

**A New Beginning in a New Way:  
The Integration of Refugees in an Urban Community**

by

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## **ABSTRACT**

The world has an unprecedented number of refugees; with the number continuously increasing, housing options when scaled are becoming unmanageable by the UNHCR's typical means of resettlement.

This thesis aims to strengthen the relocation of refugees to first world countries by developing a series of welcome place settlements integrated into the current refugee process. As a way to provide a transitional housing solution for refugees, it will phase refugees from arrival to amalgamation into a community.

Utilizing Halifax, Nova Scotia as a regional site, four scales will be addressed to integrate refugees; the urban scale utilizes a decentralized system of distribution to densify and diversify Halifax; the community scale builds on existing amenities to extend the site beyond its boundaries; the building scale encourages interactions and provides collective gathering spaces, while the dwellings are adaptable to suit the spatial, cultural and individual needs of each refugee at that time.

## **ACKNOWLEDGEMENTS**

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## CHAPTER 1: INTRODUCTION

### The Problem

The world has an unprecedented number of refugees, now reaching over 25.4 million people. The United Nations High Commissioner for Refugees, known as the UNHCR, is the global organization dedicated to the safety and protection of refugees, supported by 138 countries world wide. While the UNHCR has guidelines for relocation and protection systems in place, the number of refugees is continuously increasing, meaning the housing and protection options are becoming unmanageable by the typical means of resettlement (Betts 2018).

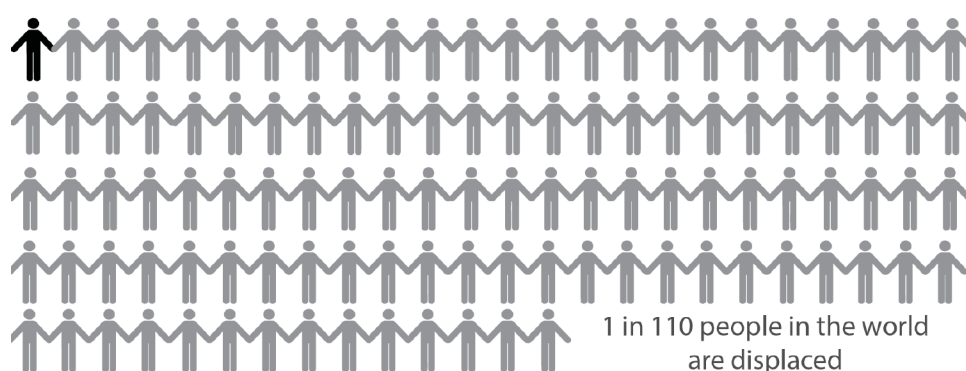


Figure 1: 1 in 110 people in the world are displaced: statistics include refugees, asylum seekers, and internally displaced people (UNHCR 2017, 2).

When refugees are forced to flee and leave their homes, their options for survival and relocation are limited. Firstly, approximately 9% of refugees are relocated to refugee camps; while camps are intended to be temporary resettlements, they are undesirable solutions as the majority of refugees remain in the camps indefinitely, for an average period of 10 years. Here, the quality of life is extremely low, without the ability to leave, work, develop individually or as a community (Betts 2018). Secondly, the large majority of refugees are relocated to a nearby civilization without any assistance to begin a new life independent from the organization (Betts 2018). Finally, only 1% of refugees are given the opportunity be relocated to a first world country for resettlement. With this option, refugees are given assistance upon arrival in finding housing, basic amenities and support throughout their stay (Betts 2018). Residents are welcomed to stay in their

new country until they are able to return home safely, or apply for permanent residence. While this is most acceptable and preferred option for refugees, it is difficult and rare.

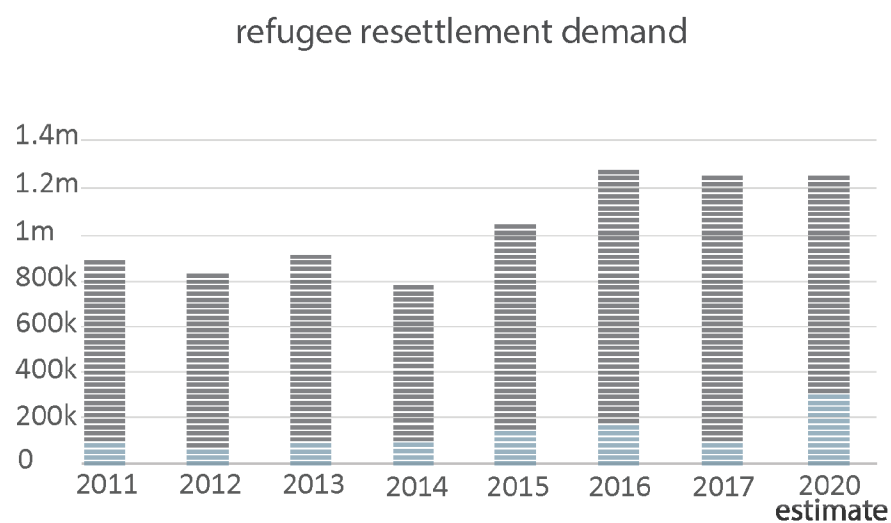


Figure 2: Refugee resettlement applications have continuously fallen short as seen since 2011, under 25% of refugees have been resettled with assistance (UNHCR 2017, 29).

## Context

Currently there are 68.5 million displaced people in the world; of these, 25.4 million are registered refugees with the UNHCR (UNHCR 2017, 2). Figure 3 + 4 outline where the majority of the world's refugees are produced, and where they are hosted. While the care and protection of refugees is a world-wide responsibility, a large majority falls on countries of close proximity, for ease of transportation and finances (UNHCR 2017, 20).

There are nearly 2.3 million refugees currently inhabiting refugee camps throughout the world, primarily located in Africa, the Middle East and Eastern Europe (UNHCR 2017, 14). Lebanon is an example of a country which hosts a large number of refugees, as it is located in close proximity to many countries in distress, making it one of the most convenient locations for refugees to flee to. With a population of around 6 million citizens, Lebanon hosts a total of 1 million refugees, making a 1:6 ratio of refugees to citizens (UNHCR 2017, 2).

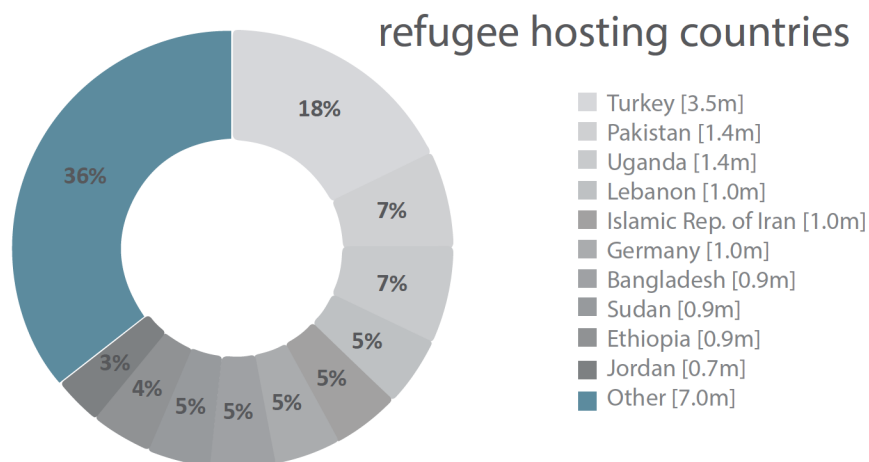


Figure 3: Turkey is currently the largest refugee hosting country, one of only six countries hosting one million refugees.

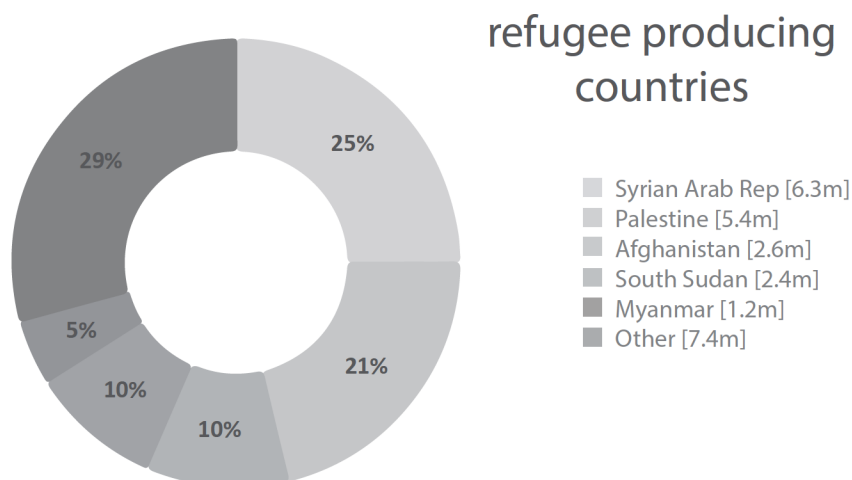


Figure 4: Syria is the largest refugee producing country, one of five countries producing more than one million refugees.

Due to distance, the majority of refugees are hosted in countries in close proximity to where they originated. Figure 5 demonstrates the distribution of where refugees are being hosted throughout the world. Currently, 85% of the world refugees are being hosted in developing countries, while only 2% are located in North America.

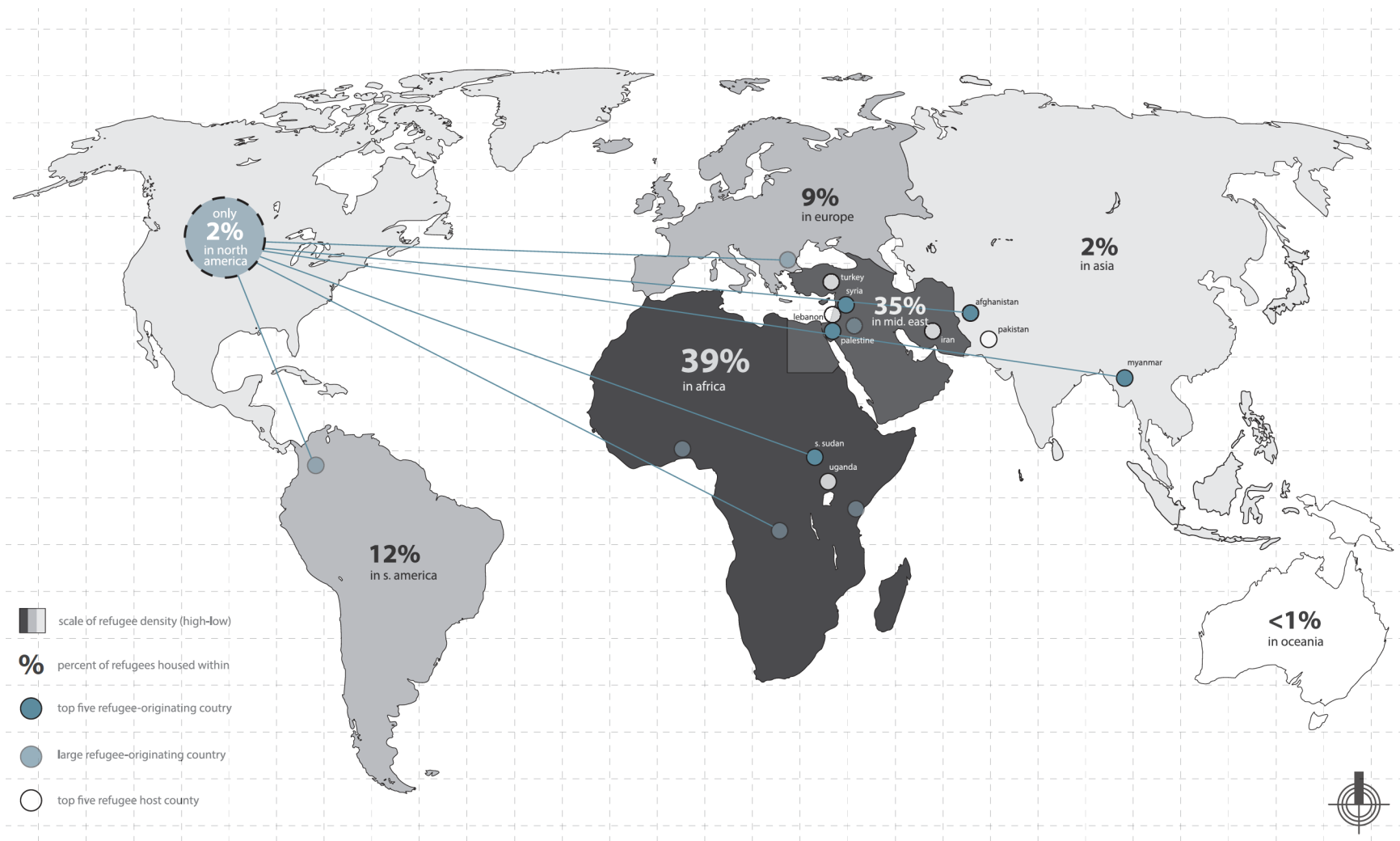


Figure 5: Refugees are typically hosted in countries close in proximity to those where they originate from, meaning Africa and the Middle East host the large majority (UNHCR 2017).



## **Thesis Proposal**

With a failing system of refugee resettlement, it is time to adapt the international system to a globalized world (Betts 2018). There is a total of one billion citizens living within developed countries; to equally distribute the 25 million refugees among this population would dictate a 1:40 ratio of refugees to citizens. While this thesis does not aim to solve the refugee crisis, it puts into perspective the number of refugees one city could aim to resettle and proposes a method of doing so.

This thesis aims to strengthen the relocation of refugees to first world countries by developing a series of welcome place settlements that are integrated into the current refugee process, as a way to provide a transitional housing solution for refugees as they phase from arrival to amalgamation into their new community. By creating a framework that is used to advance the integration process of refugees into a new community in a repeatable way, it will increase the number of refugees that can be relocated with assistance.

This thesis will focus on the relocation of refugees to developed countries strictly on an architectural basis, and will hereby assume all immigration challenges, transportation methods, refugee selection process and funding has been established.

## CHAPTER 2: REFUGEE RELOCATION TO CANADA

### History of Refugee Immigration

Through time, Canada has retained a continuous role in refugee resettlement. 2001 saw the highest refugee resettlement with nearly 45,000 approved applications, however more recently refugee resettlement has lowered to an average of 20,000 applications per year. While the Canadian government limits the number of applications (excluding Quebec), they have put forward a motion to increase refugee support starting in 2020. They intend to do so by raising the capacity of applications and introducing a new method of resettlement without the presence of a sponsor necessary (Government of Canada 2018).

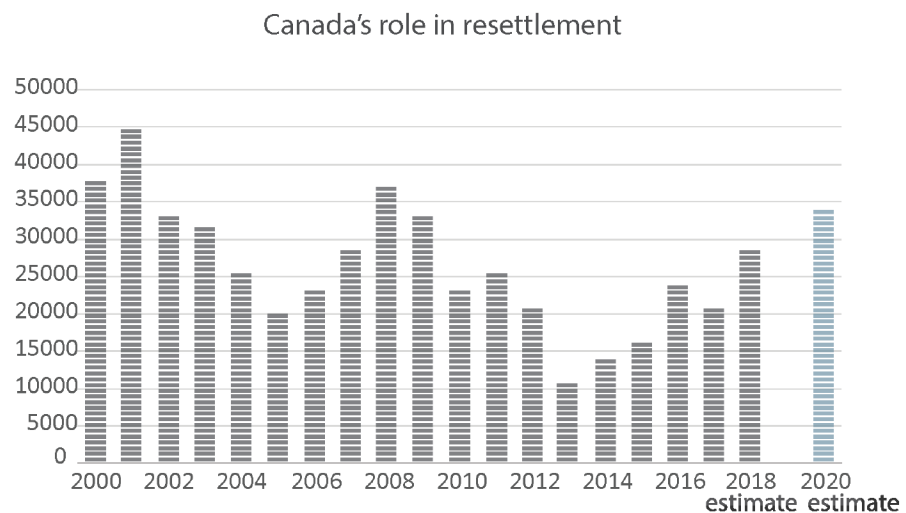


Figure 6: Canada aims to increase the amount of refugee resettlements starting in 2020, after seeing a fluctuating amount of approved applications in the past several years (Statista 2018).

### Refugee Placement Procedure

The Canadian government regulates the intake of refugees by way of sponsorships. There are two methods of sponsorship: private sponsorship and sponsorship agreement holders (Government of Canada 2018). Private sponsors are comprised of a group of five individuals who can request the relocation of a refugee to Canada (usually granted in cases for family members). The five indi-

viduals are responsible to financially support the refugee for one year and locate accommodations for them (Government of Canada 2018). Private sponsors are typically required to work in collaboration with a sponsorship agreement holder.

The more common method of sponsorship is through a sponsorship agreement holder, known as a "SAH". SAH's are organizations who work with the Canadian government to support the resettlement of refugees into their communities (Government of Canada 2018). SAH's each differing with their approach to relocating and supporting refugees. Some include collaboration with private/community sponsors, others provide housing facilities and many offer support programs and assistance. Sponsorship agreement holders are approved at a provincial level; figure 7 demonstrates the current allocation of SAH's in Canada.

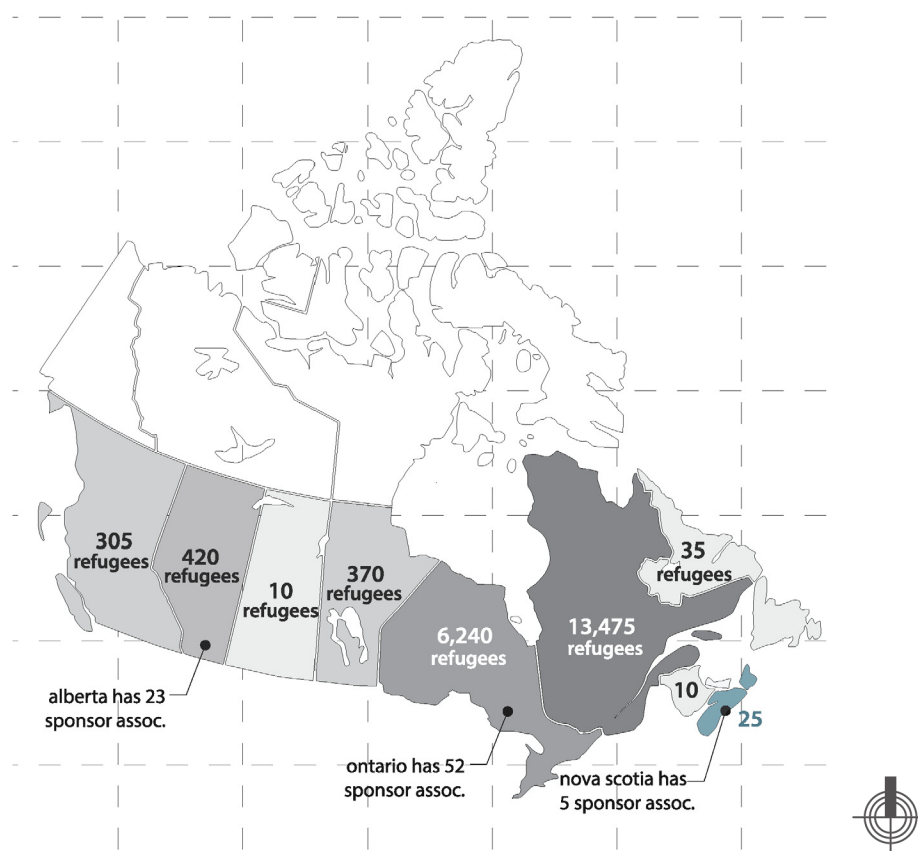


Figure 7: Canadian provinces fluctuate in number of refugees relocated, as they correspond to number of sponsorship associations (Government of Canada 2018).

In addition to regulating the number of resettled refugees, the Canadian government also selects and approves each refugee application in a five-step process, involving multiple applications and screening processes (Government of Canada 2018). The strict regulating criteria required for refugee process approval means refugees are generally intelligent young adults or families, who are well qualified for employment.

### Halifax Sponsorship Agreement Holders

The number of refugee resettlements depends heavily on the number of SAH's provided in the province, as they are the primary source for applications. Nova Scotia has five SAH organizations, making it one of the lowest SAH holding province in Canada, as demonstrated in figure 7 (Government of Canada 2018).

In 2018 (January – September), Nova Scotia was the fourth lowest province in new refugee resettlements with a total of 25 accepted (Government of Canada 2018). Alternatively, western Canadian provinces average 350 resettlements per year, while Ontario and Quebec annually see thousands of resettlements. Further, refugees make up only 15% of all immigrant types in Halifax (Milloy 2017).

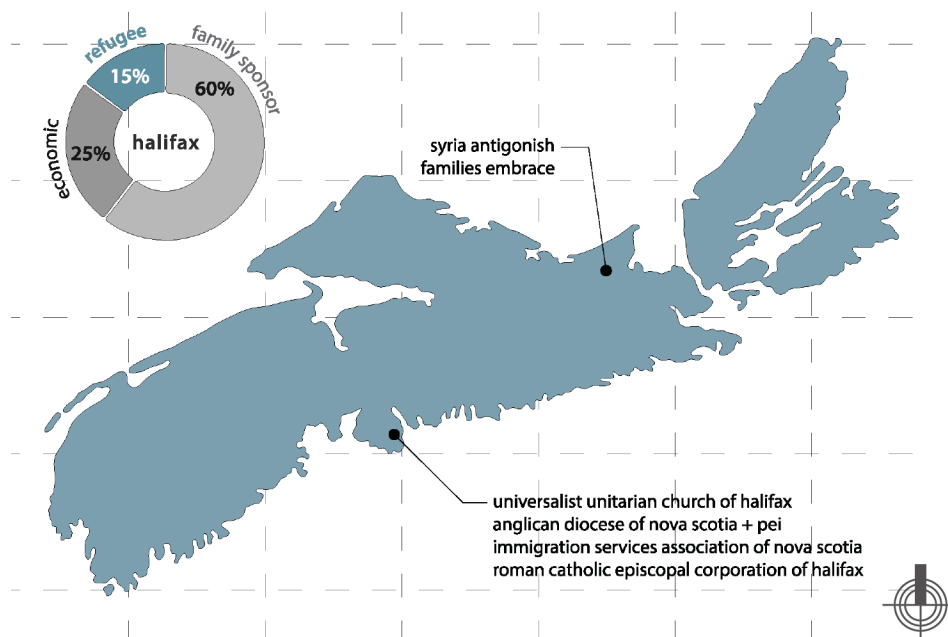


Figure 8: There are 5 SAH's in Nova Scotia; with refugees making up only 15% of all immigrants in Halifax (Canadian Immigration 2018).

The Immigration Services Association of Nova Scotia, commonly referred to as ISANS, is the primary sponsorship agreement holder in Halifax. They accepted a total of 146 refugee applications in 2016. While ISANS does not provide housing facilities for refugees, they provide assistance and programs where refugees can seek local support (ISANS 2018). They strive to achieve short term goals of getting refugees settled with housing, health care, food, finances, transportation, employment, and accustomed to the climate. They have long term goals of assisting in career credential recognition, learning the language, achieving further education, cultural adaptation, financial security, and integration into a welcoming community (ISANS 2018). ISANS noted that common settlement challenges are communication barriers, social isolation, self-confidence, stereotypes, family stresses, lack of Canadian work experience and cultural differences (ISANS 2018). While ISANS does provide local support, refugees are left living independently upon arrival and lack a sense of community in their new home.

