THE CASE FOR CONVERSIONS

Understanding opportunities for conversions of office space to housing in Canadian downtowns

Canadian Urban Institute | Institut Urbain du Canada
Gensler
University of Calgary | School of Architecture, Planning + Landscape
Center for Civilization
University of Toronto | School of Cities
Kilo Lima Code Community
Turner

The Canadian Urban Institute (CUI) is Canada's Urban Institute. We are a national platform where policy makers, urban professionals, civic and business leaders, community activists, and academics can learn, share, and collaborate with one another from coast to coast. Our mission is to support vibrant, equitable, livable, and resilient cities in Canada through research, engagement, and storytelling.

This report builds on CUI's work on the recovery of downtowns with particular attention to the impacts of COVID. This project is completed in partnership with Gensler Architecture & Design, Turner Construction, University of Toronto School of Cities, Kilo Lima Code, James Alberding consultant, Pam Kapoor writer I engager I facilitator, University of Calgary School of Architecture Planning and Landscape and Center for Civilization, and Scribe Technical.

This project is one of many National Housing Strategy Solutions Labs funded by CMHC. Solutions Labs provide funding to stakeholder project teams to examine persistent, complex housing issues and rapidly develop potential solutions.

Canadian Urban Institute
Institut Urbain du Canada

CUI acknowledges the Indigenous Peoples of all the lands that we are on today and acknowledges the importance of the lands, which we each call home. We do this to reaffirm our commitment and responsibility in improving relationships between nations and to improving our own understanding of local Indigenous peoples and their cultures. From coast to coast to coast, we acknowledge the ancestral and unceded territory of all the Inuit, Métis, and First Nations people that call this land home. We continually seek ways to reflect and acknowledge the harms and mistakes of the past and to consider how we can collectively move forward in a spirit of reconciliation and collaboration.

TABLE OF CONTENTS

INTRODUCTION

Prompted by CUI's work on downtown recovery in response to the impacts of COVID-19, the purpose of this work is to understand the opportunity that vacant and underutilized office space presents for making downtown districts across Canada vibrant, equitable and sustainable. Office conversions offer the potential to play a key role in the revitalization of Canada's key downtowns, creating more complete communities by increasing housing, adding new uses, and bringing more people to the core.

Changes in work patterns and locations ushered in by the pandemic have resulted in what could be permanent alterations to our downtowns. Office occupancy — the number of people returning to work in downtown business districts — is still well below pre-pandemic numbers, and office vacancy rates are high or increasing in many markets. At the same time, the demand for housing is high in most urban areas.

Using a variety of methods, this work evaluates the potential for the adaptive reuse of aging office stock and vacant space to increase Canada's housing supply (ownership, rental, and supportive) while helping our downtowns become resilient to future shocks.

CUI's research establishes an evaluation framework for considering conversions in a variety of settings. This work is grounded in an analysis of the opportunities for office conversion based on past examples, policy readiness and current potential in six cities: Victoria, Regina, Winnipeg, Ottawa, Halifax and Moncton. In each city, we found examples of best practices and an inventory of office buildings identified as feasible for conversion. These buildings represent typologies that exist in cities across Canada. These are also structures reaching obsolescence — costly to maintain, inefficient, and out-of-date.

What should we do with the millions of square feet of central office space sitting empty across Canada?

While conversions can be complex, involving a shift in business models, skilled trades and financial resources compared to those needed for ground-up construction, there is value in considering conversions for a variety of stakeholders. Developers can benefit from quicker timelines for approval and completion with similar costs for a retrofit than to build new. For building owners, it can provide a new or mixed form of revenue by transforming an obsolete asset; and for those with a large portfolio, like REITS or provincial and federal governments, it can help achieve climate targets aligned with ESG goals, and support housing creation.

Despite the complexity that conversions can present, our research demonstrates there are benefits to investing in office conversions in the appropriate location, under certain market conditions and for buildings with specific characteristics. Conversions also support downtown revitalization to achieve a healthier mix of housing types, diversified tax base, 24/7 economy, larger residential population, more sustainable built form and the preservation of heritage buildings. Additionally, the climate benefits of both preserved embodied energy in the buildings and the opportunity for building retrofits that would result in increased energy performance and longer lifespans for existing buildings are significant.

The risks of not pursuing conversions include a future loss of revenue to municipal governments as assessed values and the corresponding property tax decrease with a decline of downtown economic activity. In Calgary, for example, the downturn in the energy sector in the mid-2000s led to a downtown office vacancy rate of 30% and

a depressed downtown core. The value of buildings and revenue to the City declined so significantly that it became more costly to leave empty buildings alone than to invest in a solution. Through targeted incentives (the first such program in Canada), the conversion of offices to residential use is aimed at bringing more residents downtown to support downtown recovery and capitalize on the buildings already in place. While the success of this strategy is becoming clear, Calgary's experience also demonstrates how important it is to act in a timely and nimble way.

What if we could increase housing supply AND revitalize downtowns at the same time?

Similarly, our learnings reveal templates and best practices to be adapted in a Canadian context. While many cities around the world have established processes and policies that make office-to-housing conversions easier and more appealing, Canada has lagged in re-imagining and repurposing vacant and aging office buildings. In the time that Ottawa created 500 residential units through conversions, for example, American and European cities created thousands.

To identify the scale of the opportunity and ways to mitigate risks and uncertainties, this final report analyzes feasibility, barriers, and enabling conditions; evaluates best practices and supporting policies and programs; and provides recommendations. This work guided the creation of a scalable model for evaluating conversion opportunities including five hypothetical scenarios to assess conversions in different contexts. These findings identify the market conditions, policies and incentives that could be leveraged to create more opportunities for the conversion of under-utilized office space for a diversity of housing types.

Among the six sample cities examined, CUI identified millions of square feet suitable for conversion to housing, and millions more square feet of under-utilized office space when adding the potential in other large cities. In total, our estimates show a potential creation of 18,000 to 22,000 housing units in just 11 cities.

Our understanding of office-to-housing conversions is evolving. Continuing to track trends will be essential to finding where the most promising opportunities exist. CUI's research is a first step towards a Canada-wide initiative that could drive the creation of new housing and give a boost to Canada's downtowns in the process.

BACKGROUND AND METHODOLOGY

PROJECT SCOPE

This project considers the opportunities for the re-use of office space to provide necessary and needed housing in cities across Canada. This work is both an illustration of possibilities and a toolkit of actions to support the re-use of under-utilized office space.

OFFICE CONVERSIONS AND DOWNTOWN RECOVERY

This work builds on CUI's work on downtowns in 2021 to explore the trajectories of downtowns and the effects of COVID. This research revealed:

- Downtowns are on **diverging trajectories**; some towards less affordability and diversity, and others towards abandonment and neglect
- COVID and other threats to downtowns and main streets **provokes new questions and a chance to rethink the outcomes** of downtown recovery - restoring to a pre-COVID context may not be the best or only option
- Part of CUI's work on what it will take to recover our downtowns includes **exploring opportunities to re-use and revitalize under-utilized assets** including vacant office space

CUI's work in 2021 culminated in three potential scenarios for the future of downtowns:

1) Disinvestment and abandonment
2) Escalating unsustainable and unaffordability, and
3) A more hopeful scenario of recovery as a means of increased diversity, resilience, equity and sustainability.

PROJECT METHODOLOGY

This project is the culmination of an 11-month inquiry into office conversions resulting in an analysis of building typologies, the scale of the opportunity across Canada, the policy levers available, and the conditions that make conversions possible. Six Canadian cities were used to demonstrate the scale of the opportunity in a variety of geographic and market contexts.

Victoria | Regina | Winnipeg | Ottawa | Moncton | Halifax

The following methods were used to evaluate the opportunity for office conversions:

- Desk research and identification of best practices
- Developing an evaluation framework
- Evaluating city trends, market conditions and policy landscape in 6 cities across Canada
- Working in collaboration with Gensler Architecture & Design to evaluate the building stock in downtown cores
- Devising market scenarios based on the conditions in 6 cities
- Creating a process toolkit to guide action on conversions
- Calculating the overall potential across Canada's large cities
- Formulating general and context-specific recommendations

ENABLING CONDITIONS

Desk research revealed four key enabling conditions that make conversions a viable option for housing creation. While not all may exist in a city, there are ways to support conversions through policy, programs and financial support.

Building Types

Shallow floor plates, historic character, operable windows or ease of replacement, updated or flexible mechanical systems and servicing, conducive building envelope (not requiring a reskinning)

Location of a Building

Proximity to amenities, essential services; separated from incompatible uses

Policy/Regulatory Context

Policy support, flexible zoning, downtown residential intensification goals, streamlined development approvals; climate goals

Financial, Economic and Market Conditions

Programs, incentives, market conditions that support conversion (high housing demand and/or high office vacancy, aging or obsolete office buildings)

PRECEDENTS

Extensive research on case examples and best practices demonstrates the opportunity for conversions internationally and in certain market scenarios where high office vacancy, housing creation and downtown revitalization are key policy goals. Although several contexts are decades-old, these instances are not dissimilar to the impact of COVID on downtowns.

Canada

Ottawa
500 units since 2015

Halifax
200 units since 2019

Winnipeg
160+ units since 2020

Regina
65 units since 2013
(+ units in 1990s and 2000s)

Victoria
1 recent conversion

USA

Philadelphia
1,850 units since 2020
(similar in Washington DC)

New York City
59 buildings
and 12,000 units in
lower Manhattan since 9/11

Los Angeles
conversions of 14,000 units
since1990s

Europe

Rotterdam
300,000 m2 since early 2000s;
currently 20% of housing in NL
through conversions

London
72,000 units 2015-2020

In total, precedents show nearly 1,000 units in six cities in Canada and 30,000 in just four U.S. cities

BARRIERS TO OFFICE CONVERSION

The barriers to the conversion of office space are well-documented and reinforced in our research and engagement. These barriers frame where the opportunities for conversion exist. Our work focused on identifying which barriers are risks that can be mitigated through policy and technical considerations.

Barriers and risks to consider:

Challenging building typologies: particularly mid-century and later with large floorplates, inoperable windows, curtain walls and outdated systems.

Static business models: commercial real estate entities resistant to move into housing development, management and operations

Site incompatibilities: residential uses may not be compatible in areas of downtowns where there are a lack of amenities such as groceries, green space, schools, etc.

Housing moratoriums: policies that protect office removal to the detriment of more mixed-use environments

Soft market conditions: weak office markets may not mean that the conditions exist for conversion to housing

Lost revenue sources: municipal revenue loss based on a higher mill rate for commercial properties than for residential

Aging structures and systems: older building stock suffers from poor energy efficiency and deterioration; bringing a building to the quality and standards of new construction can be challenging

Lack of specialized knowledge and skills: building trades unaccustomed to conversion versus new construction

Unknown costs and inexperience: there may be more unknowns in an office conversion than new construction, and a lack of experience in navigating these challenges creates financial risk for building owners and developers

Cumbersome policies and building codes: regulations created for new construction can be complex or rigid when applied to changes to an existing building

EVALUATION FRAMEWORK

CUI identified the following four categories for an evaluation framework.

1 Building Assets

Office space as under-utilized asset • Offices changing in characteristics and use • Trends in adaptive re-use • Trends in hybrid work • Significant volume of leased but under-utilized space

2 Policy Context

Downtown intensification • Mixed-use environments • Heritage conservation • Housing incentives Permissive land use policies • Regulatory flexibility

3 Technical Considerations

Costs of conversion • Physical building characteristics Building health and safety • Innovative building technologies Code requirements for existing buildings • Financial partnerships and new business models • Economic spin-offs

4 Equity and Environment Goals

GHG savings through embodied energy • Energy efficiency targets and energy performance improvements through renovation Affordable housing goals • Urban equity opportunities • Leveraging transit and other investments in existing infrastructure and civic amenities • Downtown investment and public health and safety

UNDERSTANDING BUILDING COMPATIBILITY

BUILDING COMPATIBILITY ASSESSMENT TOOL

Modelling performed by Gensler Architecture & Design was used to identify the top office building candidates in each of six cities evaluated for this project to understand potential viability for further study to convert to residential.

BUILDING CHARACTERISTICS AND WEIGHTED CRITERIA

Properties were reviewed qualitatively by considering various property characteristics and weighted accordingly based on impact to conversion. This analysis was then used to create standard building typologies.

Licensed brokerage data was used to filter existing office buildings based on location, size, and vacancy rate. In total, 30 buildings were identified by Gensler as possible candidates, representing some but not all potential candidates. [1]

[1] CoStar Group Platform used for property or office building selection. Criteria varied between cities for two primary reasons:
a) Vacancy information not being available consistently in the CoStar Database
b) Varying average size and height of buildings between cities.

Similarly, additional data may not be available in the data set and limits to the number of buildings searched. Only buildings in Ottawa were ranked for a vacancy rate of 30% or higher; for all other cities, vacancy rate threshold was removed from criteria due to the lack of reliable data.

Building analysis was based on the following criteria weighted as noted.

30%

Floor Plate

Window to core distances ranges between 24 to 50 ft with 40 ft considered ideal. One elevator per 100 units considered desirable.

30%

Building Form

Floor plate dimensions impacts on circulation, egress and unit layout with rectangular floorplates most desirable.

20%

Servicing

Conversion potential increases with existence of a loading area, parking and a centralised mechanical room.

10%

Site Context

Walk and transit scores assessed to understand compatibility of building location as well as impact of surrounding properties such as shadowing, view corridors and direct natural light.

10%

Envelope

While façade replacement does not prevent a conversion, it increases the cost of projects and extends project schedules. Buildings with curtain wall systems are less desirable than those with punched, operable windows.

BUILDING TYPOLOGIES

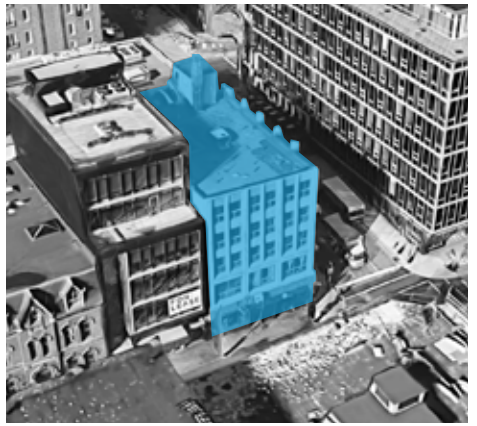
Using modelling and building evaluation, CUI created typologies to identify building types that lend themselves to conversions. This technical analysis enables us to understand the characteristics most desirable for conversions. This process was based on review of the buildings identified as having potential as well as completed conversions.

Brutalist High-rise

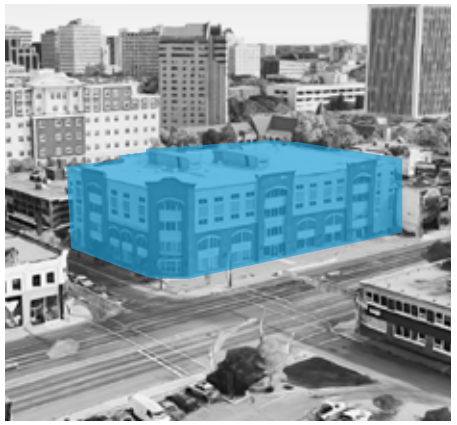
Steel Frame High-rise

Low-rise Building

Heritage Mid-rise



Challenging Mid-rise

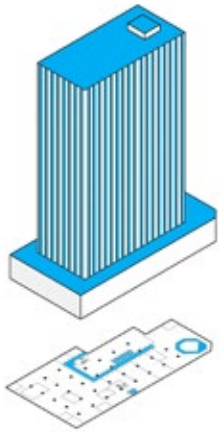


Given the small sample size (30 buildings), findings here are representative of the cities evaluated but may not be conclusive of all cities and buildings stock, espeically in large cities.

BUILDING SUITABILITY

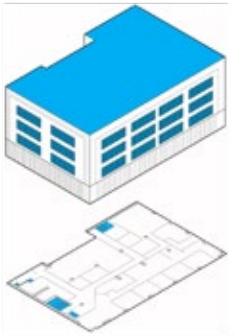
Averaging of compatibility scores for buildings for each type are added to show suitability. Based on this analysis, buildings over 80/100 are likely to succeed, those scoring over 70/100 can succeed but compromises will be required. Those less than 70/100 are unlikely to be feasible. Suitability and success will vary based on individual building characteristics. Each typology is detailed in the following pages.

Brutalist High-rise
score
78/100

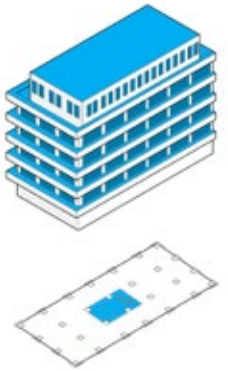


Steel Frame High-rise
score
76/100

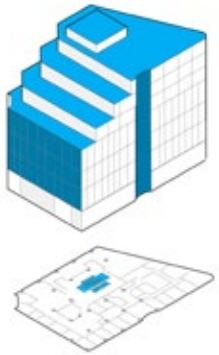
Low-rise Building
score
72/100



Heritage Mid-rise
score
69/100

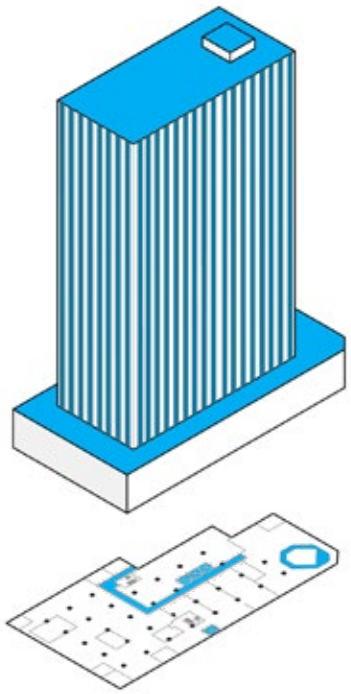


Challenging Mid-rise
score
58/100



BRUTALIST HIGH-RISE

Typically built in the 1960s-1980s of concrete and re-enforced concrete in the architectural style of Brutalism. These mid-century buildings used the technologies of the time to create austere concrete structures with few operable windows and smaller window to wall ratios than earlier heritage buildings. Internal structural columns create some obstructions to interior layout. Buildings tend to be large in floor plate since they did not require natural light for interior spaces. As these buildings are often in need of physical and energy upgrades, they make up the bulk of conversions in the past two decades.



21 buildings were identified as fitting the brutalist typology with an average compatibility of 78 out of 100, the highest of the five building types. Strengths of these buildings include configuration of floorplates, building form and context. The 'podium and tower' format of buildings of this era lend themselves to conversions with natural light on four sides.

