THE INFRASTRUCTURE DEFICIT: THE EFFECTIVENESS OF ALLIANCING AND PPP MODELS IN THE PAST AND FOR OUR FUTURE NEEDS

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ABSTRACT

This paper will examine the PPP and Alliance Models of infrastructure contracting to assess from past experience their utility, drawing on their benefits and drawbacks associated with each delivery model and consideration of how to improve co-ordination, collaboration and alignment among public and private sector infrastructure owners and funders. The paper will consider best ways to fund and finance infrastructure, how various provisions can be used to help mitigate cost and risk and will examine whether or not the use of particular project models enhance positive environmental outcomes, such as clean energy systems and net zero structure.

The four authors bring their perspectives on these topics from their experiences in the UK, Turkey, Canada and New Zealand. Each of the four jurisdictions considered are at a different point in the life cycle of the adoption and use of PPPs and Alliance Models and accordingly bring a unique perspective to the past, present and future.

Keywords: Alliancing, Infrastructure, Infrastructure Deficit, Procurement, Public Private Partnership.

1. INTRODUCTION

With very few exceptions every country in the world is facing a significant infrastructure deficit. Various estimates are given including US$15 trillion globally by 2040. To provide basic infrastructure for all people over the course of the next two decades, every year the world would need to spend just under $1 trillion more than the previous year in the infrastructure sector.[1] Traditional forms of funding from local or central government are woefully inadequate. Exacerbating the issue are natural disasters (earthquakes for example in New Zealand[2] and more recently in Turkey[3]) and the effects of global warming divert funds to emergency relief and rebuilding. Pandemics, recessions and political preferences all hinder progress towards solving that deficit.

Modern PPPs took on a new lease of life in the early 1990's with the UK Conservative Government introducing the Private Finance Initiative, the first systematic program aimed at encouraging PPPs. But countries such as Turkey were already using private funding and PPPs in the mid 1980's. Their popularity quickly progressed around the world. This included a number variants in selecting some or all of design, build, operate, maintain, own, lease and/or return. They have as many supporters as they do detractors, as an answer to the infrastructure deficit. What is clear, long term institutional investors (typically pension funds, insurance syndicates and the like) are ready and willing to invest in infrastructure projects.

The detractors fear control over essential assets needed for transport (roads and ports), water, health, prisons, schools to name a few, would be lost to private hands. They also saw the risk that if the private sector failed, the tax payer would in the end pick up the tab.

Both were right. There have been many success stories and a number of failures. But still true today is the lack of appetite for or ability of central and local government to meet the infrastructure deficit. A solution is required that taps into the private sector while protecting the essential assets.

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[1] 'The global infrastructure financing gap: Where sovereign wealth funds and pension funds can play a role', Amin Mohensi-Cheraghglou and Naomi Aladekoba, Econogrpahics, 31 October 2022, https://www.atlanticcouncil.org/blogs/econographics/the-global-infrastructure-financing-gap-where-sovereign-wealth-funds-swfs-and-pension-funds-can-come-in/#:~:text=The%20global%20infrastructure%20financing%20gap%20is%20estimated%20to%20be%20around,year%20in%20the%20infrastructure%20sector

[2] Christchurch, New Zealand, 2010 and 2011.

[3] February 3, 2023 southern and central Turkey and northern Syria.

Overlaying all of this is the urgent need to align any new procurement model with sustainability at it forefront.

The authors (and co-authors) of this paper come from jurisdictions at different stages in their PPP life cycles. Our host country will be addressed first with insights from Dogan Eymirlioglu[4]. As an early adopter of PPPs, the UK experience will be covered by Kirsti Olson[5]. Next is Canada, addressed by Karen Groulx[6]. New Zealand only adopted the PPP model in 2009. Stuart Robertson addresses New Zealand's experiences in the final section[7].

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2. INTRODUCTION – PPPs: AN OLD FRIEND WITH A NEW FACE - TURKEY

Turkey has a long-standing track record of implementing large scale infrastructure projects through public private partnerships (**PPP**) despite the lack of a framework legislation specific to PPPs. These include motorways, bridges, airports, healthcare projects and power plants. Notable recent examples include Gebze-Orhangazi-İzmir Motorway, Northern Marmara Motorway, Yavuz Sultan Selim Bridge, Çanakkale Bridge, Osmangazi Bridge and Istanbul Airport.

Turkey's history with PPP goes back to 1980s, when build-operate-transfer (**BOT**) projects rose to prominence in the second half of the decade. Other PPP models, such as build-lease-transfer (**BLT**), have also been frequently used to date.

PPP projects peaked in Turkey during the early 2010s, with an investment of more than USD 28.5 billion in 2013, according to the Presidency of Strategy and Budget of the Presidency of the Republic of Turkey. The current economic downturn in Turkey has also led to a decrease in the number and value of investments made through PPP projects. However, Turkey does not seem to be deterred by the economic downturn, as the government continues to promise big ticket PPP projects soon. One notable example is the Istanbul Canal (*Kanal İstanbul*), a mega project consisting of various large scale PPP infrastructure investments intended to create an artificial sea-level waterway in East Thrace, connecting the Black Sea to the Sea of Marmara.

Turkey has been able to leverage user-pays schemes which include annual minimum use commitments by the public partner in favour of the private partner. In this structure, the private partner charges a fee to users, and if the minimum commitment is not fulfilled by the year-end, then the taxpayers cover the shortfall of the public partner's minimum use commitment.

From the perspective of private partners, this has lowered the risk profile of even grand scale infrastructure projects and boosted their feasibility. From the perspective of public partners, this has allowed them to realize infrastructure projects with limited resources. On the downside, in some cases, the model has been criticized for being used to fund inefficient or unfeasible projects which fail to finance their cost through fees paid by users and end up resulting in high tax burden on the public. According to critics, sometimes, despite the lower initial capital requirement in PPP projects, the overall financial cost of the project could exceed the total project cost, even with the employment of a user-pays scheme.

From another perspective, Turkey has arguably derived added value from PPP projects in terms of the know-how, technology and research and development employed by foreign private partners. Proponents of the PPP model are quick to point out the increase in construction and infrastructure work undertaken by Turkish contractors in the Middle East and Africa regions.

Alliancing is still foreign to the PPP projects in Turkey and both public and private sector actors prefer using tested PPP models. This being said, one cannot rule out a transition to alliancing as current projects face various challenges and government is looking for alternative means to ease the stress on these projects through new legislations.

3. TYPICAL TURKISH PPP STRUCTURE, ITS ADVANTAGES AND INCONVENIENCES:

Typically, Turkish PPPs are structured around a public tender where newly established project companies, i.e. SPVs, bid for the project. Government's primary contractual relationship is with the SPV. The project company's shareholders are typically project developers, construction companies, infrastructure management companies.

The SPV usually enters into agreements with the affiliates of the project shareholders or independent companies with niche expertise in a given element of the project to manage the design and construction (EPC contract) or the operations and maintenance (O&M agreements).

A general overview of the PPP projects in Turkey is as follows:

OVERVIEW	ADVANTAGES	DISADVANTAGES
• Contract between a tendering public authority and an SPV (backed by a single investor or more often by a consortium).	• Holistic view of project, including consideration of project costs for the entire course of the project.	• Cost and complexity: more complex than other procurement methods. Need to anticipate all contingencies that may arise in a long-term contract.
• SPV agrees to finance, design, build, and operate (full service or simple maintenance) an asset for a fixed period.	• SPV examines the design, building, and operation of a project over a long period.	• Aspects of the contract are necessarily renegotiated over time. Difficulties arise where public body needs to renegotiate a part where there is no pricing mechanism.
• The asset is returned to the public authority at the end of this period.	• Better understanding of project through comprehensive due diligence process and pre-tender financial estimations.	• Higher transaction costs: for the public and private sector to go through the expression of interest, request for tender and negotiation stage is expensive. Contract documents are numerous, lengthy

• Public authority specifies outcomes or services required at the tender phase and then in the contract.	• Speed: as the SPV is the borrower financing the building of the asset, there is an incentive for the SPV to reduce construction duration and start operation. • No burden on the public finances	and complex. • Higher capital costs: private sector charged with financing the project. • SPVs being responsible towards the government for the entire project's performance often look for back-to-back arrangements with subcontractors. Subcontractors are often smaller firms and have difficulty working with back-to-back liability arrangements.

Tabel 1: PPP advantages and disadvantages

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4. FINANCING

Through PPP project financing, Turkey managed to secure a considerable amount of investment. According to the Presidency of Strategy and Budget of the Presidency of the Republic of Turkey, total amount invested in Turkey through PPP projects since the year 1986 exceeds USD 94 billion.

The SPV raises finance through a combination of equity provided by its shareholders and debt provided by banks/financial institutions or through bond issuance. The borrower of the facility agreement is the SPV, backed by various corporate and other guarantees by its shareholders.

Taking into account the typical size of a PPP project in the Turkish context, bank financing is mostly provided by a syndication of banks and financial institutions. However, even if the financing is provided by a syndication of banks, to make these projects more bankable, the government may provide debt repayment guarantees or debt assumptions in favour of the lenders. Step-in rights are often provided in favour of the banks.

While bank financing of PPP projects is very common and remains the go-to financing model, Turkey was not shy to try alternative financing methods. In 2016, Elazig Integrated Health Campus PPP project has been financed through the issuance of greenfield infrastructure project bonds. The issuer issued EUR 288 million of privately placed, euro-denominated senior secured bonds and on-lent the proceeds to its sister company which was the project company that was awarded the 28 year concession by the Turkish Ministry of Health to design, build, finance, equip, and maintain an integrated hospital campus in Elazig.

5. WHAT TO EXPECT NEXT?

Whilst Turkey has, to some extent, cut back on its regionally leading pipeline of mega-projects, there are ongoing plans to commission two new major schemes: Canal Istanbul and the Gebze-Halkali Railroad, along with a part of its investment plan legislation foreseeing municipalities' water, wastewater, and solid waste facilities being operated by the private sector on a PPP basis.

Whereas PPPs significantly contributed to Turkey's economy and infrastructure, stability was adversely impacted for all parties by wider economic events in recent times. Just a few years after multiple megaprojects' commencement, based on state volume and demand guarantees, calculated with forex assumptions, the Turkish lira faced a currency crisis, followed by the pandemic, and now the Russia-Ukraine war. The social results of the crises unavoidably impact the future of the projects and financing.

The market has expectations of adopting new regulations to apply to future projects for increased certainty in PPP investments. We will soon see whether the government will work on it or instead let the precedents and contracts manage the terms. In terms of current projects, one can anticipate that there will be contractual changes to adapt them better to the new economic and social realities.

Term extension will be an important tool for existing projects to balance the economics to account for force majeure and other time and cost impacts of COVID-19. Usually, an extension is discussed and determined towards the end of the contract period for any event, to extend the operational period on a mutually beneficial basis but, in terms of project management, determination of such an extension at an earlier stage would be advantageous. There is opportunity for a win-win for both the public and private sectors in this respect.

On the impact of COVID-19 on end-user demand in live projects, given that many Turkish projects include demand guarantees from the government that sponsors and lenders can benefit from, changes in the level at which the demand guarantee takes effect may become more common. Would such changes be needed short, medium, or long term? For roads, for example, there may be some limited aversion to using public transport for a period and increased long-term home working could impact traffic volumes; for healthcare, the possible impacts of treating long-term consequences of COVID-19 (and other health conditions worsened by having gone untreated during the pandemic) may result in further increased demand in the future.

The recalibration of project economics or employing more radical changes, such as using pure availability and performance rather than demand-based payment going forward, may be among the solutions. That would generate valuable certainty for the market, as a perception emerged during the crisis that purely or primarily availability-based contractual arrangements for energy, transport, and infrastructure assets have proven more robust.

