

**Reconnecting in the Third Place: Social Catalysts to Counter  
Loneliness and Social Isolation in Urban Environments**

by

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## Abstract

As contemporary pathologies of urban environments, *loneliness and social isolation* are consequences of increasingly *fragile social networks* caused by atomized and mobile customs and the erosion of *social infrastructures* due to city growth. The scarcity of *third places* and other gathering spaces outside of everyday environments provide individuals with few opportunities to develop connections in familiar environments. This thesis proposes the introduction of a *Social Catalyst* in North End Halifax, a community in Halifax, Nova Scotia presenting symptoms of fragile social networks, to reinforce its existing social environment. Informed by the neighbourhood's social infrastructure and its inherent rhythms, the catalyst combines programmatic spaces adapted to the community with social complements to generate a common ground and social anchors. Following individual *social capacities and cognition*, *catalytic social devices* are applied in the project's spatial organization and details to foster and strengthen opportunities of interactions with others.

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# Chapter 1: Introduction

## Loneliness in Urban Environments

In observing cities as human ecologies and in trying to measure the state of their social and physical environments, it has already been observed that as density of their population increases, so do social pressures and pathologies—otherwise known as ‘pathological togetherness’—affecting individual and community health (McHarg 1969). Ironically, one of the growing pathologies for which experts have voiced concerns more recently is that of loneliness and social isolation (Murthy 2017); ironic in that more than 55% of the world population currently gravitates around cities (UN. Department of Economic and Social Affairs, Population Division 2019), a number even higher in Canada with 83% of its nation living in urban environments (Statistics Canada 2017), and that while people live closer together, several actually feel more isolated.

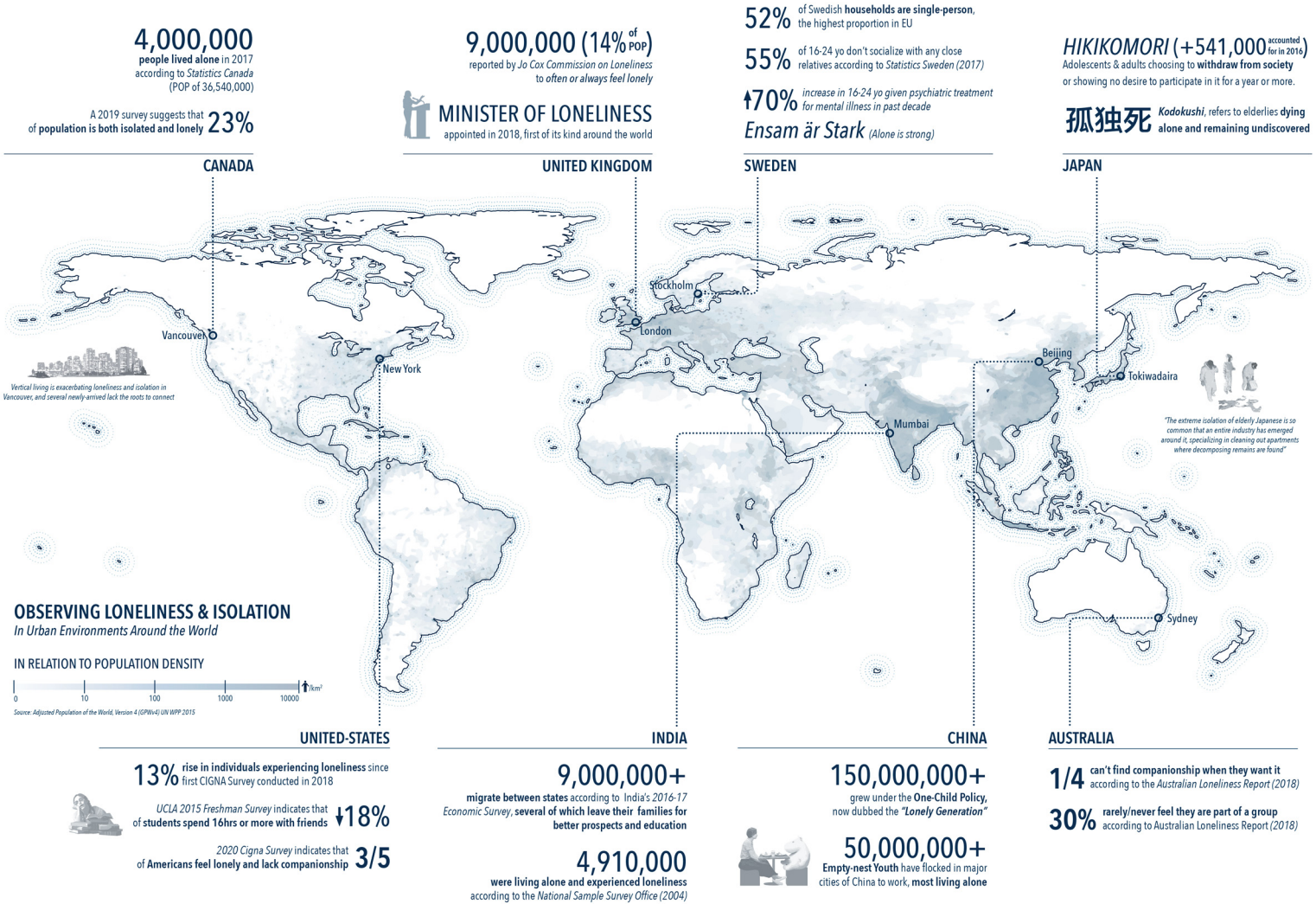
Loneliness in its simplest form is a physiological response to an innate human need: that of a social being. It can be understood as a stimulus prompting an individual to acknowledge his social connections and reach out (Cacioppo and Patrick 2008). In and of itself, loneliness is a ineluctable mechanism. Some may be fortunate enough to experience it only a few times throughout their lives, while it may be a lasting burden for others. But loneliness becomes alarming when it takes the form of chronic loneliness: when individuals can’t find levels of connection for an extended period of time or that feelings of loneliness linger on a regular basis. The body’s chemical response to loneliness disrupts cellular processes which, when prolonged, impedes on an individual’s perception of the world—increasing the feeling

of social isolation—and predisposes him to premature aging (Cacioppo and Patrick 2008), depleted mental health and mortality, comparable to obesity, lack of exercising and smoking (Holt-Lunstad et al. 2015).

The general agreement with loneliness is that it results from a paucity and poor quality of a person's social networks (D'Hombres et al. 2018) and is caused by changing social practices leaning towards atomized & individualized behaviours which make it that individuals lack opportunities to interact with others:

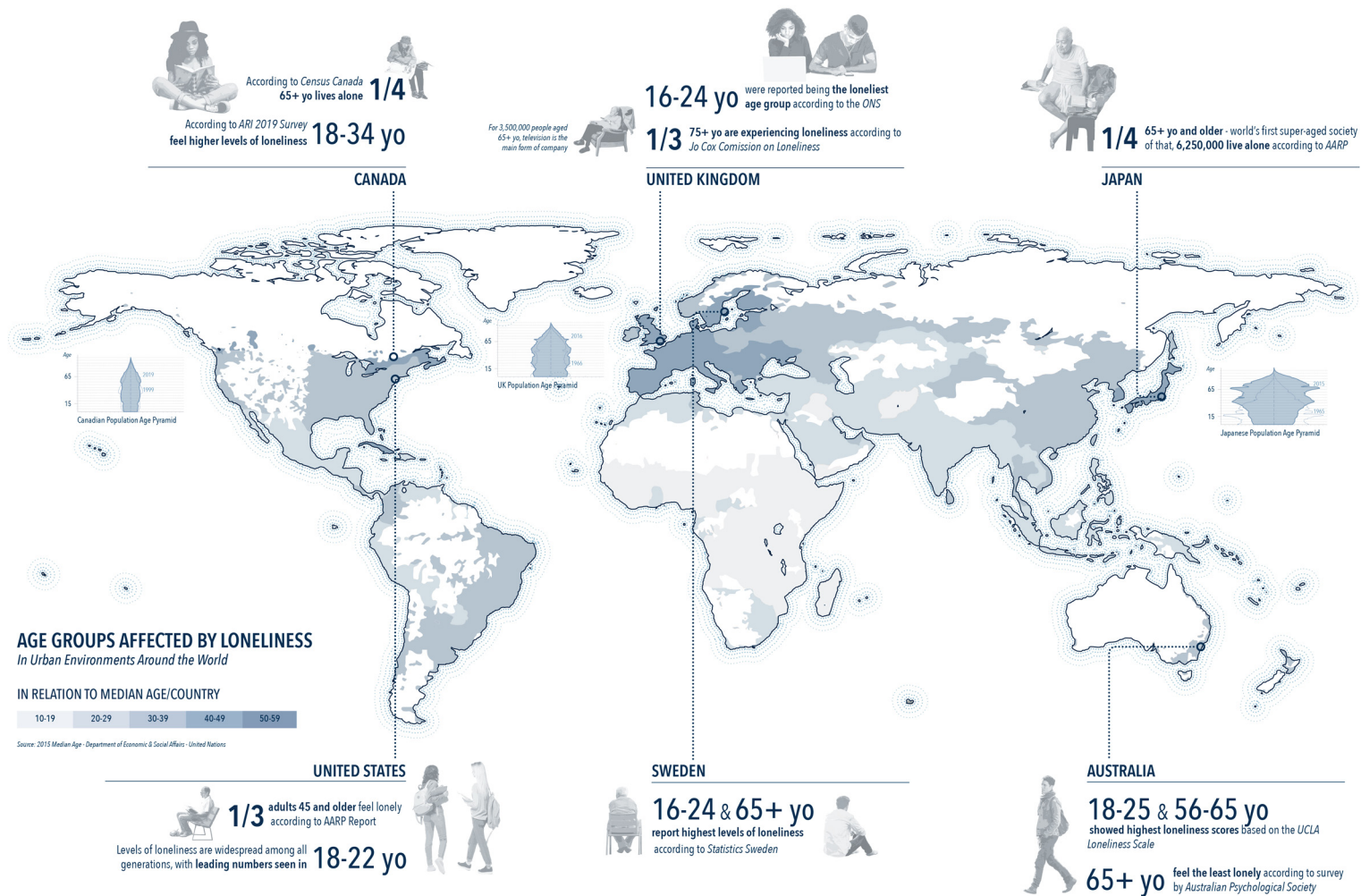
As career patterns, housing patterns, mortality patterns, and social policies follow the lead of global capitalism, much of the world seems determined to adopt a lifestyle that will compound and reinforce the chronic sense of isolation that millions of individuals already feel, even when they are surrounded by well-meaning friends and family. (Cacioppo and Patrick 2008, 53)

And with individuals bereft of connections within their very homes and the immediate spheres of their lives, the public realm and its social infrastructure—the shared places between all—could be thought of as an alternative to develop connections for locals and newcomers alike. In fact, as indicated by Erik Klinenberg, it plays a crucial role in fostering interactions in communities that are essential to counter issues of loneliness and isolation. However, that is when it provides the conditions for this to happen (Klinenberg 2019). As cities have grown to keep up with the mobility and influx of people, at rates that defy the human physiology and need for connection—it has been established that the average group size an individual is used to live in and the number of relationships an individual can maintain is 150 (Dunbar et al. 2005; Ellard 2017)—, the built environment has also evolved to match the increasingly individualized, consumerist and virtual tendencies of western cities and culture that make it hard for people to maintain customary



Observing signs of loneliness and social isolation in urban environments around the world  
 (data: CIESIN. Columbia University 2018; Australian Psychology Society 2018; Jopling 2017; Office for National Statistics 2018; Onishi 2017; Savage 2019)





Observed age groups affected by loneliness around the world (data: UN. Department of Economic and Social Affairs, Population Division 2017; Australian Psychology 2018; Jopling 2017; Office for National Statistics 2018; Simmons 2018; ).

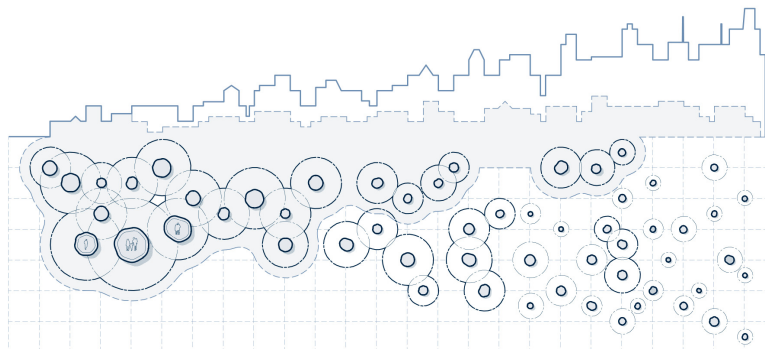
social practices and preserve appropriate social networks that are crucial to limiting the impacts of loneliness. An erosion of social environments in cities has also been observed, with Third Places and other informal gathering places tailored to individual social capacities being replaced and outnumbered by commercial spaces and transit infrastructures that cater to growing individualized patterns and contribute to a growing anonymity in cities.

### **Thesis Question**

How can a *Social Catalyst* be introduced in the social infrastructure and everyday patterns of a community as a response to loneliness and social isolation in urban environments?

This thesis proposes the introduction of a localized *Social Catalyst* in communities of Halifax presenting symptoms of social isolation and fragile social networks to restructure their impaired social environments, and looks at how to embed it in everyday patterns of a community. The objective is to help reinstate social anchors and a diversity of activities that enable individuals to warm up to the presence of others while providing a common ground to strengthen the opportunities for social connections as a response to loneliness and social isolation in urban environments.

## Chapter 2: Eroding Social Connections and Environments



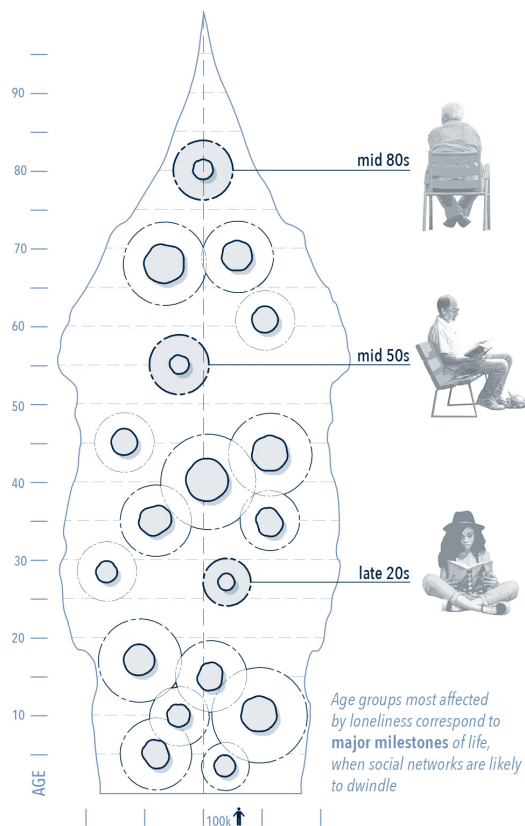
Eroding social networks and environments in growing cities



Fragile Social Networks

### Fragile Social Networks

When taking a look at cities where concerns have been expressed, loneliness and social isolation manifest themselves through various cultural phenomena specific to each place. Amongst these cities, several are found in Western countries—including Canada, the United-States, the United Kingdom, Australia and Sweden— but also in Japan, China and India. Common to all are the age groups expressing higher levels of loneliness which all coincide with major milestones of life: young adults, middle-aged and old-aged individuals (Lee et al. 2019). They correspond to three of the periods in life when individuals are more likely to see their social networks dwindle: leaving the family nest for school or work and taking on new responsibilities, approaching the end of a career and leaving behind the work environment and habits, and facing the loss of spouses, friends and close relatives. Furthermore, all of the cities have been witnessing an increase in individualized behaviours and social isolation which may be at the origin of a broken social scene (Montgomery 2013), and new patterns



Observed age groups most afflicted by loneliness in relation to Canadian Age Pyramid 2019 (data for age pyramid: Statistics Canada 2019)

of immigration are making it that established cultures and cities must adapt to accommodate newcomers with no connections and anchors (Cacioppo and Patrick 2008).



Stranger Deficit

### Atomization, Individualism and Stranger Deficit

One aspect which resonates within several cultures and cities is that of individualized practices in the everyday life and can be illustrated with a social deficit observed by Charles Montgomery: 'stranger deficit' (Montgomery 2013). As he puts it, most of the realms in which people participate have been privatized and have been relegated to the confine of the home; it is possible to have goods delivered to your home without ever walking past its threshold. It isn't necessary to gather or venture into the

public space to fulfill needs, comforts, leisure time and communication and most meaningful relationships remain within the sphere of family. Ray Oldenburg argues that “[t]he structure of shared experience beyond that offered by family, job, and passive consumerism is small and dwindling. The essential group experience is being replaced by the exaggerated self-consciousness of individuals” (Oldenburg 1999). Demographically speaking, this can be exemplified by the individualized patterns and increasing numbers of single-person households in various countries having voiced concerns about loneliness. Sweden, with its culture built around the motto “Alone is Strong” (Ensam är Stark), figures at the top with more than half (52%) of its households being single-person (Eurostat 2017), while in Japan—where conformity and community have always been prized—the amount of single-person households has increased considerably in the past decades: from 27.6% in 2000 to 34.7% in 2015 (Statistics Bureau of Japan 2020). Taking Canada as an example, four million lived alone in 2016 (Tang, Galbraith and Truong 2019) and close to 3 in 10 of households are single-person (Statistics Canada 2016). By itself, this data doesn’t explicitly indicate signs of loneliness, but as demonstrated in a Canadian study, “[b]ecause such a significant proportion of Canadians’ social stimulation comes from within their own home, those who live alone are generally more isolated” (Angus Reid Institute 2019). And while the answer to loneliness only really requires the presence of a few meaningful relationships, several specialists and sociologists have observed that a considerable amount of individuals have minimal networks or people in whom they can confide (Montgomery 2013).



Rootless Migration

## Rootless Migration

Mobility is considered as a factor that can play on the likelihood of feeling lonely, in fact it is often associated with disrupted social connections and can elicit feelings of isolation. As observed by Georg Simmel, when an individual—in his words the ‘stranger’—leaves a place of origin and makes his way into a new community, despite making contact with its members, the individual will be faced with the struggle of obtaining membership as he is “not organically connected, through established ties of kinship, locality, and occupation, with any single one” (Simmel 1950). Building a sense of attachment can be challenging when arriving in an unfamiliar environment, especially when braving it alone. Unlike locals, sense of place cannot only develop on settled lifestyles within a specific bounded territory (Lippai and Weberman 2016), but rather as a result of connecting with others and places that will allow them to adopt this new environment. In cities where everything is accelerated and constant busyness prevails, the initial feeling of being overwhelmed and seeing everyone as a stranger can play on an individual’s willingness to connect. In a state of solitude, our social cognition—a subjective perspective of the social world based on personal experience (Cacioppo and Patrick 2008)—can cause us to be doubtful of others. It can explain why cities and urban environments, where anonymity is ever so present, generate the impression of “feel[ing] desolate and unfrequented in oneself while living cheek by jowl with others” (Laing 2016), and making it harder to connect. In Vancouver, where international immigration contributes greatly to its population growth, a survey conducted in 2012 suggested that 42% of newcomers having stayed in Canada for less than five years reported having networks

of 3 or fewer friends (Clement 2012). And while cities see new developments and accommodations for its increasing population grow out of the ground on a regular basis, the rate at which community-oriented and place-making establishments appear is minimal in comparison.

### **Depleted Community Interactions and Absence of Diversity**

Whether people are increasingly isolated from contacts and trapped in the vortex of their individual dwellings, or unfamiliar to a new place, the closest solution to finding connections to make up for weak social networks would appear to be in the public space that is offered within one's community, or in the 'social infrastructure' shared between those who abound in cities. Defined by Eric Klinenberg, the social infrastructure refers to the physical places and organizations that shape interactions between people in communities (Klinenberg 2019), or do just the opposite. However, several North-American cities happen to provide far less opportunities than it could be imagined, at least at the level of communities. As Jan Gehl has observed, most industrialized cities display a segregated organization with limited diversity in the functions that make up their neighbourhoods and the physical environments outside of homes provide little opportunities for interactions of any kind. The only points of contact where communal activities can be observed are through mass media and commercial spaces (Gehl 2011), including grocery stores, retail stores and shopping centres—though the latter has already seen an important decline in its activities at the turn of the twentieth century (Koolhaas 1999). Charles Montgomery shares similar thoughts on the organization of cities into distinct urban units of homogeneous functions—neighbourhoods dedicated

to housing and others for commercial or office spaces — which has caused a dependence on intracommunity travels and has been detrimental to the proximity and familiar encounters that take place within single communities (Montgomery 2013). Furthermore, the time spent travelling around to complete errands which cannot be attended to in the vicinity of the dwelling takes up on the time one can use to maintain social relationships. It is exactly why diversity of a community is so essential according to Jane Jacobs, as it may provide far more social opportunities when walking in the community to complete errands and other activities which will sustain a sense of familiarity and lead to far more fortuitous encounters (Jacobs 1961) as opposed to travelling by car to the far extents of the city.

