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Executive Committee
City of Toronto
100 Queen Street West
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RE : EX23.3 - Provincial Transit-Oriented Communities Program

Mayor Tory & Members of the Executive Committee,

Our **HousingNowTO.com** volunteers would like to commend the provincial government and the City of Toronto for working together on your shared objectives related to the Provincial Transit-Oriented Communities (TOC) program. In particular, there are many of the City's current OPEN DOOR and HOUSING NOW sites that are within the catchment areas of the Eglinton Crosstown LRT, Finch LRT, Ontario Line and Scarborough Subway extension. Those sites would benefit from being accelerated for new affordable-housing development under the TOC program.

As the City works with the province to operationalize the terms of the Feb. 2020 Memorandum of Understanding on the TOC program, we feel it is important that the City clearly and unequivocally states that **the delivery of new affordable-housing units is a key City priority** on any lands that are deemed to be part of the Provincial Transit-Oriented Communities (TOC) program.

At present, in the staff material that we have been able to review, **affordable-housing** is just bundled into a grab-bag of different possible "community benefits" within a TOC agreement. We feel that it is important that **affordable-housing** is carved-out as a stand-alone City priority in TOC areas.

In the spirit of good-faith and collaboration between the City and the Province on the Transit-Oriented Communities (TOC) file, we have attached a recent strategic-report that our volunteers worked-on with Urban Strategies Inc., MaRS Solutions Lab, Evergreen Canada, and The Natural Step.

Leveraging Transit for Affordable Housing (October 2020)

Breaking the silos of the transit and land use planning processes

Presented by the Transit-Oriented Affordable Housing Solutions Lab

This is a public-document funded by CMHC, and can be shared with any stakeholder groups that may be interested. As always, our open data and civic-tech volunteers are happy to answer any questions the Executive Committee may have on Transit-Oriented Affordable-Housing development best practices.

Yours,

Mark J. Richardson
Technical Lead – [HousingNowTO.com](https://housingnowto.com)



Leveraging Transit for Affordable Housing

Breaking the silos of the transit and
land use planning processes

Discussion Paper

This project, entitled Transit-Oriented Affordable Housing Solutions Lab, received funding from the National Housing Strategy under the NHS Solutions Labs, however, the views expressed are the personal views of the author and CMHC accepts no responsibility for them.

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Executive Summary

Housing and transportation infrastructure in the Greater Toronto and Hamilton Area are under immense pressure. Housing costs have increased far faster than the rate of inflation, while congestion is leading to longer commutes and decreased productivity. Vulnerable groups such as the elderly, low-income and racialized communities are impacted the most, pushed to the geographic peripheries where housing is more affordable but access to high quality transit is limited. The result is a growing gap between housing affordability and access to mobility. Recognizing the challenge, governments at all levels have committed funds and resources for transit expansion and affordable housing; however, there is less focus on the coordinated delivery of affordable housing and transit.

There are numerous benefits to the co-location of affordable housing and transit.

- Affordable mobility in addition to affordable housing results in reduced overall living costs;
- Residents of affordable housing are more frequent transit users than those of owner-occupied market units;
- Affordable housing provides the opportunity to mitigate some of the potential negative impacts of transit expansion, such as displacement due to increased land values; and
- The introduction of transit is often associated with increases in land value and this uplift could be leveraged to subsidize affordable housing development.

With these mutual benefits in mind, how can transit help us address the lack of affordable housing in the GTHA? This is the core question underlying the work completed for this Transit-Oriented Affordable Housing Solutions Lab.

The Lab is a partnership between Urban Strategies Inc., N. Barry Lyon Consultants Ltd., MaRS Solutions Lab, Evergreen Canada, and The Natural Step, with funding from Canada Mortgage and Housing Corporation as part of the National Housing Strategy Solutions Labs initiative. It was created by a team passionate about improving the way we build communities. The Lab has worked over the past year to interrogate the interrelationship between the transit infrastructure and affordable housing development, with a particular focus on the co-delivery of affordable housing and rapid transit.

This report is a description of the culmination of our efforts in the Lab. We hope this document is useful for those who wish to further the integration of affordable housing with transit, particularly those in the public sector working on these issues every day.

WHAT IS AFFORDABLE HOUSING?

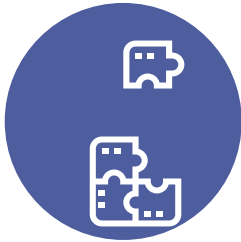
While the definition of affordable housing and how it is measured varies across different levels of government and by organization, housing in Canada is typically considered “affordable” if it does not exceed 30% of a household’s income before tax.

About the Solutions Lab

This Transit-Oriented Affordable Housing Solutions Lab aims to understand and promote the alignment of affordable housing and transit infrastructure development in the Greater Toronto and Hamilton Area. The Solutions Lab seeks to expand our collective understanding of the issues and highlight new relationships and factors for consideration, with key stakeholders convening to harness diverse perspectives toward systemic change. While the lab heard that there are many barriers in practice, it was collectively felt that opportunities exist to leverage public procurement processes and policies related to transit expansion to better support affordable housing objectives.

This project does not attempt to solve the region's affordable housing issues; rather, it investigates the opportunities that arise when investments in affordable housing and transit infrastructure align.

Key Elements of the Lab



Testing and refining our common understanding of the challenges



Developing a deeper understanding of the various perspectives from those involved with transit and housing;



Finding key insights to inform solutions to overcome these challenges; and



Bringing together key stakeholders to inform the problem framing and co-design of potential solution ideas.

Phases of work

This Solutions Lab is organized into four key phases of work:



Definition & Discovery

May to September 2019

This phase set the foundation of the Lab process with a selection of interviews with key stakeholders and related desktop research, defining the problem and identifying opportunities



Development

October to December 2019

This phase evaluated our initial findings and highlighted any gaps, along with proposing potential solution ideas. A large stakeholder workshop was a key component of the Development phase.



Prototyping

January to March 2020

This phase tested and explored our ideas more deeply. We wanted to ensure they were ground-truthed by key stakeholders and had potential for implementation.



Roadmap

April to July 2020

This phase completed the project by proposing a way forward.

The Transit-Oriented Affordable Housing Solutions Lab is a partnership between Urban Strategies Inc., MaRS Solutions Lab, Evergreen Canada, and The Natural Step. This Lab is made possible through the generous support of Canada Mortgage and Housing Corporation (CMHC) through the National Housing Strategy's Solutions Labs funding stream.

Through interviews and workshops with a diverse group of stakeholders from the transit and development sectors, a number of key insights were identified:

Transit infrastructure can impact real estate value and development potential.

Under the right conditions, the introduction of new or improved transit infrastructure can lead to significant increases in land value and development pressure, exacerbating issues of housing affordability.

Proactive planning and land acquisition creates an opportunity to capture the land value uplift of transit investments.

The ability to integrate development planning into the design of transit infrastructure from the outset, particularly at larger, higher value sites creates the opportunity for greater development and delivery of affordable housing than if developed after the fact.

Planning frameworks are often reactive to new transit.

The planning entitlement process often lags behind the transit planning and design process, making it challenging to incorporate new development with the delivery of transit. Designing new transit to protect for future development results in additional premiums which can make it unfeasible to deliver affordable housing.

While transit agency mandates often are supportive of affordable housing, it is generally outside of their core mandate and not a primary consideration.

Public sector transit agencies / infrastructure development organizations focus on mandated sets of activities which may contribute to, but not specifically address other government priorities such as affordable housing.

There are few incentives to build affordable housing through the transit delivery process.

The time between development of P3 project specifications and detailed design and construction creates market risk and challenges. In a process designed to shift risk from the public to private sector, potential incentives must be balanced with potential disincentives depending on the specific location. The process is currently not structured to facilitate the form of innovation / collaboration necessary to get the most out of complex projects such as the delivery of transit with integrated development.



In response to these insights, the Solutions Lab proposes a series of potential interventions to respond to the opportunities – and address the barriers – of integrating transit with affordable housing:

1

Supporting the expansion of agency mandates

The mandates of public sector transit, land management and infrastructure development organizations could be adjusted to better reflect the full impact – or potential impact – of their current activities on affordable housing. Result: greater consideration of how efforts could be better aligned in more innovative ways to co-deliver affordable housing.

2

Quantifying the externalities of transit-oriented affordable housing

Developing a tool to quantify the benefits (health, environment, employment) of affordable housing located in proximity to high-quality transit infrastructure will demonstrate the value of investment in affordable housing. Result: it may be shown that investment in affordable housing will directly support a variety of public sector objectives. This provides rationale to broaden agency mandates and valuable inputs for public sector business cases on transit-oriented affordable housing.

3

Developing a more comprehensive vision and accompanying spatial strategy for transit-oriented affordable housing

An overall vision for transit oriented affordable housing should be accompanied by a strategy that outlines affordable housing goals and the how, where, and when these goals will be achieved. Result: a shared understanding of expectations for the public, development industry, and transit agency.

4

Aligning the entitlement process with the transit planning process

Proactive station area planning could identify the densities and associated affordable housing requirements applicable to each station area and feed into the development of a transit line's reference concept design. Result: improved ability for transit agencies to factor in future development potential into their transit planning, potential for strategic land acquisition, and greater clarity for development industry around station-area expectations.

5

Undertaking strategic land acquisition to support new development and contribute to city-building objectives

Through strategic land acquisition and designs that maximise the development potential of publicly owned lands, there is an opportunity to facilitate new transit oriented development that captures the land value uplift of the transit investment. Result: ability for transit agencies to leverage the land value uplift associated with new transit and apply the value gained towards affordable housing. This would generate new affordable housing beyond that which would be mandated as part of zoning by-laws. It would also demonstrate the transit agency's expanded role as a city builder.

Four final notes from this Solutions Lab:

- The ability to deliver affordable housing rests in large part on being able to offset the housing development costs. Offsetting housing costs can be achieved in a number of ways including through lower land costs, reducing the costs of construction or through the provision of a development subsidy. While the Lab heard a number of challenges and opportunities related to the delivery of affordable housing, the decision was made to focus on the opportunities that might exist to deliver more affordable housing through the transit and related development planning process.
- There is no blanket “solution” that will allow transit infrastructure to support the provision of affordable housing in all instances. The interventions suggested here will not work at all stations, and outcomes will vary depending upon a range of factors including transit type, market context, and site context.
- All interventions need further exploration and testing by the relevant public sector organizations to determine the exact process of how they can be integrated into the system. This is outside the purview of this Lab.
- These interventions will not provide the quantity of affordable housing that is required in the GTHA. Other, more significant interventions must take place, including but not limited to substantial investment by all levels of government that acknowledges the severity of the issue.

Acknowledgments

This project would not have been possible without the participation and support of engaged stakeholders, who shared their time and expertise.

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Background

The attractiveness of the Greater Toronto and Hamilton Area has caused an influx of new employment and population growth.¹ While the region as a whole is benefiting, housing and transit infrastructure are struggling to keep pace with this new prosperity. Rapidly escalating housing costs are making it increasingly difficult to afford to share in the region's success. The population of the City of Toronto grew 10.6 times faster than the number of rental units being built, increasing unaffordability in an already expensive housing market: in the first quarter of 2020 (prior to the disruption of the Covid-19 pandemic), vacancy rates were at about 1% (3% is considered a healthy market) and 76% of renters in the Toronto Census Metropolitan Area (CMA) with less than \$50,000 per year in household income were spending more than 30% of their income on housing.² Almost 21% of households in the Toronto CMA were in core housing need.³

The challenge of affordability is compounded by growing regional congestion. This congestion is not only having a significant impact on our region's productivity⁴ but is making it difficult for people to seek accommodation in affordable areas and still maintain reasonable access to jobs and community services. With the worst average commute times in North America,⁵ 17.2% of workers in the Toronto CMA spend more than 1 hour traveling to work,⁶ a figure that has risen by 16% from 2011 to 2016 as the population has increased and people move further from the urban core in search of more affordable housing.⁷ Simultaneously, some transit systems in the GTHA are reaching peak capacity on a growing number of routes.⁸

As challenges, affordable housing and transit are interconnected

Housing density contributes to making public transit feasible⁹ and access to high quality public transit is generally a highly desirable factor when selecting housing, even for those who do not rely on it. This circular relationship is being leveraged by both the planning and development community. The unintended but logical consequence is that rapid transit infrastructure is often correlated with higher land values, development and gentrification,¹⁰ while the lowest income neighbourhoods are often some of the most poorly served by transit.¹¹

High-quality transit - frequent, reliable, safe, comfortable, and fast - provides access to job, education and social opportunities, and can play an important role in poverty reduction.¹² While low-income renters are some of the most frequent public transit riders¹³ they often struggle to afford housing in areas with quality transit and therefore have longer travel times or are forced to pay more for good mobility. During the recent COVID-19 pandemic some of the most congested transit routes within the City of Toronto remained routes serving primarily equity-seeking communities.

Providing affordable housing in close proximity to stations is therefore a key factor in maximizing the value of investments in both transit and affordable housing, increasing ridership and helping lower income households reduce their costs of living¹⁴ while having improved access to critical jobs and services.