### **Case Studies: Refugee Relocation Facilities**

#### ***IRCOM Housing***

IRCOM is a sponsorship agreement holder based in Winnipeg, Manitoba. They have a housing facility designed by Synyshyn, which aims to support the transition of refugees and immigrants upon arrival, until their departure to an independent dwelling (IRCOM 2018). Residents are required to be families or individuals under the age of 18.

The dwellings are designed to accommodate a maximum of seven to nine people and are leased on a one-year term upon arrival; after one year residents can apply for an additional two year stay, pending circumstances (IRCOM 2018). The facility takes a holistic approach to assist families by providing community spaces and outdoor recreation for gathering and communication; the facility aims to foster independence rather than dependency (Synyshyn 2018).

While the designed spaces and intentions are similar to this proposal in building typology and in providing the basic needs and amenities, this case study lacks physical integration of the community; the building itself is isolated and

fenced in. By isolating refugees in a complex, social interactions are lacking with the outer community, meaning language development and cultural customs are not learned, which could lead to the refugees becoming dependent on one another (ISANS 2018). The proposed welcome place will challenge this isolation by infiltrating the building with public programs to reinforce the interaction specifically between refugees and community members.



Figure 9 + 10: IRCOM housing designed by Synyshyn demonstrates recreation space for refugees to gather, however it is disconnected from the outer community (Synyshyn 2018).

### **Thesis Insertion in Process**

This thesis is inserted into the current process of relocating refugees by generating a welcome place settlement that provides transitional housing for refugees upon arrival. With the Canadian government aiming to increase the number of refugee resettlements, the facility will be used to generate a continual system of refugee integration. It will work with the local ISANS organization to provide immediate transitional housing for refugees and support programs for immigrants throughout Halifax, as they adapt to Canadian culture and environments. The welcome place provides services for refugees, but will also accommodate programs which incorporate community members. The combination in programs will allow refugees to become familiar with their community in a supportive environment and ultimately leave to be integrated into their new community.

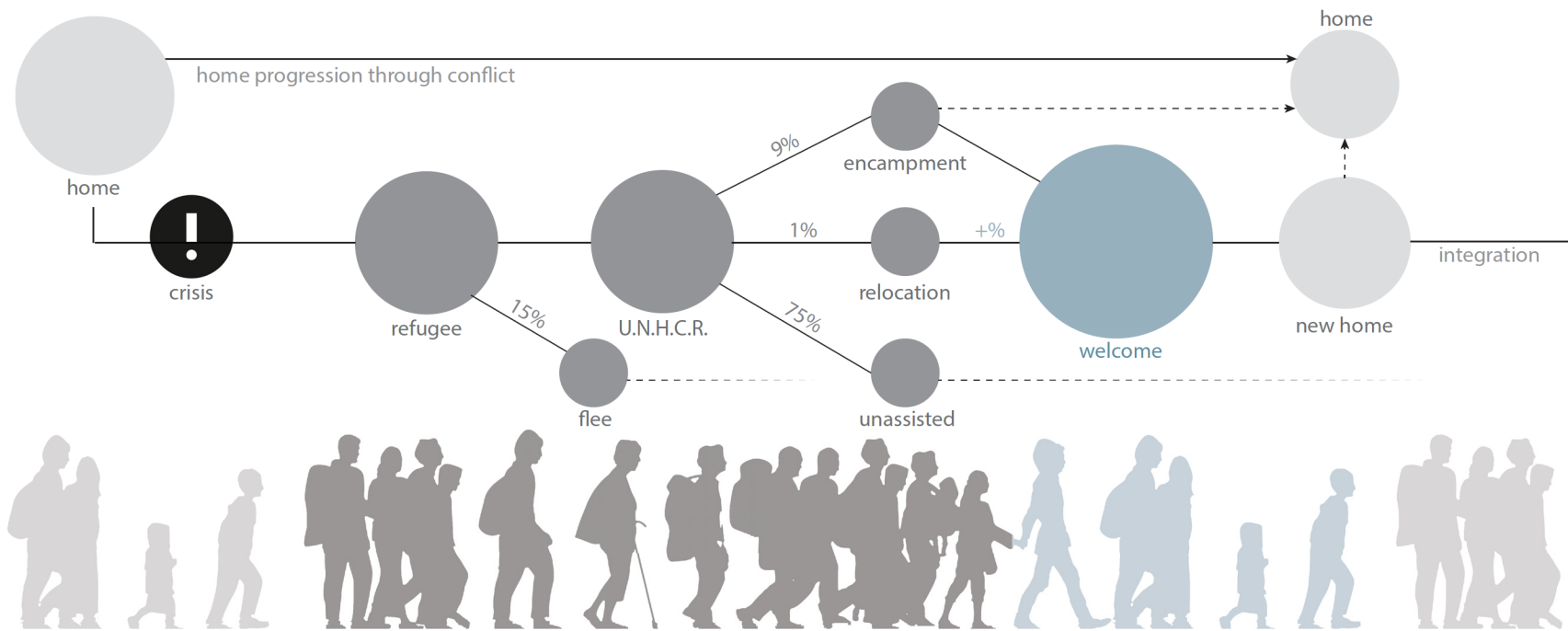


Figure 11: The welcome place is inserted into the current refugee process after refugee relocation to Canada as a transitional environment to reinforce the integration of refugees into their new community.



## CHAPTER 3: DESIGN METHODOLOGY

### Integration Approach

The Cambridge dictionary defines integration as “to mix with and join society or a group of people, often changing to suit their way of life, habits and customs” in addition to, “to combine two or more things in order to become more effective” (Cambridge Dictionary 2019). While integration is a term that can be interpreted in many different ways, for the purpose of this thesis it used meaning to join a community, being part of and accepted as an equal member. It is not an overriding of the refugee’s culture or way of life.

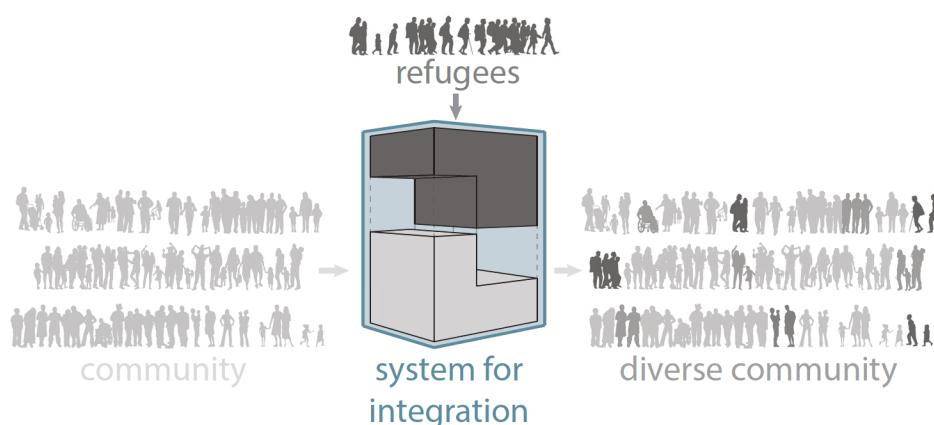


Figure 12: A system of integration is created by a facility that services both the refugees and the community members to create a diverse society.

The integration process is designed to generate a mixed-use settlement that incorporates the needs of both the refugees and the community. It generates a temporary housing solution to allow refugees to have accommodation and support upon arrival as they transition towards an independent dwelling. The settlement reinforces interaction within the design spatially and programmatically, to drive the integration process. Community spaces engage locals for events, amenities and interactions through provided services and spatial design. Each program is utilized to engage different community members, while encompassing a settlement for refugee support and integration.



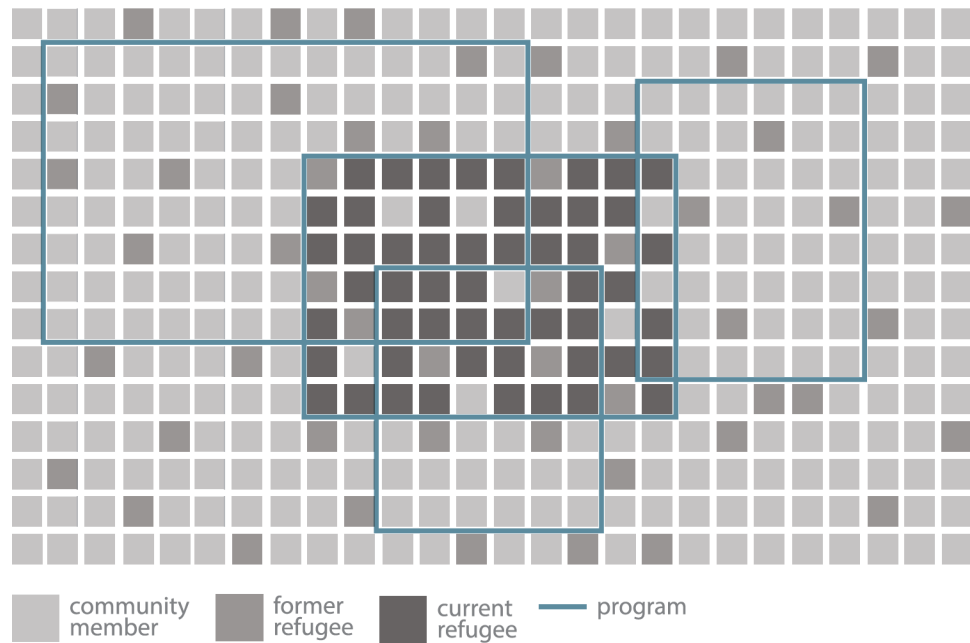


Figure 13: Different programs are dedicated to reach different community members while the site as a whole encompasses the needs of refugees.

## Design Principles

There are four design principles, each operating at a different scale, that will develop a framework for the design of integration. The design principles were developed by addressing each scale and implementing an architectural theory which reinforces integration. A combination of urban planning theories, social housing theories, designing for diversity and polyvalent principles were explored. Woodcraft and Hackett were an influential resource, as the principles for integration were developed based on principles of sustainable design as developed, for example in *Design for Social Sustainability; A Framework for Creating Thriving New Communities* (Woodcraft 2011, 22).

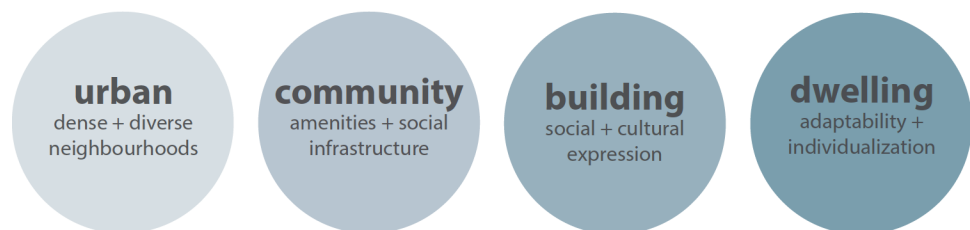


Figure 14: 4 Scales for integration

The following scales develop principles that read:

**1. *Urban: Dense + Diverse Neighbourhoods***

Based on urban planning theory of the compact city and a decentralized system of distribution developed by Frey and Lozano (explored further in Chapter 4), the settlement will be located in an area with existing diversity and similar demographics to ease the integration process of refugees. The new settlement(s) will provide prosperous amenities for the local community and contribute by diversifying the culture and densifying the surrounding neighbourhood. This is completed as residents leave the welcome place and integrate into their new community.

**2. *Community: Amenities + Social Infrastructure***

Creating a sense of community on the site is completed by generating safe and supportive environments that encourage interactions between the residents and the community. To reinforce integration, the proposal utilizes theories by Jacobs, Woodcraft and Hackett to design a community with social sustainability. It seeks to expand beyond the borders of the site and utilize existing amenities and infrastructure within the community. The extension of existing programs will encourage interaction and communication within the refugees' new community. This concept will be explored further in Chapter 5.

**3. *Building: Social + Cultural Expression***

To design a building which reinforces diversity and integration in an effort to avoid social isolation, the welcome place celebrates cultural differences and provides programs, facilities and community involvement. Utilizing design for diversity principles developed by Talen, the sharing of cultures acts not only to create a connection between refugees and community members but allows refugees to celebrate their cultures. Programs and spaces are dedicated for both group and individual expression as a source for healing and personal growth. This concept will be explored further in Chapter 6.

#### **4. *Dwelling: Adaptability + Individualization***

The design for adaptability will allow for growth and adaptation of the dwelling to suit the ever-changing needs of refugees. Designed with polyvalent principles developed by Hertzberger, the temporary housing facility adapts to suit the cultural, spatial and individual needs of each refugee at that time, with the ability to change for refugees in the future. This concept will be explored further in Chapter 8.

## CHAPTER 4: URBAN STRATEGIES



Figure 15: First of four integration scales, urban: dense + diverse neighbourhoods.

Halifax is the largest Atlantic city, but in comparison to other capital cities in Canada, the population is quite low. *Community Design and the Culture of Cities* by Eduardo Lozano is a source which discusses the benefits of compact cities. It demonstrates desired densities by comparing the density of cities in America in relation to those in Europe. Currently, American cities are only 50 – 75% as dense (measured in people per acre) as European cities (Lozano 2007, 314). Halifax retains a low density and therefore has been selected as a site for the relocation of refugees.

The calculations completed in chapter 1 demonstrate a 1:40 ratio of refugees to citizens as a maximum target for refugee resettlement. With a population of approximately 400,000 people, Halifax could look to resettle up to 10,000 refugees. The new population would increase Halifax's total population density by 2.5%. This chapter will explore how urban planning strategies can be used to organize this new population creating dense and diverse neighbourhoods that are beneficial to Halifax.



Figure 16: To equally distribute refugees among first world countries, a 1:40 ratio of refugees to citizens dictates that 10,000 refugees could be relocated to Halifax

### Diversification

The relocation of 10,000 refugees to the Halifax peninsula would not only increase the density, but also the diversity. Place diversity can be defined as social-

ly and economically diverse people, each with a mix of income, race, ethnicities, age and family type sharing the same neighbourhood (Talen 2008, 5).

Most cities have regions which are defined based on the ethnic group that is the large majority of the neighbourhood, such as “china town”, “arfric-ville” and “little Italy”. While these social isolations provide a unique atmosphere, the prosperity of the regions are solely dependent on one user group. In addition, these regions isolate the ethnic demographic from surrounding neighbourhoods and minimize interactions and integration with the community.

The combination of different ethnic groups generates urban prosperity as it increases interactions and promotes economic opportunities within the community. Cultural diversity allows the opportunity for expansion and growth, while social segregation has been proven to limit a regions economic growth ability (Talen 2008, 14).

This thesis aims to integrate refugees seamlessly into the existing urban fabric, to uniformly diversify the Halifax peninsula. Refugees will no longer be isolated within their ethnic groups so they can interact and amalgamate into their new community. This integration allows for increased employment opportunities, the use of existing amenities and a continual interaction with local community members.

### **The Compact City**

The compact city is a proposed urban planning theory that aims to increase the density of cities to provide better amenities and urban life within a compact area, as opposed to the urban sprawl method of extending a city beyond its borders (Frey 2007, 330). *Designing the City: Towards a More Sustainable Urban Form* written by Hildebrand Frey discusses the well-known debate around the concept of the “compact city”. Frey is one of the many supporters of the compact city, who views it as having environmental advantages and social benefits.

The compact city is beneficial, as there it has a high degree of containment in

the reuse of land and infrastructure. It reduces the necessity for private vehicles and promotes the affordability and efficiency of public transportation, walking or cycling as a means of transportation, as well as reduces pollution, traffic and traffic-related accidents and deaths (Frey 2007, 331). The compact city reinforces mixed use buildings and higher density populations which reduces utility costs for both the user and installer. It also creates the potential for increased cultural mix and social interactions with a concentration of local activities in communities. This has proven to generate a higher quality of life, community involvement for users and better economic advances and amenities offered (Frey 2007, 331).

There are several contradictions to the compact city, such as the elimination of suburban living, increased congestion, decrease in green spaces and loss of private spaces. There are many preconceptions that are carried with high density, and the fear that is fostered by poor representation of dense developments, poorly managed social housing and slums (Lozano 2007, 318). This thesis recognizes both the benefits and challenges of the compact city and looks to reinforce the concept in a way which is suitable for Halifax.

The densification of the Halifax peninsula is a way to better populate the city in effort to provide a more sustainable urban planning method. Halifax would benefit by creating a denser peninsula, as an increase population could support more amenities, better transportation systems and increased employment. By relocating refugees to urban areas, it minimizes sprawl and could start the transition of densifying the Halifax peninsula.

### **Systems of Distribution**

The compact city is an aggressive theory that may not be suitable for all cities, however, the densification proposal is beneficial if completed in a more uniform way. Frey describes three forms of sustainable city systems: the centralized system, most resembling of the compact city demonstrates a compact centre with dispersed communities around that all rely on the centre; the decentralized system, which expands the compact city to provide multiple concentration points,

all connected through public transportation (Frey 2007, 333); thirdly, the distributed system, which evenly distributes people and amenities within a region.

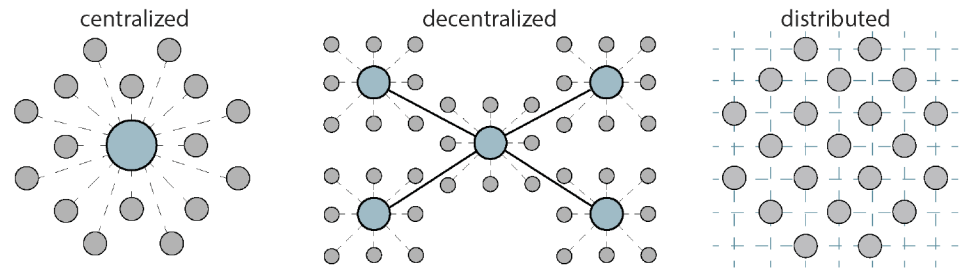


Figure 17: Frey's alternative systems of sustainable cities (Frey 2007, 335).

This proposal aims to utilize a decentralized system of distribution at an urban scale, for the relocation of refugees to uniformly increase the density within the Halifax Peninsula. The decentralized system is most suitable for Halifax as it does not densify one area exclusively, but disperses the new population among the peninsula in a uniform way.

### Halifax Design Proposal

Urban planning theory has demonstrated the need to produce dense and diverse communities in sustainable cities that strive to reduce pollution, culturally thrive and provide amenities and sustainable transportation. The increase in refugee resettlements will introduce a new population that can be organized in a decentralized system, repeatable throughout the Halifax peninsula to uniformly distribute the new population.

The welcome place is designed as a framework that can be repeated on multiple sites. To determine where the most desirable areas of expansion in Halifax are, the peninsula was analyzed based on average density and diversity as seen on figure 21. With the understanding that Halifax could relocate as many as 10,000 refugees, the peninsula was broken down into different categories, each of which could provide temporary or permanent refugee housing. It demonstrated where new infrastructure could be inserted to support the surrounding community and outlined neighbourhoods where the refugees could integrate into once they depart from the welcome place.



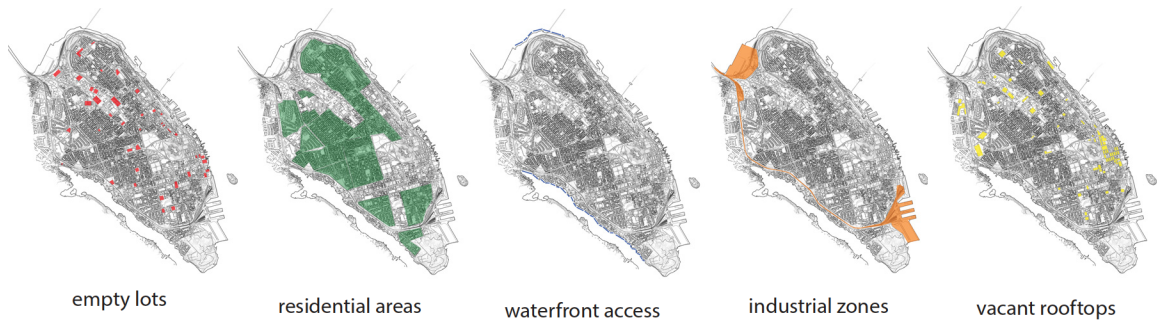


Figure 18: The Halifax peninsula was analysed to select proposed sites for welcome place. Base information from Halifax Open Data.





The following seven sites were selected as future locations for a welcome place to be implemented, as demonstrated on figure 19. By organizing Halifax's new population in a decentralized system, it can uniformly densify and diversify the peninsula. Further, the settlement can be designed in a way which acts as a central hub for the community, and in turn will reinforce the integration process for refugees into their new community.

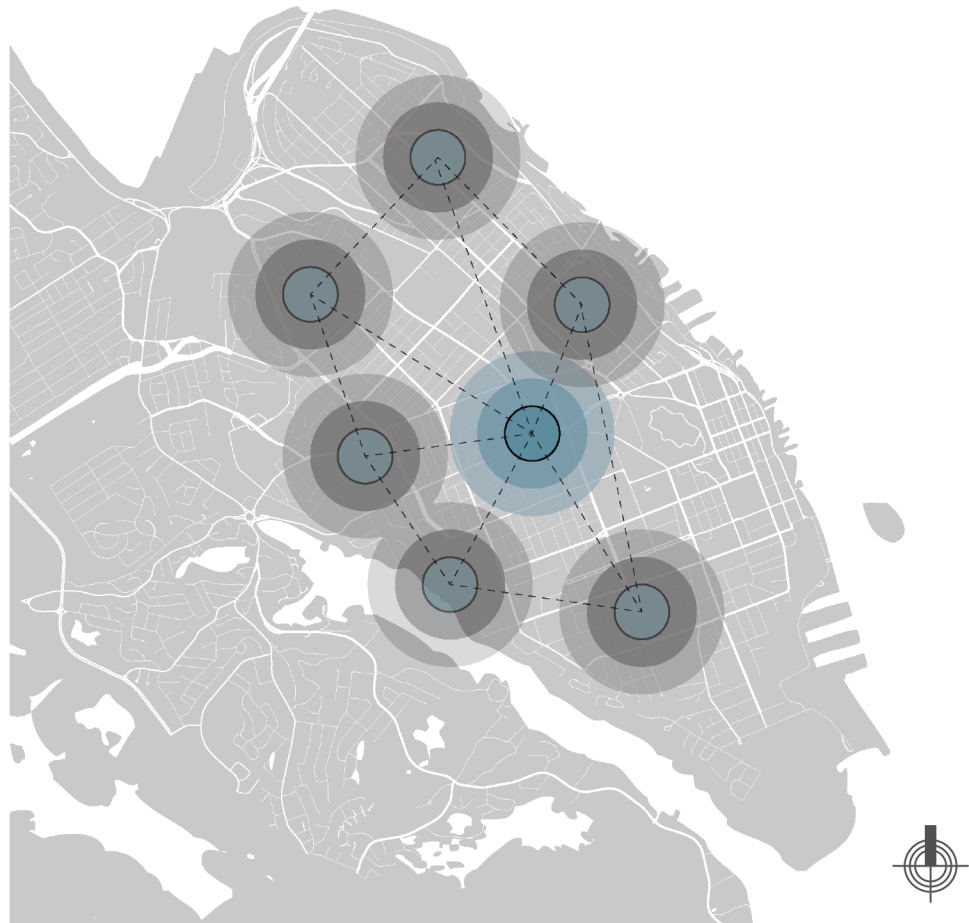


Figure 19: Decentralized system of organization implemented on the Halifax peninsula, as per Frey's alternative systems for sustainable cities. Base information from Halifax Open Data.

