



Public-Private Partnerships

What The World Can Learn From Canada



The Canadian Council for
Public-Private Partnerships



Le Conseil Canadien pour
les Partenariats Public-Privé

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Executive Summary

What this white paper is about The Canadian model of Public-Private Partnerships (often called P3s) is considered one of the most successful in the world. There have been major political commitments to P3s across Canada, and among governments at the federal, provincial and municipal level. Over 200 infrastructure projects have been delivered, representing over C\$70 billion (for projects that have reached financial close) of capital investment. The evidence shows that P3s have an impressive record internationally, and jurisdictions that have thus far made limited use of the model have much to learn from global exemplars of good practice. Therefore, this paper provides an overview of the development and the performance of P3s in Canada, which has emerged as a global leader in the use of this form of infrastructure investment. The paper outlines the growth and evolution of the Canadian P3 programme over recent years and identifies the key factors that have contributed to this remarkable policy success.

The global infrastructure challenge It is estimated that US\$57 trillion in new investment in infrastructure is required between 2013 and 2030.¹ In some countries, the infrastructure gap is already a drag on economic growth. In the US, the investment requirement stands at US\$3.6 trillion between 2013 and 2020.² It is one of world's most affluent societies, but the quality of its infrastructure is ranked 15th in the world and its comparative performance has declined over recent years.³ In this context, P3s provide an opportunity to invest over and above what formal government capital budgets will allow but, more importantly, to improve the quality of investment decisions and the efficiency with which projects are delivered.

P3s: an impressive international record It is over 20 years since countries such as Australia and the United Kingdom began to use P3s as a regular method of procurement for public infrastructure projects. In this context, many hundreds of projects are now in a mature phase of operations and we can take stock of the opportunities this form of procurement gives rise to. We are increasingly able to document the significant cost and time savings that P3s have been able to secure in construction, alongside the substantial savings that P3s offer over the life-cycle of the assets, which lower the long-term costs of service provision.

Canada: a global exemplar of good practice in P3 Since the onset of the global financial crisis, the Canadian market has emerged as one of the world's most stable and consistently productive. There has been a clear recognition of the benefits of P3s by the Government of Canada in recent years, and the model has been at the heart of long-term infrastructure plans introduced by successive governments. However, it is governments at the provincial level that have assumed the leadership role in driving forward the Canadian P3 market.

The work of provincial procurement agencies has benefited the Canadian market significantly, providing:

- A steady pipeline of well-structured economic and social infrastructure projects;
- Standardized procurement processes, including consistent project agreements and payment mechanisms, evaluation methodologies, and financing requirements;
- Fostering a collegiate approach both among and within the provinces, including the sharing of lessons learned and new approaches; and
- A framework of mutual trust between the public and private sectors which has helped to elicit and sustain the development of a diverse and competitive supply market.

The Canadian case suggests that, while political will is of paramount importance in a P3 programme's success, local and regional actors can themselves drive the emergence of viable markets.

Identifying the determinants of P3 success in Canada

A stable pipeline The P3 market has seen strong growth in terms of the number of new projects that have entered the market since 2009. Indeed, while nine P3s entered the procurement phase in 2009, this more than doubled to 20 in 2013. The stability of the P3 market has been crucial in securing competitive contract prices and high quality bids. The strong pipeline has benefited all players, and helps to maintain efficient capacity on both the demand and the supply side of the market. This capacity is now being used to expand the use of P3s into untapped provincial, municipal, and Aboriginal markets.

Efficient procurement Of the mature P3 markets around the world, Canada is acknowledged to have one of the most efficient procurement processes. Overall, the median procurement time over the whole programme period is approximately 18 months, and this has fallen to 16 months in recent years. As a consequence, bid costs in Canada are lower than in comparable markets. Bid costs for the winning bidder on a P3 in Canada are on average lower than those in Australia, at 0.5% to 1.5% of capital value compared to 1% to 2%; and substantially lower than those in the UK, where bid costs are 5% to 6% of capital value.⁶

A diverse market for project finance Government purchasers at the provincial level have ensured that project documents are consistent across all projects in an asset

class, and that the key terms are also similar across asset classes. This has been a key advantage in addressing the barriers to institutional investment in P3 projects, ensuring that projects can obtain the ratings required for projects to enter the bond market for financing, and stimulating healthy competition to emerge between different sources of debt – both bank- and bond-finance - as well as the possibility of hybrid transactions involving both sources.

A supportive political environment Among the general public in Canada, there has been a growing public acceptance of a greater role for the private sector in the delivery of infrastructure services across the country. Polls conducted show growing public support for a greater role for the private sector in the delivery of public infrastructure services. Across the country, support for private sector delivery of these services in partnership with government has increased from 60% in 2004 to 70% in 2011. The public is also increasingly aware of the possible benefits of the P3 model, not just in terms of enhanced quality of public infrastructure and services, but of the P3 market's capacity to drive Canadian employment and economic growth and create opportunities for local companies.

