles and duties of proposed resources;
- A schedule of activities and sub-activities to be undertaken during the transition, including at a minimum proposed start and end dates and duration (i.e. level of effort); assigned resources, priority and dependencies, and the proposed date of transfer of the facility and/or services to The City;
- Human resources strategy, including but not limited to, retention plan relating to employees providing the services; vacancies relating to employees providing the services; impacts of applicable legislation, etc.;
- Transition of history and detailed data (electronic and paper); and
- Mapping table to underlying Project information including any necessary definitions.

6. Unsolicited Proposals

The City will not consider unsolicited P3 proposals.

7. Governance Structure

A P3 governance structure needs to articulate the roles and responsibilities for the different resources required, in particular the responsibility for decision-making. Without a clear delineation of roles and responsibilities, experience from other jurisdictions has shown there is a greater likelihood of P3s not reaching financial close, due to the intensity and resource demands of P3 Project lifecycles (planning, transaction and operations). A

failed P3 (and conventional delivery methods) can have a very detrimental effect on subsequent Projects and The City's approach to subsequent Projects.

1. **Council:** has a vital role in the decision to deliver infrastructure through P3s. Council must approve all Projects to be included in the capital investment plan and shall approve P3 delivery for Projects and the initiation of the P3 procurement process.
2. **Steering Committee:** It is recommended that a steering committee composed of senior administration staff from relevant business units be formed at the beginning of the strategic assessment phase, unless another governance structure is approved by ALT. The steering committee:
 - a) Performs oversight throughout the assessment and decision-making process, particularly in terms of the strategic and policy implications of the Project, consistent with best practices.
 - b) At its discretion, may wish to appoint an independent external advisory panel, composed of leading experts from industry, academia and other areas to provide advice on the P3 Business Case and assist in the decision-making process.

8. Conclusion

P3s provide the opportunity to deliver needed infrastructure Projects; however, they are not a solution for solving all The City's financial resourcing issues. To realize the potential benefits of P3s while appropriately mitigating the risks to The City, a comprehensive evaluation of the Project is necessary.

The P3 evaluation process is a time and resource intensive exercise. Failure to commit to evaluations diligently and follow a rigorous public procurement process exposes The City to a significant risk of being encumbered with costly long-term contracts that have high public profiles. The evaluation process presented in this document follows best practices to mitigate this risk. It is necessary to be selective in the Projects that are evaluated due to the high cost of the overall evaluation process.

9. Appendices

Appendix 1 – Public Private Partnerships Overview

Governments have a long history of working with the private sector under the traditional model for government service delivery. The City’s traditional “delivery model” for capital Projects is to treat the design, tender, construction, and operation and maintenance stages of a Project as separate components. In each component, The City may or may not involve the services of the private sector (e.g. consulting engineers, architects, construction contractors, etc.).

In contrast, P3 delivery entails combining two or more of the Project stages into a single bundle, utilizing a single private sector bidder to deliver the bundle. In addition, the private sector may finance some or all of the capital required, rather than a City issuing debt or using other financing sources. However, it is important to note that the P3 partners long term debt and equity contributions to the P3 Project are viewed as debt to The City.

P3s tend to be long term arrangements and may include incorporating not just the initial construction of a facility, but its ongoing maintenance, operations or service to the public, depending on the nature of the Project. While the focus is often on using P3s for the capital infrastructure, an important component of certain P3s can also be the delivery of programs and services.

Benefits of P3s

The Conference Board of Canada has identified numerous benefits to the P3 approach, including on time, on-budget delivery of outputs-based infrastructure, leveraging of private sector innovation, risk transfer, and whole life-cycle considerations.

Potential Benefit	Description
Time Savings	Accelerated construction of P3 projects compared with traditional public procurement counterparts regarding earlier availability of service to the public. Rigour and discipline involved in the public-sector planning process can result in a streamlined and fully thought-through project.
Optimization of Spending—Life-Cycle Focus	Optimization of spending over the course of the project and better designed projects that will appropriately meet the long-term needs of the services.
Long-Term Guarantees on Service and Maintenance	The inclusion of an operations and maintenance (O&M) phase in many P3 project contracts can result in greater certainty with respect to timely maintenance and continued service levels.
Innovative Solutions	P3 projects are often cited as creating room for innovative solutions (beyond those that are simply geared to reducing costs) more often due to their results-oriented (output-based) set-up.
Cost Savings According to VFM Assessment	Transferring the risk to the party best equipped to deal with that risk was cited as a source of savings by multiple respondents.
Checks and Balances in Contracting	The contracting of P3s includes detailed checks and balances that result in drivers (often financial penalties) for contract adherence.