In summary, although higher order transit enhances mobility, it may also result in displacement and create or exacerbate pre-existing challenges with housing affordability. The growing challenge of affordability, particularly within our urban centres, coupled with high levels of congestion is making the ability to deliver more affordable housing with transit increasingly important.

Despite the clear alignment, affordable housing and transit are generally considered, planned, and funded independently, often by different levels of government. In general, the mandates of public sector organizations tasked with these services are tightly focused. Funding streams are similarly targeted. Organizations are not readily able to translate well-intentioned visions into action when it deviates from their core missions.¹⁵ The result is a missed opportunity to align affordable housing and transit delivery in a way where the two become more mutually supportive, public (and private) investment dollars are used more efficiently, and better mobility and affordability outcomes result.

While alignment is beginning to happen, the approach has been to support affordable housing in proximity to transit but not to more fully integrating the two initiatives.

A growing public awareness of the limitations of the current models of housing, transit funding and delivery across the GTHA has led to the launch of a number of initiatives and policy changes to align the two issues:

- The Provincial Policy Statement and Growth Plan for the Greater Golden Horseshoe policies generally direct intensification towards transit stations and encourage the provision of affordable housing.
- Inclusionary zoning – the requirement that a certain proportion of new units in each development are “affordable” – is only permitted in protected major transit station areas as per the Planning Act. These areas must be delineated within municipal Official Plans.
- Metrolinx’s Regional Transportation Plan 2041 includes housing affordability as one of the key factors influencing transportation patterns in the GTHA over the next 25 years, and states that “It will be increasingly important to monitor the combined affordability of housing and transportation.”
- Metrolinx has also unveiled a Transit Oriented Development Approach that includes both Metrolinx-owned and privately owned lands. For their own land holdings, the approach distinguishes between surplus lands that can be sold for independent development and station lands in which an agency-led joint development could incorporate station facilities. Where privately held land is suitably located, there are opportunities for privately initiated joint development that incorporate stations facilities. Metrolinx’s TOD approach leverages the value uplift resulting from transit and new transit investments to offset the cost of delivering those investments however, there is no mandate to put revenue raised towards affordable housing.¹⁶
- As part of the Ontario-Toronto Transit Partnership, announced in November 2019, the two levels of government have signed a Memorandum of Understanding (MOU) on TOD. The Memorandum outlines a high level strategy for the delivery of TOD associated with the transit expansion projects currently in the planning phase, including GO Expansion, the Ontario Line, and the Scarborough Subway Extension. This program is focused on leveraging opportunities for the private sector to deliver elements of station infrastructure in conjunction with intensification around the stations. Affordable housing or other community benefits are not identified as part of the TOD MOU.
- Housing Now is a City of Toronto initiative to leverage higher-order transit, by selling surplus City-owned properties to the development community at below-market land values with obligations to construct mixed income developments that include a high percentage of affordable ownership and rental housing units.

It is clear that there is strong recognition of the relationship and importance of better integrating affordable housing and transit:

- Affordable housing is a recognized factor in transportation planning
- Policies are being strengthened to support the delivery of affordable housing around transit

However, there is very little being done to explore the co-delivery of affordable housing and transit.

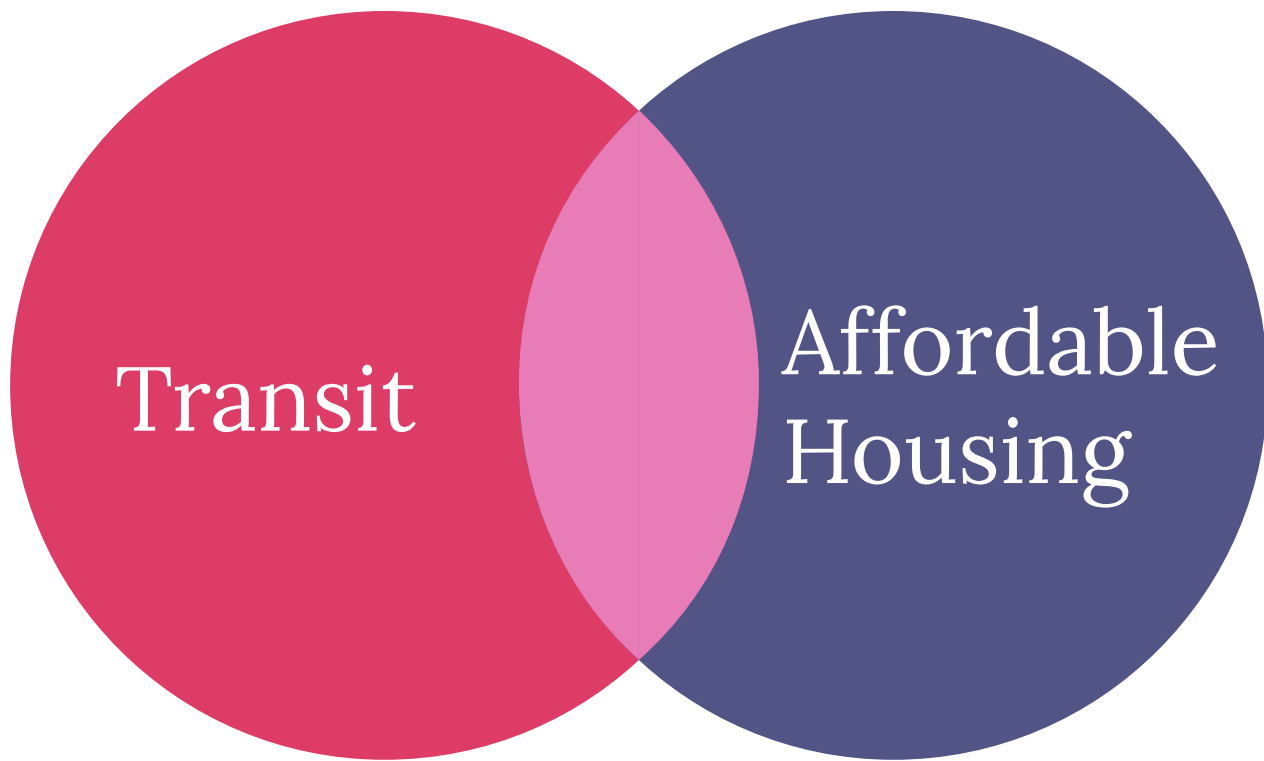
The context: major public investments are happening now and will continue in the future

In the midst of large, multi-year investments in both affordable housing and transit, there is an opportunity to leverage this investment of public dollars for greater public benefit.

Transit: There has been unprecedented financial commitment to new projects in the GTHA. The Provincial government has unveiled a \$28.5 billion transit expansion plan, committing at least \$11.5 billion (with the rest intended to be contributions from other levels of government). This includes the Ontario Line in Toronto, Scarborough Line 2 Extension in Toronto, Eglinton West LRT in Toronto, and Yonge North Extension in Richmond Hill. The investment is in addition to the Eglinton Crosstown LRT in Toronto (to be completed by 2021), Finch West LRT in Toronto (to be completed by 2023), Hurontario LRT in Mississauga and Brampton (to be completed by 2022), the YRT/Viva Bus Rapid Transit network (to be completed by 2020), and the GO Transit Regional Express Rail (RER) investment (to be completed by 2025).

Housing: Various levels of government have taken initial steps to address the challenges of housing affordability. From the federal government comes the National Housing Strategy (2017), which has promised \$55 billion in expenditures over 10 years, including direct funding, grants, and loans through the Housing Co-Investment Fund, Rental Construction Financing Initiative, the Federal Land Initiative, the Canada Community Housing Initiative, and the Canada Housing Benefit. The Ontario provincial government has secured bilateral funding agreements with the federal government to facilitate the transfer of federal funding dollars to recipients, and has recently revised the planning framework to allow municipalities to require affordable housing in designated areas. Various programs exist across municipalities. As an example, the City of Toronto's Open Doors Program provides support for voluntary affordable housing construction via capital funding, fees, property tax relief, approvals fast tracking, and activating surplus City-owned land implemented through an annual call for applications.

Such a large government commitment to transit expansion in the region is a rare opportunity. Projects underway have begun deploying Community Benefits Frameworks with the aim of leveraging transit investments for a broad range of benefits that can be delivered for equity-seeking and low-income groups.¹⁷ There are implicit and explicit assumptions that transit will stimulate private sector investment along the routes and most notably at transit stations. Demand for housing in proximity to transit coupled with a supportive policy framework is expected to lead to an acceleration of residential development in these areas. How can the demonstrated uplift in land values be used to leverage more affordable housing options from the private sector at scale? Can silos be broken down to tie public transit funding directly to public investments in affordable housing? A comprehensive approach can help to re-imagine how investment in public transit can support the provision of affordable housing and in doing so contribute to more complete, transit-oriented communities.



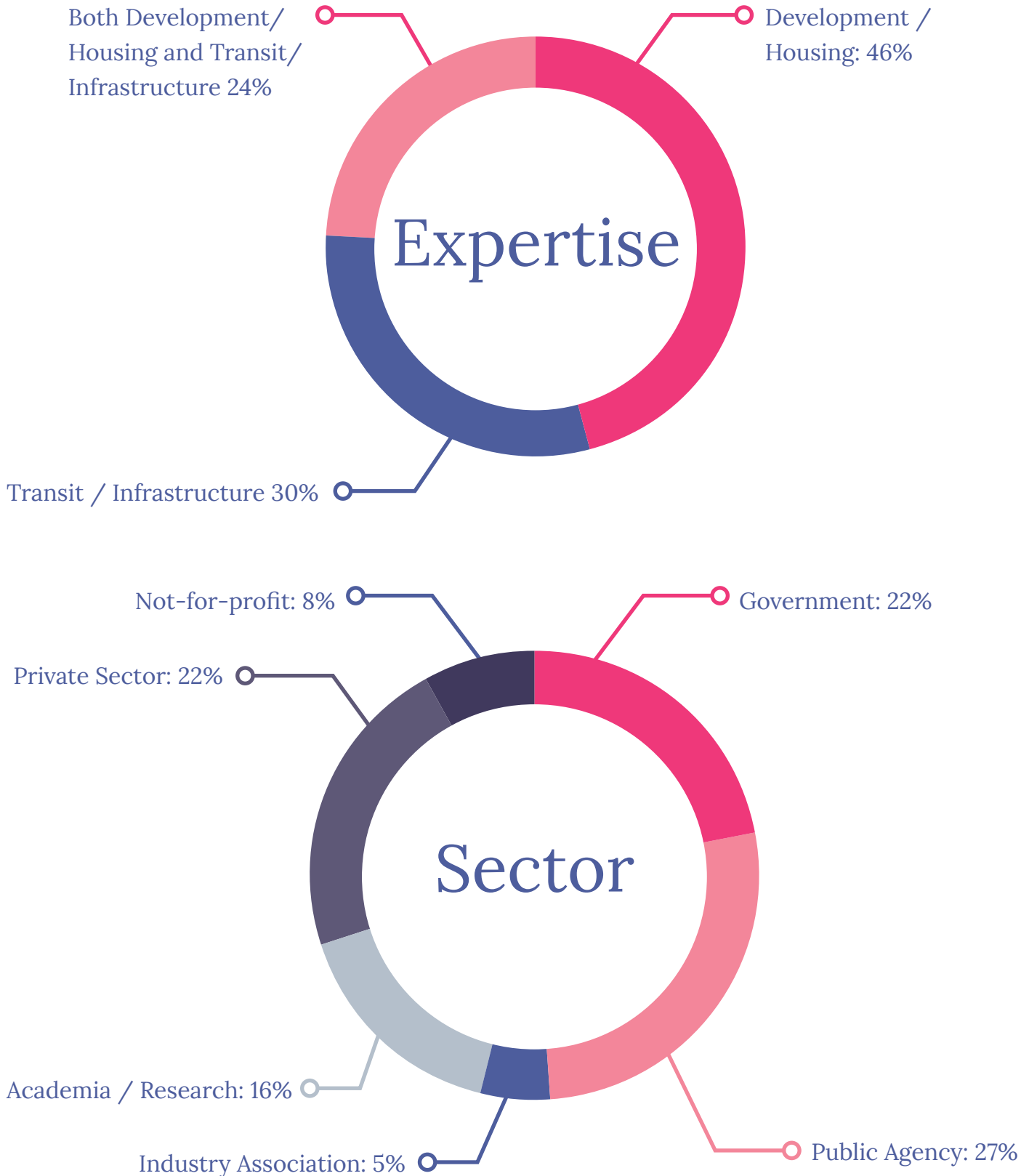
For transit, adjacent affordable housing can provide:

- Greater dedicated ridership than that of owner-occupied market units
- Opportunity to mitigate some of the potentially negative impacts of transit expansion such as displacement due to gentrification

For housing affordability, adjacent transit can provide:

- The land value uplift that, if captured effectively, can help to subsidize affordable housing development
- Affordable mobility in addition to affordable housing, resulting in significantly reduced overall living costs

Who did we speak with?





How are Transit Infrastructure and Housing Development Delivered Today?