On completed projects, design and O&M specifications and even national regulatory standards may need to be changed – to account for social distancing requirements in project delivery or consumer use of project assets – and the increased capacity likely needed would have to be accounted for through a contractual change process on those projects.

These changes are likely to be an issue in healthcare projects, including changes in functionality, capacity, or service specification, and will be a test of how flexibly PPP facilities have been designed to cope with large-scale systemic health problems. But it seems clear that the Turkish health infrastructure – including a massive recent program of project-financed major hospitals – has proven robust and vindicated the focus over many years on those projects.

PPPs, which have played a major role in Turkey for many years, will remain important due to the country's pressing development needs, but we are likely to see changes in how such projects are delivered. Nevertheless, the Turkish model remains an influential one regionally, with particular benefits to Turkish project developers who honed their approaches in their domestic environment and are now positioned to export those skills regionally.

6. CONCLUSION

For better or for worse, PPP projects have played a key role in Turkey's recent history and economic development. Turkey has been experimenting with PPP projects for approximately four decades and has arguably both reaped its benefits and suffered from its drawbacks. PPP projects have been one of the main methods used by the public to realize big ticket infrastructure projects with limited resources. Through the PPP model, Turkey was able to secure a significant amount of investment, as well as benefitting from know-how, technology and research and development employed by private partners. The Turkish PPP experience suggests that projects developed through the PPP model are not always guaranteed to financially outmatch other alternatives, but so far, the public's appeal for PPP projects seem to be alive and well, despite the current economic downturn.

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7. INTRODUCTION: REFLECTIONS FROM A MATURE MARKET – UNITED KINGDOM

More than 700 assets (such as schools, hospitals, roads and prisons) have been built under the UK Government's Private Finance Initiative (PFI), since it was launched in 1992.

At the time, there was a significant need to upgrade the UK's public infrastructure, which was in a state of neglect, but limited public sector capital was available and there was a pressing economic need to keep public debt down[8]. The PFI policy was aimed at creating Public Private Partnerships (PPPs), to allow public infrastructure to be built or renewed using private funds, with the capital cost being recovered through monthly payments for services (including availability of the asset) during the life of the project (25 to 30 years), thus removing the debt from the Government's balance sheet.

It was expected that PPPs would also offer other upsides: transfer of risk to the private sector of the burden of constructing and maintaining the asset; a better quality of build; value for money delivery of services; and handback to the public sector at the end of the project term of an asset in good condition that could continue to be used.

The remit of this paper as a whole also covers Alliancing. Although the Alliancing model has been successfully used on multiple occasions in North Sea projects and is now being employed more widely, to date it has been not been heavily used in the UK to build and upgrade public infrastructure. We have not therefore discussed this method of procurement in any detail as evidence-based conclusions cannot yet be drawn. On this, other jurisdictions are leading the way.

30 years on (and despite the UK Government's 2018 announcement that it would no longer use PPPs for future projects), many PPP projects are still running in the UK. We offer here a brief note of some lessons learned along the way.

8. VALUE FOR MONEY

PPPs in the UK have not been popular with the taxpayer. Although one of the original attractions was the ability to upgrade infrastructure "off-balance-sheet", over time it became clear to the public that it is an expensive way to borrow money .

By definition, governments will represent better credit and lower risk than a PPP project company and therefore benefit from lower costs of borrowing. However, looking simply at the cost of capital is too narrow a focus.

[8] The UK had signed up to the Maastricht Treaty, which provided for European Economic and Monetary Union. However, in order to participate, EU member states had to keep public debt below a particular threshold.

Concerns were expressed that equity returns were too high and some investors had made windfall gains . Early projects were indeed overconservative. For example, the contract did not always provide for the asset to pass back to the public sector at the end of the project term. Instead, there was an option to buy it. Since the capital cost of the asset had already been recovered over the life of the project, it was essentially being paid for twice. This did change. However, PPP projects are still set up to generate extra money (to provide a buffer for payment of senior debt). Private sector lenders need to be sure that they will get their money back so there is headroom in the numbers. If not spent on risk, this money usually falls to investors as extra return.

Eventually, the UK Government decided that good value for money could not be provided by PPPs without substantial reform.

Attempts to do this were made. For example, the Scottish Government introduced non-profit distributing (NPD) projects. These provided a fixed return for investors and allowed the public sector to participate in gains and all returns above the fixed investor return. However, eventually NPD had to be stopped. Allowing the public sector to profit meant that projects did not meet the ESA 2010 accounting rules for off-balance-sheet treatment.

9. KEY OBSERVATIONS

A. Standardisation

Standardisation of PPP contracts was an important step forward. Early contracts were drafted using a pamphlet of Department of Treasury guidance. Procurements were complex and costly. There was no consistency on contract terms, beyond some key commercial points. Later projects were entered into with the benefit of several hundred pages of model contract. Standardisation saved a great deal of time and effort and improved the ability of those involved (public and private) to manage and understand portfolios of projects.

B. Quality

It was expected at the outset that private sector expertise would impact positively on the quality of the build. However, there have been some significant issues.

In January 2016, a large section of brick outer wall at a primary school in Edinburgh collapsed during a storm (fortunately overnight, with no injuries). Following investigations at 17 Edinburgh schools, an independent inquiry[9] found that the collapse had principally occurred due to the frequent omission or mispositioning of wall ties – the two leaves of the external walls were not

[9] Report of the Independent Inquiry into the Construction of Edinburgh Schools, February 2017, chaired by John Cole: https://democracy.edinburgh.gov.uk/Data/City%20of%20Edinburgh%20Council/20170209/Agenda/report_of_the_independent_inquiry_into_the_construction_of_edinburgh_schools.pdf.

properly tied together. Of greater concern was the finding that the issue had been repeated across the school estate by different firms. This led to the conclusion that it was a systemic issue, caused by poor workmanship and inadequate supervision onsite by the contractor and the professional design team, exacerbated by inadequate independent scrutiny of the work by client representatives.

Examination of the schools also revealed fire-stopping defects. Defective fire-stopping is another systemic issue that has been reported in PPP projects across the UK, particularly in the healthcare sector[10].

While these issues were recognised to be construction defects, rather than a failure of the PPP process itself, lessons have been learned. From a bidding perspective, it had not been competitive for contractors to add in the cost of a supervising Clerk of Works, unless it was a contractual requirement, and the role of the Independent Tester on a PPP project had been value engineered down to a paper-based exercise with an occasional site visit. In short, the construction process had become reliant on self-monitoring and self-certification by the builders and systemic quality issues were not being picked up. If we were to build these structures now, we would not let this happen again.

C. Flexibility

It was anticipated that, over a 25-year project term, the public sector would want to upgrade their assets. Over time, however, this has become more difficult to arrange. Early SPVs were owned by construction companies and FM providers. They soon realised that they were sitting on a marketable asset. PPP projects offered a low-risk Government-backed return. A secondary market emerged with many projects being sold on to pension funds. However, this has led to a shift in the appetite for risk and a certain degree of inflexibility in relation to project variations.

D. Procurement of services

In the early days, it was assumed that all services relating to a PPP building (hard FM and soft FM) would be passed to the private sector. Since it was difficult at the outset of a project to work out what the whole life cost would be, market testing and benchmarking was provided for. This allowed prices for soft services to be adjusted at set intervals based on market comparators.

A major development over the life of PPPs in the UK has been to reduce the scope of services provided by the private sector. Soft services in particular (such as cleaning, catering and utilities) have in large part been taken back by the public sector. Authorities found that benchmarking and market testing did not provide value for money. The public sector can aggregate soft services across

[10] See, for example, the case of *St James's Oncology SPC Limited v. Lendlease Construction Europe Limited and others* [2022] EWHC 2504 (TCC).

the whole of their estate. They can enter into shorter-term contracts and buy flexibility. This allows them to make savings and gives them more control over the operation of their business.

E. Self-monitoring

PPP projects are set up to be self-monitoring and self-reporting. The FM provider/SPV monitors its own performance and reports its failures to meet service and availability standards. Appropriate deductions are made from the monthly invoice. The Authority then reviews the monthly report and decides if it agrees with it.

This process therefore relies on two things: fair and transparent monitoring of its performance by the FM provider/SPV; and an appropriate level of engagement by the Authority in reviewing the information it receives.

Complaints have been made on both sides. Some Authorities are said to have applied the contract to an inflexible degree. Others have taken a too cordial hands-off approach. There have been accusations of failures to properly monitor and report.

In November 2022, the UK Infrastructure and Projects Authority (IPA) commissioned a report on behaviours, relationships and disputes in the PFI sector. The White Fraiser Report was published in July 2023. White Fraiser note a difference in approach between "industrial" SPV owners (for example, building contractors) and "financial" SPV owners (those with a non-specialist investor board). The report observes that the former often take a greater interest in the running of the project, with the latter operating thin teams, relying on its supply chain to manage problems .

White Fraiser's recommendation is that projects should be self-reporting but not self-monitoring. The private sector must self-report and the Authority must monitor. They observe that in projects where the public sector has a seat on the SPV's board, or observer rights, or an equity stake in the outcome, there is a greater understanding about how the business of a PPP operates and this leads to better levels of transparency and a more open approach to resolving operational issues .

White Fraiser also recommend that under-resourcing at an Authority level should be addressed . It is a risk. Even if the SPV is reporting properly, the public sector should still be monitoring performance.

F. Dispute resolution

Dispute resolution in PPP projects is largely adjudication-based. This has caused a number of issues.

I. Confidentiality

Adjudication is a private process. Decisions are not reported and cannot be shared more widely. There is therefore no bank of precedents and no general guidance on the interpretation of terms. Although PPP contracts have been standardised, a dispute relating to a standard payment mechanism may be litigated many times and decided one way on one project and differently on others.

This has led to an imbalance. Government departments which fund public sector organisations cannot be given copies of decisions. Knowledge sharing across the private sector is better because of the level of consolidation of private sector ownership.

White Fraiser note that their consultation revealed general agreement that it would be in the best interests of the PPP market to have access to those decisions on an anonymous basis[11].

II. Panel selection

Parties need to be more focused at the outset on setting up their dispute resolution process. Many projects provide that a panel of adjudicators will be agreed shortly after financial close to deal with disputes arising during the project. In our experience, this is frequently forgotten and by the time a dispute arises there is little incentive by the defending party to co-operate. This thwarts the contractual mechanism that the parties have agreed.

III. Quality of adjudicators

The availability of adjudicators with appropriate knowledge and experience of PPP projects has been patchy. This is compounded by the fact that rotating panels do not always lead to the appointment of an adjudicator with the appropriate skillset to deal with the dispute in question. This is an issue of concern, since many projects are approaching handback and a substantial upturn in disputes is anticipated[12].

DLA's Project Autumn Report[13] suggested the creation of an Expiry and Handback Resolution Council – a panel of leading adjudicators with projects experience, who would be able to take a consistent approach to dealing with handback issues. The White Fraiser Report recommends a

[11] White Fraiser Report dated 20 July 2023 at paragraph 9.
[12] The Infrastructure and Projects Authority is forecasting a substantial handback peak in the UK between 2026 and 2037.
[13] Project Autumn: Industry Consultation Report on PPP Handback and Expiry dated September 2022.

broader approach. It suggests that a PFI Dispute Resolution Forum should be established (and a database of accredited PFI mediators), the members of which will have the capability and experience to deal with complex PFI disputes (with access to accredited technical experts when required)[14].

