FINANCIAL SUSTAINABILITY IN ACTION

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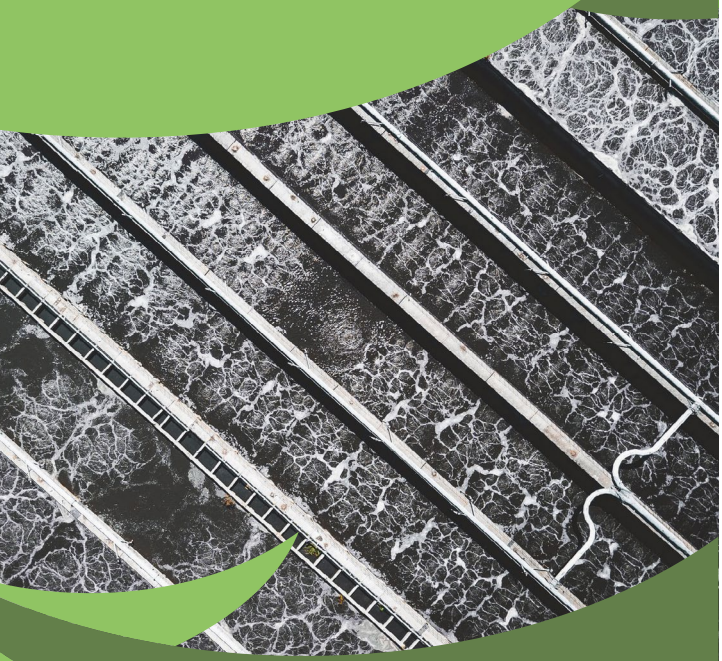

Canadian Water Network
Igniting interest.
Inspiring action.

Alternative project delivery models

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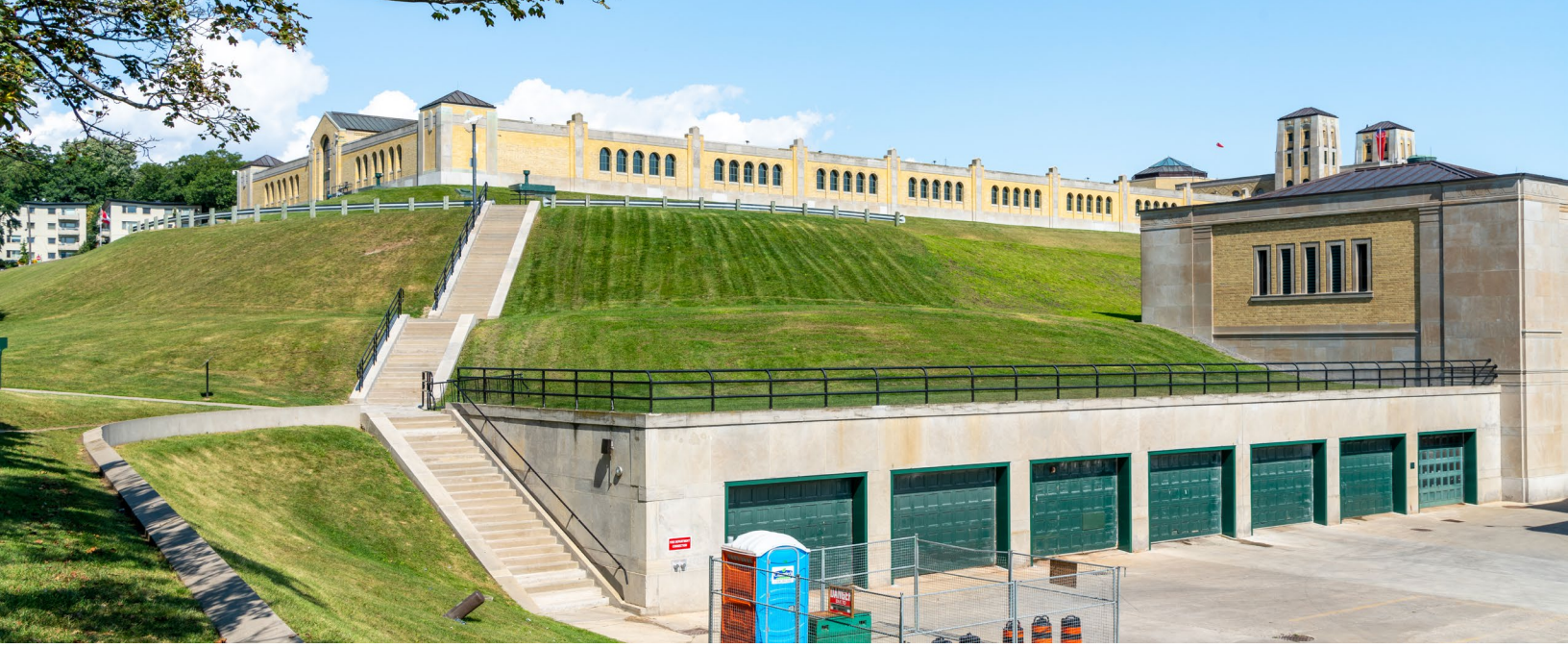