How Transit is Often Delivered

An increasing number of transit projects are being delivered through Public Private Partnerships (P3). P3s create public value by leveraging private sector expertise to reduce costs, assume risk, and improve quality. Delivery of transit through a P3 process requires a significant level of upfront work to determine the alignment, develop a reference concept design, identify lands that will be impacted and craft the specifications that can form the basis of the procurement process. Once the design is finalized, the bidding process is completed and there is selection of a preferred proponent, it is very challenging and costly to incorporate changes to the design such as to better respond to or support development opportunities above or adjacent to the station.

The following represents a simplified description of the transit infrastructure procurement process, with the assumption that a P3 (public-private partnership) model is used:

- The Project Owner (typically the Province or municipality) recognizes the need for new transit investment. (This is often influenced by past municipal and provincial land use planning decisions.)
- The Environmental Assessment process is undertaken which informs the development of the specific alignment, conceptual engineering design, and identification of project impacts. (The assessment is informed by current municipal and provincial land use planning policy.)
- A Reference Concept Design is created and Bid Documents are prepared to which potential proponents will respond
- Following a Request for Qualifications process, interested proponents bid on the Request for Proposals
- During the bidding process, detailed financial analysis of risks, costs and timelines are completed. Decisions are based on evaluation template that typically requires minimum thresholds to be met.
- The Project Owner selects the preferred proponent: the Project Company. This selection is typically based on the proponent that submits the lowest price while meeting the minimum thresholds that were established.
- The Project Company finalizes design and begins construction on the new transit line
- The Project Owner pays the Project Company once substantial completion is achieved. In a project that includes construction, operation and maintenance, the Project Company is paid to operate and maintain the transit line, with certain performance conditions attached, for a set period of time.

The Development Process

The land development process involves both the Municipality, which establishes the framework for new development and the Developer, who proposes and delivers projects within that framework.

The following represents a simplified description of the Municipal role in the Province of Ontario:

- The Municipality has an existing planning policy framework that regulates the development and use of land, intended to enhance quality of life, improve public health and safety, support the economy, and protect the natural environment through comprehensive, integrated and long-term planning. The policy framework must be consistent with Provincial policies and plans.
- Municipal planning policy can be updated in response to changing provincial planning policies, political direction, changing context (levels of population/employment growth, market or social changes/pressures etc.) or new investments such as the delivery of a new transit line. At a minimum, municipalities are required to review and as necessary update their comprehensive official plan every ten years.
- Under current Provincial policy for the GTHA, major transit station areas (MTSAs) include lands within a 800 metre radius (a 10-minute walk) of a transit station or stop. Municipalities are required to plan for minimum densities of people and jobs in MTSAs through updates to the policy for the areas. This is required for existing transit corridors and after the identification of new corridors. For new corridors, the process often follows the transit design process.

The following represents a simplified description of the role of the Developer:

- The Developer conducts due diligence on a potential land acquisition, cognizant of municipal and provincial planning policy (and referring to current and future transit plans)
- If the land is acquired, the design process is initiated and the Developer will develop a concept and prepare an application for approval by the municipality.
- The municipal planning approvals process is initiated with a formal submission, which references in-force municipal planning policy as it applies to the development site. Affordable housing will typically not be included in the initial application unless there is an explicit policy requiring it.
- The Developer will often apply to amend the Official Plan and/or zoning by-law, which may not be aligned with developer aspirations, or contemporary transit-oriented land uses and densities. In response to the application, many Municipalities take advantage of permission under the Planning Act to require provision of community benefits, such as the provision of daycares, open space, public art, or funding for services such as community centres or libraries, in exchange for the additional density. Depending on the scale of the development and local political demands, the community benefit contribution may or may not include affordable housing.
- Through ongoing discussions between the Developer and the Municipality, the proposal will be refined, culminating in a site specific Official Plan amendment, site-specific zoning by-law amendment, a site plan agreement, and eventually building permits. A legal agreement will ensure that the community benefits are delivered as agreed upon.

In areas where existing planning entitlements permit less density than what good planning practice – and often the municipality itself – would suggest is appropriate for lands in proximity to transit, seeking to amend applicable policies for a given site involves significant financial resources and time. The process also includes risk and uncertainty as to the level of density ultimately approved, the extent of community benefits, or even the possibility of refusal and the prospect of a long and expensive appeal process.

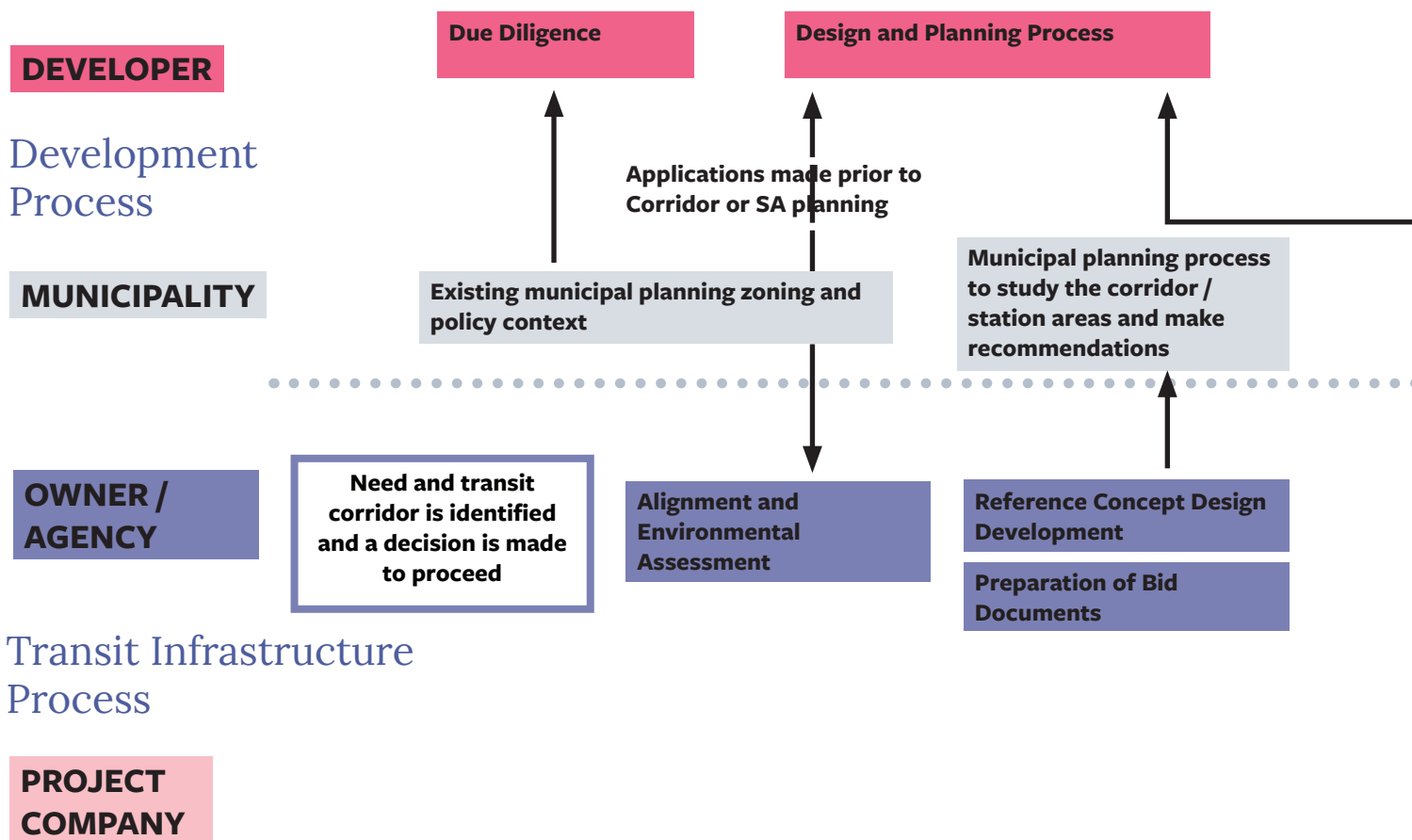
Transit and development – delivered independently but function interdependently

The transit infrastructure procurement process and the development process – through which new affordable housing is created, are currently independent processes. Transit delivery is a transit-first process where development is a peripheral consideration. The transit design process occurs independent of municipal planning processes to determine the highest and best use of land around potential stations. The development process occurs independent of transit delivery, but is based on market opportunity which is influenced greatly by the delivery of transit projects (see Section 3 below).

The various steps operate according to their own internal logic, shaped by the economic and political structures inherent to each industry and influenced by the interests of the various actors involved. Despite this independence, the processes impact each other in both direct and indirect ways. For example, the decision of where to place a transit line is impacted by historical and/or future development patterns and is often designed to respond to existing or planned concentrations of people and jobs. Similarly, planning frameworks are required to support appropriate forms, densities and types of development to optimize the benefits of transit infrastructure.

Current Process Map

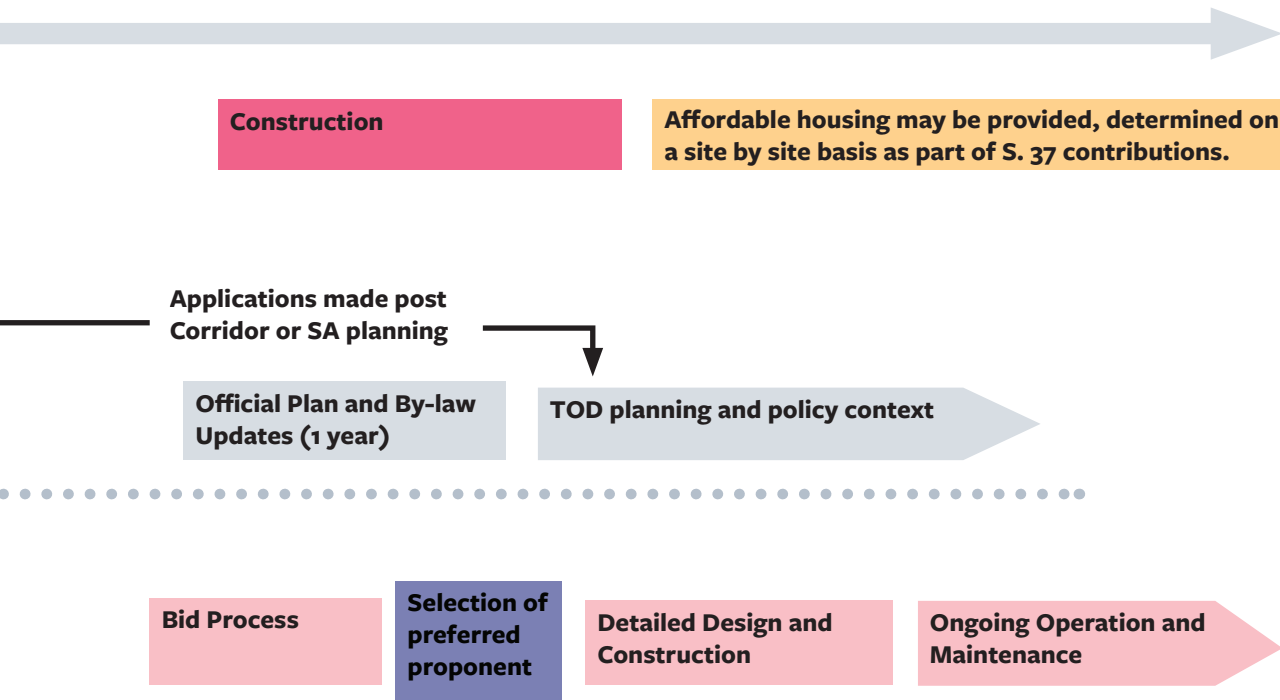
Timeline



Two tier municipalities...another layer of complexity

The process described and depicted below has been simplified to illustrate what is often a disconnect between the transit infrastructure and development process. However, its important to note that many areas in the GTHA function as part of a two tier municipal structure, where decision-making and service delivery is divided between both an upper tier regional municipality and a lower tier municipality.

In two tier municipal structures, upper-tier municipalities deal with broad planning issues that affect more than one municipality including regional transit and transportation planning, while all lower-tier official plans, zoning bylaws must conform to upper-tier directions. The two-tiered structure can create even greater challenges for the integration of the development and transit planning processes, as it requires an additional government body to be aligned in policy and implementation.



A revised process map, incorporating our proposed Interventions, can be found on page 24.

Key Insights

This Solutions Lab was an iterative process involving multiple rounds of stakeholder engagement and ideation. The following key insights were derived from interviews and independent research on the current status of both affordable housing and transit delivery.



1. Transit infrastructure can impact real estate value and development potential

Under the right conditions, the introduction of new or improved transit infrastructure can have a significant positive impact on development.

With respect to land value, all transit stations are not created equal. Location, planning and market context matter, as does the type of transit. The more frequent, reliable, and affordable the transit, the higher its impact on real estate values. For development, other fundamentals must also be in place such as strong market dynamics, positive development economics, supportive planning framework, and available development sites. Larger uplift is generally found within 500-800 metres of a transit station, and outside of the central business district (where land values would already be high). Transit impacts the real estate market in three ways:

- It creates or increases market demand;
- It stimulates land use policy changes; and,
- The above factors combine to increase development potential and therefore land value.