G. Behaviour

Pockets of poor behaviour have been observed over time. Often this occurs when an overly aggressive approach is taken by the Authority to deductions. Sometimes this is consultant-led, sometimes it is stimulated by a management change at the Authority. The public sector would argue that it is often borne out of frustration with the SPV's performance (for example, persistent failure to resolve issues on the helpdesk, or inadequate reporting). Whatever the reason for it, poor behaviour causes stress, erodes relationships and results in an increase in disputes. Swapping out the key protagonists can be an effective way of dealing with this.

Good relationships are essential to the success of any PPP project, particularly so if net zero targets are to be achieved and there is to be a successful handback.

White Fraiser recommend that, rather than being quick to call in the lawyers, good behaviour should be encouraged by a reset. A period of relief should be allowed by the Authority to give the SPV time to fix the problem. At a high level, this would involve a systematic review of asset/services and a period of collaboration (without deductions being applied) to allow the parties to take productive and transparent steps to get the project back on track[15].

10. CONCLUSION

Clearly the PPP process in the UK has been far from perfect in its operation.

Nevertheless, in our experience (and we have now accumulated a lot of it) it is possible to manage a PPP project successfully from the beginning to the end, even where disputes are encountered along the way. Most parties appreciate that they are in a long-term relationship that must be made to work and this can be achieved by showing goodwill and flexibility.

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[14] White Fraiser Report dated 20 July 2023 at paragraph 12.
[15] White Fraiser Report dated 20 July 2023 at Section 5.

11. BUILDING THE FUTURE WE WANT USING LESSONS LEARNT FROM THE PAST PUBLIC-PRIVATE PARTNERSHIPS IN A CANADIAN CONTEXT AND THE TRANSITION TOWARDS ALLIANCE CONTRACTING

A. Introduction

I. P3s in a Canadian context

Since the early 1990s, Canada has long established itself as a global leader in adopting the public-private partnership ("PPP", or "P3") model as an alternative method of project delivery. Some three decades later, PPPs continue to be on the rise—particularly in the procurement of capital-intensive and major infrastructure projects. This is not at all surprising considering Canada's heightened demand for public infrastructure investments.[16] Most notably, deteriorating infrastructure in the social, health, transportation and communications spaces served as a catalyst for PPPs as an alternative way to obtain greater value for money through competition.[17]

Following the COVID-19 pandemic, there has been a shift in focus towards investing in infrastructure as a means of driving economic recovery. Both in normal times and as part of an economic response, PPPs can reduce the risk to the public sector while leveraging private sector expertise and management capacity. However, all infrastructure projects are risky by nature, as evidenced by some of Canada's high profile transit projects that have occupied news headlines in Canada in 2023.

II. Overview of the Canadian PPP Landscape

In Canada, there are 291 active P3 projects with a total market value of $139,483,997,951.[18] A majority of these projects are concentrated in Ontario. Nationally, the healthcare, transportation, and justice sectors have the greatest number of on-going P3 projects with 102, 83, and 23 projects, respectively.[19]

From 2021-2022, the province of Ontario (which has the highest population in Canada) had a P3 project pipeline valued at more than $50 billion which attests to the overall favourability of this

[16] Association of Consulting Engineering Companies. *Understanding Public Private Partnerships in Canada* at 8. https://www.acec.ca/publications/understanding_p3.html.
[17] Maly, A. (2021, October 12). Hot or Not: Does the Canadian Public-Private Partnership Legal Framework Attract Foreign Investment? *The Canadian Bar Association*. https://www.cba.org/Sections/Construction-Law/Resources/Resources/2021/ConstructionEssayWinner2021.
[18] The Canadian Council for Public Private Partnerships. (2023). Market Snapshots. http://www.p3spectrum.ca/.
[19] *Ibid.*

procurement model in the province.[20] Of the 154 ongoing P3 projects in that province, most are in the healthcare, transportation, and justice sectors with 63, 39, and 15 projects, respectively. [21]

Of further interest is the fact that even with business and supply-chain disruptions stemming from the COVID-19 pandemic, Canada has seen nearly four dozen projects enter pre-launch or reach financial close over the past 12 months, including Projet structurant de l'Est (the "PSE") and High Frequency Rail ("HFR").[22] In Quebec, for example, its provincial government is currently in the process of evaluating PSE proposals involving the construction of an underground east-end transit network consisting of 32 kilometres of light rail at an estimated cost of $35.9 billion. Combined with existing projects, PSE will create one of the largest automated transit networks in the world.[23]

A modified progressive PPP model, which seeks to utilize early private sector involvement in all aspects of the project, is being used for Canada's largest infrastructure project, HFR. HFR is now in its procurement phase where Canada's federal government is seeking a private sector partner to take an innovative and collaborative approach for the engineering design and development of HFR.[24]

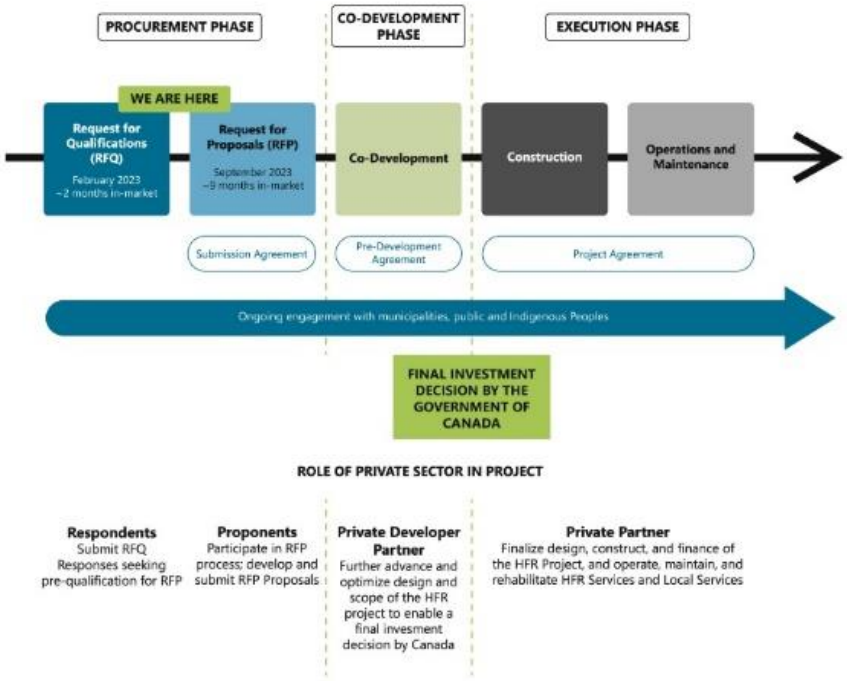

Figure 1: Modified progressive PPP model

[20] Infrastructure Ontario. (2022). *Annual Report 2021-2022.* at 12. https://www.infrastructureontario.ca/497156/contentassets/881bd0cd2d094151944c53c84d42859b/annual_report_2022-en_final.pdf.
[21] The Canadian Council for Public Private Partnerships, supra note 3.
[22] Han, J., & Mirza, A. (2023). *Project Finance Comparative Guide*. https://www.mondaq.com/canada/finance-and-banking/1109172/project-finance-comparative-guide.
[23] O'Malley, O. (2023, July 4). High Cost of East-end Montreal REM Light-Rail Link Raises Red-Flags. *CTV News.* https://montreal.ctvnews.ca/high-cost-of-east-end-montreal-rem-light-rail-link-raises-red-flags-1.6466853.
[24] High Frequency Rail. (n.d.). *A Progressive Public-Private Partnership (P3) Model*, Retrieved August 30, 2023 from https://hfr-tgf.ca/posts/a-progressive-p3-procurement/.

By contrast only two Canadian infrastructure projects have been procured under the alliance model: Toronto's Union Station Enhancement project and British Columbia's Cowichan District Hospital Replacement Project.[25]

In Canada, the legal frameworks that govern P3s are primarily formed by provincial agencies.[26] The creation of a P3 program in each jurisdiction has proven to be the most effective way to create a stable P3 regulatory environment, as it organizes, coordinates and focuses government resources in an effective and predictable manner. Additionally, the creation of a provincial P3 program signals to investors that the jurisdiction is benefiting from a well-designed institutional framework that has strong political support.[27] This approach is not unlike the approach taken in many other countries which have a PPP unit in a central ministry of government which serves as a pool of expertise on PPPs, including establishing good project assessment and contract preparation practices.[28]

Canadian PPPs, however, do not have a flawless track record. High profile transit projects, such as the Ottawa Light Rail Transit ("OLRT") and Eglinton Crosstown Light Rail Transit ("ECLRT") have occupied Canadian news headlines, illustrating some of the shortcomings and inherent risk of PPPs.

One commentator noted that, aside from delays, cost overruns and all-around headaches, the one thing that various transit projects in Canada have in common, is that they were all structured as P3 projects.[29] The director of the Infrastructure Institute at the School of Cities at the University of Toronto, has noted that "a rethinking on public-private partnerships in Canada has been precipitated by the failings of this model in the transit sector" and further that "Governments used to say they were paying more upfront, but they were well protected in the case of a large cost overrun or delays or poor delivery" noting that "What's happened in practice is that many of those risks and the cost of those risks have boomeranged back to governments -- **It's becoming clear that government is the risk holder of last resort**." [30] If not managed effectively, P3s can fall short of their intended benefits and place immense burdens upon the public sector. Despite the limited use of alliance contracting in Canada, such critiques have left the door open for alliance contracting to gain traction in Canada's infrastructure sector.

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[25] Dunsky, I., & Biance A-P. (2021, June 15) *The alliance model: an emerging form of public-private partnership in Canada*. The Chamber of Commerce of Metropolitan Montreal. https://www.ccmm.ca/en/blog-ccmm/leadership/the-alliance-model-an-emerging-form-of-public-private-partnership-in-canada/?.
[26] Maly, *supra* note 2.
[27] *Ibid.*
[28] Fouad, M., Matsumoto, C., Monteiro, R., Rial, I. & Sakrak, O. (2021). *Mastering the Risky Business of Public-Private Partnerships in Infrastructure*. International Monetary Fund Fiscal Affairs Department at 37. https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2021/05/10/Mastering-the-Risky-Business-of-Public-Private-Partnerships-in-Infrastructure-50335.
[29] Austen, I. (2022, July 9) Canada's Slow and Troubled Path to Rapid Transit. *The New York Times*. https://www.nytimes.com/2022/07/09/world/canada/transit-construction-delays.html.
[30] Maly, *supra* note 2.

B. Overview of P3s

A P3 is a "co-operative venture between the public and private sectors, built on the expertise of each partner, which develops or improves facilities and/or services needed by the public through the appropriate allocation of resources, risks, rewards and responsibilities."[31] PPPs permit private financing, design, construction, operation and, possibly temporary ownership of an asset, while at the same time, the government remains involved as a "partner". P3 projects can encompass a range of relationships; however, at their core, they have three common elements: 1) building public infrastructure funded by private capital; 2) opportunities for the public sector to clarify outcome-based specifications for the project; and 3) "the potential for innovation and synergies between design and operation".[32] P3 projects integrate the procurement of several project phases, which can include designing, building, operating, financing, and maintaining infrastructure.[33] In P3 arrangements, the private sector party is a consortium of companies (the "Consortium"). Often, each company has expertise in one of the project's various phases. In most P3s, the Consortium secures its own financing and recovers its investment as the project progresses.[34] Payments are typically made on a performance basis and at the completion of project milestones, such as at the end of a project phase.[35] P3 contracts specify outcome-based project goals—defined by the public sector owner—and the Consortium has discretion in completing the project as long as these goals are met.[36]

One of the strengths of the P3 structure is the role of lenders in their role as "performance police" which includes contractual provisions and the retention of a technical advisor retained to monitor both the construction and the operations phase to help ensure that the project entity and its subcontractors perform the project agreement obligations during both the construction and the operations phase of the project.[37]

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[31] The Canadian Council for Public Private Partnerships. (n.d.). *Award FAQ's - What constitutes a public-private partnership?*. Retrieved August 8, 2023, from https://www.pppcouncil.ca/web/Awards/FAQ.aspx#:~:text=A%20Public%2DPrivate%20Partnership%20is,%2C%20risks%2C%20rewards%20and%20responsibilities.