78/100

Avg Compatibility

Floor Plate	6/10
Form	10/10
Services	6/10
Context	8.75/10
Envelope	6.75/10

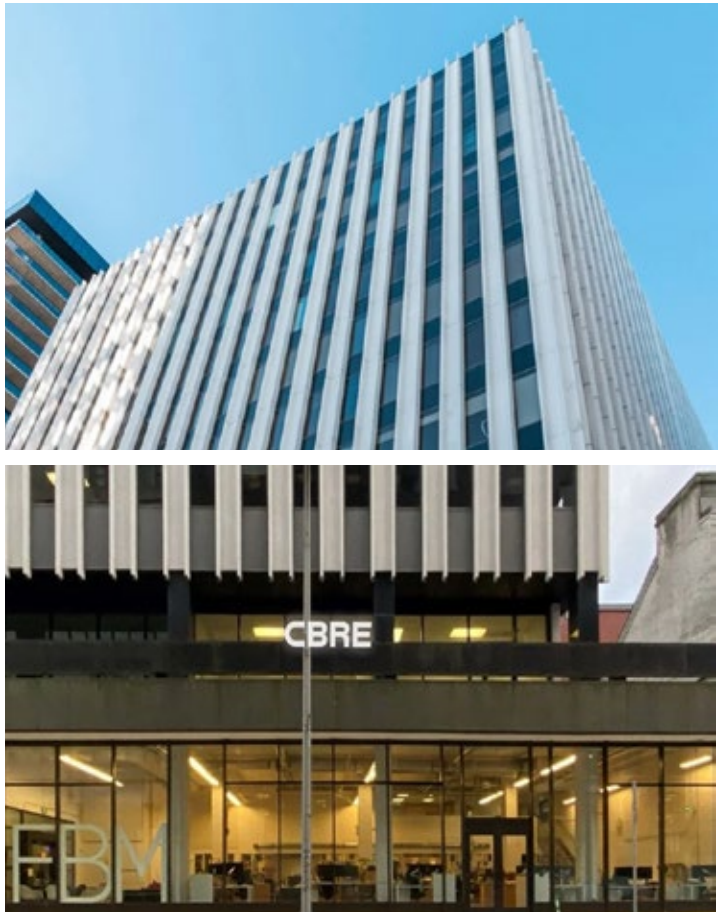
Based on methodology created by Gensler.

Images represent case examples of converted buildings in their existing context.

Agency Art Lofts
1660 Hollis Street,
Halifax, Nova Scoita

The 14-storey Centennial Building at 1660 Hollis Street was built in the 1970s and was one of Halifax's first high-rise buildings. When acquired by Sidewalk Real Estate Development, the office tower was nearly 40 percent vacant having lost its tenants to newly built Class A office buildings. The mixed-use adaptive reuse project, branded Agency Art Lofts, will introduce 100 new residential units to downtown Halifax, coming in one-, two-, and three-bedroom configurations with tall ceilings, and features 75,000 square feet of retail and maintained office space. Thirty-eight out of the 100 units will be subsidized by the province of Nova Scotia as part of a $1.9 million deal to rent those units for the first 20 years at 20 percent below the average rate reported by CMHC. The industrial feel, loft style, and infusion of art differentiates the project from the surrounding offerings. The project's estimated completion date is summer 2023.

Halifax's new zoning removed parking requirements for the site, which Sidewalk identified as an enabling condition as they would not have touched the building otherwise. Sidewalk's business model also allows the developer to capitalize on the niche market of commercial to residential adaptive reuse. The developer is vertically integrated with expertise for multiple stages of the project from planning to construction under one cohesive company instead of relying on external contractors. This business model makes Sidewalk more competitive in completing office conversions.



Source: Sidewalk Real Estate Development

STEEL FRAME HIGH-RISE

Typically built in 1990s and later, the common characteristics of steel frame buildings are a higher window-to-wall ratio than the earlier brutalist structures and a structural system of external column supports. As a result, these building do not have interior columns that interrupt the space. Buildings tend to be large in floor plate since they did not require natural light for interior spaces.

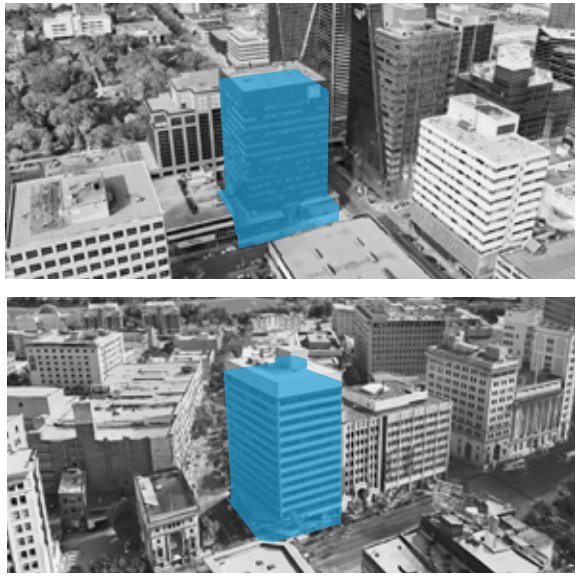
8 buildings evaluated fit the typology of a steel frame buildings.These buildings show strengths in floor plate, building form and context. Steel-frame buildings modelled have an average compatibility of 76 out of 100, only slightly lower than brutalist buildings.

76/100

Avg Compatibility

Floor Plate	6/10
Form	10/10
Services	7/10
Context	8.6/10
Envelope	6/10

Based on methodology created by Gensler.



Images represent case examples of converted buildings in their existing context.

STEEL FRAME HIGH-RISE CASE STUDY

433 Main Street, Winnipeg, Manitoba

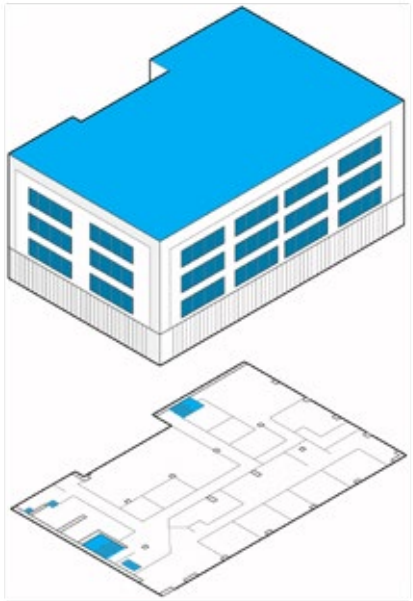
Located in Winnipeg's Exchange District, a heritage area undergoing significant revitalization, 433 Main Street was converted from a ten-storey office building to mixed-use residential by Alston Properties. The project was completed in 2022. This adaptive reuse features 80 residential units made up of one- and two-bedroom units marketed as luxury apartments. The only engineering component substituted out was the mechanical system. The building features three high speed elevators, a fitness center, penthouse lounge, in-suite laundry, and outdoor parking.

Winnipeg's permissive downtown zoning allows for a multitude of uses with zero parking requirements and reduced carrying costs from planning approvals to alternate site regulations and performance standards. Besides residential use, the building features a single level of underground parking, maintains one office level, and introduces a retail space at ground level.

Source: Alston Properties

LOW-RISE BUILDING

This typology is defined less by the era of building and more by the characteristics of the building. These buildings tend to include lower window-to-wall ratio than the heritage building or the steel frame building. The buildings tend to be squat with large floor plates thus requiring more area for circulation (hallways, elevators, stairs).



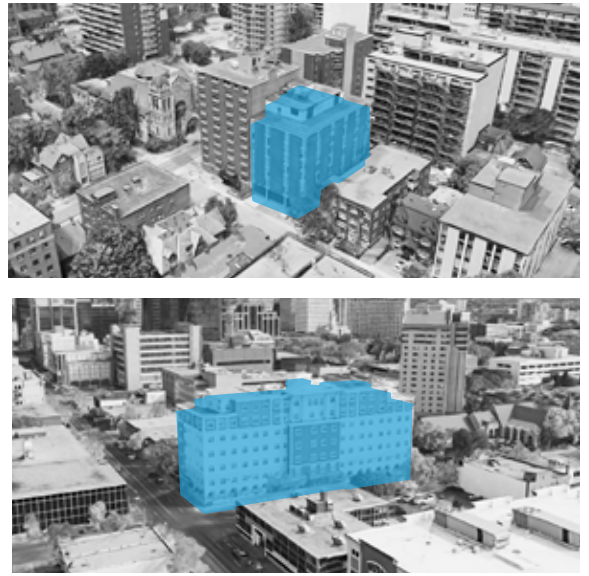
27 buildings evaluated fall into the low-rise typology. Of the buildings modelled, examples have an average compatibility of 72 out of 100, lower than brutalist or steel frame buildings owing to larger floorplates. However, the form and envelope of the buildings provide strengths if the size of the floor plate is manageable to allow a conversion or if interior space can be utilized for common amenities.

72/100

Avg Compatibility

Floor Plate	4.75/10
Form	10/10
Services	6.5/10
Context	7.6/10
Envelope	8/10

Based on methodology created by Gensler.

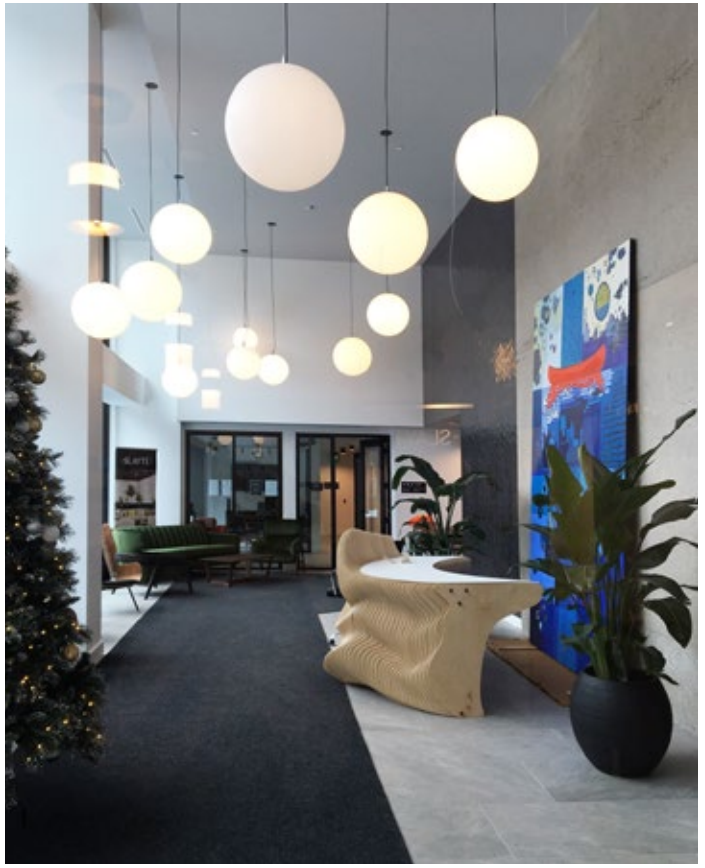


Images represent case examples of converted buildings in their existing context.

The Slayte
473 Albert Street,
Ottawa, Ontario

The Slayte, at 473 Albert Street, is an eleven-storey former office building located at the western edge of Ottawa's downtown core. The conversion to residential and commercial mixed-use was carried out by CLV Group Developments, starting in 2019 and completed in 2022. The building features 158 residential units, 6,700 square feet of indoor amenities, and 7,500 square feet of exterior rooftop amenity.

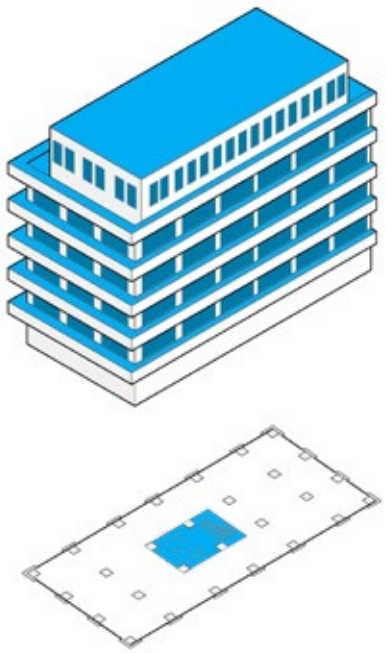
The residential unit mix includes studio, one-bedroom plus den, and two-bedroom configurations. The façade was altered slightly to include Juliet balconies to introduce a more residential feel while maintaining the existing structure. High quality amenities include a business centre, gym, and rooftop patio and party lounge.



Source: Jennifer Barrett

HERITAGE MID-RISE

Typically built from the 1800s through the 1940s, these buildings' structural systems were either masonry or concrete depending on the era of construction. Needing to have an abundance of natural light, these buildings typically had high window to wall ratios and high ceilings. Interior columns that provide structure interrupt the interior spaces. Many of these buildings were converted into residential 'lofts' as their use for light manufacturing declined in the mid-1900s.



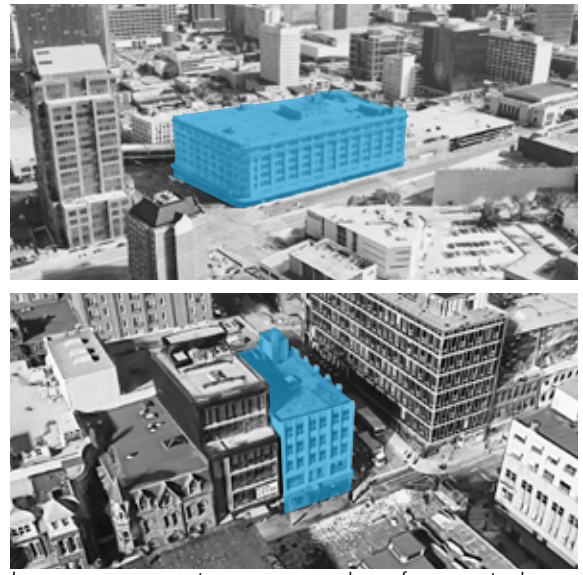
16 buildings were identified with average compatibility of 69 owing to larger floor plates and challenges of servicing. The form and building envelope are strengths, and the historic characteristics and location of heritage buildings lend themselves to housing in core areas of the city. Further, as many heritage buildings have historic designation, demolition is not possible and adaptive re-use must be considered.

69/100

Avg Compatibility

Floor Plate	4.5/10
Form	10/10
Services	4/10
Context	8.25/10
Envelope	6.75/10

Based on methodology created by Gensler.



Images represent case examples of converted buildings in their existing context.

HERITAGE MID-RISE CASE STUDY

Wehwehneh Bahgahkinahgohn
450 Portage Avenue
Winnipeg, Manitoba

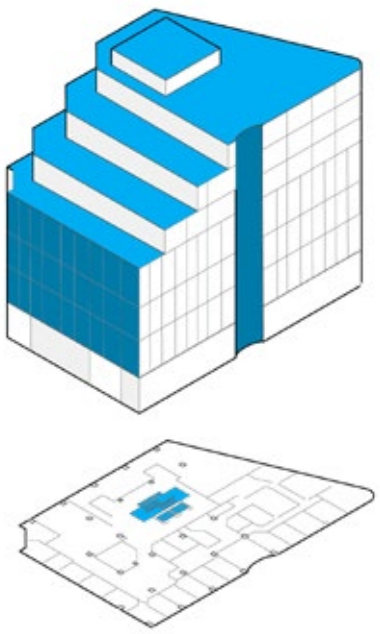
The iconic six-storey Hudson's Bay Company (HBC) heritage building in downtown Winnipeg was transferred, in exchange for elk skin and beaver pelts, to the Southern Chiefs' Organization (SCO) in a high-profile act of reconciliation. The First Nations-led, environmentally conscious, adaptive reuse of the former department store is called Wehwehneh Bahgahkinaghohn, meaning 'it is visible'. Once complete, the century-old limestone building will feature a variety of culturally appropriate commercial, institutional, and residential uses. The main floor, designed to welcome the public, will feature a museum and art gallery exhibiting Indigenous history and the repatriation of artifacts, a grocery store, and the upcoming First Nations Bistro Restaurant. The second floor will house the SCO Governance House, its property management office, childcare, commercial spaces for First Nations non-profits, and a dedicated space for educational providers. The development of the building represents the best of what can be done with a building once considered to have zero monetary value when the political will and community interest are present.

Floors three to five will house 75 units each for a total of 225 flexibly designed affordable housing units from studio to three-bedroom configurations, and the sixth floor will feature 90 assisted living units with 10 more geared towards social assisted living with a full package of amenities. Every unit will be visitable and a portion on each floor are fully accessible. Each residential floor will feature common spaces such as shared kitchens, dining and party areas, and a cultural room with a real fire. The creation of these units is meant to make up for the lack of high quality, safe, and affordable housing for the First Nations community in Winnipeg.

Source: Southern Chiefs' Organization scoinc.mb.ca

CHALLENGING MID-RISE

This typology was used to classify buildings that were identified but did not easily fit into one of the other categories listed above. The buildings in this category scored lower based on the five criteria established by Gensler hence their description as “challenging”. Characteristics of these buildings include irregular floorplates, a glazed façade and interior columns that follow the unusual shape.



Only 3 buildings evaluated were in the challenging typology with average compatibility of 59 due to unusual building shapes or curtain wall systems. However, these buildings have other positive characteristics, typically newer construction and services, as well as staggered floor plates that could accommodate outdoor amenity space and may lend themselves to conversions on a case-by-case basis.

59/100

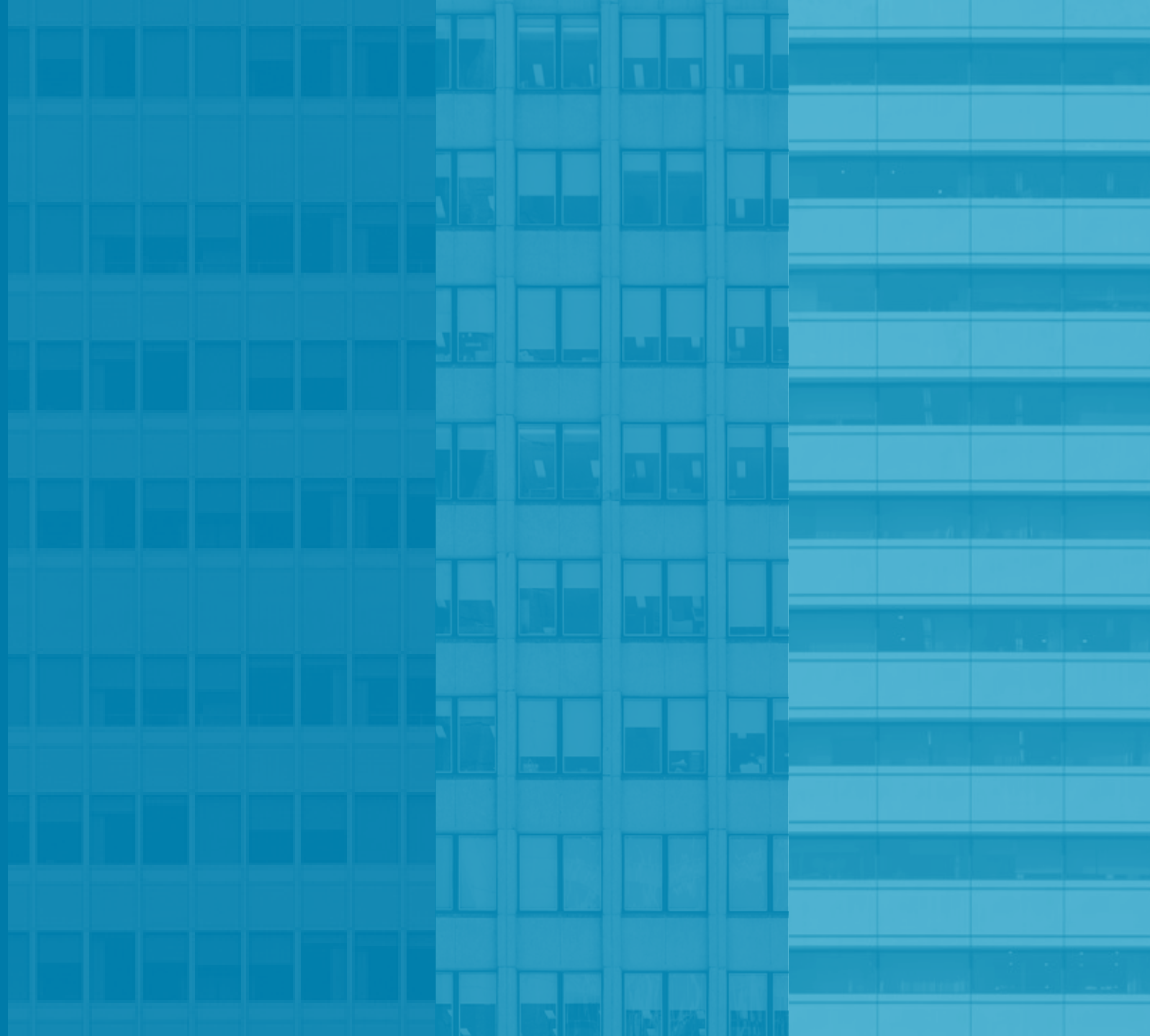
Avg Compatibility

Floor Plate	2.5/10
Form	10/10
Services	7/10
Context	8/10
Envelope	3/10

Based on methodology created by Gensler.