Source: Conference Board of Canada

Drawbacks or Additional Costs of P3s

In addition to the benefits associated with P3s, the Conference Board of Canada has identified several drawbacks or additional costs that underline the need to proceed cautiously with P3s. These concerns can include the following (depending on the nature of the Project, and the form of the P3 Model):

Potential Concern	Description
Private Financing Rates	Financing costs for the private sector participant tend to be higher than the financing available to The City when viewed in isolation of the risks retained and/or transferred by The City.
Risk Premium	Higher cost is also associated with transferring a portion of the risk to the private sector. The risk is therefore “insured,” with a risk premium charged by the private sector partner. It is important that the risk to be assigned to a party is the party best able to manage it.
Higher Transaction Costs	These are large and complex projects that bring together many parties that have competing and sometimes conflicting interests. The transaction costs reflect the essential time and energy needed to make sure that the set-up side of the P3 project is appropriate and sufficient
Lengthy Lead Times	It is essential to get the appropriate planning and set-up for P3 projects to appropriately optimize the benefits of such projects. This upfront planning, though, can take some time to complete.
Non-Effective Risk Transfer	Risk that is supposed to be transferred to the project team but is ultimately retained by the public sector. Should risks be ineffectively transferred, there is a chance that the public-sector partner will have to absorb some of the costs.

Source: Conference Board of Canada

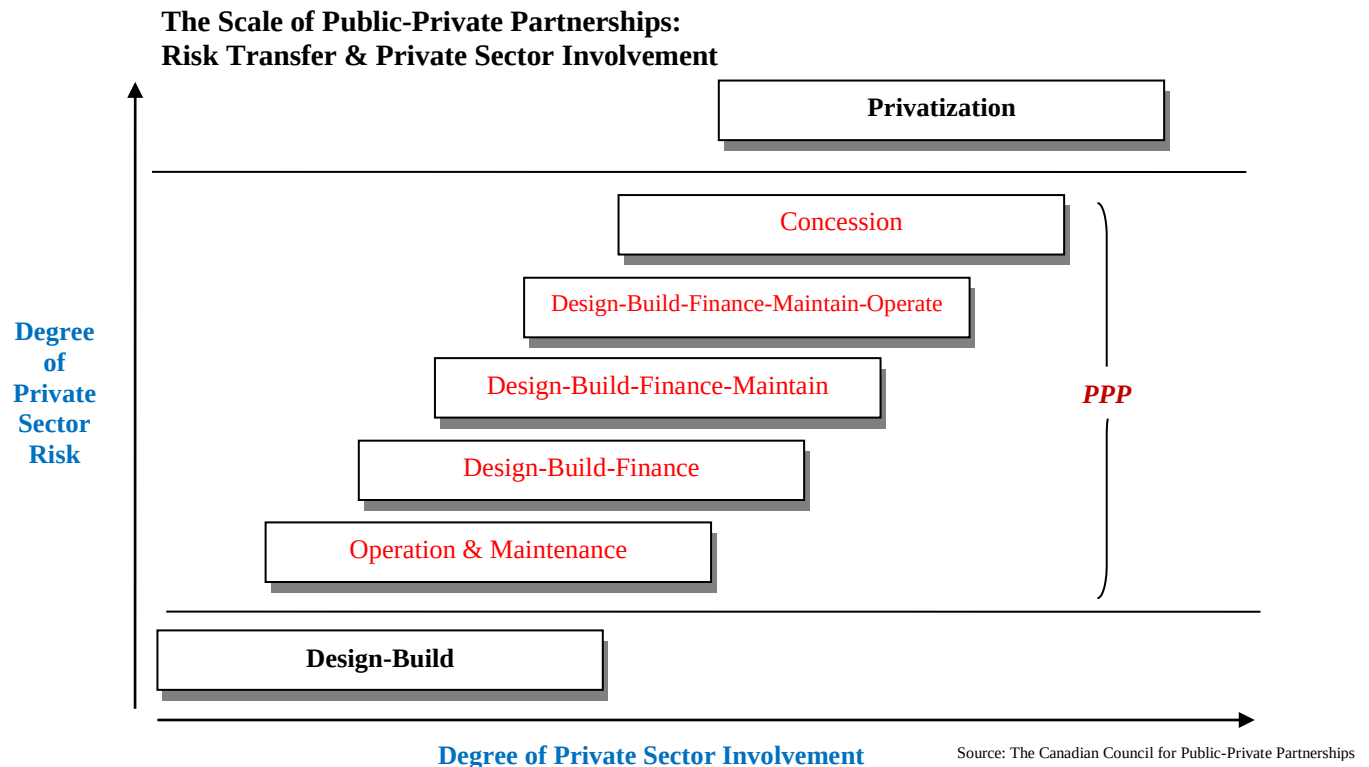
Success Factors for P3s

P3s can be a successful tool in achieving value for The City; however, certain key structures should be in place before embarking on this direction. Below are key success factors based on research of experiences from other jurisdictions:

