

## **Dreams, Deception and Delusion: The Derailing of Ottawa's Light Rail Transit Plans**

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Volume 4, Number 1, 2007

URI: <https://id.erudit.org/iderudit/1039114ar>

DOI: <https://doi.org/10.7202/1039114ar>

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### Publisher(s)

Centre d'études en gouvernance de l'Université d'Ottawa

### ISSN

1912-0362 (digital)

[Explore this journal](#)

### Cite this article

Hilton, R. & Stoney, C. (2007). Dreams, Deception and Delusion: The Derailing of Ottawa's Light Rail Transit Plans. *Revue Gouvernance / Governance Review*, 4(1). <https://doi.org/10.7202/1039114ar>

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The authors point to the dangers that occur when those who make decisions about the expenditure of public funds become promoters of a project. There are serious risks when political commitments are made early on in a project's development and appraisal stage. Rather than remaining focused on achieving levels of service within costs that are acceptable to those who pay for these services, decision makers can fall into the trap of 'boosterism' that puts ego and status ahead of public interest.

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### ***Abstract***

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### ***Résumé***

Dans cet article, les auteurs examinent dans une étude de cas le Train Léger, un projet raté de la Ville d'Ottawa. Malgré que le TL ait été promu par les politiciens et les bureaucrates locaux comme un symbole important de la ville, le projet était chargé avec les problèmes. L'article explore ces problèmes et identifie la façon dans laquelle le projet a été géré est un conte d'avertissement dans comment ne pas promouvoir les grands projets d'infrastructure publics.

Les auteurs indiquent aux dangers qui arrivent quand ceux qui font des décisions de la dépense de fonds publics deviennent des instigateurs d'un projet. Il y a des risques sérieux quand engagements politiques sont faits premier pendant un développement du projet et l'estimation monte. Au lieu de rester fixe sur atteindre de niveaux de service dans les coûts qui sont acceptables à ceux qui payent ces services, les décideurs peuvent appartenir au piège de « promotion d'une ville » qui met l'ego et le statut en avant d'intérêt public.

Government should not see its primary role as that of project promoter,  
but should, instead, keep the project, and involved actors, at arm's length  
in order to critically assess, at all stages, whether the project meets  
public interest objectives ...<sup>1</sup>

## **Introduction**

The City of Ottawa's Light Rail Transit (LRT) system was to be the city's largest ever project and for many represented the dream of clean, sustainable growth. As a mega-project, the LRT was to showcase tri-level intergovernmental funding agreements and demonstrate the virtues and efficiency of public-private partnership (P3). However, when deeply divided city councillors voted to kill the project in December 2006 over six years of planning was scrapped, the city's transit plans were left in disarray and taxpayers were left facing a bill for \$73 million with lawsuits pending for "not less than the sum of \$175.3 million."<sup>2</sup>

The magnitude of the failure of Ottawa's major transit project was put into historical perspective by local Ottawa Councillor Clive Doucet writing in *The Globe and Mail*:

It took Colonel John By six years to build the Rideau Canal from Ottawa to Kingston. It has taken the City of Ottawa six years to plan its new north-south rail line. Those six years included 55 separate votes of City Council, a tripartite contribution agreement with the federal and provincial governments, a successful international competition, the contract signed, construction ready to begin – and then the whole thing fell apart. Not building it will now cost the city more than building it would have.<sup>3</sup>

A disillusioned Doucet adds that "If you're looking for what's wrong with Canadian cities at the beginning of the 21<sup>st</sup> century, you need look no further than Ottawa's light-rail project." Following our analysis of the failed project, we strongly agree with him.

Given all the planning, the agreements and the pressing need for an environmentally clean and efficient public transport system in the nation's capital, how did this project become so badly derailed? How did a much lauded process, supposedly built on collaboration between the public and private sectors and between three levels of government, produce a project so political and Machiavellian that it became "radioactive"<sup>4</sup> before its final meltdown into an expensive and embarrassing monument to incompetence, secrecy and waste?

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<sup>1</sup> Bent Flyvbjerg, Nils Bruzelius and Werner Rothengarten, (2003), *Megaprojects and Risk: An Anatomy of Ambition*, Cambridge: Cambridge University Press, p. 110.

<sup>2</sup> *Ottawa Citizen*, February 23, 2007.

<sup>3</sup> Clive Doucet, "Here's what's wrong with City Hall," *The Globe and Mail*, December 27, 2007.

<sup>4</sup> Councillor Rick Chiarelli cited in article by Mohammed Adam, "Shattered dream ...," *Ottawa Citizen*, January 13, 2007.

In this paper, we analyze Ottawa's failed LRT debacle to address these questions and to inform current debate and practices concerning the development of mega-projects, the use of tri-level agreements, the operation of public-private contracts and their impact on local democracy, accountability and transparency. In drawing our conclusions and outlining the many lessons that can be learned, we recognize that our research is based on a single case study and thereby we limit our claims accordingly. However we feel that the case of Ottawa's LTR provides a very rich and significant case study which can inform the ongoing debate and research into a number of important areas associated with large-scale or mega-projects.

Internationally, the problems associated with megaprojects are increasingly well-documented and the failure of Ottawa's LRT<sup>5</sup> is consistent with much of the literature demonstrating how many projects of this scale are ill-conceived, over budget and ultimately wasteful of public resources. In this respect, the problems with the LRT are not unique. Reviews on very large public infrastructure projects around the world point to problems that occur when political advantage, parochial self-interest, profits and secrecy overtake public interest.

In a Canadian context, the case also raises serious questions concerning the use of tri-level funding agreements to transfer federal and provincial money to municipalities as a means of delivering large-scale transit and infrastructure projects. In particular, the case raises issues of local autonomy, accountability and political interference and also the decision-making processes and outcomes that can arise when local councillors are able to indulge themselves in spending money they do not have to raise through taxation.

These issues are particularly significant given that the federal government is looking to transfer billions of dollars over the next 5 years to municipalities to fund investment in local infrastructure and has also recently announced it will contribute a further \$962 million to help extend Toronto's subway extension of public transit into the York region north of the city. Meanwhile the Big City Mayors' Caucus of the Federation of Canadian Municipalities estimates that \$4.2 billion will be needed on an annual basis for Canada's public transit systems. In addition to Toronto and Montreal's expansion of their subway systems, "several other big cities are also looking at expanding or starting cheaper light-rail or street car systems."<sup>6</sup>

To address these issues, we begin by setting out the case study and then analyze it in the context of the literature and our research themes. We then examine the lessons learned from other mega-projects, both Canadian and international, in order to contextualize our own findings. Finally we draw conclusions based on the findings and the broader literature and suggest what the significance might be for future transit and infrastructure projects in Canada.

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<sup>5</sup> While mega-projects can vary in terms of physical and financial size, the use of the expression here is appropriate since the LRT was identified as the city's largest public infrastructure project to-date.

<sup>6</sup> Ken Gray, "Minding the gaps in funding for transit," *The Globe and Mail*, March 10, 2007.

The methodology uses publicly available reports and documentation, and draws on local and national newspaper coverage of the LRT project. In addition both authors reside in Ottawa and have been able to attend council meetings on a regular basis when open to the public.

### ***The case study: Overview and context***

On May 14, 2004, the federal and provincial governments announced that they were each committing \$200 million in support of Ottawa's proposed Light Rail Transit project. A press release issued by the federal government boasted that the \$600 million project represented "the largest intergovernmental infrastructure announcement in the City's history." The Premier of Ontario, Dalton McGuinty, also heralded the project, making a number of claims about its stature and importance for the city and its communities:

A world class public transportation system is a critical component of a strong community ...This investment will help us build strong, well-planned communities that provide a high quality of life. It is a great example of the City of Ottawa's smart growth management plan put into action.<sup>7</sup>

The project was intended to signal that the City was joining a privileged club of more than 80 other communities around the globe with light rail transit systems. LRT was trumpeted as "an ideal and affordable solution for comfortably transporting high volumes of people into downtown cores where space is at a premium."<sup>8</sup> The proposed north-south rail route would move passengers to and from the downtown to Barrhaven, an expanding community in the fast developing south of the city, and points in between, including as yet undeveloped neighbourhoods south of the airport.