For further development of this thesis, one site has been selected to develop and test the welcome place framework. The design can then be repeated and altered to suit the needs of the remaining six sites.

## CHAPTER 5: THE SITE + EXISTING COMMUNITY



Figure 20: Second of four integration scales, community: amenities + social infrastructure

### **The Community**

The welcome place framework will be designed and tested on the primary site, located on an empty lot at Quinpool and Windsor Street. It is located in a community that is already exposed to diversity, yet is very central and accessible. Additionally, the Halifax Centre Plan marks this region as a “centre”, which they categorize as a desirable area for future growth. It was selected as the primary site to develop and test the framework of refugee housing and integration, in effort to create a repeatable pattern that can be distributed throughout the peninsula, on the remaining six sites.

The site is located within a region that is projected for future growth and development. It is a collective gathering space that neighbours both the Halifax Commons recreational spaces and the Quinpool shopping district. While it offers many amenities and public spaces, the region maintains a moderate density of individuals per square kilometre, as seen on figure 21. The moderate density provides justification for locating the welcome place at this site, based on Frey and Lozano’s theory regarding the necessity of providing dense urban centres.

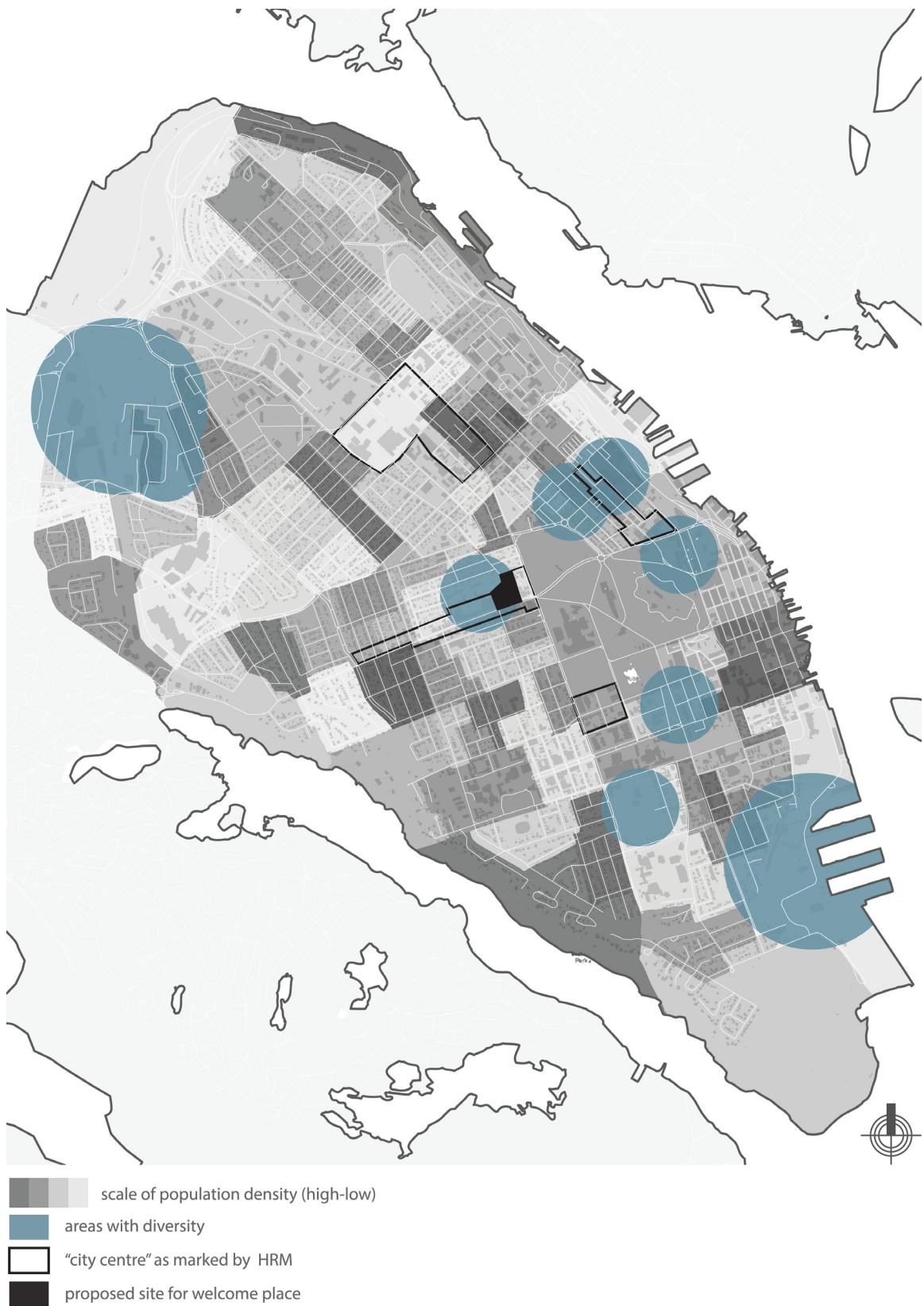


Figure 21: The site is located centrally on the Halifax Peninsula, in a community complete with diversity and moderate density. Base information from Halifax Open Data.



## Halifax Centre Plan

The Centre Plan is a planning document for Halifax's future growth to outline the desired intentions. It defines areas within the HRM as different zones. Each zone is further explored in terms of what those regions should entail in the future, such as growth, industry, or residential (Halifax Centre Plan 2017, 87). The Centre Plan demonstrates core concepts to be carried out such as; complete (diverse) communities, human scale buildings, pedestrian oriented streets, and strategic growth in the city (Halifax Centre Plan 2017, 15-19). By understanding the intention put forward by the municipality, the proposal can then be situated within its context and abide by or question the intentions with further meaning and understanding.

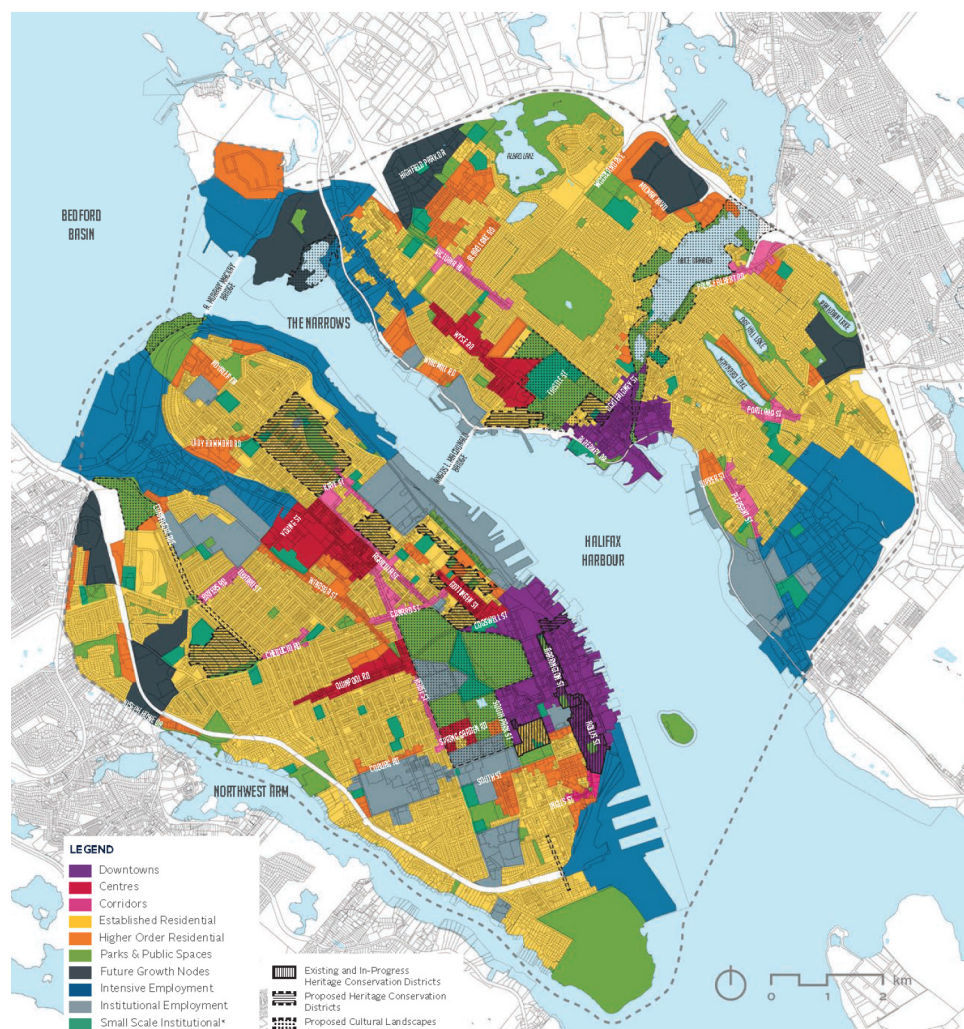


Figure 22: Halifax and Dartmouth regions, provided by Halifax Centre Plan (2017, 89).

As demonstrated on figure 22, the site is in a region that the Centre Plan defines as a centre. Centres are defined as regions for future growth, based on their existing commercial activity and residential density (Halifax Centre Plan 2018, 93-98). They have adequate transportation and land available to accommodate growth. Halifax Centre Plan aims to use the centres to create mixed use diverse neighbourhoods, provide growth on vacant and under-utilized lands and provide complete walkable communities that supports the use of public and active transportation methods (Halifax Centre Plan 2017, 94). This thesis aims to support the Centre Plan proposal by locating the welcome place on a vacant property within a moderately dense centre that will create a complete community by supporting growth and integration within the neighbourhood.

### **Use of Existing Amenities**

By selecting a site in a central location, there are a large range of amenities offered within the community. By identifying and utilizing programs not on the site but in close proximity, it then expands the site beyond its boundaries whenever possible to reinforce the concept of integrating into the community.

The settlement benefits by having close access to parks and amenities, in addition to the central location which allows for ample public transportation and health services. The site is strategically located in a community in which the demographics are similar to those of refugee families. Figure 27 demonstrates the average number of people living in each household. The facility ultimately aims to integrate refugees into their new community and can be achieved more successfully if the community is composed of similar demographics.

The average household based on the highest five refugee producing countries is 6.14 people (UNHCR 2017, 25). This not only dictates how large the individual units are required to be, but also demonstrates that the majority of refugees are families, and therefore will require specific amenities. Amenities such as schools, health care, places of worship, recreation spaces, and employment opportunities are of highest importance to for a community seeking integration.



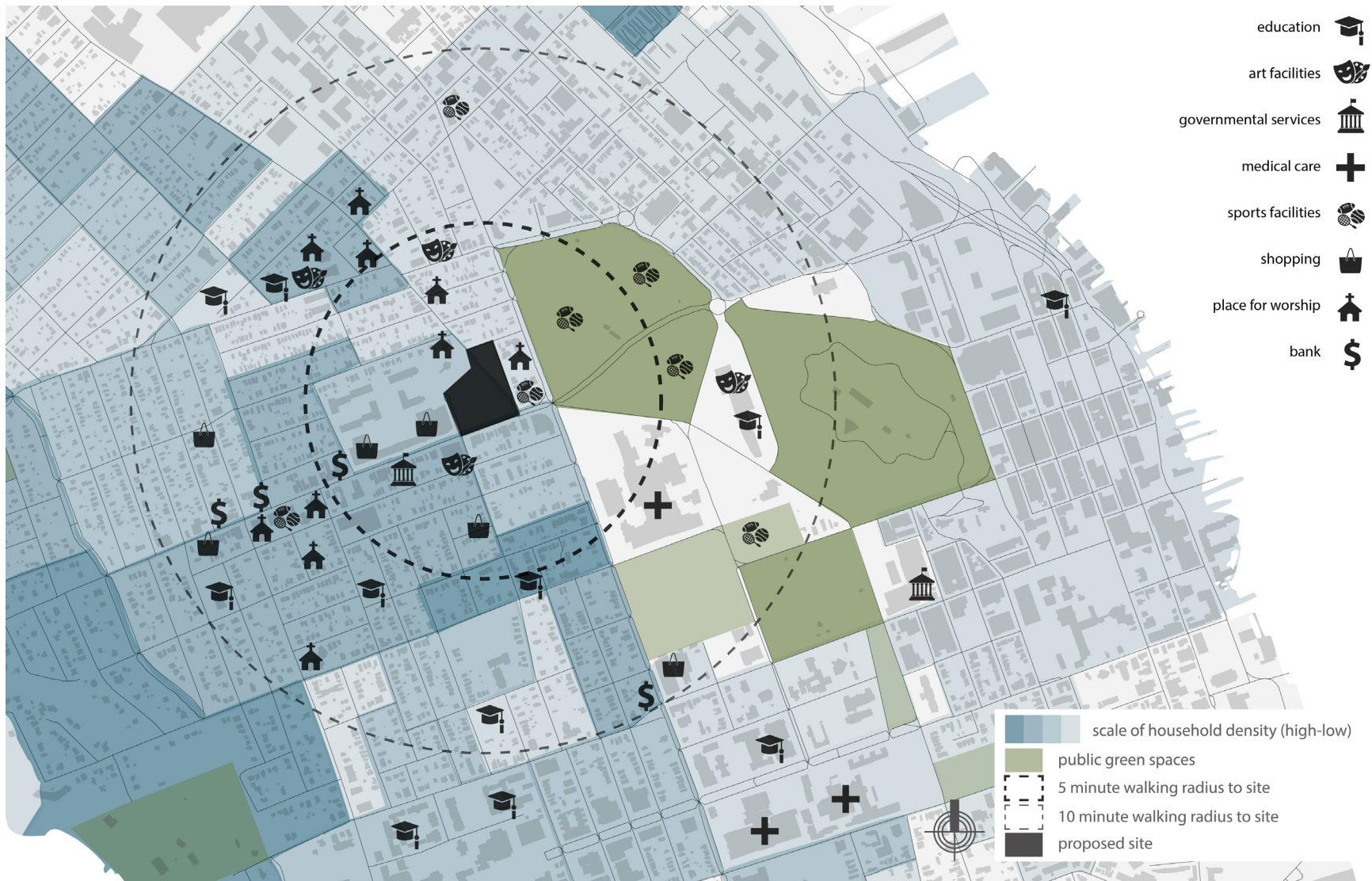


Figure 23: Amenities of importance to refugee families and their proximity to the site. Base information from Halifax Open Data.

## The Site

The site is located on Quinpool Road, a busy commercial street in one of Halifax's centres. While facing the lively street, the site is bounded on the other three sides by quiet, residential areas. In effort to respond to the existing context, the site will situate buildings and building heights to respectfully integrate into the existing neighbourhood.

Currently, the site is divided into two sections by Windsor street, as demonstrated in figure 25. In order to stitch it together and create a unified site, the proposal eliminates a portion of Windsor Street, and redirects traffic either directly to Robie Street, or behind the site on a new road, that then utilizes Quingate Place and its existing infrastructure. The new site, is a large rectangle with a northern extension, measuring roughly 150m x 180m.

To create a master plan, the site was analysed based on its location within the community, and how people interact with the current lot. Figure 26 demonstrates the classification of areas within the community being residential, commercial or green spaces, in addition to marking natural paths created by users of the site. Figure 27 highlights areas that address the public and begins to configure how programmatic elements can be laid out to respond to the surrounding context. The program is organized to allow public buildings to sit on the commercial front, residential areas to address either side of the site, and additional services to address the new street at the rear of the site. Lastly, figure 28 proposes areas on the site for circulation and entrances, blocking of buildings, and connections between buildings and green spaces.



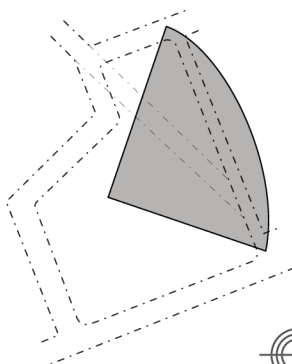
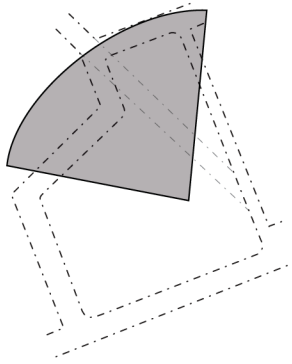
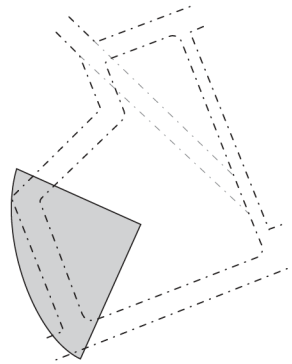
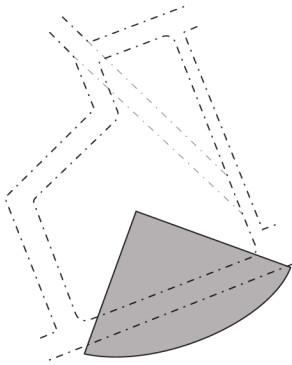
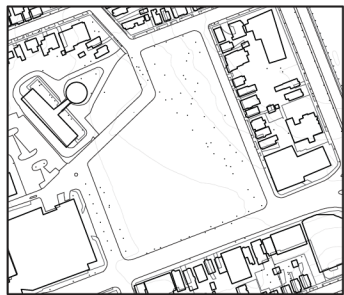


Figure 24: Site pictures demonstrate the current condition of the site and its surrounding context.





the existing site is divided ,  
creating two separate  
locations for intervention



the proposed site unifies  
both sections together, by  
redirecting traffic behind  
the site



Figure 25: The site was created by stitching together both lots by redirecting roads behind the site to create one unified plot. Base information from Halifax Open Data.

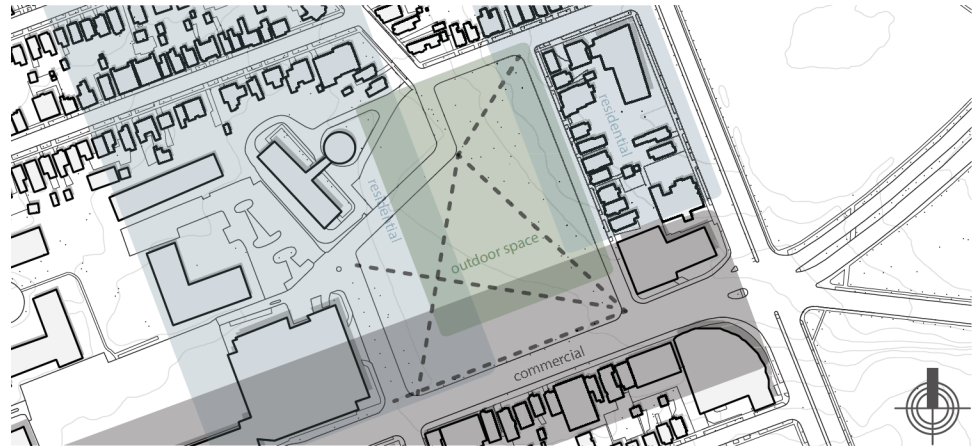


Figure 26: The site was analysed based on existing paths and regions. Base information from Halifax Open Data.

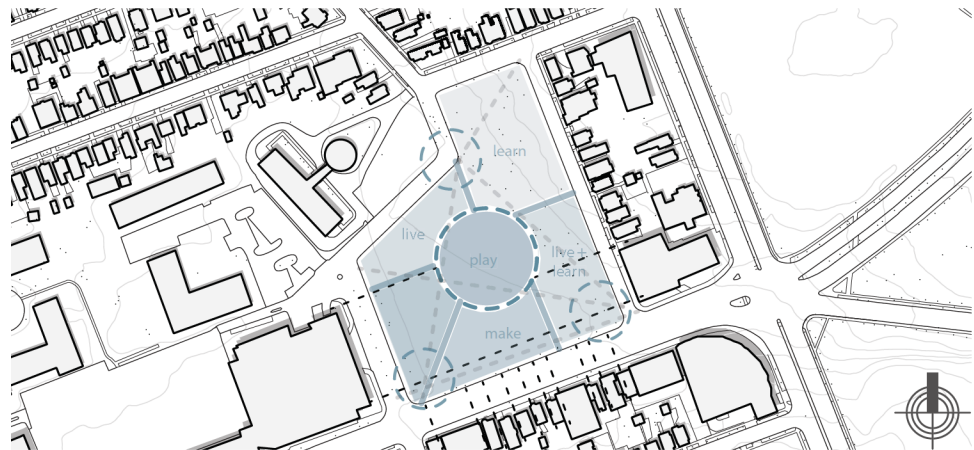


Figure 27: This analysis was used to develop a strategy for areas to address, and program placement to relate to existing context. Base information from Halifax Open Data.

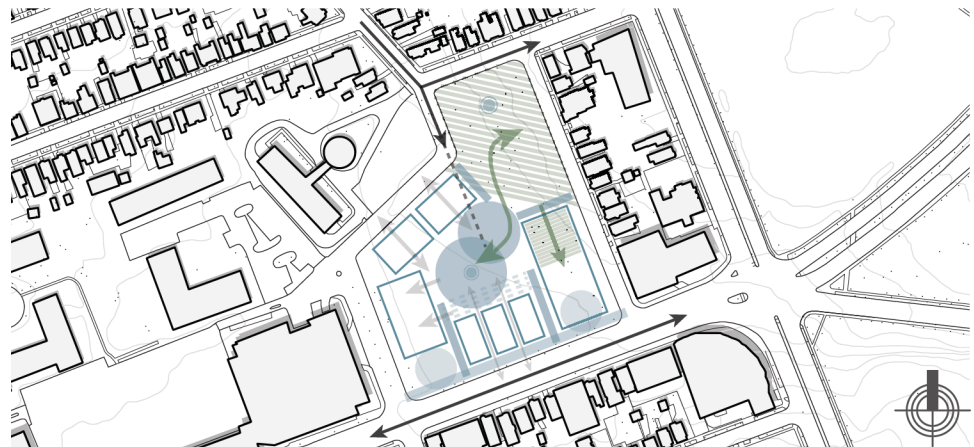


Figure 28: The site master plan demonstrates site entrances, building placement and connectivity between buildings and with the designated green space. Base information from Halifax Open Data.

