New Housing Models for Youth Transitioning Out of Care



























































CMHC's Solutions Labs brings experts and housing stakeholders together and gives them funding to incubate and scale potential solutions to complex housing problems using innovation methods and tools. The goal is to develop world-leading solutions to housing problems that can contribute to the National Housing Strategy's key priority areas.





The WoodGreen Innovation Lab supports the WoodGreen organization in creating and testing new approaches to create meaningful impacts for our clients. Our work is grounded in best practices, informed by research, data analysis, and co-design with key stakeholders. Using a human-centred approach, we engage staff, community partners, and most importantly service users with lived experience of the systems and services we are helping transform.

The Lab team is composed of a diverse team of skilled professionals who understand nuanced challenges and co-create practical solutions. We see a world where innovation is a catalyst to create a Toronto where everyone has the opportunity to thrive.

PARTISANS

PARTISANS is an award-winning Toronto-based architecture studio that specializes in making the improbable possible, at all scales and project types. We are a diverse and nimble team of architects, artists, storytellers, entrepreneurs, and cultural enthusiasts devoted to a cause: smart, high-impact architecture combined with deft programming that subverts expectations and creates meaningful built experiences.

We mobilize technology, research, invention, and collaboration to achieve the highest standards of design excellence at every turn, on time and on budget. These practices keep our projects aligned with client ambitions and goals while ensuring high fidelity to the concept and vision all the way through implementation and construction.



PROCESS is a strategy, research and planning studio. With an interdisciplinary team of urban planners, designers and artists, PROCESS aims to transform how we plan, design and experience places and communities. We believe that creative, collaborative and equitable processes result in the most responsive, meaningful and implementable plans and outcomes.

Imagine you're a child and you're at home with your family, imagine someone comes into your front door, takes you by the hand, leaves, and takes you to a stranger's home and says, 'this is where you live now, okay?' How would you feel? Would that be home? A sense of home is important because that's the spatial version of who you are as a person. Everyone needs to have that to just know who they are...For a lot of people, for a long time, our bodies are our homes. That's the one consistency during a constant state of flux and transition. A home that is our own is made up of pieces of ourselves that we take from inside and expose them out. A place to live can be given or enforced, but a home must be consciously made.

-Nicholas Ridiculous, Youth From Care & Collaborator

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Prologue

Faulty Trajectories

by Nicholas Ridiculous

Within foster care, the homes tend to blur together. Empty rooms, or worse, rooms filled with someone else's life. Nothing is ever your own. No stability, just stagnation. Cast away stuff, cast away treatment filed away in a room of junk. Youth need meaningful spaces that offer freedom to be, freedom to explore, freedom to open the doors of opportunity. If you could just have a stable base, the freedom to explore is natural.

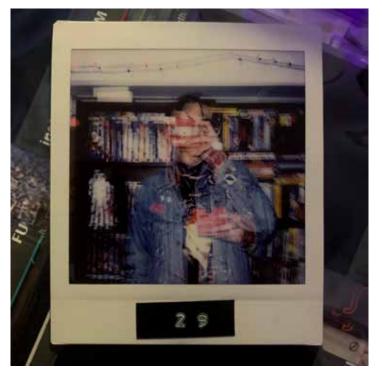
We need to build our future cities with and for those who cannot access the cities of today because there's no foundation from which to explore - they are merely untethered and surviving. By having positive support, we can move beyond survival, and understand what it means to bloom late. **How do you realize hidden potentials beyond existing? Design opens a door to allow for that exploration.**

I'm not speaking crazy ideas nor unreachable goals, I'm speaking about places to come together, places to feel a part of. A cafe, studios/public spaces that encourage gathering and commercial potential, great views, wellness services and green spaces to bring the building to life. **Not a** "forever home," but a launching pad to multiple pathways. Can design provide the sense of enough stability to inspire residents to venture down their own chosen paths? Humane design must offer "freedom" to "access" a city.

Nicholas Ridiculous, a youth from care, is a key contributor to this Solutions Lab research. Nicholas has provided a number of his own writings through this document that give unique, personal insights to transitional housing for youth aging out of care.



Jincheol Kim, Bookcase and Television, 2018.



Nicholas Ridiculous, Fresh Optics, 2020.

About This Project

Funded by the Canada Mortgage and Housing Corporation (CMHC), this Solutions Lab aligns with the National Housing Strategy's priority area of housing for those in greatest need.

This Solutions Lab seeks to develop a set of key architectural design principles and solutions that could inform future built-for-purpose transitional housing sites for youth who are homeless or at risk of being homeless, with a focus on youth aging out of the child welfare system.

These particular youth have distinct and complex needs related to their abilities to navigate life outside of the child welfare system: they often struggle with the essential life skills and social networks for successful transition into adulthood, and face a breadth of barriers related to trauma, experience with the criminal justice system, and mental health issues (Gaetz et al., 2016). Essential wraparound supports, including opportunities to build life skills and networks, future models that consider the built environment, and programmatic components could improve socioeconomic wellbeing for youth and the communities they live in.

Acknowledgements

We would like to thank staff from the Free2Be Program: Erik Wexler, Vanessa Wu, and Rasheeda Guinn; as well as the members of our Advisory Council: Dr. Uzo Anucha (Provincial Academic Director and York Research Chair, YouthREX), Michael Braithewaite (CEO, Blue Door Shelter), Wendy Chan (Senior Manager of Programs, Children's Aid Foundation of Canada), Bonnie Harkness (Director of Strategic Partnerships & Program Development, 360 Kids), Valerie McMurtry (President & CEO, Children's Aid Foundation of Canada), Heather Milstein, Abigail Moriah (Senior Development Manager, New Commons Development), Clare Nobbs (Director, Sprott House YMCA), Nicholas Ridiculous (Youth from Care & Collaborator), Reshma Shiwcharran (Youth Representative) and Chana Weiss (Youth Representative) and Cookiee Von C (Youth Representative).

A special thanks also to the members of our Youth Research Group for sharing their experiences and invaluable insights. They are the experts, and their expertise is at the heart of our work. Finally, we thank CMHC and the ECOH community for their guidance and support.



Youth advisors during our youth engagement workshop in Fall 2019

^{*}This project received funding from the National Housing Strategy under the NHS Solutions Labs, however, the views expressed are the personal views of the author and CMHC accepts no responsibility for them.

The Challenge

During their late teens and twenties, most youth are attempting to establish their own identity and independence. Even with strong support networks, youth can struggle to clearly define their paths to independence, and many remain at least partially dependent on supports into their 20s (Kovarikova, p5). Stability is especially important at this stage of life, as life skills are being honed, and the early stages of transitioning to financial independence are underway. Youth facing homelessness at this critical time face increased instability. These challenges are intensified by the COVID-19 pandemic, which has introduced difficult new barriers to accessing housing, employment, stability, and social supports.

Aging Out of Care

For youth who have had experience with the child welfare system ('youth aging out of care'), this struggle is exacerbated. Instability can hinder education; for each move, youth lose, on average, four to six months of academic progress. Despite their desires to complete high school and pursue post-secondary education, approximately half of Ontario Crown Wards drop out of high school (Kovarikova, p9-10). Youth aging out of care face further difficulties. They are often unemployed or underemployed, experience homelessness or housing instability, become involved with the criminal justice system, become parents early, face disproportionate health issues, and experience deep loneliness (Kovarikova, p6). Because they experience disconnection from supportive networks, lack models for life skills, and often don't have the overall wellbeing necessary to participate in economies, youth are far more likely to be poor and will face great difficulty accessing housing.

Housing plays a critical role in outcomes for youth aging out of care

Youth reporting experience with the child welfare system make up a disproportionate percentage of youth experiencing homelessness, accounting for over 40% of a total population ranging between 35,000 to 40,000 individuals in any given year (Youth Homelessness Survey & Transitions from Child Protection). With 800 to 1,000 youth aging out of care every year (Exploring Youth Outcomes), the need for improved support systems to prevent and reduce homelessness is critical.

The aim is to envision architecture that is designed to shape the trajectory of youths' transitions into adulthood through wraparound supports and the innovative use of physical space.

800 to 1000

youth age out of care each year in Toronto

(Irwin Elman, 2016, qtd. in Kovarikova. J., 2017)

47%

of homeless youth have experience in foster care or group homes

(Gaetz, Stephen; Bill O'Ggrady, Sean Kidd, Kaitlin Schwan, 2016)

Youth shelters in Toronto:

543

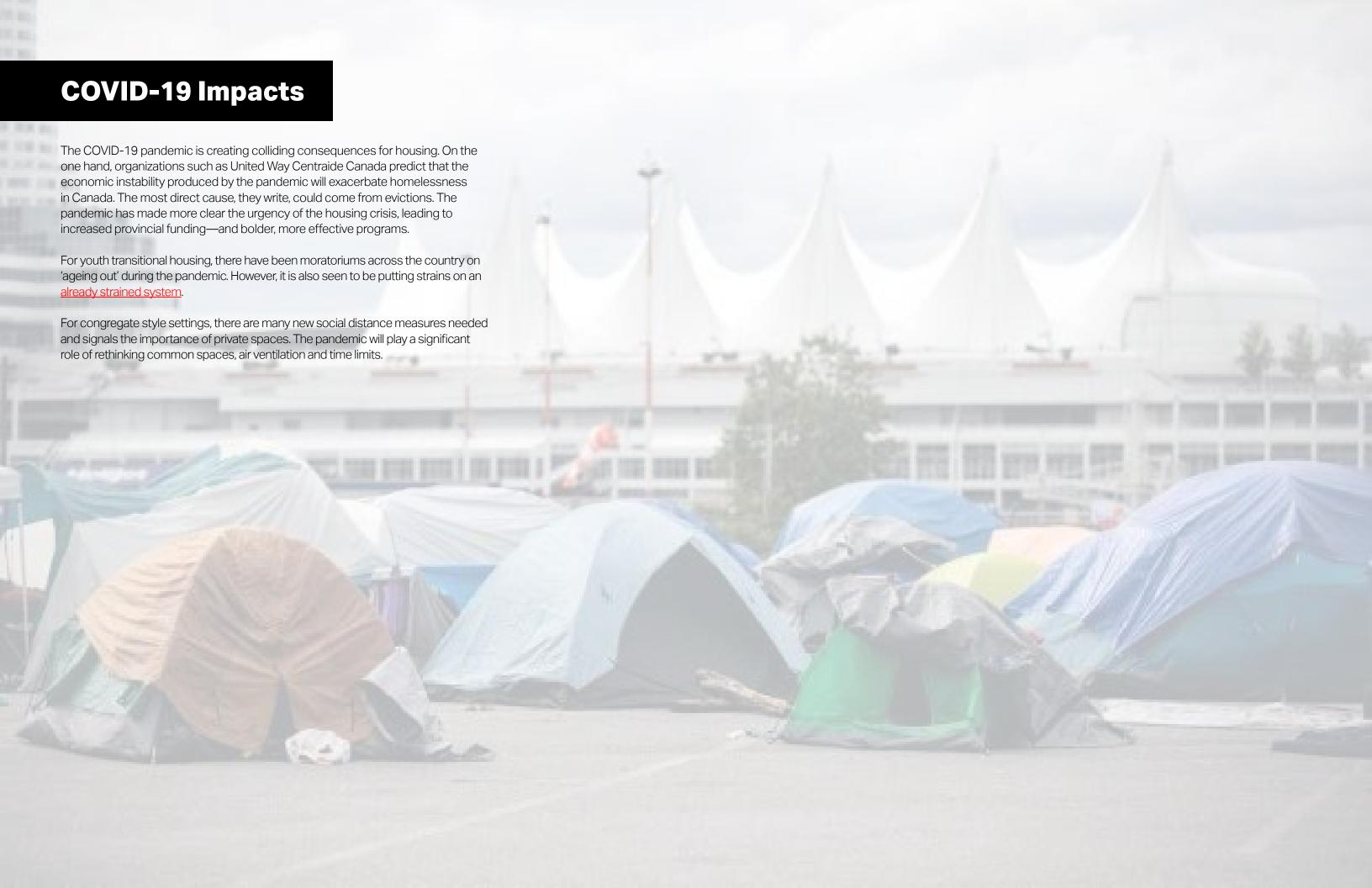
850-2000

beds

(City of Toronto, 2019)

homeless youth per night

(B. O'Grady and S. Gaetz. 2002)



Context

WoodGreen began investigating the critical gap in services for homeless youth aging out of the child welfare system at the request of the Provincial Government in 2016. In partnership with Covenant House Toronto, the Toronto Children's Aid Societies, and the Ontario Ministry of Children and Youth, WoodGreen designed an evidence-based housing-first intervention. As this work progressed, WoodGreen was selected to be part of a national demonstration project led by A Way Home Canada and the Canadian Observatory on Homelessness that looked to prevent and end youth homelessness in Canada. As part of the research project, WoodGreen launched Free 2 Be, a program to support more than sixty young people (aged 17-24) who have, or are in the process of, transitioning out of the child welfare system in Toronto.

Need for long-term transitional & supportive housing

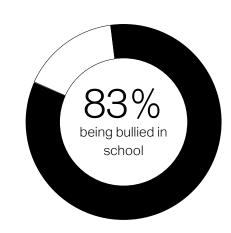
During the development phases for Free 2 Be, interviews with stakeholders and youth identified a pressing need for long-term transitional and supportive housing for youth who require more intensive supports. Grounding best practices for housing for youth (see Transitional Housing Toolkit, Foyer Model, etc.) in physical spaces remains a critical component to addressing youths' needs and integrating them into the broader community. Gaps in services when transitioning out of care leave youth vulnerable to housing instability as they often lack the resources and life skills to live independently and access private market rental units. Even without these barriers facing youth leaving care, housing affordability is a challenge across Canada, and especially for youth; over 40% of Canadians aged 20 to 29 live with their parents due to barriers to employment and the rising cost of housing. Housing instability and homelessness makes the already difficult process of transitioning out of care more difficult, jeopardizing opportunities for youth to make steps toward self-sufficiency (Gaetz & Dej, A New Direction: A Framework for Homelessness Prevention, 2017). By offering stabilizing, holistic supports at this critical stage in the lives of vulnerable youth, the model being developed through this Solutions Lab aims to become an effective intervention for reducing the rates of youth homelessness in Canada.

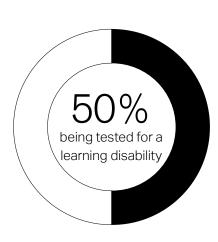
of the homeless population in Canada is between the ages of 13 & 24

(Gaetz, 2016)

Homeless youth in Canada reported:

(Gaetz, 2016)







Youth experiencing episodes of homelessness aging out of care:

(Gaetz, 2016)

24%

multiple episodes

single episode more than five episodes

Context

Stabilizing youth as they develop the skills to build critical social and economic networks will dramatically improve socioeconomic impacts for these youth. In our study, we have focused on the issues facing youth at risk of homelessness, with a particular focus on youth aged 17 to 29 who have had experience in the child welfare system. In addition to the great and growing need of youth transitioning out of the care system, there is a greater acknowledgement of the need for innovative housing models for unique sections of the population.

From a policy perspective, there is alignment from all levels of government including the Federal government's National Housing Strategy, the City of Toronto's Housing NOW program and the Provincial government's supportive housing strategy and Bill 108, promoting more homes and more choices.

From a design and programmatic perspective, we're seeing promising models from around the world use innovative design, robust wraparound programming, and innovative financing models to create new options.

The time is now to create new models of housing for youth transitioning from the foster care system.

Our Approach

WoodGreen, PARTISANS, and PROCESS have partnered to develop a deeper understanding of the complex needs of youth transitioning out of the foster care system to put forth new solutions to support youth to thrive. We've adopted a mix of qualitative and quantitative research to explore potential solutions in social programming, architecture, and design. The Solutions Lab seeks to expand understanding of the issues and highlight new relationships and factors for consideration by bringing various participants to the table.

To explore this complex challenge we are embarked on a four phased process to identify new housing solutions for youth transitioning from the foster care system.

Phase This phase set the foundation of the Lab process with a selection of interviews with key stakeholders and related desktop research. Highlevel takeaways are summarized in this brief. Development This phase evaluated our initial findings and highlighted any gaps, along with proposing potential solution ideas.

Prototyping

Phase

3

This phase looked to test our ideas and explored them more deeply. A workshop series was a key component of the prototyping phase.



Methodology

Phase 1: Research

Building on research developed through WoodGreen's Findings Report on Voices from the Child Welfare System and by the Homeless Hub (Canadian Observatory, S. Gaetz), WoodGreen, PARTISANS, and PROCESS researched best practices in youth housing design.

Our research approach was youth-centered, rooted in interdisciplinary collaboration and encompassed a number of avenues of study:

Review of 35 architectural precedents

This included specific transitional housing for youth projects as well as a broader selection of affordable housing projects. These broader projects were selected based on a number of criteria, including direct applicability of design approaches, innovation, and design excellence. Geographically, the precedents include Canadian examples, with a specific focus on Southwestern Ontario, as well as global innovators.

Three Youth Engagement Workshops

We held three youth engagement workshops in November 2019 with a Youth Research Group made up of youth from WoodGreen's Free2Be program, the Pape Adolescent Resource Centre (PARC), and some who found out about the opportunity through word of mouth.

Scan of Youth Support Program Types

We assembled a scan of various transitional housing programs through a literature review. This encompassed best practices in Canada, as well as international approaches. Common critiques were also researched.

34 Interviews with local & international experts

We conducted 34 interviews with experts in the field including youth with experience aging out of care, affordable housing developers, support workers, directors and managers of agencies interfacing directly with at-risk youth, architects, policy makers such as city councillors, municipal planning and housing office staff, and youth support services and affordable housing researchers.

Site Visits

We conducted visits to three transitional youth housing facilities in the Greater Toronto Area: Peel Youth Village, 650 Queen Street East, and 249 Cosburn Avenue.

The research from Phase 1 shed new light on the issues surrounding housing for youth aging out of care. The sometimes conflicting information and opinions gathered throughout this project illustrates the complex network of operators, regulators, designers, builders, researchers, financiers, and innovators who, at the core, are working towards providing opportunities and support systems for youth.

Based on the research, we identified key emerging themes and possible prototypes. We hosted a design charrette to gather insights on prototype developments with over 50 topic experts, including youth with lived experience, as well as planning, architecture, policy and development professionals.

Phase 4: Key Findings & a New Model

The research, development and prototyping conducted in Phases 1 through 3 informs this Roadmap Report, which offers New Models for Youth Transitioning Out of Care. This includes a comprehensive framework of core principles for developing an effective transitional housing model for youth:

- 1. Youth-led and Wraparound Program Models
- 2. Youth-Centered Design
- 3. Site Selection
- **4.** Community Engagement
- **5.** Operations and Maintenance
- **6.** Considerations for Construction
- 7. Finance and Partnerships

Three typologies have been developed and prototyped. They are: Housing Here, Housing Now and Housing +.

Understanding Transitional Housing

Definition of Transitional Housing

"Transitional housing refers to a supportive-yet temporary-type of accommodation that is meant to bridge the gap from homelessness to permanent housing by offering structure, supervision, support (for addictions and mental health, for instance), life skills, and in some cases, education and training."

—Dr. Stephen Gaetz

Director of the Canadian Observatory on Homelessness (2014b)

For youth leaving care, transitional housing can act as an interim measure while they look for more permanent and stable housing. There are many models of transitional housing for youth. Typically, they incorporate a range of supports and services dedicated to helping youth not only find housing, but also build life skills, find employment and training opportunities, and access counselling and mentorship to help sustain independence. It is suggested that because the experience of adolescence is inherently transitional, transitional housing is appropriate for many young people who require the longer-term supports we generally consider necessary in helping them transition to adulthood, while building life skills that enhance their integrated community members (Gaetz and Scott 2012, p. 14).

Approaches and understandings of best practices for transitional housing for youth are evolving. Increased research on youth development, innovations in housing design and construction materials, and broader funding, policy and socioeconomic contexts impact new ways of thinking about transitional housing. This includes transitional housing models, forms of accommodation and programmatic and design needs.

Transitional Models

There are differing approaches to the programmatic elements of transitional housing. Most transitional housing models include intensive supports and a rigorous program.

The Foyer Model

The Foyer model, which started in Europe and has recently been adopted in Canada, often requires that the young person must agree to participate in education, training or employment to receive accommodation. There are often specific rules and eligibility criteria that youth must meet to maintain housing. In addition, there is often a time limit associated with their stay. For the most part, the Foyer model is deemed successful, because it is youth-centered, where supports and programmatic requirements can still be tailored to the youth's personalized needs (See Gaetz and Scott, 2012; Canadian Observatory on Homelessness, 2015). Because of the structure and support, the Foyer model is seen to be a good model for many youth leaving care.

Housing First for Youth Model (HF4Y)

HF4Y does not demand preconditions to access housing. There are no time limits and there is an emphasis on social inclusion and community integration. Similar to Foyer and other transitional housing models, HF4Y models prioritize youth choice, voice and self determination and are focused on positive youth development (Gaetz, 2017).

While there are arguments in favour of either the H4NY or the Foyer model, there is agreement that having these myriad housing options is useful to prevent homelessness because ultimately, youth have a diversity of needs. Ensuring a youth-centric response should be prioritized.

"[Transitional housing] is like a resting spot when you are climbing a mountain. You would stop at a ledge to take a break but you wouldn't turn back down. You get the rest you need to continue your journey going up."

—Youth interviewed for this project

"The building should be an incubator for the individuals who get a two to five years incubation period where they are allowing themselves to catch up for all the development that's been fragmented, obstructed, during their life and just plan through what's next."

12

—Youth interviewed for this project

Affordable Housing

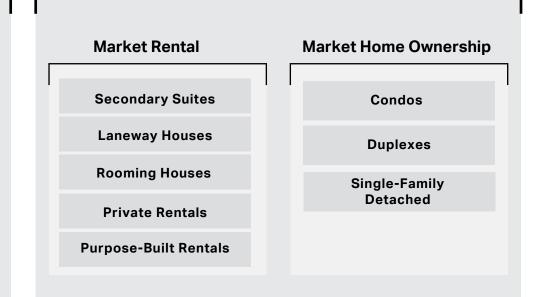
Safety Nets

Emergency Housing Domestic Violence Shelters Homeless Shelters LGBTQ2 Shelters Transitional Housing Youth Aging-Out-of-Care New Immigrants Young Mothers Physically & Mentally Challenged

Housing with Supports

Supportive Housing Assissted Living Co-Op Housing Seniors Supportive Housing Addiction Recovery Affordable Ownership

Market Housing



Locating Transitional Housing for Youth

"An effective response to youth homelessness should give young people choices and options based on their age, experience, level of independence and need."

—Dr. Stephen Gaetz

Director of the Canadian Observatory on Homelessness (2014b)

Transitional housing for youth is one approach to housing for homeless youth and youth aging out of care, and represents one of a large number of approaches to affordable housing specifically, and housing generally in Canada (see diagram above, derived from CMHC, 2018). It's important to note however that even though transitional housing for youth has a particular place in the larger approach to housing for homeless youth

generally, it is not typologically specific. Transitional housing for youth comes in many forms, scales, and programs, and, based on our research, has a number of relationships to affordable housing more generally. For instance, while congregate models of transitional housing are often typologically distinct, scattered models of transitional housing are more diffuse, often locating in other forms of affordable housing via partnerships with developers (Gaetz, S. & Scott, F., 2012b, see more details in "Transitional Housing Accommodation Types," next page). Additionally, drawing on Stephen Gaetz's statement at the start of this section, the provision of a diversity of housing approaches is advantageous in responding to the diverse needs of homeless youth and youth aging out of care. In this way, the location of Transitional Housing for Youth in this research is seen less as a part of a housing continuum, but rather as a component of a diverse number of housing options. For these reasons, this study looks at both transitional housing for youth specifically, as well as affordable housing broadly, as there are useful strategies for transitional housing for youth across the affordable housing spectrum.

"I hope there isn't a typology around supportive housing because that would almost necessarily start to siloize that type of community into one type of housing. One of the things that is very clear with working with the homeless community is that it's an extremely diverse, heterogeneous community."

-Michael Maltzan

Design Principal, Michael Maltzan Architecture

^{*}The lists of housing types indicated here are not exhaustive

Understanding Transitional Housing

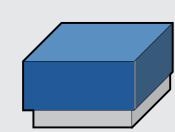
Transitional Housing Types

Both Foyer and Housing First models can adapt their programs to be suitable for a diversity of accommodations. There are a range of transitional housing options, including dedicated Congregate, Scattered, and the Hub & Spoke models. Transitional housing programs have typically followed the Congregate model, where everything is located in a dedicated building, including common space and private dwelling spaces. As the concept has evolved, new models have been developed including scattered housing.

In addition to these broad types, there are a number of innovative approaches possible within each. For instance, transitional housing can be offered with convertible leases, where youth are able to take over the lease from the housing provider and maintain the housing in their own name. This is more common with Scattered accommodation types, as the decentralized provision of services normalizes long-term tenancy, rather than being co-located with existing services. There are also host home/ supportive roommate approaches, where housing providers work with families, private households, or even educational or seniors institutions to host youth.

Where Scattered or Hub & Spoke types are co-located within larger, non-transitional developments, some housing providers indicate that it is difficult to find landlords who are willing to participate. Covenant House has proactive agreements with Daniels Corporation and Hollyburn Properties to support their transitional housing programs. Hollyburn Properties subsidizes market rents, requiring youth to only pay \$300-375 (Canadian Observatory on Homelessness, 2015, p.68). Calgary's Infinity Project similarly has partnerships with developers (Harrison & Scott, 2013). While this initiative is seen to be easier to develop in larger cities with more rental housing stock (and larger companies), there are possibilities in smaller communities. Individual landlords who have few units may want to support homeless youth and can take advantage of tax receipts (Canadian Observatory on Homelessness, 2015, p.70).