In spite of the triumphalism and acclaim, less than two and a half years after the announced tri-level funding agreement, the federal and provincial governments withdrew their funding and effectively killed the project. Days later, in December 2006, Ottawa City Council voted to terminate the North-South Light-Rail Transit Project Agreement with Siemens (a private sector consortium that had just won the bid to build the line), precipitating an expected multi-million dollar law suit against the city. In spite of attempts to resurrect the LRT plan in early 2007 this was, in effect, the "final twitch of corpse" and the project was finally laid to rest on February 23, 2007.

Consequently, following nearly seven years of planning, 55 votes of approval, millions of dollars and countless hours wasted in research preparation and land purchases, the citizens of Ottawa are now left with total costs that could be in excess of a quarter of a billion dollars in return for absolutely nothing save for a split and bitter council, strained and uncertain relations with the Ontario and federal governments, and the prospect of an increasingly congested and unsustainable road transport infrastructure. Even if a new plan for light rail can be agreed to by council, it will be years before funding and agreements can be put in place and work can begin. Many think a light rail project on this scale is

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<sup>7</sup> Infrastructure Canada, news release, May 14, 2004.

<sup>8</sup> City of Ottawa website.

now unlikely given financial constraints and the understandable desire from the public and the council to see a more cautious approach to major infrastructure projects.

Ottawa's experiment with rail transit started in 2001 with the launching of the 'O-train' pilot project, the city's promotional material dubbing it as "modern," "sophisticated," and "environmentally friendly."<sup>9</sup> Leading up to this, during the late 1990s, a number of factors had combined to make LRT an attractive option and put it firmly on the city's agenda. Like most Canadian cities, Ottawa was experiencing rapid growth with the city's own numbers predicting in excess 300,000 more people by 2021.<sup>10</sup> This would push Ottawa's population to about 1.2 million, adding significantly to the city's sprawl and traffic congestion. Consequently, the argument went, if Ottawa was to avoid the problems of larger cities, its transit system had to adapt accordingly to sustain the predicted growth.

Like other Canadian cities, Ottawa also experienced rapid growth as a result of amalgamation in 2001. This process amalgamated 12 area governments into one city and, according to Ken Gray (*Ottawa Citizen*), created an unusual sense of optimism and confidence at city hall and particularly within the planning department:

No longer did the community have 12 different visions of the future. Instead, in 2001, planners and some politicians believed the municipality could build a model city that would be a fine place to live and a capital that would serve as a model to others.<sup>11</sup>

Towards this end, the city held a smart growth summit to plan how the city should develop by 2020 and out of this came the city's award winning strategic 20/20 vision master plan that is intended to guide the city's growth. The principles established included a distinct rural countryside, a green municipality and liveable communities served by transit. Consequently, in order to achieve such aims and provide an alternative to sprawl, planners were keen to intensify the down town core, but realized that with intensification downtown, the pressures on transit increase. As Gray points out, that is why light rail was a vital part of what planners hoped would be a new model city. "You can't intensify development in the core with roads at capacity and not have light-rail going downtown. There are simply too many people attempting to get jobs there."<sup>12</sup> In other words, LRT was pivotal to the plans for shaping the city over the coming decades.

Like all major cities, Ottawa faces a number of growth related problems such as traffic congestion, sprawl and rising infrastructure costs. However its symbolic role as the capital city means that in exchange for extra funding, Ottawa also endures closer federal and provincial involvement in its affairs than any other city in Canada. In the case of light-rail, federal and provincial governments both declared strong support for LRT in Ottawa and both announced they were prepared to invest \$200 million in the project. The decision to invest was facilitated by the fact that LRT, regarded as a progressive and

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<sup>9</sup> City of Ottawa website, announcement May 23, 2003.

<sup>10</sup> Randall Denley, *Ottawa Citizen*, January 30, 2007.

<sup>11</sup> Ken Gray, "The Kind of City We Want," *Ottawa Citizen*, February 23, 2007.

<sup>12</sup> Ibid.

environmentally clean project, was consistent with the political agendas of higher order government.

Renewed interest in Ottawa's development can also to be understood as part of the urban agenda and, in particular, the federal government's *New Deal for Cities and Communities*. Economic, social and political factors have combined to move urban issues to the centre of the federal government's thinking over the last decade. Without a constitutional mandate to intervene in cities, federal government has to be highly selective and tread very carefully when engaging in urban issues.

To secure a seat at the urban table, federal governments are usually required to contribute significant funding. Entering into tri-level agreements with provincial and municipal governments has provided federal governments with some influence over the development of cities and enabled them to leverage matching funds from other levels of government. Consequently, in order for cities to secure extra federal and provincial funding, they are required to develop and submit detailed plans for major infrastructure projects in areas such as transit.

The recent addition of the federal gas tax revenues is providing increased federal funding for infrastructure projects across Canada and enabling large scale capital projects to be financed. In conjunction with the increased funding levied by Canada's three tiers of government, public-private partnerships are increasingly used to leverage private sector funding and expertise. The willingness to partner and contract-out to the private sector is part of the move towards alternative service delivery and this has been particularly influential in enabling major infrastructure projects to be undertaken that might otherwise have been beyond the financial and technical reach of the public sector.

### The vision and promise of LRT

The 'O-Train' started service on October 15, 2001 as a pilot project for LRT, using diesel-powered, three-car units that travelled over an eight-kilometre segment of existing track that had been used as a railway freight line. The top speed of the O-train was rated at '120 km/hr' in promotional materials (including the project's website) although this figure was misleading.<sup>13</sup> The pilot linked five stations from Greenboro located adjacent to the South Keys Shopping Centre, a major shopping cluster south of the city centre, to the Lebreton Flats at Bayview, immediately west of the downtown core. The O-train provided connections or 'transfer points' to the bus transitway and regular bus routes, and was viewed as the first phase of a larger plan to develop city-wide light rail transit. The pilot was therefore pitched as "an opportunity to measure performance, costs and rider response."

The results of the pilot phase were seen as critical in helping decision makers to determine whether larger-scale implementation of light-rail transit was feasible.

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<sup>13</sup> The capacity of the train units to travel at this speed did not necessarily translate into speedy service. *Frequency* of service (how long passengers must wait between train arrivals at their stop) as well as *travel time* (time required to complete a journey) are more relevant for attracting new transit riders.

However, even before the pilot project was evaluated, the O-train began to draw awards. In May 2003, a mere 18 months after it became fully operational, the pilot project won the FCM-CH2M HILL Sustainable Community Award, a national award “for excellence in municipal service delivery that advances sustainable community development.”<sup>14</sup>

With less than two years experience with the O-train, LRT was incorporated as a key component of Ottawa’s transportation master plan, one of the five 20/20 growth management plans that city council approved in September 2003. The ‘transportation vision’ in this plan called for the development of a transportation system by 2021 that would “enhance (Ottawa’s) quality of life, respect the natural environment, enhance the economy, and be managed in a responsible and responsive manner.”