Images represent case examples of converted buildings in their existing context.

POLICY REVIEW



THE POLICY LANDSCAPE

Working with municipal staff, housing, and development stakeholders, CUI evaluated the policy environment for conversions in each of six cities. This analysis was used to determine policy readiness and the extent to which conversions could contribute to municipal, provincial, and federal priorities.

POLICY ANALYSIS

At minimum, analysis of policies and programs to consider for office conversions must include noted municipal plans and relevant federal and provincial codes and acts.

MUNICIPAL

- Official (Community) Plan
- Climate Action Plan
- Housing Plan, Heritage Plan, Office Policy
- Downtown (Neighbourhood) Plan
- City Zoning By-Law

FEDERAL/PROVINCIAL

- National or Provincial Building Code, Plumbing Code, Fire Code, Energy Code
- Planning Acts and Provincial Policies

MUNICIPAL PLANS AND POLICIES

Official Plan

An Official (Community) Plan can create the right conditions for office conversions by including policies that align with downtown intensification, mixed-use, transit-oriented development and downtown amenities.
Example: City of Ottawa's Official Plan

Downtown Plan

Secondary to an Official Plan, downtown (neighbourhood) plans provide more detailed land use that can facilitate or stall office conversions. Ensuring a mix of uses, amenities and services that support residential growth as well as permissive land use designations are beneficial.
Example: City of Moncton's Downtown Core Community Improvement Plan

Office Policy

An Office Policy can be a stop-gap measure to over correction of conversions that would limit the availability of office space. Providing a threshold whereby conversions would cease would create a balance of uses that meets policy and economic development goals.
Example: City of Regina's Office Policy in Design Regina: Official Community Plan

Zoning Bylaw

Permissive zoning can support conversions by allowing a change of use without zoning amendments and by limiting approval challenges intended for new development. These include: removing height requirements, setback requirements and on-site servicing requirements that do not affect health and safety in cases where the existing floor area is retained. Additional measures include reducing or waiving parking minimums, creating a mixed-use zone that enables multiple uses including those that complement residences and allowing a vertical mix of uses so a conversion can 'pencil out'.

Streamlining of approval processes such as removing site plan control or development permit for conversions has also been applied successfully.
Example: Halifax Regional Municipality's Regional Centre Land Use By-law

Municipal Housing Plan

Housing plans with key housing targets and affordable or rental housing goals can be instrumental in aligning with land use plans to advance conversions especially when linked to affordable, supportive or transitional housing creation. Establishing design and livability standards such as minimum unit sizes or appropriate amenities can help shape outcomes to address housing needs. Flexibility should be considered since design may be challenging when working with an existing floorplate.
Example: City of Winnipeg's Downtown Residential Development Action Plan

MUNICIPAL, PROVINCIAL AND FEDERAL

Heritage Plan

Heritage buildings have been identified as a building typology relevant for conversion. As such, a City's Heritage Plan that identifies designated buildings and provides streamlined approvals, education, or financial incentives for conversion of heritage properties will increase the uptake in building restoration. Analysis of the GHG savings through conversions has identified the benefits of building restoration for embodied energy, material quality and improved energy performance.

Example: City of Victoria's Heritage Policy in Downtown Core Area Plan

Climate Action Plan

Climate Plans (municipal, provincial and federal) can support conversions by linking GHG reduction with building retrofits and higher performance metrics. In addition to rewarding avoided emissions vis-à-vis demolition, climate plans could implement a deterrent for demolitions such as a pollution levy.

Example: City of Ottawa's Better Buildings Ottawa Strategy

Provincial/National Building Code or Municipal Building Bylaw (where relevant)

Discrete sections in building codes that pertain to existing buildings can provide ease and clarity for code review and building permit requirements.

Example: Ontario Building Code (Part 11), Vancouver Building Bylaw

Other Provincial Plans, Acts and Policies

Alignment with provincial codes and acts to support conversions and remove barriers can provide incentives for pursuing conversions in the form of expedited approvals. In Ontario, it has been identified that the provincial Record of Site Conditions, which is trigger by a change of use or building permit application, can create financial obstacles and delays to conversion where soil testing and site analysis must be performed despite no disturbance of the soil and significant distance from uninterrupted ground and future residential units.

Education and Guidance

Technical guidelines, community of practice, dedicated staff teams or information to help assist a variety of stakeholders in conversions.

FINANCIAL TOOLS

In situations where market conditions and housing demand may not be enough to facilitate conversions, or where intended housing goals may be met through conversions the following direct and indirect financial tools may be considered by all levels of government:

Direct funding and incentives:

- Capital grants
- Tax exemption
- Heritage funding
- Fee waivers (e.g. building permit)
- No or low-interest loans
- Capital development funds
- Pre-development funding
- Social impact bonds
- Energy efficiency or GHG reduction funding

Land Value Capture

Models that remove fiscal challenges of land acquisition such as leased land, land trusts, property disposal (by government to housing non-profits), or targeted tax increment or community improvement areas.

Planning and Land Use

In addition to plans and policies noted in previous pages, the following planning and land use instruments can act as financial incentives by shortening timelines or removing barriers:

- Density-bonusing – to allow additional units through building add-ons in specific policy areas or for certain building types (age, architectural characteristics)
- Transfer of development rights – transfer of unused density to a neighbouring site in order to deter demolition of an existing building to increase density

POLICY CASE STUDY

UK's Permitted Development Rights (2023)

The Permitted Development Rights (PDR) [1] was passed by the UK's national government in 2011 to enable the conversions of commercial buildings to residential units by right. Under PDR, developers and buildings owners only need to provide 'prior approval' notification that outlines the projects' details and its possible impacts on transport, highways, contamination risks, and flooding risks. PDR also prohibits local authorities from imposing any other policies in the approval process, such as setting minimum space standards or affordable housing contributions.

The PDR addressed the regulatory barriers of office conversions by streamlining the process of and requirements for obtaining development permit. However, PDR skewed the value of office buildings significantly as conversions became highly profitable as developers could convert office buildings with little to no regulation.[2]

Some of the consequences of this include:

- The creation of poor quality of housing that are extremely small, poorly designed, and often located in unsuitable locations for housing [3]
- Loss of office space as many of the units created through PDR are either partially or even fully occupied [4]
- Local economic pressure driven by the increase in office rents as supply shrunk.

More than 30,000 jobs in London were impacted by PDR, majority of which involved SMEs that occupied "economically-priced" that may be difficult to replace [5]

These following considerations would help address the unintended consequences of PDR:

- Ensuring that conversions must go through normal planning process to provide local municipalities with the ability to control how conversions are taking place [6]
- Establish a minimum office vacancy to ensure that there is enough office space for firms who need it [7]
- Create minimum space and quality standards for homes created through conversions to prevent the creation of overly small and poor housing units [8]

1 Julia Park. "Why the Government Should End Permitted Development Rights for Office to Residential Conversions." Levitt Bernstein. (2021). https://www.levittbernstein.co.uk/research-writing/why-the-government-should-end-pdr-for-office-to-residential-conversions/

2 Ibid 3 Ibid 4 Ibid 5 Ibid

6 Park, Julia. Interview by Luthfi Dhofier. Canadian Urban Institute. September 9, 2022.

7 Ibid 8 Ibid

Rotterdam Covenant "Tackling Office Vacancy"

The Covenant for Tackling Office Vacancy was the City of Rotterdam's main policy instrument to address the high office vacancy rate in the city caused by the economic impact of the dot. com bubble. The covenant established a mutual agreement that lasted between 2011 and 2014 between the City, developers, and building owners around office conversions.
This agreement included include:

- The floorspace targets to be converted;
- The understanding that the total floorspace converted would be higher than new-build offices;
- Increasing knowledge sharing between the City and developers/building owners and;
- that the City would be the knowledge centre facilitating market parties.

The covenant was non-binding and based on 'best-effort obligations' concept, which means there were no hard targets nor penalties involved if the targets were not met.

The covenant was also supplemented by other supporting actions at the national and municipal levels, including:

- The creation of specific "transformation team" to increase dialogue, and co-operation;
- Building decree that sets different standards for office conversions;
- Environmental law decree 2014 and amendment to the current land use planning policy to streamline the waiver to land use plan for conversion projects
- The creation of various online and print information materials to help building owners and developers learn about office conversions. 1

To help implement the covenant, the City of Rotterdam held regular 'vacancy and conversion Friday drinks' to help foster the relationships between commercial and residential developers. 2

The lack of knowledge of office conversions within the real estate sector is a major barrier to office conversions. Efforts to educate and bring these actors together could help support office conversions, as the example from Rotterdam demonstrates. Between 2011 and 2015, more than 3,229,173 sq ft of vacant office buildings were converted into residential units and other uses. 3

1 Conversation with Erwin Heurkens and Hilde Remoy. Canadian Urban Institute. September 12, 2022.
2 Heurkens, Erwin et al. Planning Policy Instruments for Resilient Urban Redevelopment: The Case of Office Conversions in Rotterdam, the Netherlands." Building Urban Resilience through Change of Use, First Edition. (2018).
3. Ibid

Downtown Calgary Development Incentive Program

The Downtown Calgary Development Incentive Program is a $100 million investment by the City of Calgary to address the high office vacancy in the city's greater downtown area.

The program provides office-to-residential conversion projects with $75 per sq ft. Building owners and/or developers can receive up to $10 million per project and some projects could receive more with Council approval. Building owners are allowed to keep certain floors as office space, as long as they meet the minimum conversion area of 40,000 square feet. Building owners are also required to provide a 'tenant relocation plan' in their applications to facilitate existing tenants that need to relocate due to conversions. 1

Construction cost is a main barrier to office conversion. Therefore, providing developers/ building owners with financial incentives to reduce construction cost is key to support office conversions. As of July 2022, the City has approved funding for five office-to-residential conversion projects and two other projects are currently in the final approval stage. These five projects will convert approximately 675,000 square feet of office space into 707 residential units and some of these units are affordable units. 1

While the City of Calgary provides an example of the first office conversion incentives program in Canada, it also offers a cautionary tale of the challenges of increased office vacancies over a prolonged period of time. Calgary's challenges date back to a spike in office vacancies in 2015 with the downturn in the resource economy and the disappearance of large corporate presence in the oil and gas sector. Since 2019, Calgary's office vacancy rate has hovered near 30%.

1 "Downtown Calgary Development Incentive Program." City of Calgary. Downtown Calgary Development Incentive Program

Los Angeles Adaptive Reuse Ordinance

The Adaptive Reuse Ordinance (ARO) was passed in 1999 to facilitate the conversions of old, vacant, and historical buildings into residential units or other uses. [1]

The ARO supports office conversions by:

- Allowing building use change by-right without requiring Site Plan Review or adherence to CEQA requirements;
- Waiving parking requirements;
- Allowing building owners to add one-story rooftop by-right, and;
- Providing a new building code chapter to clarify building code requirements [2]

Strict zoning codes such as restrictive building use parking requirement discourage building owners and developers from undertaking conversion projects. The ARO removed these restrictions and allow conversion applications to bypass lengthy, expensive, and often complex process of obtaining zoning exceptions from the municipal government. It is estimated that between 1999 and 2019, the ARO has created more than 12,000 residential units, or more than 30% of units created in Downtown LA over the same period. [3].

1 Lall, Jessica, et al. “Adaptive Reuse: Reimagining Our City’s Buildings to Address Our Housing, Economic and Climate Crises.” Central City Association (2021),

2 Ibid.

3. Ibid

POLICY CASE STUDY

New York City (2023)

2023 Task Force Recommendations

The 2023 task force 1 was established to study and provide recommendations to help facilitate the conversion of obsolete office buildings to other uses including housing while enhancing the vibrancy of the city's business districts. The Task Force's recommendations include:

1. Expand the range of buildings eligible for the most flexible conversion regulations 2

- Provide office buildings constructed prior to December 31,1990 with access to the most flexible regulations for adaptive reuse
- Expand conversion regulations to all high-intensity office districts
- Revaluate centrally located, high-density Midtown zoning districts that don't allow new residential use

2. Make existing conversion regulations work better 3.

- Permit conversion of office buildings to a broader array of housing types
- Allow an expanded array of offices to convert all existing square footage to residential
- Several other changes related to parking, recreation space, and courtyards are also outlined in this report and will make a broader range of conversions possible

3. Provide financial incentives for affordable housing and childcare facilities 4.

- Explore and pursue a tax incentive to support mixed-income housing within conversions
- Implement a property tax abatement to incentivize retrofitting space for childcare centers

1 "New York City Office Adaptive Reuse Study." Office Adaptive Reuse Task Force. New York. January 2023. https://www.nyc.gov/assets/planning/download/pdf/plans-studies/office-reuse-task-force/office-adaptive-reuse-study.pdf

2 Ibid

3. Ibid

4. Ibid

New York City (1990s – 2000s)

421-g Tax Incentive [1]

The 421-g Tax Incentive program was passed in 1995 by the New York City Department of Housing Preservation and Development to provide tax exemption of abatement for the conversion of old commercial buildings, into multi-family units in Manhattan,south of Murray Street, City Hall, and the Brooklyn Bridge.

Under this program developers receive a one-year construction-period exemption, a 12-year exemption from real-estate taxes increase resulting from the work, and a 14-year abatement of 80% of the real estate taxes paid on the property prior to conversion. All rental units created through this program were subject to rent stabilization for 15 years.[2] It is estimated that the program helped the creation of 200,000 residential units.

Liberty Bond Program

The Liberty Bond Program was the US Federal Government's $8 billion program to stimulate the rebuilding of Lower Manhattan through commercial and residential development in the wake of 9/11. The program included $1.6 billion tax-exempt bonds split between the New York City Housing Development Corporation (HDC) and New York State Housing Finance Agency (HFA) to provide funding for multi-family rental projects within the Liberty Zone area, including for office-to-residential conversions. Under HDC, developers were required to pay a 3% fee to fund affordable housing development throughout the City. Meanwhile, HFA required developers to set aside five percent of the units built for middle-income housing. [3]

Within a year, the City of New York has allocated $478.6 million in Liberty Bond financing for four projects totalling 1,934 units, while the State of New York has authorized $676 million for seven projects totalling 1,875 units. [4]

1 Directory of NYC Housing Programs. "421-g Tax Incentive (421-g)." NYU Furman Center. 421-g Tax Incentive – Directory of NYC Housing Programs – NYU Furman Center

2 Conversation with Matt Furman. Canadian Urban Institute. October 14, 2022.

3. Directory of NYC Housing Program. "Liberty Bond Program." Liberty Bond Program – Directory of NYC Housing Programs – NYU Furman Center

4. Dunlap, Daniel W. "Liberty Bonds' Yield: A New Downtown." New York Times. (2004). Liberty Bonds' Yield: a New Downtown - The New York Times (nytimes.com)

The City of Buffalo Green Code Unified Development Ordinance

The City of Buffalo's Green Code Unified Development Ordinance (the Green Code) was adopted in 2017 to support mixed-use infill development in the city, including the adaptive reuse of its abandoned and historic buildings. The Green code is a form-based code that allow the mix-use of buildings in the city. 5

The Green Code has helped the conversions of empty warehouses, former City buildings, and parkinglots into new apartments. In the last decade, 224 multifamily housing projects, which include more than10,000 apartment units, mostly rentals, have been completed or are underway. The Office of Buffalo Mayor Byron W. Brown stated that "all of that is related to, if not caused by, the code. That trend is accelerating, and many of these projects are underway now." 5

Some of the key elements of the Green Code include:

- Elimination of minimum parking requirements to facilitate infill development and adaptive reuse, while encouraging other means of transportation 6
- Increasing the maximum height of buildings to increase density, while managing the impact of winds and ensuring the availability of light and air in the buildings and surrounding areas 6
- Removal of barriers to affordable housing, including restrictions on multifamily and accessory dwelling units and density limitations 6
- Requirement for buildings close to sidewalk to have ground-floor windows and doors, while limiting blank walls and providing sufficient shaded sidewalks 6
- Removal of regulatory barriers to adaptive reuse of vacant buildings and land 6