Success Factors	Description
Regulatory Environment	There is certainty around the policy and legislative framework that guides the overall P3 development process, as well as in the sector-specific regulation for a proposed project
Performance-Based approach	The project is focused on the performance needs rather than exact specifications of what is to be built to allow the maximum amount of technical innovation on the part of the P3 partner
Transparent Process	There is a clear, open, and fair process in place, the availability of accurate information, and a clear rationale as to why the project is being considered under non-traditional procurement
Risk capital financing	the ability of the private partner to secure non-government sources of financing once all the risks are understood and allocated will demonstrate the strength and marketability of the project business case
Lifecycle perspective	Understanding of the impact of the project on existing infrastructure systems, the regulatory environment, costs to operate and maintain over time and other potential peripheral costs and benefits.

Appendix 2 – P3 Delivery Models

The graph below illustrates the spectrum of possible models that could be considered P3s, although there is not universal agreement on all models. The different arrangements result in varying degrees of risk and responsibility that the private sector assumes.



Design-Build (DB) is a model in which the private sector designs and builds infrastructure to meet public sector performance specifications, often (though not necessarily) for a fixed price. DBs **do not** fall under The City’s definition. A DBF, however, where the P3 partner provides construction period financing **does** fall under The City’s definition of a P3.

The difference between maintain and operate is that maintain restricts the role of the P3 partner to physical maintenance of a capital asset (e.g. a fire hall), but does not have the P3 partner delivering programs, products, or services (e.g. firefighting) to the public or The City.

P3 Models with more components (i.e. DBFMO) are referred to as “deeper” P3 Models. Many consider deeper P3 Models as having greater opportunity to generate VFM due to their larger scope, as well as providing better protection due to the longer-term nature of the arrangement, and the P3 partners financial exposure (usually in the form of both debt and equity). Lenders to the P3 partner provide oversight as their repayment is tied to compliance with the PA, with no direct recourse to the City owned assets.

Appendix 3 – The City’s Experience with P3s

The City has had some experience with using P3s for infrastructure and service delivery. Several P3 opportunities have been assessed with two Projects having been procured and in operation:

1) The Organics Composting Facility Project

- a. DBFO: design, build, finance the Project throughout construction, and operating the facility for 10 years post-construction.

2) The Stoney Compressed Natural Gas Bus Storage and Transit Facility

- a. DBFM: Design, build, long term finance and facility maintenance, including building operations, for 30 years post construction.
- b. Substantial completion occurred on January 31, 2019 at which time the 30-year facility maintenance period began. Bus operations commenced at the facility in March 2019.

Results and feedback from Project stakeholders and managers to date indicate both are viewed as being successful Projects; however, both Projects are in the early stages of longer term contracts, the overall success of which will ultimately need to be assessed post-handback to The City.