[32] Murphy, T. J. (2020, July). *Structuring and Managing Construction Risks in Public Private Partnerships* at 2. McMillan LLP. https://mcmillan.ca/wp-content/uploads/2020/07/StructuringandManagingConstructionRisks.pdf.

[33] Office of the Auditor General of British Columbia. (2012). *Understanding Public Private Partnerships*. https://www.bcauditor.com/sites/default/files/publications/files/oagbc-understanding-p3-public-private-partnerships_0.pdf.

[34] *Ibid.*

[35] *Ibid.*

[36] *Ibid.*

[37] Murphy, *supra* note 17 at 6.

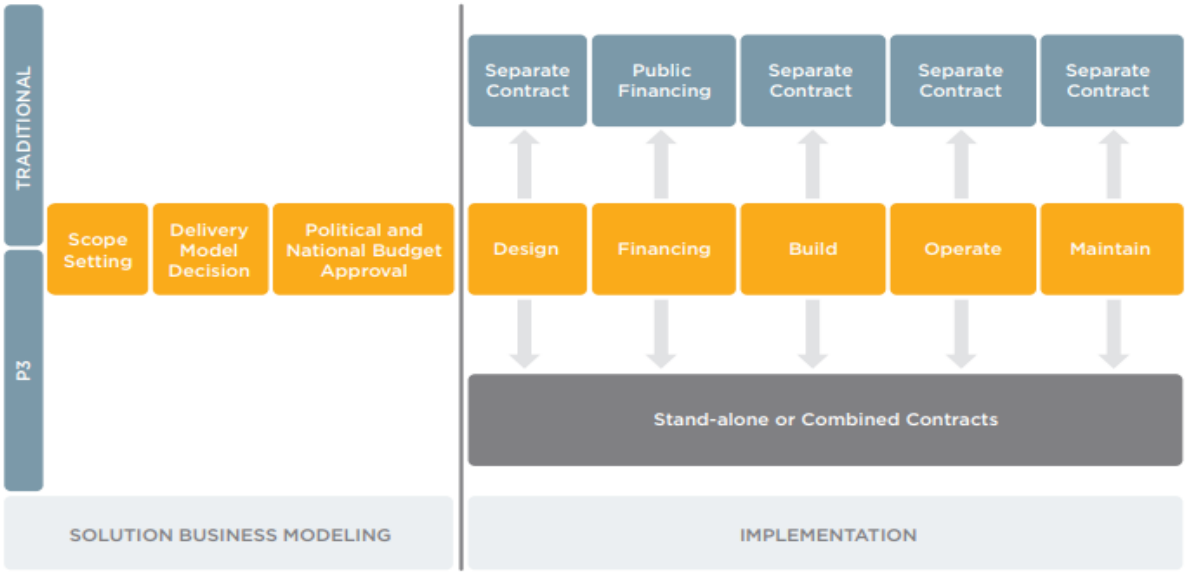

Figure 2 – P3 Procurement vs. Traditional Procurement Models[38]

C. Risk Allocation Under P3s

P3s have proven to be an effective way of transferring project risks from the public sector to the private sector partner, which is done at the expense of a risk premium.[39] Understanding the risks associated with the roles of various participants in the P3 model is key to identifying the shortcomings associated with this model, particularly with respect to complex highly technical projects such as transit infrastructure projects. The types of risks involved in a public infrastructure project include (but are not limited to) those outlined in Table 1.[40]

[38] Boothe, P., Boudreault, F., Hudson, D., Moloney, D., & Octaviani, S. (2015). *The Procurement of Public Infrastructure: Comparing P3 and Traditional Approaches* at 6. Ivey: Lawrence National Centre for Policy and Management. https://www.ivey.uwo.ca/media/1964203/comparing-p3-and-traditional-approaches.pdf.
[39] Office of the Auditor General of British Columbia, *supra* note 18 at 4.
[40] Infrastructure, Government of Alberta. (2020) *Public Private Partnership Framework and Guideline* at 147. https://open.alberta.ca/dataset/60ba6066-75de-4958-949d-a68407d035e2/resource/c43eda3c-f440-46c6-b56e-b00c45fa64a5/download/infra-public-private-partnership-framework-and-guideline-2020.pdf.

Risk Category	Description of risk
Commissioning risk	The risk that the infrastructure will not receive all approvals to satisfy an output specification, such as expected changes in legislation which allow for a specific output specification not materializing
Construction risk	The risk that the construction of the assets required for the project will not be completed on time, budget or to specification
Demand (usage) risk	The risk that actual demand for a service is lower than planned
Design risk	The risk that the proposed design will be unable to meet the performance and service requirements in the output specification
Environmental risk	The risks that the project could have an adverse environmental impact, which affects project costs not foreseen in the environmental impact assessment
Financial risk	The risk that the private sector overstresses a project by inappropriate financial structuring
Force majeure risk	An act occasioned by an unanticipated, unnatural or natural disaster such as war, earthquake or flood of such magnitude that it delays or destroys the project and cannot be mitigated
Industrial relations risk	The risk that industrial relations issues will adversely affect construction costs, timetable and service delivery
Latent defect risk	The risk that an inherent defect exists in the structure being built or equipment used, which is not identified upfront and which will inhibit provision of the required service
Operating risk (service under-performance)	The risks associated with the daily operation of the project, including an unexpected change in operation costs over budget
Performance risk	The risk that the operator will not perform to the specified service level, such as a power generator supplying less power than demanded
Change in law risk	The risk that the current regulatory regime will change materially over the project or produce unexpected results
Residual value risk	The risk that the expected realizable value of the underlying assets at the end of the project will be less than expected
Technology obsolescence risk	The risk that the technology used will be unexpectedly superseded during the term of the project and will not be able to satisfy the requirements in the output specification
Upgrade risk	The risks associated with the need for upgrade of the assets over the term of the project to meet performance requirements

Table 1 – Examples of Risks Involved in Public Infrastructure Projects[41]

Projects thought to be best suited to the P3 or PPP model are large and capital intensive projects that: have identifiable revenue streams; have some risks that can be transferred to the private sector; offer opportunities for innovation in design, construction and/or operations; and have defined service specifications that are easily measured as well as target areas where sufficient private sector expertise exists to permit a competitive process.[42] Furthermore, risks that are beyond the scope or control of either party ought to be shared or assumed by the public sector.[43] While P3s aim to incentivize private sector involvement, allocating risks that they are not equipped to handle can dissuade them from participating.[44]

Under the P3 model, risks are "dropped down" from the public sector to the private sector special purpose vehicle ("SPV") and from the SPV to the design-builder/construction company and

[41] *Ibid.*
[42] Woodman, E. (2012). *The Market for Financing of Infrastructure Projects through Public-Private Partnerships: Canadian Developments* at 36. Financial System Review: Bank of Canada https://www.bankofcanada.ca/wp-content/uploads/2012/01/fsr-0606-woodman.pdf.
[43] *Ibid* at 36-37.
[44] *Ibid.*

operator/service provider. As risks are dropped down, there is also a requirement that the transferred risks be dealt with between the operator and the constructor, which is usually achieved through a tri-party agreement called an interface or coordination agreement entered into between the SPV, the contractor and the operator. The interface agreement and respective drop down agreements with the contractor and the operator will also include an "equivalent project relief" or EPR provision. The EPR concept is that the construction contractor and operator will only be entitled to relief under their respective agreements to the extent that the SPV obtains any relief under the main project agreement. Private lenders financing such P3 projects require the construction contracts to be entered into between the SPV and the design-builder/construction contractor to incorporate certain key terms designed to ensure that risk is "dropped down" to the private sector entity best equipped to deal with such risks including such terms as:

- a fixed completion date for construction;
- a guaranteed completion price;
- a pass-down of full design and construction risk;
- performance guarantees;
- liquidated damages for delay;
- security from the contractor and/or its parent company;
- limitations on contractor termination rights;
- equivalent project relief provisions;
- restrictions on the ability of the contractor to claim extensions of time and additional costs; and
- large caps on liability.[45]

The drop down of risks to the various project participants gives rise to a somewhat fractured approach to project delivery including design, construction and operations/maintenance, with each participant operating under its own separate silo, with its associated risks, including risks arising from impacts caused by the performance of other parties to the project, such as the impact caused by poor design and installation of equipment giving rise to increased maintenance costs.

P3s can be delivered through a variety of models; selecting the optimal model depends on various factors such as client demands, project urgency and funding availability.[46] Each P3 delivery model is accompanied by a unique allocation of risk between the public and private sectors. These differ from traditional procurement models such as "'design-bid-build'[… which involves] different

[45] Murphy, *supra* note 17 at 8.
[46] Public Services and Procurement Canada. (2022) *9.60.5 - Public–Private Partnership (P3) Delivery Models.* https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/section/9/60.

contractors for design and construction, as well as limited risk transfer."[47] A non-exhaustive list of P3 delivery models, outlined in Infrastructure Ontario's ("IO") *Procurement and Project Delivery Approach*, are listed in Table 2.[48]

P3 Delivery Model	Risk Allocation	Application Examples
Design-Build	• "Reduced design and construction risk for the [public sector] compared to [design-bid-build]" • Private sector bears construction risks	Used by IO and Metrolinx in transit projects
Design-Build-Finance	• "Reduced design and construction risk for the [public sector]. Financial risks borne by [the Consortium] (construction period only)" • Private sector bears construction and financing risks	Frequently used by IO in hospital, courthouse, and transportation projects
Design-Build-Finance-Maintain	• "Significant risk transfer to [the Consortium] over the life of the agreement. Reduced design and construction risk for the [public sector]. Financial risks borne by [the Consortium]" • Private sector bears construction, financing and maintenance risks	Frequently used by IO in hospital, courthouse, and transportation projects
Design-Build-Finance-Operate-Maintain	• "Significant risk transfer to [the Consortium] over the life of the agreement. Reduced design and construction risk for the [public sector]. Financial risks borne by [the private sector]" • Private sector bears construction, financing, operation and maintenance risks	Used by IO and Metrolinx in transit projects

Table 2 – Various P3 Delivery Models and Associated Risk Allocation[49]

[47] Auditor General of Canada. (2018). *Report 4—Replacing Montréal's Champlain Bridge—Infrastructure Canada* at 4.34. https://www.oag-bvg.gc.ca/internet/English/parl_oag_201805_04_e_43036.html.
[48] Infrastructure Ontario. (n.d.). *Choosing the Right Model for Each Project – IO's Procurement and Project Delivery Approach*. https://www.infrastructureontario.ca/en/what-we-do/major-projects/model-selection.
[49] *Ibid.*

D. Canadian Case Studies - Evaluating the Shortcomings & Successes of P3s

In the publication entitled: "*The Procurement of Public Infrastructure: Comparing P3 and Traditional Approaches"*, the Lawrence National Centre for Policy and Management conducted case study reviews on various Canadian P3s.[50] In the projects they studied, the P3 approach resulted in increased efficiency, cost savings, innovation, and party collaboration compared to traditional procurement models. A summary of these findings are outlined in Table 3 below.[51]

Project	P3 Delivery Model	Risk Allocation Strategies	Reported Outcomes of the P3 Approach
Bridgepoint Hospital Redevelopment Project	Design-Build-Finance-Maintain	• Consortium adopted: construction risks, environmental risks, financial risks, and approval risks • Consortium bore costs thirty years following the project's completion • Consortium was responsible for "delay costs associated with any coordination errors and deficiencies"	• On-time development • On-budget development • 10.4% cost savings compared to traditional procurement methods
Sault Area Hospital	Build-Finance-Maintain	• Consortium adopted: design risks, construction risks, environmental risks, financial risks, and approval risks • Consortium was responsible for "delay costs associated with any coordination errors and deficiencies"	• On-time development • On-budget development • 18.2% cost savings compared to traditional procurement methods
Canada Line, Vancouver	Design-Build-Finance-Operate	• Consortium adopted: construction and operating costs and maintenance risks • Consortium adopted risks associated with most cost overruns • Consortium placed $720 million at risk to pay for costs associated with "poor operating performance" or overruns • Consortium's performance was secured by letters of credit and corporate guarantees	• Heightened efficiency • Strong collaboration • Minimal project errors

Table 3 – Logistics and Outcomes of Various Canadian P3 Projects[52]

[50] Paul Boothe et al, *supra* note 23.
[51] *Ibid.*
[52] *Ibid.*

From Table 3, it is clear that placing risks upon Consortiums can incentivize their efficient, cooperative, timely, and on-budget development.