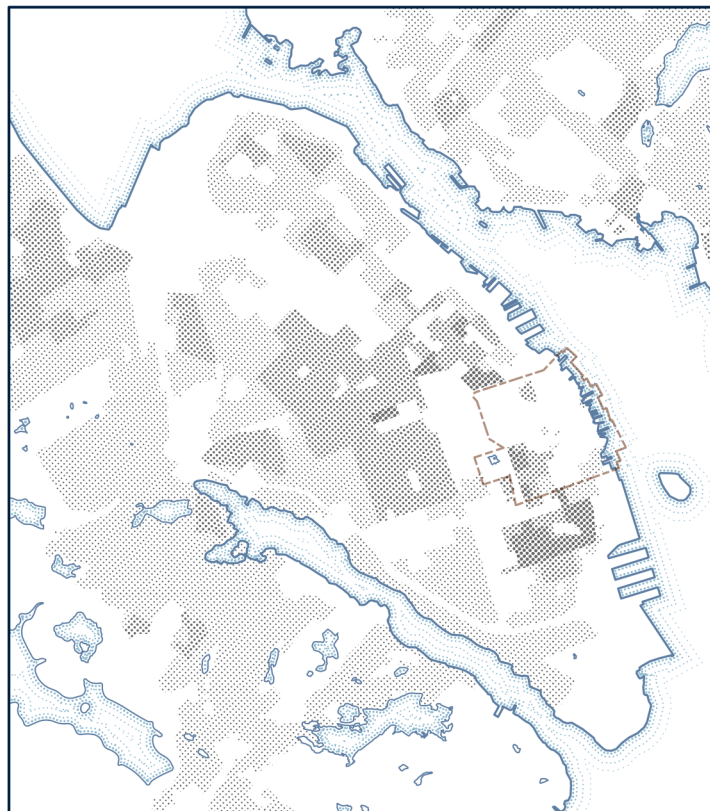
### **The Dilemma Between Third Places and Non-places**

The struggle to make connections in the public realm may also result from the scarcity of spaces dedicated explicitly for socialization and informal interactions between friends and strangers alike. Ray Oldenburg made a case of it years ago, bemoaning the absence of 'third places' in North America, these informal gathering spaces at the centre of community place-making present in countries such as France, Italy and Germany, where the *joie de vivre* associated with these cultures originates from the role granted to third places as pillars of their communities (Oldenburg 1996). They are the essential cornerstones to a vital informal public life, where individuals gather outside of their homes (first place) and work (second place) to do no more than interact with familiar acquaintances and strangers. From the local corner store, the pub and the café to the market and bookstore, these places originally intended for other purposes act as comfortable



and congenial environments that “allow casual connections with strangers, or somewhere to meet with friends, without imposing threatening or invasive interactions” (Oldenburg 1999) and help establish social anchors for the community (Oldenburg 1996). In doing so, third places are also considered points of entry for newcomers trying to become familiar with their new community (Oldenburg 1996). Simply put, third places are a “remedy for stress, loneliness and alienation” (Oldenburg 1999, 20), but have been forgotten in North America, with a majority of people dividing their busy schedules between work and home exclusively. Moreover, the non-places that take up most of the space between home and work—generic grocery stores, retail stores, boutiques and means of transit—are designed for the single purpose of satisfying consumerist needs and are rarely designed to do anything other than that. Most public and commercial space in cities host unifunctional activities that discourage additional informal activities and attend to fewer needs than earlier cities were able to (Oldenburg 1999). According to Marc Augé, the contemporary age—or what he calls Supermodernity—has introduced the ‘non-place’ to the social life of people which strips them of the possibility to interact with others in the public space and build an identity out of it. While the anthropological spaces “create the organically social” (Augé 1995), non-places result in a solitary contractuality, a sense of solitude and anonymity, as individuals take on the role of passenger, customer or driver (Augé 1995). The impression of interacting only results from the passive instructions which are there to remind one of his whereabouts and what he may or may not do, as well as the general mode of operation agreed upon. And to add to the ambiguity of the third place in public spaces nowadays,

several contemporary examples built on the model of third places do not grant the all-welcoming atmosphere and opportunities to initiate conversation with strangers and friends. Even coffee places have succumbed to the busyness of individuals who now congregate in them to work and make it that their appeal is oriented towards specific groups, to the point where even families and mothers with their newborns are not always welcomed (Klinenberg 2019). Several other examples of third places including libraries and cultural centres have been built in city centres or on the outskirts of everyday life, limiting the potential of place-making in communities where their presence is dearly needed.



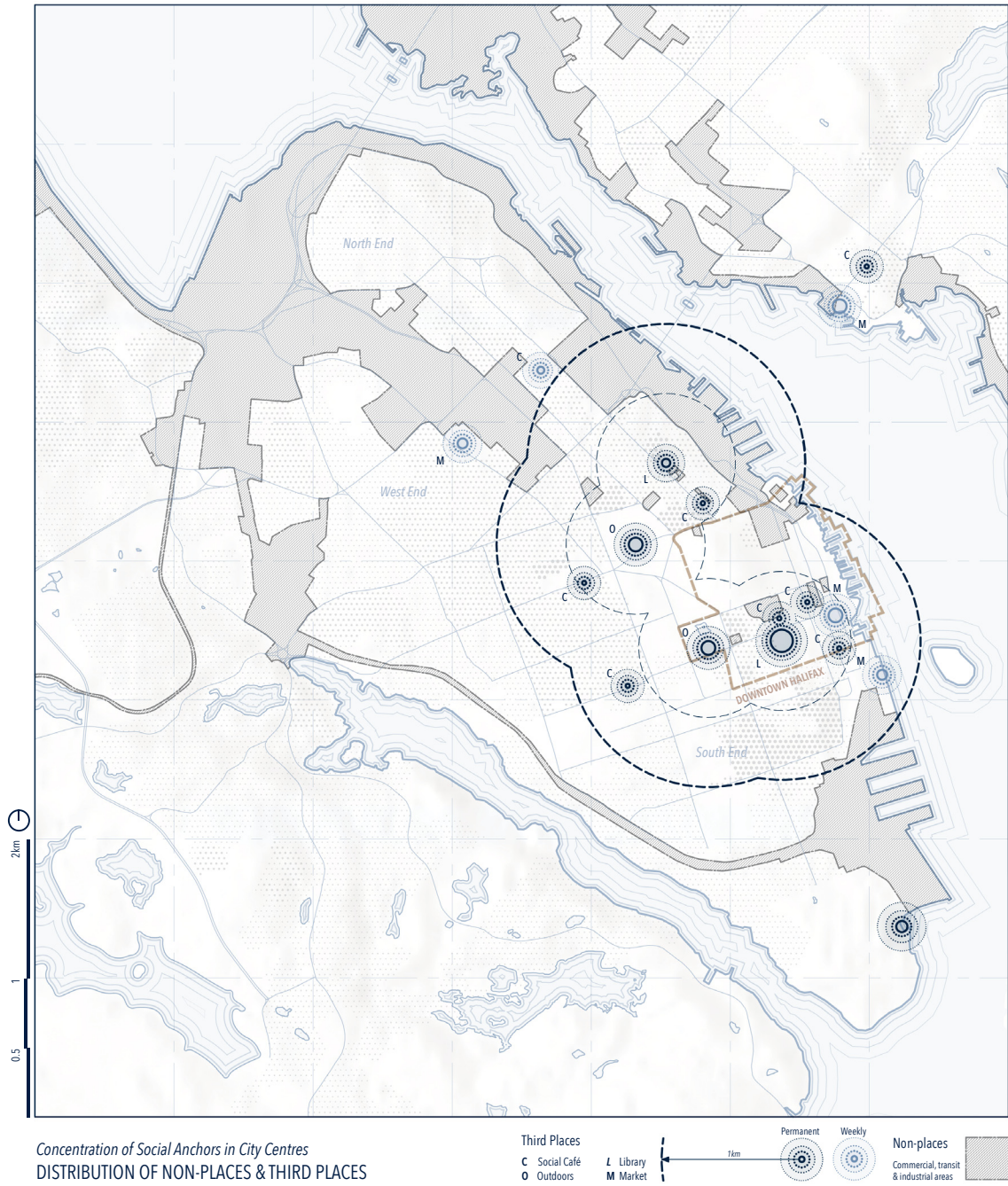
### SETTLEMENT DENSITY

Concentration of Population & Communities

Source: Census Canada 2016 - Statistics Canada



Settlement density and concentration of population in Halifax on the peninsula (data: Statistics Canada 2016)

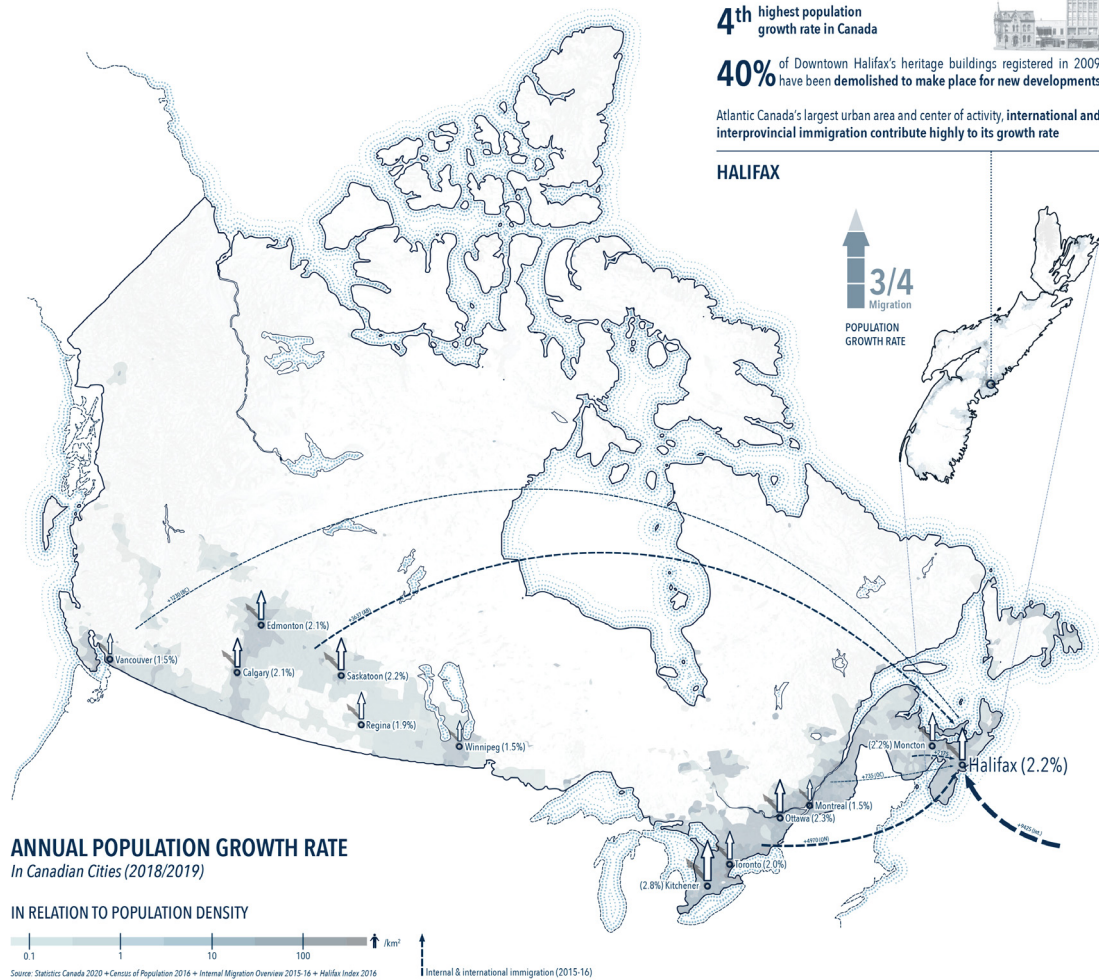


Distribution of third places and non-places in Halifax - Concentration of social anchors in city centres. Only a small amount of third places are found in communities of Halifax while non-places are growing around and isolating several of the communities all over the peninsula.

## Chapter 3: Contextualizing Loneliness in Halifax

Loneliness being an innate reaction to any individual, it can hardly be situated geographically. Several cities have voiced concerns, some of which can be found in Canada (i.e.: Vancouver), however the loneliness experienced in these cities isn't exclusive to them and they cannot be pointed to as the only cities in which this phenomenon can be observed. They are only the first ones to have acknowledged the ailment of loneliness that is affecting populations and communities in urban environments and have served to shed light on a situation that can also take place in other cities. What it allows to understand is that loneliness in cities is amplified by their expansion and mutations that fail to take into consideration the social needs and environments of its existing communities.

In establishing the grounds for this thesis, Halifax appeared as an ideal subject in that it has shown a considerable expansion in more recent years, seen through important alterations to its existing landscape and its more recent population growth rate which was amongst the highest in Canada during the 2018-2019 period (Statistics Canada 2020). Not only is it Atlantic Canada's largest urban area and centre of activities (Young 2019), its main economic activities have been attracting several newcomers to the city, and mobility and immigration account for a considerable portion of the population growth. In fact, The 2016 Halifax Index highlights that 3/4 of the population growth results from migration to Halifax, from interprovincial and international provenance (Macleod 2016). And from this growth have also emerged new housing and commercial developments,



Indicators of Halifax as a growing city (data: Saunders 2018; Macleoad 2016)

several of which have taken up the place of existing properties and buildings in the city. Out of all the heritage assets and properties registered back in 2009, 43% have since then been destroyed (Haiven 2020), and of which several were replaced by private developments. Plans for urban densification have resulted in the construction of several housing developments, whereas very little public accessible spaces have been built other than the Seaport Farmers Market in 2010 and the Central Halifax Library which opened in December 2014, both of which are situated in the Downtown area of Halifax.

## Chapter 4: Defining a Social Catalyst

### Congeniality of a Third Place

To determine the atmosphere a *Social Catalyst* should exhibit and the kind of resources it can provide to members of a community, it is only appropriate to understand the characteristics that are inherent to third places and allow them to act as loci of affiliation. These are the elements that help set the kind of social climate which doesn't require anything from individuals, and instead, allows them to build an appreciation and a sense of comfort, and make the presence of others more enjoyable. In describing third places, Oldenburg lists eight universal characteristics that are essential to their congenial environments and make of them ideal anchors for anyone in the absence of connections or as a newcomer.



Illustrating the congeniality of a third place: Halifax Brewery Market around 10:00 AM on a Saturday

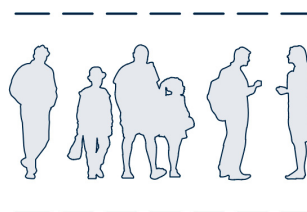


Illustrating the congeniality of a third place: The Halifax Brewery Market provides an all-welcoming environment where individuals gather on a regular basis and are provided with opportunities and the installations to interact with acquaintances and strangers alike. Both photos were taken around 12:00PM on a Saturday



### ***Neutral Ground***

It qualifies a third place as a common ground outside of individuals' private homes, where people can assemble as they please and where no one is host. In other words, no one has primacy on it and it allows for members of a community to assemble when there aren't other gathering places available.



### ***Leveler***

Third places are all-inclusive spaces with no formal criteria of membership or exclusion; individuals are welcome beyond their social status, which makes it an enjoyable place for anyone to attend.



### ***Association & Conversation***

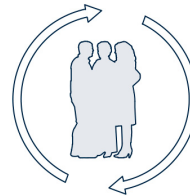
The atmosphere in third places provides the conditions for opportunities of interactions and affiliation which generally result from engaging and contributing in friendly and informal conversations, generally without pretence.





### ***Accessibility & Accommodation***

Third places accommodate people when they are released from their responsibilities elsewhere and offer the possibility for people to visit them at almost any time of the day, with the added benefit of being able to run into acquaintances. The attachment and sense of place a person develops towards a third place expands with his walking familiarity to it.



### ***The Presence of Regulars***

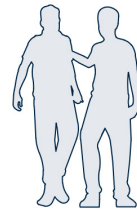
The presence of familiar individuals and crowds helps set the mood and conviviality of a third place. As William H. Whyte suggests, people attract other people (Whyte 1980). The passage from newcomer to habitué takes form as individuals become familiar and establish a sense of trust in the place and its patrons.



### ***Low Profile***

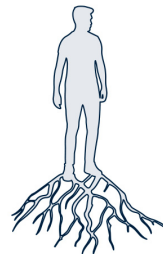
While Oldenburg refers to third places as exhibiting “plainness”, it mainly refers to a place’s physical structure as being modest and unpretentious, integrating well in the

everyday life. It is no monument and encourages levelling: visitors aren't upstaged.



### ***Playful Mood***

This characteristic trait of third places refers to the play forms that emerge from association and informal interactions between individuals and regulars visiting third places: “The unmistakable mark of acceptance into the company of third place regulars is not that of being taken seriously, but that of being included in the play forms of their associations” (Oldenburg 1999).



### ***Rooting in Place***

Simply put, third places provide a sense of belonging and extend a feeling of comfort and support similar to a home or familiar environment; to which individuals identify.

While most of these characteristics remain social in nature, they are informative of how the program should be developed and are key to understanding the role of a *Social Catalyst* in a community's everyday life:

Third places can help by creating or enhancing a sense of community on a smaller, more humane scale—a relief from the overwhelming sensory experience of a large and unfamiliar city. The village-like feeling of third places can reduce peoples' anxieties and make them feel more comfortable with trying a new social experience. (Dolley and Matthews 2018)

## The Need for Local Interventions

Unlike the common practice of more recent gathering spaces built in city centres at large scales and acting as focal points to serve the city at large—which Jane Jacobs decries as it usually results in isolating public functions (Jacobs 1961) in city cores and deprives communities from functions that could help sustain a social cohesion within them—, this thesis is meant to explore an alternate approach and find opportunities in smaller-scale interventions that may help restore neglected social infrastructures in communities at higher risk of loneliness and social isolation. The kind of projects that stem from this approach are usually referred to as ‘acupuncture’ interventions and attempt to bring respite to communities through small-scale and modest projects as a solution to social issues. The objective is to find key points of intervention that will help enhance a larger system (Lerner 2011). In this case, the *Social Catalyst* is meant to take on the role of providing the missing social dynamics and diversity of social activities within a community to grant individuals the opportunities of interacting outside of their home and work, and warm up to the presence of others. Jane Jacobs argues that the intricate and close-grained diversity of communities—the presence of various functions and places for social interaction—are essential to support its community, especially in providing an environment strangers can use during the everyday life and come across others on a regular basis (Jacobs 1961). Much as people become intimate with their environments on the account of using it frequently, appreciation for other members of the community can also increase through fortuitous encounters (Jacobs 1961). According to Gehl’s observations on the quality of contacts in neighbourhoods and cities, interactions

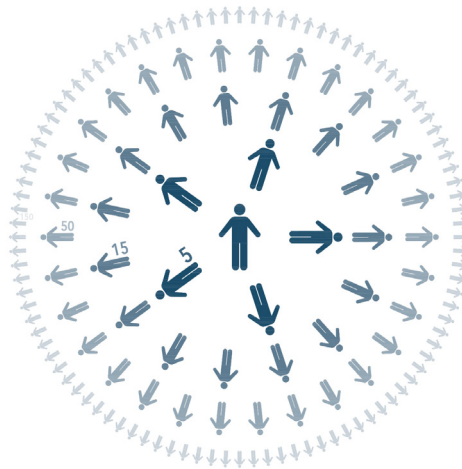
in the former are more comprehensive and significant due to familiarity and the chances of encountering individuals on a regular basis, whereas contacts in the latter are usually more passive and can be superficial (Gehl 2011) because of the anonymity. In considering that loneliness and social isolation cause people to be more vulnerable and doubtful of others, it appears logic that the kind of interactions found at the community level are far more likely to be welcomed by individuals seeking for connections. Oldenburg also indicates that the appeal of third places fades away when they are located too far away from the immediate community and lack proximity to the dwelling (Oldenburg 1999).

### **Scaling to Social Capacities**

Planning for interactions in public spaces requires amongst other things an understanding of individual social capacities in the presence of others, or the notion of proximity and moderation of interactions. It is one thing to plan for spaces where numerous people will gather, however it is important to keep in mind that individuals have limited capacities towards interacting with others and developing relationships. Not only are there distinct personality types—extraverts and introverts—who assess interactions with others differently, there are also certain spatial qualities that influence the formation of relationships or not. In the case of individuals afflicted by loneliness, it has been observed that their social cognition and capacities are impaired, mainly due to the lack of regular meaningful connections and subjective perceptions distorting interactions with others:

The sense we make of our interactions with others is called social cognition. When loneliness takes hold, the ways we see ourselves and others, along with the kinds of responses we expect from others, are heavily influenced by both our feelings of unhappiness and threat our impaired ability to self-regulate. (Cacioppo and Patrick 2008, 14)

According to Robin Dunbar's research on the human's capacity to assess relationships and form social groups, the number of relationships an individual can assess is averaged at 150, and within this range can be observed a discrete hierarchy which reflects preferred organizations of social groups: close relatives (5), the sympathy group (15), friends (50) and acquaintances (150) (Dunbar et al. 2005). It indicates a preference for social nearness and suggests that individual cognitive abilities are adapted for smaller groups. Charles Montgomery points out that when interacting in public spaces, individuals have an affinity for



Discrete hierarchy of social groups size and social cognitive capacities of an individual

smaller social groups and feel more comfortable interacting this way (Jokinen and Kelly 2019), which can explain why several feel overwhelmed in larger crowds and why the third place model is an effective one in communities. Jan Gehl also advances a similar opinion about public spaces, indicating that smaller places within larger public spaces should be organized as they provide for a more congenial environment and facilitate contacts (Gehl 2010). Further yet, public spaces should provide possibilities for

individuals to moderate contacts and interactions as it makes it easier for individuals to warm up to the presence of others but also retreat if they feel the need (Montgomery 2013), without having to leave the premises. This extends to the articulation of details in spaces that produce singular moments to facilitate social interactions between individuals, acquaintances and strangers alike, while offering spaces to feel secure and provide an attachment to communal space. In addressing loneliness in cities and public spaces, Juhani Pallasmaa suggests that this dimension is lacking in public spaces and contributes to loneliness as architecture has lost its mediating capacity to aesthetic capacities. It fails to provide a sense of relatedness and multi-sensorial experience that are associated to the mental capacities of individuals (Pallasmaa 2020). In that sense, it only appears normal to consider the organization of spaces with different proportions that provide opportunities for community activities, as well as smaller spaces and details that relate to individual social capacities and their ability to moderate interactions.



The Princeton Transit Station illustrates how public spaces can provide spaces and details allowing for individuals to moderate interactions if they feel the need. (Photo: Goldberg 2017)

## Catalytic Social Devices

By taking into consideration the various nuances of individual social capacities and the spatial qualities that favour interactions in public spaces, a series of design principles were developed to guide the design of the *Social Catalyst*. In keeping with the idea of the *Catalyst* as an intermediate bond to allow for opportunities of interactions, these principles can be thought of as catalytic devices to encourage a spectrum of social mixing and interactions (Gehl 2019) that are suitable for all: from passive and chance contacts, to familiar contacts, and all the way to friendly contacts.

## Moderating Scale of Social Spaces



This first principle relates to the formation of spaces within the *Catalyst* and how its different rooms and venues should be scaled in various sizes to enable environments and events with different levels of intimacy and congeniality. They should be arranged so that individuals can moderate their interactions and find an appropriate environment for their needs and capacities. As proposed by Louis Kahn, the spaces and the building should transcend the 'functional', and instead 'function psychologically'. The design should re-engage the full range of human experience and social association (McCarter 2016). As the different spaces are organized, they should allow for individuals to navigate

easily between them and make it possible to transition from one to another according to the type of interaction they are comfortable with.

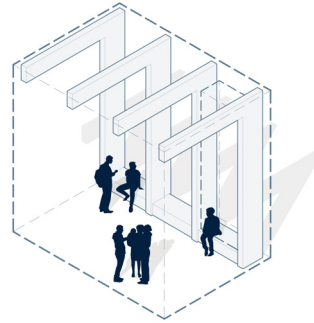
### **Circulation and Connecting Spaces as Opportunities of Informal Interaction**



As the spaces with the highest use but also the most unpredictable, connecting spaces and circulation can contribute to the social experience of the *Catalyst* in several ways and are “generative of unstructured socializing and unplanned meetings” (McCarter 2016, 86). The spaces of movement and connection can be compared to streets, in that they should be imagined as more than a guiding element to move through, and instead as a place to stay in (Alexander et al. 1977). The odds of encountering someone in connecting spaces being very high, it is only normal to take advantage of the edges along this kind of space to plan moments, usable space, nooks and sheltered spaces which may provide individuals with passive contact that is sufficient to warm up to others and perhaps even encounter or observe familiar strangers. This kind of space may also serve as an ideal environment for proximity between various individuals when planning circulation so that different groups and passersby end up crossing paths.