## **Program Development**

The program is intended to extend from the surrounding amenities and provide additional services/programs that reinforce integration. For instance, programs such as schools, daycare, places of worship, sports facilities, medical care, and banks are all located within a ten-minute walking distance, and therefore are not included on the site.

In effort to create a public site that incorporates the needs of both the refugees and the community members, different programs have been incorporated. These programs are structured in a live-learn-make-play model that is distributed throughout the site. The development of the four categories allows different programs to address different community members.

The “live” quadrant, refers to refugee housing, with an additional portion designated for local families with low income. “Learn” incorporates classrooms and learning facilities for refugee programs and well as community gatherings and classes. “Make” hosts programs that connect refugees with community members by way of expression through art or food, and additionally offers work spaces for refugees to create businesses and work. “Play” is utilized as the connection for all programs, as the community plaza and garden are areas for relaxation and natural interaction between community members and refugees.

Figure 29 demonstrates a list of programs that could be incorporated into the design and are organized into a category of live-learn-make-plan. By organizing the programs based on their public or private nature, it provokes natural adjacencies and community spaces mixed within. The overlaps of the program and spaces in between essentially outline the points of contact where interaction will occur, and therefore where architectural interventions can heighten this interaction.

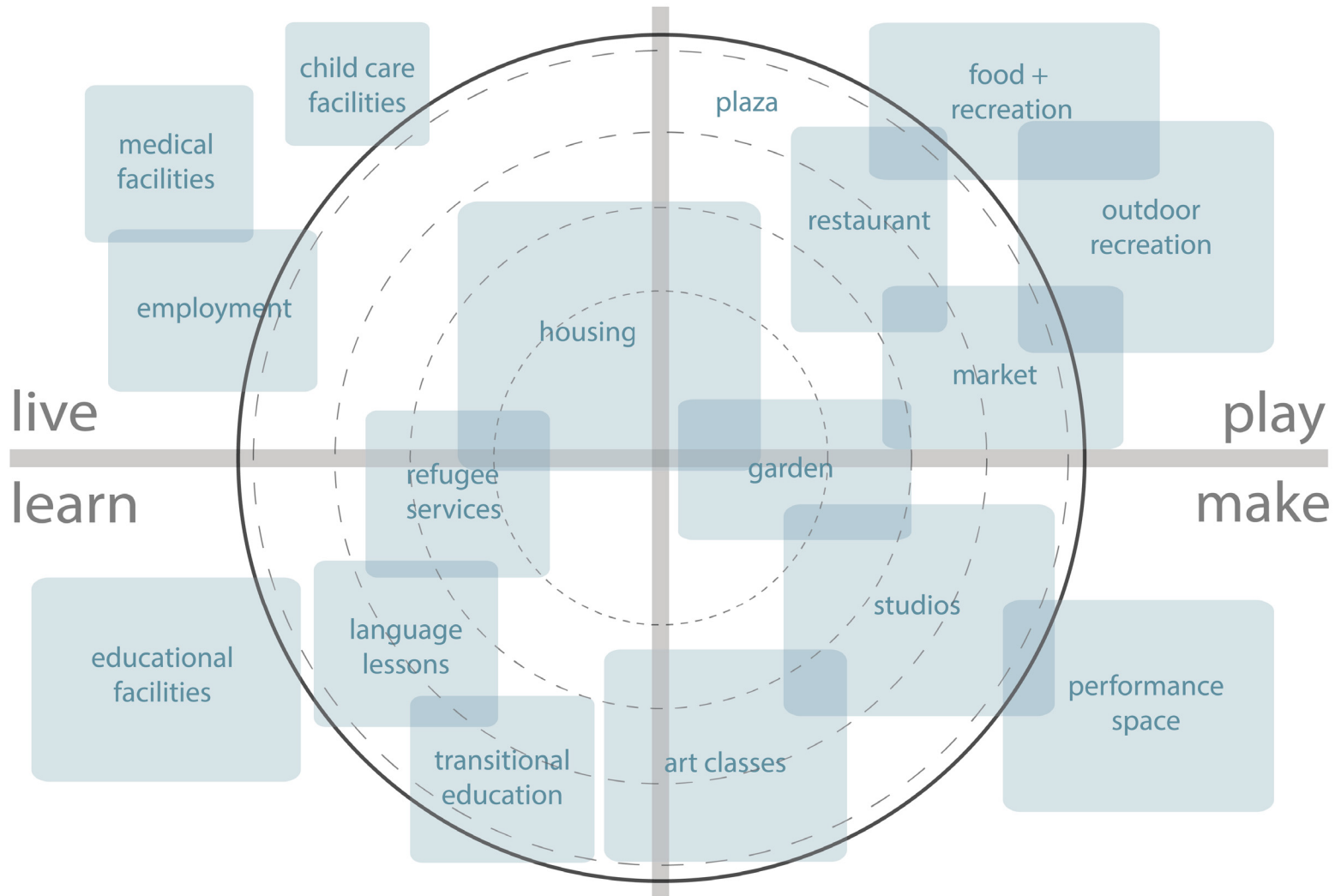


Figure 29: Program development based on privacy and social interactions, primary sources of interaction marked by overlapping programs and circulation spaces in between



The model was distributed on the site to correspond with the surrounding context. “Make”, being the most public program, is placed at the front of the site, along Quinpool Road, with “live” and “learn” lining the sides, bordering on residential areas. The garden is located at the rear of the site where it will receive the most sunlight, and is currently a green space. “Play” connects the site together to create a public centre where people can naturally interact with one another.

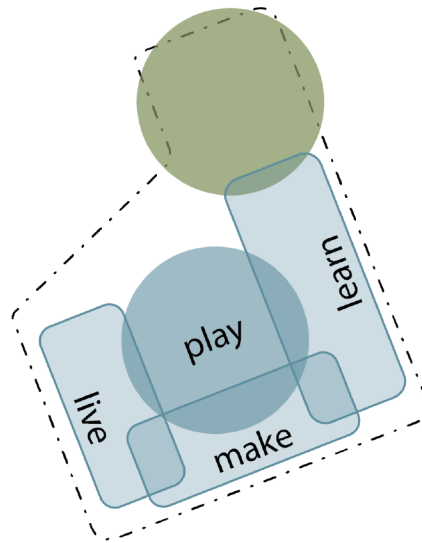


Figure 30: Live-learn-make-play model distributed throughout the site, in response to its surrounding context.

The site was analysed based on its surrounding context, to place buildings where programs can respond to those around, and to allow for natural movement and interactions within the site. Figure 31 is a site plan demonstrating how the buildings are positioned on the site. For instance, residential units are located in the east and west buildings where existing residential areas occur, demonstrating multiple levels to match its surrounding context. The southern most building located on Quinpool, a commercial street, houses public programs such as art facilities, makerspaces and a restaurant and market in effort to continue the active street front. The plaza is located in the middle of all programs to connect the site together, and create a continuous exterior path from one side of the site to the other. The northern side of the site is located in a quieter area, and therefore hosts programs such as refugee services and a public garden. For detailed building floor plans, refer to figures 72-75 in chapter 9.

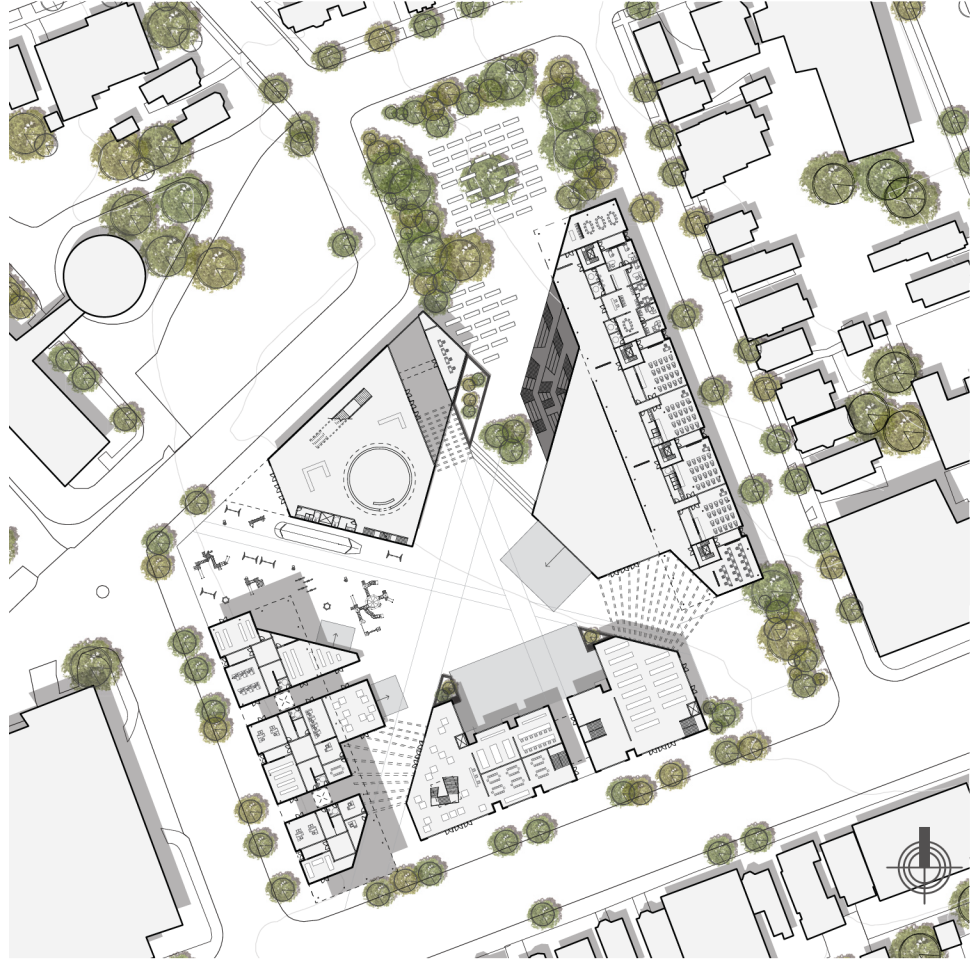


Figure 31: Site plan demonstrates buildings placement in relationship to surrounding context. Base information from Halifax Open Data.

## **Designing within a Community**

When designing a site that is meant to incorporate the needs of the community, not only the residents, it is important to address the community as a whole. Where the site is located, how it is connected to its context, the programs and people it serves, as well as how it integrates the user groups are important factors to consider. *Design for Social Sustainability* by Woodcraft and Hackett is a resource that looks at how sustainable communities are designed and sustained through time. It provides a broad understanding of the elements which should be provided within a community, and how people interact with and individualize these components (Woodcraft 2011, 21-35).

The priority of a community is to provide safe and affordable housing, as a community will then develop if these basic needs have been provided (Woodcraft 2011, 9). The proposed site is part of an existing community, meaning it must build upon what is existing and seamlessly connect to the urban fabric. In order to functionally integrate into the community, four key aspects have been developed to place the proposal in its community. These aspects are: connectivity, transparency, movement and interactions.

The programs are distributed throughout the site in a porous way which allows community members to filter through the buildings, whether on route to an amenity or to seek community spaces. The “eyes on the street” concept by Jacobs will reinforce the inner street system as a place of communication, and as a place to pause, as opposed to strictly a passageway (1992, 56). The relationship each program has to the plaza or community spaces will begin to blur the boundaries of strictly public and private as programs can expand into and retract from these spaces to fit the needs at that time. This design methods seek to maximize the use of spaces by allowing one space to be used for multiple purposes, allowing spaces to change which program they serve.

### **Connectivity**

In order to understand the role a site will play in an existing neighbourhood,

one must first analyze the neighbourhood in its existing context. Jacobs wrote a critical analysis of typical city planning, and proposed ways to create healthy and efficient urban areas, however for the purpose of this thesis the principles will be explored at the scale of the site. Jacobs proposed four necessary physical conditions to create a dynamic urban life: multifunctional neighbourhoods, short blocks and connected street systems, diverse residential areas and a high concentration of people (Jacobs 1992, 3-23). She often emphasizes the desire for street-oriented buildings of mixed used as a way of providing “eyes on the street” for safety (1992, 35).

Jacobs’ methods of urban planning are implemented throughout the design of the site, more specifically in how the people interact with the sidewalks, how the sidewalks interact with the buildings and how an internal street system can be utilized to ensure safety and reinforce interaction and integration within the site. The combination of these conditions helps sustain a diverse population and provide support and amenities for the residents and the community.

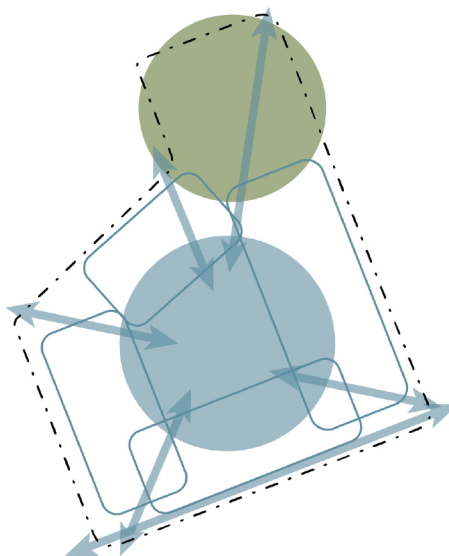


Figure 32: Demonstration of how the site (plaza) connects to the community in multiple ways.

Located on a busy commercial street, the site is most commonly accessed on foot. In effort to connect the site to the existing context, each building should is



located to ensure clear views into and through the site. Distributed throughout the site are natural pathways which connect both the buildings to one another and also the buildings to their surrounding context. When approaching the site from either side, there is a clear view through, in effort to bring people in, and create a sense of connectivity. The building in its context is explored further in figure 61-63 in chapter 9.

### **Transparency**

To draw community members into the site, in combination with connective paths, the building facades utilize transparency to blur boundaries. Typically, buildings are viewed as hard edges/boundaries which begin to define spaces. Due to these edges many public buildings are perceived as private. To eliminate this common misconception, the first floor utilizes transparent facades to eliminate the physical boundary between inside and out. On the street, this invites the public to enter into the buildings, and within the plaza it allows programs to extend beyond their boundaries and inhabit exterior spaces.

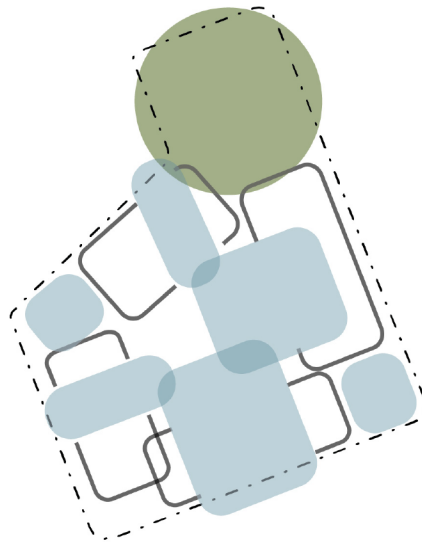


Figure 33: Transparent faces allow community members to be brought through the site, and for programs to extend into the plaza.

Further, to reinforce a public site it is important to eliminate the use of thresholds. The welcome place is driven by community involvement and public interaction in order to naturally bring locals into the site. The use of connective

paths and transparent facades create a site that is visibly open to the public. The elimination of thresholds such as material transitions, doors and stairs create a seamless transition from the community onto the site.



Figure 34: Movement through thresholds (left) makes the user aware of passing space, movement without thresholds (right) provides a smooth transitions from one area to another.

### **Movement + Interactions**

To generate a site that naturally integrates refugees into their new community, the proposal must provide spaces for gathering and interactions. Spaces can be designed specifically to create moments to pause. Through analysis of movement through the site, moments for pause can be strategically placed.

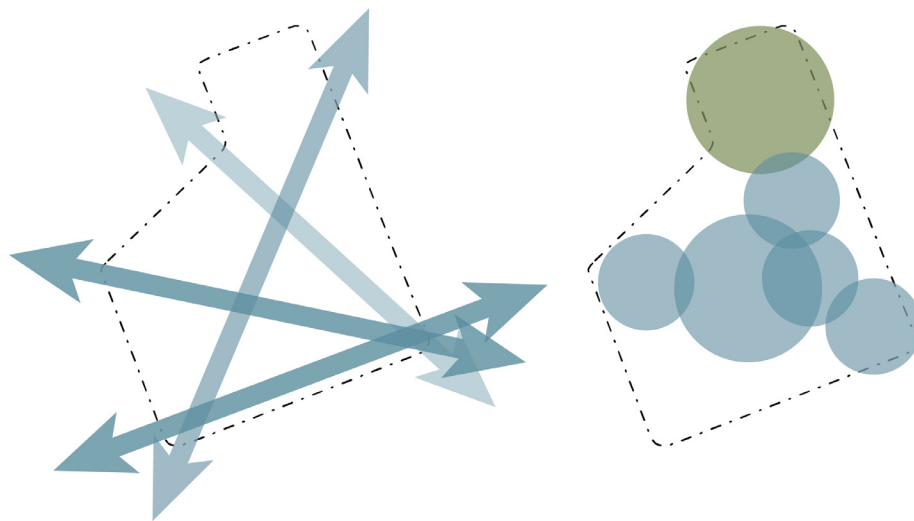


Figure 35: Natural paths and moments for interaction on the site.

The internal street system is designed to incorporate continuous interaction between both the residents and the community members. The spatial design strategically overlaps programs and amenities with public spaces to increase natural interactions and activate sidewalks. The plaza and moments for interaction are

the main source of communication between the residents and the community as a place to gather and engage one another. The exterior space utilizes light, interior facing windows and entrances to ensure “eyes on the street” to generate a safe community space (Jacobs 1992, 35).

The designated gathering spaces such as the habitable stairs, rooftop, playground and public gardens are areas for both the refugees and the community to inhabit and interact, to further reinforce the integration process. For further exploration of these areas, see figures 69-71 in chapter 9.

The community oriented settlement is designed to allow residents and community to interact naturally and continuously, which allows them to become familiar with their environment and ultimately integrate into the community. As noted by ISANS, one of the biggest challenges for relocated refugees is cultural differences (2018). In an effort to avoid social isolation the settlement provides additional amenities, to service both refugees and community members, generating interactions. As demonstrated in Figure 36, residences are designed to reinforce interaction with neighbours by generating shared community spaces both inside and out to create a sense of community and wholeness.

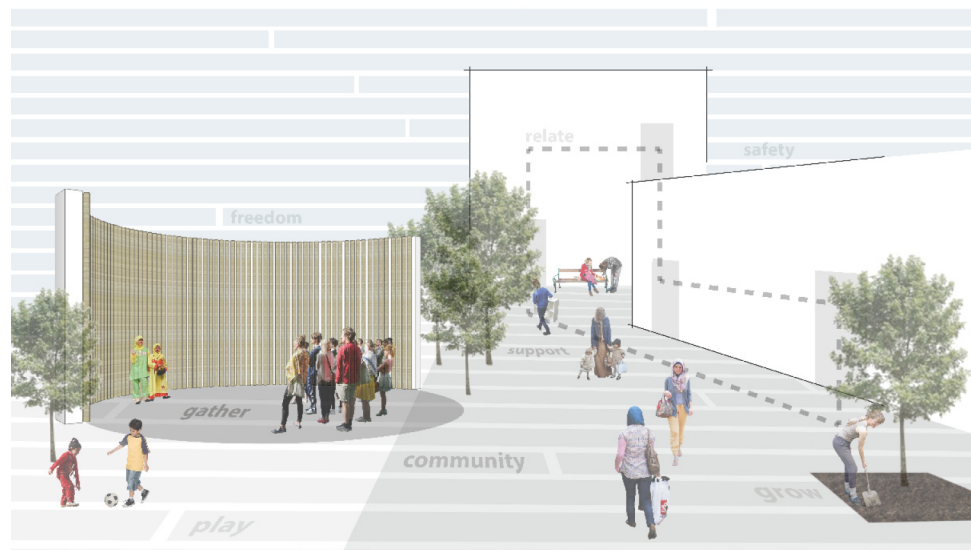


Figure 36: “Wish image” demonstrates a collective community that integrates both refugees and locals in a way which reinforces interaction and communication.

As refugees become familiar with their environment and integrate into a community, the integration process is maintained through continual community interactions. Refugees are encouraged through programs and cultural engagements to return to the welcome place as members of the community to create a continuous integration process.

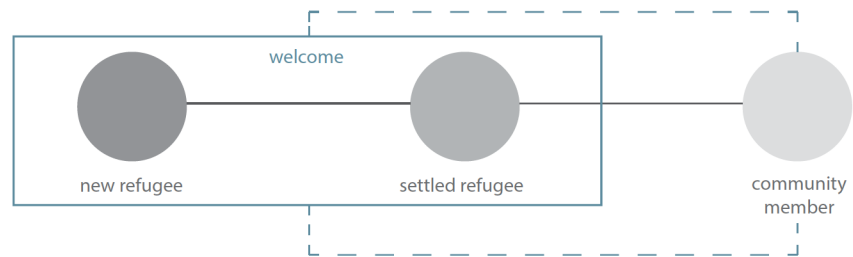


Figure 37: The cycle of refugees arriving to site, settling and integrating into the community. Community members and former refugees are continuously involved and are encouraged to return to the welcome place.

## CHAPTER 6: CULTURE FOCUSED DESIGN



Figure 38: Third of four integration scale, building: social + cultural expression.

### Design for Diversity

Subscribers to the ethnicity theory, conversely, assert that more time and energy needs to be focused on designing places that are reflective of the diverse cultural values and preferences of particular communities. From this perspective, it's erroneous to assume that there is an ideal way of designing and programming a space to attract users. The "best" plan for placemaking is one that results from extensive and continuous community participation and ultimately is flexible enough to accommodate shifting preferences and values over time. (Knapp 2008).

To accommodate the needs of a community that is driven by diversity requires careful consideration in both the design and provided programs. The design should be reflective of the diverse cultures and preferences particular to each user. The most effective design for a diverse community space is flexible enough to accommodate the needs of different users and provide an environment that can be altered to adjust to values through time (Knapp 2008). Talen concluded, "(a)bove all, social diversity requires an environment that is designed for different types of people – people with different needs, interests, tastes, and constraints. This mix, in turn, requires special attention to how people are connected, and whether they feel secure. Design for diversity is largely a matter of being strategic about where development occurs, and what form that development takes" (2008, 109).

This thesis focuses on diversifying an existing community, and therefore places emphasis on public programs and spaces as a way of strengthening the relationship between new and existing community members. By creating shared spaces and natural interactions, refugees can begin to integrate into their new community.

## Cultural Expression

As noted by Talen, social diversity is generated by a diverse group of people with different interests and constraints (2008,109). The welcome place provides a variety of programs that are intended for different user groups. Whether refugee or community member, the needs of the individual must be incorporated into the facility to generate a diverse society.

To be able to integrate new cultures into an existing neighbourhood, the ability to share cultural traditions and expressions allows for natural interactions and communication to occur between user groups. Programs that involve food and art were explored as primary methods of cultural expression, as these hands-on crafts that can be shared without the need for verbal communication.