I. The OLRT Project

The City of Ottawa retained numerous partners with respect to the procurement of the Ottawa Light Rail Transit ("OLRT") system – a 12.5 km light rail transit line which included underground tunnelling, ten above-ground stations and three underground stations. Following a P3 model for procurement, the City entered into a project agreement with a private partner, namely, Rideau Transit Group General Partnership ("RTG") for the design, construction, financing and maintenance of the OLRT project.[53] The OLRT project was to be operated by the City of Ottawa's OC Transpo. RTG signed a construction contract with Ottawa Light Rail Transit Constructors (OLRT-C) which then entered into several subcontracts including Alstrom for the supply of train vehicles.

Following construction delays and various technical and service failures which included two derailments on OLRT's main line, and complaints about the lack of reliability of the transit system, a public inquiry was held. The mandate provided for the inquiry was to examine each major component of the OLRT project from start to finish and to identify ways to avoid similar problems in future projects.

While the OLRT project's Charter emphasized values of teamwork and collaboration between the contracting parties,[54] according to the findings set out in the 2022 Report of the Ottawa Light Rail Transit Public Inquiry ("Inquiry") [55], such values were not followed by the project participants. Rather, the City took a relatively rigid approach to its relationship with RTG that was based on enforcing its "contractual rights under the Project Agreement. In fact, one of the key recommendations coming from the Inquiry is for "improved collaboration among all parties and stakeholders, including placing greater emphasis on the partnership aspect of the P3 model".

a. Benefits Derived from the P3

The agreement between the City and RTG was widely regarded as problematic; however, some benefits traditionally associated with P3s were observed. Namely, the P3 shielded the city, and subsequently Ottawa's citizens, from significant geotechnical and financial risks.[56] In 2016, the

[53] Ottawa Light Rail Transit Commission. (2022). *Report of the Ottawa Light Rail Transit Public Inquiry Final Report* at 1 & 35. http://www.archives.gov.on.ca/en/e_records/OLRTPI/files/documents/Report-of-the-Ottawa-Light-Rail-Transit-Public-Inquiry.pdf.
[54] *Ibid* at 14, 99-100.
[55] *Ibid* at 15.
[56] *Ibid* at 14, 122 & 247.

OLRT's construction was delayed by the Rideau Street sinkhole.[57] By deliberately allocating geotechnical risks to RTG, the City saved over $100 million in remediation costs.[58] Furthermore, the City was able to leverage the P3 agreement to allocate many of OLRT1's maintenance costs upon RTG.[59]

b. Drawbacks of the P3

i. Greater Consequences in the Event of Poor Party Relations

Under the design-build-finance-maintain delivery model, parties can assert their contractual rights; however, if done excessively and punitively, this can result in the breakdown of relationships.[60] This was done by the City in the OLRT project. Under the P3 agreement, RTG is responsible for maintaining the OLRT1 over 30 years; they have continued involvement in a project that significantly impacts Ottawa's citizens.[61] Given their long-term involvement in this project, there are heightened risks stemming from relationship disputes between the City and RTG.[62] In other words, quarrels between the City and RTG has potential to impact Ottawa's citizens for the duration of RTG's maintenance responsibilities.[63] Such instances have already arisen, especially after the Rideau Street Sinkhole.[64]

While the City was initially committed to working with RTG under a "shared team approach", they have since adopted an adversarial attitude.[65] To enforce the Project Agreement, the City employed punitive payment mechanisms, exerted financial pressures, and adopted harsh tactics to assert their contractual rights.[66] In particular, the punitive payment mechanisms damaged the parties' relationship during the maintenance period.[67] "This adversarial relationship hurt the parties' ability to respond to problems" with the OLRT project, and Ottawa's citizens will bear this burden for the foreseeable future.[68]

ii. Decreased Involvement from the Public Sector

Unlike the City's traditional procurement methods, the P3 arrangement forced it to adopt a hands-off approach and have minimal control over the OLRT1 project:

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[57] *Ibid* at 6, 243.
[58] *Ibid* at 6, 98.
[59] *Ibid* at 6.
[60] *Ibid* at 14.
[61] *Ibid* at 99.
[62] *Ibid* at 6.
[63] *Ibid.*
[64] *Ibid* at 12.
[65] *Ibid* at 99-100.
[66] *Ibid* at 169.
[67] *Ibid.*
[68] *Ibid* at 6.

> *The City's decision to use the [design-build-finance-maintain] model diminished its insight into and control of the project and introduced meaningful constraints for expanding the rail system. […] Regarding the City's role in the project, because a P3 transfers design, construction, and, if applicable, maintenance and operational risks to the private sector for a premium, the public partner is less likely to work with the private consortium to manage and handle the project's challenges. The P3 approach to risk transfer tends to cause the public partner to view itself as a contract administrator, seeking to enforce its rights and the private consortium's obligations. In addition to undermining the partnership relationship, this commercial arrangement comes with diminished involvement in the decisions made in the delivery of the project and the challenges that are faced along the way.*[69]

Without the power to directly respond to or offer insights into maintenance-related issues, the City requested an overwhelming volume of work orders to the maintainers.[70] Witnesses for the maintainers indicated that the City was demanding and unrealistic in giving these work orders, thus leading to inefficient maintenance.[71] The City subsequently blamed the maintainers, withheld maintenance payments, and "reverted back to an approach of requiring strict compliance with the Project Agreement".[72]

Among the key observations of the Inquiry was the importance of having dispute resolution provisions which foster early resolution of disputes, noting that early resolution of disputes should be incentivized in the project agreement, particularly where those disputes will affect the work going forward. Suggested consideration for positive and negative incentives might include a break in payment mechanism deductions if significant problems are resolved before a Key Performance Indicator deadline in a contract.[73]

c. The Uncertain Future of P3s in Canada

The Inquiry suggests that the private sector is growing hesitant of P3s because of unfavourable risk assumption: "[S]everal high-profile examples of large companies such as SNC-Lavalin, Fluor Corporation, and Granite Construction [are] leaving the business of fixed-price contracting, arguing that the risks on these projects are too great[.]"[74] The private sector is becoming increasingly

[69] *Ibid* at 99.
[70] *Ibid* at 23-24.
[71] *Ibid.*
[72] *Ibid.*
[73] *Ibid* 490-491.
[74] *Ibid* at 102.

skeptical of adopting enormous—potentially unlimited—financial risks; with fewer private sector giants bidding on these projects, the future of P3s in Canada grows uncertain.[75]

d. IO's Progressive P3 Procurement Model

In a bid to promote the importance of collaboration to the successful outcome of P3 Projects, in 2021, Infrastructure Ontario ("IO"), a crown agency of the Province of Ontario that supports the Ontario government's initiatives to modernize public infrastructure launched their Progressive P3 procurement model (the "Progressive model").[76] This model is designed to enhance collaboration between the public owner and private sector partner, especially during the early phases of the project. As noted by IO, the Progressive model "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."[77] This model also emphasizes good faith collaboration between the contracting parties.[78] IO outlines the unique formula of the Progressive model:

> *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.*[79]

12. OVERVIEW OF ALLIANCE CONTRACTING

While alliance contracting has been widely used in the UK and Australia, it is a relatively novel project model in Canada. Similar to P3s, alliance contracts involve a public sector owner working with private sector parties—referred to as non-owner participants ("NOP")—to develop public infrastructure.[80] Representatives from the public owner's organization and the NOP form an

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[75] *Ibid.*
[76] Infrastructure Ontario. *FAQs - Public Private Partnerships (P3s).* https://www.infrastructureontario.ca/en/what-we-do/major-projects/faqs---public-private-partnerships-p3s/.
[77] Infrastructure Ontario, *supra* note 33 at 4.
[78] Gismondi, A. (2021, October 18). Ontario's new P3 procurement strategy based on good faith collaboration. Daily Infrastructure News by Construct Connect. https://canada.constructconnect.com/dcn/news/infrastructure/2021/10/ontarios-new-p3-procurement-strategy-based-on-good-faith-collaboration.
[79] Infrastructure Ontario, *supra* note 33 at 4.
[80] Government of Australia - Department of Infrastructure and Regional Development. (2015) *National Alliance Contracting Guidelines* at 9.

Alliance Leadership Team ("ALT"); "[most] decisions of the ALT within the scope of the alliance are required to be unanimous."[81]

Alliance contracts are distinct from P3s in their methods of allocating risks and opportunities between the parties; alliance contracts create *shared* risks and opportunities. The key difference between the alliance model and the P3 model is that rather than taking the siloed, competitive and often adversarial approach where risks and responsibilities are divided between members of the P3 model, alliance contracts are based on the selection of participants who are capable of developing a collaborative working relationship and performing in an environment that is conducive to teamwork. Indeed, except in the particular circumstances set out in the alliance agreement, in most cases, each of the parties waives the right to take legal action against the other parties. Furthermore, a vast majority of obligations are shared jointly under alliance contracts.[82] Infrastructure BC's *Alliance Framework* report outlines five key characteristics of alliance contracts:[83]

1. Collective responsibility between parties – With respect to meeting agreed-upon project targets, the contracting parties share legal responsibility.[84]
2. Parties enter a "no-blame" and dispute-free environment – Unless extreme instances of "'Wilful Default' (e.g. insolvency, fraud, criminal conduct, deliberate and reckless misconduct)" arise, parties are not permitted to enforce legal rights upon one another.[85]
3. A "3-limb compensation model" – The private sector's payment structure consists of three elements:

   Limb 1: reimbursement of project-specific costs on a fully open-book basis;

   Limb 2: a fee to cover corporate overheads and normal (risk-adjusted) profit, and;

   Limb 3: incentive payments which may be positive or negative, reflecting an equitable share of the 'gain' or 'pain' if outcomes are better or worse than agreed targets.[86]

4. Collective decision making – Typically, decisions must be unanimous and parties share successes and failures.[87]
5. Full integration amongst the project delivery team.[88]

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https://www.infrastructure.gov.au/sites/default/files/migrated/infrastructure/ngpd/files/National_Guide_to_Alliance_Contracting.pdf.