## Nested Spaces and Catalytic Details



The third principle looks at a more intimate scale, that of nested spaces embedded in larger social spaces and connecting spaces. Based on the notion of ‘intimate immensity’, it concerns the idea of spaces possessing qualities of both the immense and the intimate, with details that individuals engage with and that impart to immense spaces an intimate, embodied scale (McCarter 2016). This can be associated with individual social capacities and social cognition. Doing so would allow individuals to feel more at ease and better equipped to warm up to the presence of others around. As Jan Gehl and Christopher Alexander suggest with the phenomenon of “edge effect” (Gehl 2010) and building edges (Alexander et al. 1977), edge placement, detailed façades, nooks, and crannies provide the ideal conditions for people to feel at ease in public spaces: “[...]space in front to watch everything, your back covered so that no surprises will come from behind, and often good physical & psychological support” (Gehl 2010, 137). Developing details, surfaces and small spaces beyond their technical and programmatic purposes, and thinking of them as an intermediate between individuals can encourage different forms of social behaviours and proximity that make of the *Catalyst* an ideal environment to grow familiar with other members of the community.

## Case Studies

In an attempt to illustrate the purpose of a *Social Catalyst*, the following projects all represent situations in which public spaces welcomed the presence of informal gathering spaces to sustain social activities in urban environments, where the opportunities were otherwise limited.

### **Joan Oliver Library: RCR Arquitectes and the Urban Landscape**

The Joan Oliver Library conceived by RCR Arquitectes was commissioned as part of a program (ProEixample) aimed at reclaiming land in the Eixample district of Barcelona for the purpose of public use and embodies perfectly the intention of local interventions to foster opportunities of interaction in communities. The presence of a gap in an existing block granted a rare access to the courtyard inside—unlike most



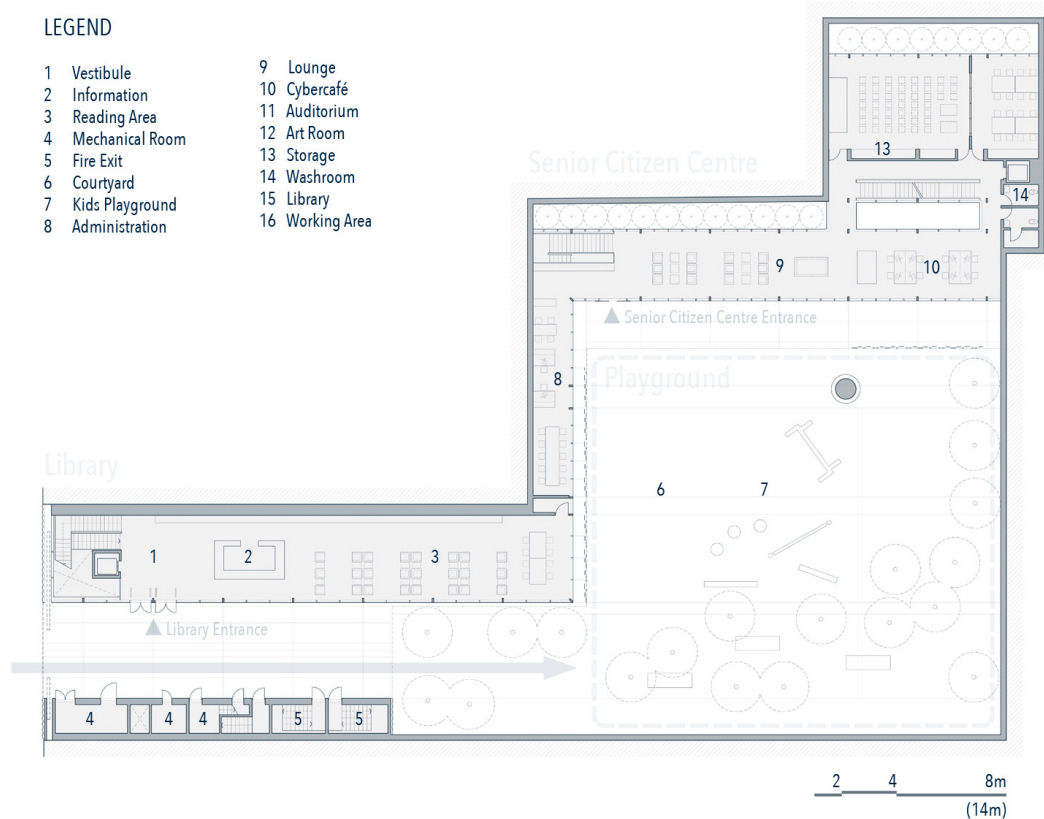
Activation of the library's interior courtyard in the evening (Arenas 2007)

blocks in the district which appear as impenetrable monoliths and prevent public access—and provided the primary motivation for the project (Gregory 2009). It takes advantage of the sheltered environment within the courtyard to offer public amenities to the local residents and offers respite from the highly animated district around. While the original



LEGEND

- |                   |                 |
|-------------------|-----------------|
| 1 Vestibule       | 9 Lounge        |
| 2 Information     | 10 Cybercafé    |
| 3 Reading Area    | 11 Auditorium   |
| 4 Mechanical Room | 12 Art Room     |
| 5 Fire Exit       | 13 Storage      |
| 6 Courtyard       | 14 Washroom     |
| 7 Kids Playground | 15 Library      |
| 8 Administration  | 16 Working Area |



Cohabiting programs in plan and section: library, senior citizen centre and playground. (RCR Architectes 2007)

intent of the brief asked for additional administrative spaces to occupy the courtyard, the architects argued for the social opportunities that could emerge from repurposing it into an accessible public space. The different library rooms were distributed vertically on the periphery of the block, forming a gate through which a passage leads passersby and locals into the existing courtyard, accompanied along the way by a senior citizens centre. Once inside, the latter shares the extents of the internal space with a children's playground and the remaining artefacts of an industrial past amidst the block. The infrastructure provides an all-welcoming informal gathering space and the simultaneous presence of families and elderly—as well as other residents—helps generate a diverse social cohesion that lasts throughout the day.

### **Arena de Morro: Urban Acupuncture by Herzog and de Meuron**

This local sports arena by Herzog & De Meuron in Mae Luiza, Brazil, demonstrates the benefits that precise local interventions comparable to urban acupuncture (Hartman 2014) can bring to cities and the public purpose it provides

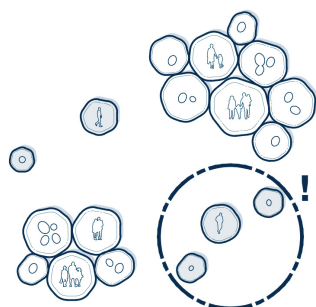


The arena provides a common ground in the community's social infrastructure which was neglected (Baan 2014a)

to its social fabric. The sheltered gymnasium built next to the existing local school provided a venue for community activities to take place and helped reinstate a sense of public power and social opportunities to its younger population, where any chance of gathering before its construction were limited by drug trafficking (Glancey 2014) and poor social infrastructures. Built around a central sports pitch with surrounding seatings to accommodate various informal gatherings, its roof also covers additional pavilions with amenities and multipurpose rooms to complement the sports activities that take place throughout the day.



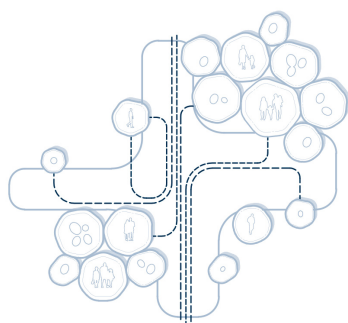
The arena allows for informal gathering and community activities to take place, bringing people together(Baan 2014b)



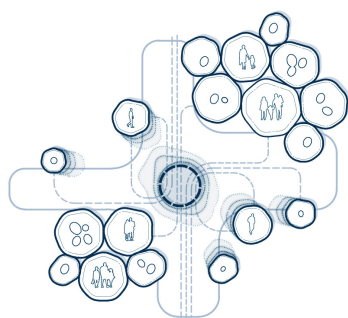
1. Locating areas at risk of fragile social networks



2. Measuring the potential of encounter in the social infrastructure



3. Understanding the rhythms of a community to structure the social catalyst



Locating the social catalyst

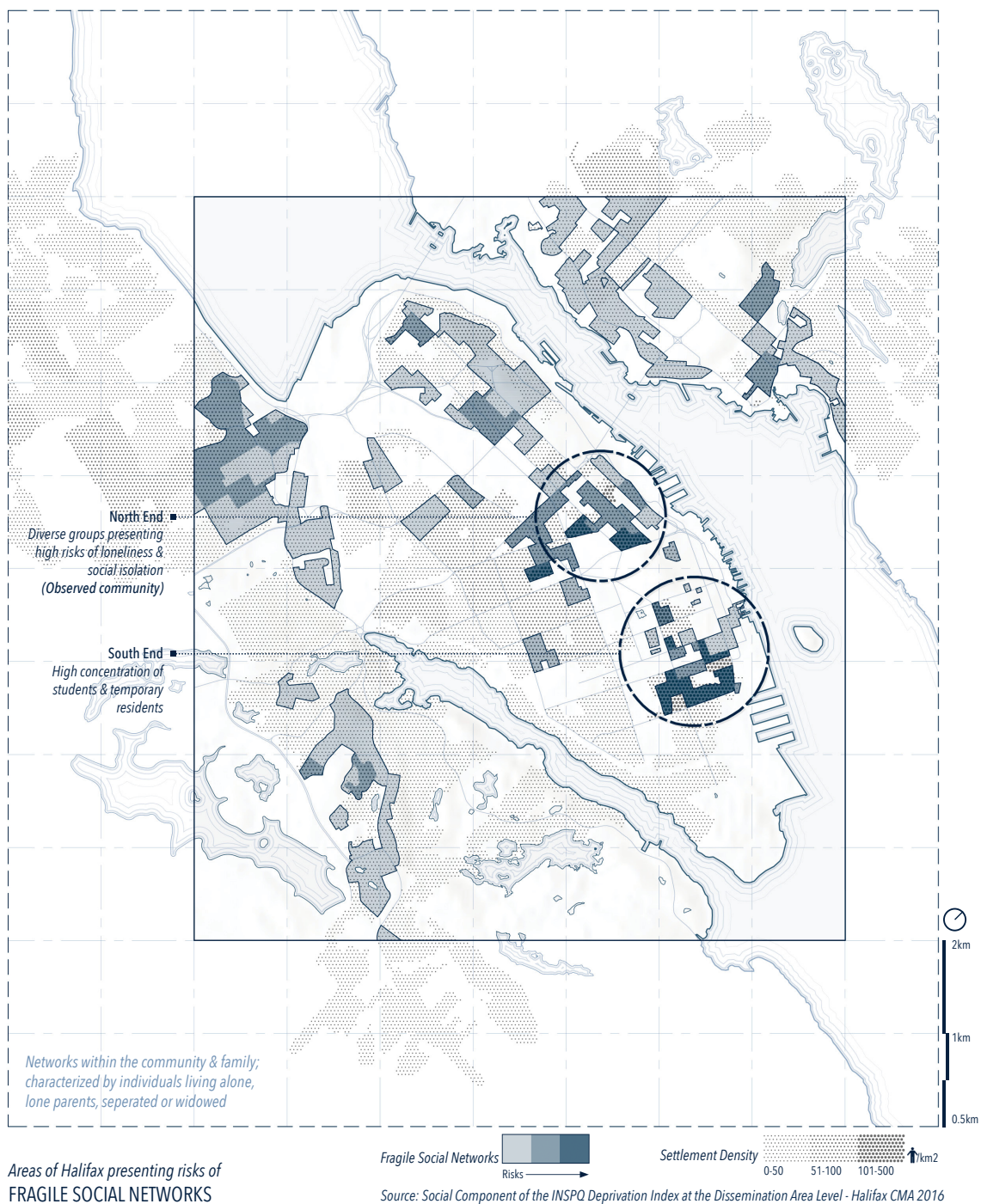
Methodology: defining the *Social Catalyst*

## Methodology

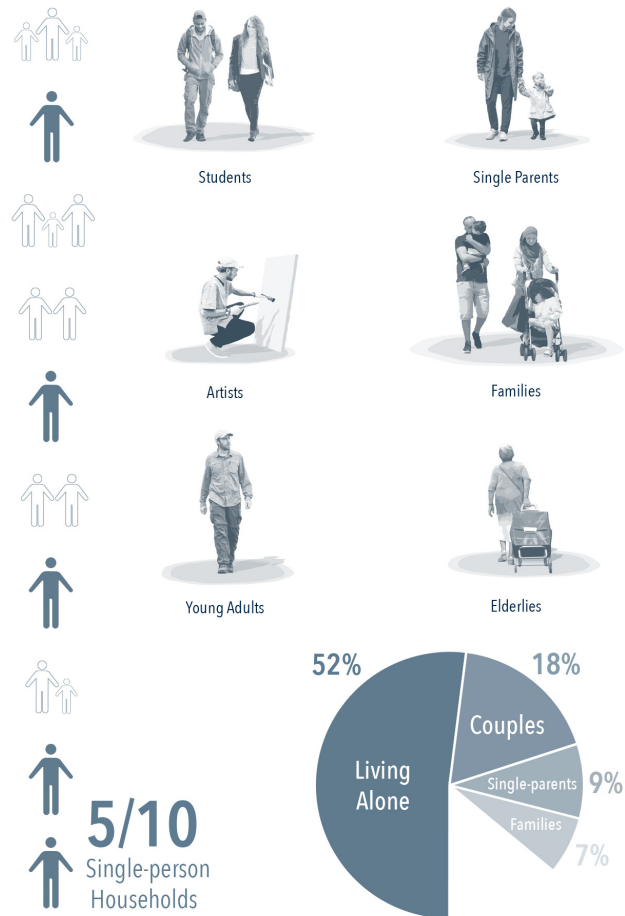
To determine the role of the *Catalyst* and locate the points of intervention that can best accommodate areas of the city presenting symptoms of loneliness and social isolation, the methodology advanced in this thesis is structured in a threefold manner. The first step proposed is to identify areas of Halifax presenting higher risks of fragile social networks, after which the objective is to measure the potential of encounter and social activities taking place within their social infrastructures. This is then followed by an analysis of their close-grain patterns and rhythms to establish the role and extents of the *Social Catalyst*.

### Locating Areas at Risk of Fragile Social Networks

The first portion of the methodology is data-defined and takes into account the location and settlement of population in a city, from which can be observed areas presenting fragile social networks. While Loneliness by itself is harder to quantify, the quality of social networks is often more extensively represented in data and was used in this case to locate areas with higher risks of fragile social networks. In the case of Halifax, the quantified information which allowed to determine the extents of fragile social networks in the city comes from the *2016 Social Component of the INSPQ Deprivation Index for the Halifax CMA* conducted for the *Canadian Institute of Health Information (CIHI)* and represents areas where individuals (living alone, widowed or single parents) exhibit higher risks of fragile social networks within the family and community. From this, two areas appeared to be more critical: the area in North End between North Street and Cogswell Street and another situated in South End, around Inglis Street.



Locating areas at risk of fragile social networks in Halifax (data: INSPQ 2016)



North End Demographics: Diversity of Community and Households (data: Statistics Canada 2016)

While both areas are considered throughout most of the methodology’s development, this thesis will be concentrating on the North End Community delimited by the Cogswell Interchange, Barrington Street, Agricola Street and the Macdonald Bridge extending into North Street. Not only does it present a significant number of individuals living alone—52% of households in the area are single-person—, its social infrastructure has been in a state of neglect for the past decades as demonstrated further. Moreover, it does present a diverse demography which could provide various opportunities for proximity and interactions that can benefit individuals lacking connections in their everyday life.



## **Measuring The Potential of Encounters in the Social Infrastructure**

In attempting to define the social infrastructure and understanding the possibilities of interaction provided by the identified neighbourhoods or the lack thereof, two theories were combined to organize the framework and criteria of observation. Loosely based on the theory behind Team 10's 'clustered system'—more specifically the principle of stems and the common ground that allows for the connection of all components of a city (Smithson 1968)—and the pluralistic layers that make up the activities of the public realm according to Jan Gehl: necessary activities, optional (informal) activities and the social activities that result from them (Gehl 2011). Its aim is to illustrate the extent of the social infrastructure in a community, the space that ties together the individual homes, community amenities, and other generators of activities in a city. However, the intent in this case is actually to observe the potential of encounter it has to offer, or the chances of coming across another person as one would proceed with his everyday life.

As suggested by Gehl, the objective of this is to analyze the existing structures to recognize where there are opportunities of gathering and life in public spaces and how it can serve as a starting point for plans to reinforce its existing conditions (Gehl 2010); looking here at ideal conditions for a *Social Catalyst*. From this, it could be understood that Gottingen Street serves as a backbone to the North End Community with an important transient bus infrastructure running along and connecting the community to the rest of Halifax. Furthermore, it encompasses a large portion of the public realm in the neighbourhood.



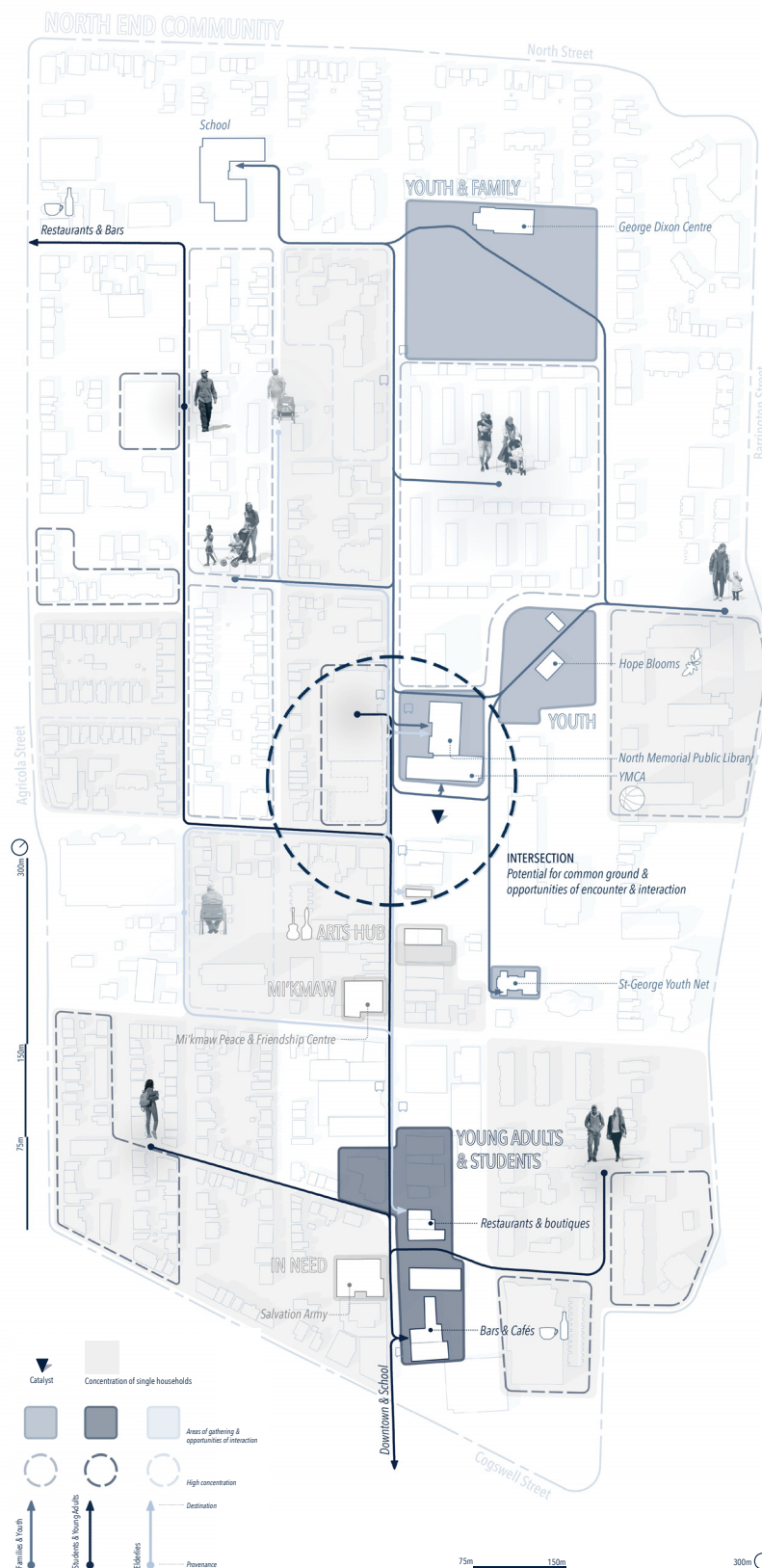
Measuring the potential of encounter in North End Halifax. Most opportunities of encounter in North End's social infrastructure are scattered along Gottingen Street. (Selected community for the development of this thesis).



Measuring the potential of encounter in South End Halifax. Most opportunities of encounter within the neighbourhood take place around the grocery stores found at their centre. Opportunities for informal activities and interactions are found outside of the neighbourhood in Downtown Halifax.

To refine the results of these observations and to understand how the existing social infrastructure serves its community, the exercise was repeated by examining the outreach of the community amenities from the perspective of its different demographic groups. This method made it possible to highlight several realities present in North End's social

infrastructure, including the whereabouts of community anchors and amenities in relationship to the whereabouts of specific demographic groups, and see how it served its members or not. From the resulting assessment of the social infrastructure, it was possible to understand how a considerable portion of it is dedicated to families and youth. Only a few isolated instances appeal to young adults and students in gentrified areas of the community, as well as minority groups in the neighbourhood and along Gottingen Street. As noted by Nova Scotia's chief medical officer and other experts, one of the reasons why loneliness and social isolation are present in the province and why they affect groups including senior citizens is because of how most community programs and amenities are tailored for the youth, while few are offered to other age groups (Lawrence 2018). However, by taking into consideration the location of community amenities and the provenance of the different demographic groups from within the neighbourhood, and establishing the possible ways for all to reach the identified services, it became possible to see where different groups might encounter on a regular basis and make it that specific areas—such as the site adjacent to the YMCA, between Gottingen & Maitland Street—can become an ideal common ground to generate proximity between different age groups. This can serve as an opportunity to build on the existing strengths and services of the social infrastructure to generate connections between the different members of the community as opposed to offering separate services. Certain programs meant for the community's youth—including Hope Blooms—are already aimed at getting children involved in their community and could potentially be associated with services offered to elderlies as a way of generating proximity and opportunities of interaction.