The combination of program model and accommodation type will drive architectural approaches as each has significantly different spatial needs, often at very different scales of development. Additionally, external constraints of financing, land-use policy, urgency of need, opportunity, among others, may drive the selection of program model and accommodation type. In types where Scattered or Hub & Spoke types are co-located in larger developments, the agency of housing providers to have youth-specific design influence may be limited.



Congregate Housing

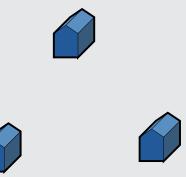
Congregate, or Fixed-Site housing, is designed as one single building with several private units (either shared or individual) or clustered units in a single building in which a certain percentage of units are set aside for youth. There are typically intensive supports on site, including counselling, case-workers and mentors, as well as shared amenities, including kitchens, recreational and vocational opportunities and spaces for counselling.

Pros: Works well for youth who benefit from a sense of community and day-to-day support.

Cons: For some, congregate housing can feel institutional and result in a lack of independence.

Target Youth: Typically youth who want support and a sense of community.

Costs: High capital investment. Operating and programming costs are also high to maintain and offer space and support.



Scattered Housing

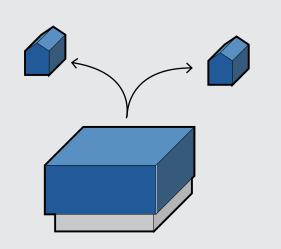
Scattered housing is dispersed throughout a community. Units are typically rented from private landlords but may also be rented from non-profit housing providers. This approach is seen to provide youth an opportunity to transition from homelessness in a way that reduces stigma and offers more opportunities to integrate into the community compared to congregate-site housing.

Pros: Smaller housing units are more easily integrated into communities. Some youth prefer this as it is less stigmatizing and does not trend to "ghettoize" people deemed to have significant social, income or health problems.

Cons: Has been associated with loneliness and isolation for youth, because it lacks opportunities to come together.

Target Youth: Youth wanting more independence with fewer day-to-day needs.

Costs: Low capital cost, but operating costs depend on market rents. In the GTA, this model is difficult to maintain due to the affordability crisis. Partnerships with developers and property managers are helpful.



Hub & Spoke

Understanding the diverse needs of youth, many housing providers are beginning to utilize a blended approach which offers both congregate and scattered approaches. 360 Kids and Covenant House both utilize this method. There are situations where a two stage model exists, where in the first stage youth live in Congregate settings and in the second stage are moved to Scattered settings. Youth who participate in Covenant House's Rights of Passage Program (within the fixed site) often move to community apartments after, which can have advantages to those moving to community apartments directly from shelters or streets (Canadian Observatory on Homelessness, 2015, p.67).

Pros: Supports different approaches.

Cons: Potentially challenging from an administrative approach.

Target Youth: Diversity of options for youth.

\$4.5 to 6 billion

is the annual cost of homelessness in Canada

(S. Gaetz. 2012. The Real Cost of Homelessness: Can We Save Money by Doing the Right Thing? Toronto: Canadian Homelessness Research Network Press.)

of the homeless population in Canada is between the ages of 13 & 24

of the homeless

(Gaetz, 2016)

FRAMEWORK

Introduction

Developing a Framework for Transitional Housing for Youth

Our team analyzed background research, interviews and emerging trends, synthesizing key findings into seven core principles that make up the Framework for Transitional Housing for Youth Aging Out of Care.

Principle 1: Youth-led and Wraparound Program Models and Principle 2: Youth-Centered Design speak to the diversity of program and design considerations for a diversity of youth. These principles highlight the importance of fostering spaces where youth can feel comfortable, learn independence and begin to thrive. Principle 3: Site Selection and Principle 4: Community Engagement, speak to the importance of location and surroundings. A thoughtful site selection and engagement with the community can be instrumental in determining the success of a transitional housing development. Principle 5: Operations and Maintenance addresses the longevity of transitional housing and Principles 6 Construction and Principle 7: Financing and Partnerships speak to implementation. While each principle is important, they should be considered collectively as an interdependent approach to the design of transitional housing for youth.

The principles represent an interconnected set of design considerations that inform transitional housing design. Sweden's youth housing Snabba Hus Vastberga is an excellent example of the design implications of the collection of themes. Snabba Hus Vastberga was proposed to be sited on unused municipal land (Site Selection), was granted an innovative temporary building permit that allows youth housing on the site for 15 years to reduce the cost of the development by eliminating the cost of land while allowing the municipality future flexibility (Financing and Partnerships). The particular arrangement of the units around an exterior courtyard protected from the adjacent busy street creates a space for community and recreation (Youth-Led and Wrap Around Programming). This triggered the need for fast construction (to make the most of the 15-year period) and a demountable structure resulting in a design decision to use standardized prefabricated units (Considerations for Construction).

We hope that this Framework can be used to develop thoughtful, unexpected design solutions that make the provision of transitional housing more common, and more responsive to the unique challenges youth aging out of care face.

Youth Voice - Nicholas Ridiculous

What is the "Problem" For Which This Solution Can Solve?

I remember when I first came on to design and implement youth programming in East Toronto, a mentor of mine sat me down over an extended breakfast at a local greasy-spoon diner and asked me the most basic of questions: "what is the problem for which the solution (i.e. programming) you are seeking to develop will solve?" Of course I was as green as the grass grows then! Myself, a person with lived experience of youth homelessness here in Toronto so one would think I should have the answer. And yet, when asked this basic question, I was not at first certain. Perhaps what was causing me confusion and distress, above and beyond performing some kind of subject-matter expertise, was the choice of language. What was this "problem" I was trying to solve? Sure, all young people require the basic necessities of life such as food, shelter and clothing. This much I understood without hesitation. But it's not a radical realization that housing is a problem in this sector, or perhaps the lack thereof. But was this the problem I was hoping to solve?

It took several days before I was able to land on an answer to the question he was posing. Housing, in-and-of-itself is not the problem I was trying to solve. Housing was in fact the container for which the solution to the quote/unquote problem I was attempting to solve lay inside of. What I was really interested in targeting was **how housing as a framework can offer up experiences that help young people to grow, develop, flourish and become the very leaders that they already are inside.** To build spaces, conditions and experiences that allow our young people to dream and imagine worlds that do not yet exist! This is the problem that I came to solve and at once I realized that we must leave the language of "problem" behind all together. Young people experiencing "a home", that is, the conditions that allow them to feel courageous in the face of the unknown, to ask meaningful questions and try, test, experiment, fail forward and get back up and try again was not a problem that required a solution but was in fact the solution itself.

Looking Back Means Looking Forward

Unfortunately, in my lived experience as a homeless youth in Toronto, and later during my career as a frontline social worker and program manager, I have found that more often than not, there are significant limitations in the models of social, transitional and supportive housing. Although there are a variety of schools of thought on the subject of residential programming as it relates to different population needs, one common thread that often runs through all three of these models is the overriding experience of stigma, discrimination and ghettoization that arises in these housing spaces for young people that reside within them. What gets lost through hyper-pathologization is the focus on natural positive youth development, on the importance of community and social integration, regardless of their mental health acuity or medical challenges, meaningful opportunities for growth and development.

1. Wraparound and Youth-Centered Programs

Approaches to Program: A Youth-Centered and Youth-Led Approach

Youth aging out of care often require support and opportunities that are built for their unique, individual experiences.

Many youth voice the desire for choice, independence and a sense of community. But every youth is different, with different levels of need. A client-centered case management model must be flexible and responsive to young people's needs and abilities. This includes adopting a Positive Youth Development framework, with Wraparound supports, which focus on positive development and assets, instead of solely on risks and deficits (Gaetz 2012). Wraparound Supports typically included are summarized below.

Supportive Staff and Peer Mentorship

Supportive staff and mentors must be willing to let the youth lead. Staff should also reflect youth experiences (have lived experience themselves and/or be trained in anti-oppression and trauma-informed support). Similarly, staff must also be supported, through management and an organizational structure. This is particularly true in Scattered site models. As identified in an evaluation of Haven's Way, live-in staff are supported by a dedicated full-time Program Coordinator (Turner Research and Strategy 2015). In addition, peer mentorship is seen as an important part of support.

Thorough Intake Process

A thorough and thoughtful intake process is required to determine the best program and location for youth entering transitional housing. This will help determine what type of education or training programs are best for the individual. Housing providers in Toronto all mentioned the importance of the Intake Process. Similarly, this often includes consistent check-ins with youth through supportive case-workers, housing-workers and other supports to ensure they are on the right path and have clear goals.

Education, Employment and Life Skills Training

The research and interviews show that providing education, employment and life skills training are fundamental for transitional housing for youth. Youth in care often haven't had the opportunity to develop skills that foster independence such as financial literacy, housekeeping and self care regimes. While some programs require youth to be in school or employed, others are more flexible and work with youth to get there.

After Care

Housing providers are encouraged to put their attention towards After Care supports to ensure youth can continue to excel after they leave transitional housing.

Examples include personal support workers, peer and professional mentors, educational support, and guidance on finding housing of their own. It also includes developing a plan for youth to remain connected to their built communities and networks and even contribute to their communities by mentoring younger program participants. After Care plans should be formulated on a case-by-case basis.

Recreational Activity

Youth need opportunities to engage in indoor and outdoor activities. Options could include art, yoga, sports, or cooking.

Systems of Care

Research suggests that there is a need to not only focus on supports offered by the housing providers, but to also better integrate youth within a broader "system of care." For instance, when Eva's Phoenix's housing workers help youth find permanent housing, they also help to develop relationships within the neighbourhood, such as with local community centres, libraries, grocery stores, and restaurants.

Unlimited or Flexible Length of Stay

A key element defined in both research and interviews is that youth prefer unlimited, longer, or flexible stay options. Currently, transitional housing for youth typically has a time limit of several months to two years. There is a push to shift these limits to allow for more flexibility or to eliminate them altogether. Covenant House Vancouver, for instance, recently shifted their timelines to allow youth to stay until the age of 25, which is a positive step (Canadian Observatory on Homelessness 2015). Haven's Way and Calgary Infinity Program, which are successful programs in Calgary, provide flexible time limits. During COVID-19, many provinces have called for moratoriums on ageing out.

Youth Choice and Co-creation

Supports should be balanced with opportunities for independent creation. When youth get to build their own communities and their own paths, they can learn new life skills, gain confidence and independence.

"If you're trying to create home for a young person, I'm convinced young people would say, 'Well, you don't create a home and then tell young people when they have to leave. That's not a home. Don't even pretend.' It's home-like, it's comfortable, it's safe, but it's not a home."

—Irwin Elman

Provincial Advocate for Children and Youth

1. Wraparound and Youth-Centered Programs

Accommodating Specific Demographic Needs

All youth have different needs. Housing providers also emphasize the importance of specialized housing for specific demographics:

2SLGBTQ Youth

Homophobia, biphobia, transphobia, and associated discrimination profoundly impact 2SLGBTQ youth. They may also have greater difficulties accessing housing, when compared to their peers, and are overrepresented in the homeless youth population in Canada (Abramovich 2012). Approximately 25-40% of homeless youth are LGBTQ, while only approximately 5-10% of the general population identifies as LGBTQ (Josephson & Wright, 2000). Factors for successful housing strategies include: supporting youth choice, affirming their identities, and protecting youth from discrimination (BC Housing Research Centre, 2018).

Sprott House is one of the first 2SLGBTQ+ transitional housing programs for youth in Canada. Sprott House provides one year of supported residential living (with the option of extending for 3-12 months) for up to 25 young people between the ages of 16 to 24.

Black Youth

Black youth are disproportionately represented in Canada's child welfare system. Data released from the Children's Aid Society of Toronto shows that Canadians of African descent represent 40.8% of children in care, yet are only 8.5% of the Toronto population. Canadians of African descent report facing disparities after leaving the child welfare system such as being treated differently than their White counterparts, not having access to culturally appropriate services, and experiencing poorer outcomes than their White counterparts (Turner, 2016). Recognizing specialized needs, Eva's Phoenix is launching YOUth Belong, which will include specializing housing for Black youth, in a scattered-site model.

Indigenous Youth

Indigenous youth are disproportionately affected by homelessness. In Vancouver, Indigenous youth represent only 2% of the city's overall population, but were 30% of its youth experiencing homelessness (Patrick, 2014, as cited in Thistle, 2017).

It is important to recognize that specific, culturally-appropriate responses to Indigenous homeless youth must be considered. As Jesse A Thistle (2017) writes, how we define homelessness for Indigenous youth is different from Canada's conventional definition. He says, "For Indigenous youth, homelessness is not defined by the common colonialist definition of lacking a structured habitation; rather, it is more fully described and understood through a composite lens of Indigenous worldviews. Considerations of different youth needs is essential when considering the model, design and program for transitional housing." (p. 6)

Therefore, factors to consider for successful housing include holistic frameworks, a trauma-informed healing lens and other culturally relevant services and opportunities for cultural reconnection (BC Housing Research Centre, 2018). Dave Pranteau Aboriginal Children's VIllage is an excellent example of successful housing, as described above.

Victims of Sex Trafficking

Covenant House in Toronto and Vancouver estimates that 30% of youth they work with have been involved in the sex trade and/or subject to sexual exploitation. Understanding that this population requires a trauma-informed response specific to sexual exploitation, Covenant House Toronto has partnered with Daniels Corporation to expand its programming, including the creation of a specialized program for women who are victims of human trafficking (Canadian Observatory on Homelessness, 2015).

Challenges of Transitional Housing

In general, there are a number of overarching critiques of transitional housing programs. Common critiques include:

Strict Programming Requirements

Programmatic requirements can be strict and those who do well in the programs are rewarded by moving on (potentially before they are ready/ have appropriate housing established).

Time Restrictions

Many programs limit stays to a few months or one year. Others allow extended stays for up to four years. No matter what the limit is, there are some youth that may need support for longer. While flexible time limits are increasingly recommended by some, others feel that the time limit helps to serve more youth. Many interviewed reference that there are often waitlists of approximately six months.

Systemic Barriers to Permanent, Affordable Housing

Programs are effective if affordable independent housing is available to move to afterwards. In a country, and in particular, a city like Toronto with an affordable housing crisis, it is increasingly difficult for youth to find and maintain permanent housing. This was identified through literature and through interviews with youth and housing providers.

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1. Wraparound and Youth-Centered Programs

Architectural Implications of Programming Types

Programming types have important architectural implications. For instance, congregate housing typically provides for intensive on-site supports, including counselling and health care. Shared amenities such as kitchens, recreation and learning spaces, and counselling rooms, are often incorporated into the model. Scattered housing is composed of dispersed units throughout neighbourhoods and therefore there are other considerations for how to incorporate community spaces on and offsite, ensure privacy and create connections to neighbouring homes (See page 12 for more details on Transitional Housing Types). Some transitional housing models provide high levels of support with case management or treatment strategies which may require 24/7 staff coverage, on-site support workers, or daily support staff. Other less-intensive models provide lower levels of support and may provide 24/7 connection to staff. In both instances, design can have influence on staffing needs.

There are also emerging trends that highlight different ways we live and interact, which is increasingly reflected in new transitional housing programs. This includes new models of co-living. Below, are two examples of co-location for youth in transitional housing.

Intergenerational Housing

Chelsea Foyer in New York integrates 40 units of youth housing within a larger 207 unit permanent supportive housing complex for low-income and formerly homeless adults (Good Shepherd Services, n.d). At Haven's Way in Calgary, live-in 'parents' provide support for groups of three to six young women. Dave Pranteau Aboriginal Children's VIIIage in Vancouver is also an excellent example of intergenerational housing.

Co-Living with Students

Bikuben Hall is a student residence in Denmark that dedicates 10% of its housing units to homeless youth who are in a Housing First case management program. Bikuben Hall is owned by a philanthropic foundation and any student can apply. (Bikubenfonden, 2012).



Bikuben Kollegiet in Denmark provides student housing with 10% of the building's units dedicated to youth leaving homelessness.



Northtown Library and Apartments in Chicago blend housing and public services to create an environment that enriches the lives of both tenants and community residents.



Dave Pranteau Aboriginal Children's Village's in Vancouver provides colocated and intergenerational housing for indigenous peoples. It includes 10 I arge units which house approximately 30 foster children, 3 youth-in-transition units and 7 affordable rental units for families. The project also features amenity space and space for programming such as carving workshops and street level commercial units. It is also home to Lu'ma Native Housing Society's new offices.

Diversity in Design

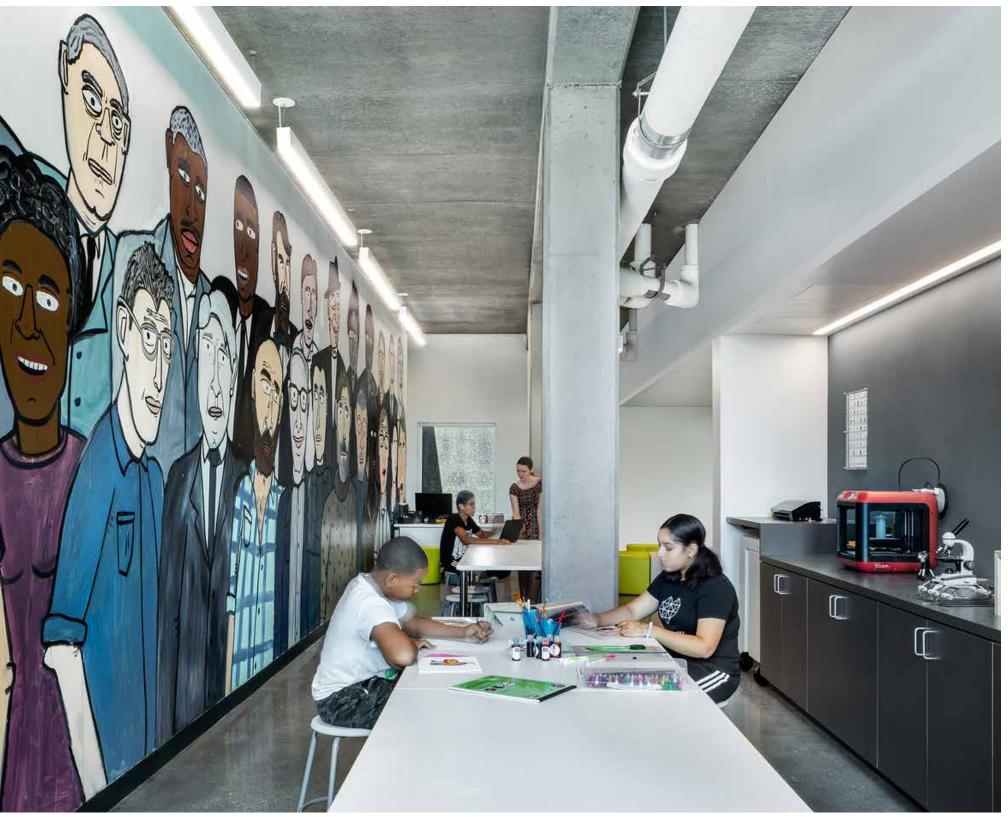
As illustrated above, there are diverse housing typologies for transitional housing that accommodate different program models. No matter what the setting, youth and other experts identified overarching design principles. This includes the need for a variety of private and social spaces to accommodate ranges of experiences, including opportunities to engage in planned and unplanned encounters and experiences. Spaces should be places where young people can learn how to transition to permanent housing and independence.

"We think that space conditions, and is in turn conditioned by, society and culture and that architecture can create the potential for social action and activity."

—Peter Barber, Architect

"I hope there isn't a typology around supportive housing because that would almost necessarily start to sillo-ize that community into one type of housing...... Instead of trying to codify, the ambition should be to consider a diversity of approaches to meet the breadth of the community."

-Michael Maltzan, Architect



Northtown Library and Apartments in Chicago blend housing and public services to create an environment that enriches the lives of both tenants and community residents.

Common Space

Sharing space can be difficult but learning to coexist is important. Common spaces can teach youth how to master the skill of communication and negotiation and build relationships. Common spaces are more than just amenity spaces. They must allow for interaction in different ways. Key common space considerations include:

1. Entrance and Circulation

Design of circulation should allow for 'unplanned encounters' where residents and staff can be visible without an obligation to engage—allowing youth to explore their comfort levels over time. Generous circulation helps mitigate the feeling of living in an institutional building.

2. Amenity Spaces

Provide amenity spaces tailored to the needs and interests of youth such as common kitchens, digital facilities, and flexible activity areas. Amenities such as communal gardens and learning spaces (e.g. teaching kitchens) can aid youth in developing life skills. On site childcare facilities allow youth with children to pursue personal development.

3. Staff Areas and Health Facilities

Where on-site staffing and health facilities are provided, accessibility and privacy must both be considered. The spaces staff or health professionals occupy must be approachable but also offer rooms which shelter youth from any unwanted attention.

4. Entrepreneurial Spaces

Social enterprise spaces can provide youth with the opportunity to develop personal and career skills. Youth run cafes are common, but flexible spaces could allow for wider possibilities. They can also be used by the larger community where they become an interface between the workings of the housing and the local community.

5. Accessible Recreation

Recreational spaces provide youth with important opportunities for exercise, social activities, and play.

"Living in care is kind of like having roommates so for it to feel like a community is really important... A lot of youth don't feel like they have a community or a bunch of people they can rely on, or even, just like discuss their personal things with."

- Youth Interviewee

"Lots of the people who live in these spaces aren't brilliant at turning up to formal meetings, but they're great if you catch them crossing the courtyard. The unplanned encounter made possible by the architecture."

—Peter Barber

Founder, Peter Barber Architects



Ku.Be Centre by MVRDV and ADEPT. Image by Ossip Van Duivenbode.



Architect Peter Barber's Holmes Road Studio in London surrounds an open courtyard intended to be developed into a communal garden by the residents.



Providing accessible recreation was identified as important for youth. Peel Youth Village in Mississauga features a full enclosed gymnasium visible from the street and entrance.



Eva's Phoenix in Toronto uses unique interior townhouses, which reduce the 50 unit institution into 5-person houses. The townhouses are highly porous to an internal street.

Planned and Unplanned Encounters

Communal kitchens, gardens, and other amenity spaces offer the opportunity for more structured socialization between residents, staff and neighbours. Open, common, circulation spaces including courtyards, wide single-loaded corridors and generous entry spaces support these interactions. Architects noted the success of design strategies such as the positioning of laundry rooms with windows, or the arrangement of a unit with a kitchen near the corridor, which allowed for visibility between residents with a range of opportunities to engage socially.

"Architecture can't force people to connect; it can only plan the crossing points, remove barriers, and make the meeting places useful and attractive."

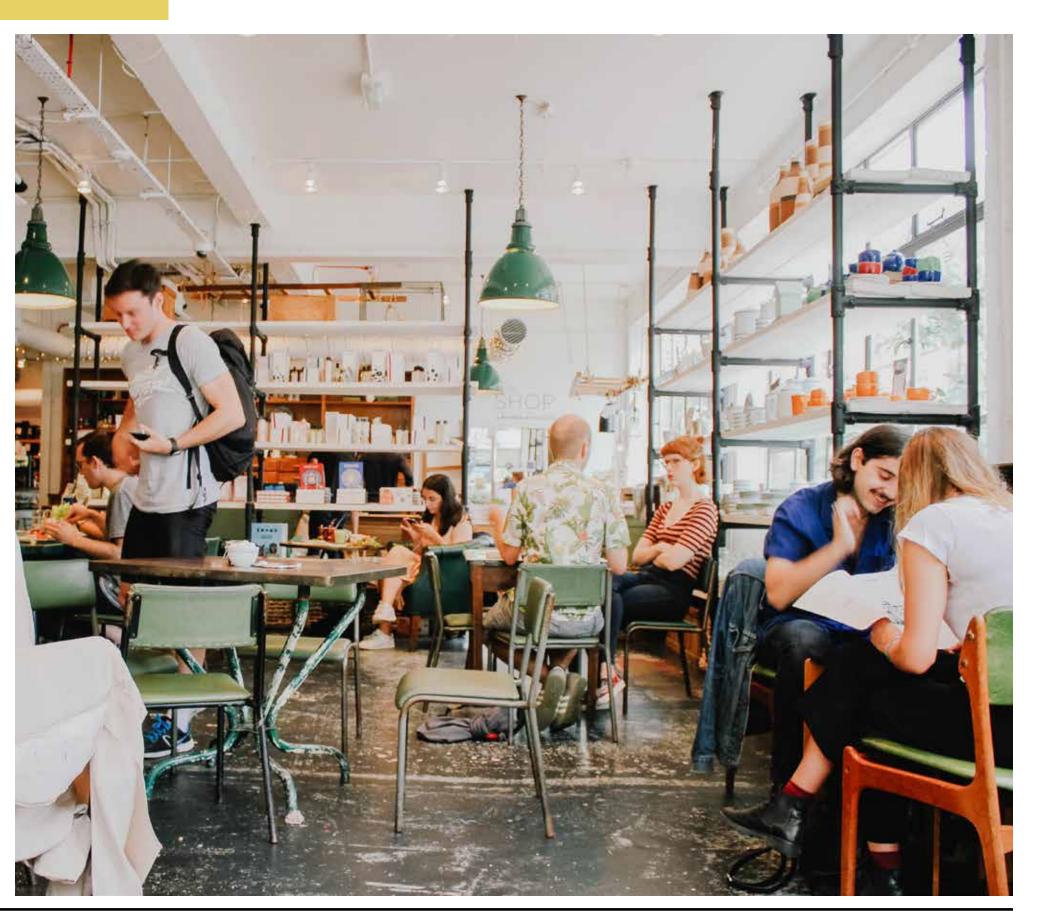
—Denise Scott Brown

Architect

"Integrating housing within the community is important. People are transitioning into 'normal' life. So the feeling that you can come and go easily, that it's a building that doesn't scream institutional, that it's physically integrated into the look of the neighbourhood as well, is very important."