Lessons to be learned More than 200 P3 projects have been signed in Canada, representing over C\$70 billion (for projects that have reached financial close) of capital investment – a testament to the success of this procurement model. Yet the benefits of P3 programmes run wider than the investments they deliver: their role is to drive better performance in procurement, and they have been shown to do so even in contexts where implementation has been much less successful than in Canada. Those countries in which P3 markets are emerging have a historic opportunity to generate significant economic benefits by adopting a more comprehensive approach to their use of the model. With trillions of dollars of infrastructure investment required in the coming decades, no country can afford not to consider those opportunities very carefully.

At the programme level, a key determinant of success is the strength of the relationship between the public and private sectors. This is clear in Canada, in which the clarity of the pipeline, strong legal framework and the extent of trust between the public and private sector have helped to foster a stable, competitive and efficient market environment. At the individual project level too, trust and partnership working are fundamental to securing the risk-sharing and good, balanced, contractual relations that are at the heart of good project delivery. To generate this, it is essential that the contracting parties have access to clear, transparent and objective information about the level of performance under the contract.

1. The Global Infrastructure Challenge

Infrastructure plays a vital role in the economic and social development of all countries. Adequate investment in the sector is needed to enhance the availability of goods and services, contribute to human capital, and improve quality of life. In a global context of increasing prosperity, technological progress, urbanization and population growth, the demand for new investment in infrastructure is set to expand significantly in the years ahead. The McKinsey Global Institute has estimated that US\$57 trillion in new investment is needed between 2013 and 2030 – this just to keep up with the projected growth in global GDP.¹

In the United States, the American Society of Civil Engineers estimates that the infrastructure investment required between 2013 and 2020 amounts to some US\$3.6 trillion.² This figure includes only economic infrastructure (the roads, railways, ports, airports, power facilities, water networks and telecoms that enhance the productive capacity of the economy). After including social infrastructure (the hospitals, schools, prisons, libraries, and government accommodation that add to human capital and enhance quality of life), it is likely that the figure would be many trillions higher.

The US is currently punching well below its weight in terms of the quality and quantity of infrastructure. One of world's most affluent societies (in GDP per capita terms), it is widely acknowledged to have a significant infrastructure deficit. The quality of its infrastructure is ranked 15th in the world, and its comparative performance has actually declined over recent years (see Table 1). Since the onset of the global financial crisis, the Canadian market has emerged as one of the world's most stable and consistently productive. There has been a clear recognition of the benefits of P3s by governments at all levels in Canada in recent years, and the model has been at the heart of long-term infrastructure plans introduced by successive governments. As we detail in this white paper, Canada is playing host to the world's most stable, efficient and well-supported P3 programme. Countries such as the US, in which P3 markets are only now emerging, have a historic opportunity to generate significant economic benefits by learning from Canada, the global leader in the use of this form of infrastructure investment.

Table 1. Comparison of national income and overall quality of infrastructure among the G20 economies*

	Quality of infrastructure, 2013-14 (rank)	Change in rank 2012-13 to 2013-14*	GDP per capita (rank)
Argentina	89	-3	54
Australia	18	0	14
Brazil	71	-1	76
Canada	12	1	20
China	48	0	89
France	4	0	26
Germany	3	0	17
India	85	-1	126
Indonesia	61	17	101
Italy	25	3	29
Japan	9	2	27
Mexico	64	4	66
Rep. of Korea	11	-2	30
Russian Fed.	45	2	46
Saudi Arabia	31	-5	11
South Africa	66	-3	85
Turkey	49	2	62
United Kingdom	8	-2	28
United States	15	-1	10

* - indicates a deterioration in the comparative quality of infrastructure. Sources: World Economic Forum, 2010; 2013; IMF 2013³

Like many other countries around the world, at various levels of economic development, the US has a pressing need to increase the scale of infrastructure investment and the efficiency of its delivery. Similar concerns have led authorities in many jurisdictions to encourage the use of private sector finance in the delivery of economic and social infrastructure - often through public-private partnerships (P3s) in which private sector consortiums take charge of the full range of project delivery risks and responsibilities: from financing and construction to operations and maintenance.

In many countries, P3s are attractive to governments that wish to invest over and above what formal public capital budgets will allow. However, P3s are also increasingly sought by governments, not as a means of easing budgetary constraints on investment, but as a way of improving the quality of investment decisions and the efficiency of investment project delivery. Reflecting this, P3s

are becoming increasingly popular among governments that have abundant access to capital and/or where their accounting and budgeting procedures eliminate the potential to use private finance as a source of 'off balance sheet' investment.

As we explain overleaf, empirical evaluation has shown that P3s have an impressive record internationally. This implies that jurisdictions that have thus far made limited use of the model may secure significant economic benefits from adopting a more fully engaged approach. As those jurisdictions have much to learn from exemplars of good practice, this white paper provides an overview of the development and performance of P3s in Canada, which has emerged as a global leader in the use of this form of infrastructure investment. The white paper outlines the growth and evolution of the Canadian P3 market over recent years and identifies the key factors that have contributed to this remarkable policy success.