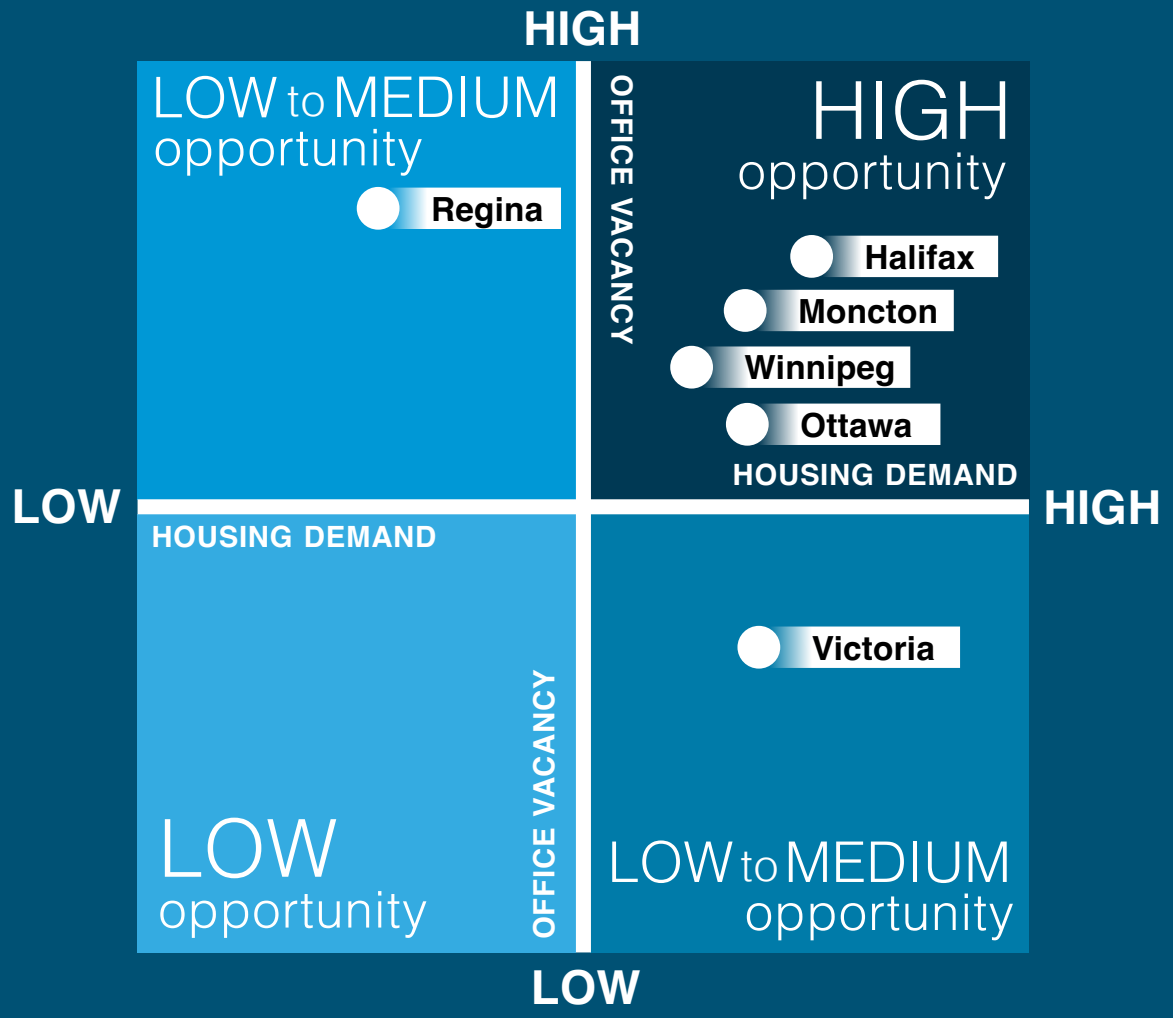
5 Steuteville, Robert. "Green Code spurs historic rehab, economic development." Public Square, a CNU Journal. 2020. Green Code spurs historic rehab, economic development | CNU

6 "New Buffalo Green Code May Make it Easier to Build in the Queen City." Hodgson Russ LLP. 2015. https://www.hodgsonruss.com/newsroom-publications-buffalo-green-codes.html

MARKET SCENARIOS

QUADRANT ANALYSIS

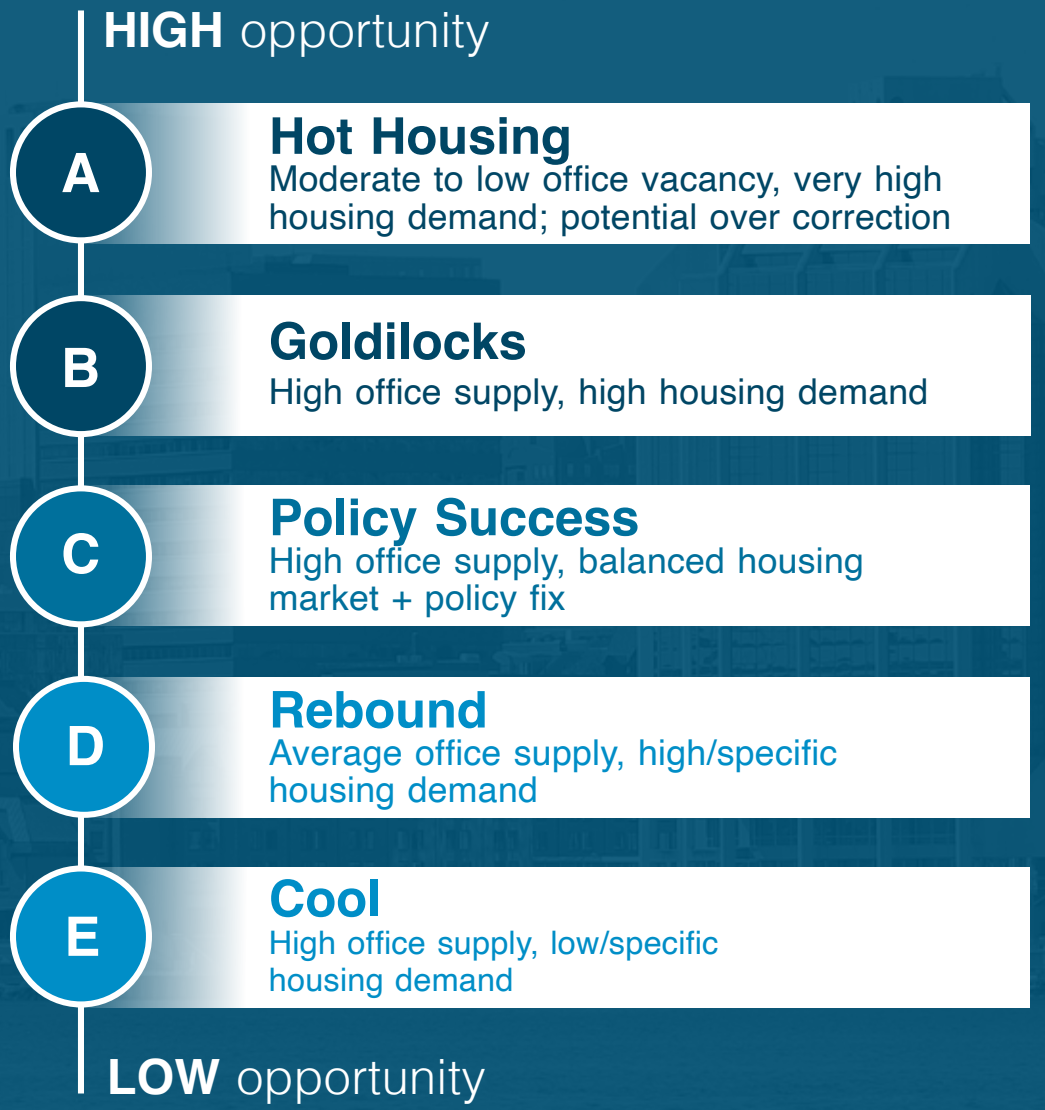
CUI used a quadrant analysis to understand the market dynamics and potential for office conversions. The top right quadrant offers the most (market) opportunity while the lower left quadrant offers the least opportunity. In cases of medium or low opportunity, conversions could be supported using policy or financial tools in alignment with strategic direction: for example, to address affordable housing need, or risk of excess and under-utilized office space and negative implications on downtowns.



DEVELOPING MARKET SCENARIOS

Applying the quadrant analysis to market dynamics and conversions potential, CUI has created five market scenarios and accompanying policy solutions.

These five market scenarios allow cities to evaluate their own market context and potential policy or program fixes to adjust to specific indices and right-size policy and program opportunities.



Scenario

A **HIGH** opportunity

Hot Housing

Very high housing demand, balanced office vacancy

Characteristics

Housing prices continue to increase with deregulated conversion policy environment, allowing developers to convert office space into poor-quality housing

Policy Example:
U.K's Permitted Development Rights

Policy and Program Options

- Create a stop gap method to prevent over correction through office policy or allow conversions in case of mixed-use
- Establish standards for residential unit size and quality and/or guidelines for specific housing types that could be achieved through conversion
- Establish office vacancy thresholds that would trigger moratoriums on conversions to prevent loss of office space in tight markets

Scenario

B **HIGH** opportunity

Goldilocks

High office supply and high housing demand

Characteristics

Housing prices continue to increase; high office vacancy persists. Yet market forces may be insufficient to support conversions

Policy Example:
Rotterdam's Covenant to Tackling Office Vacancy

Policy and Program Options

- Information sharing to educate developers and building owners about the feasibility, opportunities, and benefits associated with conversions
- Streamline planning process to reduce costly application and planning approvals timeline (i.e., carrying costs)
- Implement permissive zoning to remove policy-related barriers
- "Revenue neutral" financial assistance such as tax abatement and non- or low-interest loans

Scenario

C **MEDIUM** to **HIGH** opportunity

Policy Success

High office vacancy, balanced residential market

Characteristics

High office vacancy combined with balanced housing market. Conversions may be hard to make ‘pencil out’ hence incentives may be needed

Policy Example:
Downtown Calgary Development Incentive Program

Policy and Program Options

- Financial incentives for conversions including stackable incentives: density, heritage, affordability, environmental
- Target affordable housing through funding or property donation to non-profit housing providers
- Targeted zoning (as-of-right) to facilitate conversions as well as ground-floor retail and amenities to address residential needs, and remove obstacles such as parking minimums
- Investments in infrastructure and amenities to promote downtown living

Scenario

D **MEDIUM** opportunity

Rebound

Office vacancy is stable, return to office rate is higher than average but pockets of high vacancy exist

Characteristics

Office vacancy remains stable. However, older office space remains under-utilized and in need of renovation

Policy Example:
New York City tax incentives, bonds and land use changes and targeted policies

Policy and Program Options

- Financial incentives to reduce conversion costs
- Implement policies for intensification of both office and housing to create land use flexibility to adapt to market conditions
- Eliminate zoning obstacles such as single use zones and parking minimums and allow conversions as-of-right if no change to building floor area
- Streamline planning process to reduce costly application and planning approvals timeline (i.e., carrying costs)
- Targeted conversion of specific building types

Scenario

E **TARGETED** opportunity

Cool

High office vacancy, cool residential market

Characteristics

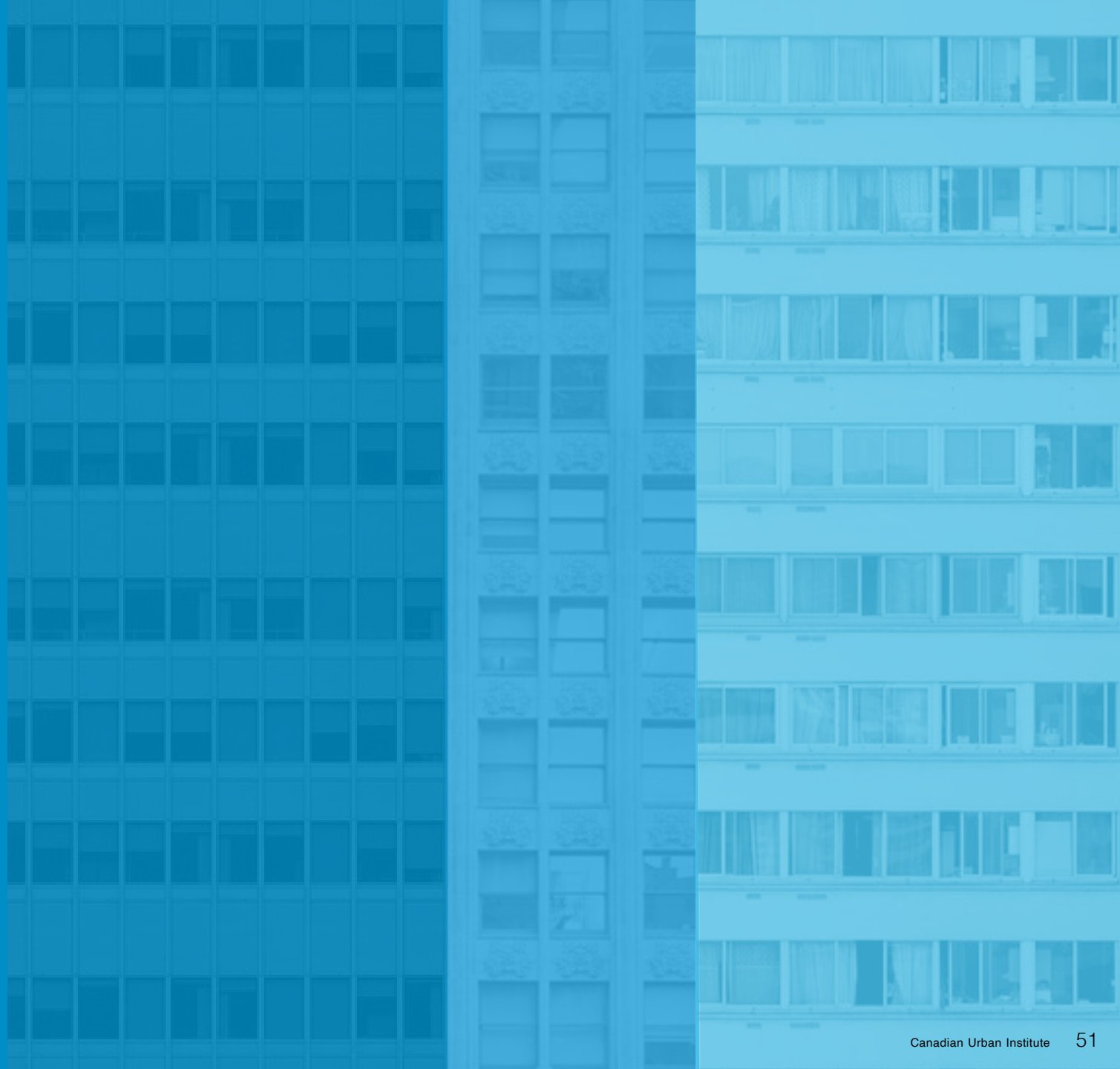
Office vacancy is high and there isn't high demand for homes. There is a persistent need to develop specific types of social/affordable housing

Policy Example:
Buffalo Green Zone

Policy and Program Options

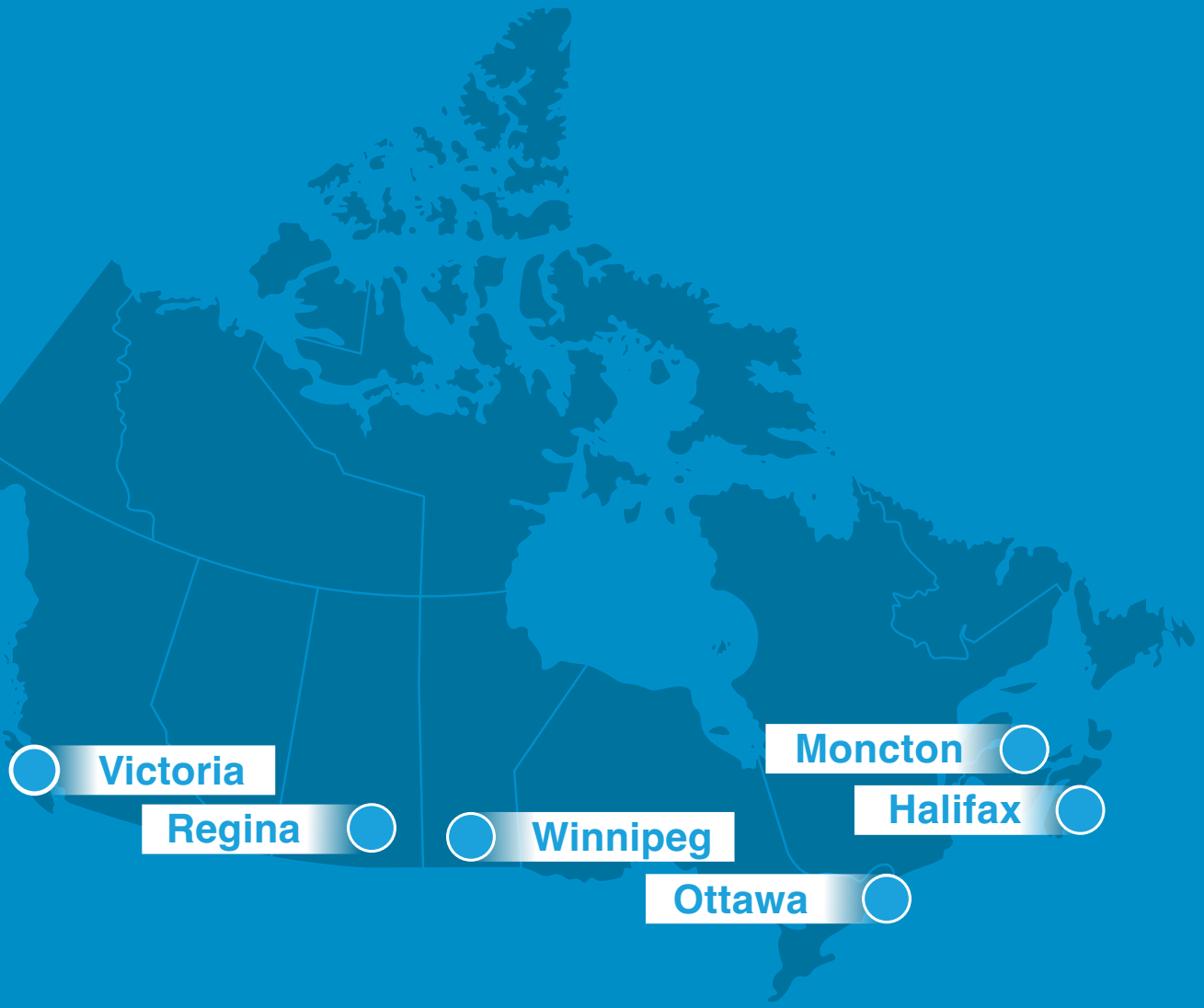
- Targeted financial incentives to support affordable housing
- Allow mixed-used buildings to make downtown more attractive and adaptable
- Create overlay plans or policy zones to encourage conversions in areas with highest concentration of vacant office use or certain building types
- Invest in downtown amenities and anchor uses to attract residential interest

OPPORTUNITY IN SIX CITIES



OPPORTUNITY IN SIX CITIES

CUI evaluated the opportunity for conversions in 6 cities across Canada. Selection was based on a variety of data describing the housing and office context in Canadian cities, combined with an evaluation of policy readiness.



SNAPSHOT OF DATA AND TRENDS OFFICE AND HOUSING MARKET

The opportunity for conversions is shaped by the demand for office space and housing. Data captures the most recent office market context in the six cities. Notable trends:

- Five of the six cities have office vacancies well above the healthy index of 10% vacancy
- With the exception of Halifax, vacancies are highest in Class B and C buildings

Conversion of vacant office space has the potential to address the lack of housing supply in the short-term:

- CUI has used data on rental vacancy and rental costs as a proxy for housing challenges
- As of October 2022, all six cities have rental housing vacancies at or below the healthy rate of 3% vacancy
- All cities but Regina have seen exceptional increases in the cost of rental housing with five-year increases in the range of 25-30%

Downtown Office Market (Q3 2022) [1]

	Ottawa	Halifax	Moncton	Regina	Winnipeg	Victoria
Vacancy rate	11%	17.5%	14.6%	17.4%	14.1%	6.2%
Downtown vacant space (sf)	2M	931,893	415,077	793,200	1.7M	314,094
Class A vacancy	7.3%	21.3%	8.3%	-- n/a	3.5 (AA)/11%(A)	-- n/a
Class B vacancy	18.7%	15.4%,	23.7%,		18.7%,	
Class C vacancy	18.9%	2.2%%	6.3%		12.8%	
Year-to-date net absorption (sf)	-165,886	207,559	N/A	39,967	4,123	9,677

1 Colliers' Office Market Reports (Q3 2022) with exception of Regina (Q2 2022)

Residential Context

	Ottawa	Halifax	Moncton	Regina	Winnipeg	Victoria
Rental Vacancy (Oct 2022) [2]	2.2%	1%	1.5%	3%	2.7%	1.4%
Rental Vacancy (Oct 2021)	3.4%	1%	1.5%	6.8%	5%	1%
Rent Cost Increase (2016-2021) [2]	30%	26%	30%	4%	25%	29%
Rent Cost Increase (2021-2022) [2]	4%	8%	7%	2%	2%	10%

2 CMHC data (Rental Market Survey), October 2016 and October 2022 for row/apartment rentals.

SNAPSHOT OF CITY POTENTIAL

This diagram illustrates the number of completed conversions and the potential for office conversion in each of the six cities based on our analysis ranked from lowest (left) to highest (right).