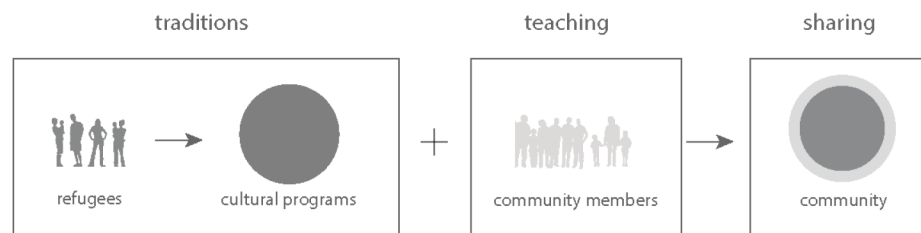


Figure 39: This diagram represents how cultural elements can be integrated into the community to strengthen the concept of integration.

To accommodate cultural spaces and allowance for expression, the site provides multiple spaces for cultural practices to take place. The proposal dedicates the entire main floor of the studios as group spaces for community learning of native crafts and techniques, a second-floor restaurant to share cultural foods and learn foreign methods, and a community garden. The sharing of cultural art and food with the local community will create a natural relationship which reinforces integration of the refugees into the surrounding community. Explored further through section, refer to figure 67+68 in chapter 9.

Community gardening as discussed by Krasny, is a way to foster independence, allow personal expression and create an environment where people can bring their own knowledge and participate with a shared responsibility (Krasny 2012,

11). Jackson, wrote "(c)ommunity gardens, as previous research has found are as much about growing the community and the individuals involved, as gardening itself" (Jackson 2017, 530).

The site proposes community gardens in a location with an abundance of light, which is currently used as a park. It will replace existing community gardens within the neighbourhood that are being relocated, and provide a combination of community and individual plots. Gardening is a meditative activity which refugees and community members can share in and develop relationships through time.

## **Case Studies: Design for Cultural Differences**

### ***Schilderwijk Residence***

The Schilderwijk Residence is a social housing complex in The Hague, Holland, by Alvaro Siza, finished in 1988 (Leoni 2009, 50). The housing blocks were designed to accommodate different cultural requirements. Through the use of strategic design and many public consultations, Siza developed a floor plan that was flexible enough to allow for different occupants/cultures (Leoni 2009, 50). The flexibility was created through placement of walls, doors and public access; for instance the kitchen was divided from the house, given access by 2 doors, allowing one to be for private circulation and the other for public. These methods of flexibility and cultural understanding are implemented into the design of the welcome place dwelling.

### **Individual Recognition**

To accommodate for relocation of refugees is not only to provide protection and amenities, but to acknowledge the challenges and trauma they have faced and to provide a place for healing and individual growth. The welcome place provides tranquil spaces such as the community garden and art facilities with both public and private elements which allow users to heal independently, or with the support and collaboration of others. In addition to self-healing, the facility houses a small doctor and psychologist office for the support of all refu-

gees who may not speak English well enough to seek external services.

Included with refugee services, the building provides a refugee memoriam, filled with stories and names of past and present refugees who have stayed at the welcome place. The memoriam acts as a hearth of the welcome place, as a celebration of success and an element to return to after departure. The memoriam acts as a display for all community members to become aware of the world refugee crisis, and to acknowledge and appreciate the welcome place as a relocation centre for refugees in their community. These spaces are explored further in figure 67+68 in chapter 9.



## CHAPTER 7: THE REPEATABLE DWELLING



Figure 40: Last of four integration scales, dwelling: adaptability + individualization.

### **Dwelling Typology**

*Modern Housing Prototypes*, written by Roger Sherwood, analyzes housing typologies and explores different examples at how they can be implemented (1978, 3). The unit typologies that are typical among multi-unit dwellings have been thoroughly analyzed to demonstrate how they function independently, the different variations that could occur and how they units can function when combined. This framework of analysis will then be used to understand precedent studies, and how the basic unit has been used, modified and specialized for that dwelling. Figures 41-43 demonstrate the three basic unit types among high density complexes that could be utilized on the site (Sherwood 1978, 3).

Each housing typology is analyzed based on its basic orientation and common core locations (core being kitchen, bathing and grounding elements). The units are then explored through how they interact with one another, by way of shared circulation. Finally, different layouts are proposed for how to orient the units within the floor of a building. The proposal seeks to maximize the perimeter space, to allow for natural light and an outdoor environment, in addition to creating a central core that reinforces interactions amongst unit residents.

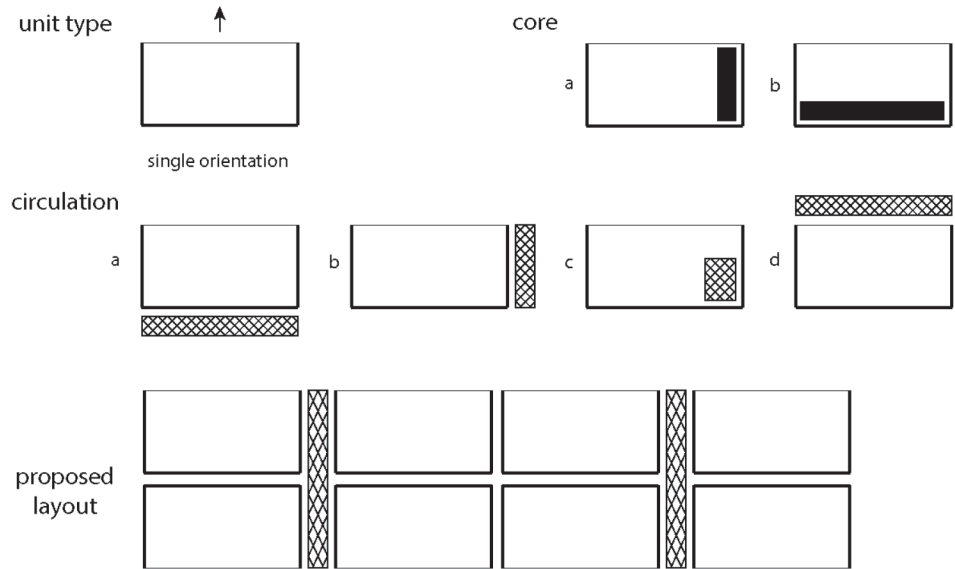


Figure 41: The single oriented unit provides one exterior wall and can be organized to group four units together with one access point (Sherwood 1978, 3).

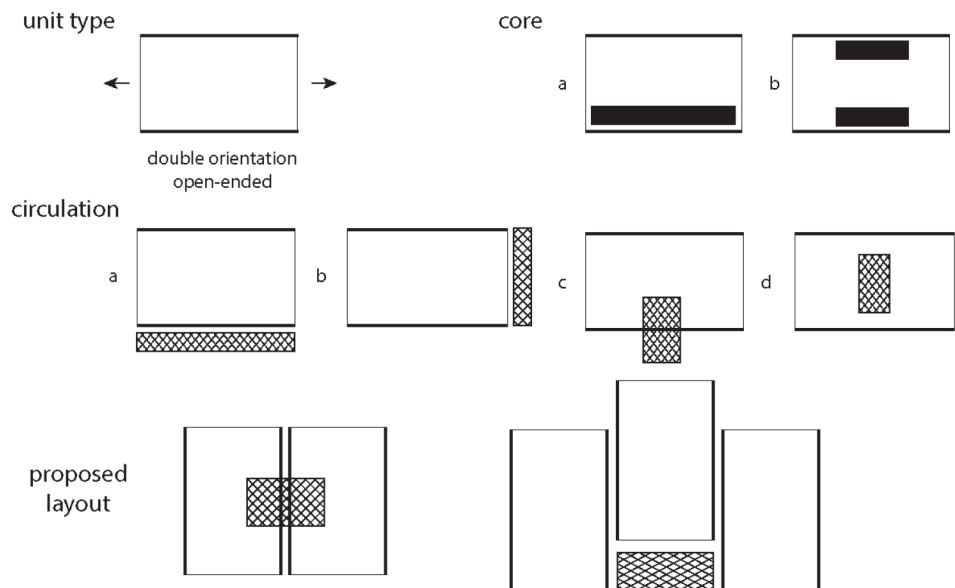


Figure 42: This double oriented unit (open-ended) provides two exterior walls on either end of the unit. This type creates challenges for providing circulation paths that to lead to multiple units (Sherwood 1978, 3).

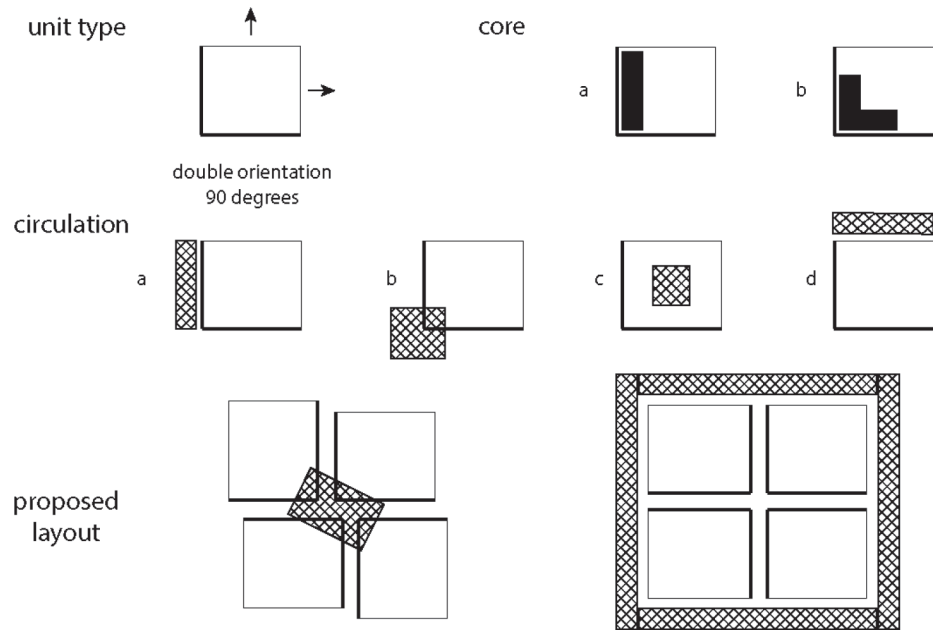


Figure 43: This double oriented unit (90 degrees) provides two exterior walls adjacent to one another, which allows units to act as a corner and be connected through circulation to multiple units (Sherwood 1978, 3).

## Case Studies: Social Housing

### *Tempelhof Airport*

The Tempelhof Airport was previously used as the Nazi Airport in WWII, but was recently transformed into one of Europe's largest refugee camps in 2015. In 2016, approximately 85,000 refugees entered Germany (Howarth 2016). This temporary refugee housing was developed to house up to 7000 refugees at one time (Howarth 2016). Architectural interventions were made to maintain the structure of the existing building while constructing temporary housing facilities within. The hanger was subdivided into sections, and the sections were then again divided to house families of 10 people (Howarth 2016). While 700 million euros were invested in this project, it provides only the basic physical needs of shelter without any opportunity to integrate into society (Howarth 2016). Interviewed residents commented that they have no programs or activities provided and were often bored (Howarth 2016). In addition to boredom, the empty time and spaces remind them of the trauma they experience and made it difficult to mentally recover.

The design was studied to determine how minimum standards can be met while allowing for the maximum number of residents to be accommodated. The addition of amenities and programs in this typology will allow integration with the community to occur and provide a place for growth and healing of individuals.

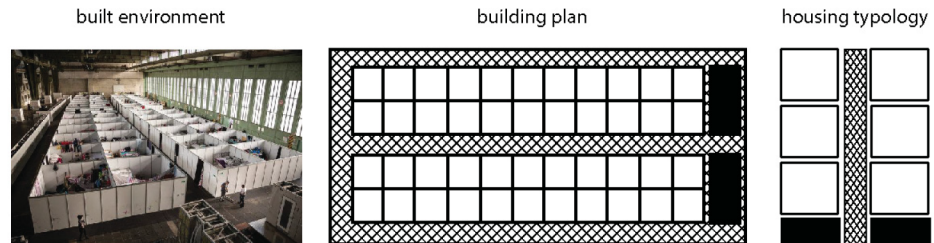


Figure 44: Tempelhof Airport Refugee Housing was analyzed based on an independent dwelling types with removed cores and perimeter circulation (Howarth 2016).

### ***Centre Village***

The Centre Village designed by 5468796 Architecture in Winnipeg, Manitoba, is a social housing complex used to generate natural interaction and maximize space and density within a site (5468796 Architecture 2010). The spatial design utilizes central courtyards to reinforce residential interactions that would not normally occur with the placement of entryways and shared staircases. The openness of the courtyard is intended to enhance community interaction as the public is encouraged to filter through the site. The creative method of distributing the modules allow units to maximize space and create a repeatable pattern.

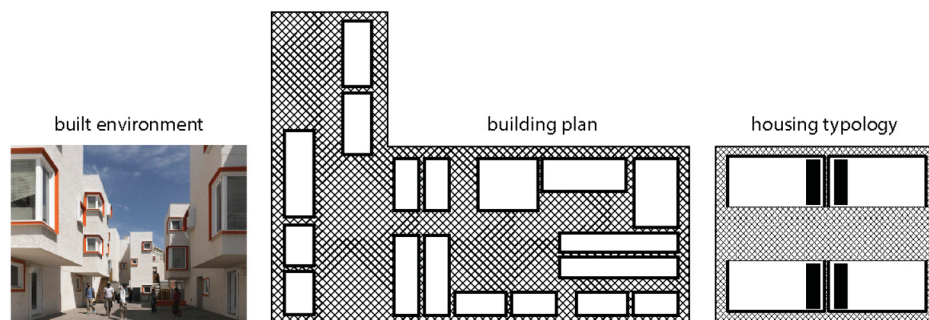


Figure 45: Centre Village was analyzed based on a single oriented unit that is dispersed throughout a social housing complex. The circulation not only provides access but also additional community space (5468796 Architecture 2010).

Unfortunately, the design is highly discredited as it unintentionally created dan-

gerous alleys and unsupervised spaces that are located in a poor area of the city; thus, the courtyards are known to house criminal activity and be generally unsafe. The awareness of the design intentions in combination with the reality of how the site was inhabited is an excellent resource to analyze and critique. The careful attention to the creation of public spaces and spatial interactions is a successful principle, however, should happen in combination with programmed public spaces and an internal street system that allows a natural flow of people through the space, not directed to a dead end.

### ***Nemausus***

Jean Nouvel's housing complex was designed to create affordable social housing that could provide residents with high-end features and communication (Nouvel 1987). The central staircases provide public access to all units within the complex, while the larger exterior galleries act as a place to gather and connect with neighbours. Each unit is designed with industrial sliding doors to completely expand the unit onto the exterior galley (Nouvel 1987).

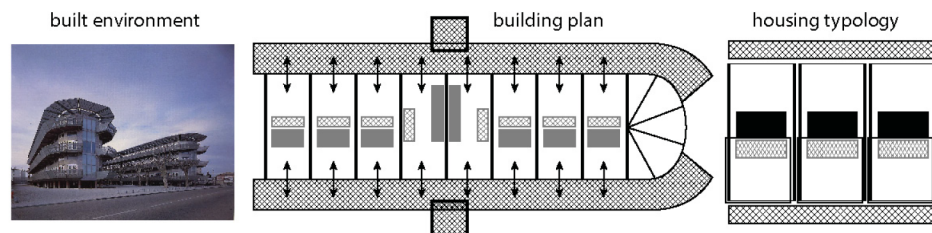


Figure 46: Nemausus was analyzed based on a double oriented unit type that allows circulation to flow around the perimeter and create a social space for interaction (Nouvel 1987).

This precedent is successful in providing public spaces for residents to interact, while providing the opportunity to blur edges between interior and exterior on a residential scale. While these methods have been proven successful, the implementation of public spaces on the exterior may not be the most effective method within Halifax, and the multiple levels limits the interaction to strictly residents, not community members. This method however, of both creating central spaces and blurring the edges of units is extremely successful and should be replicated on the Halifax site.

## **Designing the Module**

To design a transitional dwelling for refugees to inhabit for one to three years upon relocation until their departure into an independent dwelling, requires a new dwelling typology. This dwelling must be designed to suit the constantly changing needs of the refugee, as well as be adaptable to different sites within Halifax.

The dwelling is designed as one module that can be repeated in various layouts to create a building suitable for the various sites. By creating one module that is suitable for a typical family, it can then be replicated in different ways to accommodate different site restrictions, without the need to redesign the entire complex. The module is designed to suit the specialized needs of a typical refugee family, to accommodate restrictions such as number of occupants, and cultural restrictions. The module is a fixed unit that retains a constant plumbing and circulation core. It can be repeated and altered to suit the desired number of units per site and adjusted to suit desired orientation.

The module utilizes the double oriented unit - 90 degrees type, which maximizes the units exposure to exterior walls and windows. It allows the circulation access to be combined for four units per floor, yet be altered for different sites if necessary. The flexibility of the unit allows public spaces to be weaved into the building design to further reinforce community interactions and thus integration.

Additionally, the unit layout is designed to accommodate rotations of the unit around the circulation core, and even a mirrored layout, while still retaining a vertical plumbing and circulation connection. The variety of options allows the module layout to be customized for each of the seven Halifax sites.





Figure 47: The building model demonstrates the rotated module around the circulation core, with continuous vertical plumbing cores anchoring the units. Each floor is a mirrored plan of the floor above/below.



Figure 48: The building model demonstrates the repeatability of the cluster, in effort to create a long linear plan to best suit the proposed site.

For this site, the module is repeated to create two buildings for dwelling. Figure 49, (explored in further detail in chapter 9) demonstrates a further breakdown of how each floor is organized. Each building utilizes an organization which creates a central circulation core, accessible to four units per floor. One in every eight modules is dedicated for community space which can be utilized for gatherings and/or daily prayers.



Figure 49: Floor plans are composed of four unit clusters (four units rotate around one circulation core, per cluster) that are connected by an exterior public patio. Alternating floors are mirrored plans, while retaining continuous plumbing and circulation cores.

Each alternating floor is a mirrored plan, which creates fluctuating exterior facades, while retaining continuous plumbing cores and structure. The circulation core is repeated three or four times, connecting the units to one another with an exterior public patio.

### Addition of Exterior Spaces

Each patio is accessed by four units and encourages interaction and support among neighbours. In addition to the public patio, each unit also has access to a smaller private balcony (two units per balcony) for reading or relaxation. The addition of two exterior spaces helps to expand the unit. By giving residents access to the exterior, they can become accustomed to the climate. It also reinforces a sense of community and sharing between residents in the building.





Figure 50: Each unit has access to a private balcony (two units per) and a public patio (four units per).

### Material Construction

The construction of the module is designed to be a repeatable pattern that can adapt to different orientations and users. It utilizes a standard repeatable frame, that can be filled with various unit designs, and a facade organization to suit the needs of each specific unit.

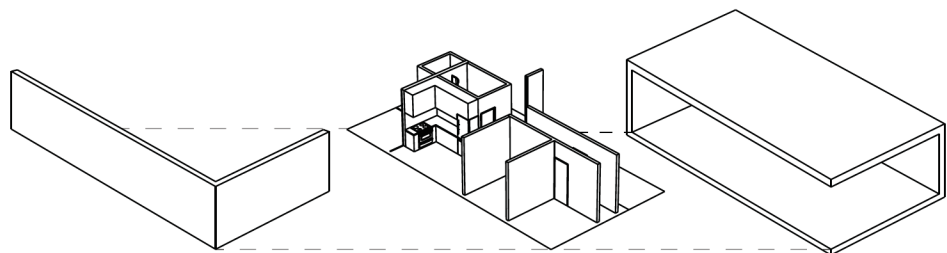


Figure 51: The module is comprised of the facade (left), an interior floor plan (middle) and a concrete core (right).

Each unit is composed of a concrete frame (floor, ceiling and two interior walls), with one of two unit plans (or a community plan) inserted within. The exterior

façade utilizes one meter panels of either metal or glazing. Each panel can be individualized and changed to suit each unit. Additionally, lined on the exterior façade are wooden shades that can slide to expose or provide additional privacy for the unit. The wooden shades are an additional measure of privacy variation, as they can be moved to create transparency or privacy within the unit. They also generate uniformity from the exterior as they rest on the façade, creating a uniformed edge. The wood on the residences relates to the community spaces marked with wood on the site plaza. For unit material break down see figure 80 in chapter 9.

## CHAPTER 8: ADAPTABILITY OF DESIGN

### Individualization

Each refugee has an individual path to integration, therefore a building which hosts the refugees during this time must then adapt to suit each refugees. Polyvalence is a design method which is utilized to allow the building to change and evolve through time. As it serves as a temporary housing solution, the refugees change every few years, meaning the building must adapt to suit the spatial, cultural and individual needs of each refugee at that time.

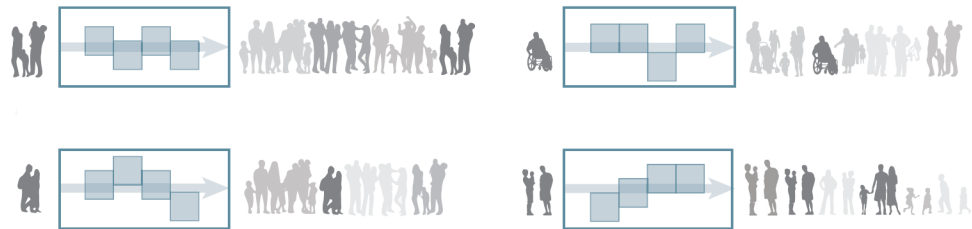


Figure 52: Each refugee has an individual path to integration; the settlement should adapt to the needs of each refugee at that time.

### Adaptation Theory

Polyvalence is an architectural term, used and described by Herman Hertzberger. The article *Polyvalence* written on the Diagoon Housing in Delft, 1970 searches to define polyvalence, and how it differs from multifunctional or adaptable designs (Hertzberger 1970). He demonstrates through text, and interpretation that multipurpose design is made to suit the needs of different predetermined programs. Predetermined being the keyword, is how multifunctional spaces differ from polyvalent. Polyvalent spaces are made to be adaptable and changeable through time, not for any specific program or quality but to change into whatever the needs are at that time (Hertzberger 1970). "Yet we should not simply strip architecture of all its qualities and meanings, leaving only a blank slate, without designing it so that it has precisely that competence to absorb (and also reject) all those qualities and meanings" Hertzberger noted and added "instead of leaving out as much as possible, polyvalence entails introducing the greatest number of spatial conditions that can play a part in every situation whatever

the function, and can simply be put to use on each new occasion" (1970, 108-9).

Hertzberger uses the precedent Diagoon Housing to demonstrate how the dwelling consists of four equally stacked living units that can be dedicated spaces based on how the users see fit. These principles are utilized both within the design of the dwelling, as well as among the public programs and their interactions with adjacent spaces. As the residents change on a yearly basis, the units must adapt to the needs of the current family, yet be flexible enough to address the needs of future users. Public programs will be designed to suit their current needs and view adjacent spaces as places of expansion should the programs change or evolve in the future.