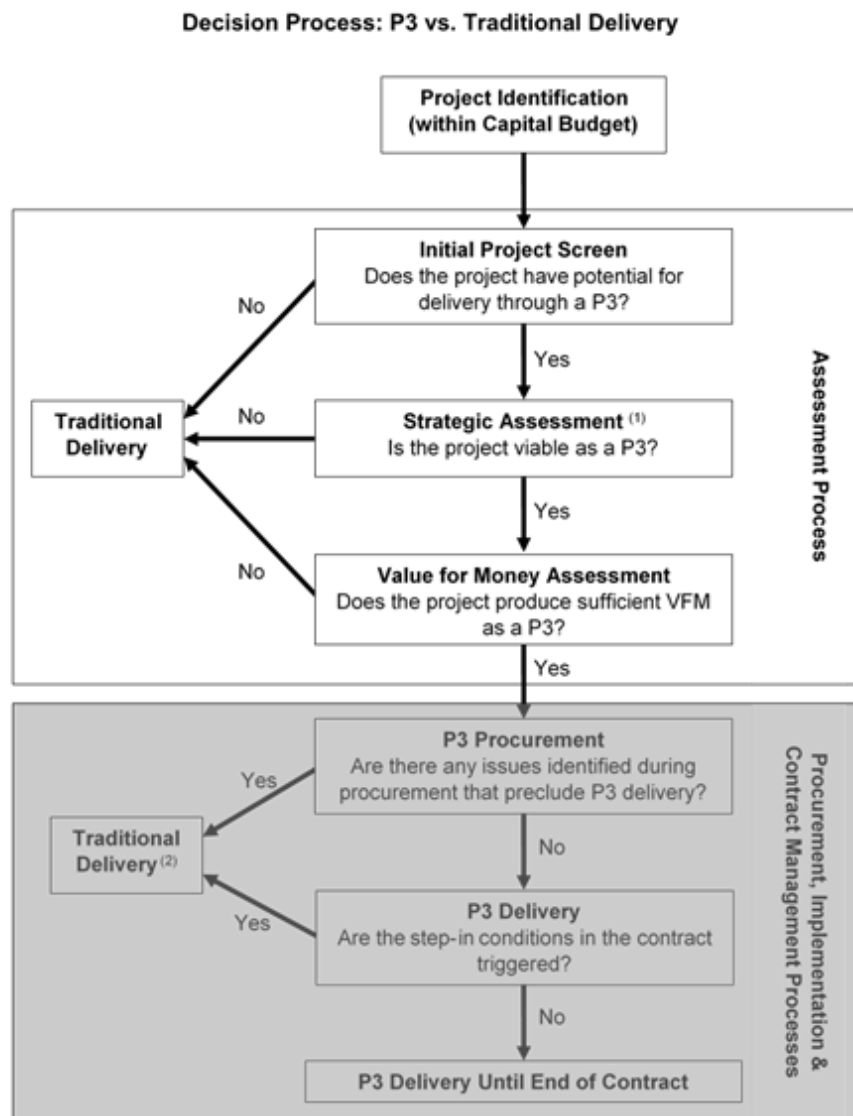
In 2018, Council approved P3 delivery of the largest infrastructure Project in The City’s history, the Green Line LRT, a Design-Build-Finance (DBF).

Appendix 4 – P3 Project Assessment Process and P3 Business Case

The Project assessment process will have three components, which together form the P3 Project Case:

1. Initial Project Screen;
2. Strategic Assessment; and
3. VFM Assessment

Below is an illustration of the decision process when moving through the P3 Project Assessment Process and P3 Business Case.



(1) On an exception basis the findings of the strategic assessment may be clear on which delivery model is most suitable for the project, and completion of the VFM Assessment may not be necessary.

(2) Form of traditional delivery model depends on when step-in rights are triggered.

Initial Project Screen

Refer below to the criteria that each Project must be screened against:

Criteria Category	Criteria
Demand	Are the long-term operation or service needs relatively stable and/or predictable?
Duration	- Is the service life of the capital asset at least 20 years? - Is there a long-term maintenance, operation, or service need associated with the capital project?
Innovation	Is there scope for innovation in the design of the solution and/or the provision of operation, maintenance, and services?
Legal Barriers	- Are there any legislative or regulatory prohibitions to a P3 approach for the project (that cannot be changed in the short term)? - What are the opportunities and challenges from a legal perspective?
Market	- Are there likely to be at least 3 bidders for the project if it is procured as a P3? - Are there precedent projects (examples of similar projects) in other jurisdictions? - Has The City received unsolicited non-competitive proposals for P3-style delivery of the project, or similar projects? - Does the private sector have the expertise to deliver on the performance specification?
Payment	- Can payment be tied to measured performance? - Is there a potential revenue opportunity for the private sector participant?
Project Risk	Are there risks associated with traditional procurement that might be better managed by a private partner?
Project Size	- Is the estimated project cost significant enough to attract the market? \$100M or more, market has definite interest - Between \$20M and \$100M, market interest may vary based on the asset class (e.g. water projects, buildings may be suitable) - Can the project be bundled with one or more other similar projects to achieve a larger project size more suitable for P3?
Specifications	Can the capital asset and related services be defined in a performance or output specification?
Land	Is the land for the project being provided by The City?
Current State	Is the project new build or greenfield? Renovations are, in general, less suitable for P3; however, every case is different.
Integration	Is the project relatively independent of other City projects, infrastructure, or control systems?
Human Resources	Does the project, if delivered by a private partner, obviate any current City staff positions?
Asset Complexity	- How complex is the asset with respect to construction, operations, and maintenance? - Is there potential to combine delivery of different asset classes into one contract?
Life-Cycle Costs	Can most of the full lifecycle costs of the asset, including construction and fit up (i.e. project costs), long term operations and maintenance, be quantified upfront with reasonable assumptions and/or availability of historic data?
Revenue Generation	Does the planned investment have inherent scope to generate any revenue?
Potential for Contract Integration	Which elements of the potential P3 (i.e., design, build, finance, maintain, operate) can be integrated into one contract?
Is the Project a Council Priority	To what extent does the project respond to departmental and Council priorities and budgets?
Sufficient City Resources	Does The City have the resources and expertise to undertake a P3 approach?
Other	Other questions or comments by the SBU or Finance P3 Workgroup that are relevant to the Project and the Project as a P3.

