

Procurement and Delivery Model Selection Process: Delivery Models Overview

Overview of Delivery Model Options:

About IO's Procurement and Project Delivery Approach:

IO considers a range of procurement options in delivering its major infrastructure projects. This approach ensures that IO can select the best option for each project. It is recognized around the world for its success in delivering projects through its made-in-Ontario P3 program along with completing thousands of smaller projects using more traditional approaches.

IO aims to build on its success by adapting and expanding on its approaches to suit the realities of a changing marketplace and the current infrastructure needs of government.

Four core objectives have always been at the heart of our approach:

- Creating competition and enabling innovation;
- Allocating project risks to the right party and appropriately incentivizing/ensuring performance;
- Taking a total lifecycle approach to assets – by integrating responsibility for the design, construction, and maintenance where possible;
- Providing as much cost certainty as possible for taxpayers.

This glossary includes models that cover the entire industry spectrum, ranging from more traditional all-public approaches to public-private partnerships, as well as private approaches. Ontario's approach to P3s always maintains public ownership of the asset. As such, not all of the models below are used by Infrastructure Ontario. Those that are considered and used by IO are identified as such:

I. Design-Bid Build (DBB)

The DBB is a traditional procurement option in which the Owner awards two distinct and sequential contracts for the design and construction work:

- The first contract is with a design firm to develop a full detailed design and to assist the Owner in putting the construction of the project out to tender; and
- The second contract is with a general contractor to build in accordance with that design.
- Under the DBB model, the operations, maintenance and financing of the project would remain the responsibility of the Owner.

IO commonly uses this 'traditional' procurement approach for many smaller scale projects in its role of maintaining and modernizing the buildings and various facilities within Ontario's general real estate portfolio.

II. Design-Build (DB)

The DB model awards the design and construction work under a single contract. Consortia, joint ventures and/or subcontracting arrangements may be established between two or more companies to pool the resources and expertise necessary to deliver the project. Under a DB contract, the Owner continues to operate, maintain, and refurbish the asset once construction is complete. Furthermore, the Owner is responsible for financing the entire construction project.

IO and Metrolinx have used this model for transit projects.

III. Integrated Project Delivery (IPD) / Alliance

The IPD/Alliance contract is formed by the Owner, designer, construction contractor, suppliers and potentially stakeholders (e.g., local organization, community stakeholder, funding organization, etc.) to plan, design, construct and commission a capital project. Compensation under an IPD/Alliance model is directly tied to cost, schedule and profitability milestones of the overall project.

The fundamental difference between an IPD/Alliance and traditional contracts is the underlying principle: a non-adversarial approach between the contracting parties. This is achieved through establishment of IPD/Alliance principles, good faith commitments, and adoption of no-dispute provisions. The Alliance contract and supporting structures promote a positive culture based on “no-fault, no-blame” and unanimous decision-making, and require all Participants to find the “best for project” solutions. The collaboration requires a greater time commitment on the Owner’s part, but efficiencies and win-win situations are maximized.

IO and Metrolinx have adopted an Alliance model for the Union Station Enhancement Project.

IV. Construction Management at Risk (CM@R)

Under this model, the CM@R contractor is engaged by the Owner to provide consultancy services during the pre-construction stage (constructability and value engineering reviews, tender administration, etc.). They are later contracted to deliver the construction of the project under a cost-plus-fee arrangement that includes a Guaranteed Maximum Price (GMP). The CM@R contractor typically advises the design team, procures the construction and manages the delivery.

The contractor in a Construction Management at Risk model is responsible for any construction cost overruns above the maximum price. The GMP is negotiated before the design phase is complete and likely to include a risk premium in exchange for the contractor taking on the risks of cost overruns above that maximum price.

IO has begun using this model in circumstances such as its accelerated build program for long-term care facilities and some justice facilities.

V. Design – Build – Finance (DBF)

Similar to a Design-Build model, a DBF approach awards the design and construction under a single contract. Consortiums, joint ventures or subcontract agreements may be established between two or more companies to pool the resources and expertise necessary to deliver a DBF project.