The goal of the transportation master plan was to make Ottawa a more transit-oriented city “by expanding public transit services and facilities, making it easier for residents to reach transit services, and by encouraging residents to make responsible travel choices” The plan presented a glowing picture of transit ridership that was projected to increase significantly, from 17 percent to 30 percent. The plan forecasted that, by 2021, 30 percent of all motorized person-trips in the afternoon peak hour would be made by transit – nearly doubling the current transit ‘share.’ The total number of transit trips was forecast to almost triple current levels. In order to achieve these lofty targets, the master plan recognized that a variety of approaches were needed to convince drivers to switch to transit:

Intensified and mixed land use patterns are making alternatives to driving more practical by bringing key destinations closer. Streetscaping and community design are making it easier to walk to transit stops and stations. New developments will be easy for transit users to reach, and transit stations are being integrated with areas of high residential and employment densities.<sup>15</sup>

While light rail was seen as a ‘complementary system’ to bus rapid transit, the transportation master plan clearly presented LRT as the mode of choice. LRT was promoted as “an elegant and affordable solution to the city’s transit needs over time.”<sup>16</sup>

Three years after the pilot project began, the city declared the O-train “a resounding success [...] ridership exceeded all projections, reaching an average of 8,981 daily weekday riders in October 2004.” Based on these results, the city claimed that Ottawa residents would adopt light rail and were ready for an extended system across the city that used ‘more environmentally-friendly electric vehicles’ rather than diesel. The city began to advance the need for electric LRT rather than diesel since it would provide a ‘smoother, quieter and more comfortable ride.’ Supporting electric LRT would also promote environmental responsibility: “...all riders will contribute to a cleaner environment each time they ride the Light Rail Transit system.”

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<sup>14</sup> Ibid.

<sup>15</sup> City of Ottawa, Master Transportation Plan, [http://www.ottawa.ca/residents/lrt/master/index\\_en.shtml](http://www.ottawa.ca/residents/lrt/master/index_en.shtml).

<sup>16</sup> Ibid.



The city began to market the concept of LRT for its powers to “change the way our neighbourhoods develop ... (building) stronger and more active communities.” The vision for LRT in the project’s website talked about its ability to transform the way people choose where they live, work and socialize.

With convenient, clean and comfortable Light Rail Transit within walking distance from home for many people, friends can do a night on the town, go to the National Arts Centre or shop downtown without using their cars. Teenagers can work part-time jobs in other parts of the city, and return safely via Light Rail Transit. Students can choose from a wider range of housing options along the Light Rail Transit corridor and affordably travel to and from universities with ease. Commuters can travel efficiently to and from major employment centres ... and the comfortable seating makes it easy to talk with people and share the experience with family and friends. The smooth, quiet ride means passengers can enjoy reading or finding a few minutes of peace in their busy day.<sup>17</sup>

The city’s website promised that the LRT would liberate citizens from the high costs of commuting by providing significant financial benefits: “Families can reduce the number of cars needed to support their transportation needs, saving thousands of dollars each year and using the money saved to fulfill other dreams.”

The city boasted about the ability of the LRT to reduce congestion, presenting a 3-D animation that showed uncongested downtown streets, where “Ottawa’s Light Rail Transit system will mingle with traffic ... (including) cars, trucks, buses, cyclists and pedestrians.” The presentation portrayed LRT as the dominant mode of transportation, seamlessly integrating with other vehicular traffic, including buses, that conveniently yielded to its clearly superior technology.<sup>18</sup>

LRT would also promote tourism across the whole region: “Tourists can hop onto the line downtown and access attractions and businesses in other parts of the city.” In what is clearly a bid to attract tourists rather than jaded commuters travelling the same route day after day, the city lauded the LRT’s “large windows (which) provide an enchanting view of scenery, communities and vistas along the way....”

Finally, the LRT would help to ‘brand’ the city with a new image: “Light Rail Transit will change the face of Ottawa, providing a look and feel of modern sophistication that will enhance Ottawa's image as an innovative, international city.” This last point was particularly important. The LRT became the status symbol for the city’s politicians, many of whom had travelled to other cities where this technology was already in place. The city’s website therefore endeavoured to broaden the perception of the ‘need’ for a more sophisticated approach to transit by trying to convince the citizens who were going to pay for it that Ottawa needed LRT in order to improve its image as the national capital.

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<sup>17</sup> City of Ottawa, LRT website.

<sup>18</sup> Can be seen at [http://www.ottawa.ca/residents/lrt/experience/virtual\\_en.shtml#](http://www.ottawa.ca/residents/lrt/experience/virtual_en.shtml#).

## The contract, schedule and demise of LRT

The city committed to providing the first section of the new LRT system by 2010 and to complete all sections by 2021. The LRT would include “102 km of track, 105 vehicles, 75 stops, and 10 park and ride lots.” The service standard was couched in language that was somewhat misleading: “Moving quietly on surface rails with service as frequent as every 3 minutes and convenient stops that connect to other transit modes, Light Rail Transit will play an important part in taking you efficiently and comfortably wherever you want to go.” To provide greater accuracy of service levels, the ‘efficiency’ threshold should include both the *maximum* expected wait time as well as the *minimum* expected wait time, but the city’s website was noticeably silent on this issue.

Following a series of public consultations during 2004 and 2005 on environmental assessments pertaining to north-south and east-west routes for the LRT, the city launched a procurement process to identify a private sector partner to participate in the construction of the north-south line. In May 2005, the three levels of government signed a memorandum of understanding (MOU) to confirm funding for the project. The estimate for the north-south line was now pegged at “\$650 million to \$700 million.”<sup>19</sup> The MOU also confirmed that the tendering process would be “competitive, open and transparent.”<sup>20</sup>

Following a review of proposals from three private sector consortia, the city identified a private sector partner to build the north-south line. City council voted in July 2006 to approve a contract with the winning bidder, a consortium that included Siemens/PCL Dufferin. The contract was signed in September 2006, although details of the arrangement with Siemens were not made public. During a turbulent municipal campaign, the north-south project became the primary electoral issue. Federal Cabinet Minister, John Baird, weighed into the debate over the project, demanding that the new city council approve it as a condition for obtaining the promised \$200 million federal share of the costs. The incumbent mayor who had championed the project, Bob Chiarelli, was defeated. Shortly after the swearing in of the new city council, an amended version of the project was approved. A truncated LRT project proposal removed a key connection to the downtown. After a brief flirtation with the concept of building a subway in the downtown core, council decided to terminate the contract with Siemens.

As he had promised during the election campaign, the new mayor, Larry O’Brien, launched a task force on transportation to “make recommendations (short-, medium-, and long-term) for development of an integrated rapid transportation plan that alleviates existing east/west pressures, is scaleable to account for immediate and growing pressures in the south end and provides options to reduce congestion through the downtown corridor.”<sup>21</sup> However, as a local resident pointed out in letter to the *Ottawa Citizen*,

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<sup>19</sup> City of Ottawa, media release, May 9, 2005.

<sup>20</sup> Ibid.

<sup>21</sup> City of Ottawa website, Mayor's Task Force on Transportation, terms of reference, January 2007.

Mayor Larry O'Brien can seek advice about transit anywhere he likes, but the councillors don't have to take it ... We elected the councillors and the mayor to make decisions. No task force can do that, because its members won't be accountable to the voters in four years. It's the councillors who will take the credit or the blame. So it's no surprise that the councillors are being a little cautious about ceding power to the mayor's task force.<sup>22</sup>

The city of Ottawa's website is unequivocal about who is the boss of the task force: "(it) will report back to Mayor O'Brien on or before June 1, 2007."<sup>23</sup> According to the terms of reference, after reviewing the task force report, which is described as 'advisory in nature only,' the Mayor will then "submit it ...to the relevant city committees for consideration."

The terms of reference for the Mayor's task force included the curious reference that stated the obvious: "all decisions with respect to future transit and transportation initiatives in Ottawa are the domain and responsibility of City Council." Given the fractious debates that led to the termination of the contract with Siemens to build the north-south LRT, the prospect of LRT in Ottawa will likely be shunted to a rail siding for some time. As Randall Denley observed shortly after the task force was launched, "Rather than wait a few months for O'Brien's task force to report on the big picture, councillors decided (on January 24) to spend \$145 million as soon as possible on buses and transitway improvements. Aren't these the same people who have spent the last few years telling us rail is our choice for the future?"<sup>24</sup>

### ***Why did Ottawa's light-rail project fail?***

Despite the extensive hype promoting the project and the claims that it would change the face of Ottawa, it was in our view the process used to manage the contracting phase of the north-south LRT project that was largely responsible for derailing it. In particular, we are critical of several aspects central to the process and believe that in addition to undermining LRT in Ottawa, our analysis raises broader concerns about the current decision making, funding and contractual arrangements used to negotiate major infrastructure projects across Canada.