Land use changes have a significant impact on land values – particularly when a change is made from lower value uses like employment or retail to higher value uses like high-density residential or mixed-use.

Transit can have a particularly significant impact on new residential development. Under the right conditions, it raises housing prices and increases demand for housing in areas where development may not have otherwise occurred due to market or economic issues. Transit's impact on office demand is less obvious in the Toronto area, as demand for office uses is driven by additional factors including proximity to existing clusters of office and access to labour. This has led to a concentration of new office investment in Downtown Toronto and to a lesser extent several existing employment centres, even where transit exists.

Pursuit of transit-oriented affordable housing following the construction of transit lines means that land, and thus price per affordable unit, is at a premium. In some cases, even waiting until after the planning of transit will result in missed opportunity, reducing the amount of affordable housing that can be delivered for every dollar spent.

2. Proactive planning and land acquisition

creates an opportunity to capture the land value uplift of transit investments

The ability to integrate development planning into the design of station locations from the outset at larger, higher value stations creates the opportunity for greater development and delivery of affordable housing than if developed after the fact.

Land value capture is a method of leveraging land value uplift from public investments such as transit. It is an attempt to return a portion of the value increase associated with the investment back to the public sector, facilitating the provision of further transit expansion or other public goods. Land value capture tools recognize that the private sector may reap an unearned windfall from the public investment. Tools for land value capture include: localized property tax increases, special assessment districts, tax increment financing, joint venture partnerships to develop station lands, and public acquisition of land in advance of the investment.

Acquiring TOD lands around a future station prior to transit investment can be a significant tool for capturing land value uplift associated with transit investment. If timed properly, public land acquisitions can result in 100% internalized value capture when the property experiences an uplift and is later sold or developed in the future. The value of these properties can be captured post-transit completion in a number of ways:

- **Land sale:** A property is sold outright to the private sector for development once the station is completed, capturing the value uplift associated with the transit itself, any zoning/planning changes impacting the site, and the increased market interest from the development industry.
- **Land lease:** Land is leased to developers over a long-term period, creating a cash flow for the public sector over the term of the lease while enabling the public sector to retain ownership. However, land leases are less common for new developments in many jurisdictions, particularly in the GTA.
- **Joint-venture developments:** These developments involve a partnership between the private and public sector. They can be very successful in cost sharing, particularly if development is to occur above or connect to a transit station. These sharing mechanisms are often used to help fund construction and maintenance costs of a station but could also presumably be used to achieve other goals – such as the construction of new affordable housing units.

Land could also be acquired for a different use in the short-term, with a long-term view for TOD. For example, land acquired for the purpose of commuter parking around a new GO train station could be acquired with the intention to eventually use it for TOD purposes once the market matures and development becomes more attractive / economically feasible.

It is important to recognize that proactive acquisition is challenging; there are legal and political barriers to acquiring land beyond that which is required for transit construction or operation. However, these challenges may reduce if project scopes and public expectations shift.

Given the direct relationship between the value of land and the cost of delivering affordable housing, the ability to proactively plan and acquire land at the outset of a transit planning process – before land prices increase – would create the opportunity to deliver a greater number of affordable units over the longer term, thus potentially reducing the cost or subsidy required down the road (see Section 5 below).

3. Planning frameworks are often reactive to new transit

The entitlement process often lags behind the transit planning and design process, making it challenging to incorporate new development with the delivery of transit.

If planning frameworks are not updated in conjunction with or in advance of planned transit investment then the planning for transit corridors, stations and ancillary facilities occurs in absence of an understanding of the planned future transit-oriented condition. This can make it difficult to understand where significant TOD opportunities exist and identify opportunities for the integration of development with transit. It also makes the ability to capture land value uplift more challenging because acquisitions made in support of the transit investment are made without the benefit of knowing (with any granularity or certainty) the future development context.

When there is a lack of planning certainty, the integration of development into the transit procurement process become riskier. If the station area entitlements do not reflect the density required to make transit-oriented development feasible, planning approvals must be undertaken, with outcomes that cannot be assured in advance. Proponents must then gamble on their future development returns. This drives up costs through reliance on more conservative assumptions to reduce their risk, resulting in higher bid pricing.

The length of the development approvals process can create an additional challenge, particularly for development projects integrated with station buildings (and even more so for below-grade stations). If the scope of the procurement is expanded to include station-related development, a development application may not be submitted until after the detailed design of the transit infrastructure is confirmed. If the approvals process starts at this point in the overall process, it can extend the P3 schedule past the deadlines originally set, impacting transit delivery.

Designing new transit to protect for future development results in additional premiums which can make it unfeasible to deliver affordable housing.

Protecting for future development opportunities on stations sites, without knowing the exact form or timing of these opportunities, is expensive, and transit agencies may not be willing to absorb the added costs. The specific cost depends on the type of transit and type of construction used.

Delivering new development integrated with station facilities post- transit construction results in an additional cost premium for developers, which then limits the ability to deliver affordable housing. While the costs of integrating development with transit facilities can be reduced through coordinated design of transit infrastructure and development during the transit design and delivery process, it requires some degree of certainty regarding the extent of development (entitlements) from the outset of the transit planning procurement process.

4. While agency mandates often are supportive of affordable housing, it is not a primary consideration

Public sector transit agencies / infrastructure development organizations focus on mandated priorities which may contribute to but not specifically include addressing other government priorities such as affordable housing.

Without an expansion in mandate on the part of transit agencies - or Project Owners more generally - transit oriented development (and specifically affordable housing) will understandably be a secondary consideration in decision-making.

- Existing mandates do not include sufficient scope to incorporate affordable housing as a priority. Arms-length public agencies have typically been pragmatic, focused on implementing policy directions and delivering programming. To connect with other societal objectives, there is a need to expand role and consideration of the transit or infrastructure authority.

- There are competing and complementary TOD priorities; affordable housing is only one. The value created through TOD can be used in multiple ways: offsetting the costs of past or future transit expansion, daycares, community centres, and of course affordable housing. There is no generally accepted method of calculating on a balance sheet what the social benefits are from the creation of affordable housing and how they compare to other priorities. In the absence of explicit mandates or a clear strategy for how and where affordable housing should be delivered, the inclusion of affordable housing with transit occurs on a case by case basis and competes with a multitude of other priorities.

Infrastructure Ontario is not a policy-making organization; rather, it is a policy implementation organization. Despite federal and provincial strategies aimed at increasing the supply of affordable housing, there is nothing in Infrastructure Ontario's enabling act that directs it to pursue the delivery of affordable housing, nor government policy that would orient its mandate in this direction outside of ad hoc projects.

Metrolinx is tasked with delivering an integrated transit system, however they have long acknowledged the benefits of integrated development and have recently partnered with Infrastructure Ontario to deliver a TOD program. The agency's mandate related to TOD is not to deliver affordable housing, but rather to maximize assets and revenue potential. Whether the agency could find value in affordable housing as a recurring income stream is unknown.

5. There are few incentives to build affordable housing through the transit delivery process

The lag between development of the P3 project specifications and detailed design and construction creates market risk and challenges.

A barrier in effectively integrating development into transit procurement is the time lag between the creation of the project specific output specifications (PSOS) - identifying the specific results the joint transit-development proponent must deliver - and the actual initiation of development.

A PSOS requirement for a specific number of units or type of units would require developers to plan years ahead of the actual development and creates significant risk, as the feasibility of development is subject to market forces that can change on a yearly or even monthly basis. This means that investments made to preserve a site for future development may not be appropriate at time of completion given changing market conditions. This can lock a developer into a design that may no longer be relevant and create challenges for refinements down the road, particularly given the fixed-fee nature of P3 projects. This increase in risk will generate a corresponding increase in the minimum developer profit margins, which can reduce the ability to extract value to put towards affordable housing.

Attaching development to the transit delivery schedule extends typical development timelines and can create challenges for development sales and financing. Aside from self-financing projects led by institutional investors, developers typically rely on roughly 70% - 80% pre-sales to provide the capital for the investment. If station facilities are to be integrated with development, relying on development pre-sales to facilitate construction is a significant risk that could extend the delivery of transit projects.

This isn't just a problem for the private sector; for the public sector agency, it is difficult to properly project the land value uplift, and therefore the value it can extract and feed into affordable housing. While this may suggest a greater degree of flexibility is warranted, the PSOS must retain sufficient specificity so the public sector receives appropriate value on its investment and achieves the vision for the site.

In a process designed to shift risk from the public to private sector there are limited incentives to deliver new development / affordable housing with transit

The value of development pales in comparison to the value of transit development. There is therefore little incentive for proponents to pursue development as part of their bid. Without some form of incentivization, developers may have little interest in dealing with the complexity of interfacing with transit infrastructure and the long lead times associated with it. The added complexity of actually integrating with station facilities may be a further disincentive for those particular sites.

The current process may not be the best structure to facilitate the form of innovation / collaboration necessary to get the most out of complex projects such as the delivery of transit with development.

The P3 procurement process is primarily focused on shifting risk from the public sector to the private sector. Responsibilities are set out in clear contractual arrangements with fixed penalties and rewards. Although the legally delineated roles can ensure each side is acting according to the agreed upon terms of the deal, it can hinder the collaboration that is required to address the complex issues involved in more challenging P3 projects. Delivery of affordable housing and transit concurrently involves a range of actors with competing interests, and a process which may require refinement and renegotiation over time. Challenges may occur at various points in the process; responding to these appropriately can be difficult within the constraints of a spec-based binding agreement. Furthermore, there are a limited number of vendors that have the capacity to undertake major transit infrastructure development projects, and a large pipeline of potential projects. The added complexity of integrating affordable housing / development into the process in such a cut-throat environment – without any compromise in risk tolerance by the public sector – makes the bid far less attractive, and may discourage qualified vendors from applying.

Integrating opportunities for greater flexibility to enable the development industry to work collaboratively with the public sector agency and respond to market changes throughout the development of the transit line could help to reduce risk associated with the integration of development into the procurement process.

Five Potential Interventions

Based on the key insights garnered from research and interviews, there are a number of potential interventions that could be made to the current system to align transit and development and collectively generate an increased supply of affordable housing.

1. Supporting an expansion of agency mandates

Description: The mandates of public sector transit, land management and infrastructure development organizations could be adjusted to better reflect the full impact – or potential impact – of their current purview on affordable housing. Public policy goals are not siloed and do not remain neatly within the efforts of single purpose organization. Expanded mandates would reflect the interrelationship of transit, new development and the delivery of affordable housing and direct agencies to more fully account for the delivery of affordable housing through their work. An expanded mandate should not dilute the original focus of the organization; rather transit, land management and infrastructure development organizations should be encouraged to identify and align their existing investments, activities and policies in support of the delivery of transit-oriented affordable housing.

While it is important to recognize that mandate expansion is more challenging than it may seem, there are a number of current factors which may help to support this initiative including: an acute need for both transit and affordable housing; increasing recognition of the role that transit plays in housing affordability; policy direction to support greater affordable housing provision within station areas and a strong emphasis on leveraging transit to support new development as a partial offset to the costs of new transit infrastructure.

Impact: Expanding the mandates of public sector transit, land management and infrastructure development organizations to include the delivery of affordable housing may lead to:

- Greater consideration of how efforts could be better aligned in more innovative ways to co-deliver on the governments affordable housing objectives;
- Increased ability for transit to deliver and contribute to more strategic benefits/objectives; and
- More direct investment of returns created by new development or land value uplift towards the delivery of affordable housing in areas with transit investment.

Sound Transit (the transit agency for the Seattle, Washington area) adopted its Equitable Transit-Oriented Development policy in 2018, pursuant to a 2016 state statute that directed the prioritization of affordable housing in surplus property disposition. Transit agencies in Washington state now have the obligation to offer a minimum of 80% of surplus properties for affordable housing developments.

The result has been the transfer of surplus parcels adjacent to light rail stations to affordable housing developers for little to no cost. This system is contingent on transit authority's capacity and mandate shift to be able to absorb the financial loss associated non-market rate property disposition.

2. Quantifying the externalities of transit-oriented affordable housing

Description: Developing a tool to quantify the positive externalities of affordable housing located in proximity to high-quality transit infrastructure will enhance the value proposition of the investment.

First, it is widely recognized that affordable housing located in close proximity to transit creates a wide array of benefits for residents and society at large. These benefits include:

- Reduced costs / time for transportation;
- Increased access to job market / education;
- Improved health outcomes;
- Improved access to social services; and
- Reduced impact on the environment.

If these benefits could be quantified, we can determine the cumulative positive financial impact on society.

Second, all levels of government expend significant resources to provide services, undertake initiatives, and enforce regulation that directly address these areas of benefit. Quantification of these benefits can therefore provide additional justification - both internally and externally - for investment in transit-oriented affordable housing, as it will contribute to a wide variety of public policy goals not only in abstract but in bottom-line savings. Through proactive investment in affordable housing in conjunction with transit, governments may end up with reduced expenditures in healthcare and social assistance and improved air quality.

Once developed, the quantitative tool would be applied to project proposals at each level of government, and provide an ongoing source of evidence for developing business cases.