The consortium must obtain short-term construction financing from third-party lenders or use its own equity resources. A lump-sum payment at substantial completion is intended to pay off the consortium’s design, construction and construction financing costs. Because the Owner (government or other public-sector owner such as a hospital or transit agency) withholds all or a significant portion of payment until project completion, this approach provides financial motivation for the consortium to complete the project on time – any incremental interest costs and financial penalties associated with schedule delays are borne by the private-sector consortium.

IO commonly uses this model when appropriate for hospitals, justice facilities such as courthouses and transportation projects.

VI. Design – Build – Finance – Maintain (DBFM)

The DBFM model involves the private sector consortium (“Project Co”) accepting responsibility for the design, construction, financing, regular maintenance and rehabilitation of the asset over the contract term to meet pre-defined performance specifications. The typical contract term for the maintenance work is 20 to 30 years. The public sector retains ownership of the assets.

Project Co would not be fully paid for construction work following substantial completion, but would be paid in instalments over the length of the maintenance term. Because the Project Co is responsible for the maintenance and performance of the facility for 20 to 30 years, there is additional incentive to use high-quality and durable materials that will ultimately benefit the Owner and public.

IO commonly uses this model when appropriate for hospitals, justice facilities such as courthouses and transportation projects.

VII. Design – Build – Finance – Operate – Maintain (DBFOM)

The DBFOM model builds on the DBFM model. In addition to Project Co accepting responsibility for the design, construction, financing, regular maintenance and rehabilitation of the asset over the contract term, it also takes responsibility for operations under the same contract.

This model is suited for projects where both the maintenance and operations have the potential to be transferred to the private sector. For instance, a light rail transit (LRT) system has the potential to be delivered under a DBFOM model, where Project Co may assume responsibility for maintaining and rehabilitating system infrastructure as well as day-to-day operations.

IO and Metrolinx have used this model for some transit projects.

VIII. Progressive Design-Build-Finance/Design-Build-Finance-Maintain

A “Progressive” procurement strategy fosters collaboration between the owner and its contracting partner. Before entering a final fixed-price contract, both sides work together to define the project requirements, design, pricing and risk.

IO’s work on the progressive strategy is well informed by its ongoing discussions with industry.

A progressive procurement strategy may be paired with a variety of contracting models. It includes cost control measures such as affordability caps to establish a budget for which the development partner would produce a scope of work. Alternate, or separate, prices can be developed to permit decision making on the amount of scope and associated cost that is desired for a project. These additional measures present an opportunity to inform government decision-making earlier than with classical versions of P3 models. It also creates an opportunity for more collaborative project planning and consultation work.

Infrastructure Ontario is using progressive P3s on three hospital projects.

IX. Progressive Design-Build

A Progressive Design-Build applies a similar collaborative approach between the owner and its contracting partner during the early work of projects such as project requirements and design work. Unlike the Progressive P3s, a Progressive Design-Build model employs a target-price similar to a traditional Design-Build model, rather than the fixed price enabled under a P3 model.

IO and Metrolinx are using this model on select transit projects.

X. Revenue Risk Concession

Revenue risk concession models involve the private partner designing, building and financing an asset, providing regular maintenance and rehabilitation services, and operating, managing and investing in the business of the asset, under a long-term agreement. The private-sector partner is compensated by revenue from user charges which in turn are used to finance its investment in the asset. The role of the public authority is primarily focused on regulatory compliance, monitoring, and customer protection through enforcing government regulations and the project agreement, as well as through policy decisions. Build-Lease-Transfer (BLT), Build-Operate-Transfer (BOT), Build-Own-Operate-Transfer (BOOT) and Build-Own-Operate (BOO) models are characterized as concession models.

IO has no projects using this model.

XI. Regulated Asset Delivery

A Regulated Asset Delivery (RAD) model involves a company owning, investing in and operating an infrastructure asset under a legally binding licence from an economic regulator. The regulator grants the company the right to charge a regulated fee for use of the asset to fund a portion of its operations and recoup investment costs. The charge is set by an independent regulator who holds Project Co accountable to ensure any expenditure is in the interest of the ultimate user of the asset.

IO does not use this model.