### **Secrecy vs. transparency**

The contract with Siemens was at the heart of the controversy. Withholding information about the cost and scope of the project was a catalyst that triggered doubts about the viability of the 30-kilometre north-south LRT project. Secrecy about the contract led to public uncertainty and suspicion about project costs, especially after the city signed the deal with just two months remaining before the date of the municipal election.

As Councillor Maria McRae observed shortly before the council decided to kill the project, the public was tired of the secrecy surrounding the signed contract with the

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<sup>22</sup> "Task force forced," *Ottawa Citizen*, January 19, 2007.

<sup>23</sup> City of Ottawa website, Mayor's Task Force on Transportation, terms of reference, January 2007.

<sup>24</sup> Randall Denley, "City Hall's not listening," *Ottawa Citizen*, January 25, 2007.

Siemens-led consortium. “I think that's wrong. Why the secrecy? ... We've got a public that supports light rail. We're just not sure about the route. The more we do in public, the better it will be.”<sup>25</sup> City Councillor Rick Chiarelli observed that, “The bidding process was set up to put an iron lock on information and so the information was coming to council sporadically and out of context. It became self-defeating.”<sup>26</sup> Councillor Gord Hunter quipped that, “There seems to have been a concerted effort to hide the truth.”<sup>27</sup>

The contract to build a north-south commuter line was never made public, even to city councillors. As the *Ottawa Citizen* pointed out, this secrecy led to ‘structured confusion’ and was to blame for the demise of a ‘flawed project.’ As concern grew, it also led to the bizarre spectacle of city councillors having to vote on whether or not to go ahead with the city’s largest ever project without ever knowing the true costs, without ever seeing the contract and without ever knowing the legal costs and implications associated with cancelling the project (estimates ranged between zero dollars and the full cost of the project!). Even though LRT had become the defining issue in the November 2006 council and mayoral elections, the public and mayoral challengers were also in the dark about these key issues. As Councillor El-Chantiry remarked:

...the whole process has been shrouded in secrecy around its legal documents and finances, which has increased public suspicion...there’s a legitimate public concern that Ottawa could be building a municipal white elephant.<sup>28</sup>

In justifying the need for secrecy surrounding the contract with Siemens, the city’s project manager explained that confidentiality provisions had to remain in effect, even after it was signed.<sup>29</sup> The contract contained propriety information that would reveal the strategy used by the consortium in its banking arrangements and the detailed costs used to estimate project components. Such information would be useful to competitors in the commuter-rail business. Since each of the bidding consortia had invested at least \$4 million in developing their proposals over six months, they were not willing to make all of the details in their plans public “without the financial reward of the contract.”<sup>30</sup>

The need for private sector partners to protect business information is in conflict with the demand for transparency in public works procurement processes. Even if an agreement of non-disclosure is signed between a municipal government and a private sector company, a contractual agreement that involves the expenditure of public funds is subject to provincial freedom of information law.<sup>31</sup> A non-disclosure agreement could therefore be subject to legal challenge. As Councillor Rick Chiarelli pointed out, “There is a public

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<sup>25</sup> *Ottawa Citizen*, November 24, 2006.

<sup>26</sup> Mohammed Adam, *op. cit.*

<sup>27</sup> *Ibid.*

<sup>28</sup> Patrick Dare and Peter Lafaro, “McGuinty comments fire up north-south rail advocates,” *Ottawa Citizen*, February 23, 2007.

<sup>29</sup> Patrick Dare and Mohammed Adam, “Secret contract likely to remain so,” *Ottawa Citizen*, January 13, 2007.

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*

interest to protect but council is not protecting that public interest by keeping the contract secret. The public should always be in the loop ...”<sup>32</sup>

Unable to get access to the contract ourselves, it is still unclear to us how much of the secrecy surrounding the project was due to the private contractors and how much was due to the city. It appears that the city also inserted some confidentiality into the contract, but because the mayor was the only elected official to have seen the contract, there is no question that this knowledge became a source of power over other mayoral candidates, councillors and the public. During the election campaign, it certainly appeared that information to the public was used selectively and only became available when it was politically expedient for the mayor or his supporters to release the information.

Although we will never know the full extent or real source of the confidentiality, there is no question that involving the private sector in building public works projects creates a dilemma: “Where does the public's right to know end, and when should the corporate right to privacy prevail?”<sup>33</sup> Until such parameters are mutually defined and acceptable to all partners involved in public infrastructure projects such as the LRT, confusion and political opportunism will continue to reign supreme.

### Tri-level agreements: complex roles and perverse incentives

Public uneasiness about the contract was reinforced by comments made in October 2006 by John Baird, who was then federal Treasury Board president. After demanding to see the contract and reviewing it during the height of the municipal election, Baird publicly voiced his concerns about the due diligence that had been carried out and suggested that there was the potential for serious cost overruns for the project. He challenged cost estimates, citing the failure of the contract to adequately deal with a number of key elements of the project, such as the cost of the maintenance yard and a lack of contingency funds. In what turned out to be the beginning of the end for LRT in Ottawa, he also insisted that the council vote again to reaffirm the project following the mayoral and council elections, before the federal government would hand over the funding.

For some, Baird's intervention was legitimate given the federal government had committed to investing \$200 million in the project. His concern about the contract and the fact that the project had become a major election issue:

It's appalling that we have a majority on city council who believe it's acceptable to launch a project worth hundreds of dollars without knowing the real cost, the ridership or the benefits. The federal and provincial governments have done exactly what they should do, exercise proper care in the spending of public money.<sup>34</sup>

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<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Randall Denley, “Finally, someone's put a stop to light-rail madness,” *Ottawa Citizen*, December 13, 2006.

However, others saw the federal intervention as political interference since the federal government does not have a constitutional right to intervene in municipal issues. Bitterness about the intervention was fuelled by speculation that Mr Baird, apparently a long time adversary of Mayor Chiarelli since their time in provincial politics, favoured mayoral candidate Larry O'Brien who campaigned promising to reconsider the north-south rail project:

In fact, documents obtained by the *Ottawa Citizen* through access to information suggest that Baird was practising partisan politics, something at which he is more adept than economics. In short, the then Treasury Board president was trying to destroy the mayoral campaign of his arch-political enemy, Bob Chiarelli. He succeeded at that admirably, even getting his political ally Larry O'Brien into the mayor's chair.<sup>35</sup>

When the council subsequently voted narrowly to scrap the project supporters of LRT and local autonomy were quick to suggest that the timing and nature of Mr. Baird's intervention helped politicize an issue on which council had already voted positively on 55 times over 6 years, "[Baird's] letter turned a done deal into open season. The project became a media and political feeding frenzy as old arguments were rethreaded into the sound bites of a municipal election."<sup>36</sup>

However, others questioned why the contract had taken so long to conclude in the first place and pointed the finger at Mayor Chiarelli's role:

Ottawa's light-rail plan could have gone ahead, until then-mayor Bob Chiarelli decided to showboat by not crossing all the Ts until he could be assured of a ceremonial sod-turning in the midst of last fall's election campaign. Federal minister, John Baird, used procedural measures to delay the project until the election was over and the project was in the hands of a new mayor and council.<sup>37</sup>

In spite of criticism for the mayor's role, Councillor Doucet remains convinced that the intervention of Baird was the '*coup de grace*' as far as the LRT project was concerned:

Mr. Baird leaked the light-rail contract to the press and accused the incumbent mayor, Bob Chiarelli of 'hiding' behind confidentiality agreements, which he had no trouble breaking – so why couldn't the mayor? And that's the way it looked to the public also. The reality was that Mr. Baird had not behaved appropriately.<sup>38</sup>

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<sup>35</sup> Ken Gray, "Mr. Baird's municipal preoccupation," *Ottawa Citizen*, January 26, 2007.