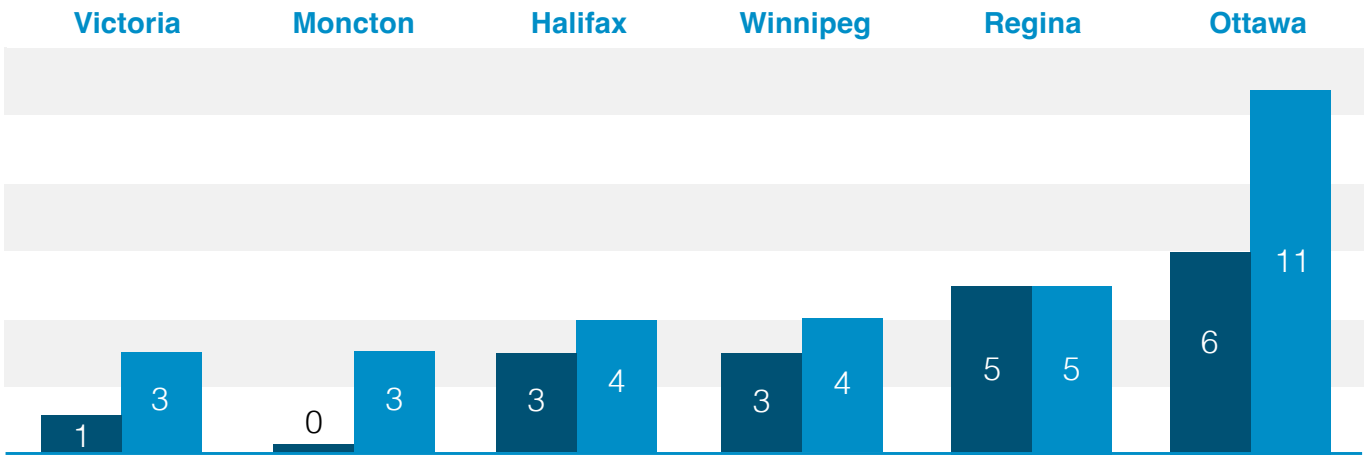
Conversions Completed

18

Potential Buildings [1]

30

Scale of Opportunity by City



[1] Based on modelling by Gensler.
Assumes office consolidation possible for complete conversion to occur.

Victoria British Columbia

At 6.2%, office vacancy in the city of Victoria has been at a healthy level over the past several years, despite the economic pressure from COVID-19. In fact, office space vacancy in Q3 2022 was slightly lower than in Q4 2018 (6.4%), indicating there is limited office space that can be converted into housing.

However, Victoria has one of the tightest housing markets in Canada. Rental vacancy rate is 1.4% (Oct 2022) and rents have increased significantly over the past several years including by 10% from October of 2021 to October 2022.

Building analysis by Gensler identified three buildings, two heritage and one mid-century, low-rise example. Given the continued need for affordable housing and the provision of funding to upgrade heritage buildings for seismic requirements there may be opportunities for targeted conversions to retain and improve heritage properties through conversion.

Market Scenario **Rebound**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Heritage	74/100	5	10	3	9	9
 Low-rise Concrete	72/100	4	10	5	9	7
 Low-rise Concrete	67/100	6	10	7	9	7

Total building potential: 3-5 [1]
Total conversion potential (SF): 240,000-300,000 [2]
Total potential units: 320-390 [3]
Case examples: 1

1 1st number based on modelling by Gensler; 2nd number includes those identified by stakeholders
2 Higher numbers includes buildings identified by stakeholders – have not been modelled for feasibility.
3 Maximum potential almost exceeds total vacant space available therefore additional office vacancy would be needed to accomplish potential unit count.

Moncton New Brunswick

With an office vacancy rate of 14.6%, and a rental vacancy rate of 1.5% (2022), Moncton's context for conversions is similar to Halifax. Moncton has seen an increase in residential development in recent years but none in the form of office conversions. This may largely be due to the fact that Moncton still has a significant number of developable lots compared to other cities creating a short-term deterrent to conversions.

For a city of nearly 80,000 people, Moncton's potential to create several hundred units for conversion could add significant residential population to downtown. With increase in rental costs of 30% over 5 years, there is upward pressure on housing supply. Further, stakeholders identified opportunities for affordable housing or student housing to support post-secondary institutions struggling to find adequate student housing. In the short-term, it is likely that education and incentives would be needed to instigate conversions given a lack of experience or precedents in Moncton.

Market Scenario **Policy Success**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Brutalist Concrete	76/100	5	10	7	6	9
 Heritage	63/100	3	10	7	6	7
 Low-rise Concrete	61/100	3	10	3	6	7

Total building potential: 3-8 [1]
Total conversion potential (SF): 370,000-440,000 [2]
Total potential units: 500-600
Case examples: 0

1 1st number based on modelling by Gensler. 2nd number includes those identified by stakeholders. As 2 buildings are below 70/100, buildings identified by stakeholder would need to have some feasibility to meet unit estimate.

2 Includes buildings identified by stakeholders – have not been modelled for feasibility. Conversion of total of 440,000 SF of space would exceed total office vacancy in downtown and would not be possible without additional vacant office space coming available.

Halifax Nova Scotia

Halifax is experiencing high downtown office vacancy (17.5%), low rental vacancy rates and high population growth (nearly 10% since 2021), giving it positive market characteristics for conversions to happen. Halifax has started to see conversions with three recent projects completed or underway creating more than 200 units. With a variety of mid-century and more recent buildings identified for possible conversion Halifax is posed for additional conversion activity. Unlike the other cities evaluated, Halifax has high vacancy in Class A buildings, which may be less likely to be converted given the quality of the office space. However, a 'flight to quality' could free up additional lower quality space appropriate for conversion.

Recent approval of the region's Centre Plan includes permissive land use that allows for as-of-right development including conversions. Halifax's climate goals encourage conversions through reduced GHG. Halifax benefits from an attractive and lively waterfront though more amenities in downtown would support additional residential growth.

Market Scenario **Goldilocks**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Brutalist Concrete	82/100	9	10	4	9	7
 Low-rise Concrete	72/100	5	10	3	8	8
 Low-rise Concrete	70/100	8	8	6	7	6
 Steel Frame	68/100	2	10	7	8	9
 Challenging	53/100	2	10	6	9	2

Total building potential: 4-7 [1]
Total conversion potential (SF): 370,000-530,000 [2]
Total potential units: 625-840
Case examples: 3

1 1st number based on modelling by Gensler. 2nd number includes those identified by stakeholders.

2 As 2 buildings are below 70/100, buildings identified by stakeholders would need to have some feasibility to meet unit estimate. Includes buildings identified by stakeholders – have not been modelled for feasibility.

SUMMARY BY CITY

Winnipeg Manitoba

At 14%, downtown Winnipeg has had a balanced office vacancy rate since before the start of the pandemic (12%), representing 1.7M SF of vacant office space in downtown alone. Winnipeg has seen a net negative absorption rate since late 2020 signalling continued headwinds for the office market. In the residential market, rents have increased by 25% since 2016 and rental vacancy rates have fallen to 2.7% as of October 2022. However, average rents are still below other major cities in Canada.

Winnipeg has three conversion projects completed or underway including the significant conversion of the former Hudson's Bay building by the Southern Chiefs' Organization to include over 300 homes and a diversity of amenities and cultural uses. [3] In addition, two conversions by Alston Properties will add more than 150 units, including a mixed-use project. These projects will offer precedents for future conversions. Recent experience suggests more downtown investment and incentives could increase conversions and revitalize downtown (a City priority).

Market Scenario **Policy Success**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Heritage	74/100	5	10	3	9	9
 Low-rise Concrete	72/100	4	10	5	7	7
 Low-rise Concrete	67/100	6	10	7	9	7

Total building potential: 3-7 [1]
Total conversion potential (SF): 340,000-900,000 [2]
Total potential units: 450-1,200
Case examples: 3

1 1st number based on modelling by Gensler; 2nd number includes those identified by stakeholders
2 Includes buildings identified by stakeholders – have not been modelled for feasibility
3 A New Future: Wehwehneh Bahgahkinahgohn - Southern Chiefs' Organization Inc. (scoinc.mb.ca)

SUMMARY BY CITY

Regina Saskatchewan

Regina has the second highest office vacancy rate of the six cities with a downtown vacancy of 17.4% with most vacancy in Class B buildings. Office vacancy has stabilized since early 2021. As dictated by Regina's Office Policy, the majority of Regina's office space is downtown (78%) supporting a clustering of office activity but leaving the downtown vulnerable when office vacancies increase. Regina has an aggressive infill target of 10,000 residents to the "City Centre" area, 5,000 of which are intended for downtown. Since approval of the Official Community Plan in 2014, residential intensification in downtown has lagged.

Five buildings have been identified using modelling with another 11 identified by stakeholders. With the rental vacancy rate dropping to 3%, the lowest since 2014, demand for housing has increased. To support policy goals and investment, financial incentives are in place. Proforma analysis revealed that while per SF costs for conversion are lower than new construction, the gap between costs and revenue is considerable. If made financially viable, conversions could offer a shorter timeline and more predictability than new residential development. Regina has 4 conversions from the 1990s and early 2000s offering some examples for further study.

Market Scenario **Cool**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Low-rise Concrete	79/100	6	9	7	8	10
 Low-rise Concrete	73/100	5	10	8	7	7
 Steel Frame	64/100	3	10	9	7	4
 Low-rise Concrete	62/100	3	10	5	6	7
 Heritage	59/100	6	5	7	5	8

Total building potential: 5-16 [1]
Total conversion potential (SF): 330,000-1.1M [2]
Total potential units: 320-1,350
Case examples: 5

1 1st number based on modelling by Gensler; 2nd number includes those identified by stakeholders. As 3 buildings are below 70/100, buildings identified by stakeholders would need to have some feasibility to meet unit estimate.

2 Higher number includes buildings identified by stakeholders – have not been modelled for feasibility. Buildings included are in downtown and Warehouse district. Conversion of total of 1.1 M SF of space would exceed total office vacancy in downtown and would not be possible without additional vacant office space coming available.

Ottawa Ontario

Based on the modeling, Ottawa has the most potential for conversions. This is largely due to the size of the city as one of Canad's largest (and a larger building inventory overall), but it is notable that there are a significant number of high and low-rise, mid-century buildings considered feasible for conversion. Further, most buildings score greater than 70/100 suggesting good conversion potential. Ottawa has also seen 5 recent case examples complete or underway, including both student and supportive housing. The presence of fed-eral buildings and anticipated office consolidation and disposal by the federal government gives Ottawa a unique position to address housing need, bring more residents to downtown, and address explicit climate goals including GHG reduction through building retrofits.

Market Scenario **Goldilocks**

Building Types and Suitability for Conversion

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Brutalist Concrete	88/100	9	10	4	9	9
 Brutalist Concrete	85/100	7	10	7	9	9
 Low-rise Concrete	83/100	8	10	7	9	7
 Low-rise Concrete	81/100	6	10	7	9	9
 Steel Frame	78/100	5	10	10	9	7

Total building potential: 11-17 [1]
Total conversion potential (SF): 1.15M-2.6M [2]
Total potential units: 1,500-4,200
Case examples: 6

Ottawa

Building Types and Suitability for Conversion (continued)

Typology	Compatability	Floor Plate	Form	Services	Context	Envelope
 Steel Frame	77/100	8	10	5	10	4
 Low-rise Concrete	76/100	9	10	7	9	2
 Low-rise Concrete	73/100	5	10	7	9	7
 Low-rise Concrete	68/100	5	10	7	9	4
 Brutalist Concrete	67/100	3	10	10	9	4
 Brutalist Concrete	66/100	4	7	8	9	8

1 1st number based on modelling by Gensler. 2nd number includes those identified by stakeholders. As 3 buildings are below 70/100, buildings identified by stakeholders would need to have some feasibility to meet unit estimate.

2 Higher number includes buildings identified by stakeholders – have not been modelled for feasibility. Conversion of total of 2.6M SF of space would exceed total office vacancy in downtown and would therefore not be possible without additional vacant office space becoming available.

KEY FINDINGS AND RECOMMENDATIONS

KEY FINDINGS

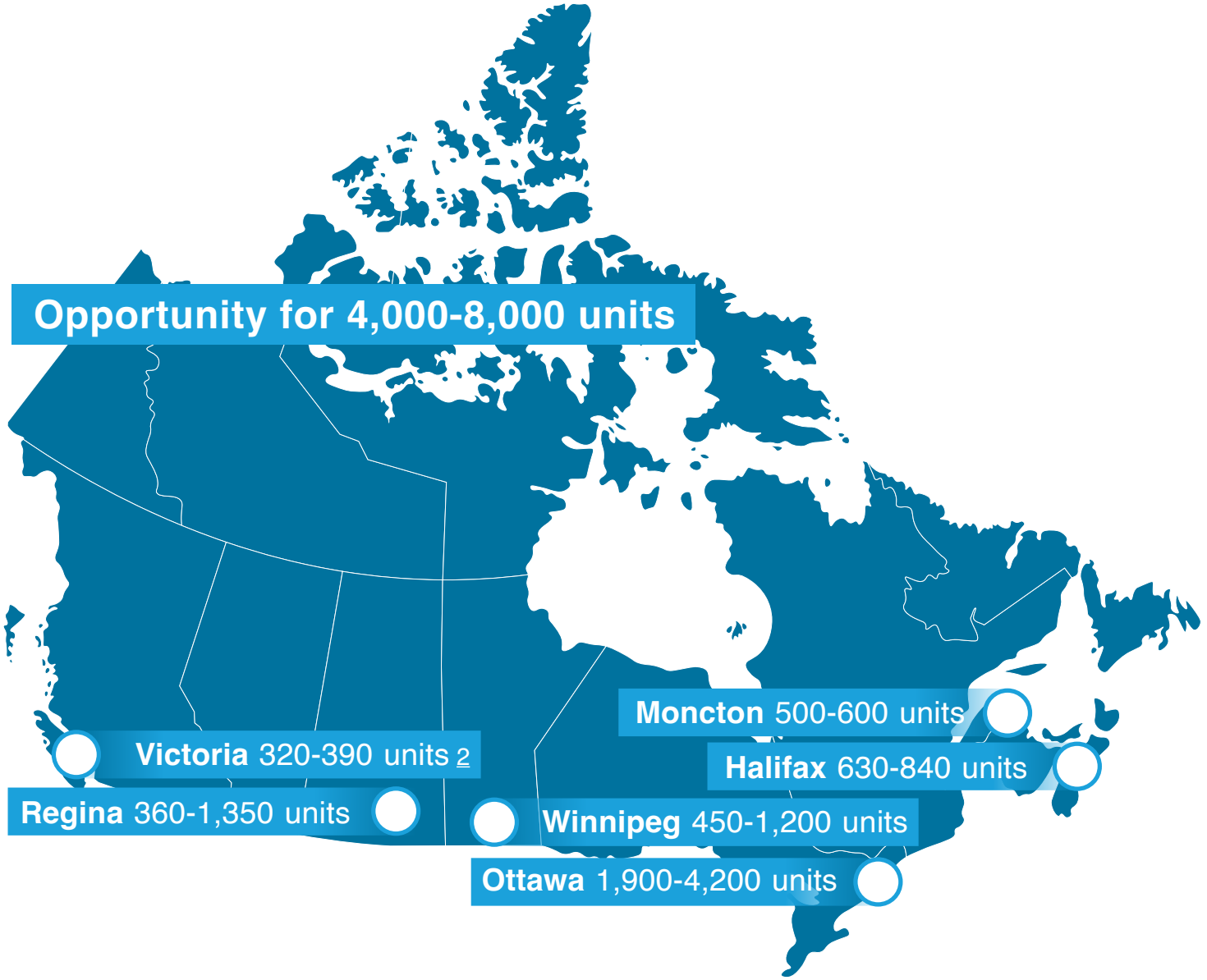
1. There is opportunity at scale in six case example cities.

In six case example cities CUI evaluated and based on modelling by Gensler, the scale of the opportunity is:

30 buildings equaling up to 3M SF of convertible space and **3,700-4,300 units** [1]

When adding buildings **identified by stakeholders** increases by 30 buildings and 3M SF; an additional **3,700-4,300 units** [1]

Predominant building types are heritage and mid-century concrete.



1 Assumes total square footage convertible including buildings with partial vacancy. Consolidation of office use would be required.

2 Represents conservative estimate of potential units. First number represents estimates based only on the evaluation of Gensler; second figure includes those buildings identified by stakeholders. This number assumes that all buildings identified have potential but does not include buildings that may not have been identified in modelling or by stakeholders due to lack of accessible data. Conversions would need to be monitored to prevent over-correction that removes needed office space. In some markets (Victoria, Regina, Moncton and Ottawa) the high end of unit creation would require additional vacancy in office space to be feasible without shrinking the office market excessively.