2. P3s: An Impressive International Record

It is over 20 years since countries such as Australia and the United Kingdom began to use P3s as a regular method of procurement for public infrastructure projects. In these countries, hundreds of projects are now in a mature phase of operation. As empirical experience has accumulated, there is clear evidence about specific advantages of the model in terms of reducing the risks and enhancing the economic benefits associated with large-scale infrastructure investments.

At the heart of the P3 model is the principle that the risks associated with the delivery of infrastructure should be transferred to the contractual party that is most able to manage them. The emphasis placed on risk stems from the fact that large-scale projects are often characterized by higher costs and/or lower than those expected during the planning phase. This reflects the reality that the future cannot be predicted with certainty. In the delivery of infrastructure projects, sources of uncertainty are many, and some of these have the potential to cause significant losses or significant additional costs for the organizations involved.

In well-designed P3s, the private sector operator has a strong incentive to identify, allocate and mitigate risk to safeguard the financial viability of the project. This implies, in turn, a strong incentive to provide an integrated package of infrastructure and services at the standard and to the timetable required under the contract. Experience shows that allocating risk in this way through the P3 model leads to two major benefits in project delivery:

- significant cost and time savings in construction; and
- substantially greater focus on, and innovation to achieve, minimization of the costs infrastructure delivery across the life-cycle of the assets, thereby lowering the long-term costs of public service provision.

Each of these benefits is explored in more detail overleaf.

2.1 Cost and time savings

Numerous studies, undertaken in various jurisdictions, have shown that the construction phase of P3 projects is associated with a significantly lower probability and severity of time and cost overruns compared with conventional public projects. This has, for example, been consistently demonstrated by parliamentary audit reports in the UK (see Table 2 for a summary). On-time and on-budget performance is encouraged under P3 since:

- Payments to the private operator are not made until the infrastructure is available for use by the public sector; and
- Any increases in the cost of construction above that expected at financial close is borne by the private sector party.

Typically, the private operator will also seek to transfer the risks associated with delivering the specified infrastructure to subcontractors – the contractors specifically responsible for the delivery of the construction works. To achieve this, the price agreed with the subcontractor has to be fixed at the point of financial close, and the construction

project must proceed on a ‘turnkey’ basis with a single firm responsible for all aspects of delivery. With these arrangements in place, the design and build subcontractor has a stronger incentive to deliver the contractually-defined asset within the agreed timetable and to a fixed budget than is normally achievable on a conventional public sector capital project.

However, the incentive framework can be strengthened even further. Indeed, the investors in the project may insist on further strengthening as part of the due diligence process. For example, the project company may require a subcontractor to post a completion bond (set at 10-15% of the subcontract value) as security for performance under the deal. Often, this is supplemented by a requirement that the subcontractor pays liquidated damages (up to a maximum of 50% of the value of the construction works) to the operator where work is delayed due to factors under subcontractor control. This is designed to compensate the project company for any fall in revenues that may result from the later onset of payments.

Table 2. Performance of P3s versus conventional procurements in the UK

Performance focus	Conventional, 1998 (%)	PFI, 2002 (%)	PFI, 2008 (%)	Conventional, 2008 (%)
Cost overrun	73	22	35	46
Time overrun	70	24	31	37

Source: UK National Audit Office, 2009⁴

It is important to recognise the important role that is played by private finance in this process. Investor intervention is crucial in ensuring that the process of risk allocation generates a set of incentives that enhances the quality of investment decisions and the efficiency of project delivery. For example, in cases where costs depart substantially from those expected, for instance if the expected costs and revenues of projects have been forecast poorly, the private operator may be unable to provide scheduled payments or dividends to its equity-holders, and in extreme situations may even default on its senior debt commitments. Investors therefore have “skin in the game”: their returns are exposed if projects are mismanaged, and they have a powerful incentive to ensure this is not the case.

Therefore, investors have a strong incentive to assess the robustness of the proposed business plans, including the subcontractor arrangements, before contracts are signed - ensuring, for example, that forecasts are robust and risks have been allocated appropriately. In particular, senior lenders (which may provide up to 95% of the finance required to deliver the project) are unlikely to accept at face value the forecasts of planners. They bring in their own advisers to undertake independent due diligence, helping to increase the quality of business plans and mitigate the risks. Such processes are usually absent from most public procurements, and it is likely that this is a key reason for the major differences in cost and time outcomes that empirical evidence has revealed.

2.2 The focus on whole-life costs

When P3s are well-designed and competitively bid, there is a clearer focus on long-term cost optimization than is normally achieved – and perhaps is even achievable - in conventional public capital procurement. Where payment mechanisms achieve an effective transfer of risk to the private sector,⁵ then the operator is penalized when the facility is unavailable for use or if the services it delivers fall short of the specified standard. Therefore, the operator has a strong incentive to plan for the long-term needs of the asset at the outset of the project. One result is that upfront capital expenditure is set at the optimal level with a view to minimizing the ongoing costs of operation and maintenance.