The challenge: Traditional project delivery models are straining municipalities

Across Canada, municipalities are facing serious challenges in delivering major public infrastructure projects on time and within budget. This challenge has three interconnected dimensions.

First, Canada has often faced challenges in delivering large public projects efficiently. High-profile examples in transit, transportation, and other sectors show repeated delays, cost overruns, and contract disputes. These outcomes often stem from fragmented project planning, inconsistent project management practices, and limited coordination across design and construction phases. Municipalities are left carrying the financial and political consequences when projects go off track.[5]

Second, municipalities are now experiencing significant cost escalation in the bids they receive for major capital projects. Many suppliers are pricing their work at substantially higher levels than anticipated. Anecdotally, firms report adding higher risk premiums to their bids because they are concerned about the very issues identified above: unclear scopes, unpredictable design processes, and adversarial delivery environments (C. Nelms, personal communication, January 9, 2026). This inflates project costs before construction even begins, further straining municipal budgets.[4]

Third, perspectives on risk allocation in major infrastructure projects have shifted considerably. Public-private partnerships (P3s) were initially appealing to municipalities because they transferred significant project risk to private partners. However, many firms became reluctant to participate in this model after several P3s resulted in substantial losses for contractors. A well-known example is Hamilton, which privatized its drinking water and wastewater services in 1994 but ultimately terminated the arrangement and brought operations back in-house after years of instability. The private operator incurred major financial losses as the contract became unsustainable.[6] With P3s falling out of favour, municipalities now face a procurement environment where risk transfer is far more limited, suppliers are increasingly cautious, and traditional delivery models often leave municipalities responsible for most of the financial exposure.[7]

Alternative Project Delivery (APD) approaches have emerged in response to these three pressures. These models are designed to reduce cost escalation, improve predictability, and create more balanced risk sharing between owners and suppliers. Integrated Project Delivery (IPD) is considered one of the most collaborative forms of APD. It brings owners, designers, and contractors together from the outset as a unified team with aligned incentives and shared accountability. Rather than fragmenting responsibility or pushing risk unilaterally onto suppliers, IPD emphasizes transparency, clear decision-making, and shared problem-solving.

Under APD, municipal staff shift from periodic reviewers to active partners. They participate in early design workshops to co-define scope, constructability, risks, opportunities and preliminary cost models. Staff also sit on joint governance teams that make timely decisions using structured processes, collaborate directly with project partners to co-manage risks and help shape procurement strategies for long lead items.