[81] PCI Group Pty Ltd. (2020). *Infrastructure BC Alliance Framework* at 20 [Alliance Framework]. https://www.infrastructurebc.com/wp2/wp-content/uploads/2021/12/2021-11-09-Infrastructure-BC-Alliance-Framework-Clean-1.pdf

[82] *Ibid.*

[83] For a full list of alliance contracts' unique legal features, see 17-19 of *Alliance Framework*.

[84] *Ibid* at 17.

[85] *Ibid.*

[86] *Ibid* at 5.

[87] *Ibid* at 17.

[88] *Ibid.*

In alliance contracting, parties are normally obligated to act in good faith, which can be defined in their specific agreements.[89] Infrastructure BC also outlines typical "Alliance Principles." These include: sharing all wins and losses; an environment where all parties have equal authority; sharing project rewards and risks; an innovation-forward mindset and common drive towards success; a "no-blame" commercial environment; open and streamlined communication; and transparent transactions.[90]

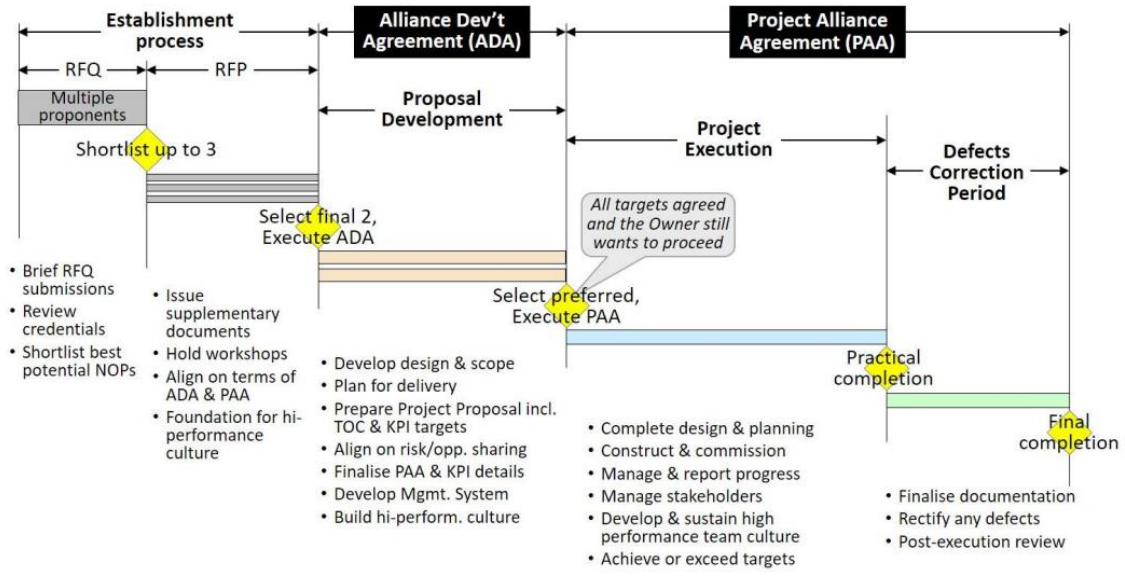

Figure 3 – Key Stages and Events in Alliance Contracting[91]

In short, Alliancing is a collaboration between the client, service providers and contractors where all parties share and together manage the risks of the project. This rationale is to achieve improved project outcomes and value for money, arising from increased integration and cooperation between various members of the project team, including planners, design teams, contractors and operators. The key elements noted in the literature regarding the Alliance model include open book, integrated project team, aligned client and commercial participants objectives, unanimous decision-making and incentivized cost reimbursement.[92]

One of the early and key tasks of alliance participants is the development of a target cost estimate, being the best estimate of what the alliance team participants thinks it will cost to deliver the scope

[89] *Ibid* at 6.
[90] *Ibid.*
[91] Alliance Framework, supra note 66 at 6; Gransberg, D. & Jeong, H. (2019). A Comparative Analysis of Alliancing and Integrated Project Delivery on Complex Projects: Parallel Systems Sharing a Common Objective. Civil, Engineering and Environmental Engineering Publications. https://core.ac.uk/download/pdf/212850645.pdf.
[92] Young, B., Hosseini, A., & Lædre, O. (2016). *Project Alliances and Lean Construction Principles* at 36. Proceeding IGLC-24. https://iglcstorage.blob.core.windows.net/papers/attachment-fa730b0a-fb75-4d9b-a6d2-606335edf64a.pdf.

of work being undertaken by the alliance, following normal good industry practices[93]. Some projects, particularly those projects involving the public sector, utilize an "industry expert" to undertake an independent estimate of the target cost estimate.

A. Alliance Contracting in a Canadian Context

While Canada has been a global leader in the P3 market, interest is budding around alliance contracting.[94] This may be attributed to alliance contracting's ability to manage complex and uncertain projects with undeterminable scopes of risk:

> *The alliance model adapts well to the most complex projects. It is well suited to projects that include a mixture of different types of risks: for example, projects that include not only the "greenfield" risks related to the construction of new structures, but also the "brownfield" risks related to the rehabilitation of existing assets, as well as risks related to technological developments. For example, the developer of a project that involves the construction of a new tramway in an existing right of way, which involves the rehabilitation of existing assets as well as the provision of rolling stock, will face greenfield, brownfield and technological risks. Each of these risks may require different management strategies and may prove difficult to control in the context of a "traditional" P3, in which each participant will face risks of a different kind. In addition, the alliance model adapts well to projects where performance requirements are difficult to quantify or define in advance.*[95]

Only two Canadian infrastructure projects have been procured under the Alliance model: Toronto's Union Station Enhancement project and British Columbia's Cowichan District Hospital Replacement Project.[96] Given the limited application of Alliance contracting in Canada—in addition to the fact that these projects have yet to be completed—it is difficult to evaluate the success of this model moving forward. However, notable information can be extracted from documents in the early stages of these projects.

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[93] Ross, J. (2000). *Introduction to Project Alliancing*. Presentation to Institution of Engineers. http://alliancecontractingelectroniclawjournal.com/wp-content/uploads/2017/05/Ross-J.13-2000-%E2%80%98Introduction-to-Project-Alliancing%E2%80%99.pdf.
[94] Dunsky, I., & Biance A-P, *supra* note 10.
[95] *Ibid.*
[96] *Ibid.*

B. Canadian Alliance Contracting Projects: The Union Station Redevelopment Project

I. Context

The Union Station Redevelopment project was the first in Canada to employ Alliance contracting.[97] Construction is expected to be finished in 2025; it is estimated to cost $562 million.[98]

> *The project's complexity warranted this unique procurement approach:*
>
> *"Union Station is an old building; it's been there for many decades" and is owned by the city of Toronto and province of Ontario, Younger says. "You've got a complex ownership structure, and it would be very difficult to do a P3 [public-private partnership] bid and ask proponents to shoulder a whole lot of permitting risk, environmental risk, geotechnical risk, and so on. That's why I think that project wound up using an alliance."*[99]

Given that Union Station is well established, it would have been difficult for parties to evaluate the premise and accurately determine project risks.[100] Without being able to define a clear scope of risk, "[bidders] would likely build a massive contingency fee in to cover the risks of all of the unknowns,' including environmental and geotechnical issues, which would likely make the price unpalatable to the owner[.]"[101] Thus, the P3 model and its method of allocating risk in the procurement stage would not have been feasible.

II. The Alliance Contract

There are several notable elements of this project's Alliance Development Agreement (the "Agreement"). Section 3 of the Agreement emphasizes the collegiality and cooperation that are typical of alliance contracts.[102] For example, section 3.1.2 establishes a "no blame" and "no claim" culture surrounding project errors/inefficiencies and a commitment to swift dispute resolution.[103]

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[97] *Ibid.*
[98] *Ibid.*
[99] Raymer, E. (2020, July 14). Construction and infrastructure sectors see uptick in alliance contracting. *Canadian Lawyer*. https://www.canadianlawyermag.com/news/general/construction-and-infrastructure-sectors-see-uptick-in-alliance-contracting/331442.
[100] *Ibid.*
[101] *Ibid.*
[102] Ontario Infrastructure and Lands Corporation and Metrolinx. (2020). *Alliance Development Agreement GO Expansion – Union Station Enhancement Project RFP No.: 19-190* (Ontario: Ontario Infrastructure and Lands Corporation, 2020) at s. 3. https://www.infrastructureontario.ca/49718d/contentassets/bd8e55a59aef4c9d9480540cefd93038/alliance20development20agreement.pdf.
[103] *Ibid* at s. 3.1.2.

Sections 3.1.3-3.1.8 build upon the Alliance Principles discussed above. The parties committed to the following (quoting from the Agreement):

> *3.1.3 Win together, lose together; 3.1.4 Empowered accountability; 3.1.5 Safety first and always; 3.1.6 One team approach; 3.1.7 Full transparency and an open book commitment; [and] 3.1.8 Creating exceptional value and mutual benefits[.]*[104]

The Agreement also ensures that parties operate in good faith, keep all records and processes transparent, and that ALT decisions are unanimous.[105]

C. The Cowichan District Hospital Replacement Project

This is the first infrastructure project in British Columbia to be procured under the alliance model. Construction began in 2022 and is expected to be completed in 2027; it has an estimated cost of $1.45 billion.[106]

I. The Request for Proposals

This project's Request for Proposals ("RFP") emphasizes core alliance contracting values. The purpose of the RFP was to acquire qualified proponents and ultimately help the public sector owner select one to carry out the Agreement.[107] The RFP contains an Alliance Development Proposal ("ADP") section, whereby each proponent had the opportunity to "demonstrate how it will participate in the Project Alliance with the [o]wner[.]"[108]

> *Although the ADP is a competitive process, the [o]wner intends to facilitate a highly collaborative and interactive process with each ADP Proponent […].These will include collaborative discussions relating to technical, management and commercial matters through workshops and topic meetings […].*[109]

Evidently, collaboration and transparency were central in selecting proponents to carry out the Agreement. For example, proponents were evaluated based on their performance in a Behavioral

[104] *Ibid* at 3.1.3-9.
[105] *Ibid.*
[106] Island Health. (n.d.). About the Cowichan District Hospital Replacement. Retrieved 30 August, 2023, from https://www.islandhealth.ca/about-us/accountability/strategic-direction/building-health/cowichan-district-hospital-replacement-project/about-cowichan-district-hospital-replacement.
[107] Island Health and Infrastructure BC. (2021, April 1) *Request for Proposals - Cowichan District Hospital Replacement Project*. https://www.infrastructurebc.com/wp2/wp-content/uploads/2021/04/VIHA-CDH-RFP-FINAL-conformed-April-27-2021.pdf.
[108] *Ibid* at 5.
[109] *Ibid.*

Workshop.[110] The proponents were assessed not only on their technical abilities, but potential to collaborate throughout the course of the project.[111] The following criteria were measured:

> *The leadership behaviours and personal contributions […] demonstrated during workshops; [t]he technical and managerial capabilities […] demonstrated during interactives and workshops; [t]he [p]roponent's* ***ability to genuinely engage the [o]wner's [t]eam in a peer-like manner*** *and to generate innovative solutions and plans;* ***[l]evel of commitment and enthusiasm to delivering on Project Alliance Objectives****; and [****o]verall capability to integrate with the [o]wner's [t]eam and create a high-performance culture.*** *[112]*
>
> [Emphasis added]

D. The Benefits and Drawbacks of Alliance Contracting

The difference between the alliance model and the traditional P3 model is that there is greater collaboration under the alliance model between the owner of the project, which is usually a government agency and the design-builder during the early stages of the Project, and a greater amount of risk sharing than is typical in a P3 project. The collaboration process starts during the procurement process where the parties collaborate regarding target cost and performance targets which are then set for a joint (integrated) owner-contractor project team. The alliance contracting model is similar to integrated project delivery or progressive design-build delivery models and involves a single contract between the project owner, financier and commission and the alliance of parties who deliver the project or services.[113]

The theory is that early collaboration at the design development stage helps to foster commercial alignment, innovation and avoid commercial disputes, through a risk-reward framework that often includes a "non-suit" provision that also applies to all organizations participating in the alliance. The project is typically delivered under an "open book" collaborative environment where all parties have access to actual project costs and records on a contemporaneous basis. Use of electronic portals housing project data and information systems are also available to project participants who have equal access to current and real time project happenings.