KEY FINDINGS

2. There is an opportunity at scale across Canada.

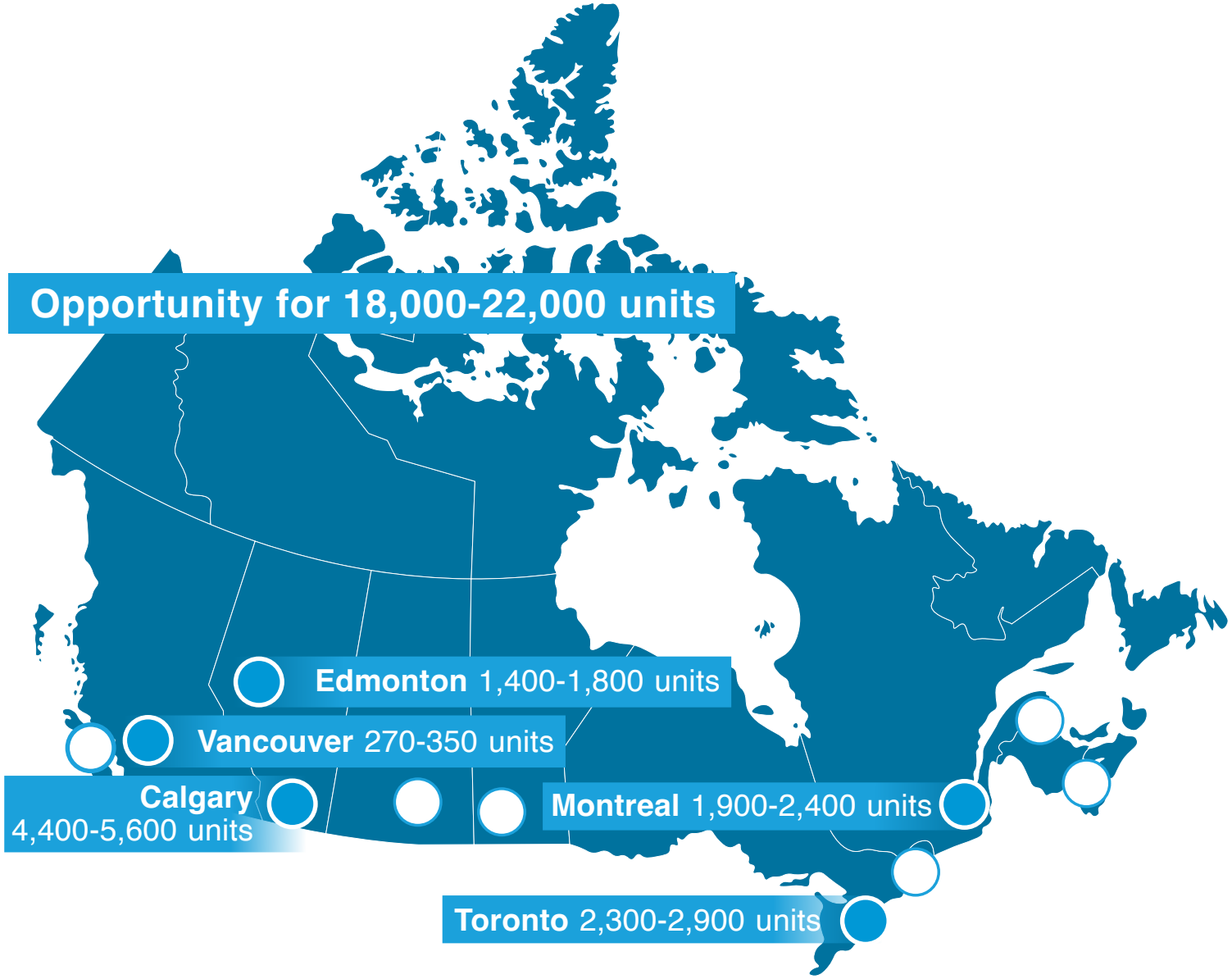
When adding potential in Vancouver, Edmonton, Calgary, Toronto and Montreal:

100 additional buildings; approximately 8M SF; **10,000-13,000 units** [1]

Total for all 11 cities of approximately **18,000-22,000 units** and 16M SF of convertible office space [2]

Representing cities that are home to 10M people

Conversions could **reduce high commercial vacancy to healthy vacancy rate** offering a value uplift for commercial properties while providing needed housing



1 Based on methodology development by Gensler that assumes 20% of office inventory has some capacity for conversion. Units are based on a rate of 80% efficiency of space and units of 600 to 750 SF.

2 Assumes total square footage convertible including buildings with partial vacancy. Consolidation of office use would be required. In some markets the high end of unit creation would require additional vacancy in office space to be feasible without shrinking the office market excessively.

KEY FINDINGS

3. Buildings and characteristics for conversion exist in all cities evaluated.

Mid-century high-rise and low-rise concrete are the predominant form of buildings with potential for conversions; examples exist in all cities evaluated.

Even buildings with **large floorplates may lend themselves to conversion for supportive housing** or other forms of **congregate living** such as student residences or mixed-use.

Gensler modelling estimates that approximately **10-20% of all commercial buildings have the potential for conversion** based on building typologies and dependent on individual building characteristics.

Typology	Compatability	# Examples modelled 1
 Brutalist Concrete	78/100	7
 Steel Frame	76/100	3
 Low-rise Concrete	72/100	13
 Heritage	69/100	5
 Challenging	59/100	2

1 Includes only 'top 30' buildings identified by modelling by Gensler. 'Challenging' typology likely unfeasible but depends on unique building characteristics

4. Building obsolescence and future of work offer opportunity for a rethink.

Market conditions vary across cities but **increases or stabilization in office vacancy are prevalent.**

As office occupancy remains low, the full extent of office vacancies is still unknown and the **trends as leases expire are unclear.**

Vacancies are highest in Class B and C buildings, which represent mid-century to 1990s era buildings. These buildings are in need of renovation; **upgrades will improve building standards**, such as energy efficiency and air quality whether for office or housing.

Preliminary research reveals that based on **GHG savings, conversions are beneficial especially in areas** with a less energy-intense grid with office conversions providing quicker carbon emissions benefits than the equivalent in new construction.

The future of office use is evolving; observation of trends will be essential to identifying where opportunities exist and to balance conversions with a healthy office vacancy rate.

KEY FINDINGS

5. Policy can make a difference – even in strong market conditions.

Even in supportive market conditions, **permissive land use policies** and **simplified regulatory requirements** are important drivers.

Incentives can be off-set by the **value uplift of a converted building**, even with differentiated property tax rates.

Market conditions can be used to determine whether conversions are feasible for building owners, developers and investors, and to **tailor policy and program response by government**.

Policies must ensure a **balance between conversions and a healthy office vacancy rate** to prevent overcorrection leading to diminishing office inventory

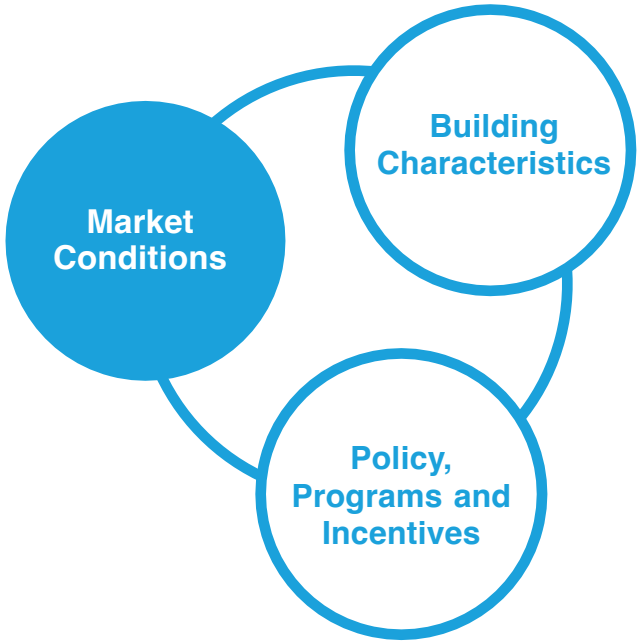
Targeting **buildings with the right characteristics and location** is key to successful conversions.

With adequate funding, conversions offer an **opportunity for affordable and supportive housing**.

The cost benefit (economic spin offs) of **increased residential population, amortized infrastructure and economic benefits** of re-investment should be considered in policy and incentives.

With the right conditions, **conversions can shorten timelines for housing creation**.

Deterrants to demolition should be considered especially in alignment with climate action plans.



KEY FINDINGS

6. A chance to rethink how we plan and build cities.

Conversions can shape how we plan and build for the future:

- support **new opportunities for intensification** and housing near infrastructure and amenities
- address **declining use of key civic infrastructure** and **public health and safety challenges** persistent in downtowns
- preserve **embodied energy and improving energy performance** standards of aging buildings
- protect **against declining value of commercial assets,** decreased municipal revenue, declining public and private investment, and abandonment of core economic hubs
- support **business and talent retention, job growth, economic resilience,** and social benefits of repurposing unused buildings
- catalyze creation of **buildings that can have multiple 'lives'** such as progression of light manufacturing buildings for multiple uses over time
- reconsider **single use buildings** and land use that limit adaptability by encouraging flexibility from the start

.

KEY FINDINGS

7. There is a value proposition for all stakeholders.

Cities: provides an opportunity to advance intensification, downtown revitalization

- mixed-use, transit-oriented, emissions reduction and heritage preservation goals
- address near term housing need with minimal efforts (policy revision); zoning simplification and leveraging capital investment (downtowns are well-serviced by existing infrastructure)
- public safety (eyes on the street), retention of existing residents, talent and work force

Developers: provides an opportunity for market innovation

- quicker builds (more units to market)
- potential savings on materials and labour (on average, lower costs per square foot for adaptive reuse than new construction, depending on building acquisition cost)

Federal government: provides an opportunity to leverage under-utilized buildings toward federal policy goals

- address housing supply and affordability goals with quicker timelines, inventory consolidation
- use stranded assets in alignment with National Housing Strategy, climate goals, and measures to lower operating costs through office consolidation
- establish acquisition program to provide federal properties for conversion to meet housing goals
- develop an interim framework for existing buildings in the National Building Code (NBC) to streamline conversions and to be adopted by municipalities prior to adoption of the new NBC

Financial Institutions: provides some investment advantages

- completed with shorter development timelines than new construction
- create potential partnership opportunities and delivery on ESG goals

Building Owners: provides an option for mixed-use buildings, or portfolio and revenue diversification

- opportunity to transform an obsolete asset
- more permissive policies could support building retrofits through shorter timelines, carbon credits, and financing through streamlined approved processes
- removal of excess office space protects against declining values of office space remaining, which benefits owners with mixed portfolios

Non-profit and Post-secondary: provides opportunities for a downtown presence

- create affordable, supportive or transitional housing with shorter timelines and in locations near existing services and amenities
- consider excess office space for student housing (large building floorplates lend themselves to congregate living)
- build an institutional presence in downtown including mix of uses, corporate partnerships and talent recruitment

HIGH LEVEL RECOMMENDATIONS

For regulators (municipal, provincial, federal):

- Target buildings of a certain era for conversions with focus on those in need of retrofit
- Create overlay plans or policy zones to encourage conversions in areas with highest concentrations of vacant office use and in consideration of land uses nearby to ensure complementary uses for new residents and capitalize on existing investment
- Ensure that policies do not limit conversion when occupying the same volume as existing building
- Eliminate or minimize development approval requirements for office conversions where no external changes will be made to building. Site plan control or development permit would be triggered should a certain number of additional units be added
- Reduce parking requirements to facilitate conversions; allow for repurposing of excess parking for other uses, such as amenities
- Create performance standards and/or design guidelines for additions or alterations to facilitate conversions including adding density with predictability
- Establish indicators to trigger financial incentives in alignment with policy objectives: housing (supply and affordability), climate, intensification
- Monitor housing creation, office absorption and office vacancy to prevent an over-correction or loss of needed office space
- Create a framework and alternative compliance standards for Building Code application to apply to existing buildings undergoing adaptive reuse
- Measure GHG emission offsets for embodied carbon and improved energy performance as part of GHG reduction targets

For building owners, developers, housing providers:

- Consider the cost of conversion and potential revenue against the maintenance and operations of a building with significant vacancy. (While 10% is considered a healthy vacancy overall, from a building-by-building perspective, there will be a percentage vacancy at which the building starts to lose money and conversion should be considered. This will vary based on market, operational or capital costs to building.)
- Consider uses for congregate living, such as student housing and supportive housing, for buildings with large floorplate and where interior spaces can be used for common kitchens, living space and other amenities
- Create office consolidation plans for entities with large portfolios
- Consider a partial conversion to retain office tenants and revenue while repurposing vacant space. (Despite feedback that mixed-use buildings are complex to retrofit and manage, we have seen two recent examples and additional past examples that provide a balanced business model with complementary uses such as shared meeting space, entertainment spaces and fitness centres.)
- Develop technical guidelines to support conversion projects and replication of best practices
- Promote downtown living through partnerships with downtown leaders and advocates

ACKNOWLEDGEMENTS

This work would not have been possible without the dedicate staff, partners, collaborators and experts listed here.

CUI STAFF

Mary W. Rowe, President & CEO
Robert Plitt, Vice-President, Strategy and Development
Jennifer Barrett, Managing Director, Programs, Policy and Planning
Greg Spencer, Director, Research
Jared Kolb, Program Director
Luthfi Dhofier, Research & Policy Analyst
Leandro G. Santos, Research Planner
Alex Tabascio, Research Analyst
Gay Stephenson, Community Partnership Lead
Gabriela Masfarre-Pintó, Community Engagement Lead
Zahireen Tarefdar, Communications & Administration Officer, My Main Street
Naomi Wolfe, Project Consultant, Healthy Communities Initiative
Maria Alonso Novo, Intern
Fannie Yiu, Intern
Nicolette Dimokopoulos, Intern
Anthony Sehl, Intern

PARTNERS & COLLABORATORS

Gensler Architecture & Design
Kelsey Longmoore (P. Eng., SK BOL Class 3), Kilo Lima Code
Jacquie Poole, Kilo Lima Code
Andrea Nylen,(P.Eng.), studioen
James Alberding, Impact Measurement Consultant
Ferruccio Sardella, Graphic Design
Lisa Orchard, Scribe Technical
Turner Construction
Karen Chapple (Ph.D.),
Angel Yang, **Priscilla Barker**, **Anoja Muthucumaru**, **Jiawen Chen**, **Xinjin Yu**, University of Toronto School of Cities
Pam Kapoor, Writer, Engager, Facilitator
Alberto de Salvatierra (MLA, MDes), **Abira Mirza**, **Teegan Heinricks**, **Corinne Osmanski**, **Karen Ajala**, **Amelie Boucher-Duplain**, **Connor Glass**, **Louise Barraza**, **Samara Schneider**, **Harmen Verbrugge**, **Dash Maxwell**, **Colin Stauffer**, **Chirstian Vargas Herrera** - University of Calgary School of Architecture Planning and Landscape and the Center for Civilization
John Purkis, Purkis Solutions
Bill Neher, (LFA, CNU-A), IBGSE Consulting
Jim Burns (CFPS), Burns Fire Code Solutions

MUNICIPALITIES ENGAGED

CITY OF MONCTON:
Luc Babineau, **Kevin Silliker**, **Sarah Anderson**, **Bill Budd**, **Alicia Grayeb**
CITY OF HALIFAX:
Eric Lucic, **Kasia Tota**, **Councilor Mason Waye, Katherine Greene**
CITY OF REGINA:
Laura Pfeifer, **Luke Grazier**, **Amarpreet Guliani**, **Kim Sare**, **Michael Cotcher**
CITY OF VICTORIA:
Peter Rantucci, **Catherine Du Bois**
CITY OF OTTAWA:
Jason Cooke, David Wise, Chris Cope, Royce Fu, Seana Turkington, Krishon Walker, Janice Ashworth, Ian Kelly, John Bernier, Carol Ruddy, Lauren Reeves, Mike Fletcher, Rebecca Hagen, Jeff Nadeau, Amy MacPherson, Aaron Thornell, Peter Giles, Randolph Wang, Mary Dickenson, Jenny Kluke, Danna See-Har

ACKNOWLEDGEMENTS

ACADEMIC, HOUSING & INDUSTRY PROFESSIONALS

David Garcia, **Terner Center**, University of California Berkeley, USA
Matt Furman, NYU Furman Center, USA
Rod Schulhauser, SVN Rock Advisors, Canada
Erwin Heurkens and **Hilde Remoy**, Delft University of Technology, The Netherlands
Julia Park, Levitt Bernstein, UK
Rodney McDonald, Royal Castle, Canada
Joe Nickerson, Sidewalk Development
Bryce Alston, Alston Properties
Sheila Botting, Avison Young
Jennifer Moore Rattray, Southern Chiefs' Organization Inc.
Joy Cramer, Southern Chiefs' Organization Inc.
Jennifer Wood, Southern Chiefs' Organization Inc.
Leah Martin, United Way Halifax
Paul McKinnon, Downtown Halifax
Matthew Honsberger, Royal LePage
Miia Suokonautio, YWCA Halifax
Kate Fenske, Downtown Winnipeg BIZ
Jasna Jennings, Byward Market BIA
Sabrina LeMay, Bank Street BIA
Ashley Hopkins, Paradigm Properties
Jeffrey Biggar, Dalhousie University
Shatvai Pinchas, Dalhousie University
Yuval Bar-Zemer, Linear City Development
Thom Janzen, Scatliff + Miller + Murray
Catherine Black, New Brunswick Community College
Heather Ferguson, BOMA
Richard Tower, IQ Commercial
Dale Hicks, Rising Tide
Jocelyne Dupuis, Adeline Properties
Gerry Fischer, REAL
Melissa Coomber-Bendsen, YWCA of Regina
Steven Drysdale, Namerind Housing
Lyle Parisian, Namerind Housing
Judith Langen, Namerind Housing
Reid Pederson, Mertz Management
Oz Drewniak, CLV Group
Evan Johnson, CLV Group
Donna Green, Cushman Wakefield
Warren Wilkenson, Colliers
Stu Niebergall, Regina and Region Homebuilders Association
Aaron McDougall, Harvard Developments
Mohammed Amini, Minto Development
Kevin Hooper, United Way Halifax
Melissa Reeves, Linebox Studio
Marc-Andre Richer, Linebox Studio
Andrew Reeves, Linebox Studio
Dean Karakasis, BOMA Ottawa
Stefan Dery, Public Services and Procurement Canada
Natalie Carrier, Vanier BIA
Trevor Freeman, Hydro Ottawa
Justin George, Colonnade Bridge
Kay Matthews, OCOBIA
Andrew Peck, Downtown Rideau BIA
Michelle Groulx, OCOBIA
Martin Barakengera, National Capital Commission
James McNeil, JJ McNeil Inc
Sue Uteck, Spring Garden BIA
Jim Graham, Affordable Housing Nova Scotia
Paul Jacob, Halifax Partnership

DOWNTOWN OTTAWA TASK FORCE:

Member of Parliament Yasir Naqvi
Kevin McHale, Sparks Street BIA
Neil Malhotra, Claridge Homes
Christine Leadman, Bank Street BIA
Sueling Ching, Ottawa Board of Trade
Cathering Callary, Ottawa Tourism
Hugh Gorman, Colonnade BridgePort
Graeme Hussey, CADHCO
Carlos Pena, Treasury Board of Canada
John Thomas, Azure Urban
Sabrina Lemay, Bank Street BIA
Jason Shinder, District Realty
Matthew Fleury, Councillor
Christophe Rivet, EVOQ architecture
Mary Huang, Centretown Community Assoc
Jared Maltais, Office of MP Yasir Naqvi

APPENDICES

TOOLKIT FOR CONVERSION

A Toolkit for building conversions has been created to provide guidance for a variety of stakeholders wishing to pursue office conversions. This Toolkit is based on best-practice research and engagement with those responsible for office conversion to date. Each step is detailed in subsequent pages. Guidance is meant for a diversity of stakeholders depending on role in conversion projects.