—Jacob Larsen

Housing Development Officer, City of Toronto



Personal Spaces

Youth transitioning out of the care system may not have previously had much room in the spaces they've lived for freedom of personal expression. Therefore, providing spaces youth can call their own is key. Personal spaces include:

1. Degrees of Privacy

A range of spaces with varying degrees of privacy should be provided to accommodate youth with different needs and those at different stages of their development.

2. Kitchen

While common kitchens may be better suited for some youth, a personal kitchen can allow youth the opportunity to develop their own approach to cooking and to take responsibility for personal grocery management and cleaning habits.

3. Study Space

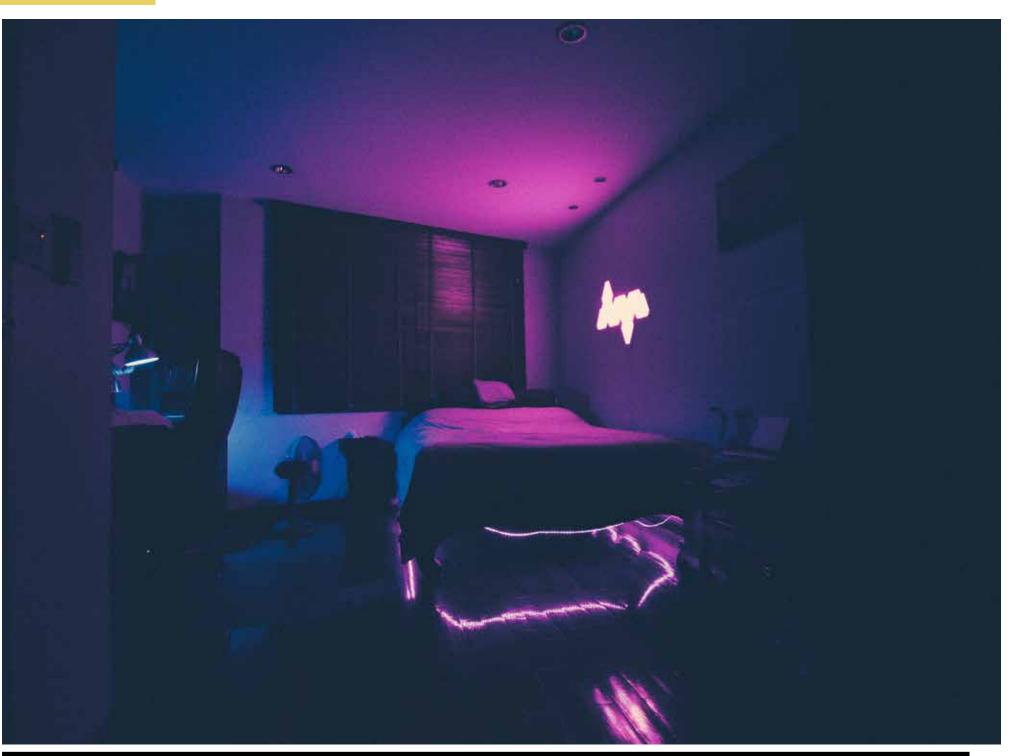
Youth transitioning out of care need time and space to consider their goals and set their own course. A dedicated private space where they can read, study, think, and create in a calm atmosphere can help them formulate a sense of themselves.

4. Bedroom and Storage

Housing for a variety of family and relational structures will be important in addressing youth needs. Sizes and storage needs should consider accommodation overnight guests and/or youth with children.

5. Personalization

It is important to allow youth the agency to shape their personal spaces. These spaces should offer comfort and utility, but inspire growth. While the necessities of structure or density may limit reconfiguration of the unit itself, the potential for youth to personalize their space can be an important outlet for the development of their independence and identity.



Privacy should be a gift we give each other, but if not defined by your own terms, it can feel like a prison.

- Nicholas Ridiculous

Youth Interviewee and Contributor

Co-Living

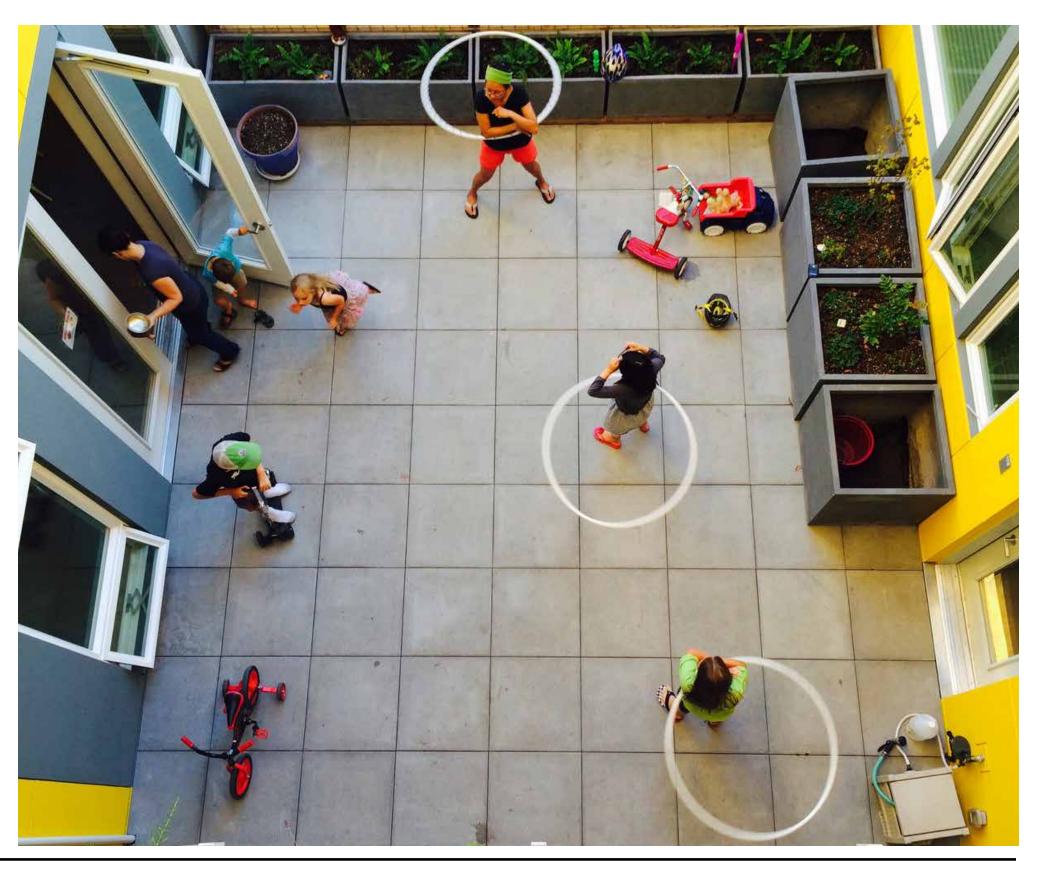
Co-living has re-emerged as a viable and desirable form of urban housing. Even entrepreneurs, start-ups, and developers have been testing the waters with shared living spaces, developing or converting buildings into large scale multi-tenant houses where kitchens, living areas, bathrooms, and other domestic facilities are available for common use (Beyond the blueprint? Shared living and the importance of architecture and design).

Exposure to new people and new ideas is at the crux of the benefits of co-living spaces and why many co-living tenants choose to live in these developments. Allowing room for broader demographics (e.g. fully accessible facilities, larger kitchens, performance/entrepreneurial spaces) has the potential to enhance diversity of experience and capabilities within the co-living community. See Appendix X: Emerging Trends in How We Live for more details on Co-Living.

We often recognize our wants over our needs, we may not want to share space with other people but somewhere inside we know we probably need the connection that comes with community.

- Nicholas Ridiculous

Youth Interviewee and Contributor



Materials and Building Design Considerations

1. Exterior

The building must respond to its context, contributing to the improvement of the neighbourhood and city at large by thoughtfully addressing the character and scale of the street, regardless of whether it is a visibly unique design or a more staid 'background' building.

2. Accessibility

No one size fits all. Youth housing must accommodate the spectrum of physical, mental, and emotional realities that youth face. Best practices beyond AODA and code minimums must be considered to ensure that youths' needs are met.

3. Variety

The intensity of a tall, densely populated building may appeal to some youth but others may desire to live in smaller buildings with fewer housemates. A variety of sizes and styles of housing will be needed to address the heterogeneity of the youth population.

4. Finishes and Materials

Durability and cost must be considered carefully. Furnishings and finishes that appear institutional or poor quality can undermine the aim of providing youth with dignified housing, which supports developing their independence and reinforcing their self-worth. In an interview, a service provider indicated it's better to have no couch than a broken one. One architect suggested using wood in transitional housing buildings because it is both durable and "gives off a warm vibe."



3. Design for Maintenance and Operations

Transitional housing has operating conditions that require special operations and maintenance considerations. Finding utilities efficiencies can help the financial viability of these affordable housing projects. Two key elements includes:

1. Reducing Operations Costs:

Energy costs represent a significant component of operations. Mandating energy efficient strategies in design and/or renovation can reduce operations costs. Using sustainable and Net-Zero building approaches is critical to reducing operating costs, improving long-term affordability, and ensuring the future of affordable housing.

2. Designing for Durability:

In addition to durable material selections, designing robust building and efficient HVAC systems is important.

20%-30%

of housing costs are Operations & Maintenance costs. This percentage is much higher for transitional housing.

(Woetzel, Jonathan, et al, 2014)

"There is higher wear and tear—you'd expect that—but it's just from the situation of people living there. They are transitional in nature, so you have more people coming in and out. But the populations that they're serving come with emotional physical traumas and that will take a toll on the building as well. Building maintenance is something that transitional housing providers definitely have to struggle with more than a traditional or a typical nonprofit housing provider."

—Jacob Larsen

Housing Development Officer, City of Toronto

4. Community Engagement Is Key

Building relationships with neighbours is key in both the development and maintenance of transitional housing for youth. Key considerations are outlined below:

1. Design for on-going community engagement to help and support youth integrate with society.

Most architects and service providers were adamant that the housing not turn inward. Several interviewees suggested housing developments should directly engage and contribute to the community, offering opportunities or amenities that could facilitate positive interactions between youth and neighbours. Examples to develop positive relationships with neighbours include:

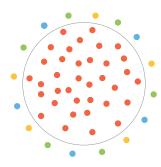
- Facilities such as communal gardens, a cafe or social enterprise (which culd be run by the housing provider or community agency) can create a space where neighbours are invited to interact with the youth on the youths' terms.
- Signs and other elements which mark the building as supportive
 housing have been noted to exacerbate the stigma some youth feel
 and tend to draw unnecessary attention. Conversely, a well-designed
 building that contributes to the street and to the city can help improve a
 neighbourhood's sense of civic value.

2. Proactive neighbourhood engagement in the design and construction process.

Opposition to new transitional and affordable housing developments prior to and during the course of construction was noted as an issue. One interviewee suggested socializing the idea of a new development by engaging with members of the neighbourhood one-on-one in a pop-up market setting. Digital engagement platforms such as coUrbanize and Neighborland offer an alternative approach to typical town halls, providing online engagement tools for working with communities to build support, and provide updates for projects. Many service providers and nonprofit developers noted that once the development is built, there are typically few issues with neighbours. Proactively addressing issues, such as outdoor amenity maintenance, noise and privacy concerns, can help create positive relationships with neighbours.

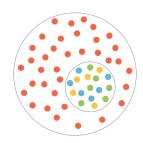
Towards Inclusivity

Facilitating youth aging out of care's transition towards inclusion with their broader communities is an important design and programming considerations for transitional housing. Below the general process is outlined, and represents steps towards inclusivity that must be designed for.



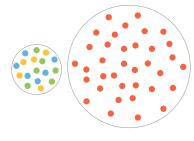
Exclusion

Youth aging out of care are faced with obstacles to accessing housing including unemployment or underemployment, involvement with the criminal justice system, and health issues. As they age-out of the care system, in order to access supports, they are faced with minimum requirements and conditions that are insurmountable.



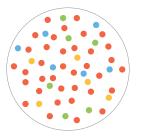
Integration

The youth are integrated into mainstream society but are required to conform to standardized requirements to maintain their supports.



Separation

Support networks are created for youth but they are kept separate from society. The difficulty of establishing independence exacerbated by systems which keep youth temporarily supported but prevent direct engagement with the broader community and do not necessarily assist them in growth.



Inclusion

Youth are wrapped into society, with agency to choose how and with whom they interact. They are positioned to engage with mentors and peers and the community at large and can develop independence on their own terms.

"Integrating housing within the community is important. People are transitioning into 'normal' life. So the feeling that you can come and go easily, that it's a building that doesn't scream institutional, that it's physically integrated into the look of the neighbourhood as well, is very important."

—Jacob Larsen

Housing Development Officer, City of Toronto

5. Site Selection

There are three broad considerations for finding sites for transitional housing:

1. Location

Proximity to transit, amenities, jobs, and education are important considerations for site selection. However, some youth aging out of care also voiced preferences to stay in the communities they grew up in. These youth suggested housing be available in a variety of contexts, dispersed across cities and suburbs, rather than consolidated into larger developments in downtown cores (even if these options are not close to transit or amenities). Finding sites close to youth's already existing communities is essential for some.

2. Policy Drivers

Land use policies have significant implications on the availability, location, and design possibilities of transitional housing for youth. These policies can permit, actively discourage, or inadvertently limit where housing can be built. Land use policies can control the form housing takes and drive affordability. We looked at a number of innovative examples of government responses to land use policies that have direct influence on finding sites for affordable housing. Some municipalities are considering ways to update their Official Plan Neighbourhood policies and Rooming House policies, which could change where Transitional Housing for Youth can be developed and expedite approval processes.

3. Productive Partnerships

Co-locating supportive housing with social infrastructure or locating housing near existing community partnerships is an excellent approach to ensuring youth have access to community supports and 'systems of care.' There are data-rich mapping tools, such as Ratio.City, that can help identify opportune sites.



One of the youth engagement workshops where we worked with youth to understand their desires and needs for the location of their housing.

"You can't build something in the middle of nowhere where kids can't get to it and where kids aren't connected to jobs and other things. We want them to be connected to the community, but then we say not in our backyard and put them up north"

—Bonnie Harkness

Director of Program Development, 360 Kids

"We think about site in terms of not just public transportation, but also employment centers and proximity"

- Developer interviewed

6. Considerations for Construction

Design and construction methodology are interdependent—there must be consideration for innovative construction practices early in the design process. The affordable housing challenge has been further complicated by the limitations of the construction industry. **It simply costs too much and takes too long to build housing.** Architects must advocate and design for smart construction approaches that can speed up housing delivery. Strategies include:

Cost-effective and rapid housing production:

A housing production model has significant implications on design, such as repeatability and standardization. Opportunities to incorporate off-site construction, prefabrication or modular construction can be considered to shorten the timeframe and costs of construction.

Design-to-Value:

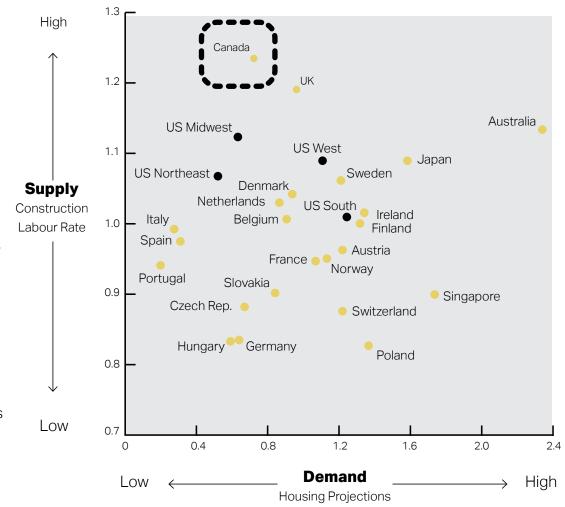
Design-to-Value is an approach to design and construction that seeks to reduce costs and complexity by relying on standardized design approaches and elements. This can be seen as a unique design challenge—a space for innovation—to develop systems and construction techniques that are durable, adaptable, uncomplicated, and beautiful.

Circular Economy and Building Principles:

The built environment, composed of buildings and physical infrastructure, continues to utilize the linear 'take-make-waste' model in which resources are taken from the ground, used and then disposed of as waste. This approach makes the built environment one of the world's largest consumers of global raw materials and largest sources of waste and negative environmental externalities such as increased air, water, and soil pollution. It uses almost half of the world's materials extracted every year and current projections and buildings and construction account for more than 35% of global energy use and nearly 40% of energy-related CO2 emissions.

As such, transitional housing units must rethink the way we build to be more sustainable and cost effective. This includes rethinking how we source, manufacture, transport, use, repair and recycle building materials.

Near-term new housing demand vs. construction labor rates Source: McKinsey Global Institute Analysis, Modular construction: From projects to products. 2019.



Current offsite construction share for housing (%)
Source: McKinsey Global Institute Analysis



"I see a lot of architects having a tough time designing affordable housing. They say it's low budget and it's impossible to be creative. I think it's super sad to hear this. We learned that we needed to not use normal solutions because the normal cheap was still too expensive. It forced us to look for solutions that were cheaper than normal cheap. The most important part was to standardize the design process. If you can work with the limited elements in a creative way, you can actually do a lot."

—Finn Nørkjær

Partner, Bjarke Ingles Group (BIG) Architects

7. Innovative Financing and Partnerships Required

Innovation in financing strategies is an important consideration, and one which has architectural and design implications. In our review of architectural precedents and interviews we found a number of innovative projects that take their unique form because of their underlying financial logic.

Innovation in Financing and Partnerships can occur across the spectrum of affordable housing financial approaches:

1. Public Support & Incentives

The public sector in Canada, at all levels of government, has a wide range of financing options at its disposal for supporting affordable and transitional housing. These include indirect support, including tax credits, incentives, priority approvals processes, housing policies, as well as direct support, including subsidies, grants, financial support, the ability to provide low-cost land through donations, long-term leases, air-rights, zoning-uplifts, among many others. The public sector can also offer to co-locate public institutions with affordable housing, lowering financing and construction costs.

2. Private Sector Involvement

Affordable housing can be developed with public sector support given the right conditions. This may include real estate investments and financing with socially minded real estate investors, community investment banks, and innovative financing partners, such as Vancity or SunLife.

There are opportunities for nonprofits to partner with private developers with increased policy regulations for inclusionary zoning and other government efforts to ensure 10% affordable housing in development projects.

3. Non-Profit Development

Non-profits have a number of funding options available, including leveraging existing assets, government owned land or assets, and developing partnerships with the government and the private sector, as indicated above. Non-Profit developers are also often service providers—the ones who can work with clients and develop programming strategies—they ensure the wrap around services are accessed. Across our research, interviewees spoke of the importance that non-profit developers being treated differently than for-profit developers because of their different users and different approaches. Examples of this include reducing red tape in development approvals, as well as fast-tracking applications.

4. Alternative Financing

We also looked at new start-up approaches to reducing financing costs which are part of a changing economic, technological, and housing delivery landscape. These can be divided into two distinct approaches: Impact Funding (an intention to generate a measurable, beneficial social or environmental impact alongside a financial return), and Crowdfunding (funding a project by raising small amounts of money from a large number of people). These approaches may be best suited to smaller developments, and require developers to provide a ROI to investors.

In most cases affordable and transitional housing development may use a combination of these approaches. Government provision of incentives and removal of barriers are forms of indirect support that can create more favorable development conditions. Additionally, a number of the precedents we looked at provided on-site revenue generation with arrangements for youth employment, such as coffee shops or community rental spaces.

"Sometimes you also need to learn and accept that if you want to do cheap stuff as an architect, you actually need to spend more time on it."

-Finn Nørkjær

Partner, Bjarke Ingles Group (BIG) Architects

"We need so many thousands of units ready quickly—we need to open the door to the private sector as well, to have partnerships between the private and the nonprofit sector again. Because if we, as we are producing the units, and can at the same time strengthen our nonprofit sector, it's a double win."

— Ana Bailão

Toronto City Councillor & Deputy Mayor Chair of Toronto's Affordable Housing Committee

Models

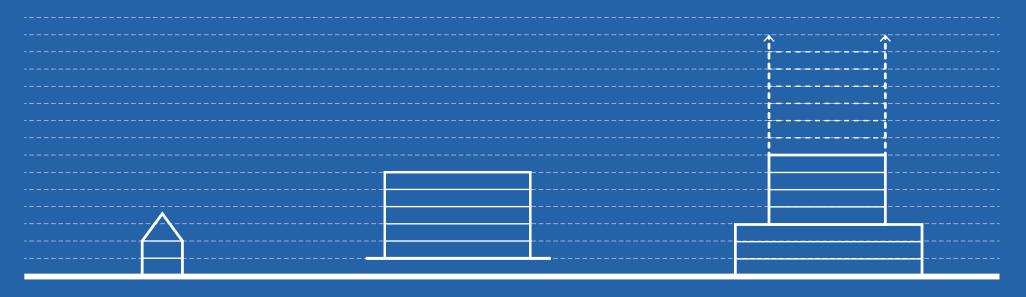
We identified three transitional housing models for youth aging out of care. These three models consider the core principles within the framework and represent a holistic architectural approach to addressing the diversity of youth needs.

The three models provide youth with a spectrum of options, allowing them to pick the pathways to independence that work best for them. The core principles within the framework above have been applied to the three models, to understand the best programmatic and design elements and locations for each. Implementation and longevity are also considered.

The types of housing outlined in this section can be built across Canada and serve youth in different ways. Building processes can involve retrofitting a single family house in a low-rise neighbourhood to support youth who are ready for more independence (Housing Here). It can include constructing modular, rapid housing in a vacant lot, including wraparound support and a pilot of co-created community uses for youth with high needs (Housing Now). Transitional housing for youth who are looking to integrate within broader communities could be co-located in higher density housing, whether it is in a dormitory with other students or intergenerational housing (Housing +). The three models can also be viewed as interconnected, providing the building blocks of an 'ecosystem of support' (see Page 70).

The solution is not found in the product but in the process.

Transitional housing should not be viewed as a static product but rather as a dynamic process, space or eco-system that is constantly being activated and reactivated by a diverse group of young people and external community members from all walks of life. Architecture is a process that is in active dialog with its environment and users.



Housing Here

Housing Here considers opportunities for small-scale transitional housing for youth, scattered in yellow-belt neighbourhoods using infill and densification strategies. By repurposing single-family or low-rise houses, there are opportunities for independent living and to foster paths towards ownership.

Many youth want to stay in the neighbourhoods they grew up in and are ready to live independently. Low-rise, single family housing can be retrofitted to serve these youth.

Municipalities across Canada have a plethora of single family, low-rise housing. In large cities, such as Toronto, and smaller-mid-sized cities, such as Halifax, more than 75% of the residential areas are zoned for detached and semi-detached housing. These houses are selling for \$1 million-plus, on average. A mix of micro-housing in these stable single-family neighbourhoods would make them more accessible to underhoused middle- and lower-income residents. A combination of political and cultural actions needs to happen at the community and city levels to make this possible.

Housing Now

Today's youth need housing now, not five or ten years from now. Housing Now looks at how modular construction techniques can be employed to deliver new congregate style transitional housing quickly, employing design and programmatic strategies that support youth with high needs.

Through research and interviews, congregate style housing was described as cost-prohibitive, however, maintaining housing with on-site supports is still necessary for many youth.

Modular construction is seen as an innovative solution to build energy-efficient and cost effective affordable, transitional housing to help lift people out of homelessness in urban areas. It is also increasingly used in rural and northern communities. CMHC recently announced a Rapid Housing Initiative and through the National Housing Strategy, has committed to modular construction throughout Canada. The City of Toronto, as part of the 2020-2030 Action Plan, has committed to creating 1,000 new modular homes in Toronto.

Housing+

For youth who need fewer supports, Housing+ investigates how transitional housing for youth can be co-located with other uses or occupants in large-scale developments. This could include cohousing with students in dormitories, intergenerational living, co-location with community services such as a library or building a life and community in private, market rate condominium buildings.

Youth who desire community connections and integration would benefit from the co-location Housing + model.

In large, dense cities where midriseto-tall building infill development plays a major role, there is a need to consider how to co-locate transitional housing for youth with other uses. Within these higher density buildings, there are opportunities to dedicate the podium component to community-building.

Starter Kit

Housing Now

Housing Now can be viewed as a short-term strategy, or quick approach, to providing homes to youth on a large scale through rapid deployment that favours quick assembly and demountable construction. This model can be used as temporary housing on vacant lands and can be easily dismounted, so the materials can be used elsewhere.

The architecture can allow for quick, pop-up activations and spaces that can be programmed and used differently over time to:

- Create ties between community and residents;
- Offer youth employment, training and skill development;
- Evaluate what type of programming is working and what is not;
- Prepare for larger and more permanent programming and buildout that requires broader community input and funding.

One of the goals for Housing Now is rapid deployment, sowing the seeds of an ecosystem to build neighbourhood relationships while testing longer term ideas too.

What is modular housing construction?

Modular housing construction can take a number of forms, including fully-finished 'drop into place' enclosed and completed units, prefabricated structures without finishes, kit-of-parts construction systems, or a mixture of both. Advantages shared by all forms of modularity include faster construction times and reduced waste.

Youth

Housing Now aligns most closely with congregate style housing, which typically supports youth with higher needs. This includes youth who may require strong staff and mentorship supports, who may have experienced significant trauma and who need a safe place to heal. These individuals typically need more life and skill training, as they may lack experience with work and may have difficulty integrating with broader communities.



"You have to learn to cook together and figure out how to respect other people's spaces. Through the design process, we learned that many youth did not know these life skills because their families were always in crisis."