Impact: Quantifying the range of benefits associated with transit-oriented affordable housing may lead to:

- A stronger understanding of the relationship between transit-oriented affordable housing and other policy objectives;
- Development of key inputs for holistic public sector business cases that evaluate the benefit of affordable housing;
- Expanded support for transit-oriented affordable housing within the public sector and clear rationale to broaden transit agency mandates.

3. Developing a more comprehensive vision for transit-oriented affordable housing

Description: Municipalities could establish a comprehensive vision for transit-oriented affordable housing with clear expectations for both the transit agencies and the development industry. Developed through collaboration with private sector and non-profit developers, the vision should be accompanied by a strategy that outlines affordable housing goals and the how, where, and when these goals will be achieved. Drafters of this vision document should adopt best practices found elsewhere.

Potential components could include:

- Higher-level principles around right to housing as well as mechanics of planning and development;
- De-stigmatization of affordable housing through proper framing as inclusive and attainable workforce housing;
- References to new Provincially-granted enabling powers, such as inclusionary zoning in protected major transit station areas; and
- How the provision of affordable housing will interact with other development-derived community benefits, and how potential trade-offs will be evaluated from a policy perspective.

Each new transit line should be evaluated under the auspices of the affordable housing vision and strategy, identifying how the line in its entirety will support the provision of affordable housing. This is directly related to Intervention 2. Development delivered through the transit procurement process in partnership with the transit agency (described in Intervention 4), or independently within the station area through the development process would meet and contribute to the targets in the vision.

Impact: The development of a clear, unified vision and accompanying spatial strategy for transit-oriented affordable housing may lead to:

- A shared understanding of expectations for the public, development industry, and transit agency related to the provision of affordable housing in new transit-oriented development;
- Clear objectives for municipality; and
- Strategic, predictable development of affordable housing instead of delivery on an ad hoc basis.

The Planning Act allows for municipalities to require inclusionary zoning in protected major transit station areas, which can be identified in advance of a municipal comprehensive review as long as more detailed study is undertaken. The **City of Toronto** recently undertook a study to understand the opportunity related to inclusionary zoning in different parts of the City, particularly with respect to the varying levels of affordable housing that could be achieved without stifling development.

4. Aligning the entitlement process with the transit planning process

Description: Revisions to the planning policy framework should be coordinated with transit alignment planning. Although planning for affordable housing is critical for both existing and future transit station areas, as addressed in Intervention 3, a proactive approach is particularly important in the development of new transit plans. The processes should occur simultaneously and generate a clear vision for public and private lands within each station area and along the corridor in general. The station area planning will identify the affordable housing requirements applicable to each station area, consistent with the vision (see Intervention 3 above) and feed into the development of the transit line's Reference Concept Design (RCD). This action requires a greater level of up-front coordination between municipalities and transit-delivery agencies

An understanding of future entitlements will help transit agencies to maximize opportunity for land value capture by enabling them to make more informed land assembly and infrastructure design decisions. For example, the design of a station or bus terminal may be configured differently to maximize overbuild potential given the planned context, or lands acquired for lay-down and construction might be sited strategically to support new transit-oriented development over time. It would ensure that provisions for overbuild were appropriately scaled to the future context and enable the potential integration of development into the transit procurement process. Additional value achieved by acquiring land early and integrating development thinking into the transit planning and design could then be used to increase the provision of affordable housing (see Intervention 5).

Impact: The alignment of the entitlement process with the transit infrastructure planning and development process may lead to:

- Improved ability for transit agencies to factor in future development potential into their transit planning;
- Opportunity for more strategic land acquisition and design strategies that in turn support greater potential for land value capture which can be used to deliver more affordable housing;
- Greater clarity for the development industry around expectations for transit-oriented development at stations; and
- Improved ability to integrate development and the provision of affordable housing into the transit procurement process.

The City of Toronto is currently embarking upon a work program to study and delineate Protected Major Transit Station Areas (PMTSAs). The delineation of PMTSAs requires an enhanced level of detail that is typically found within an area zoning by-law, including the identification of site-specific minimum densities. The City's prioritization is based upon a number of factors, including the facilitation of transit-oriented development and the opportunity to implement inclusionary zoning. Having this policy in place in the coming years will establish a greater degree of certainty for the various actors involved in TOD generally and transit-oriented affordable housing more specifically.

5. Undertaking strategic land acquisition to support new development and contribute to city-building objectives

Description: Transit infrastructure, particularly station areas, should be designed to facilitate new transit supportive development. Given a co-mandate to support affordable housing (intervention 1) and a better understanding of the future entitlements (intervention 4), transit agencies should think strategically about the lands they acquire and design the transit infrastructure in a way that maximizes the development and city-building potential over the longer-term.

Post transit implementation/improvement, the development potential that is enabled by those strategic acquisitions and development-supportive designs should be used to deliver new transit-oriented development on publicly owned lands. New transit-oriented development should not only deliver the required affordable housing (set forth in inclusionary zoning bylaws) but the uplift in land value (i.e. the increment gain in land value) generated by the transit investment should be used to deliver an even greater amount of affordable housing than would be expected from a private development occurring on lands adjacent to the station. In this way, the agency will be supporting greater affordable housing by:

- facilitating greater development, which will come with a mandatory affordable housing requirement as per zoning by-laws; and
- leveraging the transit-related land value uplift to deliver even more affordable housing than otherwise would be created.

Investment in transit can and should facilitate the achievement of benefits that extend beyond mobility, and strategic land acquisition and design would contribute to that objective.

Impact: The acquisition of lands to intentionally support new development may lead to:

- Improved opportunity for development of publicly owned lands;
- Alignment of transit mission with other city-building objectives; and
- Additional affordable housing in excess of what would be delivered through adjacent development alone.

What about the co-delivery of affordable housing and transit?

Co-delivery of transit with new development and associated affordable housing is an approach used in a number of jurisdictions to capture land value uplift, create transit-supportive development, and more effectively use scarce land resources. In an integrated transit infrastructure and development process transit builders would form a partnership with a developer, creating an organizational structure in which a single venture assumes responsibility for both elements. Project specifications outlined by the transit agency would expand to address the development component. If done effectively, this approach would allow for a more integrated design process where the transit line and station development work together to maximize public and private goals and public land assets to deliver more affordable housing.

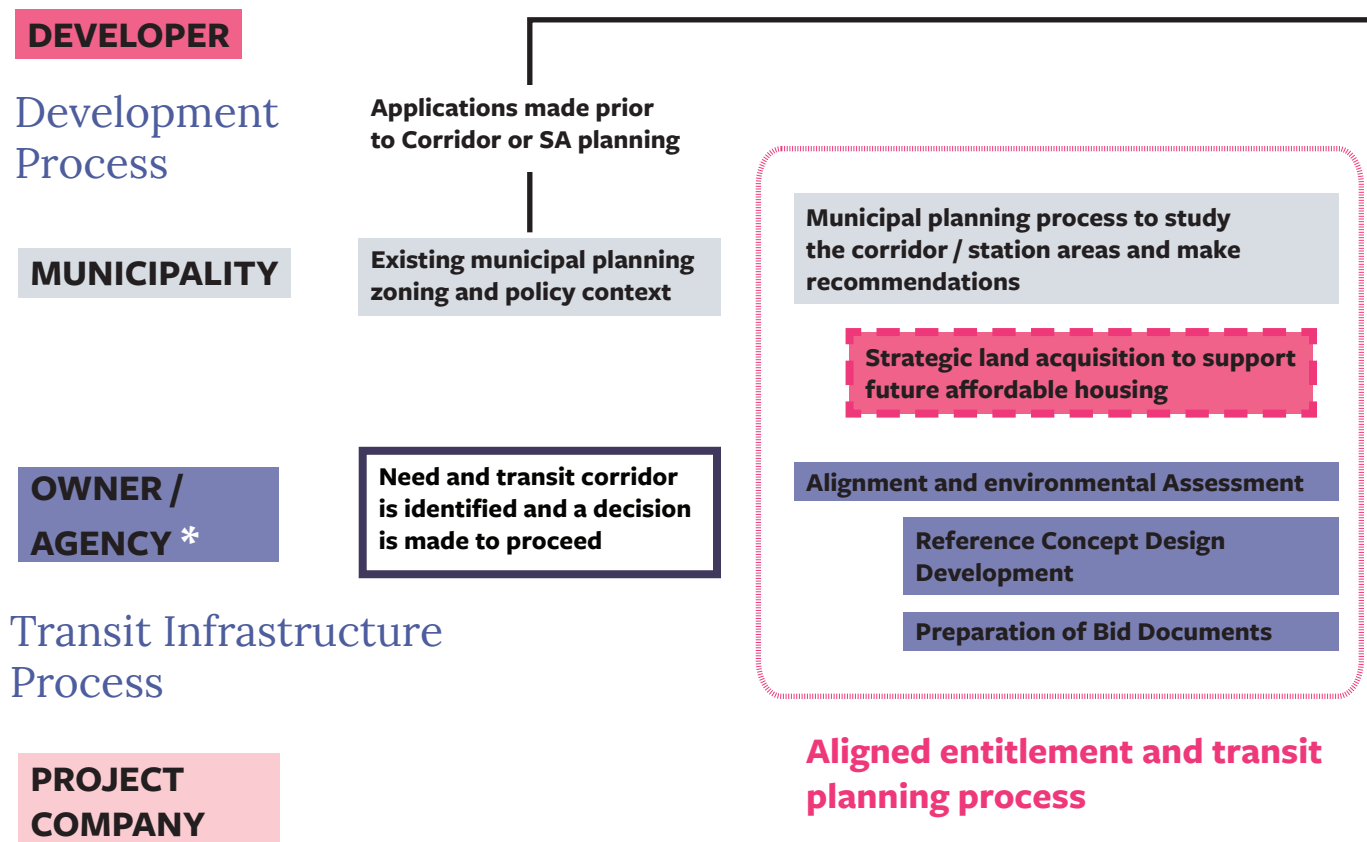
Despite the benefits of a more integrated approach, there are numerous challenges. Even with a greater understanding of future entitlements (see Intervention 4 above), the integration of affordable housing into the transit procurement process will result in a number of market and development uncertainties that may not be fully understood until well after the project has commenced. The risk of transit project delays may be significant. Furthermore, given the land values and density required to make integrated development feasible, as well as potentially complex technical challenges, this approach would only be successful at a limited number of transit stations in the region. It is for these reasons that the approach was not ultimately recommended as a key intervention. That being said, there is merit in further exploration and consideration as policies and viewpoints shift in the future.

Boston's **Massachusetts Bay Transportation Authority** (MBTA) has comprehensive Transit-Oriented Development policies and guidelines that apply to all property dispositions in existing station areas. Joint development is a frequent approach, which includes projects directly on MBTA lands / air rights and projects in which adjacent landowners participate in station design and construction. Equitable development is a key priority, with affordable housing incorporated in all TOD projects.

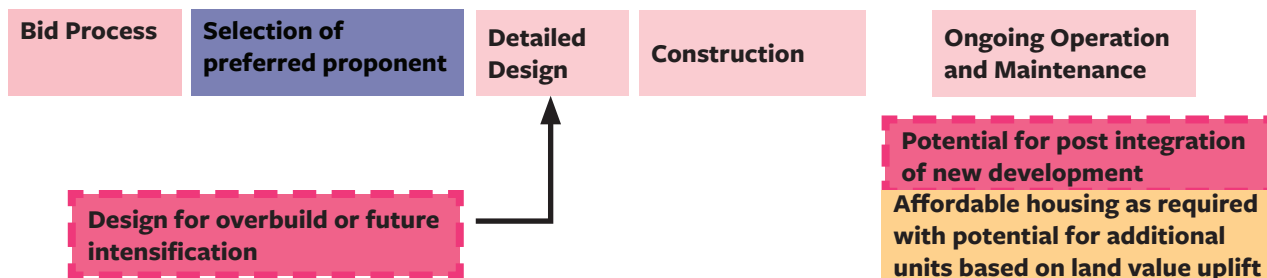
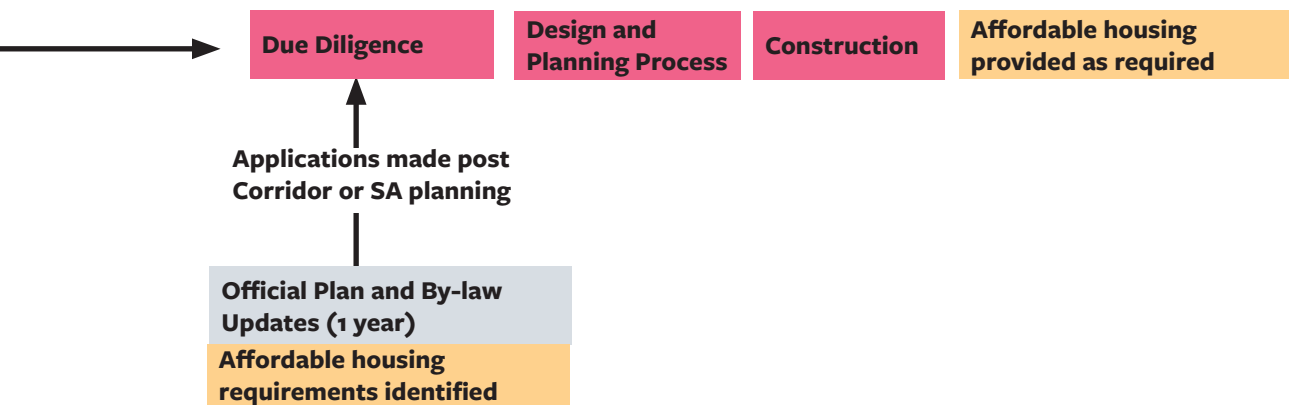
Potential Outcome Process Map

The following diagram identifies how interventions in the planning and transit procurement process described above might lead to opportunities for the delivery of affordable housing.