Not to be underestimated is the significant time and up-front commitment of both money and personnel required of all project participants in the alliance model. Alliances require upfront training, particularly where participating individuals were used to working mostly on projects

[110] *Ibid* at 27.
[111] *Ibid.*
[112] *Ibid.*
[113] Raymer, *supra* note 84.

delivered under traditional fixed price contracts, where the contractors costs are not openly shared with the owner.[114]

In an alliance, the owner serves two primary roles, as a client and as an alliance participant. The role of the client, from a governance perspective, should be to provide oversight and communicate with the alliance team via the Alliance Leadership Team ("ALT"). The ALT is comprised of members of the partnering organizations and is the project board that approves the decisions of the Project Director, sometimes referred to as the Alliance Manager or AM. The ALT or alliance board functions in a manner similar to a traditional private sector joint venture project board, with the key difference being that the joint venture partner now includes key owner executives.

Introduction to Project Alliancing, authored by Jim Ross of Project Control International Pty Ltd., notes several benefits and downsides of alliance contracting.[115]

I. Public Sector Benefits:

In the report entitled "*Introduction to Project Alliancing*", [116] the positives and negatives of alliance models are discussed. Public sector owners can yield many benefits from alliance contracting, including:

> *...much greater certainty of on-time or early delivery, especially in the face of adversity; the project to be delivered very close to or under the agreed [t]arget [c]ost; more informed decisions on technical solutions/choice of equipment; better balance between capital investment and whole-of-life costs; outcomes that meet or exceed expectations in non-cost areas; potential for real breakthroughs in some areas; and much greater job satisfaction/professional development for all involved[.]*[117]

II. Private Sector (NOP) Benefits:

Benefits to NOPs include:

> *...[p]otential for very good returns within acceptable limits of risk; enhancement of reputation leading to increased prospects of repeat and referred work[;] [s]trengthening of relationship with owner and the other participants-forming the*

[114] KPMG. (2022, January 19). *Alliance contracting: Lessons learned globally: Bring innovation and collaboration to the forefront for project procurement process*. https://kpmg.com/ca/en/home/insights/2022/01/alliance-contracting-lessons-learned-globally.html.
[115] Ross, s*upra* note 78.
[116] *Ibid.*
[117] *Ibid* at 14.

basis for possible future strategic alliances[;] [i]ncreased job satisfaction for staff with associated benefits to overall organizational culture[;] [and] [s]ignificant increase in communication and general project management skills.[118]

III. Drawbacks of Alliance Contracting

The public sector owner must have sufficient personnel, time capacity, and senior management involvement to guide and support the alliance project and broader relationship.[119] If the owner intends to take a "hands-off" approach and let the private sector operate without interference, then alliance contracting may not be suitable.[120] Second, public sector owners must be willing to embrace the "cultural shift" associated with alliance contracting; they must let go of notions of rights enforcement, individual obligations, and "traditional adversarial person-marking".[121] Next, establishing an alliance relationship requires significant time and cost investments. By way of example, the Cowichan District Hospital Replacement Project had a lengthy RFP process which involved workshops, coaching, and other assessment tools (all with associated costs) to simply select eligible private sector candidates.[122] Furthermore, given alliance contracting's reliance on relationship building, there may be catastrophic consequences if these were to break down.[123] Lastly, certain forms of insurance may be difficult to acquire under alliance contracting.[124]

E. Circumstances Under Which Alliance Contracting is Favourable Vs. Unfavourable

Broadly speaking, alliance contracting is suitable for projects with uncertain scopes of risk or where the costs of allocating risk upon the private sector are high.[125] In Canada, the Union Station project in Toronto was viewed to be particularly suitable to the alliance model, given that Union Station is an old building owned by two levels of government, being the City of Toronto and the Province of Ontario, and is subject to significant risks such as permitting risks, environmental risks, geotechnical risks and others. (Other reasons include two previously failed Union Station projects involving general contractors who essentially went broke, including Carillion and Bondfield operating under more traditional project models). The alliance model is also ideal for projects where

[118] *Ibid* at 13.
[119] *Ibid* at 16.
[120] *Ibid.*
[121] *Ibid.*
[122] *Ibid.*
[123] *Ibid.*
[124] *Ibid.*
[125] Infrastructure BC. (n.d.). *Alliance*. https://www.infrastructurebc.com/publications/competitive-alliance/.

the public sector owner's input and expertise are of the essence, such as projects with short timeframes or projects that involve complex stakeholder issues.[126]

The Government of Australia's Department of Infrastructure and Regional Development ("DIRD") outlines two thresholds that must be met before an alliance agreement can be considered viable.[127] First, the project ought to be one of high value.[128] Given the "high initial start-up management costs" of alliance contracts, they are not worthwhile for infrastructure projects under $50 million.[129] Second, the owners ought to have "sufficient internal resources, including senior executives, who can effectively represent and manage its interests in relation to external parties and the alliance contract."[130] Once these thresholds are met, the following factors should be satisfied before proceeding with an alliance agreement (quoting from the DIRD's *National Alliance Contracting Guidelines* report):

> *…the project has risks that cannot be adequately defined or dimensioned […]; the cost of transferring risks is prohibitive in the prevailing market conditions; the project needs to start as early as possible before the risks can be fully identified and/or project scope can be finalised, and the Owner is prepared to take the commercial risk of a suboptimal price outcome; the Owner has superior knowledge, skills, preference and capacity to influence or participate in the development and delivery of the project (including for example, in the development of the design solution and construction method); and/or a collective approach to assessing and managing risk will produce a better outcome, e.g., where the preservation of safety to the public/project is best served through the collaborative process of an alliance.*[131]

[126] *Ibid.*
[127] Government of Australia - Department of Infrastructure and Regional Development, *supra* note 65 at 40.
[128] *Ibid.*
[129] *Ibid.*
[130] *Ibid.*
[131] *Ibid.*

13. CONCLUSION

This paper has outlined the overall function of P3s, their rise in Canada's infrastructure sector, and the benefits and drawbacks of this procurement model. It also explored the successes and shortcomings of various Canadian P3 projects and critical lessons learned from their delivery. While P3s have generally been regarded as successful in Canada, the replacement of the Champlain Bridge,[132] the OLRT project,[133] and the ECLRT project[134] provide cautionary tales regarding their application in large and high-stakes projects situated in urban centres. While it is too early to assess the viability of alliance contracting in Canada, its theoretical benefits may be a solution to the shortcomings witnessed in recent Canadian P3s. Upon completion of the Union Station Redevelopment project and the Cowichan District Hospital Replacement Project, a more accurate assessment can be made around the viability of alliance contracting in Canada.

Karen Groulx

[132] Auditor General of Canada, *supra* note 32.
[133] Ottawa Light Rail Transit Commission, *supra* note 38.
[134] Infrastructure Ontario. (n.d.). *Eglington Crosstown LRT. Retrieved 30 August, 2023 from* https://www.infrastructureontario.ca/en/what-we-do/projectssearch/eglinton-crosstown-lrt/; CBC News, (2023, April 27). Eglinton Crosstown plagued by 260 quality control issues, including improperly laid track: Metrolinx CEO. https://www.cbc.ca/news/canada/toronto/eglinton-crosstown-delays-verster-metrolinx-1.6824272; King, A. (2022, December 8). There's no 'credible plan' to complete the Eglinton Crosstown LRT, confidential documents say. *CBC News.* https://www.cbc.ca/news/canada/toronto/confidential-documents-eglinton-crosstown-lrt-1.6675131.

14. INTRODUCTION: IN ITS TEENAGE YEARS – NEW ZEALAND

As the title suggests New Zealand, while an early adopter of the Alliancing procurement model, is only in its 'teenage years' when it comes to procuring large infrastructure projects under the Public Private Partnerships (**PPP**) model. This is reflected below in the number of large projects undertaken using the PPP model and the lack of empirical studies of their effectiveness in delivering the outcomes sought by the parties, as compared to Turkey, the UK and Canada.

Alliances and PPP are procurement methods used for delivering large scale and complex infrastructure projects in New Zealand. In terms of risk-allocation, the two models sit at different ends of the spectrum from one-another. Alliancing is a relationship-based incentive-driven contracting model with the parties sharing the project risks and rewards, whilst the PPP model shifts the vast majority of risk from the public sector client procuring the project, onto the private sector contracting entities that deliver the project.

The most appropriate procurement model for a project depends on (a) how the principal wishes to manage and allocate risk, (b) how much control the principal wishes to retain, (c) the scope and nature of the project, (d) the cost of the project and (e) how the principal wishes to finance that cost.

In an Alliance model the parties work together as a single team on a 'best for project' basis. The project participants each share in the wins and losses of the project. The particular structure used can vary, but innovation and collaboration will usually be encouraged through a 'no-fault' mechanism (meaning parties agree not to enter into project disputes with one-another, with some exceptions such as for wilful default)[135]. The obligation to pay for the project works remains with the public sector entity (i.e. the client).

The PPP Model is quite different. Under a PPP, the contract works are outsourced to the private sector. The private sector designs, constructs and maintains the works, and will also provide the financing. It is this financing component by the private sector that particularly differentiates PPPs from other procurement models. Unlike Alliances, in PPPs there is a significant risk transfer to the private sector.

The following figures and tables provide a high level overview of key advantages and disadvantages of the Alliancing and PPP models, for contrast.

[135] It should be noted that there are questions about the enforceability of 'no sue' provisions. Indeed the parties cannot contract out of the Construction Contracts Act 2002 in NZ. Parties have adjudicated disputes in Alliance projects under that Act.

A. Alliancing

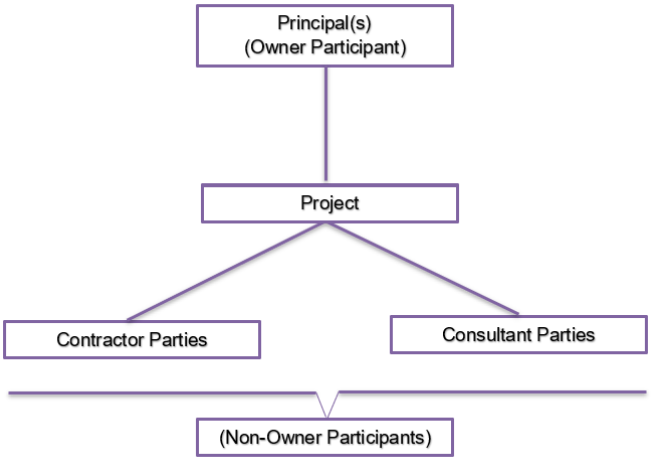

Figure 1: Alliancing model

DESCRIPTION	ADVANTAGES	DISADVANTAGES
• All parties (principal, contractor, consultants) work together as 'stakeholders' in a project team. • Parties share in the risks. • Intended to generate an environment of innovation and co-operation. • Target cost mechanism is usually used. The actual cost of completing the project is compared with a target cost that is set at the outset. • Parties share in the gain or loss of the project, measured against identified key performance indicators. • Alliance costing is generally on an open book basis. • All disputes	• Creates teamwork through a no-blame culture, an inclusive management structure, a sharing of responsibilities and linked payment mechanism. • Parties can share risks that would otherwise be borne solely by contractors. • Certain risks can be eliminated from the contractor's pricing analysis. • Reduces disputes through a no blame culture. • Allows for innovation and greater flexibility. • Has transparency through an open book payment mechanism. • Has a partial incentive based payment scheme. • Allows for a sharing of cost under-runs and over-runs.	• Highly reliant on quality of team chosen and their ability to work together. • No certainty in respect of work or services to be provided. • Sometimes a lack of clarity around roles of parties. • Lack of certainty over payment sum. • No single point of responsibility for breaches. • Usually no right of recovery for breaches, negligence or unlawful conduct (unless 'willful default'). • Requires commitment and trust by all parties. • Clarity is required around costs and how they are defined and included as part of target or actual costs. • Concern that target outturn costs are 'soft' resulting in windfall gains to non-owner participants. To try and overcome this competitive process has been introduced – two separate teams prepare a target outturn cost as part of a competitive tender process.

	intended to be resolved internally – 'no fault' basis often referred to. This means parties agree that they will not make claims against each other (some exclusions to this).		