—Dean Goodman

Architect, LGA

Programming

The focus of Housing Now programming is to assist participants develop a sense of autonomy, confidence and self-worth as well as a sense of community. This includes learning to co-exist with others, maintain relationships and acquire new skills. Key programming elements are highlighted below:

- 1. A Thorough Intake Process
- 2. Mental health supports (trained counsellors, therapists, support workers)
- 3. Basic education, employment, life skills and financial literacy
- **4. Co-created and activated spaces:** Flexible/pop-up spaces at-grade foster opportunities to co-create spaces, create a sense of ownership, offer creative entrepreneurship and employment opportunities and space for social interaction and integration.

Housing Now

Design

As a medium density housing typology that intends to support positive interaction for youth who need supports, the following design features can be incorporated:

Utilize Modular Designs

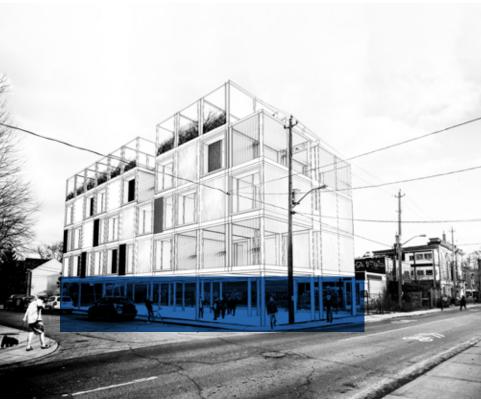
Housing Now proposes a mixture of completed modules and a kit-of-parts approach. Base-building elements with complex servicing requirements, such as bathrooms, can be made into prefabricated pods. The remainder of the building would feature a panelized solution that resembles a flat-pack assembly approach used in the home furniture. Where necessary, panels contain the conduits required for services such as heating, ventilation, and air conditioning (HVAC) and plumbing that can be linked together with standard connectors. Flat-pack panels make it possible to transport materials for a significantly greater floor area at one time.

McKinsey & Company's research has shown that the flat-pack kit-of-parts approach could be 17 percent cheaper than a traditional approach, and a hybrid solution of completed modules and kit-of-parts panels, as we're proposing for Housing Now, lowers costs by 20 percent. This would vary by project, but these estimates indicate the scale of potential savings.

Incorporate Flexible Shared Spaces, Used by Youth and Neighbours:

- **Pop-Up Space Activation at Grade:** The Housing Now ground floor can act as a Pop-up space—an incubator for building a sense of community and interaction between the youth and neighbours. Different programs can be tested indoors or outdoors at grade to understand the best future permanent programming.
- **Courtyard:** Courtyards are spaces where residents can gather and socialize in an outdoor setting and are often suitable for medium density housing typologies. Courtyards are often also viewed as spaces that can be co-designed and created by community members.









Housing Now

Location (Site Selection)

35-2



Close Proximity to Transit and Amenities:

Sites should be in close proximity to existing or planned transit, social services, and other amenities.



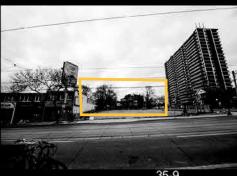








35-8





Vacant, Flat, Unencumbered

Find a site that is approximately 15,000 square feet to 50,000 square feet. It should support between 20 and 70 individual units (each between 200 to 600 square feet).

35-11









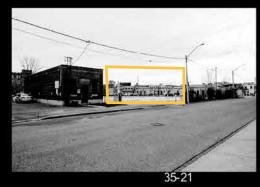












Ready for Development (Land availability):

This type of housing is available for immediate construction, with the possibility of housing occupants within 12 months. Therefore, the site should be ready for development (ie. should not require site remediation or significant development approvals). Vacant municipal-owned land, such as the CreateTO sites in Toronto, are excellent examples of sites ready for development.

35-22









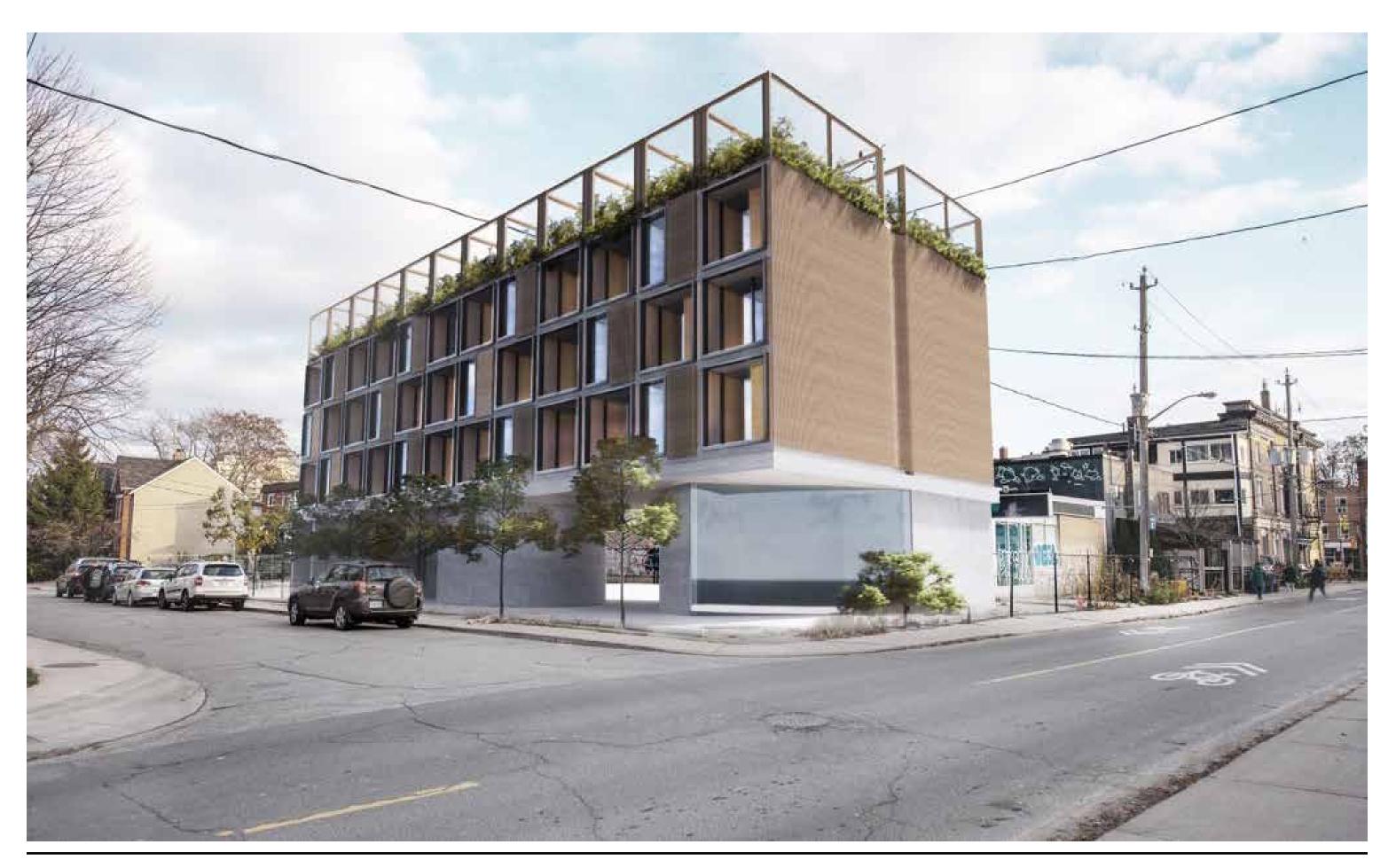




35-23



There are several considerations for modular construction of this nature:



Podium









Examples of Pop-Up Space activations

The Housing Now ground floor can act as a Pop-up space—an incubator for building a sense of community and interaction between the youth and neighbours. Different programs can be tested through the lift of the building to understand the best future permanent programming.



Housing Now (Temporary Buildings) Strategies/Precedents

Vancouver Temporary Modular Housing Initiative (2017 - present)

In 2017, the City of Vancouver embarked on a Temporary Modular Housing initiative, recognizing that "temporary modular housing can be constructed more quickly than permanent housing and provide immediate relief to hundreds of people living without a home." In just 3 years the City of Vancouver has built 12 housing developments with a total of 663 units. Each development is staffed 24/7 and provides residents with self-contained apartments, including wheelchair accessible suites, daily meal programs, laundry, life skills and employment training, health and wellness support, peer-based employment programs, as well as ground floor amenities space, commercial kitchen, dining/lounge area, and phone and internet access.

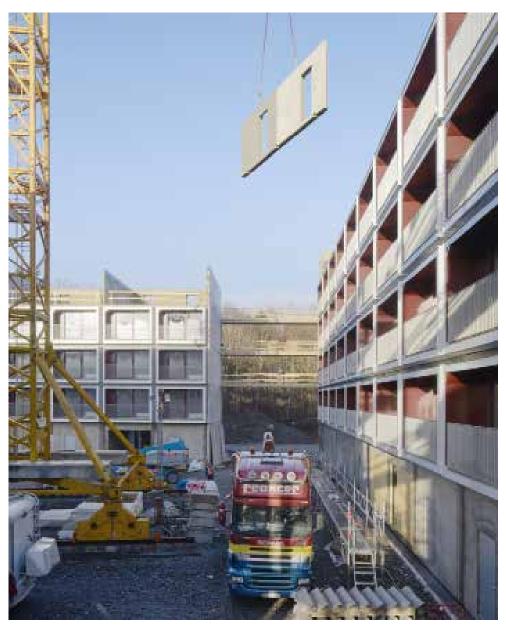
Larwill Park Housing is one example of this initiative. The program is geared towards those that are struggling with homelessness, or are at risk of homelessness in Vancouver's downtown core. Its located on a large, municipally owned parking lot in Vancouver which is slated to be the future home of the new Vancouver Art Gallery. While the gallery fundraises, the site can be used for housing for Vancouver's homeless, and the modules can be moved to another site when construction on the gallery begins.





Snabba Hus Vastberga, Stockholm, Sweden (2016)

Municipalities are often the largest land-owners in a given city, and often have large undeveloped lands. These lands could be leased to nonprofits outright, or through innovative interim means such as temporary building permits, to reduce financial barriers to development. Snabba Hus Vastberga in Sweden leveraged an arrangement for a temporary building permit on municipal land that reduced the cost of land ownership for the housing provider, while allowing the city flexibility of land-use in the long-term.



Examples of Modular Construction



North America's tallest modular building may teach cities to build cheaper housing

461 Dean is the world's tallest modular building. Designed by New York architecture firm SHoP, the Brooklyn residential tower consists of 363 pre-fab apartments that stack like Tetris blocks into a 32-story building. It's an impressive architectural feat, to be sure—but 461 Dean is also an important test of modular design's potential to make cities more affordable. However the project was a failor and the reaming blocks were built using traditional constrcution.

Can modular highrises help solve Oakland's housing crunch?

Modular Firm RAD Urban Secures \$28M In Financing To Grow Company, Bring Modular To Other Developers. Oakland will soon have the tallest prefab modular high-rise apartment complex in the country. RAD Urban is pushing forward with plans to build two 29-story high-rises with 200 units of affordable housing using steel-framed modular units.

Developers are increasingly not able to make projects pencil, they need to look for creative technologies to advance the industry and lower the cost to build and deliver housing.

Steel modular construction saves 20% on construction costs and time to completion compared to conventional stick-built construction.

Modular smart-home startup Blokable raises \$23M, plans new California manufacturing facility

Blokable, the Seattle-based startup aiming to transform how housing is developed, raised \$23 million to expand its manufacturing capabilities as it gears up to kickstart new projects. The Blokable Building System (BBS) is a comprehensive building system designed, engineered, and manufactured to consistently produce high-quality, low-cost, connected housing. Each Blok in the system is a standardized, modular housing component assembled entirely in our manufacturing facility and designed to be stacked, combined, and connected to create prosperous communities.

Katerra is developing innovative solutions to help improve housing affordability by driving down cost, complexity, and construction time

Katerra is developing innovative solutions to help improve housing affordability by driving down cost, complexity, and construction time. We combine these efforts with a team that brings expertise in the unique needs and challenges of the affordable housing sector. Our focus areas include new developments to create new high quality, equitable workforce housing; affordable housing renovations to preserve and improve existing affordable stock; and modern temporary housing solutions for the growing needs of disaster relief and homelessness. Working together, we ensure new products and partnerships are appropriately fit for purpose and will have a genuine market impact.

Using this integrated approach, Katerra is uniquely positioned to impact a wide range of market sectors and building asset types, delivering a new generation of high-quality affordable housing. Change on a meaningful scale will only come by applying a new mindset and proven, modern solutions at all levels of construction.

Can offsite construction reduce the need for manual labor?

Created using a new form of modular home design called "Aerospace Robotic Panelization," all the elements of the homes are cut and created by robots and then shipped and built on the lot of the home. The typical turnaround time from delivery of the materials to getting the structure of the homes created can be done in 1-3 days.

Google buys 300 modular homes for Silicon Valley

In 2017, modular building startup Factory_OS secured a contract with Silicon Valley juggernaut Google to design and construct modern, high-end workforce housing for their employee. Google wants the modular homes to serve as temporary housing for employees, an indicator that internet giant wants to tackle the housing crisis in part by providing affordable housing directly.

Employees average rents across the US continue to climb, creating a need for affordable housing that reaches even high income wage earners. Modular construction offers a serious solution.

Modular-building technology, essentially factory-built homes that are pieced together onsite, could help reduce the cost of construction in the Bay Area by 20% to 50%

Test Sites

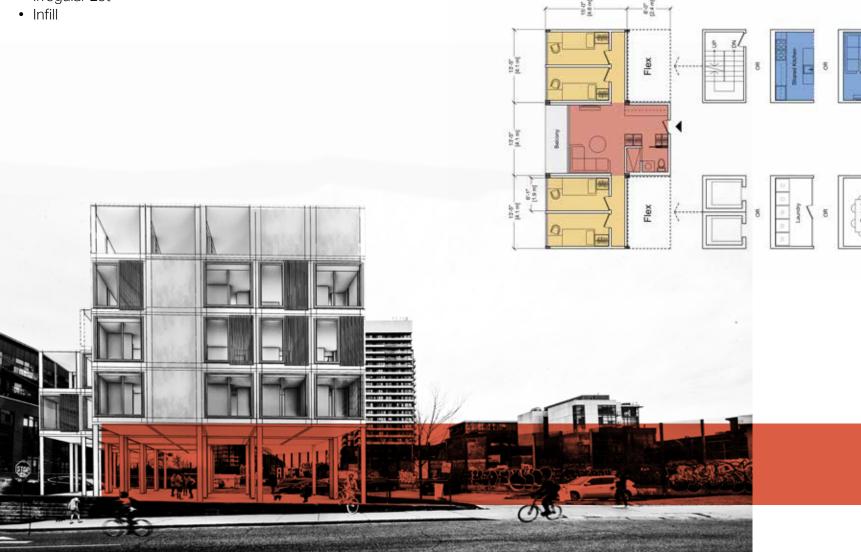
To test this approach, we've looked at a series of different lot typologies (Rectangular corner site, infill lot, irregular site) and have developed preliminary plans to show how this modular system could be developed. As the following pages show, even with standard sized elements, the system is highly flexible to accommodate different lot geometries and scales. Similar flexibility is possible internally, where voids can be easily created to create larger social spaces and shared views throughout. The modular construction system also allows the perimeter of the building to be stepped, creating balconies for youth and visual interest from the street.

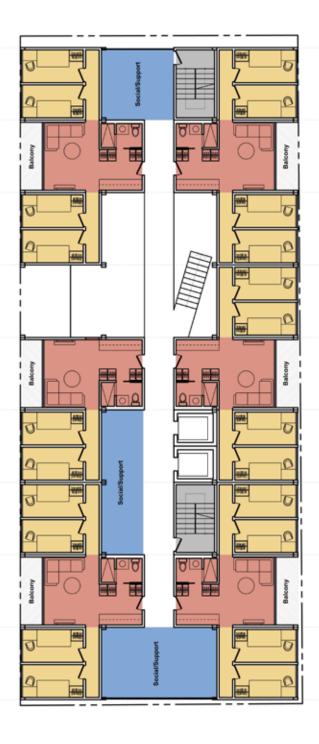
Housing Now can be suitable for a number of different lots:

- Rectangular Corner Lot
- Irregular Lot

Test Site 1: Rectangular Corner Lot

For the Rectangular Corner Lot, we considered a Bar Building Approach.







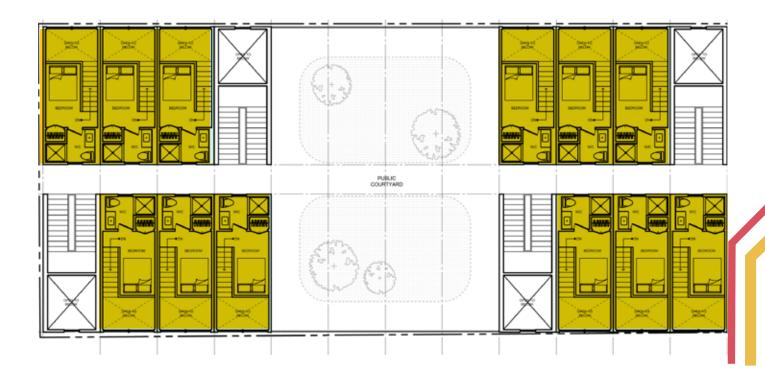
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Test Site 1: Rectangular Corner Lot



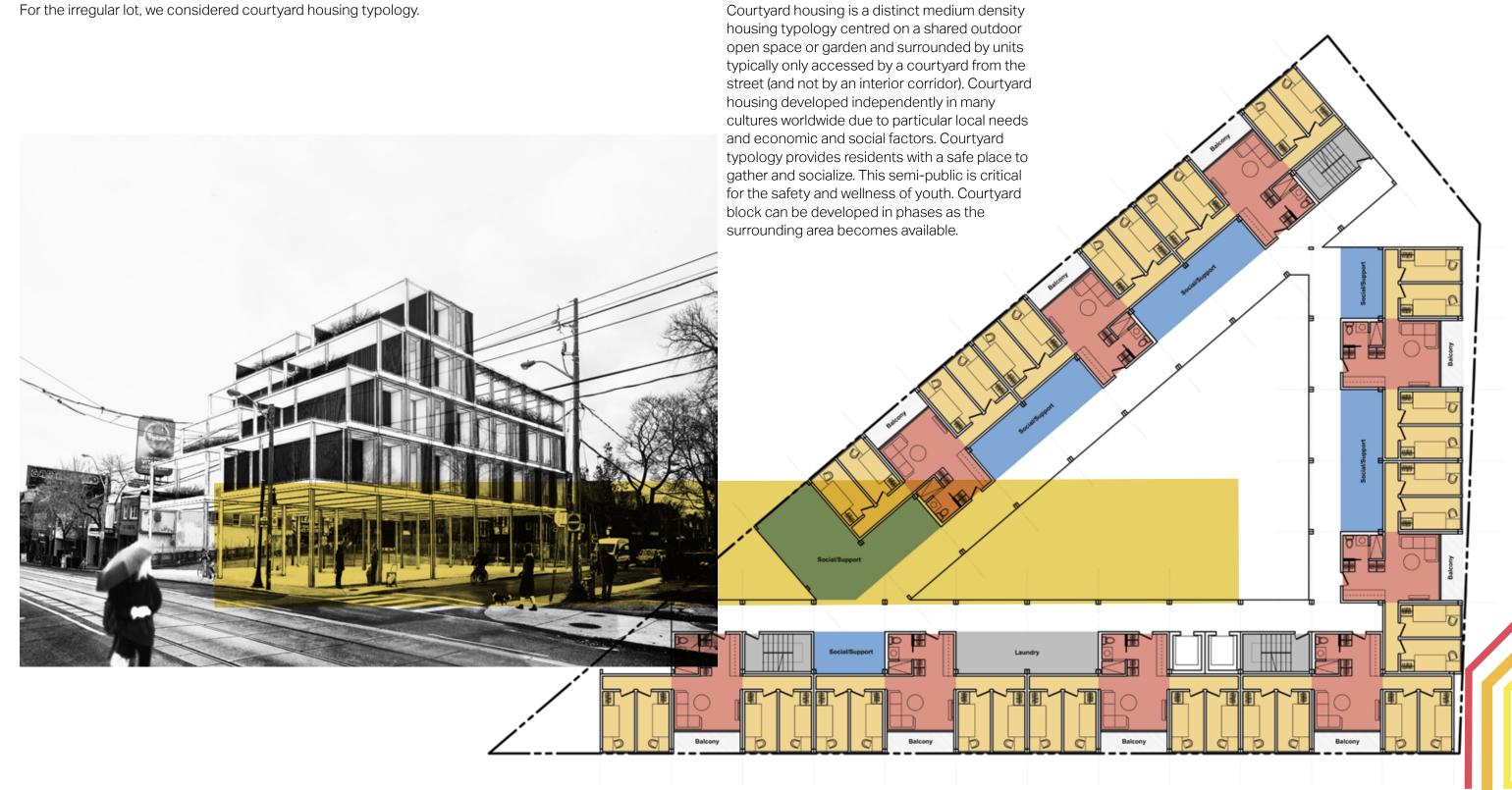


Bar building is the extension of the central block typology. There are opportunities to create many unique units in the bar building, such as double-height and mezzanine dwellings, single or co-living spaces. The internal or external long corridor provides residents with a safe place to gather and socialize. This semi-public is critical for the safety and wellness of youth. Courtyard block can be developed in phases as the surrounding area becomes available.



Test Site 2: Irregular Lot

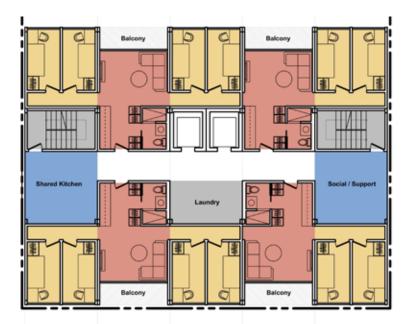
For the irregular lot, we considered courtyard housing typology.



Test Site 3: Infill

For an infill site, we considered a mid-rise tower typology.



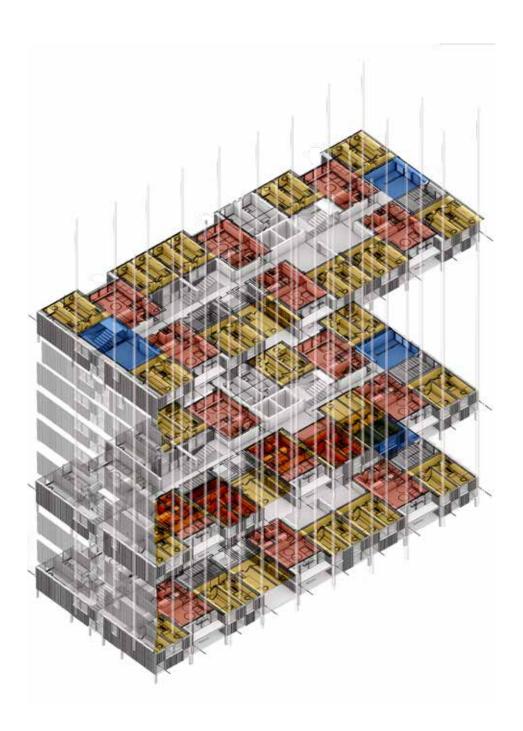


The mid-rise tower is the typical format that can be implemented quickly in many infill sites. The central elevator core allows the ground floor to be flexible. At the same time, supportive spaces can be spread along the perimeter. A co-living strategy allows for efficient planning. There are two configurations for this site, with identical structures. The compact option is four bedrooms per shared living, and the relaxed option is two rooms (bedroom and washroom) per shared living space. There is the flexibility to combine these two plans in one massing.

Youth Voice: Nicholas Ridiculous

Developing relationships with others in the building, intentional community-building, and the direction of people willing to serve as mentors rather than clinical practitioners gives me the sense that youth exiting care might be offered their first experiences of accountability and responsibility. It starts with the smallest aspects of being allowed to grow with the whole building offering its learning potentials. The challengers, the teachers, the friends, the guides, the stand-in father figures, the nurturers - all the character types that can come together to create a space where development of skills and relationships might play out in authentic rather than paid connections.





Implementation

Community Engagement

• Partner with local community agencies, BIAs, etc. to activate the ground floor and test flexible community spaces.

Financing and Partnerships

- Work with municipalities to unlock unutilized and vacant land by leasing the land for free for temporary use.
- \$1 billion rapid housing initiative.
- Incentives for private sector investment.

Policy Considerations and/or Reform

• National Housing Strategy and subsequent government initiatives (Municipal housing plans, rapid housing, modular housing, etc.)

Construction Considerations

• Use modular construction for fast delivery and lower cost.

Maintenance and Operations

- Improve maintenance by leasing equipment rather than buying.
- Work with local community organizations, city, etc. to manage the ground floor community space.
- Opportunity to reuse materials once dismantled.

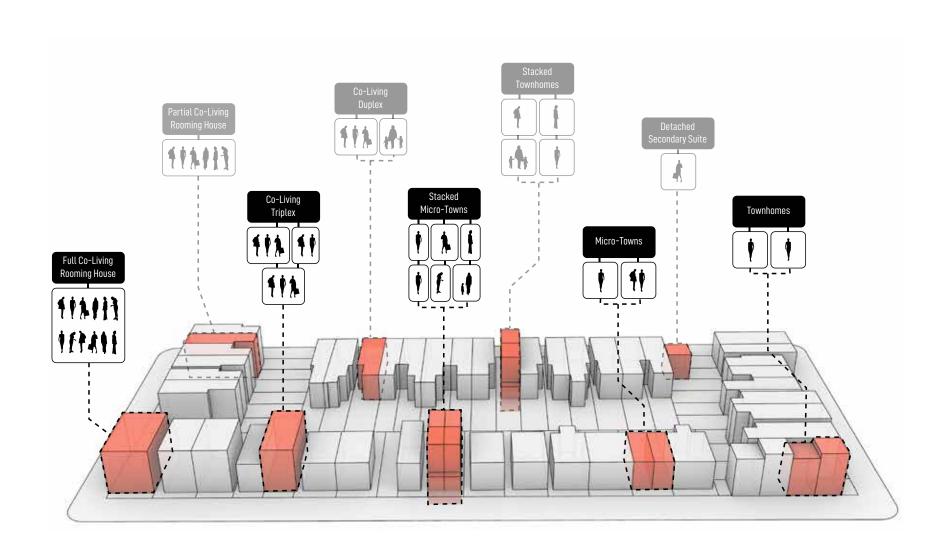
Housing Here considers small-scale housing interventions for youth transitioning to independent living by locating in areas primarily zoned for low-rise and single family homes, often referred to as 'Yellow Belts.'