Timeline



* Affordable Housing Mandate



Roadmap

This Solutions Lab has identified a series of practical interventions, informed through research, discussions and co-design with a diverse range of actors in the fields of transit, housing and development. The resulting recommendations build upon existing structures and processes to support the delivery of a more consistent supply of affordable housing around transit.

The Lab has demonstrated that there is an excellent opportunity for actors within government, agencies and outside advocacy to find ways to align, tailor and implement the ideas presented within this report to strengthen the relationship between the delivery of transit and affordable housing.

The five interventions proposed in the previous section would, if all were implemented, result in significant change to the process and delivery of affordable housing together with transit. However, getting to that desired end state requires big and small actions by the many actors that influence this work. While the Lab established these interventions as priorities, there was no opportunity to dive fully into the mechanics of implementation.

The intention of this Roadmap is twofold. First, we wish to scale up by getting different levels of government on board with the Interventions and facilitating Actions. Second, we wish to scale out by encouraging adoption of these recommendations to other jurisdictions after successful demonstration in the Greater Toronto and Hamilton Area.

Organizing body

To advance and continue this Solutions Lab, an organizing body will be required. This body could be an existing entity and would coordinate and facilitate the implementation of the Actions discussed below and solicit funding as needed.

We propose that an ideal actor to assume this role would be an organization that meets some, or all of, the following criteria:

- a national reach, with a presence across Canada;
- a mission related to transit-oriented affordable housing, or one that could be supported through a focus on transit-oriented affordable housing;
- pre-existing knowledge of the issues;
- pre-existing knowledge of the stakeholders;
- experience as a “convener” of stakeholders;
- an understanding of public processes and procedures; and
- ability to provide funding.



Next Steps

Intervention 1: supporting an expansion of agency mandates

Actor(s): Public sector transit, development, and asset management agencies with direction from provincial and / or municipal governments

Action 1.1: Review existing business operations

- Transportation and land management agencies should review their business operations and decision-making processes and assess existing and potential impact on housing availability and affordability, as well as the potential for delivering affordable housing as part of their operational model
- Housing and development agencies should review their business operations and decision-making processes with respect to relationship or potential relationship with transit and transit expansion processes

Action 1.2: Consult with internal and external stakeholders

- Agencies should undertake consultation with internal and external stakeholders to understand their needs and potential impact of changes, and solicit feedback on specific nature of mandate expansion

Action 1.3: Propose revised mandates

- Agencies should draft expanded mandates that better reflect the relationship between transit delivery and affordable housing as it interacts with their core operations and structure, prioritizing language that provides direction for future action.

Actor(s): Provincial and municipal governments

Action 1.4: Create alignment throughout government

- Governments should ensure that mandates of various agencies, Divisions, Ministries are aligned when it comes to their focus on transit and affordable housing, providing direction as needed so that constructive collaboration is possible
 - New policies should require transit agencies to work with municipal planning authorities and the development sector, as appropriate, to maintain or increase existing levels of affordable housing when undertaking the assessment and design of new transit projects
-

Actor(s): Affordable housing advocates

Action 1.5: Community and political advocacy

- Continue to advocate for federal, provincial and municipal governments to integrate transit and affordable housing, create a diverse constituency and generate a clear request for change.

Intervention 2: Quantifying the externalities of transit-oriented affordable housing

Actor(s): Housing agency and non-profit housing advocates

Action 2.1: Conduct secondary research

- Undertake targeted research on the impacts of transit-oriented affordable housing on a broad range of factors (health, education, employment etc.) to understand and quantify the impacts and communicate those relationships to decision-makers.

Action 2.2: Match impacts to government programs

- Match the impacts to government programs and funding to map the areas where savings/benefit could be achieved through revised distribution of public funds. This would involve a high-level review of government and agency budgets. The review would also identify any potential unintended impacts of budget reallocation.

Action 2.3: Develop a publicly accessible calculator

- Develop a publicly accessible calculator and communicate those benefits to decision-makers and the general public. The communication materials should identify examples of how redistribution could improve outcomes and / or save money.

Actor(s): Infrastructure / transit development agencies

Action 2.4: Revise business case development

- Government agencies should account for affordable housing impacts and transit-oriented affordable housing benefits within project Business Cases

Intervention 3: Developing a more comprehensive vision for transit-oriented affordable housing

Actor(s): Municipality

Action 3.1: Survey existing affordable housing policy and programming landscape

- Develop an understanding of the existing affordable housing policies and programs in the municipality. Map out how they overlap and the outcomes currently achieved. Undertake assessment of permitted actions currently not implemented in the municipality, supported by survey of best practices in other jurisdictions.

Action 3.2: Consult with internal and external stakeholders

- Engage with affordable housing advocacy groups, non-profit and for-profit developers, and community organizations. Engage with transit agencies that will interact with and be part of the outcome of this process.

Action 3.3: Develop a comprehensive vision and accompanying plans

- Components of the vision should include the following:
 - Higher-level principles around right to housing as well as mechanics of planning and development;
 - De-stigmatization of affordable housing through proper framing as part of inclusive mixed-income housing, including attainable and workforce housing;
 - References to Provincially-granted enabling powers, such as inclusionary zoning in protected major transit station areas;
 - How the provision of affordable housing will interact with other development-derived community benefits, and how potential trade-offs will be evaluated from a policy perspective; and
 - The roles of different actors, including the municipality and transit agencies, in furthering the vision.
- As a component of existing processes to plan for major transit station areas, develop place-specific affordable housing approaches that are: comprehensive, mapped to the delivery of transit investments, account for the market context, and make use of legislative changes to set firm expectations for the public and the private sector.

Intervention 4: Aligning the entitlement process with the transit planning process

Actor(s): Municipality and transit agency

Action 3.1: Understand the existing process

- Undertake a detailed review of existing transit planning and land use planning processes. This should include a review of the formal and informal activities of each organization involved in the processes, including interviews with staff in various roles.

Action 4.2: Draft a proposed process

- Create a revised structure that would allow the transit and land use processes to align and feed into each other. Roles, responsibilities, touchpoints and timelines would be determined.

Action 4.3: Consult on the proposed process

- Consult on the proposed process with the various actors involved, revising and improving the structure iteratively to ensure it responds to their needs and legal requirements.

Action 4.4: Initiate a pilot project

- Based on the proposed structure, establish a pilot project in which station area planning permissions and area vision are set by the municipality simultaneous with transit station planning. It will be an exercise in collaboration to demonstrate feasibility and identify lessons for improved alignment.

Action 4.5: Establish a transit-oriented community building “action team”

- As part of the process explained above, or independently, municipalities should create an action team that can be ready to immediately act whenever transit opportunities arise. They would identify opportunities for new transit oriented development and other public benefits in a timely fashion so that city-building objectives can inform the transit planning process.

Intervention 5: Aligning the entitlement process with the transit planning process

Actor(s): Municipality and transit agency

Action 5.1: Understand opportunities for strategic land acquisition

- Undertake a review of the existing policy context and legal framework for land acquisition by public sector agencies, including related to acquisition at market price and through expropriation

Action 5.2: Make revisions to general framework on land acquisition

- Responding to the insights found through Action 5.1, tackle roadblocks to acquisition through potential changes to underlying government laws and policy to better facilitate strategic land acquisition. (This Action is optional, and may not be feasible or necessary)

Action 5.3: Develop policy on land acquisition around transit stations

- Develop clear policy and implementing guidelines for acquisition of station-related lands in advance of transit construction. The policy should indicate the criteria for when acquisition is appropriate and desirable, including the potential for delivery of sufficient numbers of affordable housing units. The local municipality should commit to providing entitlements that aligns with the opportunity for transit-oriented development and related provision of affordable housing. A Memorandum of Understanding could be drafted between the municipality and transit agency related to the development and delivery of affordable housing over the longer term.

End Matter

About the team



Urban Strategies Inc. is a Toronto-based planning and urban design firm that offers a wide range of services to public and private clients in Canada, the U.S., Europe and Asia. The firm's fourteen partners, five principals, and complement of planners and designers come from diverse backgrounds, including architecture, economics, landscape architecture, planning, public administration and the visual arts. Since 1986, our work has earned over a hundred awards and an international reputation.

Urban Strategies has led numerous transit-oriented development and station planning projects in Canadian and American cities. Our recent transportation-oriented community planning experience includes land use/ transportation mobility hub and corridor-based master plans for cities across North America and abroad, including Singapore, London ON, Halifax, Ottawa, Toronto, Waterloo, Kitchener, Mississauga, Oakville, Richmond Hill, Calgary, Edmonton, St. Paul, Minnesota and London and Manchester, UK. In Ontario, we have long standing and established relationships with Metrolinx and the TTC on a diverse portfolio of projects.

The firm also has a wealth of practical experience with affordable housing, believing that a diversity of residents is essential to a complete community. We have worked alongside not-for-profit developers such as Options for Homes and New Commons Development to secure planning approvals, integrated affordable housing into private-sector master plans for projects such as Galleria and Mirvish Village, and assisted social housing agencies with revitalizing the physical and social landscape of their communities in projects with Toronto Community Housing and BC Housing.

Lab team

Leah Cooke, Matthew Kelling, Craig Lametti, Kaitlyn Hundt-Lippett, Emily Reisman

N. Barry Lyon Consultants Limited is a real estate advisory firm specializing in market research, urban planning, development feasibility and public policy.

Since 1976 we have been working with developers, institutions and governments to identify strategies that maximize the value of their real estate assets to most effectively service their mandate. These assignments involve the determination of development feasibility and highest and best use, estimation of land value, real estate portfolio analyses, acquisition and disposition strategies. This work gives us an inside view of how development works and gives us a unique perspective on how government policies can influence the urban form.

Given our insight in the private sector, we are routinely engaged by municipalities and government agencies to advise on affordable housing, parkland, and growth strategies. In particular, we have developed a deep understanding of how transit investment can influence markets, and the social and economic benefits that can be captured through creative strategies.

Lab team

Mark Conway, Josh MacLeod



MaRS Solutions Lab is the social innovation lab for MaRS Discovery District, one of the world's largest urban innovation hubs. Our core focus is on inclusive urban innovation. We convene changemakers across organizations and sectors to generate breakthrough innovations for our most important and complex urban challenges. We also build capacity for systems change across Canada, providing advice and capacity building to governments, foundations and other organizations that want to work out how to create change for a better future together. MaRS is dedicated to cross-disciplinary collaboration, system transformation to increase innovation adoption, and driving ideas to positive impact.

Lab team

Claire Buré, Sergio De Lara, Mikayla Zolis



Since 1991, Evergreen has been facilitating change, working with city builders to convene, collaborate and catalyze ideas into action. We collaborate with stakeholders and partners across sectors to develop innovative ideas and catalyze change by testing solutions, developing prototypes and scaling projects. Through our award-winning suite of programs, we have actively engaged Canadians in creating and sustaining healthy urban environments in our schools, our public spaces, in housing and transit systems, and communities themselves.

Lab team

Isabel Cascante, Michelle German, Anant Saini



The Natural Step Canada (TNS) is a national charity and part of an international network that accelerates the global transition to a sustainable society. TNS Canada has worked with leading communities and businesses for close to 20 years. The Natural Step's Sustainability Transition Lab process builds on the latest research and practice in creative collaboration. TNS labs have improved Canada's sustainability, including sustainable housing, natural capital, energy, circular economy and communities.

Lab team

John Purkis

About our funder



Through the National Housing Strategy (NHS), the federal government is re-engaging in affordable housing and bringing together the public, private and non-profit sectors to ensure more Canadians have “a place to call home”. Canada’s first ever National Housing Strategy is a 10-year, \$40-billion plan that will strengthen the middle class, fuel our economy and give more Canadians across the country “a place to call home”. Over the next decade, the National Housing Strategy will remove 530,000 families from housing need, cut chronic homelessness by 50% and change the face of housing in Canada forever.


This project entitled Transit-Oriented Affordable Housing Solutions Lab received funding from the National Housing Strategy under the NHS Solutions Labs, however, the views expressed are the personal views of the author and CMHC accepts no responsibility for them.

<https://cmhc-schl.gc.ca/en/nhs/solution-labs>

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Appendix: Economic Modeling

Executive Summary

An economic modeling exercise was completed on three prototype transit stations in order to better understand the potential of a more integrated approach involving strategic land acquisition in the planning and design of transit investments to leverage land value uplift as a means of increasing the amount of affordable housing that could be delivered.