If the balance of the answers to these criteria is positive toward P3 delivery, then the Project may be suitable for a P3 delivery model and worthy of more in-depth analysis in the strategic assessment. It may be possible at this stage to identify the most likely suitable P3 model as well.

The Finance P3 Workgroup may supplement the Initial Project Screen with additional questions and approaches based on the nature of the Project being considered, as well as the continuing evolution of P3 assessments in the market.

Strategic Assessment

The main components of the strategic assessment are as follows:

- Project description through the full life cycle (design, construction, operations and maintenance, and decommissioning if applicable);
- Description of cost components, and estimates if available, for each phase of the Project life cycle;
- A preliminary list of P3 Models to be considered for the Project;
- A review of any Project-specific objectives or constraints The City may have with respect to the Project;
- A *qualitative* risk assessment, which:
 - identifies which risks are of importance in selecting a delivery model for the Project
 - assesses the risk (i.e. likelihood and severity) the *Project* is exposed to under both traditional delivery, *and* the P3 Models under consideration
 - applies each P3 Model's risk allocation to assess the risk to The City under each model
- A review of the market of service providers and assessment of the likely interest of the market in bidding competitively for the Project (and optionally, a market sounding as described under VFM Assessment);
- A review of any relevant precedent Projects or similar Projects;
- A preliminary comment on the potential for cost savings, based on precedent/similar Projects, other relevant experience of The City and its advisors, and the findings of the qualitative risk assessment;
- A review of any requirements associated with funding agreements with other levels of government that will provide funding for the Project;
- A determination of the preferred P3 delivery model; and

- A distillation of the above into a determination of preferred delivery model for the Project (i.e. either traditional, or the preferred P3 Model). Best efforts should be made to reduce the number of delivery models to one traditional and one P3 Model at this stage; however, it is possible that more than one P3 delivery model be carried forward for further consideration.

VFM Assessment

The general methodology for a VFM assessment is as follows:

- Determine the full schedule of the Project and, through cash flow modelling, the life cycle cost of traditional delivery of the Project (including design, construction, operations, maintenance, recapitalization/renewal, service provision, and financing) to provide the “raw cost estimate.” This may be a high-level order of magnitude estimate or more a detailed estimate, depending on the Project profile;
- Quantify the risks (i.e. determine expected cost) to The City of traditional delivery, which when added to the life cycle cost provide the “risk-adjusted cost estimate”, also known as the “Public-Sector Comparator”;
- Using the raw cost estimate as the baseline, estimate the costs to The City if delivered under the P3 Model(s). This is done through cash flow modelling of the private partner’s financial approach and may consider expected private sector efficiencies in capital, life-cycle, and operating costs, as well as the cost of private financing. The results are known as a “Shadow Bid”; and
- Compare the Public-Sector Comparator to the Shadow Bid to determine the VFM, if any, offered by the Shadow Bid.

The VFM assessment should reflect, and attempt to price, the Project based on The City’s expected service standards.

The main components of the VFM assessment, in addition to those that are part of the strategic assessment, are as follows:

- The preferred potential P3 Model, as determined by the strategic assessment (i.e. the VFM assessment should focus on one specific P3 Model if possible, however, more than one P3 Model may be carried into the VFM assessment if the outcome of the strategic assessment does not result in the clear identification of only one P3 Model);
- A quantitative risk assessment, which builds on the qualitative risk assessment done in the strategic assessment, and:
 1. Quantifies as best possible the likelihood and impact of all risks that The City faces under traditional procurement; and