Outreach of community amenities in North End's social infrastructure by community demographics. Despite a varied demographic representation, most community amenities appeal to families and youth, and to a certain extent to young adults and students

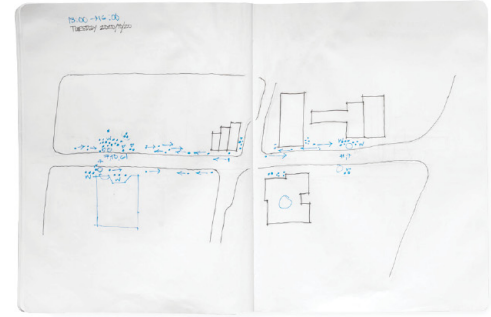
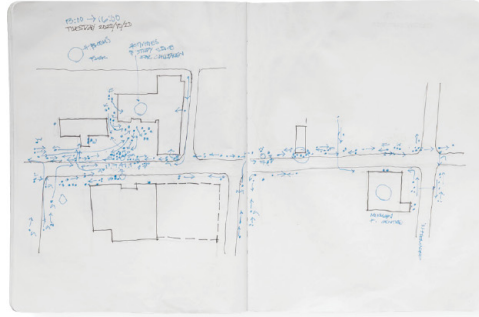
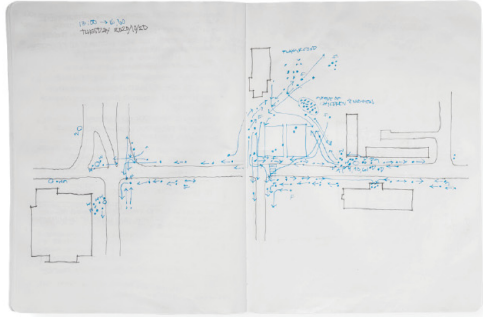
### **Understanding the Rhythms of a Community to Structure the Catalyst**

To expand on the results from the previous observations and to establish the purpose and precise location of the *Social Catalyst*, the third step of the methodology refers to certain principles from Henri Lefebvre's Rhythmanalysis method. As indicated by Lefebvre, eurythmic rhythms normally manifest themselves in social groups—families, villages, towns and institutions—and are determined by the interactions which happen within a cyclical structure of time and repetition (Lefebvre 2004), in other words the everyday activities of a community. However, what can be understood as harmonious rhythms and interactions in a community can also become arrhythmic and inexistent when conditions prevent them from happening (Lefebvre 2004), as can be seen when social infrastructures fail to provide opportunities for informal gathering and proximity. This is why observing the fine-grain activities taking place on Gottingen Street, the main corridor of activity in North End's social infrastructure, would allow for a better understanding of the activities taking place in the neighbourhood between individuals and groups. The result of this observation is meant to inform the ideal activities and programmatic elements that can help shape the *Social Catalyst* to increase the chances of encounter on a regular basis and promote a sense of familiarity.

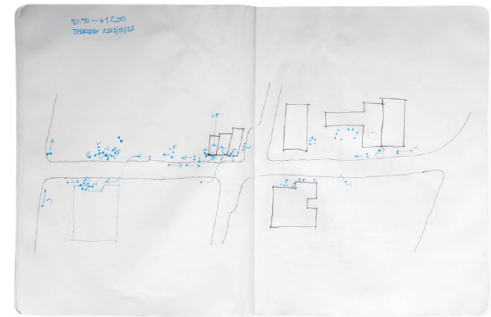
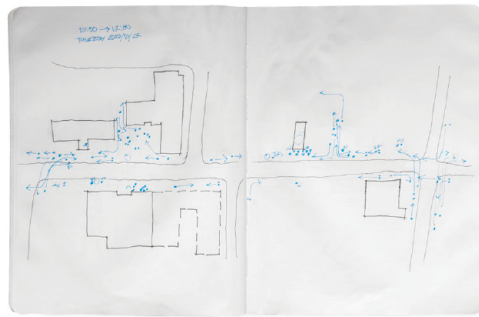
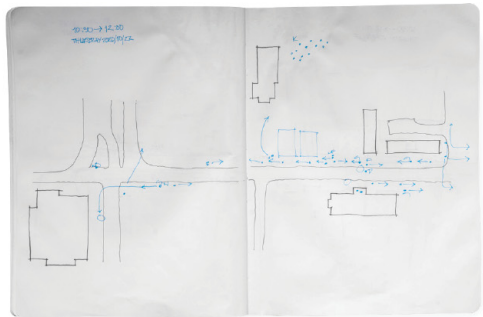
After spending more than two weeks on Gottingen Street observing its patterns, it was possible to establish the duration and whereabouts of activities and repeated behaviours taking place along the street, as well as identifying variations in typologies and activities taking place on different sections of the street. Most informal gatherings taking place along the street spawned around the community

services—including the North Memorial Public Library, the Salvation Army, the Mi'kmaw Peace and Friendship Centre and the George Dixon Centre—and the few cafés on the street, all of which seemed to generate isolated forms of gatherings appealing to specific groups. While the library and the George Dixon Centre mostly welcomed families and children from the neighbourhood, several cafés and boutiques located on the southern end of Gottingen Street mainly attracted young adults and students. The numerous bus stations appeared as the only spaces along the street where individuals of different groups could be observed. Of all the individuals waiting and passengers coming off buses, a considerable amount were carrying grocery bags and baskets. A better comprehension of the patterns taking place around the stations revealed that they provide the only access to basic necessities which are otherwise absent in the neighbourhood and as a result, are uprooting individuals from the community and opportunities for informal social activities. Further yet, most passersby coming on Gottingen Street from Cornwallis, Cunard and Buddy Daye Streets also carried grocery bags, suggesting that access to fresh food supplies is located further west outside of the neighbourhood. This was confirmed after locating the whereabouts of the nearest grocery stores further in West End Halifax, at 1.4 and 1.5km from Gottingen Street.

Additional observations led to believe that of all the visible community services provided to individuals living in North End, many were oriented towards families and youth engagement and gravitated around the library. The Hope Blooms facilities and the YMCA both offer an array of programs ranging from urban agriculture and entrepreneurship to basketball programs aimed at the



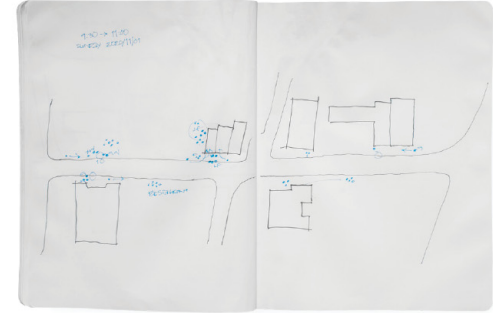
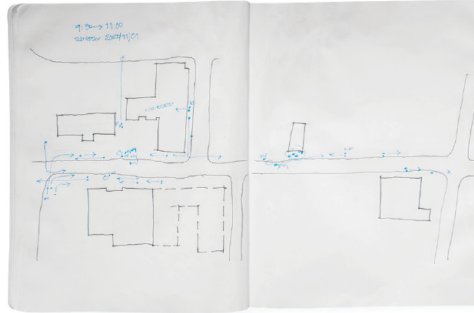
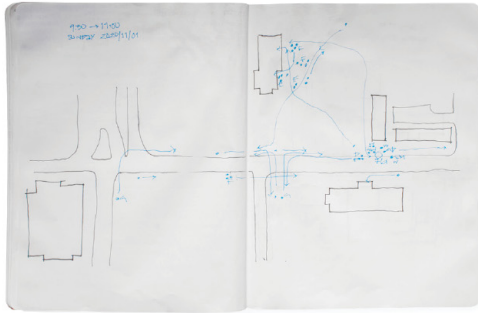
Tuesday - October 20, 2020 (1:00PM - 4:30PM)



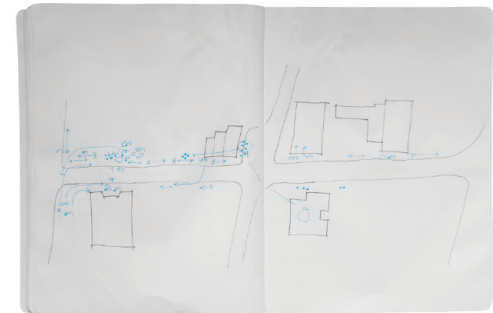
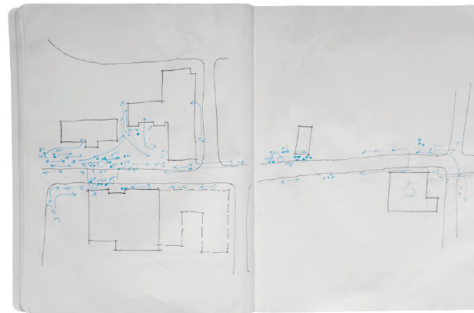
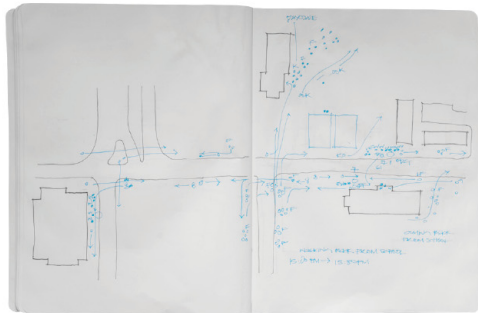
Thursday - October 22, 2020 (10:30AM - 12:00PM)

Observed rhythms and gatherings during different periods of the day and week on Gottingen Street between North Street and Cogswell Street.



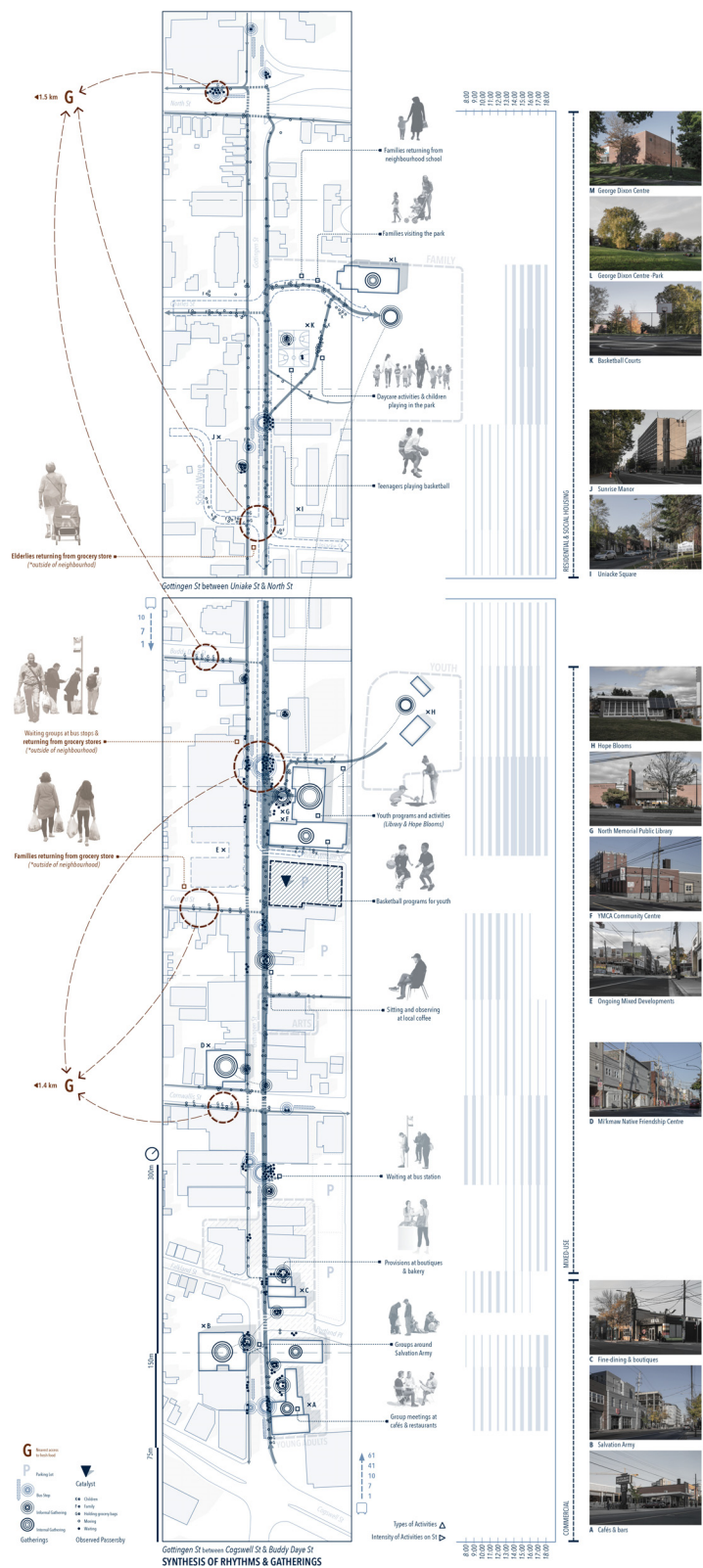


Sunday - November 1, 2020 (9:30AM - 11:00AM) .....

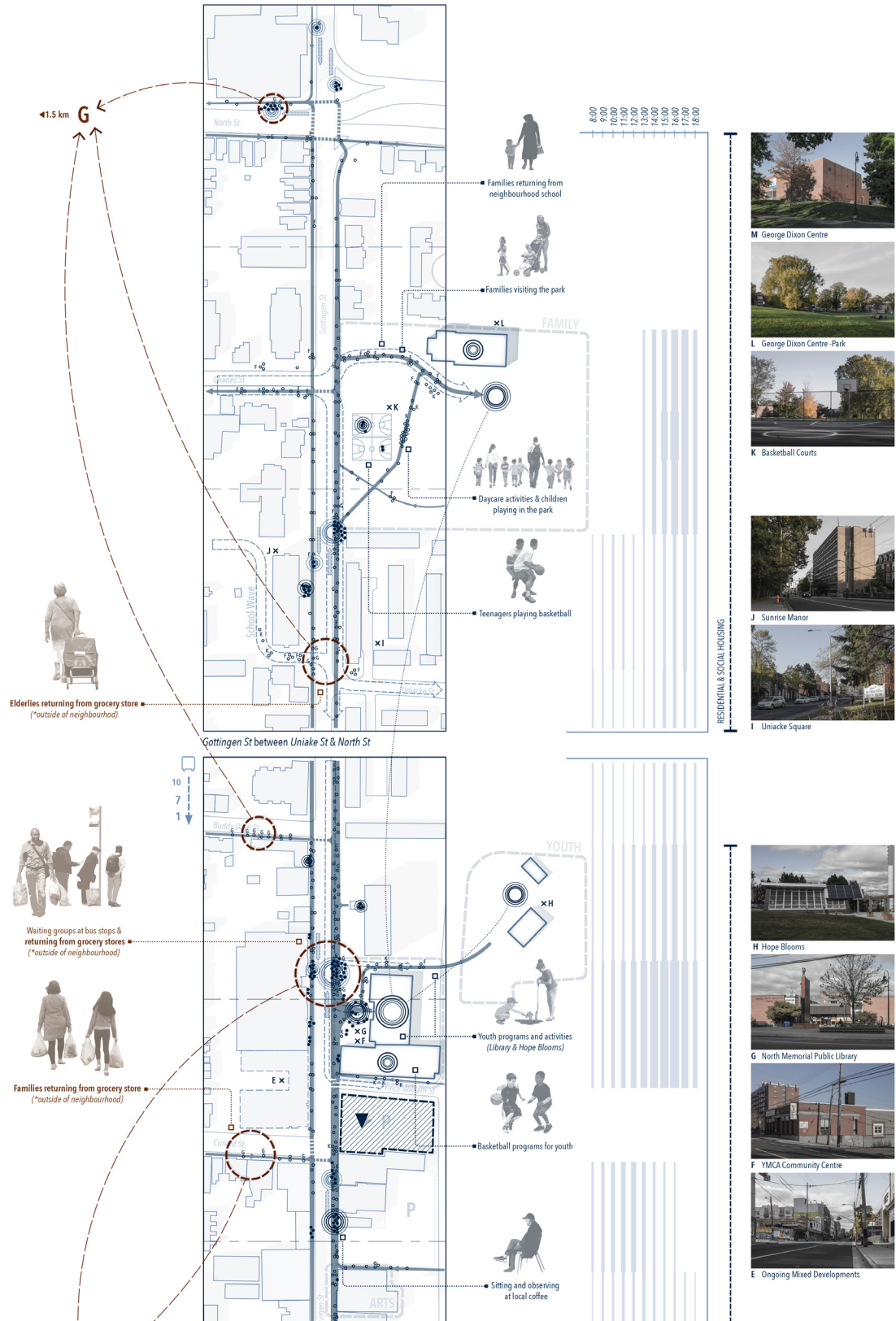


Friday - November 9, 2020 (2:00PM - 4:00PM) .....

Observed rhythms and gatherings during different periods of the day and week on Gottingen Street between North Street and Cogswell Street.



Synthesis of observed rhythms and gatherings on Gottingen Street; the observations lead to believe that individuals are provided little common ground as most basic necessities, more specifically access to fresh food, are found outside of the neighbourhood (complete image).



Synthesis of observed rhythms and gatherings on Gottingen Street (close-up on Gottingen Street between North Street and Uniacke Street) (1/2).



Synthesis of observed rhythms and gatherings on Gottingen Street (close-up on Gottingen Street between Buddy Daye Street and Cogswell Street) (2/2).

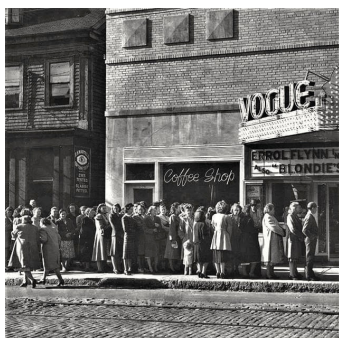
inclusion of youth in the community. As could be seen on several afternoons, children flocked towards the library following school hours for study programs and other activities taking place around. From this, it could be understood that the portion of Gottingen Street between Cunard Street and Buddy Daye Street offers a strong potential for opportunities of interaction and could potentially serve as grounds for individuals to find connections.

In shedding light on the nature of activities taking place in the neighbourhood, which appear to be working in isolated cells, the *Catalyst* would best work as a common ground for the different activities to be connected and help build a social cohesion between different individuals and groups in the area, bringing together elderly citizens, families, students and individuals living alone in an all-welcoming space where they can benefit from the presence of others. Not only would the *Catalyst* be sustained by these external complements, it can provide additional spaces to enhance existing activities such as the YMCA basketball programs and arts culture in the neighbourhood, while generating connections with programs like Hope Blooms. The inclusion of a community market also appears to be an essential component to consider, as an ideal linking element in the program and as a way to provide access to fresh food in a neighbourhood identified as a food desert (Beaumont 2012) and confronted with covenants that prevent the construction of any grocery stores nearby (Munro 2020). The possibilities of social activities that can result from this kind of third place (Castle 2005) could potentially be beneficial for North End as it can introduce a form of regularity and repetition in the public realm that is key to developing a familiarity with others and developing connections.

## Chapter 5: Atrophy of North End's Community Life

### Depleted Community Life and Urban Expansion

The area of North End between North Street and Cogswell Street was subject to several major transformations over the course of its history, with Gottingen Street at its centre bearing traces of the numerous changes having taken place. Starting as a local retail street and main service point to provide the daily necessities of North End's working-class residents at the turn of the nineteenth century (Grant and Roth 2015), it shifted to a major commercial street with an increasing diversity of stores and entertainment to accommodate locals. Residential and economic growth in Halifax led to Urban Renewal projects around North End and Gottingen Street, starting with the construction of major transit infrastructures contributing to the depletion of its commercial activities and the relocation of Africville's community amongst its residents starting in 1964 (Erickson 2004). Uniacke Square's housing facilities built in 1966 stand along Gottingen Street today as one of the reminders of the community's displacement. Further yet, the newly built Angus L. Macdonald Bridge and the Cogswell Interchange contributed to physically isolating the community from adjacent neighbourhoods and the increase in transit they generated led to the construction of parking lots along Gottingen Street (Grant and Roth 2015). By the 1970s, the fine-grained street and its neighbourhood turned into a low-rent district with new social housing projects and cooperatives and became even more isolated from the city. The remaining institutions on Gottingen Street started closing—including the Vogue Theatre, Kline's



Vogue Theatre on Gottingen Street (The Chronicle Herald 1948)



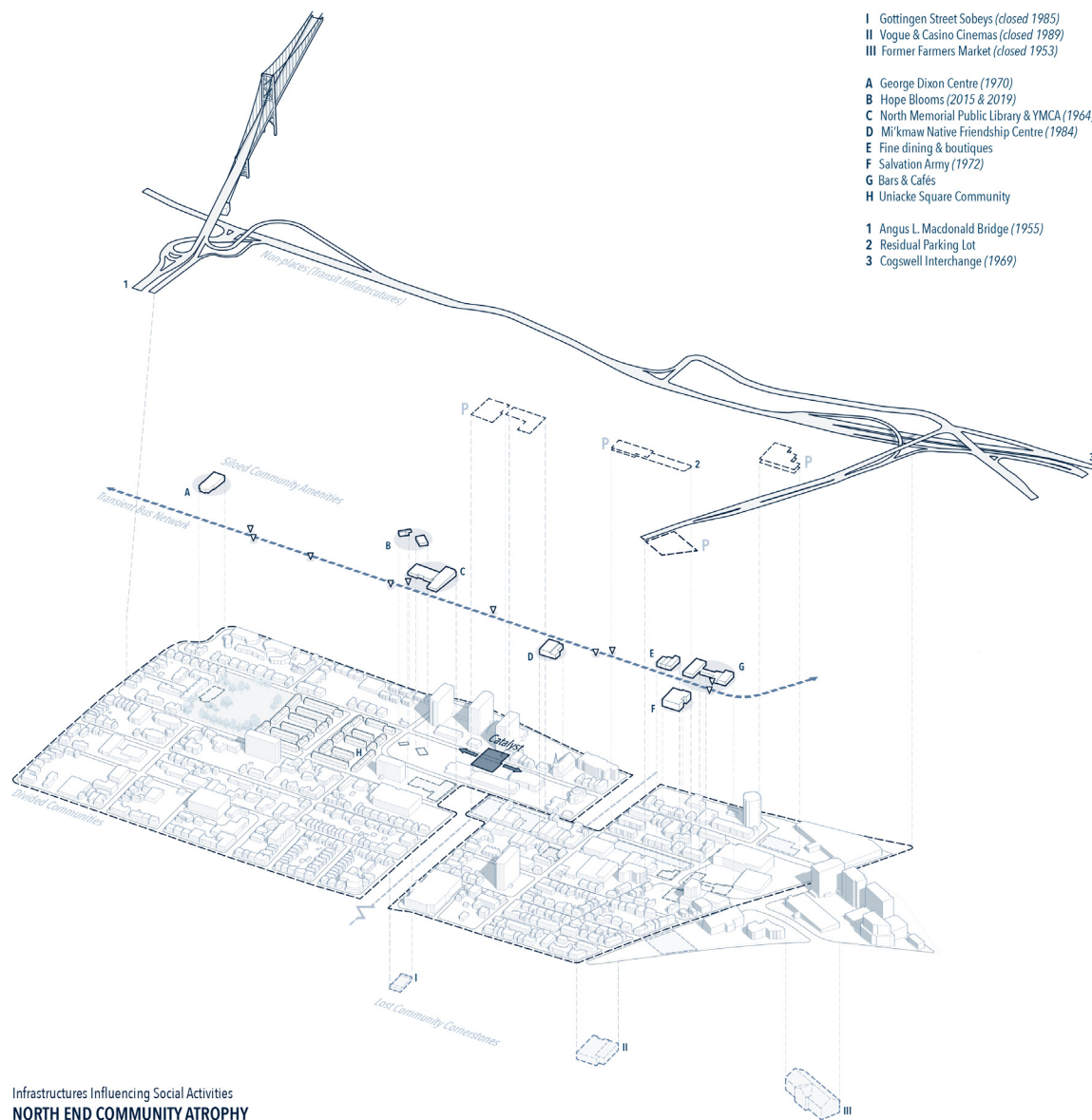
The Gottingen Street Sobeys (Lewis N/A)



Outside the Former City Market (Norwood 1953)



Former Farmer's Market (Halifax Municipal Archives 1950)



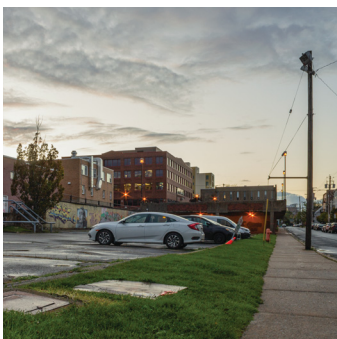
Exploded axonometric of North End Halifax; the neighbourhood has almost entirely been surrounded by transit infrastructures, whereas most of its community amenities work in silos along Gottingen Street.