## Case Studies: Adaptable Buildings

### *Dapperbuurt Housing*

This Amsterdam housing complex was designed in 1898 by Margret Duinker and Machiel van der Torre, in a way which allowed users to individualize their spaces (Piloto 1997, 36). Each unit contains a central core which contains the kitchen wall, a bathroom (subdivided into two rooms) and an access hall. The space around the core is one large space which can be subdivided into as many as four smaller rooms. The dividing panels are stored within the walls of the core and can be stored away or revealed as the user chooses.

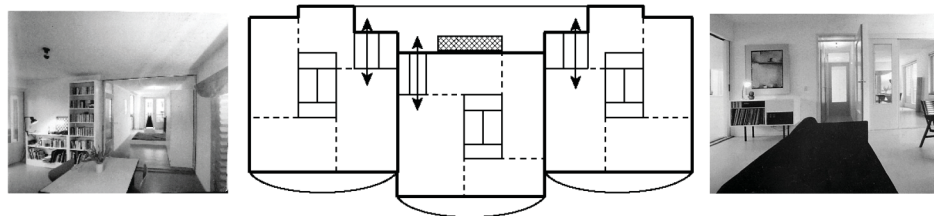


Figure 53: Dapperbuurt Housing provides individualized interior spaces by the use of stored walls, allowing the individual to customize their space (Piloto 1997, 36).

This housing complex is designed to allow users to individualize their dwelling to suit their needs. The ability to modify each individual unit is extremely successful by providing all means within the unit itself and having the dividers as a temporary unit. The core is in the centre of each unit, allowing for interior walls

to be flexible in dividing spaces or retracting to be stored within it. The idea of subdividing spaces is implemented into the design of each dwelling to address the constantly changing needs of the refugees who will inhabit the units. The unit types are successful in providing sufficient lighting and access to exterior, however they lack a social aspect and the ability to expand into the exterior.

### ***Villa Verde***

Villa Verde is a community of public housing design in Chile in 2016, by Architect, Alejandro Aravena. The community is one of several that Aravena has designed which construct “half homes”. There are 484 incremental houses constructed in rows that are viewed as half houses, for within each housing frame half of the house is designed and built, while the second half is left open, ready for future expansion (Aravena 2012). This approach is used to provide immediate low-income housing for tenants, with the ability for tenants to expand independently in the future.

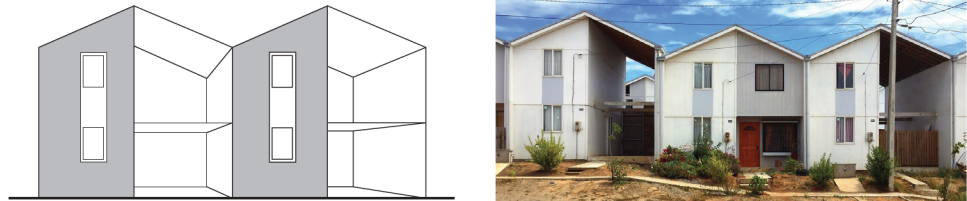


Figure 54: Villa Verde is a building complex that provides residents with half a house, and the framework to expand into the second half in the future.

While many other case studies have viewed adaptable spaces strictly within the interior of a building, Villa Verde is an excellent precedent of a community that creates adaptable spaces that expand beyond the initial dwelling. It allows individuals to be invested in their homes and create their own “sense of place”. The growth of each individual dwelling also reinforces the growth of the community, as residents have a collective goal to develop the community.

### **Implementation into Design**

Figure 55 was an attempt at creating adaptable spaces within the dwelling. The images demonstrate polyvalence in the design of residential spaces by being

able to create, change and modify spaces and their boundaries. The concept was further implemented into the design, as seen in chapter 9.



Figure 55: Interior partitions in a dwelling to allow for the individualization of spaces.

The design of the units is developed with polyvalent principles, to accommodate the needs of the current refugee. As refugee's transition into the community every one to three years, the unit must adapt to many different families. With refugees each coming from different cultures, the units must accommodate different cultural requirements.

The module is rotated around the circulation core, and therefore varies in its orientation on the site. The unit can incorporate one of two different interior designs, varying depending on the orientation of the unit being directed towards a private or public view; each unit is either primarily facing a private balcony, or opens to a public patio (shared by four units). The plans are adjusted to direct bedrooms and private quarters towards private views, while retaining access to both the patio and balcony from each unit. Each kitchen and bathroom is fixed on the plumbing core that is continuous throughout the structure. The plans are explored further in figure 81 in chapter 9.

The top five origin countries of refugees relocated to Canada in 2016 are; Syria, Eritrea, Iraq, Congo and Afghanistan (Statista 2018). Refugees who are relocated from these locations, often require different amenities, or dwelling restrictions based on their cultural influences.



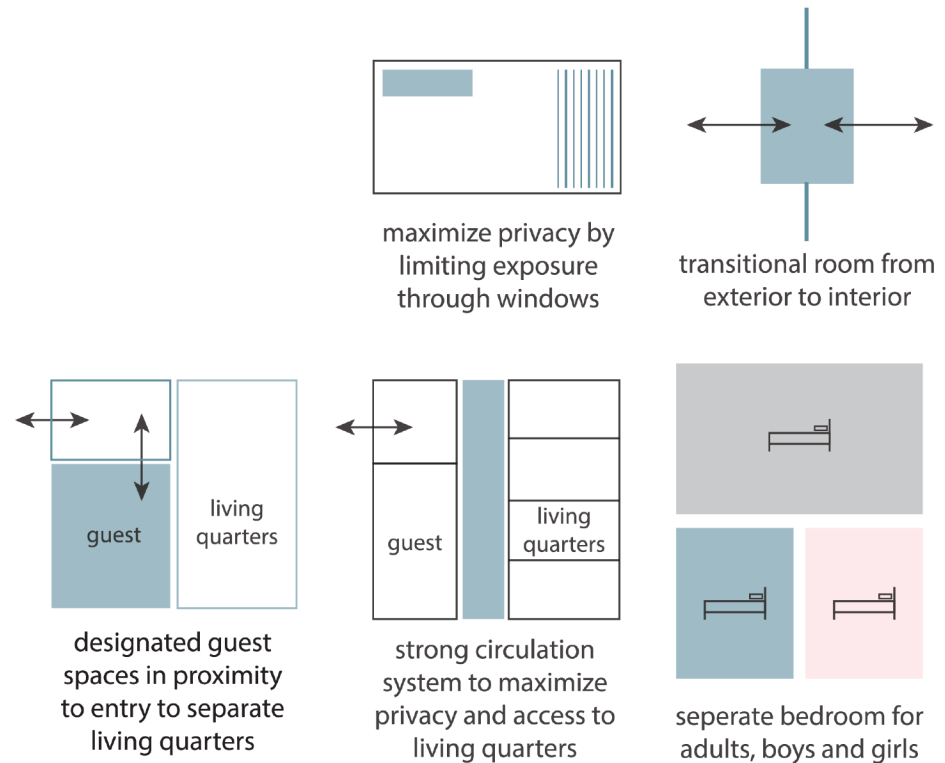
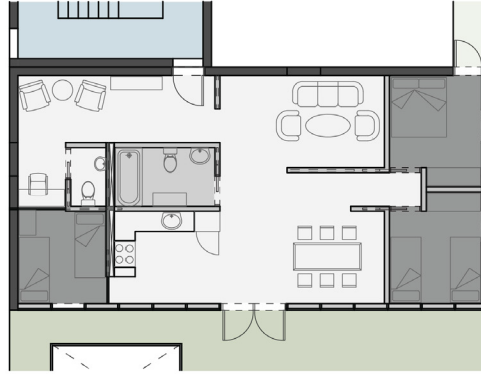
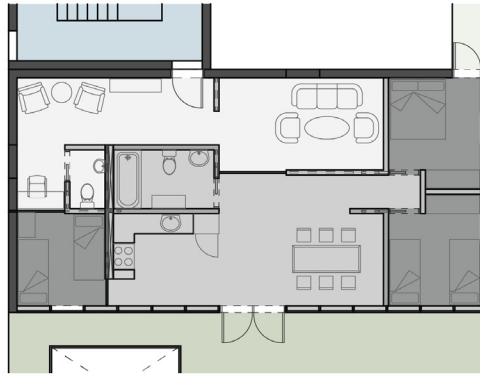


Figure 56: The diagrams demonstrate common Middle Eastern dwelling accommodations and requirements (Omer 2014).

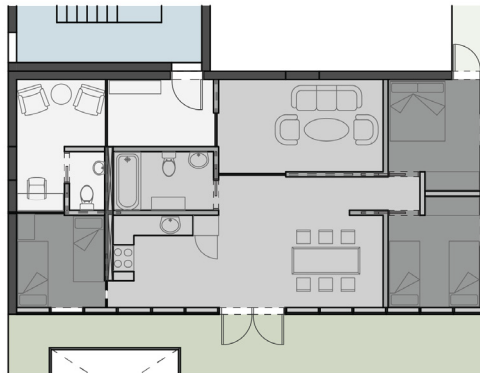
For instance, in many middle eastern cultures, it is common to have a private entry and guest space that is visually separated from the living quarters of the house (Omer 2014). To accommodate this division, and many other scenarios related to privacy, there are various walls that can be hidden or exposed, based on the desires of the current user. The movable walls allow for the typical dwelling unit to be suitable for every refugee and any cultural restrictions they may have. Figure 57 demonstrates the variation in privacy levels that can occur within each unit. For maximum transparency all walls remain concealed, and for maximum privacy, the entry, living and guest quarters can be separated from the kitchen, bathroom and bedroom circulation.



**maximum transparency**  
open floor plan | private bedrooms



**moderate transparency**  
separated service spaces | private bedrooms



**minimum transparency**  
designated entry + guest space | private living quarter



 scale of privacy (high-low)

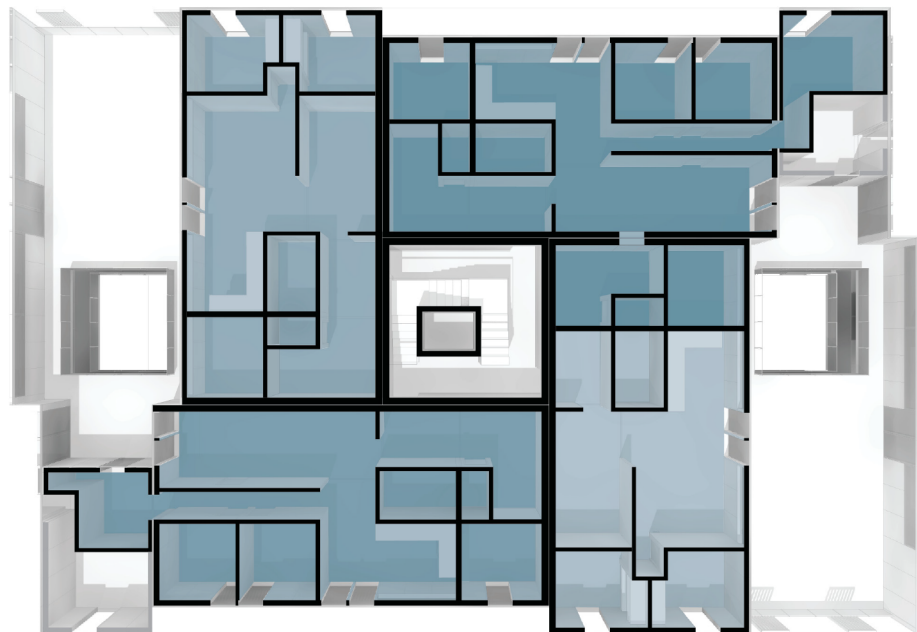
Figure 57: Each unit can expose or conceal walls to suit the desired privacy/transparency level of the current user.

To further explore interior conditions of a dwelling, a diorama model was created with interior wooden partitions, to explore the relationship between interior and exterior. The partitions are movable, to create a variation in levels of privacy. Figure 58 demonstrate different positions the partitions may take, and the privacy level they provide.



Figure 58: Diorama scene demonstrates different variations in privacy levels, with the repositioning of interior wooden shades.

In addition to varying cultural requirements, each unit must accommodate a variation in occupant sizes. The average refugee family size for the five countries previously mentioned, is 6.14. The unit is designed to accommodate two to three bedrooms or six people. Should a family of eight require more space, a portion of the unit can be transferable from the adjacent plan and be utilized as additional square footage – then suitable for eight people. The remainder of the adjacent unit is then suitable for four. Additionally, to connect each cluster together, a “filler” section of two bedrooms is added, one bedroom accessed from either side. Making this unit the largest with five bedrooms, suitable for ten people.



### adaptability in habitation





	2 bedroom   77 square meters   $\pm$ 4 people
	2 - 3 bedroom   98 square meters   $\pm$ 6 people
	3 - 4 bedroom   112 square meters   $\pm$ 8 people
	4 - 5 bedroom   133 square meters   $\pm$ 10 people

Figure 59: This diagram demonstrates the habitability of the units, and how area can be transferred from one unit to the next, if necessary.

## CHAPTER 9: DESIGN PROPOSAL

This thesis aims to strengthen the relocation of refugees to first world countries by developing a series of welcome place settlements, as a way to provide a transitional housing solution for refugees as they phase from arrival to amalgamation into their new community.

The design was broken down into four scales, each demonstrating a different method for integration. The urban scale seeks to create dense and diverse neighbourhoods by introducing a decentralized system of distribution to locate seven proposed sites throughout the Halifax peninsula. For design strategies at the urban scale, refer to chapter 4. The community scale utilizes existing amenities to expand the site beyond its boundaries, and generate a safe and supportive environment that encourages interactions between residents and locals within the community. The building scale reinforces diversity and integration through the use of public programs. It creates an environment that celebrates cultures and allows refugees to express their heritage both individually and within the community. Finally, the dwelling is designed as a repeatable module that can be configured to suit the needs of each specific site. As the residents change every one to three years, the dwellings are also adaptable to suit the spatial, cultural and individual needs of each refugee at that time.

The proposal was generated based on principles and methods that were explored at each scale, as expressed in chapters 4 through 8. The following figures demonstrate the completed thesis project. The drawings and models were completed to express the thesis intentions and demonstrate the methods that were used.



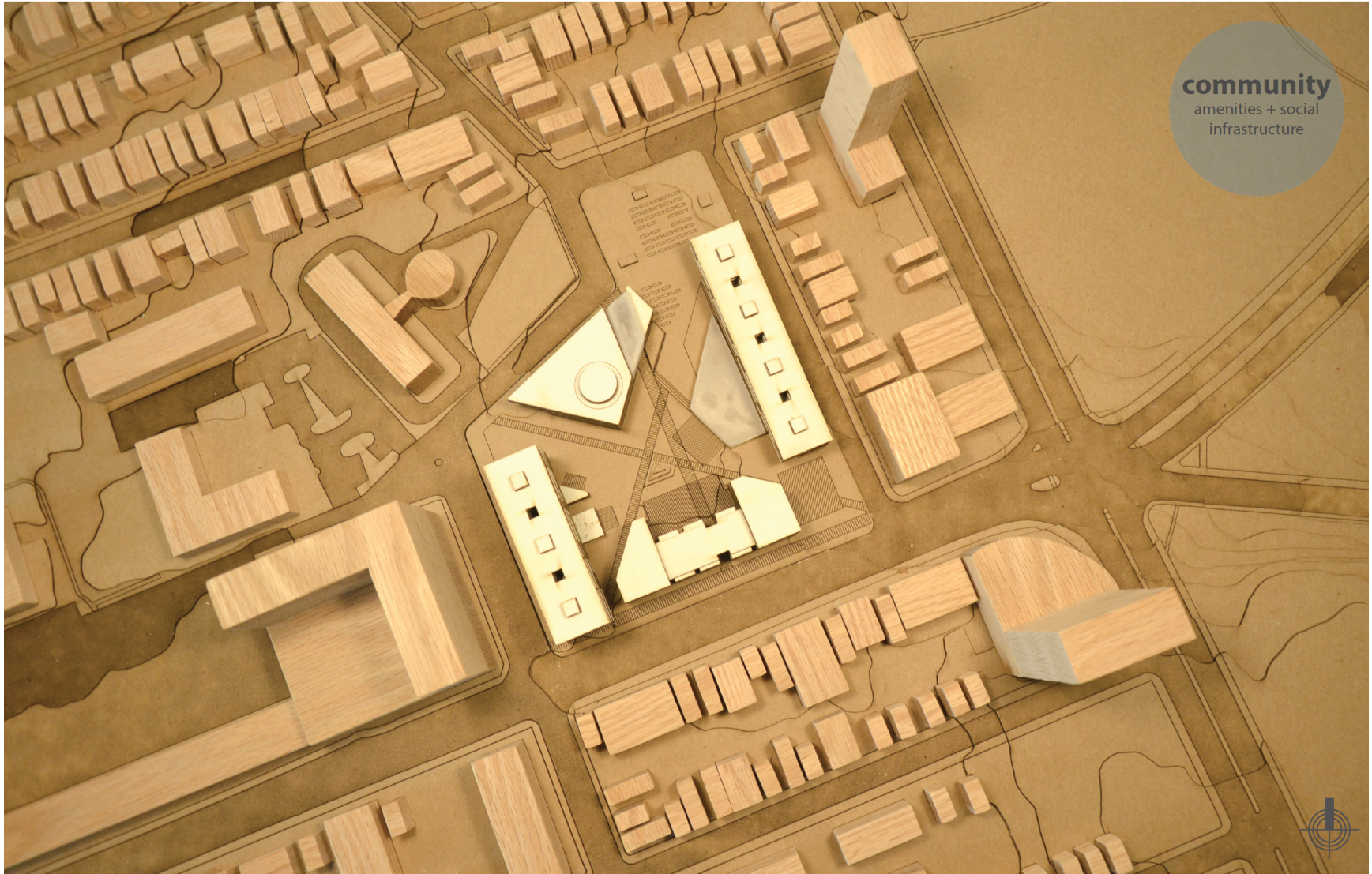


Figure 60: The site model demonstrates the proposed buildings, and their connection to the surrounding community.





Figure 61: Approaching site view from west Quinpool Road demonstrates a continuous street front with six floors of residential units to balance the large adjacent forms.



Figure 62: Approaching site from east Quinpool Road demonstrates a view diagonally through site into the plaza, with a community gathering space located on the front corner of the site.



Figure 63: Approaching site from north Windsor Street with a view of the refugee services building, looking into atrium and through to plaza.





**building**  
social + cultural  
expression



Figure 64: The site plan demonstrates connectivity, transparency, movement and interactions in building placement and design. Base information from Halifax Open Data.

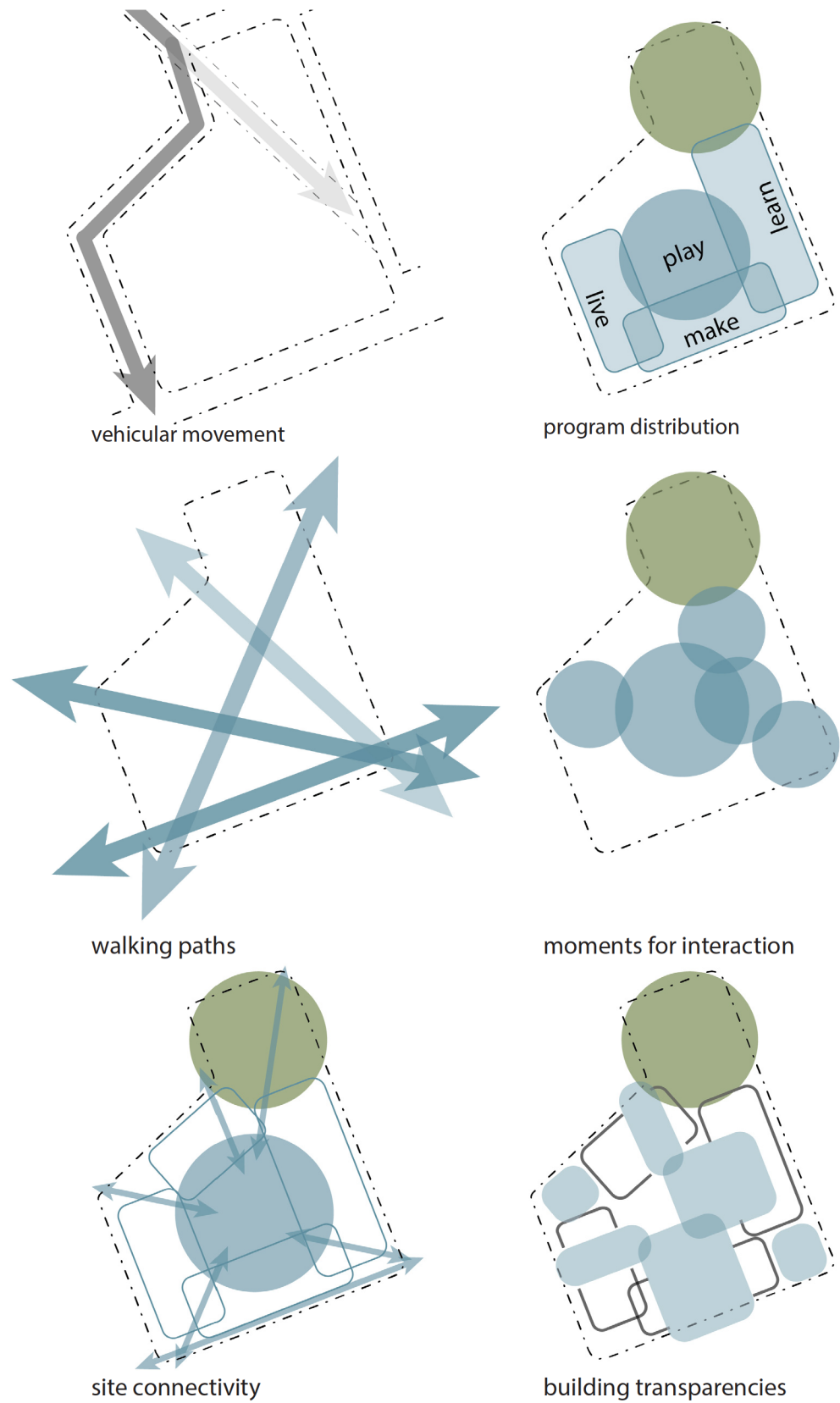


Figure 65: Site diagrams demonstrate design intentions regarding site organization, connectivity, transparency, movement and moments of interaction.