2. Quantifies as best possible the likelihood and impact of all risks that The City faces under P3 delivery (the likelihood and impact will change due to risk transfer to the P3 partner).
- A market sounding of relevant service providers (i.e. discussion of the Project characteristics, costs, schedule, etc.) to obtain direct market input on issues of risk allocation, financing, procurement concerns, and competitive interest that affect the VFM assessment or the overall conclusions, or both. This may sometimes be done as part of the strategic assessment;
 - Development of a cash flow model for the raw cost estimate;
 - Development of the risk-adjusted cost estimate, or Public-Sector Comparator;
 - Development of a cash flow model for the Shadow Bid;
 - The Public-Sector Comparator and Shadow Bid are in NPV terms to enable comparison. The discount rate for the NPV calculations should generally be The City's long-term cost of borrowing. When deviating from this, the rationale for using a different discount rate shall be documented.
 - An analysis of the difference between the Public-Sector Comparator and the Shadow Bid, resulting in an assessment of VFM. This analysis generally includes sensitivity analysis on significant VFM inputs. Sensitivity analysis is particularly important in instances where the VFM proposition is relatively small (i.e. < 3%); and
 - A distillation of strategic factors and VFM to select the recommended delivery model, which may be traditional or a P3 Model.

The final step discussed above is key in cases where important considerations identified in the strategic assessment either balance or complement the primarily financial results of the VFM analysis.

Appendix 5 – External Consultants and Advisors Engagement

Additional expertise will be required that may not be readily available through internal resources. The engagement of external consultants will require following the current *Procurement Policy*. The following external consultants may be retained through a procurement, depending on the Project needs:

- **Technical Advisors:** May be involved at the business case stage and will provide expertise and technical resources to The City regarding all phases of the procurement work, which will include:
 - Functional program finalization;
 - Technical specification writing;
 - Project Agreement review and preparation of specific technical sections;
 - Responding to or assisting in the responses to inquiries;
 - Aid during the assessment processes;
 - Participate in the design and construction period with The City as the compliance team;
 - The Technical Advisors may include architects, engineers, information technology experts, equipment planners, facilities maintenance consultants, insurance advisors, and any other technical expertise required; and
 - If possible, all consultants should be under one Technical Advisor lead for ease of coordinating related Project requirements and expertise. The exceptions to this are the facilities maintenance consultant and insurance advisor, who may report separately to The City as their roles do not have a direct relationship with the other technical consultants' roles.
- **Quantity Surveyor:** May be engaged at the business case stage and will provide expertise in the cost estimates of the Project.
- **Financial Professional:** Will be engaged at the business case stage generally at the time of proceeding to the strategic assessment phase and may include the following:
 - During the VFM phase risk quantification, the Financial Advisor will conduct Monte Carlo analysis of potential risk outcomes, using risk modeling software;
 - Provide expertise regarding financial matters during the Procurement Phase, which may include:
 - a. Assist in the market sounding;
 - b. Preparation of the financial details for the Project;
 - c. Assist in the preparation of the procurement documents, and Project Agreement;
 - d. Assist in the assessment processes;
 - e. Responding to or assisting in the responses to select inquiries;

- f. Update the VFM analysis from the business case stage, Procurement Phase, Preferred Proponent selection, to Financial and Commercial Close;
 - g. Prepare the final VFM Assessment Report for public release within 90 days from signing of the PA; and
 - h. Provide expert financial advice throughout the procurement.
- **Legal Advisor:** Will provide expertise regarding legal matters during the Procurement Phase, including:
 - Assisting in the drafting of the procurement documents, PA and related schedules;
 - Responding to or assist in the responses to select inquiries; and
 - Lead the legal aspects of the procurement and closing process.
- **Fairness Professional:** Will be engaged prior to release of procurement documents and be involved throughout the remainder of the Procurement Phase to ensure that it is conducted in accordance with the processes as agreed to and described in the procurement documents.
 - Will generally issue two written reports:
 - i. The first at the selection of the shortlisted Proponents under the procurement process; and
 - j. The second at the completion of the selection of the Preferred Proponent.
- **Capital Markets / Interest Rate Advisor:** May be retained leading up to Financial Close to provide rate setting advice to The City during rate setting processes. This may also extend to advice on credit spread protection, if the procurement documents contain such a mechanism.
- **Procurement Advisor (if required):** May be engaged at the business case stage and may provide expertise and resources regarding procurement matters during the Procurement Phase, including:
 - Assisting in the preparation of the Project plan and schedule;
 - Assisting in the drafting of the procurement documents, and PA;
 - Responding to or assist in the responses to inquiries;
 - Assisting in the assessment processes; and
 - Providing expert procurement advice throughout the procurement process.
- **Clerk of the Works Clerks of the Works (also known as Quality Site Inspectors):** may be hired as an owner representative to ensure proper oversight of materials or services incorporated into the Project and for quality control in P3 models which include design-build.