<sup>36</sup> Clive Doucet, *op. cit.*

<sup>37</sup> David Reevely, "Climb on board the Meech train," *Ottawa Citizen*, February 20, 2007.

<sup>38</sup> Clive Doucet, *op. cit.*

Others are more blunt in their assessment of Baird's decision to force another vote describing his role as "misguided and very political... [when he]... stuck it to former mayor Bob Chiarelli."<sup>39</sup>

In addition to the tri-level agreement providing a controversial conduit for federal intervention into municipal affairs, it also raised questions about who would be responsible for breaking the contract, the costs already incurred and the legal penalties owing to the contractors. Both federal and provincial governments moved quickly to clarify that, under the terms of the agreement, they would not be liable to pay any of the \$73 million already invested in the project, nor would they be liable to share any of the costs arising out of legal action taken against municipality. The fact that the entire costs of scrapping the project, which could run into hundreds of millions of dollars, would fall to the city created a number of perverse incentives to build the LRT even though it was seen by many to be flawed, unpopular and a potential white elephant that would drain the city of resources to develop alternative transit plans in the future.

As some councillors began to realize, the financial structure of the tri-level agreement meant it could well be cheaper for municipal taxpayers in the city of Ottawa to spend \$200 million on building the project, thereby releasing the \$400 million from their federal and provincial partners, than it would be to scrap the project and end up being solely responsible for the costs incurred and future legal settlements. This logic was used by a number of councillors to try and persuade the council to support the project, even though such a position appeared to demonstrate little regard for the provincial and federal taxpayers across Canada who would be asked to pay \$400 million for a project about which there were serious concerns and fading local support.

Even some of the project's harshest critics appeared to be seduced by this logic, in spite of the fact that the new price on offer to build the north-south line had increased by \$70 million in December 2006 following a letter from Siemens.

Councillor Rick Chiarelli, who has been a long time critic of the project's price tag and voted against it three times in the past....said he's now willing to give the project a second look because, although he still thinks the price is too high, he's starting to think the company's settlement offer is close to what they might get in a lawsuit which could cost the city millions in legal fees too.... maybe it's better to overpay and get a light rail line than pay \$175 million plus in taxpayers' money and get nothing.<sup>40</sup>

Given the financial structure of the tri-level agreement and the contract with Siemens, such thinking becomes entirely rational from a municipal perspective and this is one of several ways in which tri-level agreements tend to encourage spending on major infrastructure projects, even when the project may be widely regarded as sub optimal and ill conceived.

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<sup>39</sup> Sue Sherring, "All council roads lead to nowhere," *Ottawa Sun*, December 15, 2006.

<sup>40</sup> Councillor Rick Chiarelli quoted in an article by Jake Rupert, "\$175-million settlement....," *Ottawa Citizen*, February 14, 2007.

The realization that ‘the money is on the table now’ (and may not be in the future), for example, naturally creates a momentum and logic to spend and build that is difficult to pull back from. Moreover, notwithstanding Baird’s intervention in facilitating the scrapping of the project, both the federal and provincial governments have strong political incentives to see the money they have transferred spent on flagship ‘green’ infrastructure projects such as LRT.

Certainly the province, through Dalton McGuinty, has been vocal in urging the municipality to reconsider the scrapping of LRT in the city and pushed for the project to be resurrected rather than face lengthy and expensive legal battles. In calling the city’s decision to scrap the project “short-sighted,”<sup>41</sup> he recently reminded councillors that the ‘\$200m is still on the table’, adding a barbed proviso that “the money is not to be used to build stability in law firms, it is to build a public transit system.”<sup>42</sup> However such interventions appear to “heighten tensions between City Hall and Queen’s Park”<sup>43</sup> and may simply undermine constructive tri-level collaboration.

Another divisive consequence of cancelling the agreement is the impact it has had on Ottawa’s rural taxpayers. Under the agreement, rural taxpayers were not liable for the costs of building the LTR as they were seen to derive relatively little benefit from public transit. However, once the project was cancelled, rural taxpayers became equally liable for any legal settlements that the municipality has to shoulder as this would become part of the overall city budget. Faced with this financial structure, the rural electorate and their representatives on council have a further clear financial incentive to see the project go ahead.

### Build it and they will come?

Despite LRT’s promotion by the city bureaucrats as ‘an ideal and affordable solution for comfortably transporting high volumes of people into downtown cores,’ late in the debate after the contract with Siemens was signed, councillors came to realize that the ‘net increase’ in ridership provided by the LRT was in fact minimal. One report estimated this figure to be as low as 1,500 as opposed to the 40,000 figure often used to justify the project.<sup>44</sup> Rather than a massive increase of new riders who would be attracted to the ‘fast, smooth, quiet and comfortable ride’ offered by electric LRT, the proposed north-south line would mainly siphon existing commuters who were already using express buses. When doubts began to appear as to the ‘cost-benefit’ of the north-south LRT, support for the project quickly faded.

The rationale for expanding Ottawa’s transit modality to include north-south LRT is based in large part on the city’s forecast of a population explosion over the next decade,

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<sup>41</sup> Lee Greenberg, “McGuinty urges city to rethink rail,” *Ottawa Citizen*, March 8, 2007.

<sup>42</sup> Patrick Dare and Peter Lafaro, “McGuinty comments fire up north-south rail advocates,” *Ottawa Citizen*, February 23, 2007.

<sup>43</sup> Lee Greenberg, *op. cit.*

<sup>44</sup> Mohammed Adam, *op. cit.*



particularly in suburban areas. While the city projects an increase of 180,000 in three suburban areas by 2021, other forecasts put the increase at closer to 30,000. The city's planning director informed councillors that his staff did not have sufficient time to present councillors with updated numbers before transit decisions were made. As Denley points out, "In other words, councillors are expected to make decisions in response to a ridership demand that simply doesn't exist."<sup>45</sup>

By failing to provide convincing arguments both in terms of added benefits that LRT would bring in terms of improving levels of service for transit (frequency and reliability of service and reductions in commute times), attracting new riders and reducing road congestion, the north-south LRT became a project premised on faulty data and unrealistic assumptions.

The use of selective and inaccurate information as the basis for specious claims about costs, completion dates and utility is of course not unique in the development of major infrastructure projects. With competitor's seeking to win contracts, and politicians and city officials keen to sell the project to a largely unquestioning public, there are built-in pressures to understate costs and overstate benefits.

In terms of the costs of the project, it was also going to be necessary to close down the award winning O-train light-rail transit service for three years. Ironically this was the city's pilot project for the LRT system and in spite of a lack of open discussion with the public about its future, the costs of closing it became a major factor in terms of peoples' cost-benefit analysis and was significant in the eventual loss of support for the plan.

Inexplicably ending O-Train service was agreed by Ottawa council with no discussion of the impact on its up to 10,000 daily riders, Carleton University, a major institution on the line, and the rest of Ottawa's transportation system, or why it was in fact necessary. The fact the north-south light-rail project wasn't an expansion of the O-Train was core to its undoing, as it led to a proposal to spend up to \$1billion with little real benefit over the current O-Train service.<sup>46</sup>

### Parochial interests and short-sighted agendas

The city decided to start building the LRT by first proceeding with the development of the north-south line. This decision was based on a strategy to develop new communities in the south (which formed the basis for forecasts about Ottawa's new suburban population) by constructing transportation systems designed around transit rather than roads. In building the LRT, the City believed that it would take pressure off of the east-west road traffic that converged on the downtown. The new LRT line would divert north-south traffic from further congesting east-west transportation corridors.