This hands-on involvement differs substantially from conventional delivery models, where staff review work only at defined milestones, risks are segmented, and cost escalation often appears late in the project.[8] Municipalities are increasingly recognizing that APD is not only a construction strategy but also a long-term financial strategy, particularly for large drinking water and wastewater projects where overruns can significantly affect municipal debt capacity, utility rates and the ability to invest in future infrastructure.[1]

Overview of APD models

Given cost escalation pressures, strategies that serve to reduce the risk associated with the delivery of major capital projects are essential to long-term financial sustainability. APD models are increasingly seen as one of these strategies. They improve financial predictability and reduce the likelihood of unexpected cost overruns that can destabilize utility budgets. Municipalities are adopting APD models because they create efficiencies across the entire project lifecycle. When structured effectively, APD and IPD help municipalities contain total project costs, improve schedule reliability, and redirect savings toward other critical capital needs.[2,3]

Municipalities report several consistent financial advantages when using APD:

- Integrated design and construction activities enable projects to be delivered faster, reducing labour costs and inflationary escalation.
- Construction expertise is incorporated early in the process, which helps evaluate feasibility, identify risks before they become costly issues, and avoid decisions that lead to later budget increases.
- The use of a single point of responsibility significantly reduces change orders, claims, and disputes that commonly arise under traditional delivery.
- Municipal staff benefit from a lighter administrative burden because they can work with a single integrated team rather than managing multiple contractors, designers, and consultants.
- Risk is assigned to the party best able to manage it instead of defaulting to the municipality.
- Life cycle savings can be achieved by incorporating durable materials, optimizing operations, and reducing long-term maintenance needs.[2,3,4]

Together, these factors combine to lower overall costs, minimize delays, and increase financial predictability, making APD a compelling choice for municipalities focused on long-term sustainability. It should, however, be noted that while APD and IPD are incredibly valuable tools, these delivery methods are much more time and capacity intensive for municipal staff than traditional project delivery. As such, these methods are most beneficial for large, high-risk projects, as was the case in Lloydminster, Alberta.



Case study: Lloydminster, Alberta

About Lloydminster

The City of Lloydminster, located on the Alberta–Saskatchewan border, serves approximately 32,000 residents through its municipally operated water utility. The utility manages the full water cycle, including drinking water, wastewater treatment and stormwater services. Its drinking water system draws raw water from the North Saskatchewan River. Lloydminster's upgraded wastewater treatment facility, opened in November 2023, can process up to 42,000 cubic metres of wastewater per day, supporting long term growth and environmental protection. The City also maintains an extensive stormwater network, comprising 110 km of pipes, 15.8 km of drainage channels, 17 management facilities, and a wetland complex. Lloydminster has modernized water metering through the adoption of Advanced Metering Infrastructure, first installed in 2017.[10]

The City of Lloydminster offers a compelling example of how APD can help a municipality deliver a large, complex water infrastructure project with greater financial certainty. Located along the Saskatchewan and Alberta border with a population of about 32,000, the City faced an urgent need to upgrade its aging wastewater treatment facility. The existing system relied on outdated lagoon technology that failed to meet federal regulatory standards. In 2018, the federal government issued a directive requiring compliance by December 2020. Although the deadline was later extended to December 2023, the city faced potential fines of up to one million dollars and even jail time for the mayor if it failed to meet these regulatory obligations. The pressure to deliver the project on time and within budget was intense.[9]

Three levels of government came to the table, each committing approximately one third of the project cost through multiple grant programs. Even with this support, Lloydminster faced strict financial limitations due to borrowing constraints and low reserve levels. The City set a maximum budget of $81.5 million based on approved funding. Initial cost estimates under conventional

delivery models ranged from $90 to $100 million, exceeding the City's financial capacity and placing its long-term sustainability at risk.[9]

Given these challenges, Lloydminster adopted the IPD model to achieve cost certainty, accelerate the project schedule, and secure community and economic benefits. The City established a Project Steering Committee comprised of department heads from operations, engineering, finance, communications, procurement, the city manager's office, and the mayor. The committee outlined the owner's requirements, goals, and constraints to guide the project. External experts were invited to present on the IPD model to senior leaders, allowing leadership to better understand its potential. This early education was critical in gaining support from council and aligning the internal leadership team.[9]

A Validation Report was completed to establish a reliable budget before moving into construction. This gave the City a confident cost baseline and reduced financial uncertainty. IPD allowed construction to begin before design was fully complete, enabling Lloydminster to meet tight regulatory deadlines and avoid costly penalties. The IPD contract structure required all parties to collaborate in the best interest of the project and included shared rewards, meaning every participant benefitted if the project delivered under budget. This alignment of incentives supported efficiency and drove financial discipline throughout the project.[9]

The outcome was a wastewater treatment facility that met environmental and regulatory requirements while staying within the City's financial limits. By choosing IPD, Lloydminster maintained a project cost of $81.5 million; it saved an estimated $10-20 million dollars compared to traditional delivery. These savings preserved borrowing capacity for future needs and strengthened long-term financial sustainability.