Table 1: Alliancing advantages and disadvantages

A. PPPs

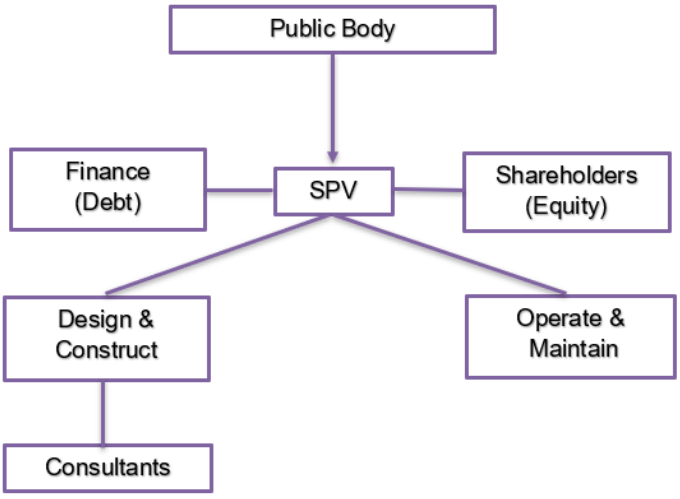

Figure 2: PPP model

DESCRIPTION	ADVANTAGES	DISADVANTAGES
• Contract between the public sector and a private entity or consortium. • Private entity agrees to finance, design, build, and operate (full service or simple maintenance) an asset for a fixed period (often 25 – 35 years). • The asset is returned to the public entity at the end of this period. • Public entity often specifies outcomes or services	• Holistic view of project, including consideration of whole of life costs. Private party examines the design, building, and operation of a project over a long period. • Better understanding of project through comprehensive due diligence process. • Speed: because the contractor finances the building of the asset, there is an incentive for the contractor to reduce	• Cost and complexity: more complex than other procurement methods. Need to anticipate all contingencies that may arise in a long term contract. Aspects of the contract are necessarily renegotiated over time. Difficulties arise where public body needs to renegotiate a part where there is no pricing mechanism. • Higher transaction costs: for the public and private sector to go through the expression of interest, request for tender and negotiation stage is expensive. Contract documents are numerous, lengthy and complex.

required. • Private entity or consortium commonly selected by competitive tender.	construction duration. • Cost certainty: cost escalation is less likely. • User maximisation: when paid directly by users, contractor has an incentive to build asset so benefits to users are maximised. • Provides an alternative source of funding. • Overcomes intergenerational equity issues. • Innovation.	• Higher capital costs: private sector charged with financing the project. • Inflexibility of long term contracting: lack of contestability with a long-term service asset (benchmarking and market testing to remedy). • Performance enforcement trouble: with service delivery, it is hard to build aspects such as maintaining good customer relations into the contract. • Public perception: politically PPPs are not liked in New Zealand and linked (wrongly) with privitisation.

Table 2: PPP advantages and disadvantages

The New Zealand Government has used PPPs and Alliancing to deliver major infrastructure projects with differing levels of success.

15. ALLIANCING IN NEW ZEALAND

In New Zealand the Alliancing model was first used on major roading projects[136]. Originally a 'pure' Alliance model was used whereby the non-owner alliance parties were selected based on non-price attributes. However, over time the favoured model has changed to a 'competitive' Alliance model (or two TOC model). Under the competitive model parties are also selected based on the price they submit during the bid phase, for the project's outturn cost.

The Alliance model is politically favoured in New Zealand and has been successfully used on major roading projects, energy projects and projects of national significance[137]. Alliances have also been used to help recovery works following a number of natural disasters suffered throughout the Country in recent years[138].

[136] Grafton Gully and Central Motorway Junction (both in Auckland) completed in February 2004 and December 2006, respectively.
[137] Such as the City Rail Link in Auckland and the O Mahurangi – Penlink project in Whangaparāoa.
[138] For example, the Stronger Christchurch Infrastructure Rebuild Team (SCIRT) for repair works after the Christchurch earthquakes in 2010-2011, North Canterbury Transport Infrastructure Recovery (NCTIR) which was formed to restore the road and rail networks following the Kaikoura earthquakes in 2016, recently East Cost Recovery Alliance was formed for the recovery works on the state highway and rail networks of Tairawhiti and Hawke's Bay following the Cyclone Gabrielle in February 2023.

Alliancing is particularly suited to delivering large, complex projects with high risks in New Zealand's relatively small market: A single supplier may not be able to deliver a project of this nature on its own, so Alliancing allows multiple suppliers to deliver a project, by pooling resources, collaborating and incentivising innovation between project participants.

16. PPPs IN NEW ZEALAND

PPPs have been used in New Zealand since 2010. A key rationale for adopting PPPs was the popularity (at the time) of the model in other jurisdictions such as Australia, the United Kingdom and Canada, and the private financing that could be sourced to deliver projects. It was hoped that the Government could use PPPs to procure large-scale capital assets for an equivalent, or lower, whole-of-life cost when compared to conventional public sector procurement methods.

PPPs in New Zealand have been primarily delivered through a design, build, finance and maintain model which transfers responsibility for all of these tasks to the private sector. A design, build, finance, maintain and operate model has been used on the Auckland South Correctional Facility referred to below, but this model is currently out of favour, in part due to concern over the private sector taking on this role (which some see as a public sector function). The following projects have been delivered using the PPP model in New Zealand:

- Hobsonville Schools, completed in 2013 (currently in maintenance phase)
- Auckland South Correctional Facility, completed in 2015 (currently in operation and maintenance phase)
- NZ Schools 2 (bundle of schools), completed 2017 and 2019 (currently in maintenance phase)
- Auckland Prison, completed in 2018 (currently in maintenance phase)
- NZ Schools 3 (bundle of schools), completed in 2019 (currently in maintenance phase)
- Transmission Gully expressway Wellington, completed in 2022 (currently in maintenance phase)
- Pūhoi to Warkworth state highway, completed 2023 (currently in maintenance phase)
- Waikeria Prison, build ongoing

The New Zealand PPP project documents were developed based on UK and Australian precedents. The same foundation documents have largely been used on all PPP projects to date. Use of the PPP model is currently highly political and attitudes are divided. For example, the PPP projects that have been undertaken to date were primarily procured under former National-led Government(s).

The current Labour-led Government has been reluctant to procure projects using the PPP model. Consistent with this, no new PPP projects have been bid under Labour's 6-year tenure. There will be a nation-wide election in October this year. The outcome of that election may determine whether PPPs will be utilised again (particularly given the Government's recognised funding and financing constraints and the availability of private capital). If PPPs are used, this may be under a different moniker and will likely based on revised project documents.

Use of the PPP model has been reviewed because of issues that have been encountered on a number of projects, with the review(s) being published by Te Waihanga | New Zealand Infrastructure Commission[139].

Observationally, there are concerns in the market that the complex processes and high costs involved to administer PPP projects (including for Changes and Variations) need to be evaluated, and that too much risk may have been transferred to the private sector in some New Zealand PPPs.

Covid-19 has also significantly affected New Zealand PPPs, particularly those that were in the construction phase when the pandemic hit. Extensive shutdown periods, impacts on productivity and off-shore supply disruptions caused by Covid-19 led to extensive and costly negotiations between the parties and renegotiation of project documents in order to move forward.

Currently there are no tenders being called for PPPs, which reflects the current Government's desire to move away from the use of private financing of infrastructure. This may change following the 14 October 2023 election, when perhaps, we will start to see a pipeline of new PPP projects come on line.

17. THE FUTURE

There is, however, no doubt in anyone's mind, even putting aside political differences, that New Zealand like many other countries has a substantial infrastructure deficit. The New Zealand Government is currently undertaking significant restructuring of how we manage our 3 waters infrastructure[140], but this will not remedy the underlying need for huge investment in upgrading the existing infrastructure. Conservative estimates show between NZ$120 billion and NZ$185 billion of investment is required over the next 30 years.[141] Transportation, both personal and business, is caught between the funding shortfall and philosophically opposed views on green initiatives/public

[139] *Report-Interim Project review of Transmission Gully PPP Project, 03 February 2021, https://tewaihanga.govt.nz/search?categories=Reviews&page=*
[140] Fresh water, waste water and stormwater.
[141] Te Tari Taiwhenua – Department of Internal Affairs, update 13 April 2023 https://www.dia.govt.nz/three-waters-reform-programme-frequently-asked-questions

transport over more roads. Whatever philosophical view is held, New Zealand is a signatory to COP 26 and a target of a 50% reduction in gross 2005 net emissions by 2030[142].

The limits to Government (both central and local) borrowing cannot be cured by increased taxes and user-pays schemes alone. There has been some small relief with pay as you go taxes (solely in Auckland, fuel tax), but again a step-change is needed. Private financiers have expressed they are ready and willing to invest in long-term infrastructure projects. From 2015 to 2020 assets under management for sovereign wealth funds and private pension funds globally grew from US$11 trillion to US$15 trillion. At the end of 2020 total global pension assets (private and public) exceeded US$56 trillion. These funds both locally and internationally have a huge appetite for large infrastructure projects. This is mainly because the investment horizons of institutional investors are often long-term with low but secure return expectations, which are characteristic of large-scale infrastructure projects.[143] These investors are also becoming more aligned with environmentally sustainable practices and goals.

Whether it be through Alliances, PPPs or a modified version, the reality for a country with a population of 5.1 million, such as New Zealand, but a land mass 10% greater than the United Kingdom (pop. 67.33 million), we lack the necessary taxation base to maintain and improve our infrastructure under a traditional procurement model. With improvements in their environmental sustainability practices, and a ready appetite for investment in long term infrastructure projects, pension and other funds under a traditional or modified PPP procurement model are likely to be the future.

Stuart Robertson, Paul Buetow and Sara Cheetham

[142] Statement of Prime Minister, Rt Hon Jacinda Ardern, Minster for Climate Change, Hon James Shaw, 31 October 2021, https://www.beehive.govt.nz/release/govt-increases-contribution-global-climate-target

[143] 'The global infrastructure financing gap: Where sovereign wealth funds and pension funds can play a role', Amin Mohensi-Cheraghglou and Naomi Aladekoba, Econogrpahics, 31 October 2022, https://www.atlanticcouncil.org/blogs/econographics/the-global-infrastructure-financing-gap-where-sovereign-wealth-funds-swfs-and-pension-funds-can-come-in/#:~:text=The%20global%20infrastructure%20financing%20gap%20is%20estimated%20to%20be%20around,year%20in%20the%20infrastructure%20sector.

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