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<sup>45</sup> Randall Denley, "City Hall's not listening," *op. cit.*

<sup>46</sup> David Gladstone, "Getting back on the rails," *Ottawa Citizen*, February 12, 2007.

However, commuters who experienced the daily frustrations of travelling on the already severely congested east-west transportation corridors were not convinced about the city's choice of LRT priority. Beginning with the construction of a north-south LRT through areas that are presently farmland made no sense to those living in the heavily developed eastern and western communities who faced the shortcomings of overloaded east-west routes. For these commuters, the north-south line made no sense. As a letter to the *Ottawa Citizen* observed, "While we're four-square behind the idea of efficient mass transit that offers a legitimate alternative to the private automobile, we can't help but think the previous council was rushed into approving a rail link that doesn't make the most sense for our city."<sup>47</sup>

As advocate of the north-south line Councillor Clive Doucet admitted, "The sound bite: "Can't fix east-west with a north-south solution" held in the public's imagination."<sup>48</sup> City bureaucrats had argued that there was no clear east-west route for an LRT and expressed concerns that developing a rail line would cost at least twice as much as the north-south line.

The city's transportation master had already chosen light rail as a key solution to transit needs, although there was still the nagging doubt in many taxpayers' minds that the city had not done its homework. While the city had undertaken a series of environmental assessments that involved consultations with members of the public, the process was flawed. As Randall Denley observed, the city needed to ask better questions.

Downtown, the goals are to reduce pollution and traffic congestion and move people quickly through the downtown. 'What's the best way to do that' would be the appropriate question. In the suburbs, we want to move large numbers of existing customers downtown, but also attract more riders. Again, what's the best way to do that? It wouldn't be a surprise to find that people want service that's fast, frequent and comfortable. The (environmental assessments) don't get at that. All they do is provide engineering solutions.<sup>49</sup>

The interprovincial dimension was also missing. Despite the heavy traffic caused by buses and passenger vehicles coming into Ottawa's downtown core from Gatineau, the city's vision of interprovincial implications of LRT was vague. The transportation master plan included the commitment that 'Interprovincial service to and from Gatineau will be strengthened and refined'<sup>50</sup> although how LRT would link to the growing community across the river was unclear. The plan committed to:

Undertake a study to identify interprovincial rapid transit requirements, in cooperation with the City of Gatineau, the National Capital Commission and other levels of government, including the possible extension of LRT service across such

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<sup>47</sup> "Uneasy Riders," *Ottawa Citizen*, December 7, 2006.

<sup>48</sup> Clive Doucet, *op.cit.*

<sup>49</sup> *Ibid.*

<sup>50</sup> City of Ottawa, Master Transportation Plan, iv.

bridges as the Lemieux Island Rail Bridge, the Portage Bridge or the Chaudière Bridge, to create an integrated GO (Gatineau-Ottawa) Light Rail Transit Service.<sup>51</sup>

During the May 2004 announcement of the federal government's \$200 million commitment for the LRT project, the attending federal minister (David Pratt) stated that, "the Government of Canada recognizes the importance of developing a *broader, integrated approach* to rapid transit in the nation's capital."<sup>52</sup> The news release stated that, "The governments of Canada and Ontario together with the city, have committed long-term support for the *region's* urban transit needs...."<sup>53</sup> In order to develop LRT with a truly 'regional' perspective, however, the impact of the proposed project on communities on both sides of the Ottawa River needed to be addressed. The LRT, however, was clearly promoted as an 'Ottawa project' rather than a solution to address the growing traffic congestion in the National Capital region.

There were those within Ottawa's city council who do not share the view that the LRT is an 'Ottawa project.' Some councillors are clearly ward-centric, seeing approaches to transit only in terms of the interests of the constituents of their wards. 'Ward-centric' politicians are prepared to support whatever it takes to get re-elected regardless of the consequences. Express buses may be what constituents in some wards prefer, regardless of the environmental impact created elsewhere in the city. As Denley observes, the attitude is one of "if it means more pollution and congestion downtown, who cares? ... It's worth remembering that the job title is city councillor, not ward councillor." Making the same point, Sherring asks if it is any coincidence "that so many of those opposing light-rail are councillors representing wards that feel their residents won't directly benefit from it."<sup>54</sup>

### The project scope and cost

In the search for answers as to why the project failed, some have blamed the 'botched' process that provided councillors and the public with insufficient information about the project costs and its overall benefits. Through documents obtained under freedom of information that provided insight into the 'complex bidding process' for the project, the *Ottawa Citizen* concluded that, "in the crucial first seven or eight weeks after Siemens won the bid, city bureaucrats, perhaps unwittingly, failed to publicly provide all the information they had on the scope and cost of the project."<sup>55</sup>

There was certainly significant confusion about what the LRT project entailed. Councillors and members of the general public were unclear about the components that pertained directly to the construction of the electric train as well as the related infrastructure and its costs. As the *Ottawa Citizen* observed, the city was largely to blame: "Having tendered a project with several components, [city bureaucrats] only

<sup>51</sup> Ibid., p. 48.

<sup>52</sup> Infrastructure Canada news release, May 14, 2004, added emphasis.

<sup>53</sup> Ibid., added emphasis.

<sup>54</sup> Sue Sherring, *op. cit.*

<sup>55</sup> Mohammed Adam, *op. cit.*

focused on the cost of the rail line in public discussions, ignoring other key parts and leaving themselves vulnerable to accusations that they were hiding the true costs.”<sup>56</sup> As Councillor Diane Deans admitted, “I don’t think it was clear enough to the public what it was costing us and, to a certain extent, we allowed that to happen.”<sup>57</sup>

When the joint funding for the project was announced in 2004, the total value for the LRT was placed at \$600 million. The news release was clear about what these costs entailed:

The Governments of Canada and Ontario together with the City, have committed long-term support for the region’s urban transit needs, by proceeding with a first phase of the O-Train expansion from Lebreton to Limebank. The total estimated for this phase is \$300 million. They also committed to set aside \$100 million each for development of further phases, including the extensions to downtown Ottawa and Barrhaven.<sup>58</sup>

One year later, when the city signed a memorandum of understanding with the federal and provincial governments that ‘reaffirm(ed) each partner’s financial commitments,’ the news release issued by the federal government stated that “the project’s estimated cost [was] \$650 million to \$700 million.”<sup>59</sup>

On June 14, 2006, the City of Ottawa issued new information in a backgrounder about the LRT stating that, “By late 2009, Ottawa will be home to a new, environmentally-friendly north-south light rail transit system. The LRT system will help connect Ottawa and change the way people experience their city over the next decades.”<sup>60</sup> The cost for the project was now defined in several different ways:

The fixed price for the construction and design of the base LRT project is \$654.2 million. The total cost of the project is \$744.2 million. If approved by Council, the extension to Barrhaven will cost \$24 million. The yearly operating cost of the project is \$15.9 million.<sup>61</sup>

In a news release issued on July 12, 2006, the city announced the approval of the fixed price contract for the design, construction and 15-year maintenance of the north-south LRT project. While the fixed price for project remained at \$654.2 million, the total cost of the project was increased to \$778.2 million to include the extension to Barrhaven. The annual operating cost of the project ‘when completed’ was unchanged, at \$15.9 million.<sup>62</sup>

However, in both of the June and July statements the reference to ‘operating costs’ was unclear. Over 15 years at \$15.9 million annually, the operating costs would be less than

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<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Infrastructure Canada, news release, May 14, 2004.

<sup>59</sup> Infrastructure Canada, news release, May 9, 2005

<sup>60</sup> “O-train Backgrounder,” City of Ottawa newsroom, June 14, 2006.

<sup>61</sup> Ibid.

<sup>62</sup> City of Ottawa, news release, July 12, 2006.