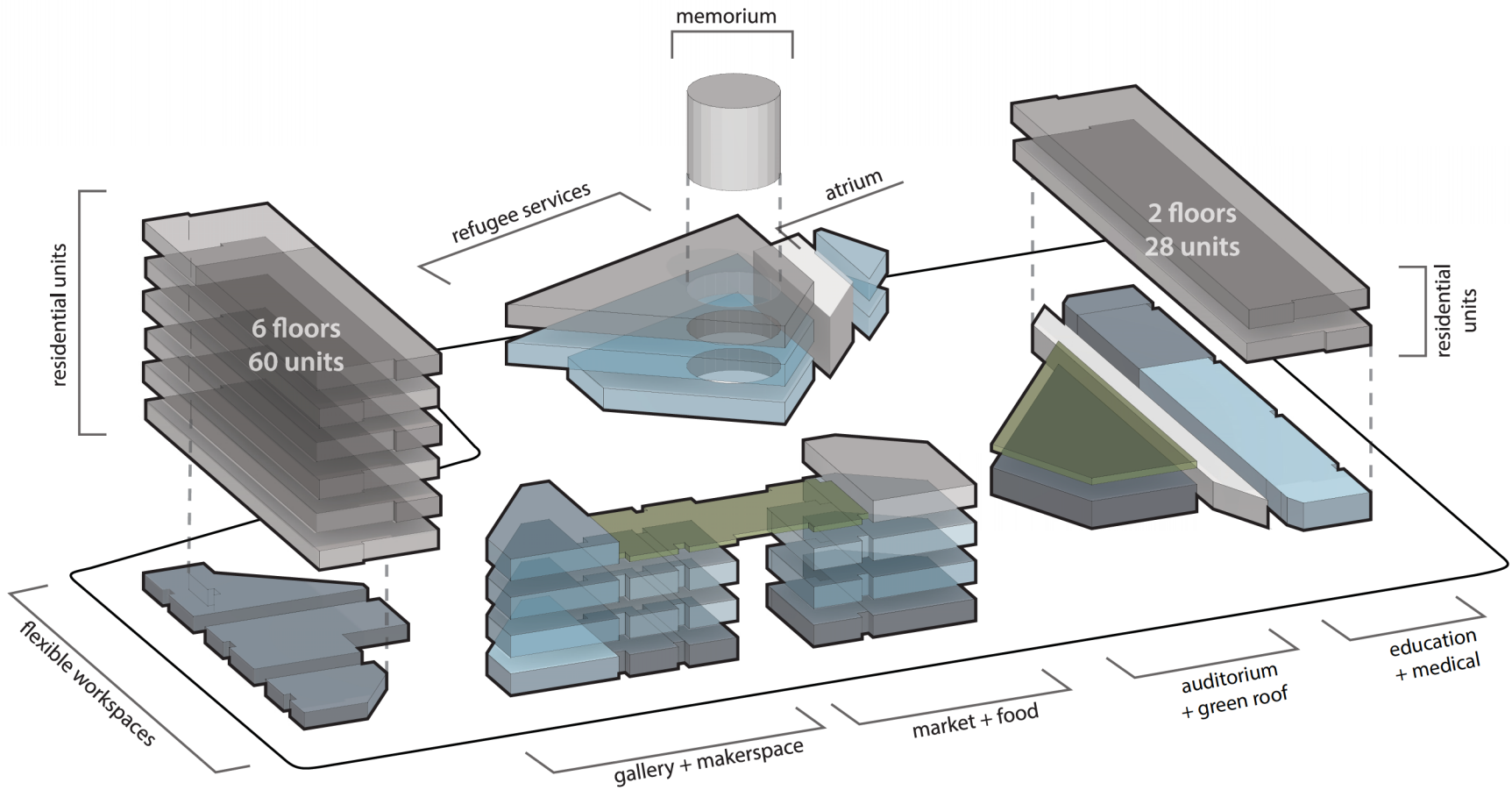


Figure 66: Programs are distributed throughout to create a mixed use site that engages both residents and community members.



Figure 67: North/south section demonstrates public art gallery, community plaza and refugee services integrating people into the site, creating natural interactions with different user groups.





Figure 68: East/west section demonstrates two residential buildings joined with a public plaza; community members interacting by way of natural paths, habitable spaces and community projects.



Figure 69: The plaza and habitable staircase provides a space for natural interaction and a mix of user groups.

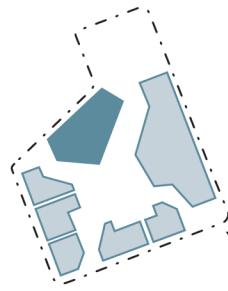


Figure 70: The habitable rooftop provides a space for different user groups to interact while overlooking the central plaza.



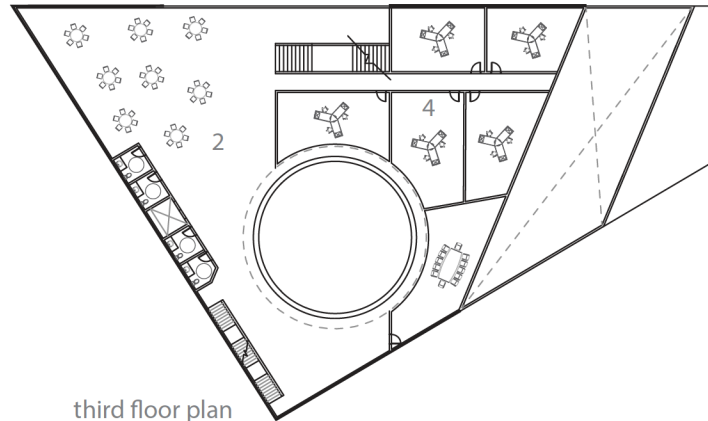
Figure 71: The plaza provides movement and moments for natural interactions and generates a mix of residents and community members inhabiting the spaces.



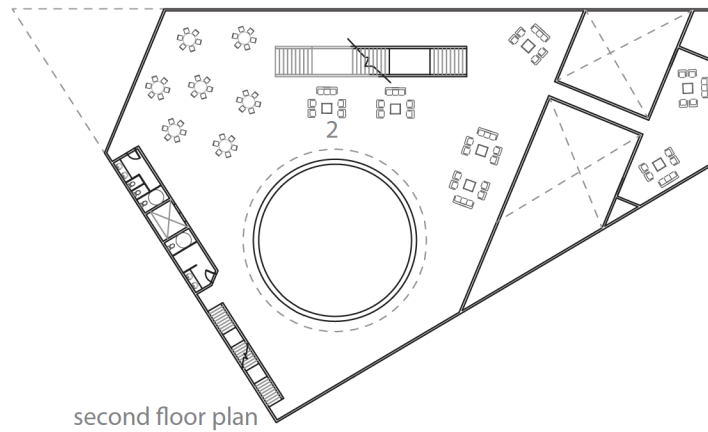


## learn | play - north building

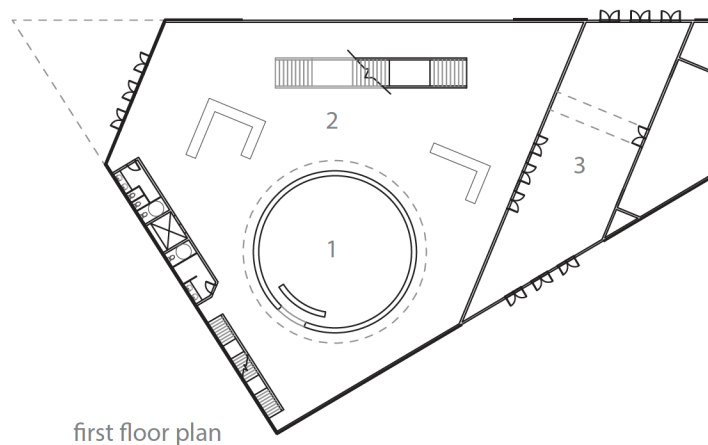
- 1 - refugee memoriam + prayer
- 2 - refugee services | general access
- 3 - atrium
- 4 - private | ISANS offices



third floor plan

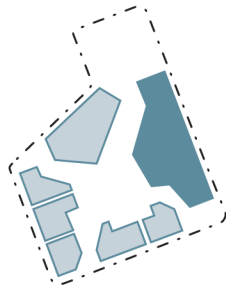


second floor plan



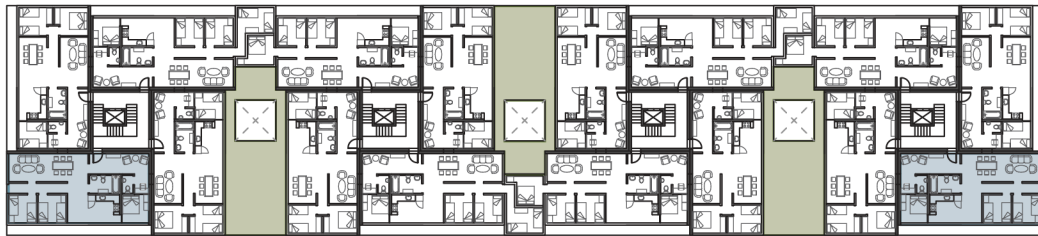
first floor plan

Figure 72: The northern-most building consists of refugee services and a memoriam to remember and celebrate refugee stories, in addition to a large atrium that connects the exterior of the site into the plaza.



## live | learn - east building

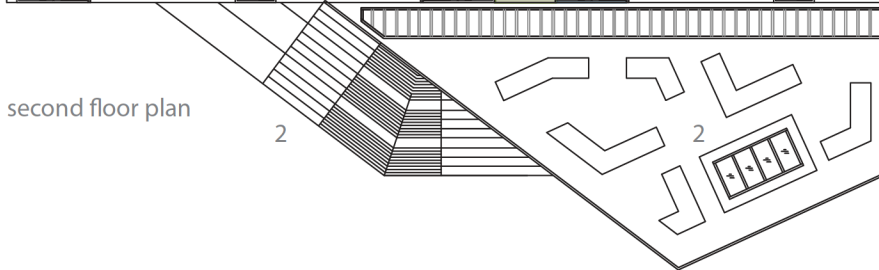
- 1 - auditorium | flexible space
- 2 - habitable exterior stair + rooftop
- 3 - conference room
- 4 - health + wellness services
- 5 - learning spaces | classrooms
- 6 - residential access



third floor plan



second floor plan



first floor plan

Figure 73: The eastern-most building consists of learning spaces and health services, with a large atrium and habitable stairs and habitable rooftop, in addition to two upper residential floors.

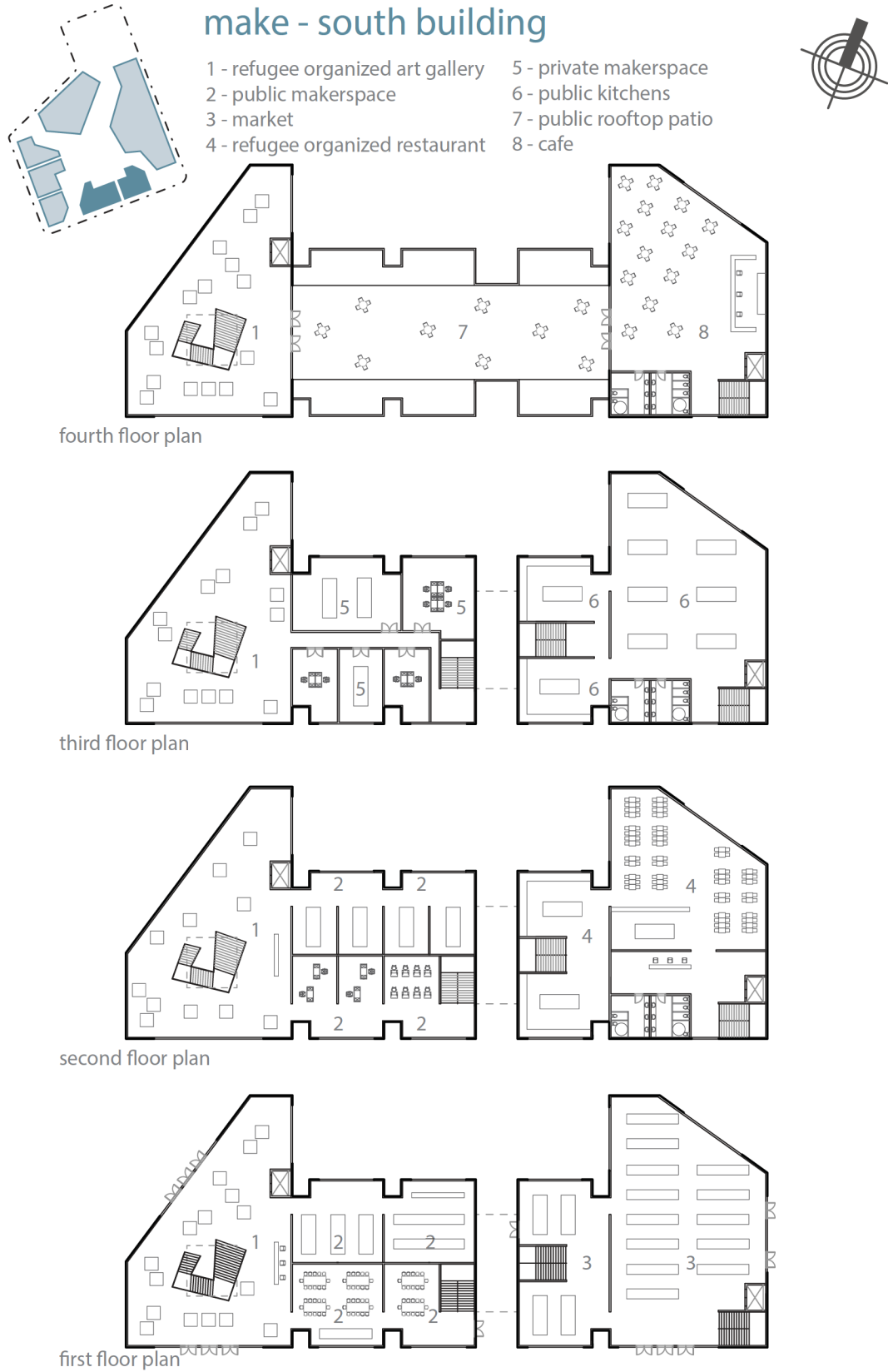
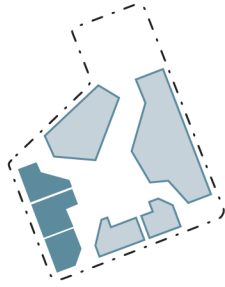


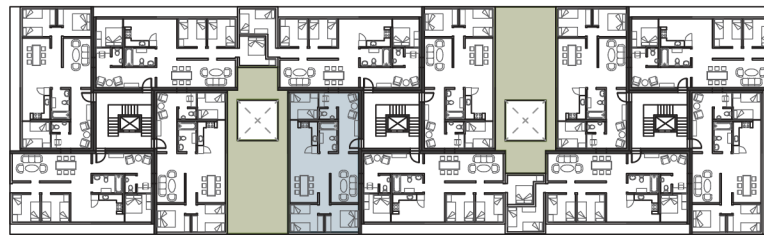
Figure 74: The southern-most building consists of art studios and makerspaces, in addition to communal kitchens and a restaurant to foster refugee healing and the sharing of cultures.





# live | make - west building

- 1 - flexible workspaces
- 2 - residential access



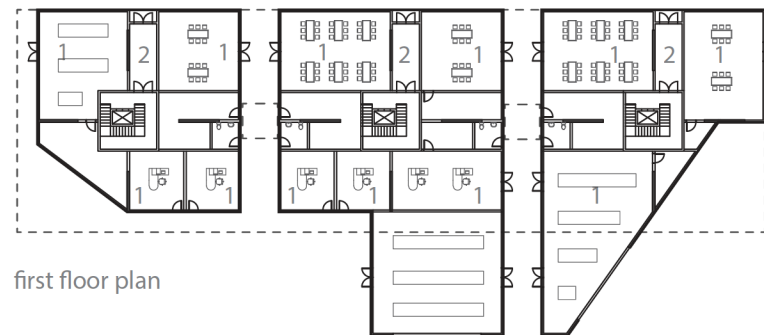
fourth + sixth floor plan



third, fifth + seventh floor plan



second floor plan



first floor plan

Figure 75: The western-most building provides work and retail spaces for refugee run businesses, with six residential floors above.

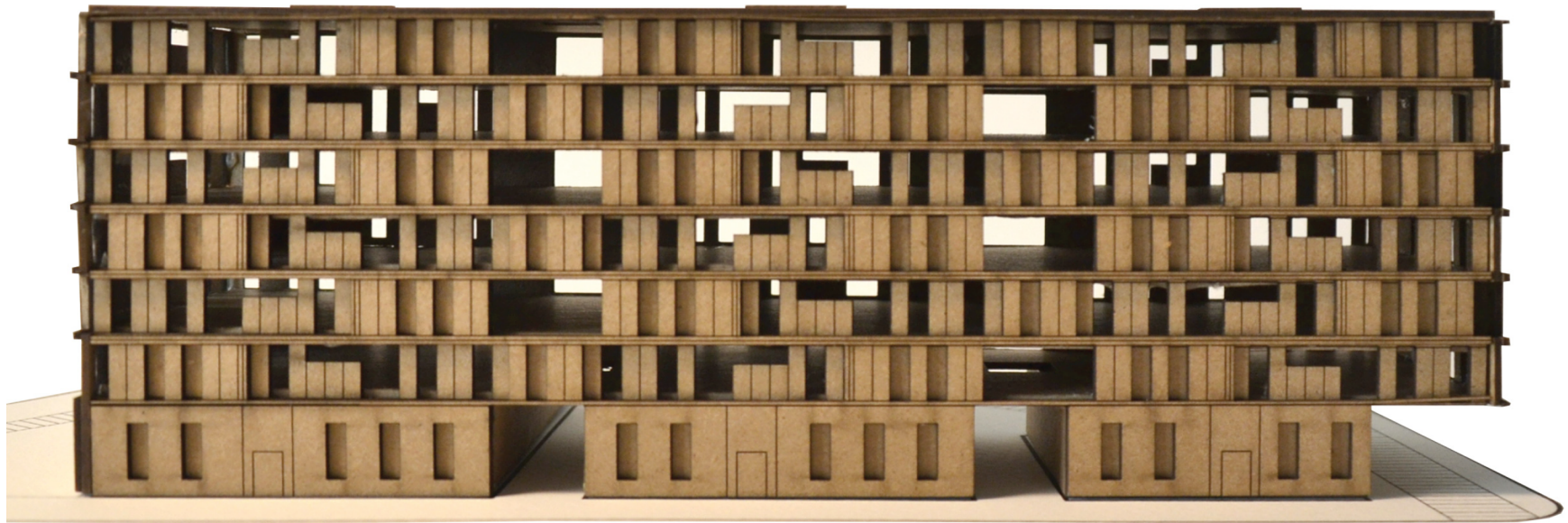
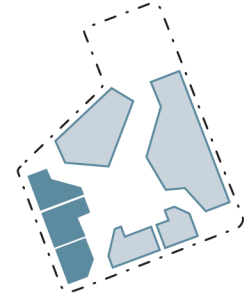


Figure 76: The western-most building model demonstrates a fluctuating facade, as balconies and units are expressed on the upper six floors, with each unit cluster connected through an exterior public patio.



Figure 77: Each residential floor plan demonstrates a mirrored plan, that supports four circulation cores, three exterior public patios, and private balconies along the facade.

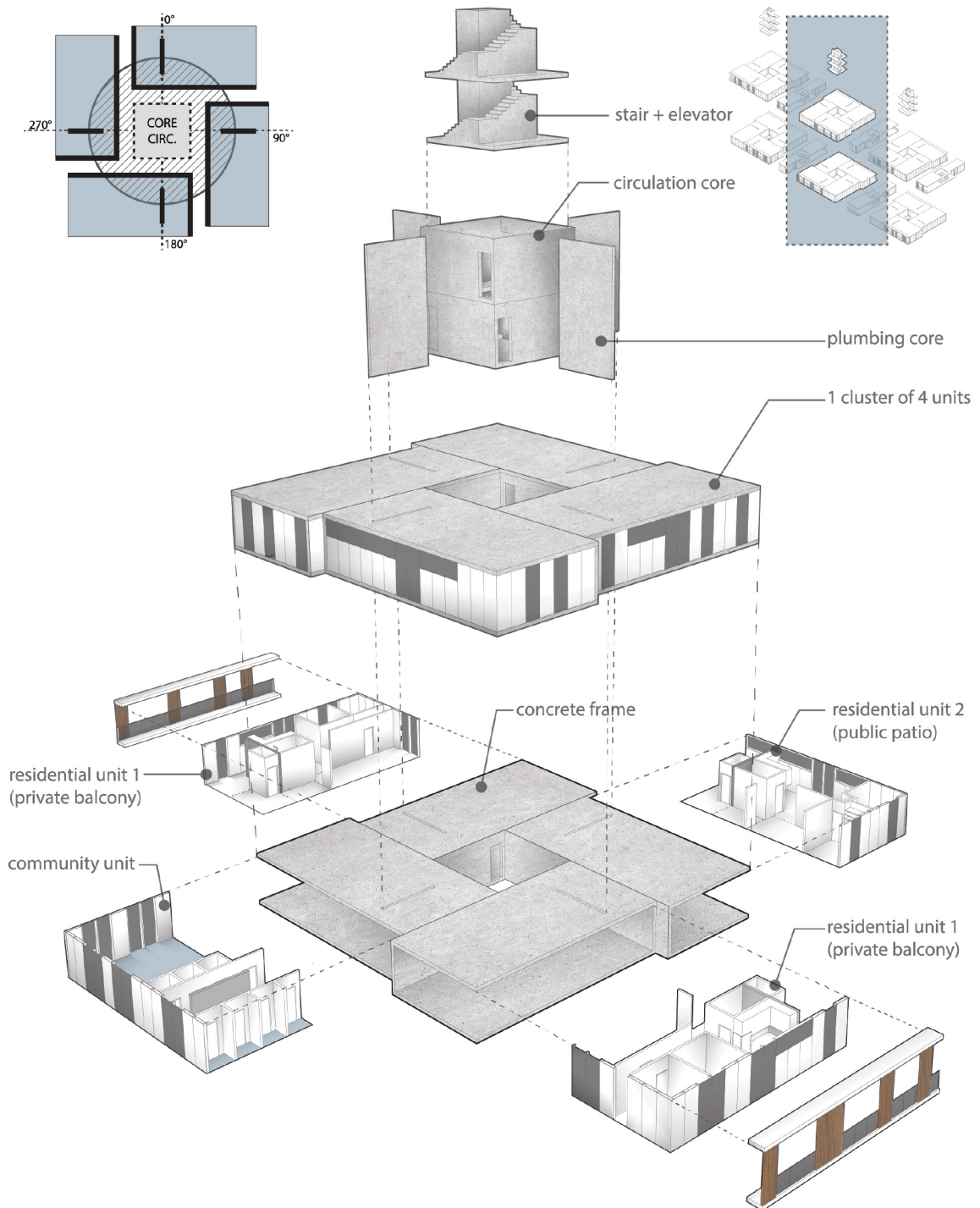
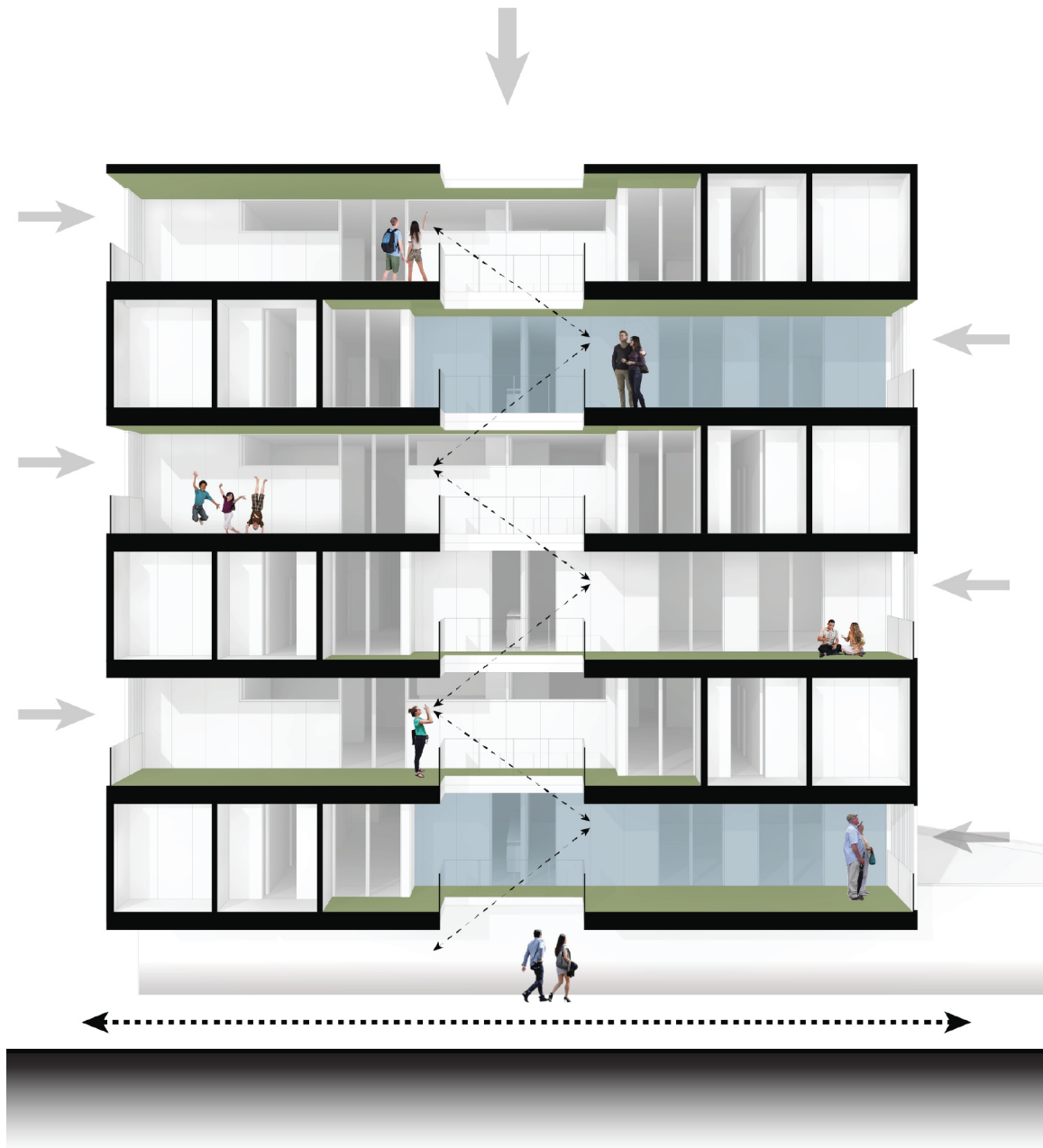


Figure 78: Each cluster is comprised of four units per floor that rotate around a central circulation core. Each unit utilizes a concrete frame, with one of three interior layouts depending on the orientation of the unit being public, private or if the unit serves as a community unit.