Our research identified youth's desire to remain in their existing communities—close to their existing support networks, service networks and friends. While proximity to transit access was often cited as an important site consideration, our research also found that for many youth transitioning out of care transit is too expensive for regular use, and so opting to stay in their existing neighbourhoods is preferred.

Unlike larger youth facilities that operate at institutional scales, repurposing single-family homes allows for a smaller-scale, close-knit community of youth, and provides greater independence for youth who need less support and oversight. Further, locating housing outside of institutional facilities creates possibilities for paths to ownership, such as rent-to-own or co-ownership financing arrangements.

Youth

Housing Here is best suited to youth who require less hands on support. These youth might have strong senses of independence, but need assistance creating stability. They could be elder youth who have gone through the process of renting or living with roommates, and would prefer more autonomy and privacy. This housing type may also cater to youth who have a family of their own and need more space and privacy.



With participants coming from the foster care system, any space to call your own can feel like a blessing. Designers and architects have a chance to offer a room, but also, a home beyond just that, for youths to build themselves up in. When your sense of personal space is slowly peeled away, it can be hard to feel deserving of it. It is time to show these up and coming youngsters that they do, in fact, deserve it!

- Nicholas Ridiculous

Youth Interviewee and Contributor

Programming and Involvement with Community

There are many opportunities to develop "systems of care" that can assist youth to live independently while also allowing them to integrate into the community. While some youth living in 'Housing Here' settings may be ready to live independently, others would benefit from having supports in place.

1. Create a Support Network: Connect with Nearby Businesses and Services

Seek out partners that can facilitate access to existing support programs. This may include partnerships with nearby community and nonprofit organizations and agencies that provide employment services, skills-oriented classes, mental health, etc. It may include partnering with local businesses to provide offsite access to health and wellness programs (e.g. local community centres, yoga studios, and art therapy). This also may include ensuring Support Staff and mentors have access to common spaces or private spaces to work with youth.

2. Canvas for Collaborators

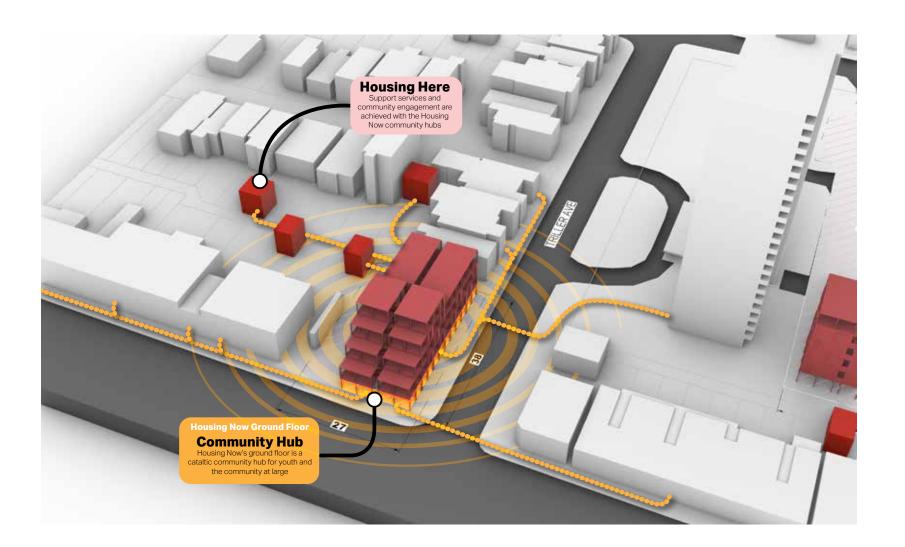
Engage with community groups, neighbourhood associations, and municipal funding program facilitators to connect nearby residents to develop community integration.

3. Leverage New Neighbourhood Amenities

Potential to leverage increased density to incentivize the development of neighbourhood amenities (ie. YMCA, libraries, or community centres) that would benefit all neighbours.

4. Manage Potential Community Backlash

In these lowrise neighbourhoods, there can be community backlash towards transitional housing for youth. Service providers and nonprofit developers highlighted opportunities to build relationships with neighbours, minimizing the backlash and building community. Some recommended having open houses and neighbourhood barbecues as early as possible. They also mentioned the need to keep the houses well maintained, which includes consistent garbage pickup, shoveling and a landscaped yard. They highlighted it is essential to respond to any complaints as quickly as possible.



"It's important to keep youth homes integrated into our neighborhoods. You can't put these people off to some area. It is good that they're integrated with their peers, with other youth and other families. Communities are diverse, Communities are here to help each other, to learn from each other. That's how you build a good community."

— Ana Bailão

Toronto City Councillor & Deputy Mayor Chair of Toronto's Affordable Housing Committee

Design

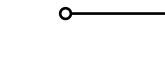
Housing Here can take many forms—the goal is to provide a diversity of housing options for youth that work within the existing site, zoning, and community constraints. Below, we outline the typologies that would best support for both co-living and independent living.

Design for Privacy, Outdoor Access and Flexibility

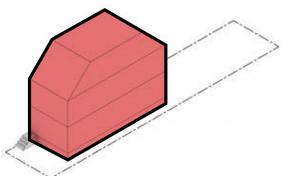
In all instances outlined below, innovative solutions will be needed to properly navigate common spaces, both indoor and outdoor. Due to the limited space in retrofitted houses, special consideration to privacy, access to outdoor spaces and flexibility of social spaces must be prioritized. Flexible social spaces could be used for unplanned social interactions, programmed recreation. It could also be spaces for support staff and visitors to meet in privacy.

Accessibility

Retrofitting existing single-family homes for accessibility can be difficult. While it's not expected that every home within the Housing Here model would need to provide full accessibility, some should—either through careful site selection or through retrofitting. Examples of accessible features include direct ground-floor access, full service provision on the ground floor, curb-cuts, and sufficient frontage for pick-up & drop-off, among others.

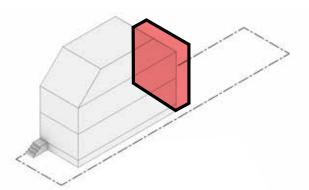


Co-Living



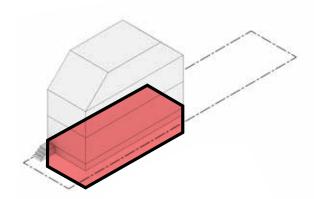
Rooming House

The rooming house model would allow for the entire house to be converted for youth use. The house would likely accommodate 6-8 youth per house. Youth have their own bedrooms, and share spaces for cooking, socializing, washrooms, and laundry.



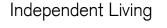
Addition

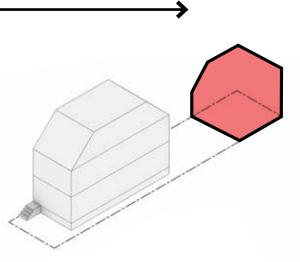
Depending on the existing building and as-of-right zoning, additions (independent sites or additions to a rooming house) could increase the density on a site, accommodating more youth.



Secondary Suite

Secondary suites can provide housing for one or two youth. In many jurisdictions, secondary suites are already permitted by existing zoning bylaws. Special design consideration should be made to maintain privacy between the owner and the youth. This could include developing separate outdoor spaces, separate entrances or noise buffers.





Detached Suite

Detached suites or laneway suites are opportunities for new-build solutions and can house one to four youth. Like with secondary suites, design considerations to ensure privacy and separation will be needed.

Location (Site Selection)

1. Make Use of As-of-Right Zoning

Different jurisdictions in Canada will allow different densification strategies for Yellow Belts. Secondary suites are common in many jurisdictions. Laneway suites are becoming more common in larger cities. Rooming houses are less common, though some wards of Toronto have bylaws that permit them. Some municipalities are looking at inclusionary zoning bylaws, which could support additional density in these areas.

2. Look for Under-Utilized Assets

Underdeveloped lots with the appropriate zoning present opportunities to increase value for homeowners while providing transitional housing for youth.

3. Distribute Widely

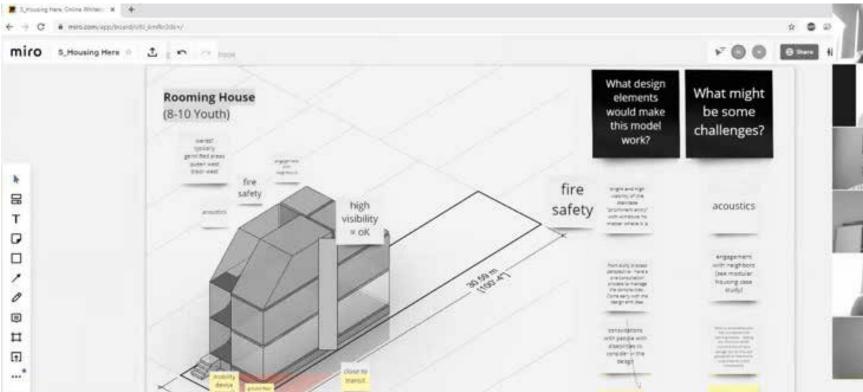
Providing a larger number of options in a variety of neighbourhoods allows youth a greater likelihood of staying in neighbourhoods that they're familiar with, and where they have existing social and support networks.

4. Work with Lot Typologies

Understand similarities in Yellow Belt lot sizes to create scalable and/ or reusable densification strategies. This is especially important for new construction densification such as laneway housing/suites which could be deployed as a modular, prefabricated system to reduce implementation costs.

5. Leverage Connectivity

Look for sites with access to employment opportunities, grocery stores, retail, and community services (recreation centres, libraries) that are within walking distance. Access to transit (including bike sharing) is important, though for many youth transitioning out of care it can be too expensive to use regularly.



Housing Here should leverage connectivity with surrounding amenities, from public institutions to Housing Now's youth-focused services.

"Integrating housing within the community is important. People are transitioning into 'normal' life. So the feeling that you can come and go easily, that it's a building that doesn't scream institutional, that it's physically integrated into the look of the neighbourhood as well, is very important."

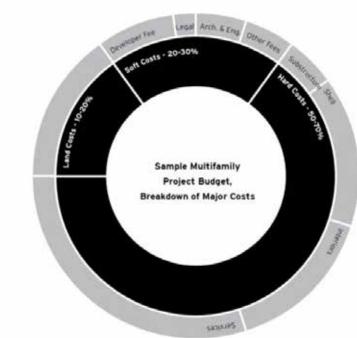
—Jacob Larsen

Housing Development Officer, City of Toronto

Materials typically account for 70% of total construction costs for housing upstarts, making smaller projects unfeasible. One option is to recycle building materials from Housing Now to reduce construction and environmental costs for Housing Here. See page 63, 'Ecosystem of Support,' for more details on this approach.







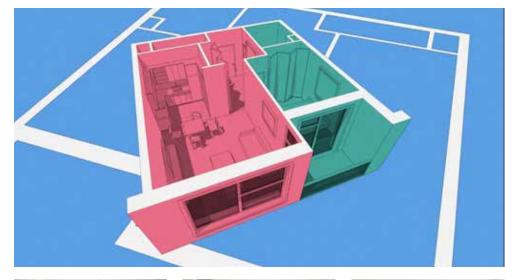
Strategies:

PadSplit Atlanta, Georgia

PadSplit works with property owners who are renting out single-family homes. The property owners agree to fix up the houses to a certain standard, then PadSplit helps them add walls to create new rooms. The company screens potential residents and rents out each room, including utilities, internet, and laundry.

The aim is to become the 'Airbnb of workforce housing' —a trusted platform that can offer more affordable, long-term housing alternatives by letting anyone rent out a spare bedroom. Owners will pay for conversions and furnish the rooms as they please. Once the home is accepted on the platform and meets local building codes and standards, they can begin renting to prospective tenants.

The model is similar to SROs (single room occupancy buildings), taking the form of low-cost residential hotels or rooming houses. PadSplit may be able to avoid some of the negative perceptions of SROs that led to campaigns against them. It can also address some common issues in rentals. For example, by paying for utilities, the property owners have the incentive to invest in energy efficiency, something that often doesn't happen when tenants have to pay electric bills.









Strategies:

St. Thomas/Ninth New Orleans, Louisiana

In an attempt to add modest density on a site located on an industrial edge in New Orleans, Jonathan Tate came across stringent zoning requirements. Initially, zoning permitted only 3 single family dwellings on the site due to requirements for these homes to occupy a large parcel of land. With clever maneuvering, Tate convinced the City to allow him to build 12 affordable homes on the site by reframing the project as a horizontal condo and using regulations that govern condos to make the project a reality.

The simple, geometrically sculpted buildings are arranged in a tight cluster around a central paved courtyard which include a parking spot for each home. Simple materials, such as corrugated metal, are selected for their durability and cost efficiency. A splash of bright colours are used to add a sense of vibrancy and life to the project.



"Looking at possibilities for density where you may not have seen it though land use and finding smaller parts and pieces of land. But also using design as a way to create more density on the site."

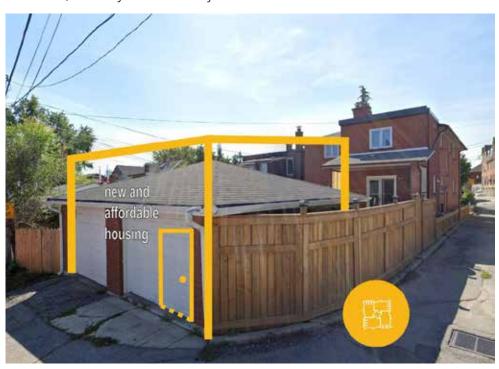
—Jonathan Tate

Architect, Office Jonathan Tate (OJT)

Strategies:

Partna Housing Toronto, Ontario

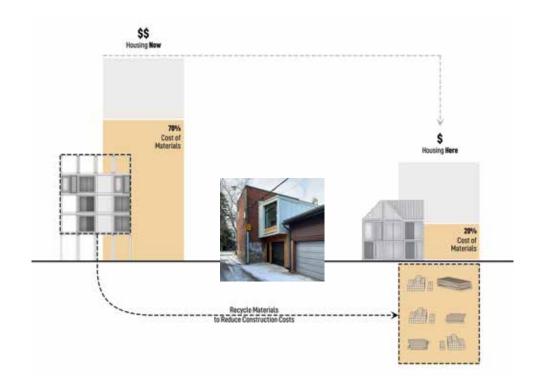
Partna Housing is a nonprofit organization based in Toronto that works with homeowners to add affordable units to their homes, whether through retrofits or adding suits. Partna provides financing, technical and tenant management to homeowners to accommodate affordable housing as additions, laneway or secondary suites.

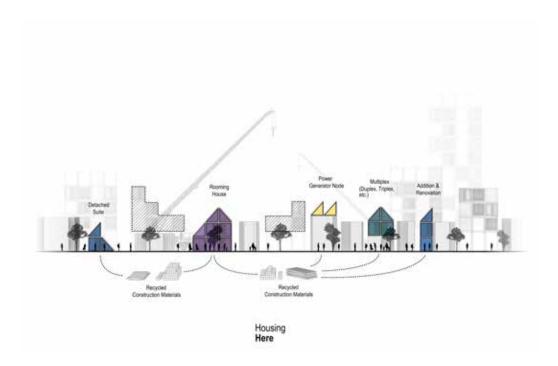


"I felt very strongly that if you wanted to solve the affordable housing crisis, you had to figure out a way to demonstrate to the private market how affordable housing could in many cases be as profitable or more profitable than market rate housing...For the cost of the federal subsidy for a single unit PadSplit can create 50 units."

-Atticus LeBlanc

CEO, PadSplit





Implementation

Community Engagement

• Manage potential community backlash: Engage with residents early and often; maintain the property, respond to complaints, develop social interaction opportunities (barbecues, community gardens, etc.)

Financing and Partnerships

- Nonprofits to work with government to unlock government owned land and/or receive expedited development approvals and fast-tracking of applications.
- Partnerships with homeowners, private developers and nonprofits. Examples include:
 - i. PadSplit
 - ii. Partna Housing,
- Alternative financing:
 - i. Impact lending and investing.
 - ii. Crowdfunding.
 - iii. Rent-to-Own (low interest financing support from lending institutions).
 - iii. Co-Ownership Financing (reduce risk/cost for youth).

Policy Considerations and/or Reform

- Zoning by-law amendments.
- Laneway suites, secondary suites, rooming house policy updates.

Construction Considerations

- Repurpose heritage buildings with low market value.
- Adaptable and flexible walls/units.
- Use recycled materials reduce construction costs.
- Expedite the approvals process.
- Simplify construction process.

Maintenance and Operations

• Improve energy efficiency by renovating existing house.

Housing+ investigates how transitional housing for youth can be colocated with other uses or occupants in large-scale developments, and how design can encourage beneficial partnerships that support youth aging out of care. This could include cohousing with students in dormitories, intergenerational living, co-location with community services such as a library or co-location with market-rate housing. The aim, in each of these, is to provide support for youth to develop the skills and confidence to live on their own.

In larger cities, there are fewer opportunities to develop standalone congregate housing. However, there are increased opportunities to co-locate. **Housing+ offers a model for creating a long-lasting community within a transitional housing development.** This model draws on best practices of co-locating transitional housing with other uses, as well as examples of co-living, boarding houses, and dormitories. Like Housing Now, there are opportunities to integrate community or other flexible spaces at-grade but are more permanent.

The public facing amenities incorporated into Housing+ could be programmed based on the needs and character of the youth and the surrounding community, to offer opportunities for interaction.

Youth

Housing+ is focused on youth who have exited the care system or more supportive housing and are interested in building community. One potential model would be to develop cohousing for youth aging out of care and university students, in dormitory type settings. The Bikuben Student Residence in Denmark uses this model (explained in subsequent pages).

Programming

Programming should focus on helping youth build independence, stability and sense of community responsibility and support. This includes:

Life Skills, Employment, Education and Mentorship

The programming must focus on developing skills for both independent and community living. Some features may include: life skills (chore wheel, housekeeping rules), employment and education (apprenticeship and training programs) and peer mentorship and supports (such as 'accountability buddies').

Youth Ownership of Programming

There should be opportunities for youth to shape their co-living situation and define the programs (this could include providing questionnaires or facilitating a workshop when youth move in).

Programming at Grade, for Youth and Neighbours

There can be opportunities for youth to codesign community spaces at-grade. A diverse mix of partners, users (residents and neighbours) can invigorate a sense of activity and community and ensure the experience of the building does not feel institutional.

Partnerships could be developed with local community organizations, higher education providers, social enterprises, or government institutions. This could include integrated programming such as cooking sessions, performances and talks or opportunities for entrepreneurship and employment. A consistent flow of friendly neighbourhood interaction through something like a cafe or dance workshops could help facilitate new social connections, broadening residents' networks and experience.

These partnerships can be mutually beneficial by pooling resources and delivering interesting programs and employment opportunities.

"It's not for all young people in homelessness—it's a matter of mindset. One of the things we're trying to promote is that young people in homelessness want to live like other young people. And sometimes it's giving them the support they need to be successful in that."

-Anne Bergvith Sorensen

Chief Consultant, Home To All, Denmark Consaultants with the Bikuben Foundation

Design

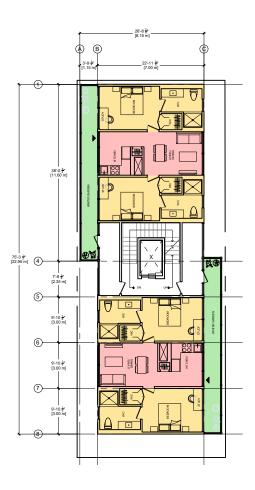
The main design criteria for Housing + include:

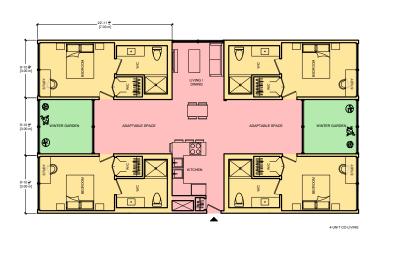
Internal Private and Shared Spaces

Ensure there are **designated private spaces** (such as the bedroom). Exceptions could include larger suites provided to couples or bunked suites. **Facilities like bathrooms and kitchens can be shared** in pairs or small groups while larger amenities like seminar rooms, lounge spaces, or a gym would be available to a full floor or building. To tailor the model further based on varying levels of support needed, staffed kitchens or health/ consultation offices could be integrated.

Flexible Pop-up and Permanent Community and Entrepreneurial Spaces

These can be programmed and re-programmed based on the evolving character of the community, both external and internal to the site (e.g. a performance space that could transform to a games room). This could facilitate additional opportunities for interaction and provide venues for more public self-expression.







Private Unit
Shared Space
Exterior Space

Location (Site Selection)

Explore Large Sites that Permit High Density

Housing+ would require a large site and could be explored on various lots.

Co-locate with Partners and/or Select Sites near Existing Amenities

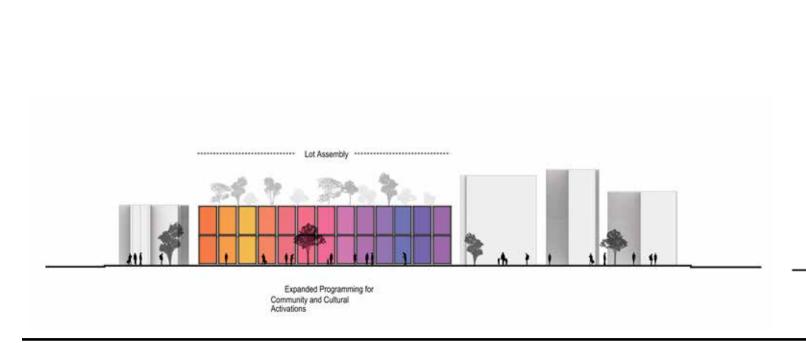
Opportunities for symbiotic relationships will strengthen the potential success of the development. For instance, where a neighbourhood has an aging library, Housing+ could incorporate a renovation or complete rebuild with the library occupying one or several public facing floors of the housing, integrating the building into the community and providing increased opportunities for pooled financing.

Additional amenities can be tailored to suit the neighbourhood, addressing the lack of resources such as gyms, green space, cafes, etc. The aim should be to provide sufficient access to internal supports while, at the same time, encourage youth to engage with the surrounding community.

"We need to be really careful because the way that we design a building, design a public realm, design our shelters —it's not just bricks and mortar—it actually facilitates the social interaction of whoever uses that space. We need for people to say, 'This is important.' It's not only about looking pretty, it's about being functional and contributing to the social outcomes that we want."

— Ana Bailão

Toronto City Councillor & Deputy Mayor Chair of Toronto's Affordable Housing Committee





Strategies:

Bikuben Kollegiet Copenhagen, Denmark

Bikuben Halls, a student residence in Denmark, puts aside 10% of units for homeless youth. There are two locations: One in the Landowners Association Ørestad University district in Copenhagen and one in Odense. In Copenhagen, the passages to the rooms are connected with the shared kitchen and social space to enhance the community living style of the students. The common areas themselves are located inwards facing the open courtyard creating a visual connection with each other while the dorms are all facing outwards providing each student their own view to the outside of the building. This creates a clear change in the feeling of private vs public spaces for its inhabitants. The building was designed with movement in mind with its double spiral circulation system compared to the common corridor layout of student dorms. This approach made it possible for the common spaces to be all connected together through one common circulation system. In an interview, we learned that more complex problems require more intensive supports. Shared facilities and opportunities for social encounters and gatherings were seen as difficult for many homeless youth residents, who desired more privacy and were triggered easily. Alternatively, better programs for the youth to adjust to the new setting would be required.

The site in Odense has no common areas. Units have their own kitchens and bathrooms. There are entrances from the outside in. Even though there are fewer opportunities for community interaction, people feel integrated as part of the community. Those from the Odense sites are now asking for more common areas to meet neighbours, according to an interviewee.







Strategies:

VinziRast-Mittendrin Vienna, Austria

Located in the 9th district of Vienna, the VinziRastmittendrin is a place for both students and the homeless. This coexisting style of living was possible based on the success of the Vienna Audimax Occupation by students in 2009. The students wanted to further work with homeless individuals and build up a community together. Every dormitory floor has a communal kitchen, living room, terrace, and working space. The dorms are split into three with a shared washroom and an additional smaller kitchen. The basement was rebuilt for event space while the first floor has a popular coffee shop run by volunteers. There is a roof studio space at the very top floor included with a huge roof garden where the VinziRast group hosts many of their workshops to both engage social activeness in the community while creating an income source for the building.









Implementation

Community Engagement

• Co-locate with community space, services, etc. for neighbours and community members to use.

Financing and Partnerships

- Public-Private-Nonprofit partnerships (Ex. Evolv Development with Sun Life, Daniels and Woodgreen).
- Inclusionary zoning (10% of developments as affordable housing).
- Impact investing.
- Waved property taxes and property leveys.
- Partner with university and colleges, city departments or developers to develop mixed use housing.
- Consider philanthropic donations to potential partners like higher education institutions that could see mutual benefit in pooling resources.

Policy Considerations and/or Reform

- Zoning amendments to permit mixed use, as needed.
- Utilize Section 37 or other community benefits tools.