Again, the evidence shows that the role of private finance is important in this regard. Investors of all kinds, equity- and debt-providers, are encouraged to come together during the project planning stage to ensure that the future operations and maintenance commitments are factored into the design of the construction project itself. Senior lenders in particular – the banks and/or bond arrangers that provide 80% to 90% of the required capital finance, and conduct a great deal of due diligence and scrutiny of the project plans, require assurance that contract milestones will be delivered over the long term to ensure that scheduled payments of capital are interest are not threatened via the abatement regime. These parties bring a powerful and independent voice to the long-term planning process.

In simple terms, the private operator of a P3 contract is accountable for the long-term maintenance of the asset, and it therefore has to ensure that this is built to last. In addition (and assuming the procurement phase is appropriately competitive), the operator has an incentive to ensure that the design of the project serves to minimize the overall costs to the public sector partner, as competitive tension encourages bidders to find ways of offering the lowest price bid for the quantity and quality of service provision that the purchasing authority has specified. The P3 model therefore encourages the private operator to innovate in design; and because risks and responsibilities are transferred to the operator, it also has the managerial discretion and flexibility it needs to initiate such innovation.

In an ideal world, to be sure, the goal of long-term cost-minimization could be achieved via conventional procurement. The public sector does, after all, have a long-term responsibility for maintaining the infrastructure that it purchases. It is possible to increase the accountability of government for the effective management of its asset base through, for example, the establishment of longer-term financial planning horizons, or moving to more commercial forms of accounting and budgeting that encourage the recognition of ongoing maintenance requirements. Empirical experience across the world suggests, however, that in practice such an approach is extremely hard to achieve in normal public procurement.

All too often, the focus on minimizing the up-front cost of the construction project dominates all else, with higher than necessary operations and maintenance costs over the life of the asset the inevitable result.

3. Canada: A Global Exemplar of Good Practice in P3s

“We compliment the Canadians for the successful PPP programme they have developed, which has definitely improved upon the original UK model.”

Geoffrey Spence, Chief Executive, Infrastructure UK

While the UK pioneered the P3 concept in the early 1990s, Canada is now widely acknowledged to be the key source of international best practice - the model and inspiration for emerging P3 programmes around the globe. Especially since the onset of the financial crisis, the Canadian market has emerged as one of the world's most consistently productive – a market characterized by a strong pipeline, efficient procurement, vigorous competition in supply and a supportive political environment. The factors that have given rise to these features are explored in more depth in sections below, but here the focus is on how and why the programme has evolved in recent years to assume its place as the global exemplar of P3 good practice.

3.1 The market environment: demand side

It is almost a truism to say that a viable programme of P3s depends on there being an adequate degree of political will. Strong government support is needed to initiate the establishment of a brand new market, and nurture the development of that market over time. In Canada, the extent of political support is globally distinctive: the model is promoted by agencies at all parts of government in Canada – at the federal, provincial and municipal levels.

There has been a clear recognition of the benefits of P3s by the Government of Canada in recent years. In its 2007 budget, it announced the creation of a C\$1.25-billion P3 Fund, to be coordinated by a specialist P3 office. This ultimately evolved into PPP Canada, which is now established as one of the world's great centres of P3 knowledge and expertise (see Box 2 overleaf). The 2013 Budget allocated an additional C\$1.25-billion and also established a ‘P3 screen’ for infrastructure projects with a capital value of over C\$100 million. This implies that the applicability of the P3 model will be rigorously considered for all large-scale investment projects promoted by government as a matter of routine.

More recently, the federal government reaffirmed its strong commitment to P3s in a new long-term infrastructure plan announced in Budget 2013. This initiative, which replaces the former Building Canada Plan, envisages over C\$70 billion in infrastructure financing over a 10 year period. The government is supporting the role of P3s is delivering the investment agenda with further funding of C\$1.25 billion for the P3 Canada Fund, intended to play a catalytic role in leveraging up to six times this amount in private capital via new P3 deals.⁶

Box 1. The New Building Canada Fund

The New Building Canada Fund was allocated C\$14B over 10 years to support infrastructure of national, regional and local significance that promotes economic growth, job creation and productivity. The Economic Action Plan 2013 announced that applications to the New Building Canada Fund with eligible costs of C\$100M or more would be subject to a P3 Screen, to gauge the appropriateness of P3 delivery. In cases where a P3 is expected to provide better value for money, the federal government makes P3 procurement a condition of funding. This is likely to increase the number of new jurisdictions entering the market with P3 projects over the life of the New Building Canada Fund. The previous Building Canada Fund supported 45 projects that met or exceeded the C\$100M threshold, eight of which were procured as P3s. While not all large assets are viable as P3s, this implies that a proportion of the infrastructure projects that Canada is taking forward will be undertaken via a P3 solution.

built upon the successes of the earlier provincial adopters by creating their own specialized agencies. These are focused on complex infrastructure delivery and are now themselves host to a significant base of knowledge and experience, putting forward a programme of viable P3s, and often making their services and expertise available within their respective jurisdictions to the municipalities which, as discussed further below, have become an increasingly important source of demand for P3s in recent years.