\$238.5 million, a not unsubstantial amount. When added to the ‘total costs’ of the project (\$778.2 million) the construction, maintenance and operation of the LRT project over 15 years would be over \$1 billion.

During the evaluation of the bids to construct the LRT, the city further complicated what was understood to be the real cost of the project by making adjustments to what was to be included in the contract with the successful bidder. The winning bid from Siemens – its ‘Design-Build’ price – was \$721 million, which included the base rail project and the construction of a bridge. However, these costs excluded the maintenance yard and operation (\$71.9 million in the winning bid from Siemens) as well as the maintenance costs over 15 years (the Siemens’ bid was \$159.6 million). As the *Ottawa Citizen* reported,

When all the components were added up, Siemens’ bid came to \$953.2 million ... Throughout the light-rail discussions and citywide debate, however, the city constantly referred to the cost of the budget as \$725 million. The primary focus on that base figure, to the exclusion of the additional costs, was a big part of the confusion and controversy that later engulfed the project and sank it.<sup>63</sup>

City officials further complicated the process by excluding money for contingencies, property acquisition and utility relocation and later removed the cost of building a bridge (originally part of the bidding process) and water and sewer infrastructure that would be affected by the construction of the LRT. The “juggling of the numbers was confusing and misleading to the public, and made the project a tough sell.”<sup>64</sup>

### ***Lessons learned from mega-projects***

The underlying reasons for the derailment of Ottawa’s ‘mega-project’ are not unique. While the dollar value of Ottawa’s LRT pales in comparison to the mega-projects around the world included in a study carried out by the Rand Corporation in the 1980s, the lessons learned from these projects are universal. Merrow *et al.*<sup>65</sup> presented the results of an analysis of fifty-two mega-projects, ranging in cost from US\$500 million to over US\$10 billion (1984 dollars), with an average cost of US\$2 billion. The study found that mega-projects are burdened by cost overruns and delays and prone to stretch available resources to the limit.

While the study found that poor project definition as well as project complexity can greatly contribute to inadequate cost estimates, the most important source of faulty estimates is found in how a project is defined.

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<sup>63</sup> Mohammed Adam, *op. cit.*

<sup>64</sup> Ibid.

<sup>65</sup> Edward W. Merrow, Lorraine McDonnell and R. Yolaz Argüden (1984), “Understanding the Outcomes of Mega-Projects: A Quantitative Analysis of Very Large Civilian Projects,” available at <http://www.rand.org/pubs/reports/2006/R3560.pdf>.

Projects evolve from general, often hazy ideas into highly specific plans that are ultimately transformed into physical reality. The closer the project is to completion, the easier it is to see and account for all aspects that contribute to cost and time. The better the definition of the project and the more detailed and all-inclusive the information available to the estimator, the better (i.e., less optimistic) the estimate will be.<sup>66</sup>

Scope changes can significantly drive cost growth in projects. A scope change is defined as “any *discretionary* change in the size or configuration of a project. Scope changes include both additions to and subtractions from a project, as well as discretionary changes in the elements that make up the project.”<sup>67</sup> The authors’ comment that, “...decreases and increases in scope are both sometimes used by ingenious (or desperate) project managers to mask what would otherwise be cost overruns,”<sup>68</sup> could easily apply to the O-train project in the final days before council terminated the contract with Siemens.

In research carried out for their book *Megaprojects and Risk: An Anatomy of Ambition*, Flyvbjerg, Bruzelius and Rothengarten gathered data from several hundred large infrastructure projects to analyze construction cost estimates using statistical methodology. While recognizing that no major projects are alike, Flyvbjerg *et al.* found that, “with respect to cost development, there is a striking similarity between [projects, in that] there is a tendency towards a significant underestimation of costs during project appraisal ... the problem with cost-overrun is exacerbated by the fact that often this problem comes hand in hand with lower-than-estimated revenues.”<sup>69</sup> The authors found that construction cost overruns around the world for mega-projects ranged from 26 percent to 196 percent. While Ottawa’s city council pulled the plug on the LRT before it proceeded to the construction phase, the concerns raised by city councillors and members of the public about the total costs of the project underlines this observation.

Flyvbjerg *et al.* also found that cost overruns in major transportation projects are widespread due to “a lack of realism in initial cost estimates”:

The length and cost of delays are underestimated, contingencies are set too low, changes in project specifications and designs are not sufficiently taken into account, changes in exchange rates between currencies are underestimated or ignored, so is geological risk, and quantity and price changes are undervalued as are expropriation costs and safety and environmental demands. Many major projects also contain a large element of technological innovation with high risk. Such risk tends to translate into cost increases, which often are not adequately accounted for in initial cost estimates.<sup>70</sup>

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<sup>66</sup> Ibid., p. 22.

<sup>67</sup> Ibid., p. 24.

<sup>68</sup> Ibid., p. 24.

<sup>69</sup> Flyvbjerg, Bruzelius and Rothengarten, *op.cit.*, p. 14.

<sup>70</sup> Ibid., p. 12.

The results for transit projects were sobering. Flyvbjerg *et al.* cited a study carried out by the US Transportation and Road Research laboratory that assessed ten rail transit projects worth US\$15.5 billion (1988). The study found that the total capital cost overrun for these projects was 61 percent, ranging from -10 to +106 percent for the individual projects.<sup>71</sup> Flyvbjerg *et al.* concluded that, “the cost estimates used in public debates, media coverage and decision making for transport infrastructure development are highly, systematically and significantly deceptive. So are the cost-benefit analyses into which cost estimates are routinely fed to calculate the viability and ranking of projects.”<sup>72</sup> The authors provide a rationale behind the deception, stating that, “Cost underestimation and overrun cannot be explained by error and seem to be best explained by strategic misrepresentation, namely lying, with a view to getting projects started.”<sup>73</sup>

Flyvbjerg *et al.* also observed that transportation demand forecasts – such as ridership estimates for transit projects – are particularly problematic. These forecasts form the basis for appraising socio-economic and environmental benefits and for developing estimates of the financial viability of projects. The authors point out that, “Decision makers are well advised to take with a grain of salt any traffic forecast that does not explicitly take into account the risk of being very wrong. For rail passenger forecasts, and especially for urban rail, a grain of salt may not be enough.”<sup>74</sup>

Citing research on rail estimates carried out by the US Department of Transportation, the authors observe that “for virtually every [rail transport] project the divergence between forecast and actual ridership was wider than the entire range of the critical decision variables. Actual ridership was 28 to 85 percent [average 65 percent] lower than forecast ridership, meaning that forecasts overshot actual development by 38 to 578 percent [average 257 percent].”<sup>75</sup> The authors conclude that the accuracy (or rather the degree of *inaccuracy*) of demand forecasting is a major source of uncertainty and risk in the appraisal of major projects.

In their research on the transparency in infrastructure investment decision making in Canada, Haider and Badami reported on the process used to scrutinize a proposed large rail project between Montreal and Toronto.<sup>76</sup> They concluded that the process used to assess the viability of the Via Rail proposal (VIAFAST) was flawed and that the public sector decision making was subjected to political influence. The authors argue that “public representatives in the Parliament and the Senate were not completely aware of the details of the proposal” when the Minister of Transport requested \$3.0 billion from the

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<sup>71</sup> Ibid., p. 15, citing Don Pickrell (1990), “Urban Rail Transit Projects: Forecast versus Actual Ridership and Cost,” Washington, D.C.: US Department of Transportation.

<sup>72</sup> Ibid., p. 20.

<sup>73</sup> Ibid., p. 16, emphasis added.

<sup>74</sup> Ibid., p. 31.

<sup>75</sup> Ibid., p. 22, citing Don Pickrell, *op. cit.* as well as “Desire Named Streetcar: Fantasy and Fact in Rail Transit Planning.”