1. Research and Data Collection

2. Regulatory Review

3. Scenario Testing

4. Building Inventory

5. Working Group

6. Measure and Track

TOOLKIT

1. Research and Data Collection

Review **best practice** and identify current **local examples**

Conduct **data** and **market analysis**

Evaluate **market conditions** (office vacancy and housing demand)

2. Regulatory Review

Review **existing regulatory environment** (Zoning, Official Plan, Housing Plan, Climate Action Plan) and existing program criteria (e.g. heritage incentives, housing incentives, carbon credits)

Look for **alignment with city policies**: climate action, housing intensification, housing supply, office policy

Consider policy amendments to **streamline and remove barriers** to conversions

Consider ways to **design for policy or code compatibility**

TOOLKIT

3. Scenario Testing

- HOT HOUSING — A
- GOLDILOCKS — B
- POLICY SUCCESS — C
- REBOUND — D
- COOL — E

Evaluate data and market characteristics to understand a **city's market scenario** (based on CUI's five scenarios); consider relevant policies and programs

4. Building Inventory

- BRUTALIST HIGH-RISE
- STEEL FRAME HIGH-RISE
- LOW-RISE BUILDING
- HERITAGE MID-RISE
- CHALLENGING MID-RISE

Apply CUI's **five building typologies** and building characteristics to understand feasibility of buildings for conversions

Create process to bring together building owners and city staff

TOOLKIT

5. Working Group

Establish a **go-to municipal conversion team** to help a building owner navigate process for building conversion including **potential for affordable housing** or to address other housing needs

Find ways to **bring together commercial and residential building owners and developers** including universities and non-profit housing providers to benefit from each other's knowledge

6. Measure and Track

Establish a tracking system to **measure number of units** and track buildings for best practices

Establish a community of practice network to support subsequent owners

Establish a method to identify building opportunities

Create a **technical guide** or 'how to' for conversions

FEDERAL FUNDING PROGRAMS

CUI has completed a scan of CMHC programs that may have applicability for office conversions. Program criteria would have to consider building re-use for eligibility. The benefit of office building re-use is both in the time to deliver housing (often shorter than ground-up construction) as well as the environmental benefits of embodied carbon and building upgrades. This list has not been vetted for conversion eligibility. It is also based on the best information found.

Rapid Housing Initiative (RHI)

(3rd round released for $1.5B in 2022-2023. Funding for rapid housing provision including modular and adaptive re-use. The conversion of an office (former school building) in Ottawa is funded by RHI.

National Housing Co-Investment Fund (NHFC)

$2.9B for the creation of more than 4,000 units and repair of over 17,000 units.

Rental Construction Financing Initiative (RCFI)

Repayable loans for the construction of rental housing at 80% below market rent for 40% of units (and some additional forgiveness for exceeding affordability or energy efficiency requirements)

Housing Accelerator Fund

A new fund for $4B over 5 years to target the creation of 100,000 new units.

Co-operative Housing Development

A new program with $1.5B in funding reallocated from Co-Investment Fund and Rental Construction Initiative

Affordable Housing Innovation Fund

$200M to support new ideas in affordable housing

Canada Infrastructure Bank

Funding for retrofits to support energy efficiency.

Canada Greener Affordable Housing

Low-interest loans and grants to non-profits and affordable housing providers.

Housing Supply Challenge

An additional $300M in funding focused on innovations in construction could certainly include building challenges and solutions for converted office space

MLI Select

Multi-unit mortgage loan insurance for affordability, accessibility and climate goals.

POLICY AND PROGRAM OPTIONS

This table outlines a list of actions to support office conversions. CUI developed this list through a literature review, examples of other jurisdictions, interviews with real estate experts, and engagement with stakeholders from four case example cities (Regina, Ottawa, Halifax and Moncton).

Policy and Program Options to Support Office Conversions
Financial Policies and Programs

Policies/Programs	Responsible Jurisdiction	Rationale
Provide tax incentives (rebate, credit, refund, TIFF) for conversions that achieve the City's housing goals	Municipal, Federal	To reduce the overall costs of conversions
Provide capital grants for conversions that achieve the City's housing goals	Federal, Municipal	To reduce the capital costs of conversions
Provide development fee waivers for conversions that achieve the City's housing goals	Municipal	To reduce the up-front development fees for conversions
Create and implement a downtown economic investment strategy to support the creation of amenities to support and attract increased residential use	Municipal	Create and implement a downtown economic investment strategy to support the creation of amenities to support and attract increased residential use

Policies/Programs	Responsible Jurisdiction	Rationale
Initiate a conversions pilot project	Municipal	Provide building owners and developers with an example of conversion project
Tie financial incentives to climate objectives to support climate adaptation and mitigation goals for all levels of government	Municipal, Provincial, Federal	To improve the viability of conversions that demonstrate a reduction in GHG emissions over demolishing and building new and encourage retrofits
Allocate community benefits charges towards affordable housing as the result of conversion	Municipal	To improve the financial viability of conversions resulting in affordable housing
Provide incentives for non-profit housing developers embarking on conversion projects for affordable housing	Municipal, Provincial, Federal	To improve the capacity of non-profit housing providers to develop affordable housing through conversions
Identify and match government funding programs at provincial and federal levels to support conversions	Municipal	To make use of existing provincial and federal programs to improve the financial viability of conversions
Utilize the community land trust financial model to reduce development costs and implement conversions as scale	Municipal, Non-profit	To enable non-profits, in combination with financial incentives, to acquire buildings for conversion to affordable housing
Discourage demolition of older buildings by imposing pollution levy	Provincial, Municipal	To disincentivize demolition and encourage conversions as an alternative
Encourage adaptive re-use by applying carbon credits or other incentives for building re-use	Federal, Provincial	To incentivize adaptive reuse based on its avoided emissions

Policies/Programs	Responsible Jurisdiction	Rationale
Impose office space vacancy tax	Municipal	To discourage building owners from removing office space from the market or withholding vacant buildings for an extended period
Allow the stacking of different incentives such as heritage, housing, etc., to support office conversions	Municipal	To increase the financial feasibility/ROI of office conversion projects
Consolidate office uses and sell vacant/unused federally owned buildings that are suitable for conversions at below-market rate and provide a transition plan for this initiative	Federal	To enable developers to convert federally owned office buildings to residential providing assurance and at cost to be financially viable

POLICY AND PROGRAM OPTIONS

Policy and Program Options to Support Office Conversions
Regulatory Policies

Policies/Programs	Responsible Jurisdiction	Rationale
Pre-zoning to permit changes of use for existing office buildings to residential and mixed use	Municipal	To reduce costs related to conversions due to carrying costs (time) and the rezoning applications process
Amend the zoning by-law to reduce parking minimums for residential use, where relevant, to support conversions	Municipal	To improve the viability of conversions well served by transit in downtown cores
Streamline the planning approvals process	Municipal	To reduce the planning related costs of conversions
Revise building codes for more flexibility in conversions	Federal, Provincial	To increase the viability of office conversions by providing clarity on building standards
Provide building owners with guidance to develop a commercial tenant relocation strategy	Municipal	To fast-track conversions in buildings currently occupied by live commercial tenants and ensure tenants are not adversely impacted by conversions
Remove the need for a development permit in cases where there are no changes to the site	Municipal	To allow developers to go straight to the building permit stage to reduce planning approvals-related costs

Policies/Programs	Responsible Jurisdiction	Rationale
Establish office conversion districts (i.e., overlay zones) to concentrate conversions in specific areas featuring compatible built form and uses supportive of residential growth	Municipal	To focus conversions in specific geographic areas, strategically targeting financial incentives, providing economies of scale, and controlling for use interactions.
Ensure downtown plans and strategies are regularly reviewed and iterated to support office conversions	Municipal	To account for changing conditions
Implement residential design and livability standards for office conversions	Municipal	To set minimum livability standards and prevent the creation of low-quality housing
Permit the repurpose of excess parking for other uses (i.e., flexible spaces, servicing, commercial, amenities, and public spaces)	Municipal	To enable the adaptive reuse of underutilized parking structures and activation of excess surface parking for the purpose of improving the attractiveness and livability of the building and area
Implement the ability to transfer development rights in the case of heritage buildings in zones that will not meet the maximum permitted density	Municipal	To take advantage of unused height and density to encourage vertical additions to adjacent office buildings up for conversion
Implement density bonusing	Municipal	To leverage additional height and/or density as a basis of negotiation between municipalities and developers to secure community benefits such as affordable housing through additions from conversion

POLICY AND PROGRAM OPTIONS

Policy and Program Options to Support Office Conversions
Information/Nudging Programs

Policies/Programs	Responsible Jurisdiction	Rationale
Market the benefits of conversions on the vitality of downtowns	Municipal, Provincial	To attract investment and population growth
Create a conversions manual for acceptable minor variances for adaptive reuse	Municipal	To provide clarity and predictability in the planning process for developers and building owners interested in conversions where rezoning is not planned
Write a conversions guidebook	Municipal	To provide clarity and predictability for conversions in the planning process, technical requirements, and available financial incentives
Regularly monitor and report on the office market (e.g., quarterly) to track changes and inform policies and programs	Municipal	To understand the scale of the opportunity
Explore the entry of non-traditional funders such as Crown corps and pension funds in conversions	Municipal, Provincial, Federal	To introduce alternative funders to conversions
Identify and analyze existing and planned office conversions and disseminate findings	Municipal, Provincial, Federal	To determine best practices, lessons learned, and return on investment potential for interested parties

Policies/Programs	Responsible Jurisdiction	Rationale
Create a dedicated staff team	Municipal	To administer and process conversion-specific planning applications and streamline the process
Create a municipal land development corporation	Municipal	To craft and implement a public lands or property divestment strategy to provide property at low or no cost to non-profits to facilitate affordable housing construction through conversion.
Develop an inventory of office buildings and developable sites	Municipal	To identify the scale of opportunity for viable conversions and enable Cities to know when sites are scarce and conversion may be a viable option for housing
Track the creation of units through conversion in a building permit database	Municipal	To allow a municipality track unit creation and scale of conversions through permitting system already in place
Create an information sharing platform between commercial and residential developers, post-secondary institutions, and non-profit housing providers	Municipal	To help developers and buildings owners understand how to undertake office conversions through lessons learned in the public, private, and non-profit sectors
Create an office vacancy threshold based on historical trends and future projections of the office space market	Municipal	To ensure the maintenance of a healthy office space market and inform building owners and developers of opportunities and constraints for conversions
Review off-site charges such as utility hook-ups and development charges	Municipal	To determine potential fee reductions considering existing building servicing requirements and infrastructure.

BIBLIOGRAPHY

Articles and Reports

"421-g Tax Incentive (421-g)." Directory of NYC Housing Programs." NYU Furman Center for Real Estate and Urban Policy. New York University School of Law and the Robert F. Wagner Graduate School of Public Service, 2005-2023. https://furmancenter.org/coredata/directory/entry/421-g-tax-incentive-program

"2022 Preliminary Budget at a Glance." City of Winnipeg. Multi-year budget: 2022 update. 2022. https://legacy.winnipeg.ca/interhom/Budget/2022-budget/pdfs/2022-Budget-at-a-Glance_Preliminary_ENG.pdf

"Adaptive Re-use: Executive Boulevard and Rock Spring Office Markets. (May 2016 Draft)." The Maryland-National Capital Park and Planning Commission Technical Report. White Flint 2 Sector Plan and Rock Spring Master Plan: Consultant Briefing. Montgomery County Planning Department. http://www.montgomeryplanningboard.org/agenda/2016/documents/PBMemo6-30-16BSABriefing_000.pdf

"Adaptive Reuse Ordinance." Publications. City of Los Angeles, 2001. https://www.ladbs.org/docs/default-source/publications/ordinances/adaptive-reuse-ordinance---l-a-downtown-incentive-areas.pdf?sfvrsn=7

Agius, Jeremy, and James Keller. "The Void in Calgary." Globe and Mail (Toronto, ON), Oct. 14, 2021. https://www.theglobeandmail.com/canada/alberta/article-the-void-in-calgary-how-office-towers-emptied-in-a-once-bustling/

"AVANT. Orbital Insight. The Vitality Index." Avison Young. https://www.avisonyoung.com/return-to-office-vitality-index

"Bike Score." Walk Score. 2023. Retrieved from: https://www.walkscore.com/bike-score-methodology.shtml

Bozikovic, Alex. "Calgary's Core Mission: To Turn a Ghost Town of Office Towers into Living Neighbourhoods." Globe and Mail (Toronto, ON), Oct. 21, 2021. https://www.theglobeandmail.com/canada/alberta/article-calgarys-core-mission-to-turn-a-ghost-town-of-office-towers-into/

"Briefing Report No. 3: Public Policy." p. 24. PDF. (2021). Centre for Civilization part of the Civic Commons Catalyst Initiative. Retrieved from: https://www.toronto.ca/news/city-of-toronto-issues-third-social-bond/#:~:text=Yesterday%2C%20the%20City%20of%20Toronto,positive%20and%20equitable%20socioeconomic%20outcomes

"Bring Back Main Street." Our Work. Canadian Urban Institute, 2021. https://canurb.org/initiatives/bring-back-main-street/

Bullen, Peter A. and Peter E. D. Love. "Residential Regeneration and Adaptive Reuse: Learning from the Experiences of Los Angeles." Structural Survey 27, no. 5 (2009): 351-360. https://www.emerald.com/insight/content/doi/10.1108/02630800911002611/full/html?fullSc=1

Chianello, Joanne. "Why a 4-storey Apartment Could be Coming to a Residential Street Near You." CBC News (Ottawa, ON), Jan. 24, 2022. https://www.cbc.ca/news/canada/ottawa/draft-report-housing-task-force-ontario-1.6324869

BIBLIOGRAPHY

City of Denver. “Adaptive Reuse Program Strategy Paper for the City and County of Denver, CO.” n.d. https://www.denvergov.org/files/assets/public/city-council/documents/d4/denver_adaptivereusestrategyreport_oct2020.pdf

Clifford, Ben, Jessica Ferm, Nicola Livingstone, and Patricia Canelas. “Assessing the Impacts of Extending Permitted Development Rights to Office-to-Residential Change of Use in England. Report for Royal Institution of Chartered Surveyors.” The Royal Institution of Chartered Surveyors. May 2018. https://www.rics.org/globalassets/rics-website/media/knowledge/research/research-reports/assessing-the-impacts-of-extending-permitted-development-rights-to-office-to-residential-change-of-use-in-england-rics.pdf

Clifford, Ben, Jessica Ferm, Nicola Livingstone, and Patricia Canelas. “Understanding the Impacts of Deregulation in Planning.” Understanding the Impacts of Deregulation in Planning (2019): 35-45. Accessed https://doi.org/10.1007/978-3-030-12672-8_4

“CMHC Rental Market Survey (October 2016 – October 2021)”. Housing Market Information Portal. Canada Mortgage and Housing Corporation. https://www03.cmhc-schl.gc.ca/hmip-pimh/en#Profile/1/1/Canada

“CMHC Census-based and NHS-based Housing Indictors and Data.” Housing Market Information Portal. Canada Mortgage and Housing Corporation, 2023. https://www03.cmhc-schl.gc.ca/hmip-pimh/en#Profile/1/1/Canada

Coes, Christopher, Jennifer S. Vey, and Tracey Haden Loh. “The Great Real Estate Reset: A Data-driven Initiative to Remake How and What We Build.” Anne T. and Robert M. Bass Center for Transformative Placemaking. The Brookings Institution, December, 2020. https://www.brookings.edu/essay/the-great-real-estate-reset-a-data-driven-initiative-to-remake-how-and-what-we-build/

“Core Area Loans and Grants.” City of London. September 21, 2022. https://london.ca/core-area-loans-grants

Cotell, Josh, and Claire Harding. “Remixing Central London”. Centre for London. March 2022. https://www.centreforlondon.org/wp-content/uploads/2022/03/CFL-Remixing-Central-London.pdf

Cuozzo, Steve. “NYC Can Get Creative — and Fun — with Uses for Empty Office Space.” Real Estate. New York Post. December 26, 2021. https://nypost.com/2021/12/26/nyc-can-get-creative-with-uses-for-empty-office-space/

Davidson, Justin. “Would You Want to Live in an Office tower on East 38th Street?” Curbed. Vox Media, February 19, 2021. https://www.curbed.com/2021/02/office-conversion-apartments-architecture-aro.html

Davis, Erin Nicole. “Could Aging Office Buildings Offer an Answer to Canada’s Housing Supply Crisis?” Storeys. December 13, 2021. https://storeys.com/aging-office-buildings-answer-housing-supply-crisis/

“Downtown Business Improvement Area (BIA) and Central Business District Zone (CBD) Financial Incentive Program.” City of Moncton. March 21, 2021. https://www5.moncton.ca/docs/grants/2022/BIA%20and%20CBD%20Financial%20Incentive%20Program%20-%20Revised%20March%2021,%202022.pdf

“Downtown Calgary Development Incentive Program.” Development & Building. City of Calgary, 2023. https://www.calgary.ca/development/downtown-incentive.html

Duany, Andres, and Robert Steuteville, “Defining the 15-Minute City.” Public Square: A CNU Journal. Congress for the New Urbanism. February 8, 2021. https://www.cnu.org/publicsquare/2021/02/08/defining-15-minute-city

BIBLIOGRAPHY

Dunlap, Daniel W. “Liberty Bonds’ Yield: A New Downtown.” New York Times. (2004). https://www.nytimes.com/2004/05/30/realestate/liberty-bonds-yield-a-new-downtown.html

Esajian, Paul. “Tips for Converting Commercial Property to Residential.” Fortune Builders. https://www.fortunebuilders.com/tips-for-converting-commercial-property-to-residential/#:~:text=Commercial%20property%20can%20be%20converted,residential%20versus%20commercial%20land%20use

Farivar, Cyrus. “Why Empty Offices Aren't Being Turned into Housing, Despite Lengthy Vacancies.” NBC News. July 25, 2021. https://www.nbcnews.com/business/real-estate/why-empty-offices-aren-t-being-turned-housing-despite-lengthy-n1274810

“Financial Incentive Program for Downtown Community Improvement Plan Area & Designated Heritage Properties”. City of Moncton. March 21, 2022. https://www5.moncton.ca/docs/grants/2022/CIPA%20Financial%20Incentive%20Program%20Revised%20-%20March%2021,%202022.pdf

Garcia, David, and Elliot Kwon. “Adaptive Reuse Challenges and Opportunities in California.” Terner Center for Housing Innovation. University of California Berkeley. November 2021. https://ternercenter.berkeley.edu/wp-content/uploads/2021/11/Adaptive-Reuse-November-2021.pdf

Gilley, Derek, Greg Zielinski, Sarah Palmer, Duncan Lyons, Jeff Barber, and Bill Talley. “Design Parameters for Urban Office-to-Residential Conversion.” Gensler, 2017. https://www.gensler.com/gri/design-parameters-for-urban-office-to-residential-conversion

Graham, Rylan and Jenna Dutton. “Obsolescence as an Opportunity: The Role of Adaptive Reuse in Calgary’s Office Market.” The School of Public Policy Publications (SPPP) 14, no. 1 (2021). https://policyschool.ca/wp-content/uploads/2021/02/Office-Vacancy-Graham-Dutton.pdf

Grabar, Henry. “Could Your Empty Office Turn into Apartments?” Slate. April 20, 2021. https://slate.com/business/2021/04/residential-conversions-housing-offices-manhattan-boston.html

Grant, Tarynn. "Developer Plans to Convert Downtown Halifax Office Space into Housing.” CBC News. November 30, 2021. https://www.cbc.ca/news/canada/nova-scotia/halifax-nova-scotia-affordable-housing-downtown-office-conversion-sidewalk-developer-1.6266068#:~:text=Rent