Box 2. The development of PPP Canada

Canada is a federal state, and the responsibility for infrastructure investment is shared between the different levels of government. A federal institution, Infrastructure Canada, is complemented by a range of centres of infrastructure expertise at the Provincial level. In 2006, the government of Canada launched a C\$33 billion infrastructure plan, Building Canada; the C\$53 billion New Building Canada Plan was announced in 2013. Through the creation of PPP Canada and the P3 Canada Fund, the federal government has, since 2007, played a more active role in encouraging P3 project delivery across the country. The P3 Canada Fund has proved to be particularly important as an encouragement for greater municipal involvement in P3s. Under the fund, the PPP Canada agency has conducted five rounds of calls for project applications, and has fully committed the C\$1.25 billion made available under the fund, investing in a national portfolio of more than 20 P3 projects, and leveraging more than C\$6 billion in capital expenditure within the six provinces and territories and 13 municipalities involved. The agency is now expected to play a central role in the renewed P3 Canada Fund, which has a further C\$1.25 billion from the federal government. The Economic Action Plan 2013 expanded its mandate to include responsibility for managing a 'P3 Screen' introduced under the New Building Canada Fund, which will apply to all funding applications with eligible costs of C\$100 million or more.

At a national level, the Canadian Council for Public-Private Partnerships (CCPPP), is a not-for-profit, non-partisan, member-based organization with broad representation from across the public and private sectors. It promotes innovative approaches to infrastructure development and service delivery through public-private partnerships with all

While federal support has been strong, it is the governments at the Provincial level that have assumed the leading government role in driving forward the Canadian P3 market. In particular, the provinces of Alberta, British Columbia, Ontario, and Quebec have developed and refined the Canadian P3 model. Each has established its own specialist agency, and collectively these have helped to create a distinctively Canadian approach to P3 project and programme management.

The work of these agencies has benefitted the Canadian market significantly, providing:

- A steady pipeline of well-structured economic and social infrastructure projects;
- Standardized procurement processes, including consistent project agreements and payment mechanisms, evaluation methodologies, and financing requirements; and
- Fostering a collegiate approach both among and within the provinces, including the sharing of lessons learned and new approaches.

In Canada, later adopters of the P3 model have clearly learned the right lessons from these experiences and have used them to make notably rapid progress. The provinces of New Brunswick and Saskatchewan have, for example,

levels of government. A proponent of evidence-based public policy in support of P3s, the Council facilitates the adoption of international best practices, and educates stakeholders and the community on the economic and social benefits of public-private partnerships.

3.2 The market environment: supply side

The roll-out of P3s in Canada is supported by strong legal frameworks that help to stimulate greater market confidence. Procuring authorities, private operators and investors and creditors have security that the various contractual mechanisms contained within P3 project agreements will be enforced. In turn, this has helped to foster a diverse and competitive range of providers across all components of the industry, including operational and financial players.

Suppliers in Canada's P3 market are now global leaders in terms of their experience, knowledge and capacity. According to the P3 Canada Fund, its projects attract substantial interest, between seven and 14 interested

bidders at the initial Request for Quotations (RFQ) stage. Significant Canadian-based market players include Black & McDonald, Ellis Don Corporation, PCL Constructors, and SNC Lavalin. Large and active players from overseas include Acciona (Spain), Bouygues (France), Honeywell (US), Innisfree (UK), Johnson Controls (US) and Plenary Group (Australia). The involvement of such a diverse range of domestic and international firms leads to more effective competition, forcing suppliers to drive down prices and to innovate to increase the quality of their submissions.

In addition, and in stark contrast to the recent experience of many other countries with mature P3 markets, projects of various sizes in Canada have the benefit of ready access to private sector capital. Both banks and institutional investors have continued to be active in the markets in this context, resulting in significant competition between lenders and, in turn, financing rates that are very low by international standards. Indeed, bond spreads have actually fallen in the Canadian market over recent years while in many other countries substantial increases in risk premiums have been observed. This diversity and breadth of the supply market is a reflection of the successful stewardship of the programme by the public sector at all levels.

Table 3. Number and capital values of P3 projects in Canada (all jurisdictions)*

	Number	Capital value (C\$ million)
Transportation	49	31,405
Hospitals & Healthcare	83	22,418
Justice/Corrections	19	5,458
Energy	6	4,458
Education	11	1,746
Recreation & Culture	17	1,380
Environmental	24	1,229
Real Estate	4	944
Defence	1	867
Government Services	4	482
IT Infrastructure	2	1
Total	220	70,388

* includes only costs of projects where costs have been finalized and released.

Source: CCPPP Database

4. The Determinants of P3 Programme Success in Canada

This section provides a review of the areas in which Canada clearly demonstrates best practice in comparison with other P3 markets, and the factors that have given rise to these.

4.1 A strong pipeline

In contrast to much of the rest of the world, the Canadian P3 programme has been strong and stable in recent years. Canadian P3 projects reaching financial close have ranged between 10 and 15 projects per year since the onset of the crisis in 2008, underlining the extent to which consistent government support and diversity in supply has helped to strengthen market resilience. While the number of contracts reaching financial close is somewhat lower than the peak years – in particular the years 2005 to 2009 - the P3 market has seen strong growth in terms of the number of new projects that have entered the market between 2009 and 2014. Indeed, while nine P3s entered the procurement phase in 2009, this more than doubled to 20 in 2013.