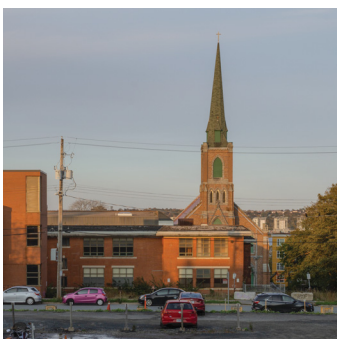
Angus L. McDonald Bridge



Cogswell Interchange



Residual parking lot  
between Gottingen Street  
and Maitland Street



Residual parking lot  
between Gottingen Street  
and Maitland Street

Clothings, and Rubin's Menswear—and were replaced with community services including shelters and legal aid (Grant and Roth 2015). The Rubin's Menswear was converted into the Mi'kmaw Native Friendship Centre to accommodate the growing Indigenous population in North End. In 1985, the neighbourhood suffered what is considered to be its biggest loss with the closure of the Sobeys's supermarket (Grant and Roth 2015), the last amenity of its kind up until today (Beaumont 2012). While Halifax does not stand as tall as other major cities in Canada, the case of North End does illustrates well how the growth of urban environments can cause social isolation and hinder the social infrastructures of communities which in turn lead to increased risks of fragile social networks and loneliness.

### **Siloed Community Facilities**

Becoming one of the most stigmatized neighbourhoods of Halifax in the 1990s, it has ever since been at the mercy of growing gentrification as a result of decreasing property evaluations and a desire for revitalization and densification in the city. North End was the subject of rapid growth once again, this time with the influx of artists, students and professionals seeking for low-cost housing in an area where space was available (Grant and Roth 2015). The southern end of Gottingen Street has also seen a turn in its activities with condominiums, art galleries, cafés and fine-dining restaurants opening in former cornerstones of the street. The result of this, however, has contributed to a highly polarized environment and divided communities on either side of Cunard Street (McGregor 2015). The emergence of gentrification has caused the uproot of long-time residents who could no longer afford to live in the neighbourhood and the new activities on Gottingen aren't considered to





George Dixon Centre



North Memorial Public Library



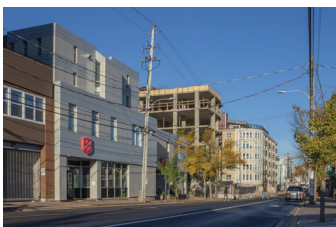
Hope Blooms



North End Community YMCA



Mi'kmaw Friendship and Peace Centre



Salvation Army

be an organic part of the existing community. As it is today, most community centres and new attractions on Gottingen Street act in silos to accommodate the diverse communities in North End. Long-time residents have been said to spend little time south of Cornwallis Street, where new developments and small businesses are opening, whereas newcomers are sometimes hesitant to walk up north on the street (Grant and Roth 2015). Furthermore, most community facilities other than parks present themselves to the public as monolithic structures with little openings to allow for a connection between the internal activities and the street activities, making it hard for the passerby to be attracted towards them.

## Chapter 6: Introducing the Social Catalyst in a Community

### Situating the Catalyst

As observed during the application of the methodology—more specifically when observing the rhythms of North End’s Community—and in considering the evolution of the neighbourhood, situating the *Catalyst* in the vicinity of the North Memorial Public Library appeared as an ideal solution because of the mutual benefits that could emerge between the *Catalyst* and adjacent facilities and as a reconnecting element along the community divide found in North End on either side of Cunard Street.



The site in its existing state serves as a residual parking lot south of the YMCA on Gottingen Street.

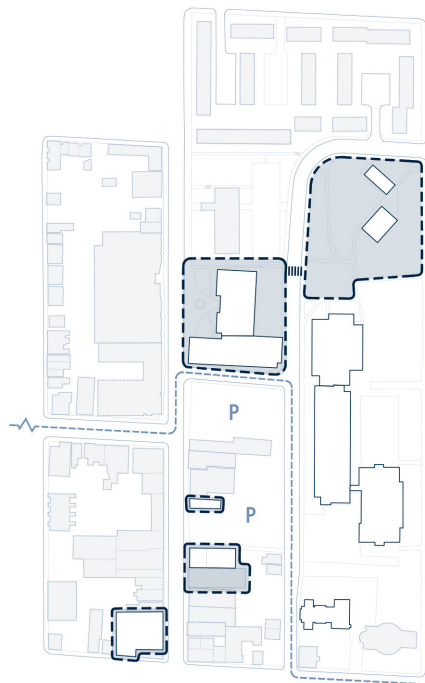


The edge of the site along Maitland Street is several meters lower, as is the typical topography along Gottingen Street.

Situated at the end of Cunard Street, south of the YMCA and between Gottingen Street and Maitland street, a residual parking lot acting as a void in the neighbourhood's social infrastructure and resulting from depleted community and economic activities presented itself as a site of choice for the *Catalyst*. The presence of a bus station on the corner of the site facilitates its access through public transportation and its location next to the YMCA and North Memorial Public library benefit programs offered by the establishments, as is its proximity to Hope Blooms on the opposite block along Maitland Street. The site also acts as a strategic location for the incorporation of various cultural activities taking place in the neighbourhood, with an arts hub—encompassing artist studios and music production studios—and the Mi'kmaw Native Friendship Centre situated close by on Gottingen Street. The decision to situate the *Catalyst's* program on this very site stems from the objective to generate the most opportunities of interactions by relating programmed activities and maintaining a constant presence of patrons which would otherwise be limited if the program components were to be dislocated and scattered around on different sites. In order to make the building more than an object along the streetscape, and rather a social environment that extends beyond its physical limitations and accessible at all times, the site was distributed equally between interior space and outdoor public space around the *Catalyst*. This makes of it a permeable environment with several smaller moments to allow for informal interactions and passive encounters to take place as community members go on with their daily routines.

## Catalyst at the Community Scale

The impacts and benefits of the *Social Catalyst* extend beyond its own site and reach out to the community scale, serving as an intermediate to help consolidate and restructure the existing social infrastructure. Starting as an opportunity to reconnect blocks on both sides of the site, it enables the extension of the social infrastructure and serves as the linking element between siloed community amenities on either side of Cunard Street, possibly as a way of reconciling the community divide in the neighbourhood. Furthermore, allocating part of the site as an open connecting space from Gottingen Street to Maitland Street facilitates and highlights a continuous pedestrian circulation across

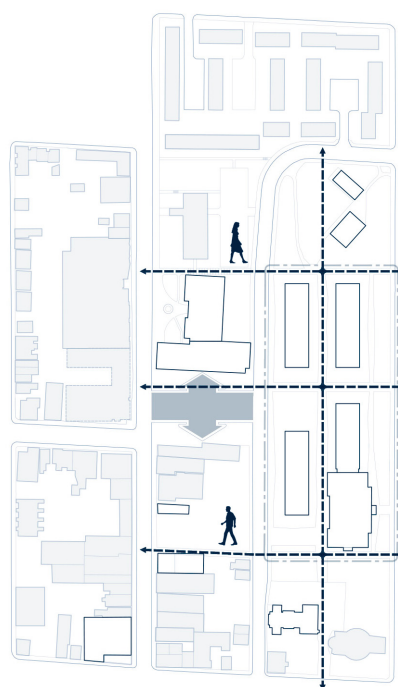


A Existing Social Context + Community Divide

North End existing social context + community divide

the neighbourhood to reinforce a number of existing weak paths and connections that make way between both streets.

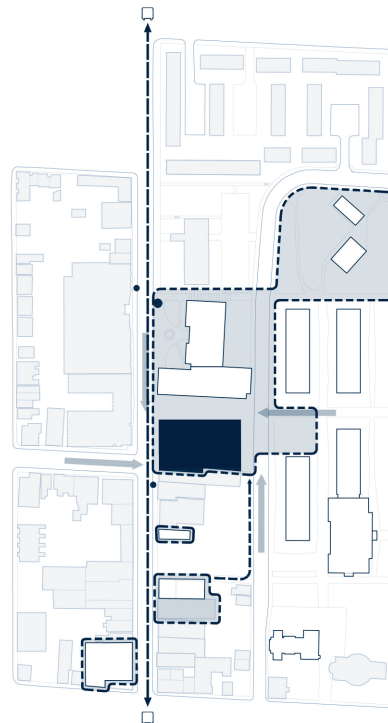
The connecting space also grants an appropriate access to the YMCA and Hope Blooms from Gottingen Street as opposed to the existing conditions. Maintaining these axes across also makes it possible for the social infrastructure to be accessible from any point in the neighbourhood—not unlike public forums historically found at the crossing between the *Cardo* and *Decumanus Maximus* in Roman cities—and its connection to the main transient bus infrastructure in the neighbourhood make it more likely for individuals to encounter the *Catalyst* on a regular basis. It can also serve as a foundation for the upcoming One North



**B** Block Reconnection + Altered Version of  
Recent *One North End Development Proposal*

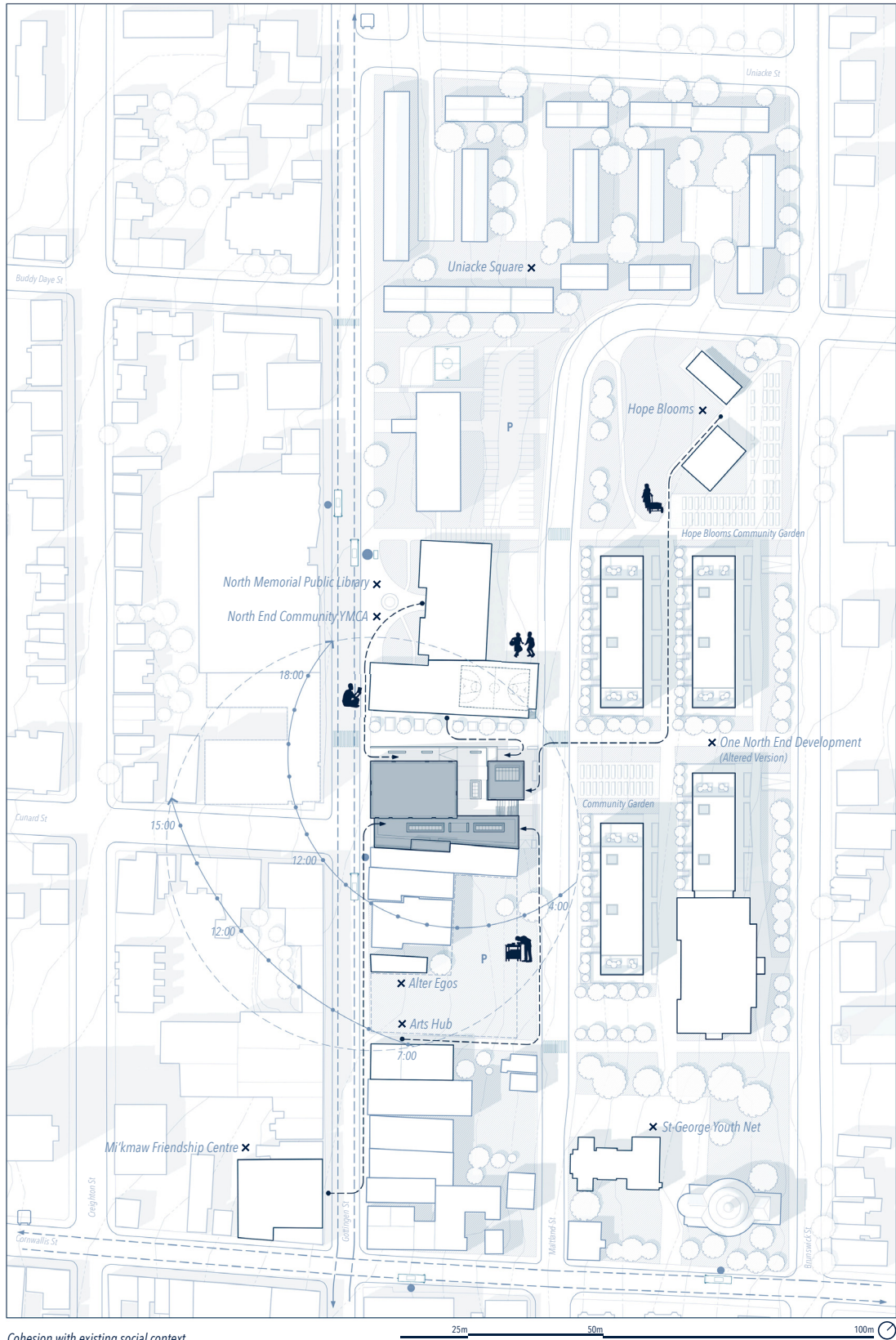
Reconnecting blocks along Gottingen Street +  
Interaction with new development  
(*altered version of recent One North End Development Proposal*)

End Development to be built on the opposite side of Maitland Street by providing an indication of the principal connections to maintain in order to facilitate access to the community's social infrastructure and allow circulation from one end of North End to the other. As with most of the principles developed for the *Catalyst* at various scales, the decision of situating the project in this specific site was taken so that it could act as the missing bond to facilitate access and encourage opportunities of interactions.



 Consolidation of Social Context + Connection to  
Main Transient Infrastructure

Consolidation of social context +  
Connection to main transient infrastructure



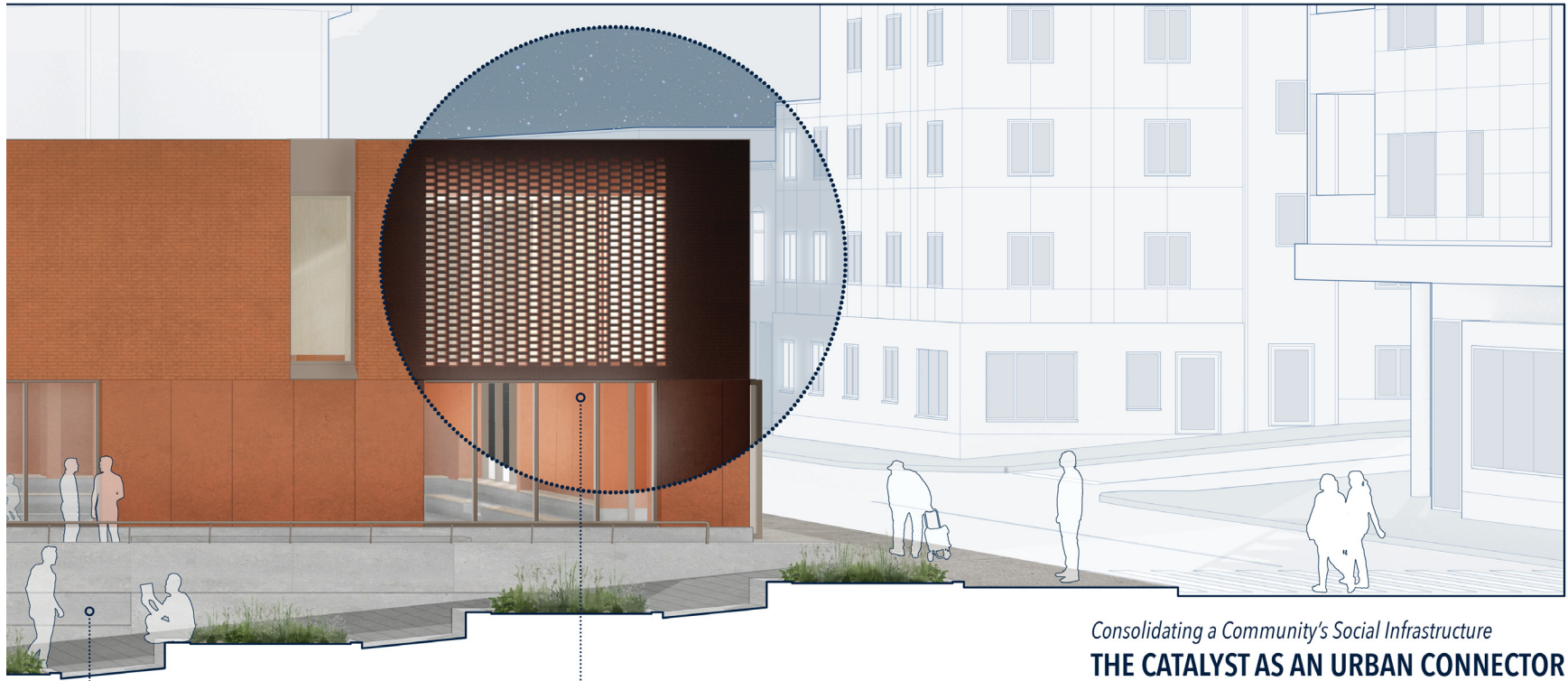
Cohesion with existing social context  
SITE PLAN & CATALYST LOCATION

Site plan and *Social Catalyst* location: cohesion with the existing social context



The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (full section). Opportunities of interaction can be found all around the *Catalyst* with courtyards and an inhabited pedestrian street along its lateral facade.





Consolidating a Community's Social Infrastructure  
**THE CATALYST AS AN URBAN CONNECTOR**

 Passive & Chance Encounters

 Community Lantern  
 Visual Signal

→ Göttingen Street

The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (1/3). All facades include brick sunscreens which act as light filter during the day and community lantern at night; visible from afar on all three sides.



The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (2/3). Pockets and openings in the plinth's walls provide different sheltered seating possibilities for individuals to occupy nearby regular circulation.



The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (3/3). Subtracting mass from the plinth to generate openings provide a visual connection with installations found inside.

## **Catalytic Program**

In its simplest form, the program developed to accommodate the North End community can be thought of as a catalytic program. All programmatic elements have been considered as either linking elements with existing external complements found within North End's social infrastructure or an added value to the everyday life which is absent in the existing community. The goal of this combination is to offer a linking element which will allow for individuals of the community to find opportunities of interaction which are respectful of existing rhythms on a regular basis.

## **The Social Catalyst as a Community Ecumene**

As an ecumene refers to an inhabited portion or an area with a high concentration of activities—whether industrial, economic or cultural—it is used here to highlight the concentration of community activities and the combination of its inherent rhythms to generate a common ground for its members to gather on a regular basis and benefit from the opportunities of interactions that can emerge from the *Catalyst*. With respect to the characteristics that define third places, it is meant to host activities that welcome all groups of the community and the combination of specific program components—the indoor basketball courtyard, the cultural room, the workshop and the seedling centre—generate a continuous presence of patrons throughout the day.

It combines necessary activities such as the weekly farmers market and permanent food counter taking place in the basketball courtyard and cultural room respectively, which sustain a regular attraction and respond to the community's dire need for access to fresh food. Additionally, its main venues—the basketball courtyard and the cultural room—



**SOCIAL CATALYST**

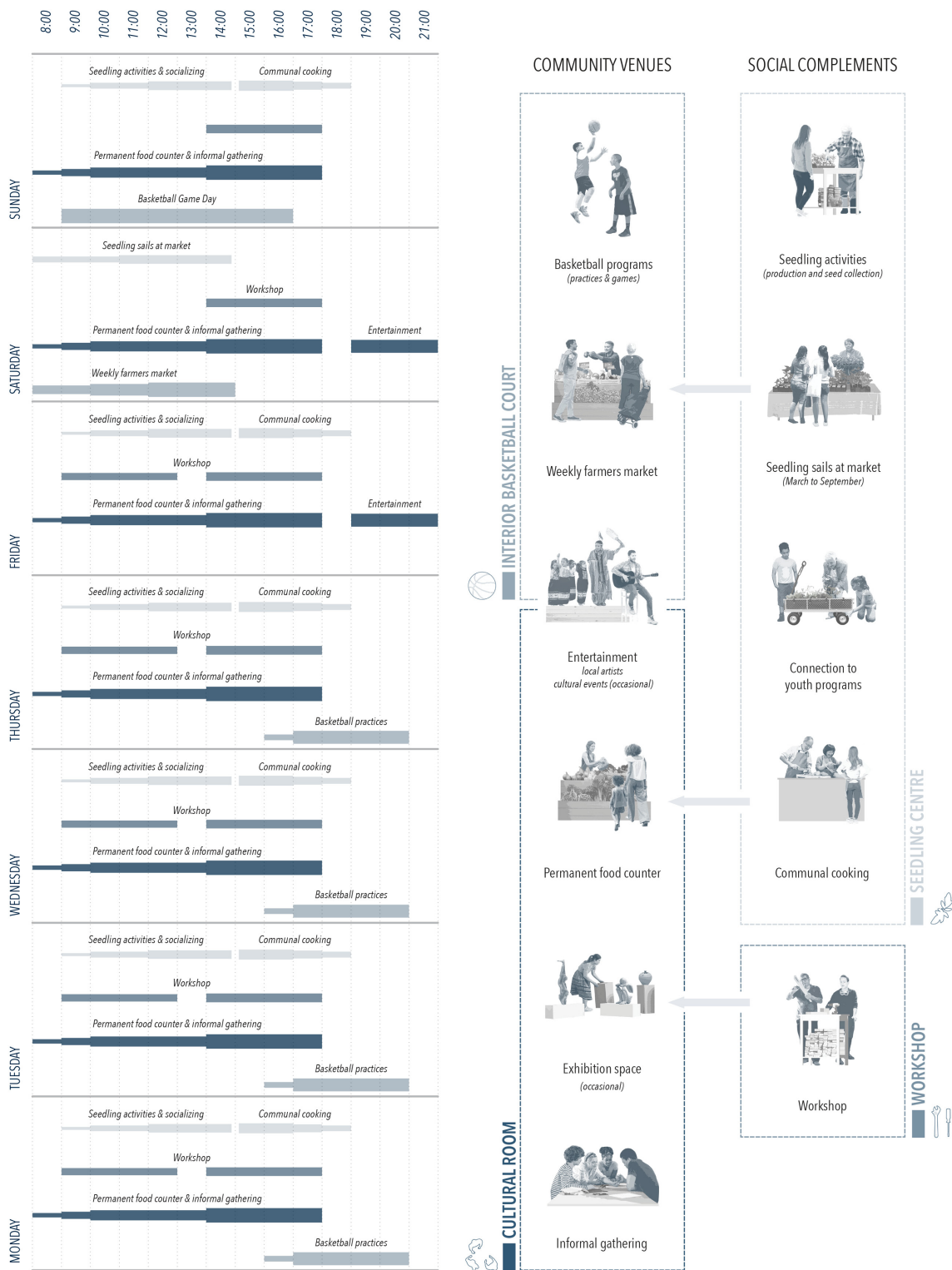
**COMMUNITY ECUMENE**  
COMMON GROUND



The proposed program for the *Catalyst* acts as a community ecumene and builds on Jan Gehl's idea of combining necessary activities and informal activities/spaces as a generator of social opportunities.

serve as grounds for a larger extent of informal and social activities throughout the week which are meant to benefit the community basketball programs and cultural activities taking place in North End, and the social complements—seedling centre and workshop—provide resources to individuals seeking connections and anchors in the community. The proposed social complements have been considered for the activities they offer as a way to create a social cohesion with existing community programs and create proximity between different age groups, including elderlies, young adults and families. This can be seen with the seedling centre for senior citizens as it would combine its services with those offered by Hope Blooms, making it possible for children to support elderlies in tending to the seedlings and their growth, as well as helping with the transportation of materials and seedling trays. Indirectly, this provides an additional opportunity of interaction and helps connect senior citizens to their community. Locating the seedling centre along the spaces used by the children attending basketball practices and games after school and on weekends also provides an additional form of interaction between senior citizens and the community's youth, spawning an additional encounter which might not be present in their routines otherwise. A similar pattern takes place with the workshop, being readily available to the community and artists in the neighbourhood. Acting as a resource and form of leisure, it is not unlikely for opportunities of interaction to take place between individuals who visit the installations; transmitting knowledge and tips.