Appendix 6 – P3 Procurement Process

To assist in reducing the likelihood of bids coming in over budget, the procurement documents may include an “Affordability Ceiling” coupled with a “Scope Ladder”. The Affordability Ceiling quantifies the maximum price The City will pay and can be based on the overall NPV of the bid, including all elements of the P3 (i.e. DBFMO), or select P3 elements only. The Scope Ladder identifies successive levels of scope that can be eliminated in order for the bid to come in under the Affordability Ceiling.

The City will hire an independent Fairness Professional to ensure that the selection process adheres to the high standards of openness, fairness, and transparency.

The successful winning proposal will be based on an evaluation of technical and financial criteria (including price) which may include qualitative criteria or other value-added criteria (or both) as set out in the procurement documents.

The terms of the finalized contract will be based on the specifications identified during the assessment process and the procurement process; however, any changes made during the procurement process need to be assessed in terms of the impact on the VFM assessment. During the procurement process, issues may arise that cause The City to abandon the P3 and move back towards a traditional delivery model. An important consideration in this decision is the impact on future P3s.

Commercial Close

Once the approval process and negotiations are complete, the contract is awarded to the successful Proponent. A suitable date and location is identified for contract execution, where the City’s representative signs the contracts after all other parties have signed. The PA should address potential gaps in operating practices between The City and the P3 partner in areas such as training, bilingualism, public safety and community access.

Financial Close

Bids normally assume that the cost of debt financing reflects an agreed margin above a reference rate, rather than a prescribed interest rate. This is due to the timing of the drawdown of funds being difficult to determine while interest rates move daily.

The risk allocation reflected in the procurement documents normally indicates that the risk of movements in interest rates between the submission of bids and financial close are to be borne by The City. This is commonly referred to as base rate protection. This means that the periodic payments (often referred to as the “Annual Service Payment” (ASP)) to the P3 partner included in the PA are finalized and settled at, or following, financial close. Recalculation of the ASP is performed within the financial model that was provided with the bid. The means of applying the model for this purpose needs to be agreed with the P3 partner prior to financial close. At financial close, the ASP can be

recalculated using the actual interest rates and these are then inserted into the relevant schedules to the PA.

Given that the risk of interest rate movements generally remains with The City until financial close, the length of time from the submission of proposals to financial close can have a material impact on the ultimate price of the proposal. This is further incentive to ensure that the process from submission of proposals is as timely and efficient as possible.

As the P3 Model evolves, new features may be added. Recently, P3 transactions have provided the P3 partner with credit spread protection in addition to base rate protection. A credit spread is the risk premium add-on to the base interest rate used when pricing corporate debt issues. Credit spread protection protects the P3 partner from widening credit spreads between the time of financial bid submission and financial close. It is recommended that The City engage an external capital markets advisor to assist with both base rate and credit spread protection as these are complex features, requiring up to date subject matter expertise.

At contract execution there may be a small number of matters that financiers need to resolve before unreservedly committing their finances to the Project. It is important that the number of such matters left outstanding at contract execution is kept to a minimum to prevent delay between contract execution and financial close. When these matters have been resolved, financial close can occur.

At financial close, the ASP under the contract can also be finalized. Usually, changes to the ASP depends on changes in interest rates in the period between bid submission and financial close.

VFM Refresh

Should the Project proceed as a P3, the VFM report is updated based on the actual successful proposal at financial close. The result is referred to as the final VFM assessment which will be documented and available to the public no later than 90 days after financial close.

Lessons Learned Process

A debriefing discussion among the Project team on the lessons learned from the Project should be undertaken at this point.

Appendix 7 – Risk Register Categories

Below is a table of risk register categories (including sample risks within each category), as they relate to a capital Project from the planning through to the procurement, construction and operations/maintenance phases.

Each Project will require its own risk register, as every Project is different, and depending on the delivery models being assessed, certain risks may be managed / mitigated differently.