The stability of the P3 market has been crucial in securing efficient contract prices and high quality bids. A strong pipeline benefits all players, and helps to maintain efficient capacity on both the demand and the supply side of the market. Prospective operators are better able to allocate their resources and maintain a presence in the market when the domestic pipeline is clear and predictable. The public sector also benefits from the stable base of P3 expertise that is established and nurtured with a stable pipeline and level of deal-flow.

The Canadian market is also evolving and diversifying as lower levels of government embrace the P3 concept. Historically, as noted previously, demand for Canadian P3s was dominated by the Provinces of British Columbia, Alberta, Ontario and Quebec. The P3 market was therefore focused on sectors such as education, healthcare and transportation that are under provincial control.

In addition to the active entry into the market of the Province of Saskatchewan, the launch of the C\$1.25 billion P3 Canada Fund (see Box 2), has encouraged the entry of some 15 municipalities into the P3 market over the past four years. Municipalities that have been particularly active in procuring P3 projects include Winnipeg, which has four active P3 projects, and Toronto, with three active P3s. Other municipalities engaging in P3s include Regina and Saskatoon with two projects and Lac La Biche in Alberta; Ottawa; Sudbury; Hamilton; Montréal; and La Prairie, Quebec, with one each.

Their entry has resulted in demand for a wider range of assets, including water and wastewater treatment facilities, public transit infrastructure, and solid waste management assets. In consequence, the Canadian market can now be regarded as a world leader not just in terms of its diversity but also its level of activity. Of the 20 projects that entered the market in 2013, 10 were initiated by new entrants, and seven of the new entrants (which are highlighted in blue in Table 4) are municipalities.

Table 4. New entrants into the Canadian P3 market in 2013

Project name	Location	Level of government
Regina Stadium	Regina	Municipal
Sheridan College Phase II	Mississauga, ON	Provincial
Joseph Brant Hospital	Burlington, ON	Provincial
McLoughlan Point Wastewater Treatment	Victoria, BC	Municipal
VIVA BRT	York Region, ON	Provincial
ErinoakKids Centre	Various locations in ON	Provincial
407 East Phase II	Durham Region, ON	Provincial
Milton District Hospital	Milton, ON	Provincial
AMT Pointe-Saint-Charles	Montreal, QB	Provincial
Swift Current Long Term Care	Swift Current, SK	Provincial
Eglinton Crosstown LRT	Toronto, ON	Provincial
Emily Carr University	Vancouver, BC	Provincial
BC Children's and Women's Centre	Vancouver, BC	Provincial
Mackenzie Valley Fibre Link	Various locations in NWT	Territorial
Surrey Biofuels	Surrey, BC	Municipal
Saskatoon Civic Operations Centre	Saskatoon, SK	Municipal
Regina Wastewater Treatment Plant	Regina, SK	Municipal
RCM of Haute-Yamaska Sorting Facility	RCM of Haute-Yamaska, QC	Municipal
Victoria CRD Biosolids Facility	Victoria, BC	Municipal

Source: Adapted from PPP Canada, 2013

4.2 Efficient procurement

Of the mature P3 markets around the world, Canada is acknowledged to have one of the most efficient procurement processes. According to analysis of projects from the database of the Canadian Council for Public Private Partnerships,⁷ the median procurement time over the whole programme period is approximately 18 months.

There is also evidence that the process is becoming more efficient over time, presumably as the level of familiarity and experience grows in the public and private sectors. A recent survey by KPMG found that, in projects procured since 2007, the time from release of tenders to financial close has fallen to approximately 16 months.⁸ This compares favourably to the average procurement time for P3s in Australia (17 months) and in the UK (34 months).

As a consequence, bid costs in Canada also compare favourably with those in Australia and the UK. Although a like-for-like comparison between countries is difficult, due to limited information, substantial variability in bid costs as a proportion of capital costs, and differences in project sizes. Bid costs for the winning bidder on a P3 in Canada are on average lower than those in Australia, at 0.5% to 1.5% of capital value compared to 1% to 2%; and substantially lower than those in the UK, where bid costs are 5% to 6% of capital value (see Table 5).

Private sector bid costs as % cap. value	UK	Canada	Australia
Average project value	US\$150 million	C\$350 million	A\$250 million
Winning bidder	5-6%	0.5-1.5%	1-2%
Each failed bidder	2-3%	0.35-1.0%	0.8-1.2%

Source: KPMG Research 2010⁵

Exactly why Canada has been able to perform better than its peers in terms of the efficiency of the procurement process is a complex question. In part, this must reflect different levels of commercial experience on the part of state purchasers, something that is not necessarily easy for other, less mature P3 markets to replicate, at least in the short-to-medium term. However, strategies used in Canada have clearly played a key role in improving the efficiency of the procurement process and have greatly reduced bid costs. These include:

- Rigorous adherence to project timetables and the disciplined avoidance of further bid stages after the Request for Proposal (RFP) stage;
- Fewer information requirements, relying more on the preferred bidder developing its proposal (before and after commercial close) and on protections within project agreements;
- Greater discipline in avoiding 'scope creep', especially after the selection of the preferred bidder;

- Some form of substantial contributions from the public sector towards bid costs;
- Greater standardization of contracts (despite variations between provinces), with contracts being rolled forward to subsequent projects without substantive amendment; and
- Less focus on third party income or development gains as a source of value for money (KPMG Research 2010⁵).