Construction Considerations

- Remove barriers for efficient procurement.
- Consider design standardization.
- Run design competition.

Maintenance and Operations

- Lease equipment rather than buy.
- Utilize durable and low energy materials

While the typologies can work on their own, they can also work together over time to create resilient communities for youth. As a test case, we have selected the Parkdale neighbourhood in Toronto.

What is an Ecosystem of Support?

The ecosystem of support concept is defined by the values of interconnection, iteration, and reuse. We envision a future where the three housing models come together in the following ways:

The temporary modular buildings from Housing Now could be developed first. Within the Housing Now model, we could explore innovative approaches to community spaces, courtyards and coliving. We could implement a pop-up library, modular cafe or a performance venue. There is an opportunity to learn about how residents use these spaces. Successes and learnings from these activations could then be applied and made permanent in housing developed in the Housing Here and Housing + models. The temporary Housing Now buildings, if developed as interim housing, could also be disassembled, and materials could be repurposed for Housing Here and Housing+ construction. This circular building approach is described in more detail in the Appendix.

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CMHC Solutions Lab | WoodGreen | PARTISANS | Process

New Housing Models for Youth Transitioning Out of Care

Location

Why Parkdale?

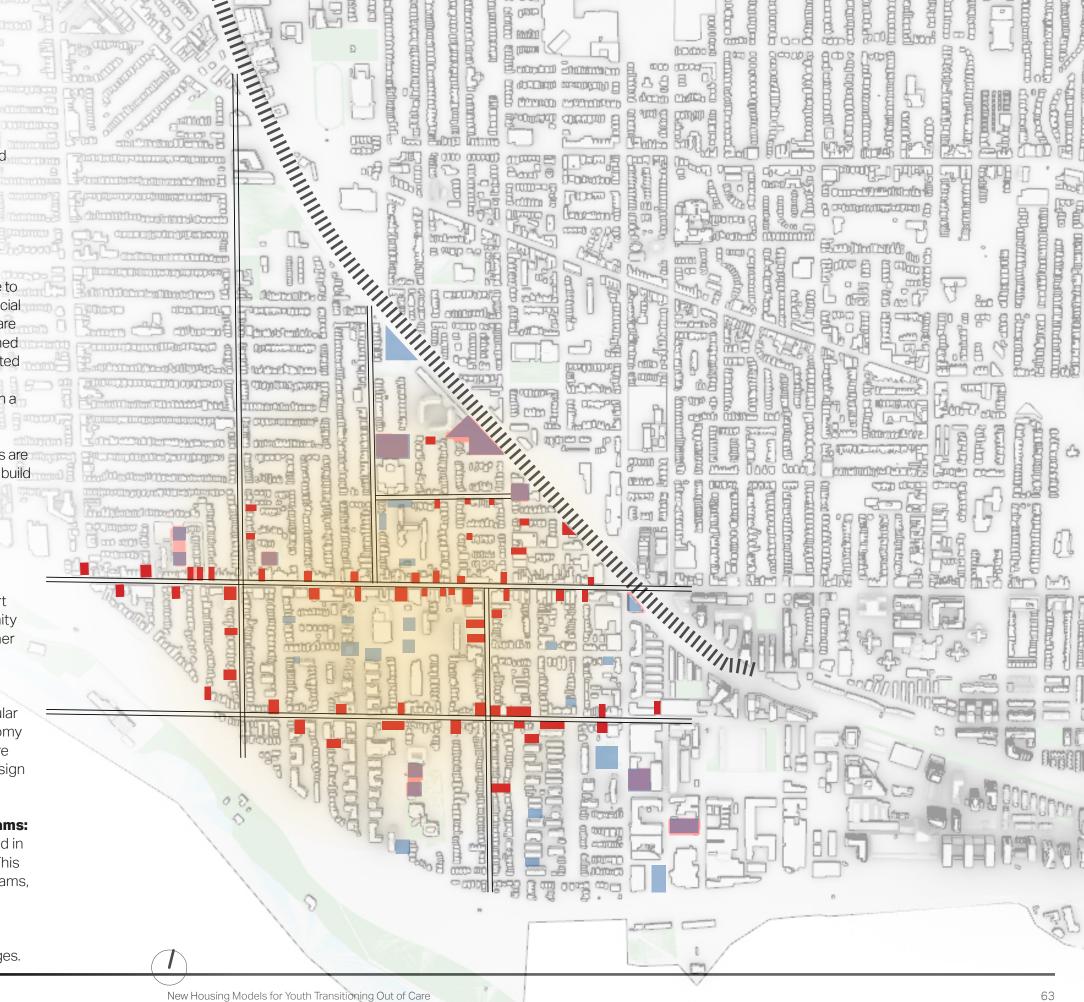
We chose Parkdale as a case study because the neighbourhod is wellpositioned for supportive housing, due to its diversity of social services and infrastructure, its walkability, and its active and supportive community.

- Lot typologies: Parkdale is a neighbourhood in Toronto's West End. Largely built in the 19th century with a history of heavy industry, the neighbourhood hosts a unique mix of old Victorian detached and semidetached houses and larger lots where industrial buildings used to sit.
- Connection to services, amenities and transit: Parkdale is home to many new immigrants, in part due to its low rents and the rich web of social service agencies located in the area. Today, 90% of Parkdale residents are renters. Tibetan refugees, among a diversity of other groups, have opened grocery stores and restaurants, helping to transform a formerly dilapidated and crime-ridden neighbourhood into a lively, family-friendly one. The neighbourhood is walkable, allowing people to get what they need within a short walk.
- Social infrastructure & community power: In the face of neighbourhood gentrification, many community activists and organizers are developing land trusts and other services to prevent displacement and build community power.

How does the Ecosystem of Support work?:

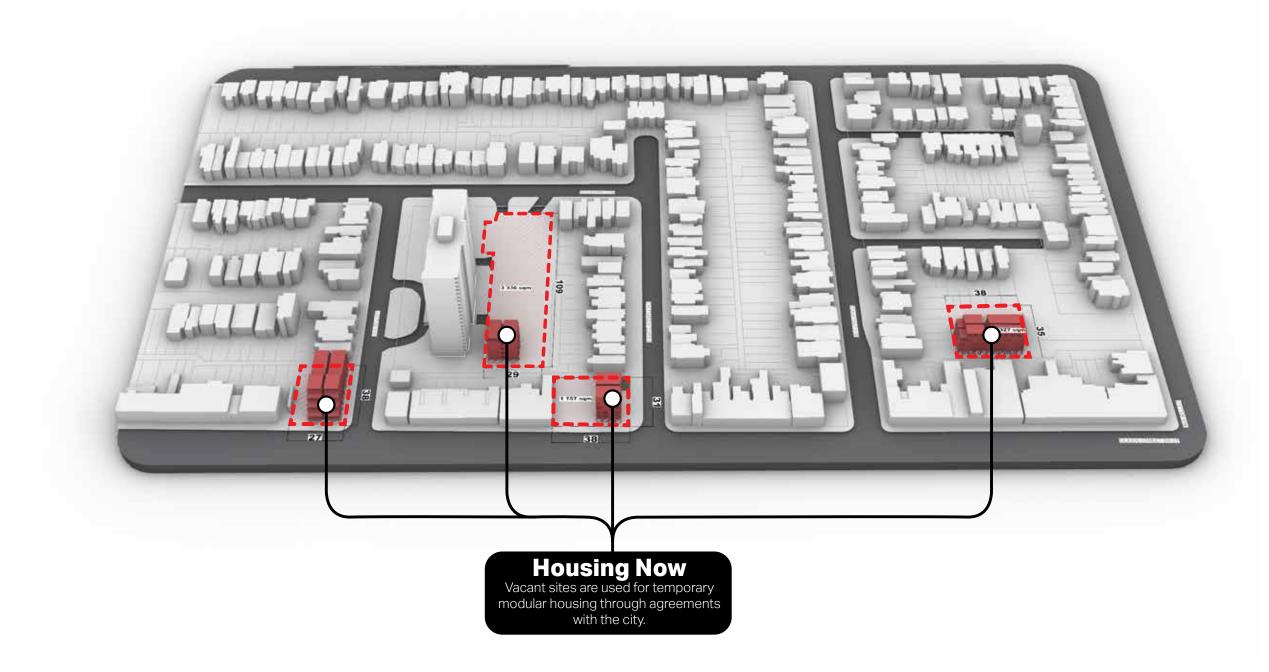
- Housing as process Testing Community Spaces: In the short term, Housing Now presents opportunities to test and pilot community spaces at grade. If successful, these spaces could be explored further and more permanently within Housing + models.
- Circular economy applied to construction and reuse: In the medium term, Housing Now developments that are temporary modular construction, can be disassembled and reused, using circular economy principles. The materials can be then used to construct Housing Here or Housing + developments, allowing materials to be reused, and design ideas to be shared.
- An Interconnected System of Housing, Services and Programs: In the long term, the housing models described above can be located in close proximity to one another to create an ecosystem of support. This system provides youth with access to a range of services and programs, providing them choice and flexibility on their path to independence.

The ecosystem of support process is defined in detail on the following pages.



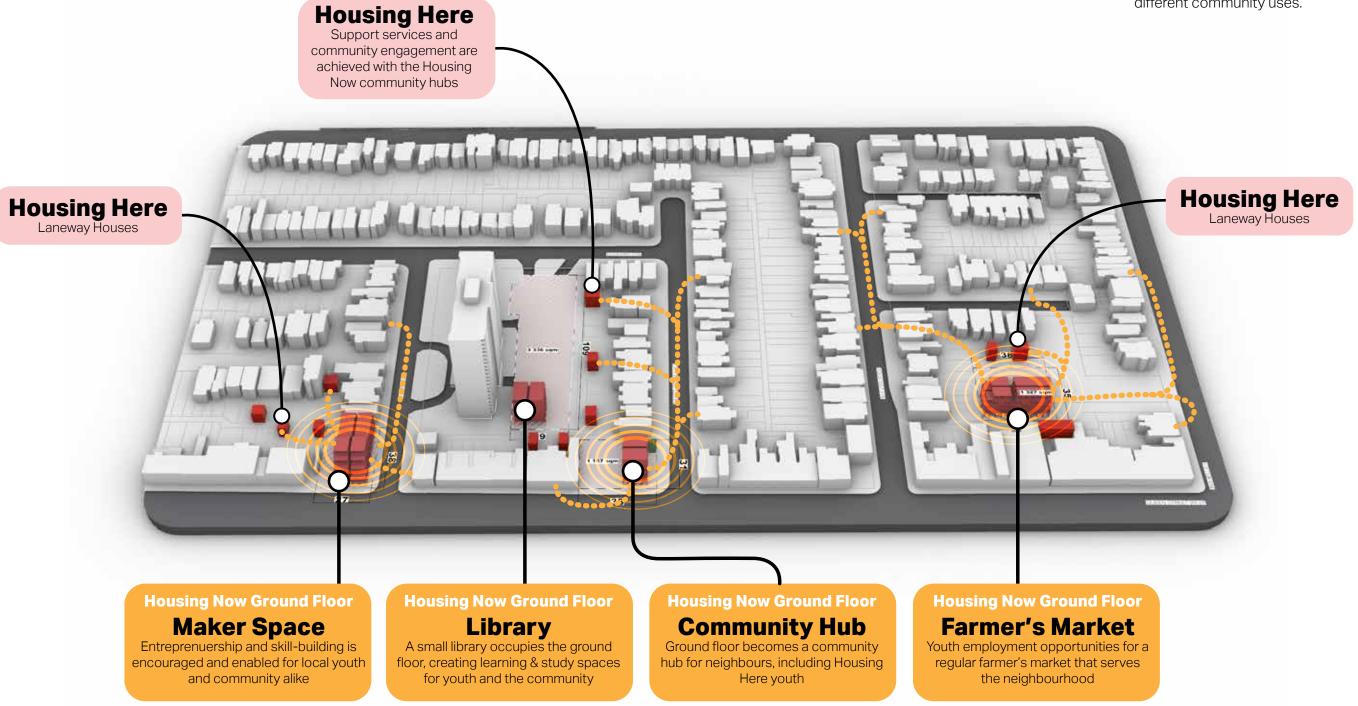
Today

Housing Now would be the first typology to be implemented because of its speed and the ability to address immediate housing needs. Potential sites include empty lots, parking lots, and underutilized spaces. We estimate that the Housing Now typology would be best suited to sites between 500 sqm and 1,500 sqm. These properties could be borrowed from municipalities or private landowners through the use of temporary building permits.



+2 Years

With **Housing Now** established, **Housing Here** begins to be built out in some existing houses. New bylaws permit greater uptake. Initial discussions with institutional partners begin for **Housing+. Housing Now** ground floor can be activated with different community uses.



+5 Years

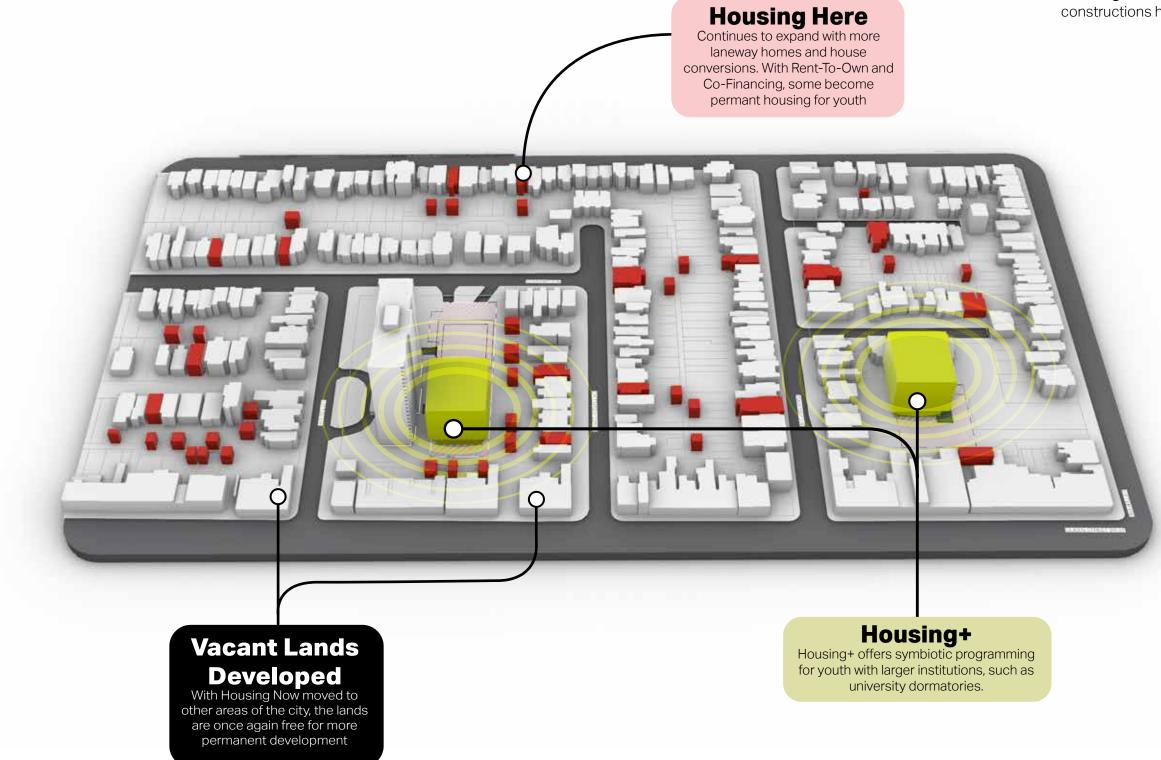
Housing Here continues to see development.
Housing+ projects are under construction.
Housing Now implementations are taking on different roles. Some have been moved to different sites, others have been converted to permanent use and have become hosts of important civic uses.



+10 Years

Housing+ projects are completed and operating. **Housing Here** is established and continues to see further development.

Housing Now - Some of the temporary modular constructions have been moved to different sites.



A Way Forward

A New Hope

by Nicholas Ridiculous

For someone who has been working on self-healing for a long time, this type of project is important to me. From what I have witnessed, this life does not get better by itself. We are never given back what is taken, but we can find anew. That is why we need to create a new cycle through projects like this, not of pain and hardships, but of healing and support. A program for youth, by youth. As crown wards, and children from the system; we must be given the chance to reclaim our power on our own terms and seek out the life we want. We can't learn to trust ourselves if no one ever puts trust in us. Transitional housing projects like this are the change we need, somebody has to show the youth that accountability is important. At the core, the accountability inspires responsibility which creates the essential growth needed to move forward. This project is a launch pad of healing, to reactivate and springboard the once broken.

The core approach to this project is youth empowerment. By creating pathways of healing in a stable environment where youth feel safe and free to find and express themselves. The young people coming out of these systems are very diverse, as are their issues, and the remedies for those issues. That is why it is important for the youth to have a say in the space they are in, to ensure they get what they need and also to ensure the programs organically evolve with the youths. So the programming itself doesn't stagnate. Even if the options differ slightly, it is important to not assume one solution fits all.

These typologies are a framework, a new foundation for the youths to build the beginnings of their young adult lives upon. Not a band-aid, not a crutch, but a map. It is an important element to have more experienced youth be the ones to help them learn to read that map. Having the youth "lead by example" and show that it is possible to work hard and heal yourself, is a key factor. It is hard to heal from these experiences by yourself, sometimes just seeing it is possible helps a lot.



Implementation Roadmap

Housing Here

residents early and often; maintain the

Construction

 Adaptable and materials reduce construction costs.

Expedite the

Maintenance and

Policy Considerations

secondary suites rooming house

Community Engagement Partner with local

community agencies, BIAs, etc. to activate the ground floor and test flexible community spaces.

Construction Considerations

Use modular construction for fast delivery and lower cost.

Policy Considerations and/or Reform

National Housing Strategy and subsequent government initiatives (Municipal housing plans, rapid housing, modular housing, etc.)

Housing+

ernment to unlock government owned land and/or receive expedited development

- approvals and fast-tracking of applications.

 Partnerships with homeowners, private developers and nonprofits. Examples include

- i. Impact lending and investing.
- iii. Rent-to-Own (low interest financing support from lending institutions).
 iii. Co-Ownership Financing (reduce risk/cost for youth).

Strategy:

Considers small-scale housing interventions and retrofits for youth transitioning to independent living by locating in areas primarily zoned for low-rise and single family homes, often referred to as 'Yellow Belts', which may foster paths to ownership.

fouth transitioning to independent living who require less supports, might have strong senses of independence but need assistance

Create a support networks through connections with local businesses, services and collaborators.

Diverse forms (rooming house, additions, secondary suites, and detached/laneway suites). The following principles are important:

- Prioritize privacy (between youth and neighbours and internally)
- Ensure appropriate outdoor access
- Incorporate shared spaces that can be used for interaction, recreation and support staff
- Accessibility considerations (when retrofitting single family homes)

Location: Areas primarily zoned for lowrise, detached/semi detached housing (Yellow Belt areas), often in locations where youth nave community connections.

Financing and Partnerships

Work with municipalities to unlock unutilized and vacant land by leasing the land for free for temporary use. \$1 billion rapid housing initiative. Incentives for private sector investment

Housing Now

Maintenance and

Work with

local community

community space.

Opportunity to reuse materials once dismantled.

Improve maintenance

by leasing equipment

organizations, city, etc. to

manage the ground floor

rather than buying.

Operations

Strategy:

• Quick approach to providing homes to youth on a large scale through rapid deployment that favours quick assembly and

• Can be used as temporary housing on vacant lands and can be easily dismounted, so the materials can be used elsewhere.

• Can incorporate a ground plane with flexible, accessible space for non-permanent / pop-up activations and programming (such as markets and coffee shops) that supports residents and the neighbourhood.

• Youth who have recently exited the foster care system, who have higher needs and require direct support and guidance in developing stability and independence.

Wraparound supports including thorough intake, mental health supports as needed, basic education, employment, life skills and financial literacy Opportunities for youth to co-create and activate space

Design:

- Modular design.
- Flexibility of common and shared spaces that can be used both by youth and neighbours, including pop-up activation spaces at-grade.

Areas of high to mid-density that is ready for development, and can be developed for temporary or permanent use.

Inclusionary zoning (10% of developments as affordable housing).

Partner with university and colleges, city departments or developers to develop mixed use housing.

Consider philanthropic donations to potential partners like higher education institutions that could see mutual benefit in pooling

• Co-locate transitional housing for youth with other uses or occupants in large-scale developments, and encourage beneficia partnerships that support youth. This could include cohousing with students in dormitories, intergenerational living, colocation with community services such as a library or co-location with market-rate housing.

• Include opportunities for at-grade activation (permanent or nonpermanent).

Programming:

ocus on helping youth build independence, stability and sense of community responsibilities:

- Life skills, employment, education and mentorship
- Youth ownership/co-creation of programming
- Programming at-grade, for youth and neighbours

ocation: Areas of high to mid-density that can accommodate for vertical and horizontal growth

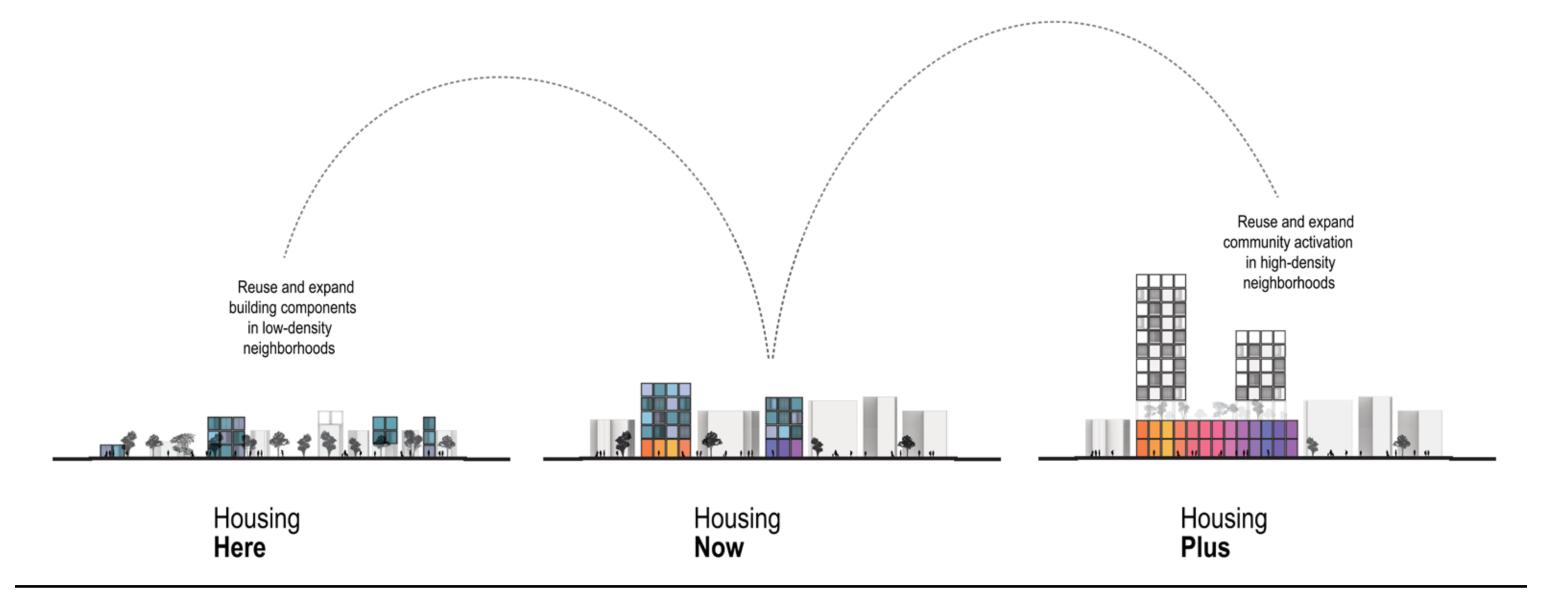
Key Takeaways

Throughout our research and process, four key takeaways stand out when considering the development and implementation of youth transitional housing:

- **1. Youth-led approaches to programming:** Prioritize youth choice and voice on their path to independence.
- **2. Housing is a process, not a product:** Where possible, design flexible spaces for youth to co-create and define overtime. This includes utilizing Housing Now podiums as temporary flexible spaces to pilot how pop-up spaces can be utilized in communities and replicated in future models.
- **3. Innovative partnerships and financing models:** These could include collaborative partnerships between public-private-non-profit sectors and new financing tools such as impact investing.
- **4. Building Community, not just housing:** Transitional Housing for Youth is an opportunity to build-up communities holistically by providing mutually-beneficial programming to youth and neighbours. This includes opportunities to engage neighbours through the design and development process and once the youth move in. Furthermore, where possible, develop an ecosystem of care where different housing models are located in proximity to each other, to community services and amenities and other systems of care.

Guided by these key takeaways and the above Implementation Roadmap, WoodGreen Community Services is in the process of scouting acquisitions, in the hopes of implementing the conceptual typologies identified in this Solutions Lab for the benefit of our youth clients.

We hope that the models produced in this study offer inspiration and guidance for policymakers, not-for-profit organizations, housing developers and more, and spur much needed action to address the current youth housing crisis.



Appendix

Glossary

Solutions Lab

National Housing Strategy Solutions Labs offer organizations with funding to help them solve complex housing problems. The funding is used to explore new ways of making progress on a housing challenge.

Transitional Housing

Transitional housing refers to a supportive – yet temporary – type of accommodation that is meant to bridge the gap from homelessness to permanent housing by offering structure, supervision, support (for addictions and mental health, for instance), life skills, and in some cases, education and training.

Supportive Housing

Supportive housing generally refers to a combination of housing assistance and supports that enable people to live as independently as possible in their community.

Congregate Housing

A type of housing in which each individual or family has a private bedroom or living quarters but shares with other residents a common dining room, recreational room, or other facilities. This model is often accompanied by many supports.