Heath, Tim. “Adaptive Re-Use of Offices for Residential Use: The Experiences of London and Toronto.” Cities 18, no. 3. (2001): 173-184. https://doi.org/10.1016/S0264-2751(01)00009-9

Heurkens, Erwin et al. “Planning Policy Instruments for Resilient Urban Redevelopment: The Case of Office Conversions in Rotterdam, the Netherlands.“ In Building Urban Resilience through Change of Use. City: John Wiley & Sons, 2018

Howard, Miles. “What If We Turned Empty Offices into Housing?” Boston Globe. May 2, 2021. https://www.bostonglobe.com/2021/05/02/opinion/what-if-we-turned-empty-offices-into-housing/

Immen, W. “Future proofing: Strategic Group’s repurposing approach.” August, 2020. Strategic Group. https://www.strategicgroup.ca/news/future-proofing-strate-gic-groups-repurposing-approach/

BIBLIOGRAPHY

"Incentives for Developers: Transferable Heritage Density Bonuses." Home, Property and Development. Urban Planning, Zoning and Development. City of Vancouver. https://vancouver.ca/home-property-development/density-incentives-for-developers.aspx

Johanson, Mark. "The Office Spaces Transforming into Luxury Apartments." Worklife. BBC. May 11, 2022. https://www.bbc.com/worklife/article/20220505-the-office-spaces-transforming-into-luxury-apartments

Kathpalia, Sunaina Bakshi and Yesim Sayin Taylor. "Examining Office to Residential Conversions in the District." D.C. Policy Center. October 7, 2021. https://www.dcpolicycenter.org/publications/office-residential-conversions/

Kerr, K. "What To Do with a Tired Office Space." Strategic Group. (November, 2017). https://www.strategicgroup.ca/news/tired-office-space/

Knowledge Leader Editor. "Office-to-Residential Conversions: Risks, Rewards and Real Estate Darwinism." Knowledge Leader. Colliers International. March 30, 2015. https://knowledge-leader.colliers.com/editor/office-to-residential-conversions-risks-rewards-and-real-estate-darwinism/

Kwasniak, Arlene J. "The Potential for Municipal Transfer of Development Credits Programs in Canada." Journal of Environmental Law and Practice 15, no. 1 (2004): 47-70. http://www.tdc-alberta.ca/Files/AK_TDC_in_Cda.pdf

Lall, Jessica, et al. "Adaptive Reuse: Reimagining Our City's Buildings to Address Our Housing, Economic and Climate Crises." Central City Association (2021). http://www.ccala.org/clientuploads/directory/whitepapers/CCA_Adaptive_Reuse_White_Paper_FINAL_.pdf

Lambert, Steve. "Downtown Winnipeg Bay Building to be Transferred to Southern Chiefs' Organizations for Mixed-use Development." CBC News (Winnipeg, MB), Apr. 21, 2022. https://www.cbc.ca/news/canada/manitoba/winnipeg-the-bay-building-indigenous-housing-1.6426554

Lanthier, Nancy. "Canada's Lease Rates for Office Space Increasing, Despite Increasing Vacancies." Globe and Mail (Ottawa, ON), Dec. 28, 2021. https://www.theglobeandmail.com/business/industry-news/property-report/article-canadas-lease-rates-for-offices-increasing-despite-soaring-vacancies/#:~:text=In%20Vancouver%2C%20lease%20rates%20have,by%202024%20from%20current%20levels.%E2%80%9D

"Liberty Bond." New York City Housing Development Corporation. Internet Archive WayBack Machine. Dec 20, 2005 – July 15, 2007. http://www.nychdc.com/program/liberty%20bond_details.htm

"Liberty Bond Program." Directory of NYC Housing Program. NYU Furman Center for Real Estate and Urban Policy. New York University School of Law and the Robert F. Wagner Graduate School of Public Service, 2005-2023. https://furmancenter.org/coredata/directory/entry/liberty-bond-program

Litman, Todd. "A Complete Community Is All Mixed Up". Blogs. Planetizen. March 15, 2021. https://www.planetizen.com/blogs/112565-complete-community-all-mixed

"Lower Manhattan Development Corporation." Lower Manhattan Development Corporation. http://www.renewnyc.com/ThePlan/residential_growth.asp

McLean, Steve. "Canada's Office Market Outlook Improves, but Recovery is Slow." Real Estate News Exchange. July 13, 2021. https://renx.ca/canada-office-market-outlook-improves-recovery-slow/

BIBLIOGRAPHY

"Montreal Road Community Improvement Plan". City of Ottawa, 2001-2023. https://ottawa.ca/en/business/get-help-starting-or-growing-your-business/programs-and-projects/community-improvement-programs/montreal-road-community-improvement-plan

"New York City Office Adaptive Reuse Study." Office Adaptive Reuse Task Force. New York. January 2023. https://www.nyc.gov/assets/planning/download/pdf/plans-studies/office-reuse-task-force/office-adaptive-reuse-study.pdf

"North American Industry Classification System (NAICS) Canada 2017 Version 3.0". Statistics Canada. March 18, 2021. https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553

OBJ Staff. "InterRent REIT to convert Albert Street office building to apartments." Ottawa Business Journal. January, 2020. https://obj.ca/article/interrent-reit-convert-albert-street-office-building-apartments#:~:text=InterRent%20REIT%2C%20which%20acquired%20the,a%20mixed%2Duse%20apartment%20complex

O'Sullivan, Feargus. "Behind the Accidentally Resilient Design of Athens Apartments." Bloomberg. July 15, 2020. https://www.bloomberg.com/news/features/2020-07-15/the-design-history-of-athens-iconic-apartments

"Office Exodus May Lead to Rethinking Downtown Spaces." CBC News. Accessed October, 2021. https://www.cbc.ca/player/play/1961160771764
.
Park, Julia. "Why the Government Should End Permitted Development Rights for Office to Residential Conversions." Levitt Bernstein. (2021). https://www.levittbernstein.co.uk/research-writing/why-the-government-should-end-pdr-for-office-to-residential-conversions/— Levitt Bernstein.

Peng, Changhai. "Calculation of a Building's Life Cycle Carbon Emissions Based on
Ecotect and Building Information Modeling."
Journal of Cleaner Production 112 Part 1 (2016): 453–465. https://doi.org/10.1016/j.jclepro.2015.08.078

"Real-time Local Business Conditions Index." Statistics Canada. https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2021017-eng.htm

Remøy, Hilde T. and Theo J.M. van der Voordt. "A New Life: Conversion of Vacant Office Buildings into Housing." Facilities 25, no. 3/4 (2007): 88–103. https://doi.org/10.1108/02632770710729683

Remøy, Hilde T. and Theo J.M. van der Voordt. "Adaptive Reuse of Office Buildings into Housing: Opportunities and Risks." Building Research and Information: International Journal of Research, Development and Demonstration. 42, no. 3 (2014): 381-390. https://doi.org/10.1080/09613218.2014.865922

Remøy, Hilde T., and Sara J. Wilkinson. "Adaptive Reuse of Offices: Residential Conversions in Sydney." Sustainable Buildings. European Real Estate Society (ERES, 2015. https://www.researchgate.net/publication/314715675_Adaptive_reuse_of_Sydney_offices_and_sustainability

Remøy, Hilde T., and Sara J. Wilkinson. "Office Building Conversion and Sustainable Adaptation: A Comparative Study." Property Management 30, no. 3 (2012): 218-231. https://www.emerald.com/insight/content/doi/10.1108/02637471211233738/full/html

Rick Liu, "Converting Office to Residential Is Complicated," The Third Place, A Montgomery Planning Department Blog (blog), October 4, 2017, https://montgomeryplanning.org/blog-design/2017/10/converting-office-to-residential-is-complicated/
.
Sharma, Atul. "The Future of Aging Office Buildings." The Third Place: A Montgomery Planning Department Blog. Montgomery County Planning Department. March 21, 2017. https://montgomeryplanning.org/blog-design/2017/03/the-future-of-aging-office-buildings/

Sorich, George, Jan Steingahs, Ross Roy, Olivia Fung, and Simon Bell. "Transforming Office Buildings to Livable Spaces." NORR. https://norr.com/spotlight/insights/transforming-office-buildings-to-livable-spaces/

BIBLIOGRAPHY

Squires, Camille. “What’s in Store for Empty Downtown Office Buildings?” Quartz. April 12, 2022. https://qz.com/2151800/cities-are-turning-empty-office-buildings-into-apartments

Steuteville, Robert. “Green Code Spurs Historic Rehab, Economic Development.” Public Square: A CNU Journal. November 30, 2020. Congress for the New Urbanism. https://www.cnu.org/publicsquare/2020/11/23/green-code-spurs-historic-rehab-economic-development.
“Table 3: Population Density of Primary Downtowns, 2021.” Statistics Canada. February 9, 2021. https://www150.statcan.gc.ca/n1/daily-quotidien/220209/t003b-eng.htm

“Table 98-10-0002-01: Population and dwelling counts: Canada and census subdivisions (municipalities)”, 2021 and 2016 Censuses. Statistics Canada. February 9, 2022. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810000201

“The Case for the Core”. Canadian Urban Institute. September 2021. https://canurb.org/publications/case-for-the-core/

“The Greenest Building: Quantifying the Environmental Value of Building Reuse”. Preservation Leadership Forum. National Trust for Historic Preservation, 2011. https://forum.savingplaces.org/viewdocument/the-greenest-building-quantifying

“The Victoria Housing Strategy 2016 – 2025 Phase Two: 2019 – 2022”. City of Victoria. Last modified June 4, 2022. https://www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/Housing~Strategy/The%20Victoria%20Housing%20Strategy_Phase%20Two_FINAL%20Web.pdf

“Transit Score Methodology.” Walk Score. 2023. https://www.walkscore.com/transit-score-methodology.shtml

Vanderdeen, Lauren. “Foot Traffic Picks Up in Western Canada’s Downtown Areas as COVID-19 Restrictions Lift.” Globe and Mail (Toronto, ON), April 23, 2022. https://www.theglobeandmail.com/canada/british-columbia/article-foot-traffic-picks-up-in-western-canadas-downtown-areas-as-covid-19/

White, Richard. “Crunching the Numbers: A Test Case for Converting a Calgary Office Tower into Apartments.” CBC News. May 26, 2021. https://www.cbc.ca/news/canada/calgary/road-ahead-calgary-downtown-building-conversion-costs-1.6030951

White, Richard. “White: Office-to-Residential Conversions Easier Said Than Done.” Calgary Herald (Calgary, AB), September 29, 2017. https://calgaryherald.com/life/homes/condos/white-office-to-residential-conversions-easier-said-than-done

Willing, Jon. “Residential Conversion of Centretown Office Building Could Signal COVID Market Transformation.” Ottawa Citizen (Ottawa, ON), April 8, 2021. https://ottawacitizen.com/news/local-news/residential-conversion-of-centretown-office-building-could-signal-covid-market-transformation

Windsor School of Law - C4C Housing Systems Workshop Series: Bridging the Gap: Financial Incentives - TIFS, CIPS & More. Financial Incentives for Increasing Housing Supply: C4C Housing Systems Workshop 3 Centre for Cities. 2022. Access date. https://www.youtube.com/channel/UCQtmGYTeE6KRM-HW5vFjbszQ.

Workshop Forum. ‘Transit and the Optimistic Return to Office’, hosted by SRRA Research, May 12, 2022.

Interviews and Engagement Sessions

Sarah Anderson and Alicia Grayeb. Interview on zoning and bylaws in Moncton with Leandro Santos. Canadian Urban Institute. January 17, 2023.

Amarpreet Guliani. Interview on zoning and bylaws in Regina with Leandro Santos. Canadian Urban Institute. January 11, 2023.

Kasia Tota. Interview on zoning and bylaws in Halifax with Leandro Santos. Canadian Urban Institute. January 10th, 2023.

Seana Turkington. Interview on zoning and bylaws in Ottawa with Leandro Santos. Canadian Urban Institute. January 11, 2023.

David Garcia. Policy Director at the Terner Center University of California, Berkeley, Interview by Jennifer Barrett. May 10, 2022.

“Engagement sessions with building owners and developers in the city of Halifax.” Office space conversions project. Canadian Urban Institute. August 3 and September 21 2022.

“Engagement sessions with building owners and developers in the city of Moncton.” Office space conversions project. Canadian Urban Institute. August 23 and September 13, 2022.

“Engagement sessions with building owners and developers in the city of Ottawa.” Office space conversions project. Canadian Urban Institute. October 3, 7, and November 4, 2022.

“Engagement session the building owners and developers in the city of Regina.” Office space conversions project. Canadian Urban Institute. June 23, 2022.

Erwin Heurkens and Hilde Remøy. Interview by Luthfi Dhofier. Canadian Urban Institute. September 12, 2022.

Joe Nickerson, Sidewalk Real Estate Development. Interview by Jennifer Barrett. Canadian Urban Institute. October 14, 2022.

Kelsey Longmoore, Founder, Kilo Lima Code Community. Interview by Jennifer Barrett. Canadian Urban Institute. April 12, 2022.

Matt Furman, Furman Institute, NYU. Interview by Jennifer Barrett. Canadian Urban Institute. October 14, 2022.

Julia Park. Interview by Luthfi Dhofier. Canadian Urban Institute. September 9, 2022.

Rodney McDonald, Royal Castle Management Inc. Interview by Jennifer Barrett. Canadian Urban Institute. March 30, 2022.

Steve Paynter, Gensler. Interview by Jennifer Barrett. Canadian Urban Institute. April 8, 2022.

Workshop with municipal officials. Office space conversions project. Canadian Urban Institute. December 6, 2022.

Workshop with municipal officials. Office space conversions project. Canadian Urban Institute. December 9, 2022.

SUPPLEMENTAL DOCUMENTS

High-level costing

High level costing has been completed for two buildings identified as feasible for conversions. One in Ottawa and a second in Regina.

Based on this analysis are the following findings:

- Per square footage costs for conversion vs. new construction (hard costs only) are approximately $130 -$200 per SF less than new construction in the same location
- Cost per square foot does not account for building acquisition, which could greatly influence financial feasibility but nor does the per cost of new construction account for land costs and other potential new capital costs such as servicing
- Unknown expenses can be more common when working with an existing building (hazardous materials, systems upgrades) but construction is not necessarily more expensive

.

Access the document here

GHG analysis summary

The following analysis evaluates the impact of office-to-residential conversions on GHG emissions including embodied carbon of the building itself and improved energy performance.

Re-use of existing buildings offers opportunities to avoid some of the climate impacts of new construction and shorten the timeframe to net contribution. A GHG analysis has been conducted to demonstrate the cumulative effect of avoided construction emissions due to building re-use and the point at which it would take for a new building of the same materials and volume would achieve emissions offset (the point at which it is no longer compensating for emissions triggered by new construction compared to an existing building converted).

This analysis shows that office-to-residential conversions **can provide near term carbon emissions benefits when compared to the equivalent new construction, in addition to potential net reduction in total emissions over the building's lifespan.**

Depending on the building materials, location (energy grid) and other factors, **a new building can take 16 – 75 years to offset the carbon emissions that could be saved through building re-use.**

This analysis has been completed for three building typologies analysed in CUI's work:

- Heritage typology
- Concrete high-rise typology
- Steel frame typology

Access the document here

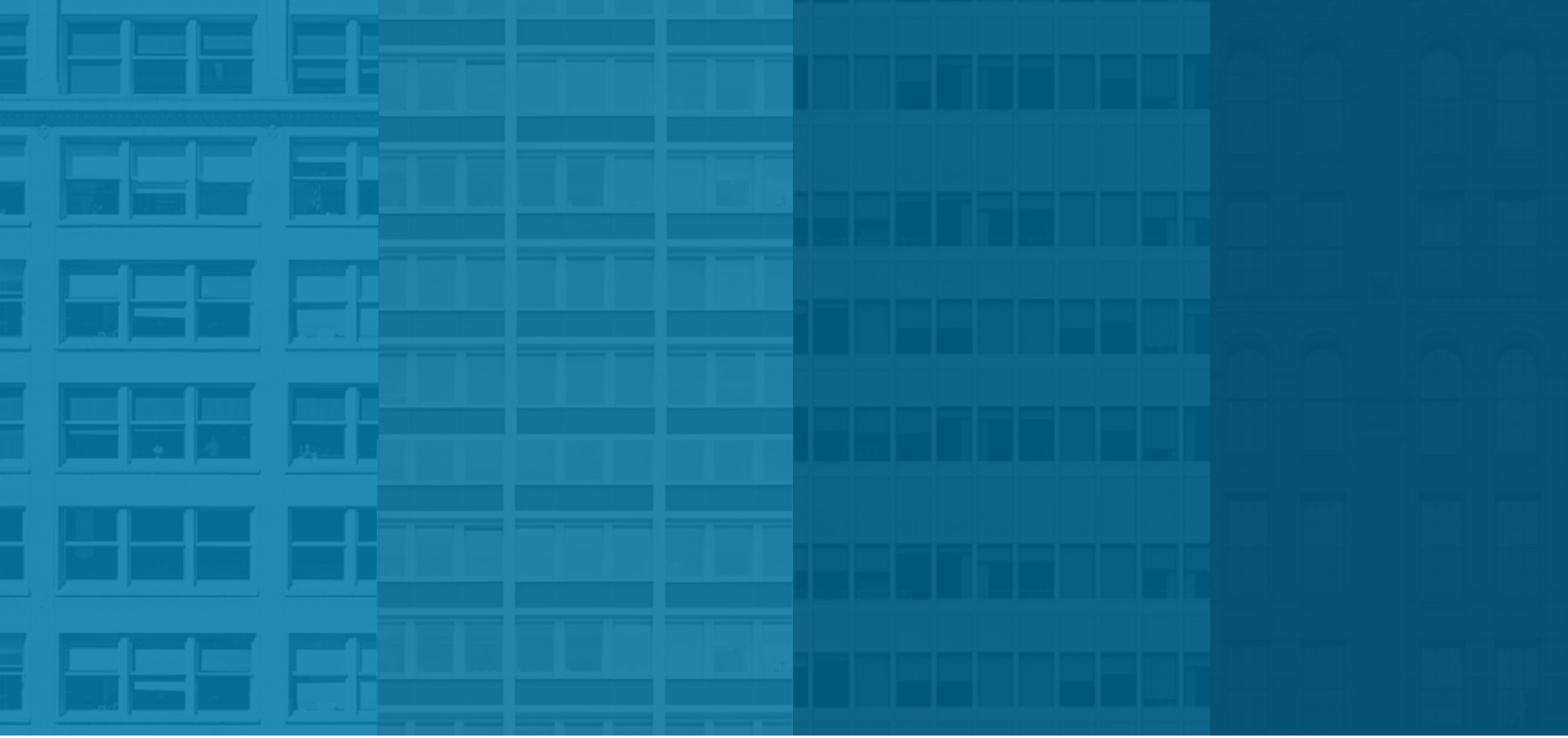
Building code analysis summary

The following document includes an analysis of Building Code implication for conversions. A list of recommendations is included.

Access the document here

Building code information sheets

Access the document here



Canadian Urban Institute
Institut Urbain du Canada