The proximity of both complements to the main social venues also facilitates their integration in larger events taking place within the *Catalyst*. Members of the seedling centre and the



Opportunities of interactions across programs  
**PROPOSED PROGRAM - WEEKLY SCHEDULE**

Proposed weekly program of the schedule based on existing activities in the community and additional programmatic elements from the *Catalyst* to offer an environment in constant use, with activities to welcome all members of the community.

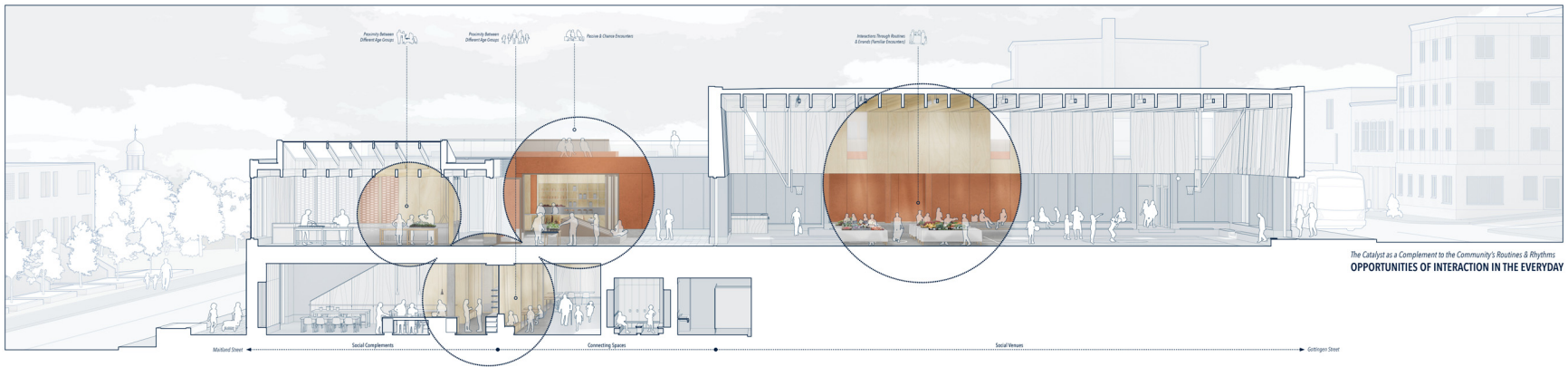
workshop can take part in the weekly markets by setting up exhibits and stands to showcase and sell the results of their work/activities, thereby generating additional connections to the community. Furthermore, they benefit from additional opportunities of interaction as several of the program components take place synchronously and profit from each other over the course of the week. The cohabitation of these programmed components provides a diversity of activities and functions that appeal to different groups of the community and ensure the presence of people on different schedules.

### **Social Venues: Basketball Courtyard and Cultural Room**

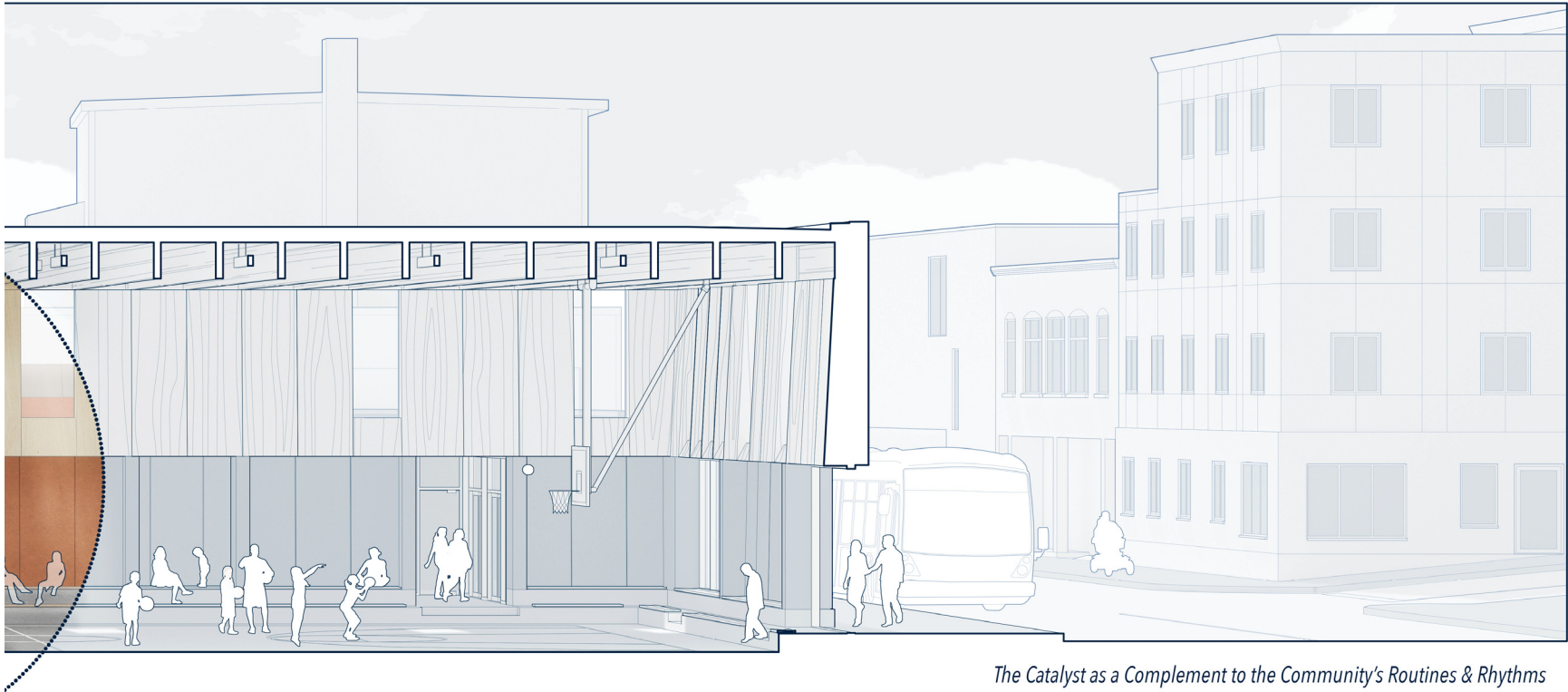
Both the basketball courtyard and the cultural room are found on the main floor, at the same level as Gottingen Street. The cultural room acts as the culmination of Cunard Street inside the *Catalyst*, while the courtyard borders the interior street leading to cultural room and faces both Gottingen Street and the former Prince William Street now turned into a pedestrian circulation.

The basketball courtyard is surrounded on three sides by seating arrangements which appear as a natural continuation of the plinth inside and cascade towards the basketball court at the centre. It is favourable for basketball practices and games taking place on a weekly basis as a result of the YMCA programs, but also an ideal space to host cultural events and weekly farmers markets that are part of individuals' routines and provide a reason to visit the *Catalyst*, therefore increasing the chances of encounters and social activities. Openings on the Western and Eastern facades enable an alternative flow during markets, from Gottingen





The *Social Catalyst*: social venues and complements to generate social activities based on the community's routines and everyday (full section).

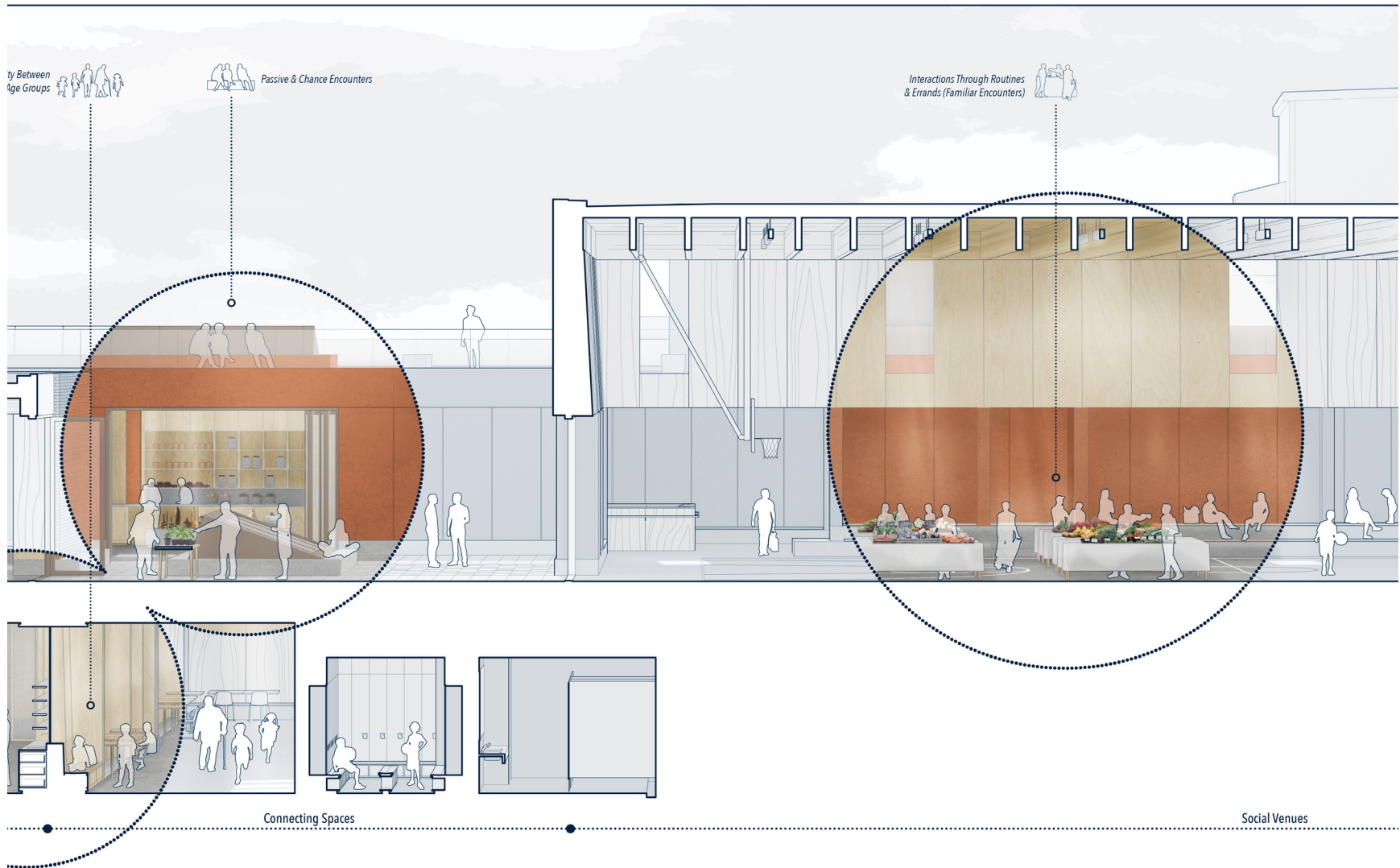


*The Catalyst as a Complement to the Community's Routines & Rhythms*  
**OPPORTUNITIES OF INTERACTION IN THE EVERYDAY**

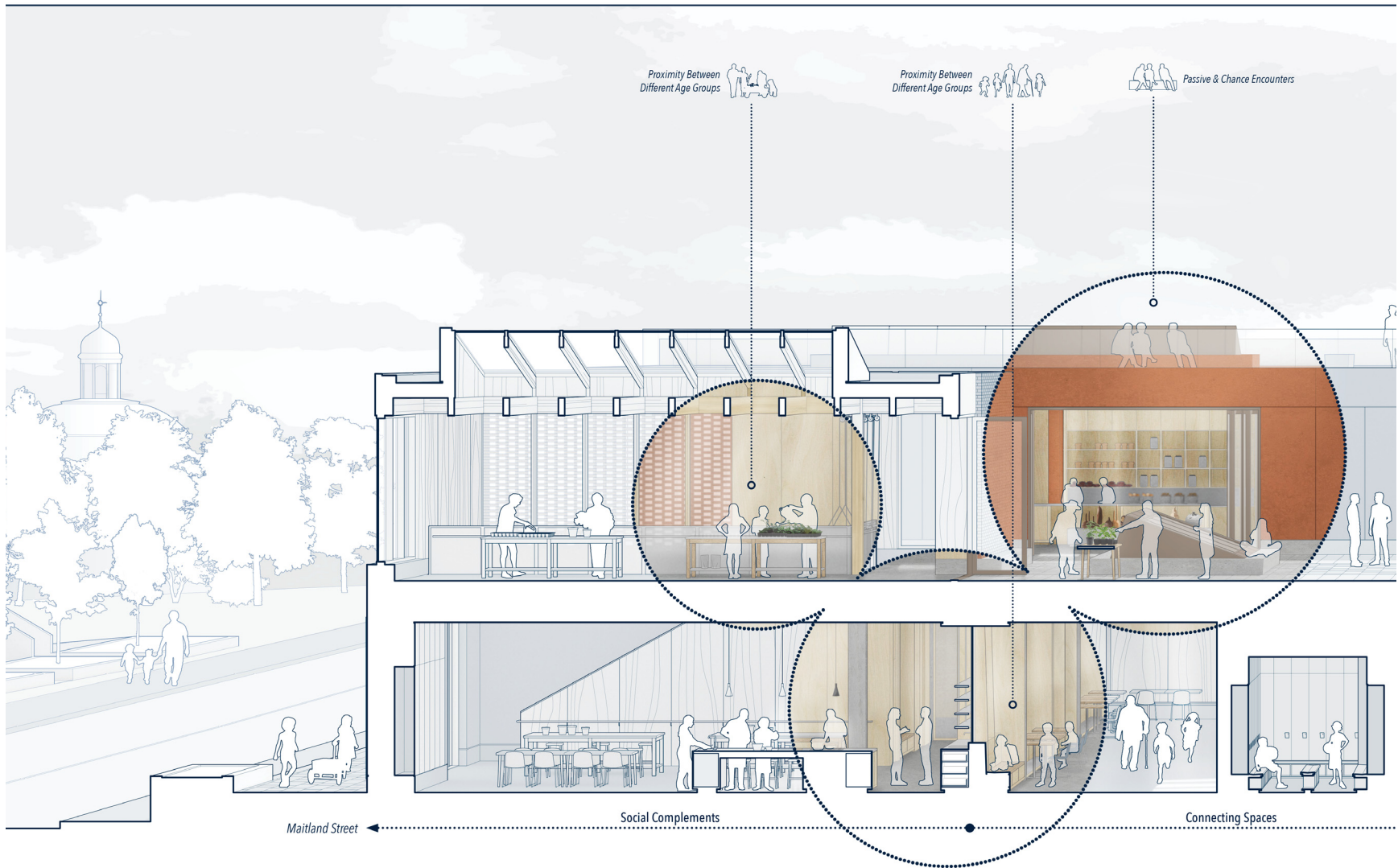
Social Venues

→ Gottingen Street

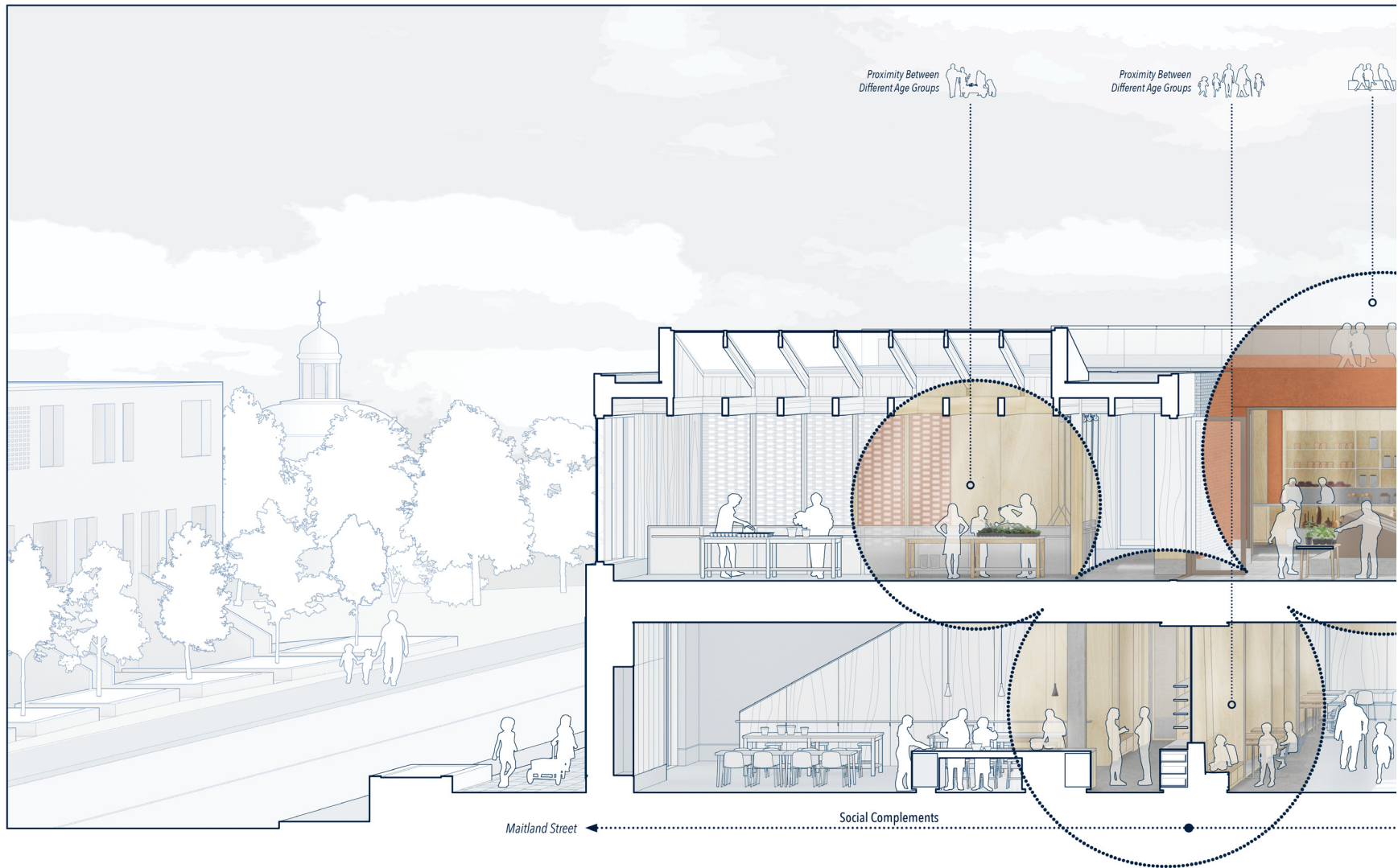
The *Social Catalyst*: social venues and complements to generate social activities based on the community's routines and everyday (1/4). The basketball courtyard opens on Gottingen Street to facilitate a circulation flow during markets and make the installations available to all.



The *Social Catalyst*: social venues and complements to generate social activities based on the community's routines and everyday (2/4). The changing rooms and lockers are found halfway between the YMCA opposite to the *Catalyst* and the basketball courtyard above.



The *Social Catalyst*: social venues and complements to generate social activities based on the community's routines and everyday (3/4). The basketball courtyard opens on an exterior courtyard with the seelding centre greenhouse on the opposite side.



The *Social Catalyst*: social venues and complements to generate social activities based on the community's routines and everyday (4/4). Social complements are found along Maitland Street to facilitate connection with nearby community programs.

street all the way to the seedling centre found further behind the courtyard. It also offers visibility on activities taking place inside from Gottingen Street and makes the basketball court available to all when no activities are taking place. The changing rooms and lockers that accompany the basketball courtyard are found below on the Maitland level, as part of an ordered procession organized between the YMCA and the basketball court.

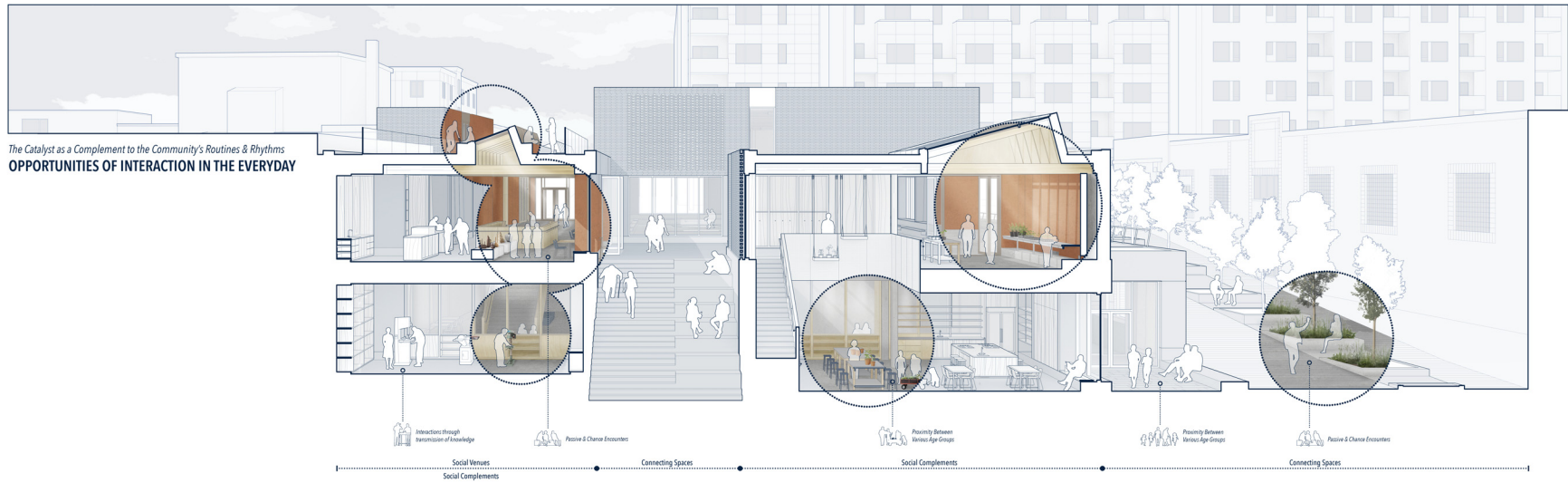
The cultural room hosts a series of smaller functions and events, starting with a permanent food counter to help maintain an access to food throughout the week and outside of the market's schedule. In its most basic form, it serves as a room for informal gathering and is suitable for members of the community to meet, not unlike a conventional third place/ café. Additional space is found on the roof above, with a terrace providing more intimate gathering spaces. However, the cultural room is designed to act as a multipurpose room to accommodate various cultural events and activities. It can be adapted to host events such as music performances, debates, and conversations, with an open central space to arrange rows of seatings and an elevated platform facing Maitland Street which can act as an elevated stage. The central space also grants the opportunity to organize small-scale exhibitions as a way of showcasing artists in the neighbourhood, as well as the outcome of what is produced in the workshop below to connect individuals with their community. The cultural room also serves as an extension of the farmers market if additional space is required.