Scattered Housing

Projects of fewer than 15 units located in non-minority concentrated neighbourhoods.

Hub and Spoke

Formally defined, the hub-and-spoke organization design is a model which arranges service delivery assets into a network consisting of an anchor establishment (hub) which offers a full array of services, complemented by secondary establishments (spokes) which offer more limited service arrays.

Zoning By-Laws

A zoning bylaw controls the use of land in your community. It states exactly: how land may be used, where buildings and other structures can be located, the types of buildings that are permitted and how they may be used, the lot sizes and dimensions, parking requirements, building heights and setbacks from the street.

Modular Construction

A term used to describe the use of factory-produced pre-engineered building units that are delivered to site and assembled as large volumetric components or as substantial elements of a building.

Yellow-Belt Neighborhoods

The term yellow belt was coined by urban planner Gil Meslin to describe the parts of a city that have severe restrictions on development where existing low rise housing exists. To be more specific, these areas will only allow for single family houses on larger lots to be built.

Infill

Infill development is the process of developing vacant or under-used parcels within existing urban areas that are already largely developed.

Densification

A term used by planners, designers, developers and theorists to describe the increasing density of people living in urban areas.

Circular Economy

A systemic approach to economic development designed to benefit businesses, society, and the environment. In contrast to the 'take-make-waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resource.

Design for Manufacture and Assembly (DFMA)

DFMA is the combination of two methodologies; Design for Manufacture, which means the design for ease of manufacture of the parts that will form a product, and Design for Assembly, which means the design of the product for ease of assembly.

SRO

Single room occupancy is a form of housing that is typically aimed at residents with low or minimal incomes who rent small, furnished single rooms with a bed, chair, and sometimes a small desk.

MEP

Mechanical, electrical and plumbing (MEP) refers to these aspects of building design and construction. In commercial buildings, these elements are often designed by a specialized engineering firm. MEP design is important for planning, decision making, accurate documentation, performance- and cost-estimation, construction, and operating/maintaining the resulting facilities.

BIA

A Business Improvement Area (BIA) is a "made-in-Ontario" innovation that allows local business people and commercial property owners and tenants to join together and, with the support of the municipality, to organize, finance, and carry out physical improvements and promote economic development in their district.

ΙZ

Inclusionary zoning refers to municipality and county planning ordinances that require a given share of new construction to be affordable by people with low to moderate incomes.

TOD

Transit-oriented development is a type of urban development that maximizes the amount of residential, business and leisure space within walking distance of public transport.

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CMHC Solutions Lab | WoodGreen | PARTISANS | Process | New Housing Models for Youth Transitioning Out of Care

Andrea Adams

Executive Director St. Clare's Multifaith Housing

Andrea is the Executive Director of St. Clare's Multifath Housing, a charitable foundation and landlord responsible for 413 rental units in five buildings across Toronto to help get the homeless and hard-to-house into their own home to give them privacy and dignity.

Karin Brandt CEO. coUrbanize

Karin holds a MA in city planning from MIT and began her career in urban development working at Lincoln Institute of Land Policy. As a planner, she frequently saw development opportunities stymied by NIMBYism at community meetings. Determined to make an impact on how cities grow, Karin launched coUrbanize in 2013 and joined the TechStars Boston accelerator. She has supported over 250 projects across the US and Canada to help residents and project teams build better communities together.

Irwin Elman

Provincial Advocate for Children and Youth, Province of Ontario

Irwin has worked as an educator, counsellor, youth worker, program manager, policy developer and child and youth advocate. He has created innovative approaches for others in Ontario, Jamaica, Hungary and Japan. Prior to becoming the Provincial Advocate for Children and Youth, Irwin was the Manager of the Pape Adolescent Resource Centre in Toronto (PARC), an award-winning organization that supports young people as they leave child welfare care, for more than 20 years. He later served as the Director of Client Service at Central Toronto Youth Services, a children's mental health centre. Irwin obtained his Master of Education and Bachelor of Education from the University of Toronto, and a Bachelor of Arts Degree (Honours) in political science from Carleton University.

Ana Bailão

Councillor & Deputy Mayor, City of Toronto

Deputy Mayor Ana Bailão serves as City Councillor for Ward 9 (Davenport). She has been a member of Toronto City Council since 2010 and was re-elected in 2018. Following re-election, Ana was re-appointed as Deputy Mayor as well as a member of the Mayor's Executive Committee and as Chair of the Planning and Housing Committee. She was also re-appointed as the City's Housing Advocate and serves on the boards of the Toronto Community Housing Corporation and "CreateTO," which manages all of the City's real estate assets. She served on the City's Special Committee on Governance, represents the City at the Federation of Canadian Municipalities and is Chair of the FCM Social Economic Development Committee.

Michael Braithwaite

CEO, Blue Door Shelters

Michael is an established Non Profit Executive with a focus on motivating staff,communities and boards to find ways both strategically and operationally to improve our communities for children, youth and families. He specializes in fundraising, government relations, innovation, strategic partnerships & planning, program development, and housing. Michael is the past CEO of Raise the Roof, which provides national leadership on long-term solutions to homelessness through partnership and collaboration with diverse stakeholders, investment in local communities, and public education. He's also past Executive Director of 360°kids.

Pavel Getov

Architect & Professor

Pavel Getov received his Diploma of Architecture from HIACE, Sofia in his native Bulgaria and holds a Master of Architecture degree from SCI-Arc. Prior teaching positions include a Visiting Professor of Critical Practice at CALA, University of Arizona. From 1991 to 2007 he worked with Richard Meier & Partners, NBBJ and Morphosis leading large scale complex projects from initial concepts to final completion, including an affordable housing project in Madrid's Carabanchel neighbourhood. He founded Studio Antares A + E as an alternative practice seeking integration between architecture, arts and environment.

Peter Barber

Architect, Peter Barber Architects

Peter Barber established his own practice in 1989, and is currently a lecturer and reader in architecture at the University of Westminster. He has lectured about the work of his practice at many institutions, including the Royal Institute of British Architects, the Architectural League in New York, and numerous international and domestic schools of architecture including Helsinki, Pretoria, Ahmedabad, Mumbai, Burma, Munich, Genoa, Istanbul and Colombo as well as Oxford University and The Bartlett-University College London. He has been invited by the Government to lead a discussion on "Designing for Better Public Spaces." He has been described by The Independent as one of the UK leading urbanists.

Mitchell Cohen

President, Daniels Corporation

Mitchell Cohen is president of the Daniels Corporation and has managed the firm's day-to-day operations since 1984. Committed to community, Daniels offers innovative programs that help people achieve home ownership, and supports numerous charities and non-profit organizations. Prior to joining The Daniels Corporation, Cohen developed co-operative housing in the not-for-profit sector in Montreal and Toronto. He brought this experience to Daniels and spearheaded the creation of 3,600 units of affordable housing between 1987 and 1995. He has a Masters in Social Psychology from the London School of Economics, and a Bachelor of Science in Psychology from McGill. In 2010, Cohen was honoured with an Award of Merit from the St. George's Society, and is a recipient of the Queen Elizabeth II Diamond Jubilee Medal.

Dean Goodman

Architect, Levitt Goodman Architects (LGA)

Dean Goodman co-founded LGA in 1989. His 30 years of practice have been driven by a love and an insatiable curiosity for design, construction and technology. He specializes in working collaboratively with clients to translate their ideas and goals into innovative designs. Dean's honest and straightforward approach allows him to form strong client relationships and bring clarity to complicated issues. From a child's play space to social housing project, his goal is always the same: to make architecture that fundamentally enriches the lives of the people who use it.

Alexander Hagner

Architect & Professor

Alexander Hagner co-founded the architecture studio gaupenraub+/- in 1999. He's worked as an external lecturer for various Universities and Institutes, such as the Vienna University of Technology, holding workshops at Vienna's BOKU, NDU St. Pölten, TU-Graz and KTH-Stockholm. Alexander's studio has received numerous awards for design excellenced, including a nomination for the Mies van der Rohe Award, and the ETHOUSE Award. For the past ten years gaupenraub has engaged in social projects, such Memobil furniture for people living with dementia or "VinziRast-mittendrin", where students and formerly homeless people live together, which has been granted the Urban Living Award 2013.

Bonnie Harkness

Director of Program Development, 360Kids

Bonnie is an experienced Director of Operations with a demonstrated history of working in the individual and family services industry. She is skilled in nonprofit organizations, youth development, program evaluation, volunteer management, and fundraising. Bonnie has a Masters Certificate in Public Sector Management from University of Ontario Institute of Technology. She is the past Executive Director of United Way Ajax, Pickering, & Uxbridge, as well as Big Brothers and Sisters of Ajax-Pickering. She also held the position of Program Director at Pathways for 10 years.

Carol Howes

Director of Service at Covenant House Toronto

Carol has been in the field of social work for the last 40 years. After getting her start at the Toronto Children's Aid Society, she continued her work on the frontlines working with vulnerable children and youth. Since joining Covenant House Toronto in 1995, Carol has held a variety of positions at the agency, all centred on managing programming for youth including the crisis shelter program, the drop-in centre, transitional housing, the health care clinic, education services, job training, life skills, spiritual care and anti-human trafficking initiatives. Throughout her career, Carol has shared her expertise with various committees and networks including the Ministry of Children and Youth Services' Policy Director Advisory Committee, A Way Home Canada's National Learning Community, and the Toronto Shelter Network, among others.

Brock James

Architect, Levitt Goodman Architects (LGA)

Brock James is a partner at Levitt Goodman Architects. With over 25 years of practice, he has specialized in making child care centres, schools, universities and libraries that foster learning and are inspired by the realities of each place and its people. As head of operations for the firm, Brock ensures that each new project builds on the knowledge of previous work, so that every LGA client benefits from the complete value of the firm's experience. Brock is a guest critic, lecturer and sits on the provincial steering committee for Wood Works Ontario. He recently led the team that authored the Child Care Design and Technical Guidelines for the City of Toronto - a resource guide for the construction and renovation of licensed child care centers.

Monika Jaroszensk

CEO, Ratio.City

Monika Jaroszonek is the Co-Founder and CEO of RATIO.CITY, an early-stage tech startup that helps real estate industry professionals access information, evaluate their options and make better decisions. She has over 15 years experience working in architectural firms in Toronto and is leveraging that experience to create a comprehensive urban analytics platform for planning and building great cities. Monika holds a Masters of Architecture from the University of Waterloo.

Jacob Larsen

Housing Development Officer, City of Toronto

Jacob is a professional planner and land economist with experience in development, community-led planning, and active transportation in the GTA and the Canadian North. As the Housing Development Officer at the City of Toronto, Jacob delivers affordable housing through activation of public lands, development incentives, pre-development, and fostering collaboration between public, private and non-profit entities. He previously worked for the City of Hamilton where he managed the development approval process and public consultation for infill and intensification in one of the GTA's fastest growing municipalities.

Atticus LeBlanc

Founder, Pad Split

Atticus is the founder of PadSplit, Inc and co-founder of Stryant Investments, and Stryant Construction & Management. He has been an affordable housing advocate and investor since 2008, when he began acquiring distressed single-family homes in Southwest Atlanta. Stryant Investments has owned and managed 9 apartment complexes, over 100 single family homes, and several adaptive re-use commercial projects. Atticus serves on the board of trustees for Campfire GA and the advisory board for The Creatives Project. He is an active member of the Buckhead Rotary Club of Atlanta and volunteers regularly with ULI's Urban Plan Education Initiative and TAPs Committee. He graduated from Yale University in 2002 with a BA in Architecture and Urban Studies and was a 2017 graduate from ULI's Center for Leadership.

Björn Lindgren

Associate Director, jagvillhabostad.nu

Bjorn Lindgren is the Associate Director of jagvillhabostad.nu, a Swedish non-profit, youth-led association that works for a better housing situation for young people.

Louis

Youth from Care

Louis is a refugee from Uganda who came to Canada to seek a better life. He has been in Canada for half a year now, living off of welfare and is attending a highschool to fulfill his credits for university. He has already attended highschool and this is his second time through the latter half of the program. Louis took on some part-time jobs during his time at school through available agencies provided by the shelter. Through working hard to accumulate his credits and go to university, his goal is to eventually afford a place for himself in Toronto. Louis sees the issue of the housing industry at hand and believes that there are ways to lower the cost of homes for people like him to live in.

Michael Maltzan

Architect, Michael Maltzan Architecture

Michael Maltzan, FAIA, founded Michael Maltzan Architecture, Inc. in 1995. Through a deep belief in architecture's role in our cities and landscapes, he has succeeded in creating new cultural and social connections across a range of scales and programs. Michael received a Master of Architecture degree with a Letter of Distinction from Harvard University's Graduate School of Design and he holds both a Bachelor of Fine Arts and a Bachelor of Architecture from the Rhode Island School of Design where he received the Henry Adams AIA Gold Medal. His designs have been published and exhibited internationally and he regularly teaches and lectures at architectural schools around the world. He is a Fellow of the American Institute of Architects and a recipient of the American Academy of Arts and Letters Architecture Award.

Cheryl Mangar

Supervisor, Children's Aid Society of Toronto

Cheryl Mangar has 30 years of experience in the areas of Child Welfare and Child and Youth Care. Cheryl has been at CAS of Toronto for 16 years and is currently the Supervisor for the Pape Adolescent Resource Centre, a preparation for Independence Centre for youth transitioning from Child welfare to adulthood. Cheryl is a strong advocate and champion of Diversity, Equity and Inclusion; youth engagement and strongly committed to building partnerships with the community to ensure youth are empowered to reach their full potential.

Andreas Martin-Lof

Architect, Andreas Martin-Lof Arkitekter

Award-winning Swedish architect Andreas Martin-Lof founded his practice in 2008. His practice specializes in temporary affordable housing constructed of prefabricated units.

Nicky

Youth from Care

Nicky lived in foster care for most of her upbringing, bouncing between different homes before the age of 18. She sought the help of Free2Be, which helps youth in transition from foster care to adulthood. In 2019, Nicky moved out on her own to Oregon for six months, before returning to Canada. Due to her upbringing and financial situation, Nicky was unable to sustain living on her own and now lives in a family friend's home with nine other people. Nicky spends most of her time at home creating art, with a focus on crochet and drawing. She hopes to turn her passion for art into a full time job, and has begun publishing and selling her work online. Nicky is having difficulty moving out due to the current housing market in Toronto. She also voiced her frustrations with the city of Toronto's laws on homelessness.

Nicolas

Youth from Care

Nicolas studied fashion design at Seneca for four years. During his studies, he took classes for youth assistance. He has seen a huge disconnect towards what he experienced as a youth and what was being taught in the classes. Like his mother and his four other brothers, he was taken into foster care when he was born and had to move through many different homes before he could live independently. He has been recording his own podcast and sharing it on multiple platforms to bring awareness to his experiences as a foster kid and how this could be fixed in context to other youth experiencing something similar. He currently works at a print shop and hope to find a better job in the near future.

Clare Nobbs

Director, YMCA Sprott House - Walmer Road Centre

Clare is a skilled, compassionate leader in the field of mental health and housing. She develops and nurtures relationships with municipal, provincial and federal policy-makers, is responsible for building strategic partnerships to end homelessness for 2SLGBTQI young people, and mitigates the impact of housing instability on mental and physical health. She has worked as a community development professional with over17 years of experience building programs in social and community services. Clare is committed to anti-oppression/anti-racist practice. She has in-depth experience with the needs of 2SLGBTQI spectrum youth, focusing on housing, mental health, advocacy, employment and social and material supports.

Finn Nørkjær

Architect, Bjarke Ingles Group

Finn Nørkjær has collaborated with Bjarke Ingels since he won the competition for the Aquatic Centre in Aalborg in 2001. Finn is instrumental in materializing BIG's visionary architecture by bringing his extensive experience to the table. Finn has been deeply involved in most of BIG's built projects, including VM Houses, The Mountain, The Danish Pavilion for the 2010 Shanghai Expo, Gammel Hellerup High School, TIRPITZ Museum and LEGO House. Most recently, Finn has worked on the Glasir – Torshavn College on the Faroe Islands, word's best restaurant noma in Copenhagen and affordable housing Dortheavej Residence.

Todd Palmer

Past Associate Director, National Public Housing Museum

Todd Palmer has over 20 years of experience in conceptualizing and orchestrating program-rich interventions that define public space, provide accessible cultural platforms, and serve in communal processes of making meaning towards cohesive social compacts. Todd was the associate director of the National Public Housing Museum in Chicago, and has taught at New York University for more than 10 years. Most recently Todd led the Chicago Architecture Biennial for 3.5 years from October 2016 until March 31, 2020, working to produce the visions of each edition's respective artistic directors, curators, contributors and participants for a free and open program drawing 1 million in public attendance across 2017 and 2019.

Eve Picker

Founder, SmallChange.com

With a background as an architect, city planner, urban designer, real estate developer, community development strategist, publisher, and instigator, Eve has a rich understanding of how cities and urban neighborhoods work—and how they can be revitalized. Amongst her many urban (ad)ventures, Eve has developed a dozen buildings in blighted neighborhoods, and taught urban design and participated in Sustainable Design Assessment Teams for the American Institute of Architects in cities from Los Angeles to Springfield, helping to set a strategic course for downtowns and housing developments. Now Eve has leads Small Change, a real estate equity crowdfunding portal to help fund transformational real estate projects. Small Change connects every day investors with developers to help them build projects that make cities better.

Tony-Saba Shiber

Project Manager, nArchitects

Tony was an Assistant Project Manager & Designer at nARCHITECTS, where he oversaw the construction of Carmel Place (formerly My Micro NY), New York City's first modular, micro-housing building also achieving a LEED Silver rating. He was also part of the design team for M2, a mixed-use project in Calgary, Sai Yuen Lane, a 250-unit micro housing tower in Hong Kong, and the Wyckoff House Museum located in Brooklyn, New York. In addition to his professional work, he is a returning guest reviewer and lecturer at Pratt Institute and Cornell University. Tony holds a Bachelor of Architecture degree from the University of Kentucky and a Master of Architecture degree from Cornell University.

Stephanie

Youth from Care

Bio not provided

Liza Stiff

Director, Research & Program, TAS Developers

Liza leads expert & visionary research into solutions that address TAS priorities: approaches to long-term affordability, food systems and environmental sustainability ensuring implementation through design from the inception of a project and brought into reality through construction.

Jonathan Tate

Architect, Office Jonathan Tate

OJT (Office of Jonathan Tate) is an architecture and urban design practice located in New Orleans. Our work includes large scale, urban research and strategic planning initiatives, client-based architectural commissions for a range of building types (commercial, residential, cultural), as well as our own self-developed projects (often as part of a larger applied research investigation).

Shequita Thompson-Reid

Senior Site Manager, Eva Phoenix

Shequita has experience in program development with a demonstrated history of working in the public & non profit industry. She has strong community and social services background with skills in nonprofit organizations, youth development, crisis intervention, government, and program evaluation.

Jonathan Woetzel

Director, McKinsey Global Institute

Dr. Jonathan Woetzel is a director of the McKinsey Global Institute, leads McKinsey's Cities Special Initiative, and is responsible for convening McKinsey's work with city, regional, and national authorities in more than 40 geographies around the world. Jonathan has led numerous research efforts on global economic trends, including growth and productivity, urbanization, affordable housing, energy and sustainability, and e-commerce. Jonathan's public sector work is extensive—he has advised national governments in Asia on improving the environment for foreign investors, national energy policy, and economic development strategies. He also leads work with local governments, having conducted more than 60 projects throughout China to support local economic development and transformation.

Yasmin

Youth from Care

Bio not provided

Charrette Attendees

Housing Here

Atticus LeBlanc, CEO, PadSplit
Pavel Getov, Professor, Southern California Institute of Architecture
Michael Braithwaite, CEO, Blue Door Shelters
Jushua Benard, VP Real Estate Development, Habitat for Humanity
Cheryll Case, Founder, CP Planning
Claire Nobbs, Director of Sprott House, YMCA
Stephanie, Youth from Care
Cookiee, Youth from Care
Ivan Vasyliv, Senior Designer, PARTISANS
Michelle German, Vice President Policy & Strategy, WoodGreen

Housing Now

Janani Mahendran, Planner, City of Toronto

Graham Gerell, Policy Advisor, Ministry of Housing
Emma Ringqvist, Youth Housing Advocate, Housing Now
Tom Greenough, Engineer, Entuitive
Derek Ballantyne, Managing Partner, New Commons Development
Chad Story, Director of Practice Innovation, A Way Home Canada
Cheryl Mangar, Supervisor, Children's Aid Society
Valerie McMurtry, President, Children's Aid Foundation of Canada
Tom, Youth from Care
Geoffry McGrath, Senior Dev. Manager, New Commons Development
Pacificah, Youth from Care
Vinkie Lau, Housing Secretariat, City of Toronto
Habibi Feliciano Perez, LGBTQ Refugee Programs & Housing at the 519
Gina Cody, Independent Trustee, CAPREIT
Ben Salance, Project Manager, PARTISANS
Sara Udow, Principal, Process

Housing+

Jacob Larsen, Affordable Housing Office, City of Toronto Joesph Luk, Senior Urban Designer, City of Toronto Anne Bergvith Sorensen, Bikuben Kollegiet Foundation Todd Palmer, National Public Housing Museum Jennifer Gourley, WoodGreen Andrew Arifuzzaman, Chief Administration Officer, UTSC Uzo Anucha, Advisory Council, YouthREX Wendy Chan, Advisory Council, Children's Aid Foundation Erik Wexler, Program Manager of Free 2 Be, WoodGreen Ron Sampton, School of Disability Studies at Ryerson University Nichols, Youth from Care Anna-Kay Russell, Manager, Public Affairs, WoodGreen Haley Rae Dinnall-Atkinson, Accessibility Specialist, Quadrangle Mwarigha MS, VP Housing & Homelessness Services, WoodGreen Shahin Chowdhury, Senior Account Manager, Real Estate Finance, Vancity Community Investment Bank Nicholas Ridiculous, Youth from Care Michael Bootsma, Project Manager, PARTISANS

Pooya Baktash, Co-Founder, PARTISANS

Circular Economy How We Live and How We Build

How We Live

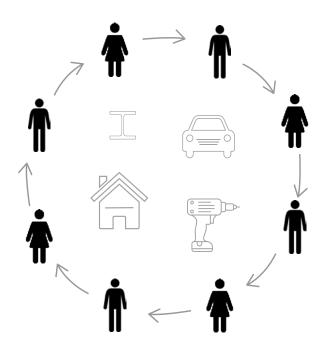
Circular Economy

The capitalist sharing economy is a socio-economic system built around the sharing of resources. It often involves a way of purchasing goods and services that differs from the traditional business model of companies hiring employees to produce products to sell to consumers. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organizations.

The sharing economy has a history of disrupting traditional business sectors. The lack of overhead and inventory help share-based businesses run lean. The increased efficiencies allow these brands to pass-through value to their customers and supply chain partners.

Traditional industries are being affected by the sharing economy—and many traditional brands will struggle if they do not adapt to the changing landscape.

- The sharing economy involves short-term peer-to-peer transactions to share use of idle assets and services or to facilitate collaboration.
- The sharing economy is rapidly growing and evolving but faces significant challenges in the form of regulatory uncertainty and concerns about abuses.



\$1.31 billion is what Canadians spent on peer-to-peer ride and

private accommodation services in 2016

(Statistics Canada. 2017. The Sharing Economy in Canada.)

aged 18 and older participated in the sharing economy in

of Canadians

(StatCan, 2017)

In 2016, approximately:

69,000

adults offered private accommodation services

(Statistics Canada. 2017. The Sharing Economy in Canada.)

How We Live

User-Centered Design: Co-Living

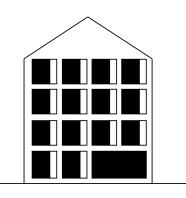
Co-living has re-emerged as a viable and even desirable form of urban housing. Where previously community activism or housing policy was the driving factor in the creation of co-living projects, now entrepreneurs, startups, and developers have been testing the waters with shared living spaces, developing or converting buildings into large scale multi-tenant houses where kitchens, living areas, bathrooms, and other domestic facilities are available for common use.³

While the majority of new co-living developments have been directed towards accommodating young professionals, particularly in financial centres and tech hubs, this form of housing has the potential to address a wide range of demographic and community needs.

The shared resources and more cost-effective distribution of services in a co-living development make it an attractive option for affordable housing and for youth in particular who would have the opportunity to develop new networks and find their footing in a city. However, care must be taken to provide appropriate amenities, facilities, and programming for the demographics that the housing is developed for. Aesthetics also play a critical role encouraging or conversely hampering feelings of familiarity and domesticity. For example, the slick finishes and order-by-the-book op art appropriate to a hotel could make a co-living space feel very sterile or alien.

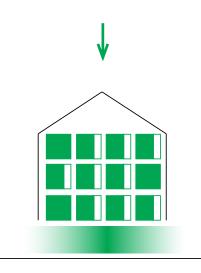
Exposure to new people and new ideas is at the crux of the benefits of co-living spaces and why many co-living tenants choose to live in these developments. Allowing room for broader demographics (e.g. fully accessible facilities, larger kitchens, performance/entrepreneurial spaces) has the potential to enhance diversity of experience and capabilities within the co-living community from which tenants could learn, grow, and develop their networks.

³ Beyond the blueprint? Shared living and the importance of architecture and design; https://medium.com/space10/beyond-the-blueprint-shared-living-and-the-importance-of-architecture-and-design-580a5e5434b9



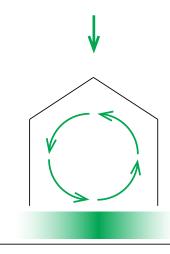
CONVENTIONAL APARTMENT LIVING

- + private residence rooms
- + private areas
- + private commercial space



CO-LIVING

- + **shared** residence rooms
- + shared areas
- + shared commercial space



"Lots of the people who live in these spaces aren't brilliant at turning up to formal meetings and discussions, but they're great if you catch them crossing the courtyard. The unplanned encounter made possible by the architecture."