The project also delivered community and economic benefits. More than $10 million was spent through local vendors, boosting the regional economy. Project teams contributed to local charitable organizations, showing that major infrastructure projects can also strengthen community ties.[9]

Key takeaways

- **Ensure continuous involvement of officials and stakeholders.** Engage city leaders and community stakeholders throughout the project to sustain alignment, support informed decision-making, and maintain momentum from planning to delivery.
- **Cultivate strong collaboration to resolve issues early.** Establish a collaborative working environment that encourages partners to surface challenges quickly, address them collectively, and stay aligned with community priorities.
- **Provide clear guidelines to guide decisions.** Develop and use structured processes that offer a consistent roadmap for decision-making and keep all partners coordinated throughout the project lifecycle.
- **Use transparent communication to facilitate buy-in.** Share information openly and reference evidence from successful IPD projects to strengthen confidence among senior administration and council.
- **Leverage IPD to deliver cost and community benefits.** Adopt integrated project delivery to achieve cost certainty, accelerate timelines, and generate meaningful community outcomes.
- **Reduce grant dependence to strengthen financial resilience.** Use the model to lessen reliance on unpredictable external funding and reinforce long-term financial stability.
- **Emphasize shared accountability and risk-based problem-solving.** Implement structures that distribute responsibility, incorporate independent risk assessments, and encourage collaborative solutions to build stakeholder trust.

References

1. Bird Construction. (2025, September 19). Enhancing project outcomes through alternative delivery and collaborative risk sharing. https://cwn-rce.ca/2025/09/19/enhancing-project-outcomes-through-alternative-delivery-and-collaborative-risk-sharing/
2. Fenn, M. (2024). A jump start: Providing infrastructure for more housing. https://canurb.org/wp-content/uploads/A-Jump-Start.pdf
3. Legacy Building Solutions. (2016, June 2). Why municipal projects benefit from alternate delivery methods. https://blog.legacybuildingsolutions.com/municipal-projects-benefit-alternate-delivery
4. Canadian Water Network. (2025). Confronting cost escalation in Canadian water infrastructure projects. https://cwn-rce.ca/resource/confronting-cost-escalation-in-canadian-water-infrastructure-projects/
5. Tenpenny, J. (2015, February 17). Too big to fail. ReNew Canada. https://www.renewcanada.net/too-big-to-fail/
6. International Consortium of Investigative Journalists. (n.d.). Hard water: Uphill campaign to privatize Canada's waterworks. https://www.icij.org/investigations/waterbarons/hard-water-uphill-campaign-privatize-canadas-waterworks/
7. Loxley, J., & Loxley, S. (2020). Asking the right questions: A guide for municipalities considering P3s (2nd ed.). Canadian Union of Public Employees. https://cupe.ca/sites/cupe/files/p3_guide_en.pdf
8. Crone, L. (2026). Integrated project delivery: A better way to deliver capital projects [Unpublished manuscript]. Bird Construction; Canadian Water Network.
9. Stang, D. (2024, May 3). Lloydminster wastewater treatment plant (WWTP) integrated project delivery project [PowerPoint slides]. Municipal Water Consortium.
10. City of Lloydminster. (n.d.). Water services. https://www.lloydminster.ca/home-property-utilities/water-services/

Further reading

1. Fenn, M. (2024). A jump start: Providing infrastructure for more housing. https://canurb.org/wp-content/uploads/A-Jump-Start.pdf
2. Canadian Water Network. (2025). Confronting cost escalation in Canadian water infrastructure projects. https://cwn-rce.ca/resource/confronting-cost-escalation-in-canadian-water-infrastructure-projects/