## **Social Complements: Seedling Centre and Workshop**

The social complements provide facilities and activities to members of the community who lack proper installations for opportunities of interactions—senior citizens as it happens to be the case here—amongst other things, and work alongside the social venues adjacent to them. The seedling centre and the workshop share a common entrance and cloakroom along the study hall, at the end of the central staircase coming from above, and stretch along Maitland Street.

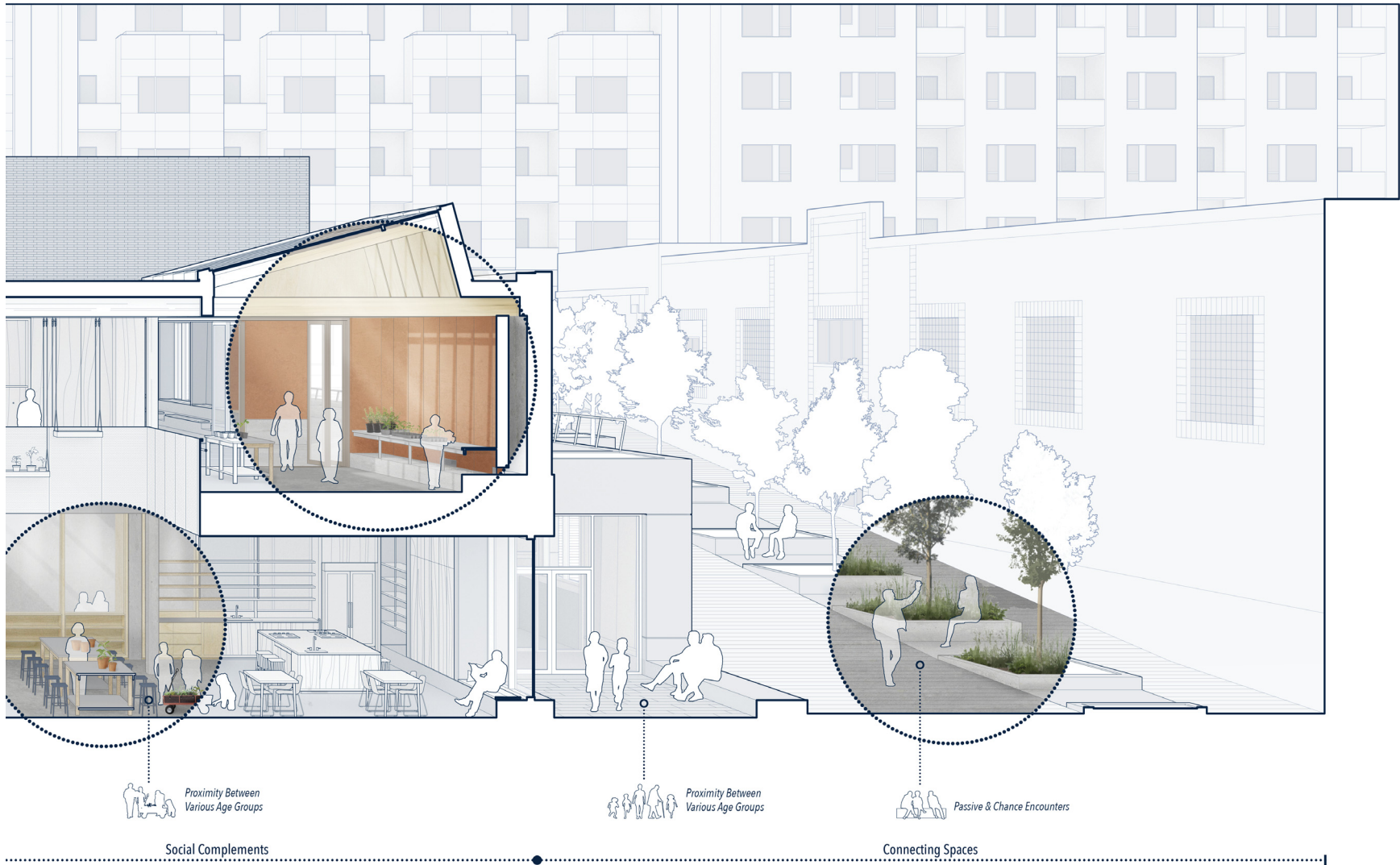
The workshop is situated further South, below the cultural room, and is visible from the main entrance on Gottingen street through the central staircase. Visible from behind sheltered spaces—where one can sit and observe others at work in the heavy tools section—, it is bordered by storage and a supervisor office on either side and looks out on Maitland Street. The workshop extends outward, through an operable door, onto additional exterior space for operations requiring open-air installations, as well as facilitating transportation and deliveries from the art studios nearby.

Adjacent to the main entrance on Maitland Street, the seedling centre is distributed on two communicating levels with several installations to support the production of seedlings. The first level is shared between a communal cooking area—including a kitchen and a dining area—and a potting area next to an operable door to allow for transportation and deliveries back and forth between Hope Blooms, community gardens and the centre. The second floor on the Gottingen Street level is entirely dedicated to a greenhouse for storage and growth of the seedlings. The

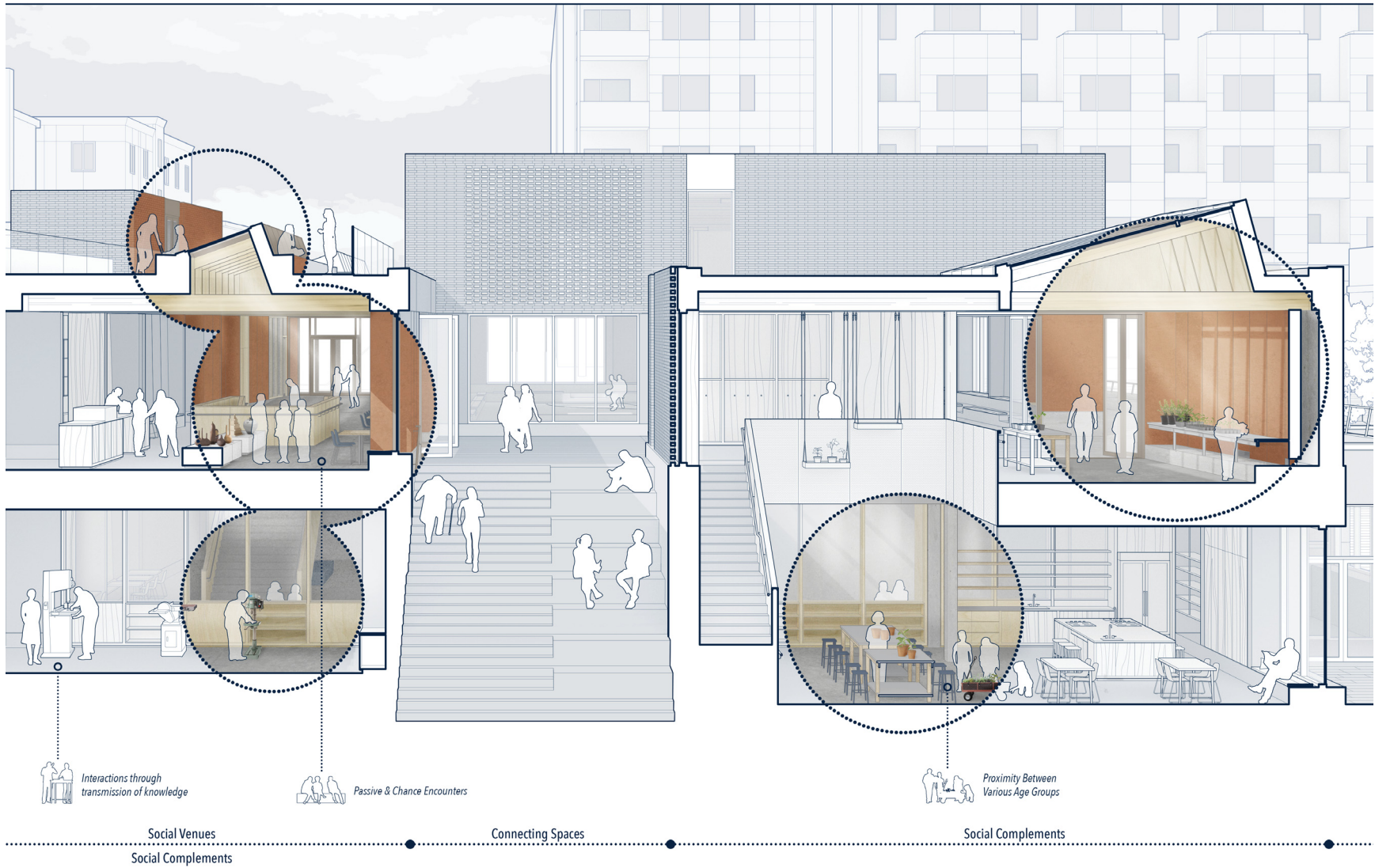


The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (full section).

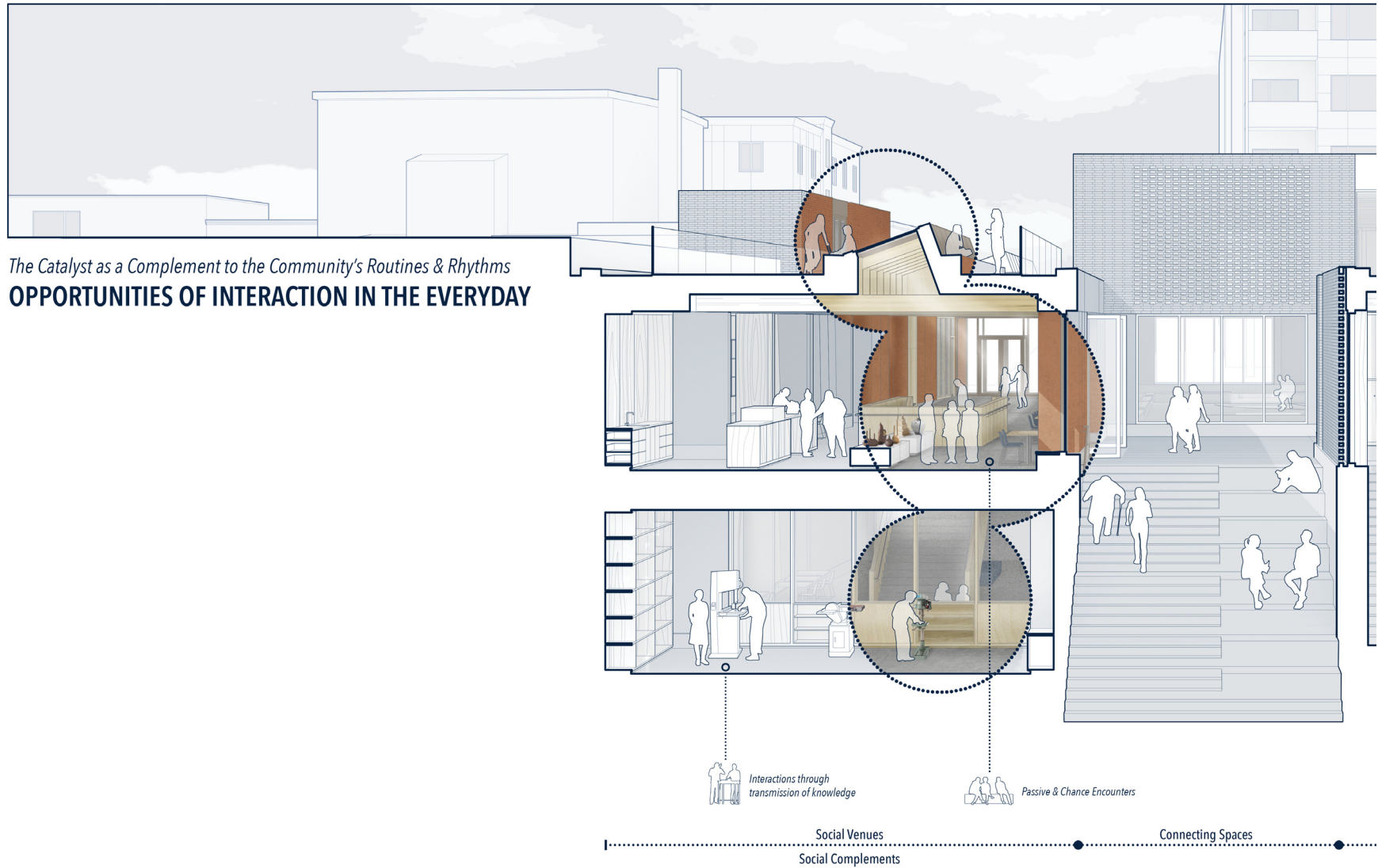




The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (1/3).



The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (2/3).



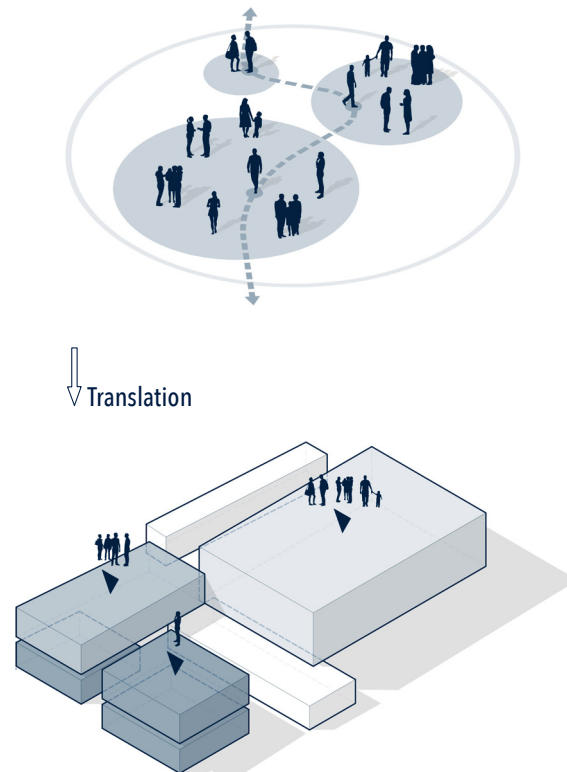
The *Social Catalyst* as an urban connector: providing opportunities of interaction throughout the community's patterns and routines (3/3).

staircase adjacent to the potting area leads to a storage and transportation zone above. It is equipped with lift and pulley systems to make the transportation of seedling trays easier and practical for elderlies with limited mobility. Next to it, the main growing area rests under an operable skylight to allow ample natural light throughout the day and ensure optimal conditions for growth. A mass wall to the North, behind the tray tables, contributes to an ideal form of air circulation and heat gain through convection. The greenhouse extends east and is visible from Maitland Street through an opening equivalent to the width of the growing area, while an operable door looking west unfolds on the exterior courtyard and the basketball courtyard further ahead. This makes it possible for the greenhouse to be included as part of the weekly markets and allows senior citizens and other individuals involved in the seedling centre's activities to partake in community gatherings and events.

### **Applying Catalytic Social Devices**

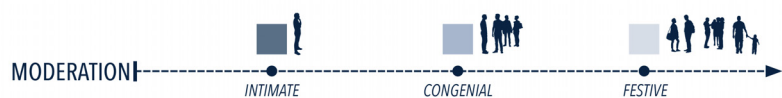
Planning the precise location of the *Catalyst* and devising of a program and facilities that best correspond to the community's everyday life is likely to bring people in the same place, but it is also important to consider the spatial characteristics that will make individuals feel comfortable enough to visit the *Catalyst* and make of it a regular destination where it is possible to encounter others with respect to their social capacities. In other words, setting forth the catalytic devices enumerated earlier and making use of them as guiding principles for the architecture of the *Catalyst* is simply a way of ensuring that there is enough support present for people and that it can actually serve as a response to loneliness and social isolation.

## Moderating Scale of Social Spaces

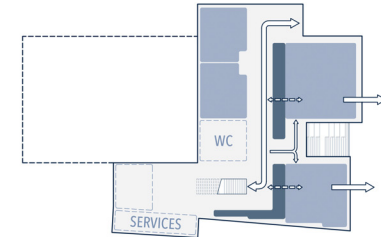


Translation: moderating the scale of social spaces in the *Catalyst*

In an attempt to respect that people experience different levels of comfort when interacting with others according to the scale of the room in which they find themselves and how easily it is possible for them to retreat to another, the *Catalyst* and its program components can be understood as a society of rooms with different sizes and configurations. This encourages different types of interactions and activities, and can help individuals moderate their interactions. All rooms are adjacent but contain different atmospheres and it is possible for anyone to easily navigate from one to another according to the type of interaction they are comfortable with. All rooms and components (with the exception of service areas) are categorized as follow:



Along with considering the optimal organization of the venues and complements with respect to existing community services and patterns, the rooms have all been organized to enable an easy transition from one to another. The seedling centre and the workshop found along Maitland Street provide rooms for up-close interactions and dialogue for those who are reaching out and looking for connections in the community. The cloakroom serves as a common transitional room between the main corridor (the study hall) and both rooms, and contributes to a more manageable environment. The smaller scale of the complements makes it easier for individuals who already lack regular interactions and can help find a comfortable environment to initiate in conversations and activities with others. On the other hand, the basketball courtyard connected to Gottingen Street offers a more festive environment for markets and other cultural events to take place and can host a larger amount of patrons. The cultural room can be considered as the perfect middle between both extremes, with its more congenial medium-scaled room. It is made up of smaller areas and sheltered spaces combined together. The skylight garden found above its roof provides slightly more intimate spaces and offers a view on all activities happening in and around the *Catalyst*, affording a progressive exposition to different kinds of interaction. All of the listed spaces outlined above are accessible at all times and allow individuals to transition from one to another to their liking, whether they feel comfortable or not in one space or another. And as will be discussed further on, additional spaces with a more intimate nature can be found within every room, making it possible for visitors to build an appreciation for the different rooms.



### WORKSHOP

- 1 Machinery/tool zone
- 2 Working stations
- 3 Storage
- 4 Workshop supervisor office



### SEEDLING CENTRE

- 5 Lobby/cloakroom
- 6 Storage
- 7 Seedling preparation zone
- 8 Kitchen/cooking zone
- 9 Dining/lounging zone



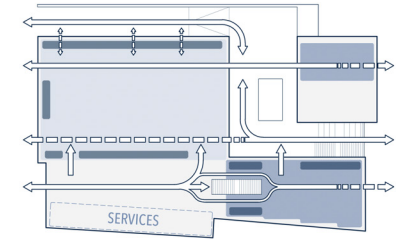
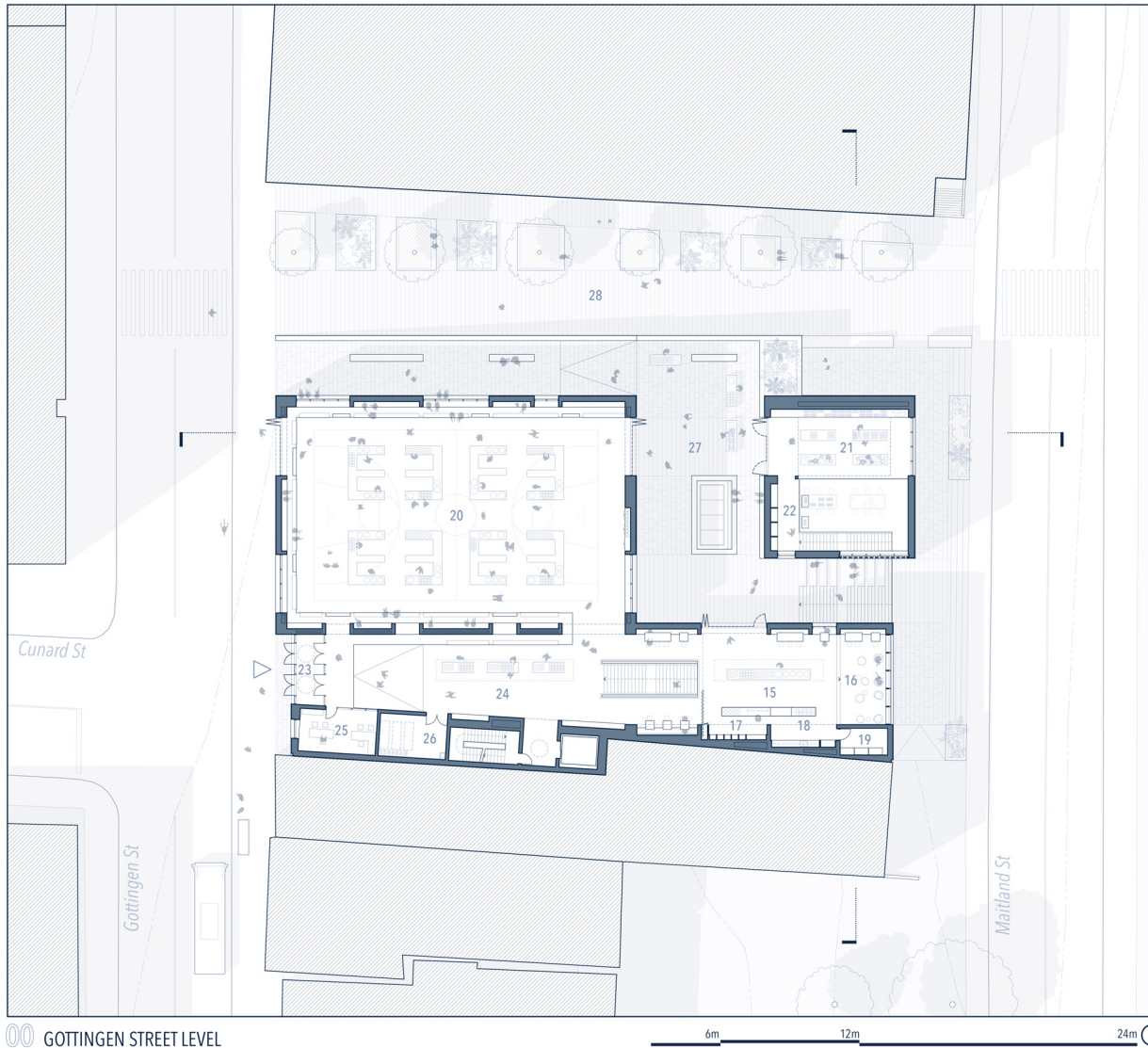
### BASKETBALL