Where these elements are in place, bidders have greater certainty, which in turn can be expected to generate greater competition and more efficient contract prices for the output that the public sector purchaser requires. Key to this in the Canadian context has been the rapid Request for Proposals process, which requires that bidding consortia submit proposal which include full financing. Because the financiers are unable to hold their debt financing commitment for a long time, that provides a strong incentive for the private sector to agree to quick and firm deadlines for procurement.

4.3 A diverse market for project finance

Since the financial crisis, many mature P3 markets have experienced a rapid reduction in deal-flow. In large part, this is due to reductions in the availability of private finance alongside an increase in its cost. Recent changes in financial sector regulation, designed to reinforce the resilience of financial institutions, have amplified these effects. In particular, the Basel III Accord has required commercial banks to set aside more capital for long-term assets such as those associated with P3s, making assets linked to such projects less attractive for these institutions. At the same time, demand for infrastructure assets has been limited among alternative investors, such as pension funds, sovereign wealth funds and insurance companies, due to a range of institutional and investment-specific factors (see Box 3).

Box 3. Barriers to institutional investment in P3 markets

Institutional barriers

- Lack of specific expertise
- Liquidity risks
- National and international regulatory barriers

Investment barriers

- Negative perception of the value of infrastructure assets
- Lack of transparency about infrastructure plans and pipelines
- Lack of data on performance of infrastructure projects

Such problems have been notably absent in the Canadian market, in which debt finance has continued to flow to projects and, as discussed previously, deal-flow has remained stable. Both Canadian and foreign banks have continued to be active in financing Canadian infrastructure since the financial crisis. To some degree, the P3 market has benefited from relatively good performance in the country's banking sector. In the build-up to the financial crisis, Canadian banks were more conservatively managed than many of their European counterparts, and also took a more cautious approach to infrastructure lending (typically making only shorter-term loans, up to five-to-seven years). In addition, Canada has one of the most developed P3 bond markets in the world, with such bonds often structured to be investment grade. It is notable that Canada has never needed to adopt the "monoline" bond insurance model that became an important part of the financing landscape in the UK. Its pension funds have spearheaded direct investments in infrastructure since the early 2000s.

Today, indeed, Canada has along with Australia the highest asset allocation dedicated to infrastructure by pension funds around the world: some 5% compared to the global average of around 1%. Total Canadian pension fund assets were over US\$1.5 trillion in 2013, about two-thirds of GDP; and growing at a rate of 7% over 10 years (see Table 6). The majority of investors in this context make direct investments in infrastructure, thereby giving rise to a distinctive "Canadian model" which has attracted considerable attention around the world.

Pension fund	Total assets	Infrastructure assets	
	C\$ billion	C\$ billion	%
OTTP	129.5	9.6	7.4
PSP	64.5	3.6	5.6
CPP	183.3	11.2	6.1
OMERS	61.5	9.8	14.8
Alberta	69.7	3.1	4.4

Source: Inderst, 2014⁹

However, it is also important to note that government actions have also played a role in generating a diverse project finance market that is robust to macroeconomic shocks.

The extent to which government purchasers at the provincial level have ensured that project documents are consistent across all projects in an asset class, and that the key terms are also similar across asset classes, has been a key advantage in addressing the barriers to financial investment in P3 projects identified in Box 3 (on previous page). Alongside a rapid and transparent bidding process, as highlighted above, the degree of standardization that has been promoted by all Canadian jurisdictions has helped to reduce the information requirements of senior lenders and thereby encourage their entry into the P3 market.

This process is also enhanced by the actions of contractors, who will typically provide robust security packages that are passed through to the project company. That allows projects to obtain better rated debt from the ratings agencies so projects can enter the bond market for financing. This has enabled healthy competition to emerge between different sources of finance – both bank - and bond-finance – as well as the possibility of hybrid transactions involving both sources.

4.4 A supportive political environment

The scale of support for the P3 concept within government at the federal, provincial and municipal levels has already been highlighted. In addition, among the general public in Canada, there has been a growing public acceptance of a greater role for the private sector in the delivery of infrastructure services across the country. Polls conducted on behalf of The Canadian Council for Public-Private Partnerships (CCPPP) have shown growing public support for a greater role for the private sector in the delivery of public infrastructure services. Across the country, support for private sector delivery of these services in partnership with government sits at 62%.

This period coincides with the growth and standardization of the P3 programmes across the country.

The public is also becoming more aware of the possible benefits of the P3 model, not just in terms of enhanced quality of public infrastructure and services, but of the P3 market's capacity to drive Canadian employment and economic growth. P3 activity also creates opportunities for smaller, local companies, who frequently sub-contract with larger firms to take on specialized components of P3 projects.