Risk Register Category	Sample Risks	Cost Base	Resources Required to Identify Risk and Determine Value
Policy & Strategy	- Risk of delay in procurement process - Risk of procurement process failing	Total contract value (excluding financing)	SBU, representatives from finance, integrated risk management ("IRM"), legal
Design	- Risk that technology proves inadequate to meet project requirements - Risk that design is insufficient to deliver services at required levels	Design + construction	SBU, representatives from IRM, technical/design advisor
Site Information	- Risk that geotechnical and/or environmental information provided to bidders is incomplete - Risk of unforeseen geotechnical and/or environmental conditions	Design + construction	SBU, representatives from IRM, technical advisor
Procurement	- Risk that lack of interested bidders results in smaller number of bids - Risk that procurement documentation is incomplete - Risk of resource capacity within City to undertake/oversee procurement - Risk that City projects compete for bidders	Design + construction	SBU, representatives from finance & supply, IRM, legal, financial and technical advisors
Construction	- Risk of construction delays - Risk of cost overruns - Risk of latent defects - Risk of City-initiated change orders	Design + construction	SBU, representatives from IRM, legal, financial and technical advisors
Permits & Approvals	Risk of not receiving building permits, environmental approvals	Design + construction	SBU, representatives from IRM, legal, technical advisor
Commissioning	Risk of late delivery	Design + construction	SBU, representatives from IRM, financial and technical advisors
Life-cycle and Residual (Maintenance)	- Risk of asset being run down - Risk of higher-than-expected maintenance costs	Maintenance	SBU, representatives from IRM, finance, supply management, financial and technical advisors
Operations	- Risk of not meeting performance specifications - Risk of higher-than-expected operating costs - Labour supply risk - Risk of professional/legal liability	Operating	SBU, representatives from IRM, finance, supply management, legal, financial and technical advisors
Political	Risk of public resistance to private sector involvement in infrastructure/service delivery	Total contract value	SBU, representatives from IRM, finance & supply, legal, financial and technical advisors
Reputation	Risk of P3 failing	Total contract value	SBU, representatives from IRM, finance & supply, legal, financial and technical advisors
Other	Other risks identified important to the Project, on a case by case basis	Case by case basis	Any representatives identified as involved in the P3 Project including the ones identified in this table

Appendix 8 – Definitions

- **Administrative Leadership Team (ALT):** Refers to the most senior group of administrative officials in The City.
- **Commercial Close:** once the approval process and negotiations are complete, the Project Agreement is executed by the successful Proponent and The City.
- **Finance P3 Workgroup:** The Corporate and Innovative Finance team in the Finance business unit.
- **Financial Close:** the time when the Project Agreement and all financing and other agreements related to the Project have been executed and delivered and all conditions to the effectiveness of the Project Agreement and Project financing agreements have been satisfied.
- **Minimum Value Threshold:** \$100 million on a Net Present Value basis which may be subject to change in conjunction with future policy updates.
- **Net Present Value (NPV):** The value of a Project found by adding the present value of expected future cash flows and the cost of the initial investment.
- **P3 Model:** The integration of multiple Project elements into one performance-based contract. These elements may include Design, Build, Finance, Operate, Maintain, or a combination thereof.
- **Procurement Phase:** The phase of a P3 Project that begins with Council approval of a P3 Model and ends when the Project Agreement has been fully executed.
- **Project:** as applied in this document, a capital investment that falls under one of these categories:
 - Capital project that is a planned, delivered and evaluated on its own merit and has a well-defined scope, cost and schedule resulting in new or substantially improved assets; or
 - Capital program that is a grouping of capital projects that are related and benefit from being planned and managed together; or
 - Annual investment program that is a recurring capital program focused on maintaining or upgrading current, in-service assets or for ongoing purchases of similar assets.
- **Project Agreement (PA):** The contractual arrangement between The City and the P3 partner.
- **Proponent:** a competing consortium, typically consisting of a sponsor, design-builder, finance provider, maintainer or operator, or a combination thereof.

- **Public-Private Partnership (P3):** A contractual agreement between a public authority and a private entity for the provision of infrastructure or services, or both, in which:
 - The private sector participant assumes the responsibility for financing part or all of the Project; or
 - The City seeks to transfer risks that it would normally assume, based on the private sector participant's ability to better manage those risks; or
 - The arrangement extends beyond the initial capital construction of the Project; or
 - All or any combination of the above.
- **Public-Sector Comparator:** The risk-adjusted cost estimate of a Project assuming the most efficient form of traditional government delivery. It includes the best estimate of full lifecycle costs, benefits and risks over the contract term.
- **Shadow Bid:** The risk adjusted cost estimate to The City of the Project if delivered under a P3 model(s). This is done through cash flow modeling of the private entity's financial approach and may consider expected private sector efficiencies in capital, lifecycle, and operating costs, as well as the cost of private financing. It includes the best estimate of full lifecycle costs, benefits and risks over the contract term.
- **Sponsoring Business Unit (SBU):** The City business unit or most senior Project representative which is responsible for the Project.
- **Value-for-Money (VFM):** The difference between the Public-Sector Comparator and the Shadow Bid is referred to as the VFM. There is said to be positive Value-for-Money by procuring a Project using a P3 when the cost to deliver the P3 is less than the Public-Sector Comparator.