Economic analysis of potential outcome

The three stations examined are meant to be illustrative and as such located in different market areas of Toronto and are serviced by different types of existing or planned transit. They were:

- Keele Street and Eglinton Avenue West (Eglinton Crosstown LRT);
- Pape Avenue and Danforth Avenue (Line 2 Subway / Ontario Line); and,
- Weston Road and Lawrence Avenue West (Weston GO / UP Express).

Methodology and Approach

For each station, two scenarios – a base case and an integrated TOD case were created.

The base case follows the current approach to transit construction. The public sector acquires the minimum amount of land to construct the transit station, leaving the private sector to assemble surrounding properties if they wish to construct a new development. In this case, affordable housing is only provided if required as part of existing land use policy. In the base case, no new units are constructed above the transit station, densities on surrounding properties may be lower, and fewer total residential units are constructed.

The second scenario for each station area assumes that the public sector is able to acquire additional properties surrounding the transit station – those otherwise assembled by the private sector in the base case. These additional properties are then used to create a larger development, integrated with the transit station, if possible. Efficiencies

in the TOD are gained by being able to build over and/or directly adjacent to the station.

The same site area in the base case now can support not only a larger building, but more project value given its integration with the transit station. These two factors help support a higher land value than the base case approach. The assumption is that this additional land value could be exchanged for affordable housing.

Calculating Land Value and Affordable Housing Yield

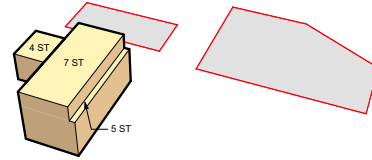
A residual land value model was used to estimate the revenues associated with a given development and subtract estimated costs and developer profit to determine a supportable land value.

In the base case, an estimation of the land value associated with the private developer's project was made. In the integrated TOD scenario an estimation of the land value associated with the larger integrated development was made. The difference in land value between these two scenarios was then used as the value that could be exchanged for new affordable housing units.

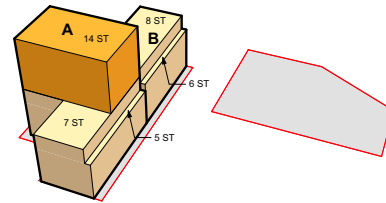
The number of affordable housing units that could be generated is based on two things – the increased land value associated with the integrated TOD project relative to the base case, and the capital subsidy required to build affordable housing units instead of market-rate units. A capital subsidy is the amount of money required to cover a portion of the cost associated with constructing an affordable housing unit to ensure it is economically viable.

Pape Subway

No Partnership
Total GFA: 6,580 m²

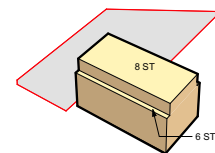
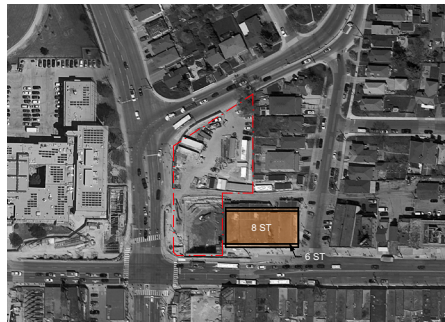


With TOD Partnership
Total GFA: 19,656 m²

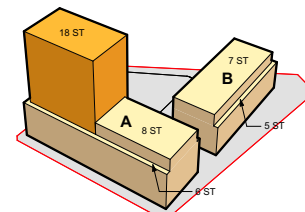


Keele & Eglinton LRT

No Partnership
Total GFA: 8,138 m²

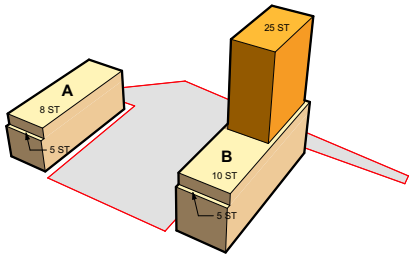


With TOD Partnership
Total GFA: 29,726 m²

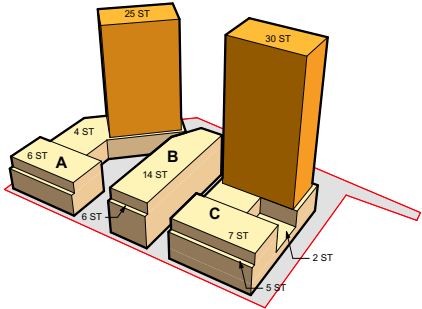


Weston GO

No Partnership
Total GFA: 40,911 m²



With TOD Partnership
Total GFA: 68,874 m²



The difference in land value between the base and integrated cases was divided by the capital subsidy to determine how many affordable housing units may be achievable in the new development. If the capital subsidy was \$200,000 per unit, then a scenario with \$5,000,000 of increased land value would generate a total of 25 new affordable housing units.

In an approach like this, both parties benefit. The private developer benefits by gaining access to a premium development site that they may not have otherwise had access to, by having the opportunity to participate in a higher value project than in the base case, and potentially by saving time and money by not having to assemble multiple properties for development (depending on the lot fabric).

In exchange, the public sector benefits by trading the additional land value they have generated by assembling the surrounding properties in exchange for new transit-oriented affordable housing that would not otherwise be constructed. Minor improvements to ridership are also probable, and commercial opportunities that could drive rental revenue have increased viability.

Economic Modeling Results

The economic modeling exercise showed that it is possible to leverage publicly-owned TOD land for the construction of new affordable housing units. Overall, using the assumptions, it was demonstrated that the three station areas noted previously could yield a combined 235 to 270 new affordable housing units without any additional government funding. If additional incentives could be secured – through CMHC or Open Door programs, for example – it is possible that the capital subsidy could be reduced, and additional units could be provided. These are units that would be provided over and above what the private sector might be required to deliver through inclusionary zoning.

The most significant takeaway from our analysis was that each station is different and a blanket, ‘one size fits all’ policy is unlikely to work. Each station area has a different market context, different land economics, a different policy structure, and different development potential. All of these aspects impact project value and the amount of value that could potentially be extracted for the purpose of affordable housing construction. As such, a blanket policy would end up leaving affordable housing units on the table in stronger market areas and may render projects unfeasible in weaker market areas.

The type of transit also matters. This type of approach is most effective with underground transit, but may also work with commuter rail transit like GO train lines where a significant amount of land is acquired around the station for parking or other uses. Other surface transit types like bus routes or LRT lines are unlikely to be appropriate for this approach to TOD as station lands cannot be developed for high-density uses.

Finally, the level of desired affordability also plays a role in how many units can be leveraged. At 100% AMR, the capital subsidy will be lower, generating more affordable housing units than at 80% AMR where the required capital subsidy will be higher.

It is also important to understand that for the approach to be successful, the TOD development needs to be planned at the same time as the station and transit facilities (reflecting Intervention #5). Development on top of or immediately adjacent to transit can create design and construction challenges but with advance planning and thoughtful coordination, integrated developments can be achieved. Where this may not be feasible, it might still be possible to create a TOD site that is directly adjacent to a station and achieve design efficiencies through reduced setbacks and some light overbuilding. This may be an important area for follow-up research.

More detailed information on the economic modeling exercise, including our financial assumptions and results for each station area, can be found below in the full report.

Full Analysis

NBLC and Urban Strategies identified three prototype stations for our economic modeling exercise. These station areas are located within different market areas of the City of Toronto and are serviced by different types of (existing or planned) transit. The three stations are as follows:

- Keele Street and Eglinton Avenue West (Crosstown LRT);
- Pape Avenue and Danforth Avenue (Bloor-Danforth Subway / Ontario Line); and,
- Weston Road and Lawrence Avenue West (Weston GO / UP Express).

The purpose of this economic modeling is to gain an understanding of whether or not integrating transit-oriented development (TOD) as part of transit station development can reveal additional density that can be used to leverage the construction of new affordable housing units. For each station, we have created two scenarios – a base case and an integrated TOD case.

Scenario 1 – The Base Case

The base case follows the current approach to transit construction. The public sector acquires the minimum amount of land to construct the transit station, leaving the private sector to assemble surrounding properties if they wish to construct a new development. In this case, affordable housing is only provided if required as part of existing land use policy – but its provision is likely to be minimal, if at all. In the base case, no new units are constructed above the transit station, densities on surrounding properties may be lower, and fewer residential units are constructed.

Scenario 2 - Integrated TOD

The second scenario for each station area assumes that the public sector is able to acquire additional properties surrounding the transit station – those otherwise assembled by the private sector in the base case. These additional properties are then used to create a larger development, integrated with the transit station, if possible. Efficiencies in the TOD are gained by being able to build over and directly adjacent to the station. Access to the station from the future development is direct and weather proof. The same site area in the base case now can support not only a larger building – but more project value as an integrated, all weather access is a highly desirable market feature.

These factors create a high land value that would otherwise not be realized in the traditional, base case approach. Our hypothesis is that this additional land value could be exchange for affordable housing.

Station Areas and Development Massing

Urban Strategies provided NBLC with a set of massing drawings for base case and integrated TOD at each of the three prototype stations. The following provides an overview of the massing and development statistics for each of the prototype stations and how the base case and integrated TOD scenarios vary in terms of scale and unit yield.

Keele and Eglinton (Crosstown LRT)

The Keele Crosstown LRT station is located on the northeast corner of Keele Street and Eglinton Avenue West (see Figure 1). Lands on the western side of the block were acquired for the purpose of a station entrance and bus terminal, though the remainder of the block remains in private ownership.

As Table 1 notes, our base case includes an 8-storey building along Eglinton Avenue West, on the east side of the station entrance. This building would yield approximately 96 residential units.

Under an integrated scenario, the building along Eglinton Avenue West would be much larger, with additional height – up to 18-storeys – above the station entrance at the corner. The unit count increases by more than 150 units to 251, with an increase in total gross floor area (“GFA”) to 229,000 sf.



Figure 1

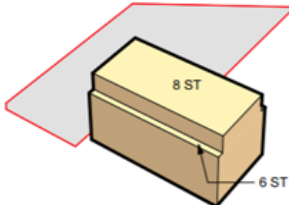
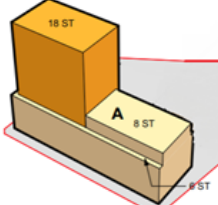
Keele & Eglinton					
	Base Case			Integrated TOD	
No. Properties	4		5		
Site Area (acres)	0.44		0.73		
Max. Storeys	8		18		
Estimated GFA (sf)	88,000		229,000		
No. Units	96		251		

Table 1



Figure 2

Pape & Danforth				
	Base Case		Integrated TOD	
No. Properties	5		7	
Site Area (acres)	0.31		0.71	
Max. Storeys	7		14	
Estimated GFA (sf)	71,000		212,000	
No. Units	77		231	

Table 2

Pape and Danforth (Line 2 & Ontario Line)

Pape Avenue and Danforth Avenue already features a station on the existing Bloor-Danforth subway line. However, the intersection is also expected to be the location of a future Ontario Line station. For the purpose of our economic modeling and massing, we have assumed that a new entrance to the Ontario Line would be constructed on the west side of Pape Avenue, across from the existing subway station entrance (Figure 2).

Our base case, as shown in Table 2, assumes that the private sector would eventually develop the properties directly to the south of the new station entrance, yielding approximately 77 units.

In an integrated scenario, we have assumed the properties to the south would be acquired by the transit authority. This would allow for the construction of a larger building – up to 14-storeys – with 231 units and an additional 140,000 sf of GFA beyond the base case. We have assumed that the 70 parking spaces currently located in the Green P parking lot would be replaced in this scenario.



Figure 3

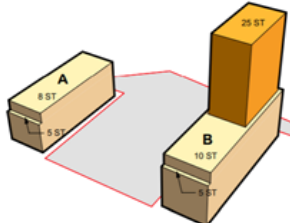
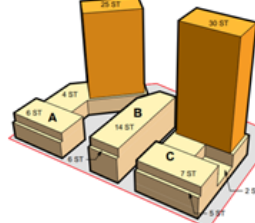
Weston & Lawrence					
		Base Case		Integrated TOD	
No. Properties	2				
Site Area (acres)	1.36				
Max. Storeys	25				
Estimated GFA (sf)	440,000				
No. Units	481				
				4	
				2.38	
				32	
				741,000	
				811	

Table 3

Weston and Lawrence (Weston GO & UP Express)

Weston GO station – which includes both GO train and UP Express service – provides a different approach to TOD and the massing scenarios. While true integration with the station may not be possible in the same way as an underground station, the surrounding lands, including the existing commuter parking lot, provide TOD opportunities.

In the base case, we have assumed that the lands on either side of the Metrolinx-owned parking lot can be developed by the private sector with new residential developments (Figure 3). This includes the parking lot on the west side of the property, currently owned by the Weston Park Baptist Church. Even without the Metrolinx parking lot, this still yields quite a bit of new development – 481 units across two buildings (Table 3).