A key factor is that, under the Canadian approach, P3s are pursued only when the procuring authority can demonstrate through a robust appraisal process that doing so will generate economic benefits - Value for Money - over the life of the contract. Canada stands apart from many of its international counterparts in this regard, as some countries that rely on different accounting standards may employ the P3 model as a means of providing additional investment or managing down debt-to-GDP ratios. By maintaining focus on value for the taxpayer, Canada has established credibility for P3s purely as an innovative asset delivery model.

Box 4. Highlights of 'The P3 Pulse' - National and Community Opinions on Public-Private Partnerships in Canada

On April 10, 2014 CCPPP released "The P3 Pulse: National and Community Opinions on Public-Private Partnerships in Canada". The report summarizes the results of the national poll and three new community surveys that Nanos Research conducted for CCPPP about Canadian attitudes on P3.

- 62% of Canadians are open to P3s
- A majority of Canadians indicated P3 support across key sectors of the economy, including transit systems (70%), roads (65%), social housing (64%) and hospitals (63%)
- In the three community surveys (Winnipeg, Sault Ste. Marie, Moncton) where P3 projects were present, a strong majority that was higher than the national average, indicated support for P3s and recognized their benefit to taxpayers
- They also agreed that these projects might not have been possible without the private sector as a partner in their design, construction, financing and maintenance

5. Lessons to be Learned from the Canadian Experience

The Canadian P3 model is one of the most successful in the world. At the heart of that success is the high level of political commitment across all levels of government. To create and nurture a productive P3 market, such support is essential. But a key lesson from the Canadian market is that this process does not need to be led by the federal government alone. In this case, it was provincial governments that were the driving force behind the roll-out of successful jurisdiction-specific programmes. Core to this process were provincial agencies, staffed with skilled and experienced professionals that had both the capacity and the political support to centralise procurement and standardize contracts in line with best practice – and so drive greater efficiency and improve outcomes across the programme.

More than 200 infrastructure projects, representing approximately C\$70 billion (for projects that have reached financial close) of capital investment, provide evidence as to the success of this approach. However, the success runs far wider than just the amount of capital investment secured. A P3 programme is as much about improving the efficiency of infrastructure delivery as it is about generating new investments. The weight of empirical evidence accumulated across the globe shows that P3s can improve performance significantly in comparison with conventional procurement, even in the many contexts where implementation has been much less successful than in Canada.

The evidence shows that countries that have made substantial use of P3s have generated significant economic benefits from doing so. Canada can demonstrate clearly how P3s have contributed directly to its employment and economy, as depicted in Box 5 below. By bringing together the combined expertise of the private and public sector through the P3 model, it has been able to expand the number and size of its infrastructure investment and as a result, provide services for public benefit to enhance the quality of life for Canadians as well as significantly increase the economic activity of its communities. This implies that jurisdictions such as the US, in which P3 markets are only now emerging, have a historic opportunity to adopt a more comprehensive approach to their use of this model. As a leader in P3s, Canada is the best place to look to ensure that policy and implementation of this model are in line with international best practice. With trillions of dollars of infrastructure required in the coming decades, no country can afford not to consider those opportunities very carefully.

Box 5. Impact of 10 years of P3 projects

- 517,430 full-time equivalent jobs, including 290,680 direct full-time equivalent jobs
- \$32.2 billion in income
- \$48.2 billion in total gross domestic product (GDP) and \$25.1 billion in direct GDP
- \$92.1 billion total economic output
- \$9.9 billion in total cost savings
- \$7.5 billion in tax revenue

Source: CCPPP Project Database and InterVISTAS¹⁰

At the programme level, a key determinant of success is the strength of the relationship between the public and private sectors. This is clear in Canada, in which the clarity of the pipeline, strong legal framework and the extent of trust between the public and private sector have helped to foster a stable, competitive and efficient market environment. At the individual project level too, trust and partnership working are fundamental to securing the risk-sharing and good, balanced, contractual relations that are at the heart of good project delivery. To generate this, it is essential that the contracting parties have access to clear, transparent and objective information about the level of performance under the contract.

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3. World Economic Forum, *The Global Competitiveness Report 2010-2011*; and 2012-13; International Monetary Fund (2013); and International Monetary Fund, *World Economic Outlook Database*, October 2014.
4. See National Audit Office (2009), *Performance of PFI Construction*, The Stationery Office: London.
5. See Service Works Group white paper, *PPPs - Understanding the Risk and Managing the Protection*, Service Works Group, February 2013. Successful payment mechanisms are those which enhance information flow, foster a culture of trust and facilitate balanced contractual relations. Information flow can be improved via software tools that include the benefits of a fully integrated payment mechanism. This is the optimal means of interpreting and operationalizing the contract, ensuring that this serves the objectives of all the parties.
6. It should be noted that the federal government has also delivered several P3 projects of its own, underlining the extent of its support for the model. For example, the RCMP E Division Headquarters Relocation Project (a design, build, finance and operate transaction of C\$1 billion in value) was tendered in 2008 and became operational in 2012.
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