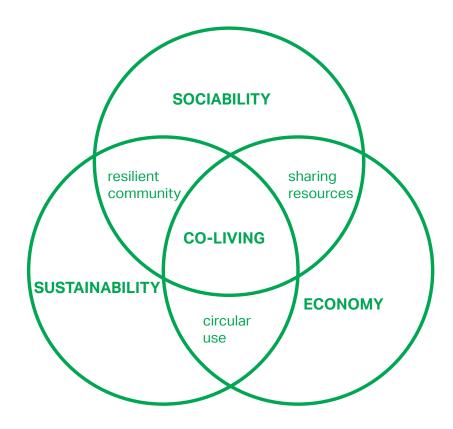
-Peter Barber

Founder, Peter Barber Architects

"Architecture can't force people to connect; it can only plan the crossing points, remove barriers, and make the meeting places useful and attractive."

—Denise Scott Brown

Architect



Capitol Hill Urban Cohousing, Seattle, USA

Construction Start N/A **Construction End** 2016

Construction Cost \$5.6M, including land

GFA 17,600 sqft

Units 9 units + commercial space

Capitol Hill Urban Cohousing, also known as CHUC, is a 5-story, mixed-use building in Seattle's thriving Capitol Hill neighborhood. Although its physical appearance may be of a typical, urban infill, mixedused project, the innovation lies in the development process that brought it into fruition. The ultimate, collective goal for the building - as determined by the future residents - was the construction of a community that will nuture both the individual and the family. We have very intentionally redefined the commonly held value of the home as investment commodity, instead prioritizing the longevity of the community. The development model is called Cohousing, which has its origins in Denmark, and is a concept by which a community of future residents embarks on a real estate development venture, with priority given to building social cohesion among residents during the design and construction process.

At CHUC, the upper four stories comprise nine homes, each with a full kitchen and living space, and 2-3 bedrooms, in addition to shared indoor and outdoor amenity space. The street-level commercial space is home to the architecture practice of Schemata Workshop, owned by residents of CHUC.







Gap House Seongnam, South Korea

Construction Start N/A **Construction End** 2015 **Construction Cost** N/A

GFA 6,415 sqft

Units 6 units + commercial space

The project is located in Bokjeong-dong, South Korea. Being an area that has a couple of universities nearby, a demand for student studio-type accommodations have significantly risen in the past years. Being contiguous with Seoul, the office working, white-collared demographic has also joined the frenzy and has been a factor in the demand for residential units as well. Because of this, the area has become very crowded with multi-dwelling units, studios and student accommodations.

The typical character of high density residential areas in the capital such as the monotonous and generic looking units – which were designed for maximum profit and efficiency of space has left residents with living spaces that were poorly designed to support the ideal lifestyle and routine.

The concept of the Gap house is to support new life style of the young, single demographic household by sharing common spaces such as the living room, kitchen, and dining area. Archihood WXY focused on a design that creates a balance between the common and private spaces deeply considering the 'share house' amenity. The balance is coordinated by the outdoor space which is defined to 'The Gap' – a design which helps bring in nature to the residents and encourage interaction and mingling amongst housemates.







Circular Economy

Circular economy replaces one assumption—disposability—with another: restoration. At the core, it aims to move away from the "take, make, and dispose" system by designing and optimizing products for multiple cycles of disassembly and reuse.

The circular economy aims to eradicate waste—not just from manufacturing processes, as lean management aspires to do, but systematically, throughout the various life cycles and uses of products and their components. Often, what might otherwise be called waste becomes valuable feedstock for successive usage steps. Indeed, tight component and product cycles of use and reuse, aided by product design, help define the concept of a circular economy and distinguish it from recycling, which loses large amounts of embedded energy and labor.

Moreover, a circular system introduces a strict differentiation between a product's consumable and durable components.

Manufacturers in a traditional economy often don't distinguish between the two. In a circular economy, the goal for consumables is to use nontoxic and pure components, so they can eventually be returned to the biosphere, where they could have a replenishing effect. The goal for durable components (metals and most plastics, for instance) is to reuse or upgrade them for other productive applications through as many cycles as possible

This approach contrasts sharply with the mind-set embedded in most of today's industrial operations, where even the terminology—value chain, supply chain, end user—expresses a linear view.

"We had incredible programs in the 60's, 70's and 80's where a lot of our social houses that we have today were built. And so we need to maintain that stock because even though it was built in the past, it is essential we need to keep it in good condition. So a lot of the money in the housing strategy is going to that. Because for years and years, they were disregarded for maintaining that stock."

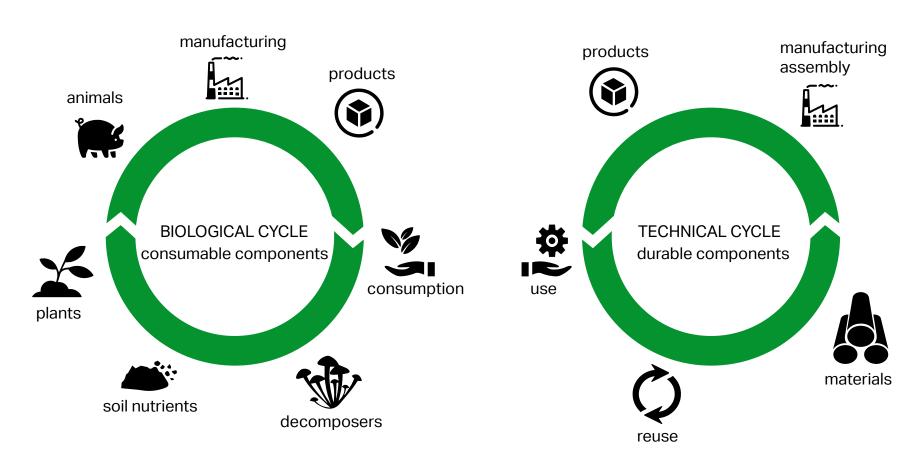
-Ana Bailão, Toronto City Councillor & Deputy Mayor

LINEAR ECONOMY





CIRCULAR ECONOMY



How We Live

Circular IKEA

Leasing Model

With many existing buildings in the North America being torn down before they reach their 50th birthday, alongside the huge financial implications of renovating community housing that was built in the 70s, the dismantle-and-rebuild approach could make economic and environmental sense if projects pursue appropriate models of finance and ownership.

Another approach to considering architecture for affordable housing that decreases the use of cheap materials likely to end up in landfill, has recently come out of lkea.

The Swedish furniture giant lkea announced last year that it plans to make all its products according to circular principles by 2030, meaning that they can be reused, refurbished or [recycled](https://www.dezeen.com/tag/recycled/). It will use only renewable or recycled materials across its entire range.

Beyond material innovation in wood and fabric, lkea is aiming the close the circle by offering the buy back and recycling the furniture as it will offer to buy back thousands of pieces of used lkea furniture in 27 countries, for resale, recycling or donation to community projects.

Last year, Ikea began testing a furniture rental program in some markets, it also began taking old furniture back from customers, so it could refurbish old sofas and resell them instead of having them sent to landfills. It's just one aspect of the company's plans to become fully circular by 2030—meaning that everything it makes is designed for reuse, repair, or recycling.

Ikea also has a new set of circular design principles for its designers to use on new products, since decisions made at the beginning of the design process ultimately determine where a product will end up.

The company wants to serve as a model for others. The partners are also hoping to influence the next generation of designers.



FROM LINEAR ECONOMY



TO CIRCULAR IKEA









Circular Building

The fact that construction is one of the largest sectors of today's global economy. The transition to a circular economy is particularly relevant for the built environment. Additionally, the built environment uses almost half of the world's materials extracted every year and current projections and buildings and construction account for more than 35% of global final energy use and nearly 40% of energy-related CO2 emissions.

Our built environment, which is composed of buildings and physical infrastructure, continues to utilize the linear 'take-make-waste' model in which resources are taken from the ground, used and then disposed of as waste. This approach makes the built environment one of the world's largest consumers of global raw materials and largest sources of waste and negative environmental externalities such as increased air, water, and soil pollution.

A truly circular built environment embeds the principles of a circular economy across all its functions, establishing a system that is regenerative, accessible and abundant by design.

This means buildings are designed from the outset in a modular and flexible way, sourcing healthy materials that improve occupant wellbeing and minimize use of new materials. They are built using efficient construction techniques, and are well utilized thanks to shared and flexible spaces. Components of buildings are maintained and renewed when needed, while building energy use is conserved due to smart technology and product-as a-service business models. The buildings themselves are designed to be able to adapt to different uses over time, making them resilient to changing market conditions and avoiding premature redevelopment. When they finally reach the end of their life, the materials and construction techniques deployed allow the buildings to be taken apart in a way that protects the true value of the materials so that they can be used again.

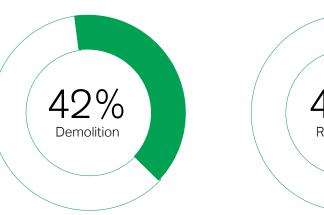
4 million tonnes

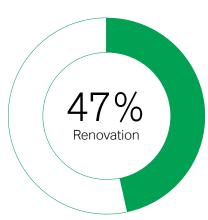
of waste is produced in Canada through Construction, Renovation, and Demolition (CRD)

(Canadian Council of Ministers, 2016)

Waste produced by stage of CRD:

(Canadian Council of Ministers, 2016)







Canada's greenhouse gas (GHG) emissions:

(Senate of Canada, 2015)

17%

building sector

rest of GHG emissions

Circular Building

Achieving a circular economy not only requires adoption of circular design principles and the establishment of appropriate recovery systems, but also invariably challenges us to rethink how we source, design, manufacture, transport, use, repair, and recycle everything.

The four pillars of circular building are:

1. Source Reduction

Reducing the volume of new materials should be a priority. Examples include preserving existing buildings, optimizing new build sizes, and prolonging the life of buildings.

2. Salvage and Reuse

While salvage and reuse are already a part of the construction and demolition industry, new ways to repurpose and upcycle materials should be considered.

3. Waste Separation

Waste that cannot be used must be efficiently separated and transported to the correct recycling facilities for processing.

4. Recycling

Recycling materials to be reused in the construction and demolition industry or in other areas should be improved, with new processes designed specifically for the construction and demolition industry.

Design for Material Optimization



Maximize Use Through Programming

Optimize Material Efficiency

Design to Reduce Construction Waste

Design for Deconstruction and Future Circularity

Material Selection Strategies



Reuse Existing Materials and Buildings Onsite

Reclaimed Components and Materials

Circular Materials -Recycled & Recyclable

Waste Management Strategies



Lean Construction

Construction & Demolition Waste Planning

Waste Separation Onsite



renovation.

1. Material Passport

The Future of the Circular Future

Designing buildings to make use of recyclable materials with an eye on DFD (Design for Disassembly).

While improving the efficacy of the above elements is a key step in pushing

construction and demolition industry, new materials, tools, and systems that

are designed to prevent waste should be a priority. Today, there are many

Creating a data regarding construction material for future use and

innovative approaches that aim to help the construction and demolition

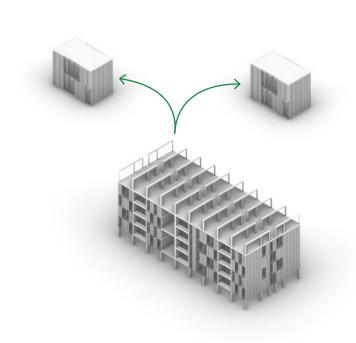
the construction and demolition industry towards a circular economy, the future promises to provide even more opportunity. The circular economy

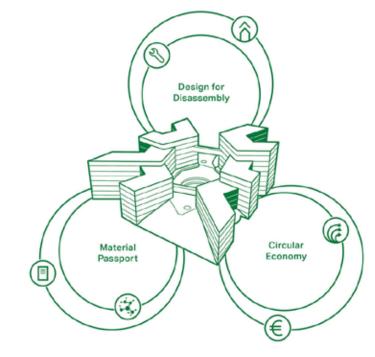
is, essentially, a designed system, and in order to build a truly circular

3. Circular Economy

A new strategy to reuse and adapt to the future.

industry become more circular. These include:





Building a Circular Future © 3XN / GXN

Kit-of-Parts

Just as, at present, architects, developers, and city officials are met with the enormous task of refurbishing or demolishing the post-war housing stock to make way for housing that is more compatible with contemporary technologies and expectations, it is reasonable to speculate that if we do not change the way in which we build, we will be confronted with a similar dilemma 30 to 40 years from now. How can architecture reverse this problem? In other words, how can buildings become more responsive, less permanent, more adaptable, while also remaining sustainable and producing less waste?

A site, more than a physical space with formal and aesthetic implications, is also a complex matrix of information that is guided and influenced by behaviours and neccessities of the community; when the site demands, the building supplies.

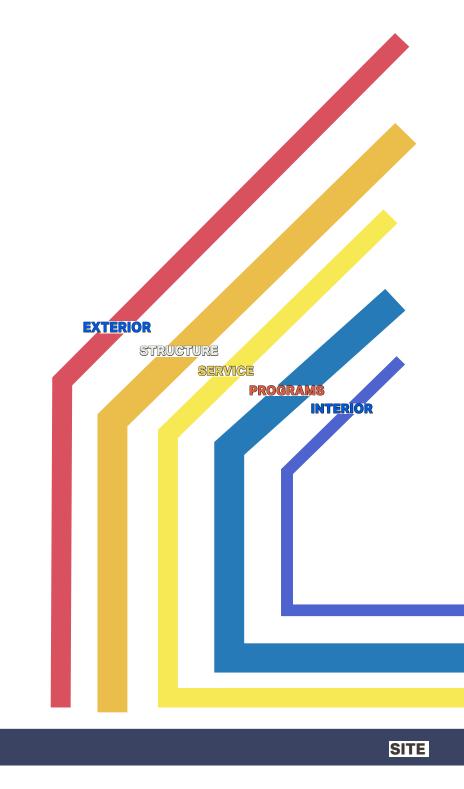
Programming, in order to serve its community, must be responsive, and be supported by the necessary infrastructure. Community needs might change from season to season or from year to year. Ensuring a circular interior system facilitates changing programs without added waste.

The exterior of a building typically has a long life-cycle. However, as requirements and uses of the building change, the skin will need to adapt in order to provide better quality spaces and better environmental performance. A circular approach will allow the exterior to adapt without producing large expenses or waste.

Interior elements are highly active, often changing several times over the life-cycle of a building. A circular approach to interior partitions and details can ensure the reduction of waste and less expenses for the management of the building.

The structure of a building is one of the components with the longest life-cycle. While a building might last 50 to 100 years, neighbourhood demands might require it to shrink or to grow. A circular approach can ensure that assembly and disassembly processes operate without waste.

The service components of a building are often most exposes to changes, replacement of parts, and so on. But overall, their life-cycle is rather long. A circular approach can ensure that products are built with reuse in mind.



Design for Manufacturing and Assembly

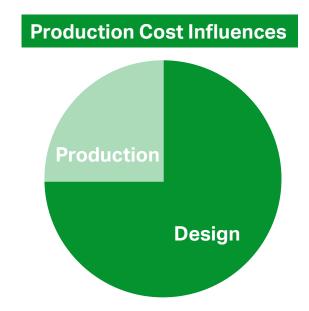
Design for Manufacturing and Assembly (DFMA) is an engineering methodology that attempts to streamline the production or assembly process by simplifying and optimizing its design, resulting in time and cost savings. Although typically used in engineering, the methodology is expanding to include architecture and construction as a more componentized and prefab approach is starting to take place, where time and cost to produce and assemble buildings can be traced back to design decisions and approaches to materials and systems. By utilizing DFMA in architecture and construction models. there is significant potential to increase the speed and efficiency with which buildings are built, especially when combined with other rapid construction processes. Furthermore, speed and efficiency have a direct impact on providing a rapid built solution to the immediate issues of youth homelessness.

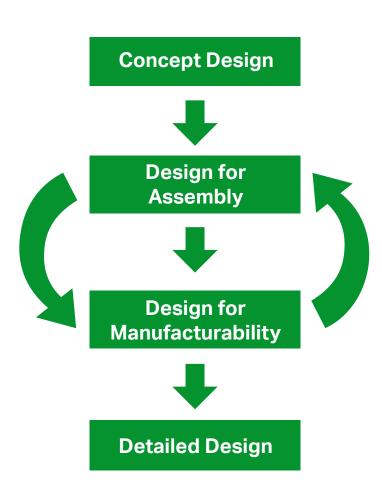
DFMA Principles:

- **Reduce the number of parts or components** —reduce individual part costs, handling, tracking, assembly, testing and reliability throughout the supply chain, from assembly to arrival on site.
- **Standardize parts and materials**—generally more cost effective, reliable, and more readily available for production and maintenance.
- **Create modular designs**—Reduce the number of unique components; Use existing modules to reduce design or test costs; Use scale to produce common components or modules.
- Design for efficient and minimal joining—Reduce and simplify fastenings between parts to improve speed of assembly and disassembly.
- Streamline number of individual manufacturing operations
 / process—reduce the number of individual steps involved in producing and assembling
- Design to minimize handling and maximize ease of assembly parts that are foolproof and cannot be assembled in the wrong way
- Design for maintainability—parts to be easily taken apart for maintenance or repair with replacement parts readily available.
- **Limit tolerance constraints**—determine a suitable level of tolerance that meets performance criteria without adding unnecessary time to production or assembly

70%

of the cost to produce an item is based on the design decisions for that product





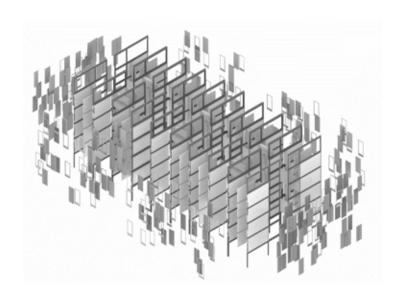
Design for Disassembly

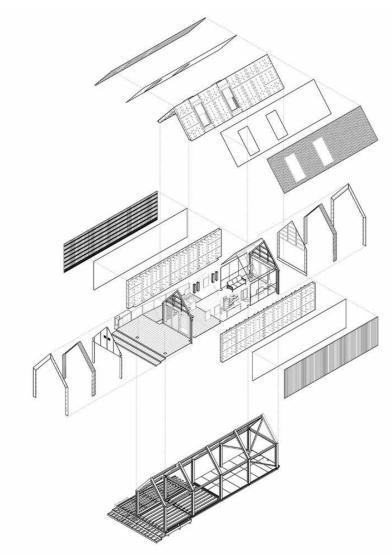
Reuse, refurbish, remanufacture is a mantra often recited by disciples of the circular economy who seek to transform economic conditions so building materials retain their value for much longer than simply being disposed of as waste.

Designing for long-term value isn't something typically associated with temporary structures, but recent projects have shown the ephemeral approach can work if buildings incorporate easy-to-disassemble components and materials suitable for reuse or remanufacture. This has led to the new way of thinking in designing buildings and the concept behind the DFD.

The concept of Design for Disassembly (DFD) gained increasing traction in recent years, as it addresses the growing concern around the high consumption of resources and low recycling rate within the construction industry.

By definition DFD is the design of buildings to facilitate future changes and dismantlement (in part or whole) for recovery of systems, components and materials, thus ensuring the building can be recycled as efficiently as possible at the end of its lifespan. The strategy builds on an increasing acknowledgment of the fact that the majority of the built environment has a limited lifespan and that every building represents a depository of resources, which, rather than ending up in a landfill, should find their way back into the "reduce, reuse, recycle" loop. As such, DFD involves understanding the structure's complete life-cycle and making provisions for the reuse of its parts, in order to reduce both the consumption of resources and pollution.





Construction diagram of The Circular Building by Arup. Image © Arup Associates

Design Principles

The DFD process requires a significant amount of planning early on in the design phase, and there are strategies and principles to consider, to ensure the architectural object holds value once it has reached its end of life. The following are a few general guidelines to follow when designing for disassembly.

Planning the Deconstruction

DFD requires generating a detailed deconstruction plan, including instructions for the disassembly of elements, as well as a review of the building components and materials and how they should be reused, recycled, or reclaimed.

Assessing Materials

Design for Disassembly requires extensive research into construction materials for selecting the ones that are non-toxic, of high quality (to withstand assembly and disassembly) and have good recycling potential.

Choosing Connection Details

One fundamental principle of DFD is creating accessible connections and choosing the appropriate joinery in order to ease dismantlement and avoid the use of heavy equipment, or too many tools. The focus should be on mechanical joinery, using bolted, screwed or nailed connections, as opposed to non-removable, chemical ones such as binders, sealers, glues or welding, which would make the material difficult to separate and recycle.

Designing for Adaptability

Although DFD focuses on the life end of a building, the method seems to be an excellent strategy for extending a construction's use. Thus, separating different building systems and making their replacement less disruptive to the overall building creates a greater opportunity for future renovations. This could be the case of MEP systems, whose lifespan is much shorter than that of other systems within the building and where DFD could make the selective removal of specific elements much easier, resulting in less waste. Favouring modularity and standardization in the design process of assemblies and components also facilitates reuse.

For the time being, designing for disassembly is not an easy endeavour, bringing an added layer of responsibility and requiring a significant effort from all parties involved in the construction process, architects included. Less encouraging is the uncertainty regarding whether the few examples of projects designed with this process in mind will be deconstructed and reused as to the architects' intent. Since DFD is still in its infancy, endresults are yet to be seen, and the conclusions lie decades in the future. Nonetheless, as the construction industry engulfs an excessive amount of resources and first –use materials each year, no effort should be spared, and all strategies should be considered when it comes to reducing waste.

How We Live and How We Build

Holistic Housing

We want to distance ourselves from the dominating notion of architecture as a finished product - to see it rather as a process and an organic, variable system that ages and changes and is in active dialog with its environment and users.

Sustainable architecture is not a style; it is the product of an attitude - with respect to one's own work, with respect to the people for whom we build, and with respect to the world in which we realize our buildings.

Architecture As A Process

Living valued and living quality are terms with a rather unclear boundary between them. According to Sigrid Rughöft, living conditions are interrelated with the desired living standards of the residents. Living conditions are seen as features of a house, building and the neighbourhood. Desired living standards result from the cumulation of living needs and the concrete requirements for the space.

The quality of living is defined as the level of conformity between the desired standards and actual conditions of living.

Living value includes the possibility of comparability in the context of an equivalent in respect of benefits of material and non-material type.

- **1. Utility vaults and utility benefits.** Includes the practical sustainability for purpose, healthy living and appropriate durability
- **2.** Emotions value (self perception of the living situation). This covers aspects such as fleeing well and loving my home.
- **3.** Prestige (third-party perception of the living situation). A home is intended as confirmation of personal success.
- **4. Protection and social quality of space.** This means protection from detrimental external physical influences, disturbance of privacy and communication space.

The Building and its Life Cycle

Previous production methods in architecture took almost no account of the temporal dimension of the building. There are reasons for this. History shows that buildings considered as high-class architecture tend to last longest.

Architecture was built for eternity and remains a symbol of human defiance of the passage of time, a sign of permanence and strength.

However the life expectancy of buildings was drastically reduced during the second half of the 20th century, due to some of the lower-quality materials and building methods used, or the design of the buildings being inadequate for the future and the rapidly changing requirements. In any cases buildings are increasingly demolished, completely refurbished, altered or converted to other users.

Adaptability and flexibility of use are in odds with the transitional design process. Design process fundamentally aims for certainty and clarity, especially during construction process. The building is proceed as finished and static object. Cost planning considers only the investment cost only and not life cycle.

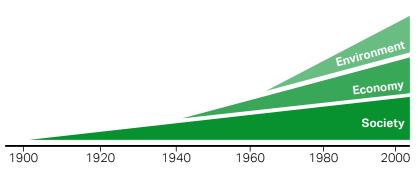
- **1.** In contrast to a static consideration of a building, a life cycle analysis is the sum of the effect over the whole life of building from execution, operation and demolition.
- **2.** Life cycle costing covers cost of manufacture (construction), maintenance and operation.
- **3.** Life cycle assessment, studies the environmental effects of buildings.

The cradle to cradle concept suggest that products are produced, used and recycled in a closed energy and material cycles and natural cycle. A building with great potential for flexibility is valuable Asset in life cycle cost, architect and designer should consider the temporal dimension when designing buildings making them usable in the long term.

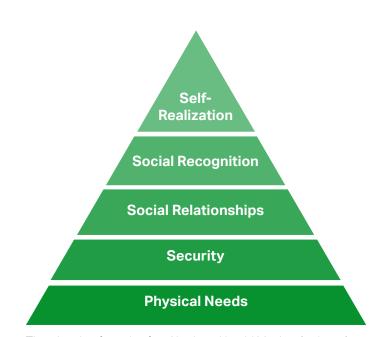
Sustainability

If the concept of sustainability is to operate within a complex and diverse society, it cannot be thought of as a merely quantifiable field of study, nor as a compilation of data sets. It needs to be able to negotiate and work through the various levels of human needs, not only economic, but also (and especially) social needs. By thinking about sustainability from a social perspective, it becomes possible to approach business-as-usual human needs from an analytical perspective. Social sustainability provides paths toward answering questions such as: What is the correlation between consumption of goods and well-being? Is the possession of goods a symbol of status?

Thus, thinking sustainably goes beyond specific actions and data analysis. Equally important is working toward changes in behavior from a social perspective. This might involve rethinking how communities work and how those communities produce the behaviors in the first place. In that sense, these behaviors could be said to have a spatial, or architectural dimension.



Main Architectural Themes of the 20th Century (redrawn). Needs Citation.



The triangle of needs after Abraham Harold Maslow (redrawn) Needs Citation.

Youth

community-

Housing

HOUSING+