### residential section | vertical connectivity

- community unit | shared by 7 units
- public patio | accessed by 4 units

Figure 79: Residential section demonstrates a vertical connection created by skylight to unify exterior patios on each floor, and create shared spaces throughout the residence.



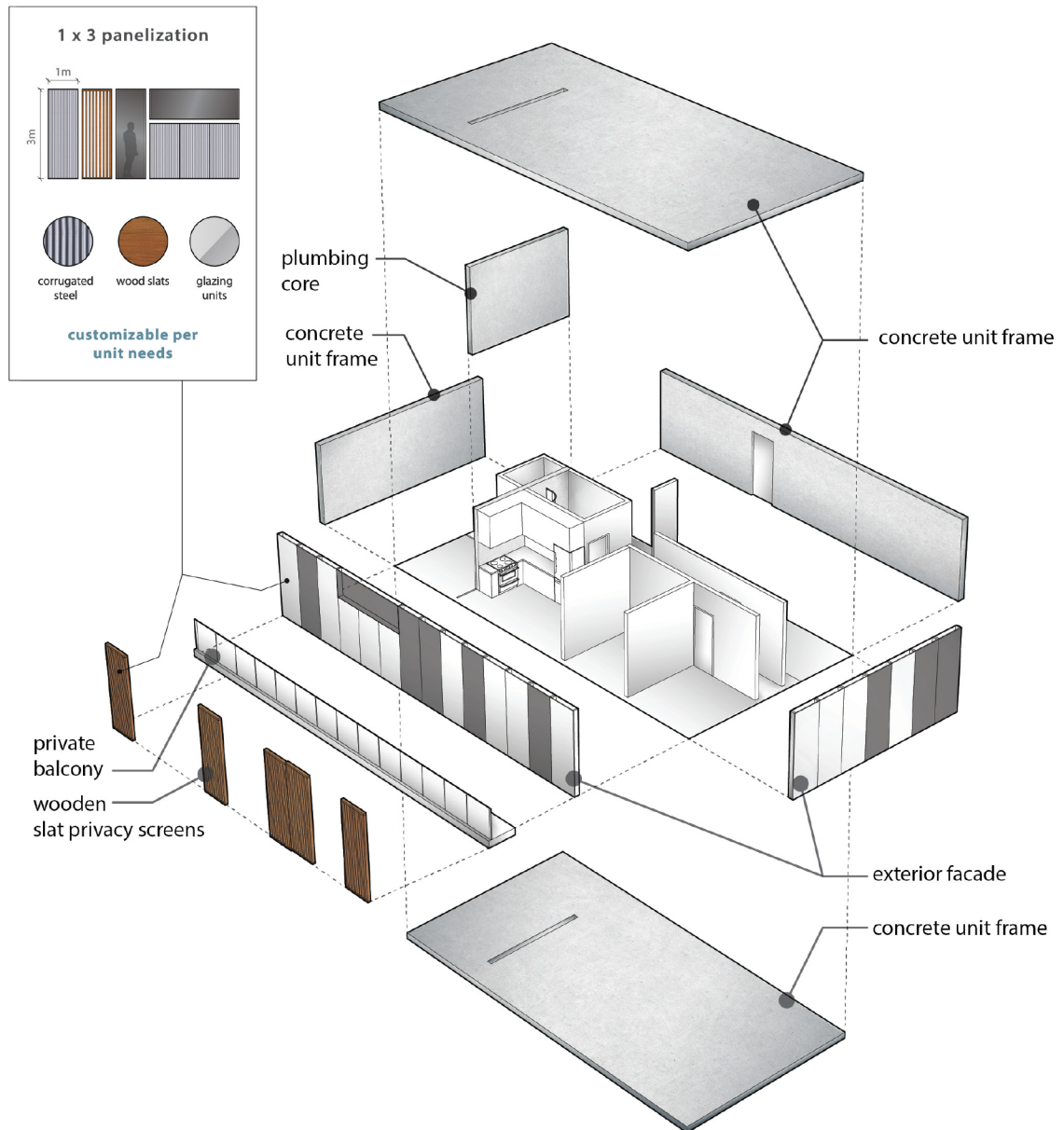
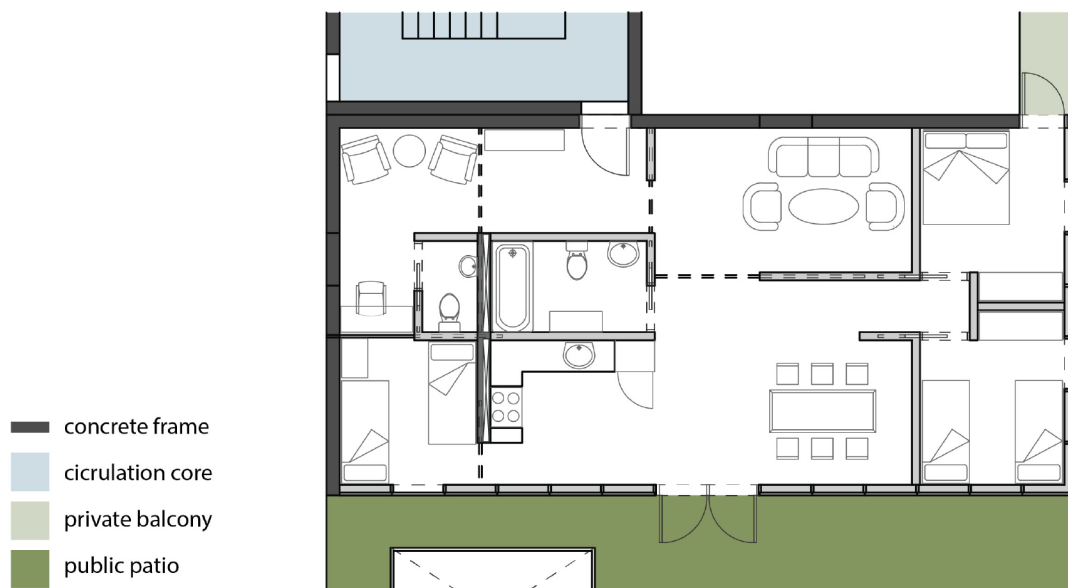


Figure 80: Each unit is comprised of a concrete frame (two walls, ceiling and floor) that is then fitted with one of two unit designs based on orientation. Each unit has access to a public patio, and well as a private balcony with wooden shades for a variety of privacy options.



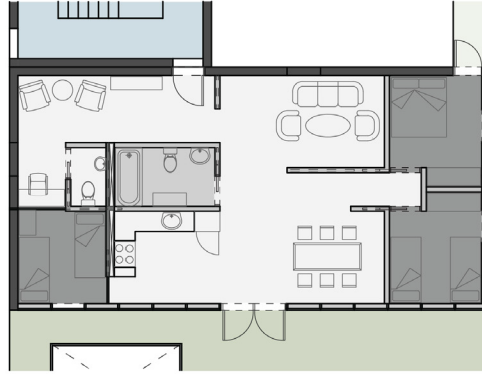


**unit layout a: facing private balcony**

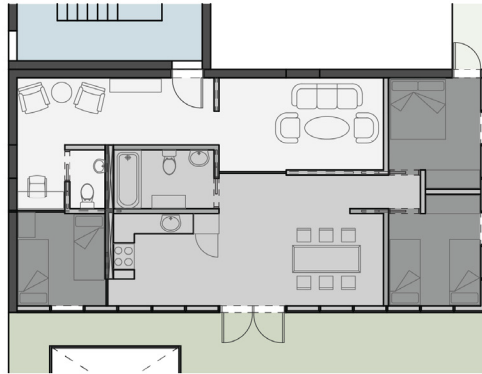


**unit layout b: facing public patio**

Figure 81: Floor plans are adjusted to manage privacy levels while the orientation of the unit can be directed towards either a public patio or private balcony. The plans utilize concealable walls, to allow the user to select their desired privacy levels.



**maximum transparency**  
open floor plan | private bedrooms



**moderate transparency**  
separated service spaces | private bedrooms



**minimum transparency**  
designated entry + guest space | private living quarter


 scale of privacy (high-low)

Figure 82: Each unit can expose or conceal walls to suit the desired privacy/transparency level of the current user.

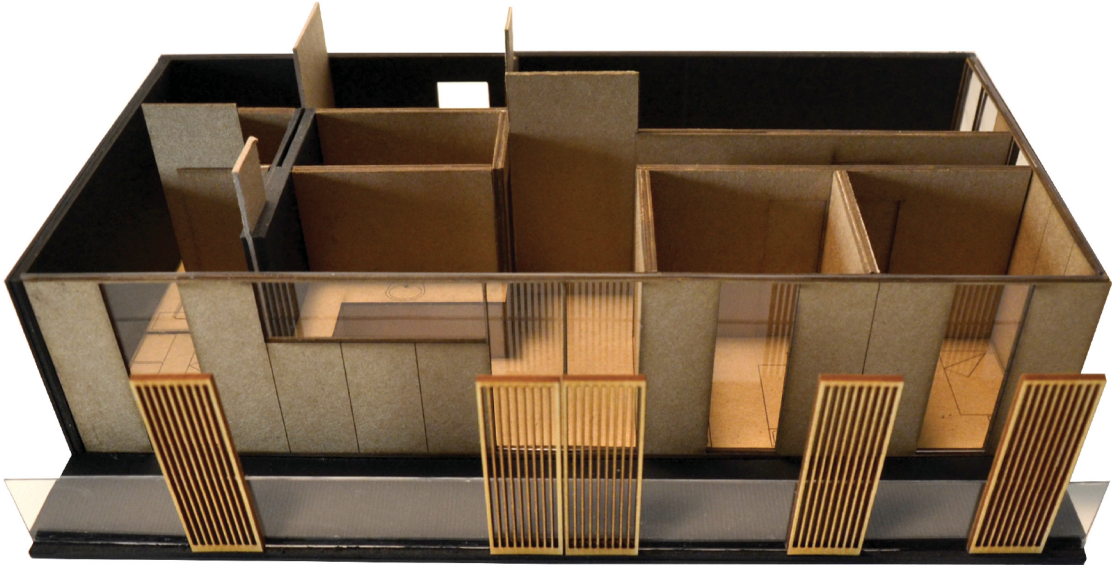


Figure 83: Unit model demonstrates interior-exterior relationship through one metre facade panels, and the adjacent private balcony.

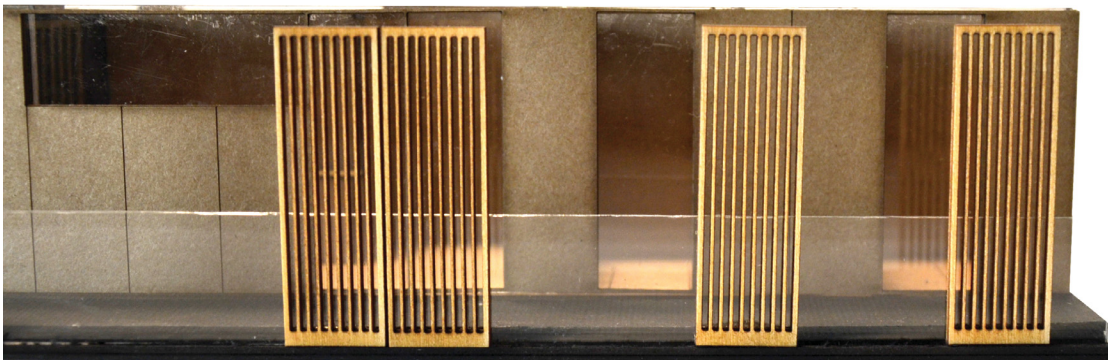


Figure 84: Unit model demonstrates the variation in privacy levels with the ability to expose or shield windows with the wooden slat panels.

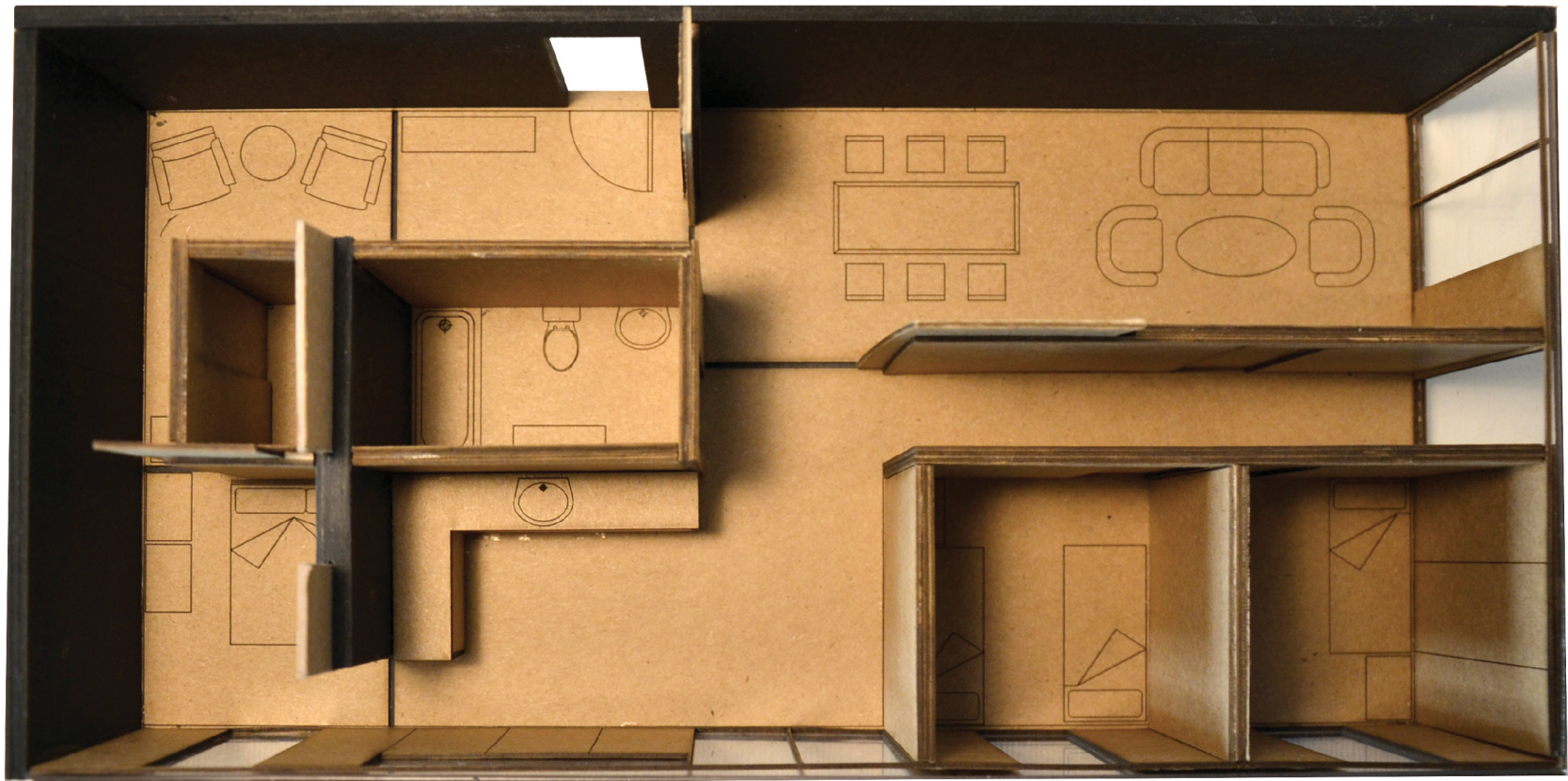


Figure 85: Unit model demonstrates floor plans and flexibility in utilizing or concealing additional walls for privacy.





Figure 86: Interior view demonstrates how each unit can expose or conceal walls to suit the desired privacy/transparency level of the current user.



Figure 87: Each unit has access to an exterior public patio, which is shared by four dwellings to create a relationship among neighbours.

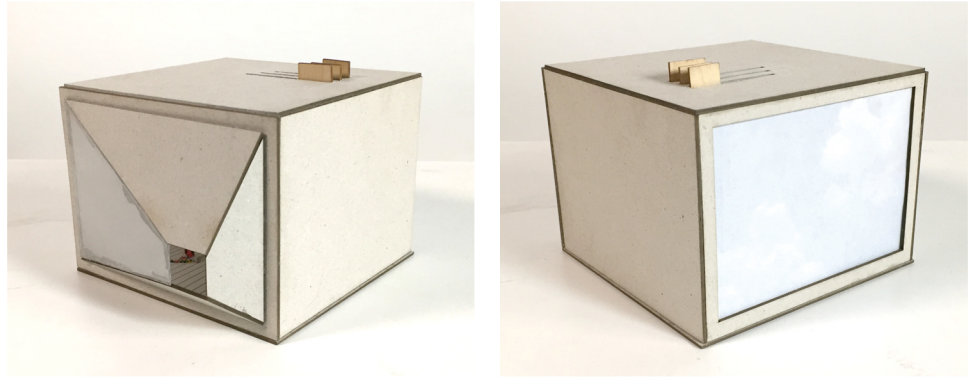


Figure 88 + 89: A diorama model was constructed to create an interior scene that could begin to address how one occupies the spaces and moderates privacy levels.



Figure 90 + 91: Diorama scene demonstrating full sun exposure.



Figure 92 + 93: Diorama scene demonstrating moderate daylight exposure.



Figure 94 + 95: Diorama scene demonstrating dark night exposure.



## CHAPTER 10: CONCLUSION

### The Proposal

This thesis aims to strengthen the relocation of refugees to first world countries by developing a series of welcome place settlements, as a way to provide a transitional housing solution for refugees as they integrate into their new country and community.

To equally distribute refugees within first world countries, such as Canada, would dictate a 1:40 ratio of refugees to citizens, meaning Halifax could aim to relocate up to 10,000 refugees.

The proposed site can house 618 refugees at one time. Assuming a minimum of 10% of the housing is dedicated to local families with low income, the site will see a total of 550 refugees per cycle. If the cycle repeats every two years, this site will host a total of 2,800 refugees over a ten year period. Further, if this model was completed on the proposed six other sites, Halifax could reach the goal of relocating 10,000 refugees within ten years.

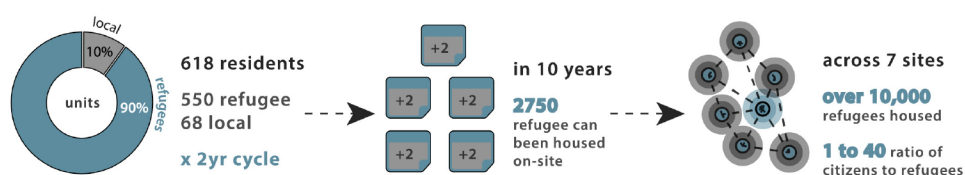


Figure 96: With a two year integration cycle replicated on all seven sites, Halifax could relocate 10,000 refugees within ten years.

Should the need for refugee housing decline in the future, the dwellings could accommodate low-income housing, student or senior housing in addition to, or in replace of refugee housing.

### Beyond the Thesis

This thesis proposed a step towards solving a world-wide crisis. With the number of refugees continually increasing, now at 25.4 million people, it is a humanitarian crisis that needs intervention to provide housing and protection as

the current system is falling short. Currently only 25% of refugees are given assistance per year (UNHCR 2018).

Halifax is a city that could strongly benefit from increased density and diversity. It contains communities that could welcome newcomers, and give refugees a new community to be part of. This proposal is designed to be a repeatable system that should be implemented to continue through time and expanded to other Canadian cities.

Refugees are people with tragic stories who were forced to leave their homes and are left with nothing. It could happen to anyone, at anytime. Developed countries should step forward and implement a system to provide protection for those who are in need. It is a humanitarian necessity that a solution be proposed to assist refugees in relocation; it is time to view refugee settlements as opportunities and seek to benefit from a new beginning in a new way.

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