In an integrated scenario, we have shown redevelopment of the Metrolinx parking lot, which allows for larger buildings on the west and east side of the station areas, along with an additional building in the middle of the site. Overall, the integrated scenario includes a total unit yield of 811 units across three buildings. We have assumed that the existing 144 commuter parking spaces on the Metrolinx parking lot, and the 79 parking spaces in the Weston Road Baptist Church parking lot, have been replaced as part of the overall redevelopment. This is a significant assumption. If these parking requirements were reduced there would be a positive impact on the affordable housing potential.

Calculating Land Value and Affordable Housing Yield

As part of our economic modeling, we have utilized a residual land value model that estimates the revenues associated with a given development and subtracts costs and developer profit to determine the supportable land value.

In each base case, we have estimated what the land value associated with the private developer's project would be.

In the integrated TOD scenario we have estimated the land value associated with the larger integrated development. This encompasses the lands that were to be purchased by the private sector in the base case, in addition to the lands that would be purchased by the transit authority for the new station.

The difference in land value between these two scenarios is then used as the value that could be exchanged for new affordable housing units.

Why do we use the difference, rather than the full value of the integrated development?

The best way to explain this is by using an example. Let's say in a base case scenario, the land purchased by a private developer adjacent to a station is worth \$5,000,000. Also in the base case, the station property – which is not used for TOD – has a value of x and is purchased by the transit authority. The value of the station property is not relevant to this exercise given that the transit authority needs to acquire it regardless of whether an integrated TOD approach is taken or not. The cost of the station property is therefore fixed.

When the station area is added to the private developer's land, a larger development can be constructed with more height and higher unit yields (as noted in Tables 1 to 3). This creates a project that has a higher value than the base case – let's say this larger integrated development is valued at \$12,000,000. By combining these properties to create a larger development, their combined value now exceeds their value as separate development parcels (e.g. Station land purchase price + \$5,000,000 for adjacent properties < \$12,000,000). Combining these properties for development has created excess value that can be tapped into for public benefit.

In an integrated TOD scenario, if the transit authority purchases the properties adjacent to the station that otherwise would have been purchased by a private developer in the base case, their costs have now increased by an estimated \$5,000,000.

The transit authority can now go out to the market with their development parcel – valued at a combined \$12,000,000 – and find a developer to construct the integrated TOD project. Our assumption is that they would expect the developer to reimburse the cost associated with purchasing the additional adjacent lands (\$5,000,000) to ensure that transit construction costs remain as budgeted. The remainder of the land value (\$7,000,000) would then be exchanged to the developer for the equivalent value of affordable housing units in the new development.

Why does this approach make sense for the two parties?

They both benefit. The private developer benefits by gaining access to a premium development site that they may not have otherwise had access to, by having the opportunity to participate in a higher value project than in the base case, and potentially by saving time and money by not having to assemble multiple properties for development (depending on the lot fabric). The development, having direct, all weather access to the transit station is also more marketable. In our analysis we keep the market value of future units the same in each scenario but it's probable that the developer could charge more if the development is fully integrated.

In exchange, the public sector benefits by trading the additional land value they have generated by assembling the surrounding properties in exchange for new affordable housing that would not otherwise be constructed. Minor improvements to ridership are also probable. Commercial opportunities that could drive rental revenue also have increased viability.

How many affordable housing units should be included as part of these new TOD projects?

The number of affordable housing units that could be generated is based on two things – the increased land value associated with the integrated TOD project relative to the base case, and the capital subsidy required to build affordable housing units instead of market-rate units. A capital subsidy is the amount of money required to cover a portion of the cost associated with constructing an affordable housing unit to ensure it is economically viable.

Calculating this capital subsidy is done by:

- Determining the construction cost of each affordable housing unit;
- Determining the monthly net operating income for each affordable housing unit based on average market rents;
- Calculating the maximum supportable loan based on the monthly net operating income; and,
- Subtracting the supportable loan total from the construction cost of an affordable unit to arrive at the required capital subsidy per unit.

The difference in land value between the base and integrated cases is then divided by this capital subsidy to determine how many affordable housing units may be achievable in the new development. If the capital subsidy is \$200,000 per unit, then the above example – with \$7,000,000 in excess land value – would generate a total of 35 new affordable housing units.

Station Lands

As noted, while our modeling does account for the cost of acquiring additional lands in a TOD integration scenario (the lands identified in red in Figures 1 to 3), we have not calculated the cost of acquiring the lands that are identified for station use in the base case scenarios (identified in green in Figures 1 to 3). The transit authority would have to acquire these lands for the purpose of building a station regardless of whether a business as usual or integrated TOD approach is taken. Regardless of the approach, the acquisition cost of these station lands should remain static and therefore would not represent an additional cost for the transit authority in an integrated TOD scenario.

If the transit authority wanted to recover the cost of acquiring these lands as part of the TOD integration, it would leave less land value to leverage for the provision of affordable housing units. This decision will have to be weighed based on what is the highest priority – transit cost savings or maximizing the amount of affordable housing built on these sites.

Economic Modeling Result

Table 4 provides a summary of our economic modeling. The top portion of the Table sets out basic site statistics, revenue assumptions, development costs, and the resulting land values for base and integrated cases at each of the stations. The bottom of the Table notes the required capital subsidy required to build an affordable housing unit at each location, and how many affordable housing units may be possible in our illustrative developments at 100% and 80% average market rent (“AMR”) based on our assumptions.

Please see 4.5 Key Assumptions for the key assumptions used in the modeling. It should be noted that our financial analysis has been prepared without the benefit of detailed site design or costing. The analysis is intended only to illustrate how, or if, integrating TOD with a station development can create additional value that can be exchanged for affordable housing units.

The following are key findings from the economic modeling exercise:

- There are significant differences in land value at each of the stations, driven largely by the differences in achievable index prices.
 - Whereas Weston and Keele are assumed to achieve pricing in the range of \$800 to \$850 per square foot (“psf”), Pape has an index price of \$1,100 psf. This has an impact of raising land values by \$100 to \$135 per square foot buildable at Pape relative to the other two stations.
- The discrepancy in land values means that the amount of additional land value that the integrated TOD scenarios yield is also varied between stations – ranging from \$12,000,000 to \$26,000,000 – which impacts the number of affordable rental units that can be supported in a new integrated development.
- The required capital subsidy also varies between station areas and depends on the level of affordability desired. At 100% AMR, the subsidy ranges from \$166,000 per unit at Weston to \$219,000 per unit at Pape. At 80% AMR, the required subsidy increases to \$187,000 to \$241,000 as the net operating income generated by the affordable rental units is reduced.
 - The discrepancy in the required capital subsidies between stations is due to differences in development costs. This is largely due to differences in soft costs such as parkland dedication fees, property taxes, land transfer tax, and sales commission fees, which are impacted by variable factors like land value and unit revenues.
- All of this, along with development scale, impacts the number and proportion of affordable housing units that can potentially be generated at each of the station locations.
 - The number of units varies between 59 and 108 at 80% AMR, and 66 and 119 at 100% AMR across our three prototype stations. However, the most significant discrepancy is the proportion of units at each location that can be built as affordable housing. It varies from as low as 9% at Weston at 80% AMR, to as high as 51% at Pape at 100% AMR.

CMHC Housing Lab - Comparison of Results

nblc

Test Sites, Toronto

Development Inputs	Keele		Pape		Weston	
	Base Case	Integrated TOD	Base Case	Integrated TOD	Base Case	Integrated TOD
Number of Properties	4	5	5	7	2	4
Site Area (acres)	0.44	0.73	0.31	0.71	1.36	2.38
Number of Units	96	251	77	231	481	811
Max. Storeys	8	18	7	14	25	32
Gross Floor Area (sf)	88,000	229,000	71,000	212,000	440,000	741,000
Avg. Index Price (Present\$)	\$850	\$850	\$1,100	\$1,100	\$800	\$800
Avg. Net Unit Size	750	750	750	750	750	750
Avg. End-Price (Present\$)	\$637,500	\$637,500	\$825,000	\$825,000	\$600,000	\$600,000
Parking Space Price (Present\$)	\$50,000	\$50,000	\$65,000	\$65,000	\$50,000	\$50,000
Storage Locker Price (Present\$)	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Total Revenue	\$71,000,000	\$188,000,000	\$76,000,000	\$226,000,000	\$344,000,000	\$585,000,000
per sq. ft. buildable	\$814	\$821	\$1,070	\$1,066	\$782	\$789
Total Development Costs (excl. land)	\$51,000,000	\$133,000,000	\$48,000,000	\$139,000,000	\$258,000,000	\$445,000,000
per unit	\$529,000	\$531,000	\$620,000	\$601,000	\$536,000	\$549,000
per sq. ft. buildable	\$578	\$581	\$673	\$659	\$586	\$601
Residual Land Value (Present\$)	\$8,000,000	\$20,000,000	\$13,000,000	\$39,000,000	\$24,000,000	\$37,000,000
per unit	\$81,000	\$80,000	\$168,000	\$169,000	\$50,000	\$46,000
per sq. ft. buildable	\$88	\$87	\$185	\$185	\$55	\$50
per acre	\$18,000,000	\$27,000,000	\$42,000,000	\$55,000,000	\$18,000,000	\$16,000,000
Additional Land Value with Integration:	\$12,000,000		\$26,000,000		\$13,000,000	
Affordable Housing Component	Keele		Pape		Weston	
	100% AMR	80% AMR	100% AMR	80% AMR	100% AMR	80% AMR
Required Capital Subsidy (per unit)	\$182,000	\$204,000	\$219,000	\$241,000	\$166,000	\$187,000
Affordable Rental Units Generated	66	59	119	108	78	70

Table 4

Conclusions

Our economic modeling shows that it is possible to leverage publicly-owned TOD land for the construction of new affordable housing units. In our analysis we illustrate that on the three sites, between 237 and 268 affordable housing units could be delivered without any government funding.

It also should be noted that if additional incentives can be secured – through CMHC or Open Door programs, for example – that the capital subsidy associated with each of the integrated TOD projects in Table 4 could be reduced. This would have the effect of increasing the number and proportion of affordable housing units provided within the development.

However, it is important to remember that each station is different. Every station has a different market context, different land economics, and a different policy structure – all of which impact project value and the amount of value that can potentially be extracted for the purpose of affordable housing.

Given this, there is unlikely to be a “one size fits all” solution where a policy can be put in place that requires a certain number of affordable housing units or a certain proportion of every project to be affordable. This type of policy would end up leaving potential affordable housing units on the table in stronger market areas and may render other TOD projects unfeasible in weaker market areas.

It is also important to understand that for the approach to be successful, the TOD development needs to be planned at the same time as the station and transit facilities. This can create design and construction issues but with enough advance planning, integrated developments can be achieved. Where this may not be feasible, it might still be possible to create a TOD site that is directly adjacent to a station and still achieve design efficiencies through reduced setbacks and some light overbuilding. This may be an important area for follow-up research.

Assumptions

The following are some of the key assumptions utilized in our economic modeling:

- The intended uses, building scales, and heights for all stations and scenarios are approvable;
- Building efficiency of 82%;
- An average unit size of 750 sf net;
- A suite mix consisting of 10% studio units, 40% one-bedroom units, 40% two-bedroom units, 10% three-bedroom units;
- Sales pace of 10 to 15 units per month depending on location and building scale;
- Revenues are estimated by NBLC based on current index prices in comparable projects, as reported by RealNet Canada/Altus Group;
- Above grade hard construction costs for market rate units of \$240 psf at Keele and Eglinton and Weston and Lawrence, \$250 psf at Pape and Danforth (assumes higher-quality finishes at Pape to justify higher index pricing). Hard construction costs of \$225 psf for affordable rental units. All above grade hard construction costs are based on the 2020 Altus Group Construction Cost Guide;
- Below grade hard construction costs of \$140 psf for underground parking garages, based on the 2020 Altus Group Construction Cost Guide;
- Soft costs include development charges, property taxes, land transfer taxes, building permit fees, among others, as per their prescribed rates at the time of writing;
 - NBLC has estimated other soft costs including planning application fees, consultants fees, marketing costs, lender's fees, legal fees, and insurance, among others;
- A contingency equivalent to 5% of total hard costs;
- Costs and revenues for market-rate units are inflated at 2.5% annually. Revenues for affordable rental units are inflated at 2.0% annually;
- A parking ratio of 0.75 spaces per unit for market-rate units, 0.1 spaces per unit for visitors, 0.2 spaces per unit for affordable rental units;
- Existing parking spaces at Weston and Pape stations have been replaced within the new developments, where necessary. Visitor parking spaces are included as part of the replacement spaces;
 - In the base case, 35 of 70 spaces at Pape are replaced (the development does not extend across the entirety of the existing parking lot). At Weston, all 79 spaces in the Weston Baptist Church parking lot are replaced in the base case;
 - In the integrated scenario, all 70 spaces at Pape are replaced. At Weston, all 79 spaces at Weston Baptist Church and all 144 spaces on the Metrolinx parking lot are replaced in the integrated scenario.
- Storage locker ratio of 0.5 per residential unit;
- Developer profit of 15%;
- Operating expenses of 40% for affordable rental units;
- Discount rate of 7%; and
- At Weston, which includes multiple buildings, each subsequent phase is assumed to launch once the previous one begins construction.