<sup>76</sup> Murtaza Haider and Madhav Badami, “Transparency and public participation in infrastructure investment decision-making in Canada,” presentation to the Canadian Regional Science Association Annual Meeting, May 28-29, 2004, Moncton, NB.

federal government. The parliamentarians, like the councillors who voted on the O-train project proposal, were left ‘in the dark.’ The authors conclude that, “Transparency and public participation are the cornerstones of good governance.” Accordingly, they argue that transparency must be a fundamental principle in managing public funds and that “the need for transparency is felt even more when the public sector decision making deals with infrastructure projects with billion dollar price tags.”

Haider and Badami conclude that the public’s acceptance of decisions that are made to commit resources to infrastructure relies on the transparency and inclusiveness of the decision making process:

Transparency allows independent experts to study the validity of assumptions on which such decisions are often predicated...[it] dispels the perception of corruption and/or cronyism. Public participation and input ensures that the chosen alternatives reflect people’s aspirations and result in the best use of scarce resources.

## **Conclusion**

In setting out the troubled saga of Ottawa’s failed LRT project, the paper has endeavoured to illustrate and explain why the capital city’s largest and most expensive undertaking to date ended in expensive failure. To this end, our analysis has identified the secrecy surrounding the public-private contract; a lack of public consultation and commitment; limits on local autonomy imposed by the tri-level agreement; political opportunism; parochial ward-centric decision making and strategic misrepresentation of the costs and benefits to be key factors.

As the new mayor prepares to hand over Ottawa’s transit planning task to community volunteers in the new transit task force, it is difficult not to agree with Denley’s verdict that:

...our highly paid experts and elected councillors have made a terrible mess of it. They poured millions of dollars and untold thousands of hours of staff time into a north-south rail plan that the public ultimately did not endorse. They’ve also spiked all the studies of the east-west rail plans. In truth, they have no plan, except a plan to spend.<sup>77</sup>

Although a single case study, we have located our analysis within the broader and growing literature on mega-projects, and this suggests that the problems that have undermined Ottawa’s LTR plans are not uncommon. In particular, as Flyvbjerg *et al.* observed, there is a danger when those who make decisions about the expenditure of public funds become promoters of an infrastructure project. Reviews of mega-projects that involve public works around the world indicate that there are serious risks when political commitments are made early during a project’s development and appraisal stage. Rather than remaining focused on achieving levels of service within costs that are

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<sup>77</sup> Randall Denley, “City Hall’s not listening,” *op. cit.*



acceptable to those who pay for these services, decision makers can fall into the trap of 'boosterism' that puts ego and status ahead of public interest objectives. Political prestige quickly trumps good public policy.

Ottawa's LRT project became ensnared in image building and political prestige. Ego rather than public policy drove the project and hyperbole became the order of the day as efforts were made to 'brand' the project as a means of marketing Ottawa as a world-class community. The cost of the LRT became secondary. Since there was no effort to distance decision makers from the promotional aspect of the project, there was no separation between the public policy objectives and the proposed solution. The public became skeptical, unconvinced of the value of the project and failed to understand why the project focused on north-south service rather than a more obvious east-west service.

Flyvbjerg *et al.* question whether any mega-project would ever be undertaken if some form of delusion were not involved: "... would projects be undertaken if the true costs and benefits were known beforehand? ... It is easy to find motives for producing deceptive forecasts of costs and benefits. Politicians may have a 'monument complex', engineers like to build things and local officials sometimes have the mentality of empire-builders."<sup>78</sup> However, having been 'burned' by the north-south LRT fiasco, the public is demanding something better. They are seeking transparency in the decision making process that produces a solid rationale for the project's scope and costs and presents clear, measurable, and achievable results. Ottawa's LRT project manager, Rejean Chartrand, acknowledged that "this case points to a tricky problem for the growing business of partnerships between companies and governments to get public projects done" and his statement of the basic dilemma bears repeating: "Where does the public's right to know end and when should the corporate right to privacy prevail."<sup>79</sup>

Given recent spending announcements by the federal government that it is committing \$962 million to a tri-level agreement aimed at expanding Toronto's subway system, our research is timely. If lessons can be learned from the City of Ottawa's experience, then we might hope to see a more open and transparent process unfold. As one Ottawa city councillor reflecting on the failed LRT process put it:

Whatever transit system we proceed with it needs to come through the front door and not the back door...In the past people felt there was secrecy surrounding light rail. I think this time we need to bend over backwards to ensure there is a level of transparency and openness.<sup>80</sup>

However complaints by the Toronto Transit Commission that they have not been consulted about the project, allied to accusations that short-term political considerations

<sup>78</sup> Flyvbjerg, Bruzelius and Rothengarten, *op. cit.* p. 46.

<sup>79</sup> Mohammed Adam, *op. cit.*

<sup>80</sup> Councillor Steve Desroches in Sue Sherring's, "Seeking a light rail revival," *Ottawa Sun*, February 14, 2007.

are driving the federal investment, do not bode well for the prospects of a successful outcome.<sup>81</sup>

As Councillor Maria McRae attempts to build a community summit on transportation in the Ottawa, she said “the idea is to avoid what happened to the north-south project [and] a summit would solicit input from citizens. We have got to find a way to build consensus on a way to go...but to do that we need the community to buy into a plan.”<sup>82</sup> The city’s Director of Planning, Nancy Schepers, echoes this point arguing that the public will need to be consulted during the review process if some consensus is to emerge around a future vision for the city.<sup>83</sup> The obvious question is why wasn’t consultation and community engagement a key part of the LRT project first time round?

In addition to increasing transparency and participation, we would also recommend that tri-level agreements establish clearer ‘rules of engagement’ in an effort to avoid the political interference that many perceive to have taken place in the City of Ottawa’s democratic affairs. This is a particularly sensitive issue in Ottawa where both Baird and McGuinty are seen to have a personal interest in the outcome of the mayoral election.

In the past few months, the project has become the single most contentious issue in the city, as two key figures, one tied to Mr. O’Brien and the other to his defeated opponent, Bob Chiarelli, added influence to the course of the light-rail project.<sup>84</sup>

In this context, it is significant that recent calls by the big city mayors for a national transit strategy that would guarantee a flow of federal money for bus, subway and light-rail lines, also asks Ottawa to “...separate the politics from the policy’ ... to avoid having federal government choose public-transit projects in ridings they think they can win in an upcoming election.”<sup>85</sup>

In the longer-term we would advocate increased scope for raising local taxation (a local income tax for example) with less reliance on federal and provincial transfers, meaningful community participation and perhaps the introduction of political party discipline at the municipal level as a means of addressing some of the problems the case study has raised. In the end we are left to agree with Westell’s observation that “In a sensible system of government cities would finance and build their own public transit. In Canada we don’t have a sensible system.”<sup>86</sup> However, given the extent of political capital involved in Canada’s traditional approach to serving up major transit infrastructure projects we do not expect changes anytime soon. Consequently, Ottawa’s LRT experience provides an egregious example of what can go wrong in tri-level agreements

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<sup>81</sup> “TTC chair frustrated by funding decisions,” CTV website, March 7<sup>th</sup> 2007, *toronto.ctv.ca*

<sup>82</sup> Jake Rupert, “Task force to tackle transit woes,” *Ottawa Citizen*, January 20, 2007.

<sup>83</sup> Jake Rupert, “Committee refuses to make major transit decisions,” *Ottawa Citizen*, February 1, 2007.

<sup>84</sup> Lee Greenberg, *op. cit.*

<sup>85</sup> Michael Roschlau (head of the Canadian Urban Transit Association) quoted in an article by Ken Gray, “Minding the gaps in funding for transit,” *op. cit.*

<sup>86</sup> A. Westell, “Transfer please: Why the feds finance city transit,” *The Globe and Mail*, March 10, 2007.

and public-private partnerships and should serve as a caution to other cities contemplating similar ventures.