- 10 Study Hall
- 11 Gender-neutral locker room

### MISCELLANEOUS

- 12 Washroom
- 13 Mechanical Room
- 14 Vestibule

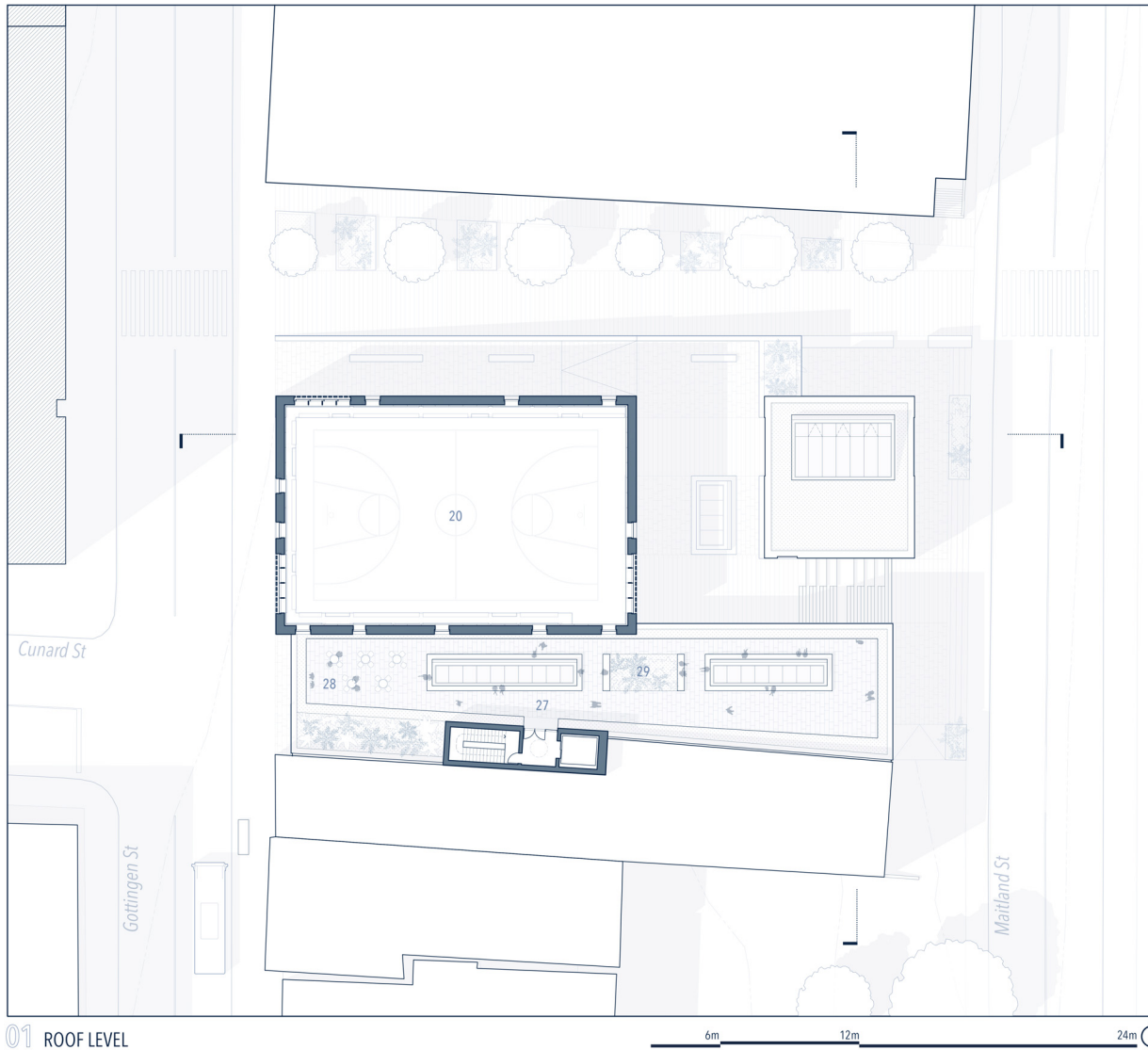
Catalyst floor plan: Maitland level. The diagram at the top right of the page illustrates how the scale of social spaces are moderated.



- CULTURAL ROOM**
  - 15 Multipurpose zone
  - 16 Elevated zone
  - 17 Permanent food counter
  - 18 Preparation zone
  - 19 Storage
- BASKETBALL**
  - 20 Interior basketball court
- SEEDLING CENTRE**
  - 21 Greenhouse
  - 22 Storage + Transportation zone
- MISCELLANEOUS**
  - 23 Vestibule
  - 24 Entry hall/interior street
  - 25 Administration
  - 26 Market storage + janitor room
  - 27 Courtyard
  - 28 Pedestrian street (Prince William St)

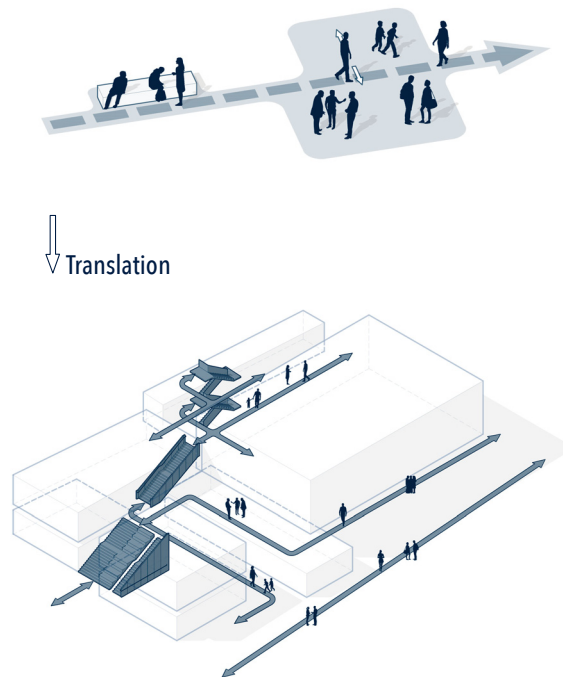
Catalyst floor plan: Gottingen level. The diagram at the top right of the page illustrates how the scale of social spaces are moderated.





Catalyst floor plan: Roof level. The diagram at the top right of the page illustrates how the scale of social spaces are moderated.

## Circulation and Connecting Spaces as Opportunities of Interaction



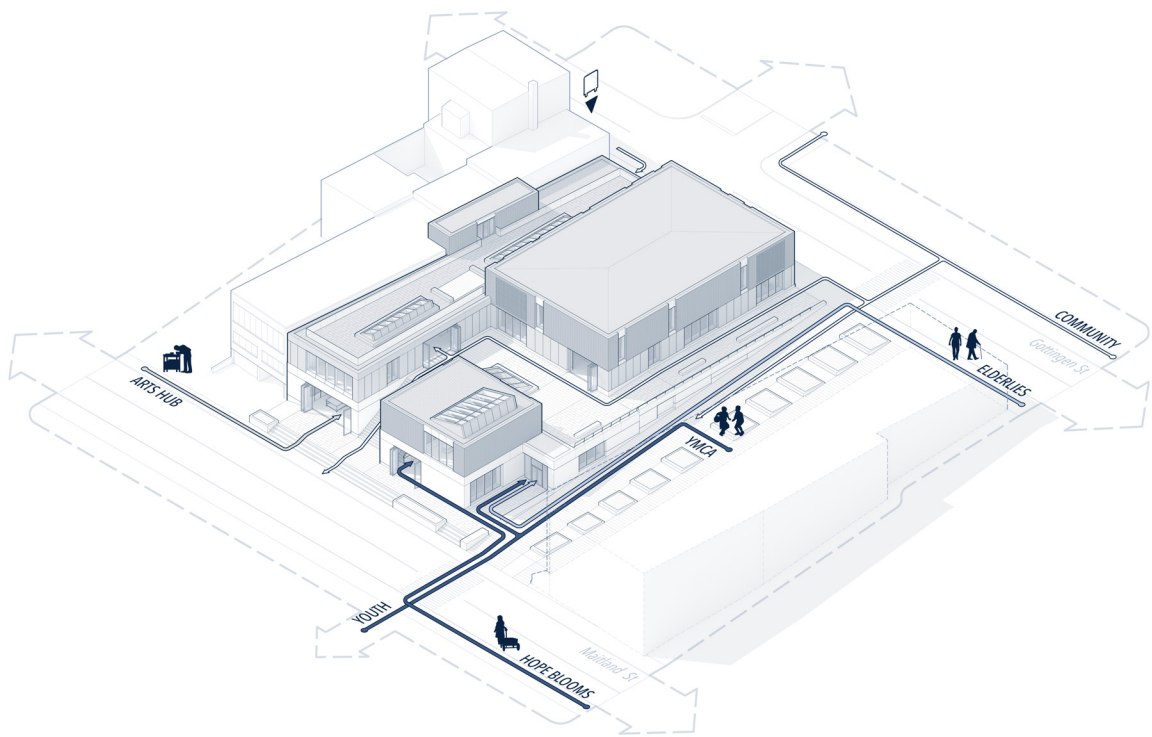
Translation: circulation and connecting spaces as opportunities of interaction in the *Catalyst*

The *Catalyst's* circulation has been envisioned as more than a conventional circuit for movement and access to specific points inside. Instead, activities and moments of interaction spill in it and take advantage of its unpredictable nature to generate additional opportunities of interaction.

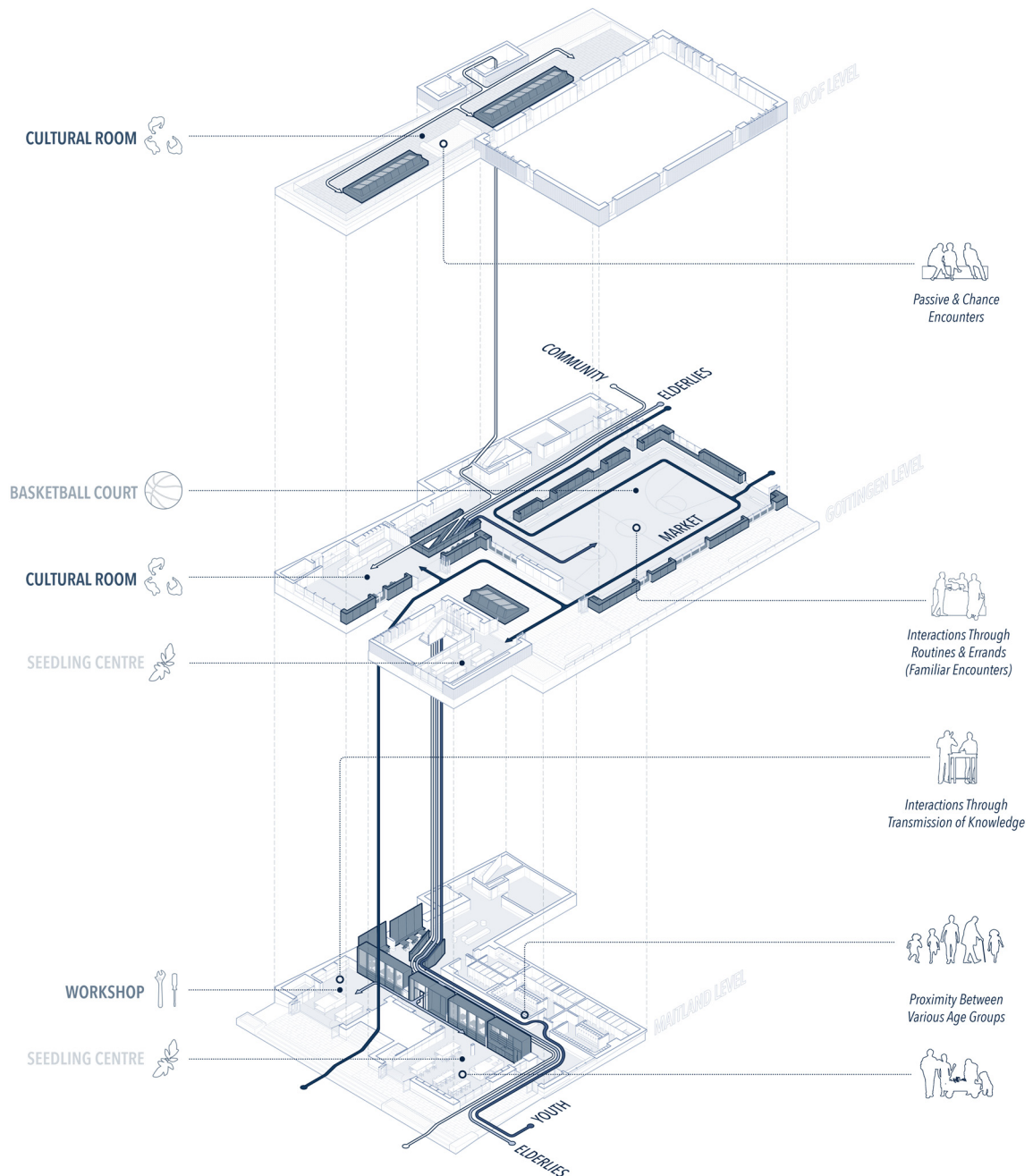
Circulation has been orchestrated so that any individual venturing inside can encounter several programmed spaces before arriving to destination. This can be understood immediately when walking into the entry hall as it seeks to become an extension of Cunard Street inside the *Catalyst*. All of its edges are adapted so that passersby can stop to talk or wait for a friend who has yet to arrive. Furthermore, its generous width makes it possible to install additional tables and stands during markets so that the latter can expand throughout the extents of the *Catalyst*. The porous limit

between the entry hall and the basketball courtyard provides a smooth transition from circulation to activities, as is the case with all other venues and components visible upon entry and made possible by the central staircase. The latter not only acts as a threshold to the cultural room, it also offers a direct view on the study hall and workshop immediately below. After coming down the central staircase, patrons of the *Catalyst* come across the study hall which is meant to provide access to changing rooms, the seedling centre, and the workshop. The sheltered spaces along the hall serve as studying areas for children before basketball practices, and as informal gathering areas at other times of the day. Moreover, the seats found within the walls separating the workshop and seedling centre from the study hall allow passersby to stop and observe activities taking place behind the glass, with senior citizens and other members of the community potting seedlings and manipulating tools in the workshop.

Similar strategies have been employed with exterior circulation, most paths and courtyards around the *Catalyst* serve as connecting spaces between different venues and complements; including the main exterior courtyard connecting together the seedling centre, the cultural room and the basketball courtyard. Further yet, all are populated with installations for people to stop and find a place to rest or initiate in conversations, whether it be the pedestrian alley between Gottingen Street and Maitland Street or the terraces along the basketball courtyard outside. Factoring in the provenance of different age groups in the community also allowed to plan circulation as a way of generating unlikely pairings and proximity between senior citizens, children, families and other members visiting the *Catalyst*.

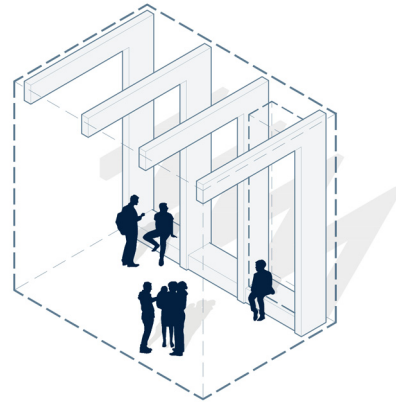


Exterior axonometric: the provenance of various age groups and community members was taken into when planning the circulation and entry points around the *Catalyst* in an attempt to generate unlikely pairings and proximity between the different groups.

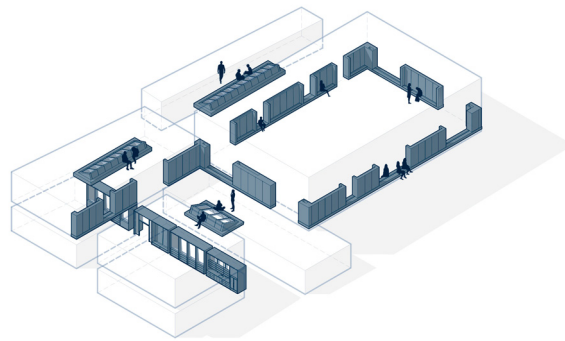


Axonometric of interior circulation and connecting spaces: most visitors will encounter several complements and venues before arriving at destination. The circulation is orchestrated between the different rooms to allow for encounters between different members of the community. The blue sheltered spaces identified along the circulation are nested spaces (as will be discussed further) to encourage passive and fortuitous encounters.

## Nested Spaces and Catalytic Details



↓ Translation



Translation: nested spaces and catalytic details in the *Catalyst*

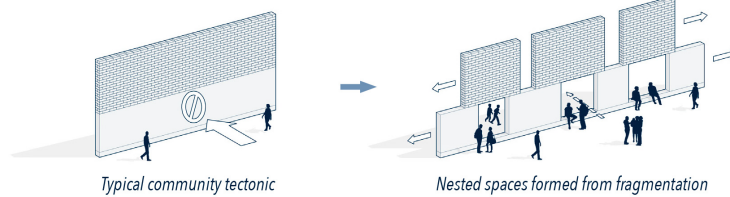
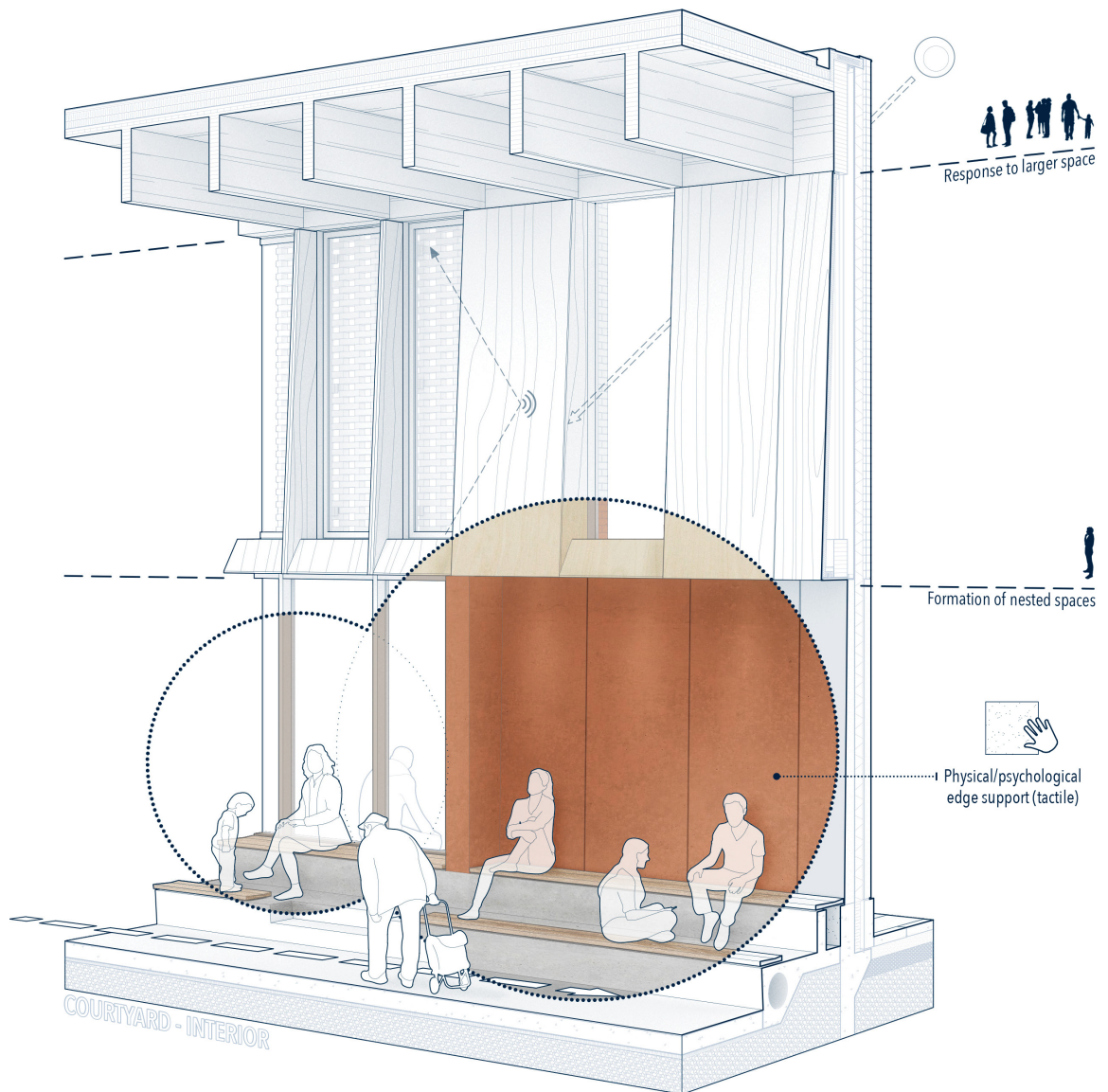
A series of details and moments within the building have been articulated with the intention of bringing the *Catalyst's* experience to an embodied scale, with which individuals can engage and find forms of support—both physical and psychological—to increase their sense of belonging and security. More precisely, three details that are essential to the *Catalyst's* tectonic expression have been revisited to develop their social dimension. This was meant as a way of exploring their potential to encourage different forms of social behaviors and proximity that can allow individuals to grow familiar with others.



Community Material Continuity:  
potential material process of  
pigmented concrete panels

The first detail can be observed along the edges of the basketball courtyard, inside and outside alike. As a result of fragmenting the stereotomic materials that characterize most of the community amenities forming the social infrastructure in North End, thick blocks made out of pigmented concrete slide along the perimeter seatings and support the upper portion of the assembly. Nested spaces are shaped within the thickness of the blocks and are accompanied by sculpted wooden seats to foster more intimate moments inside and around the more festive space. The pockets formed between the blocks provide additional nested spaces outside and inside that communicate together and help diversify the spectrum of interactions along the courtyard. The operation has been repeated at a finer grain, with portions of the bricks making up the upper walls being fragmented to generate a brick sunscreen acting as both a light filter and a community lantern to indicate the *Catalyst's* presence when the sun sets.

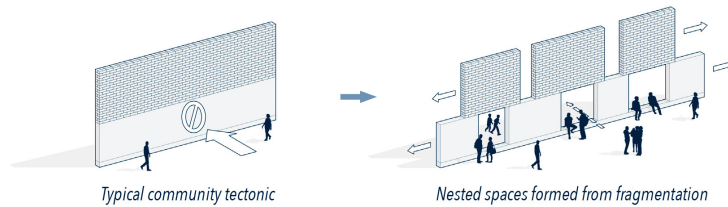
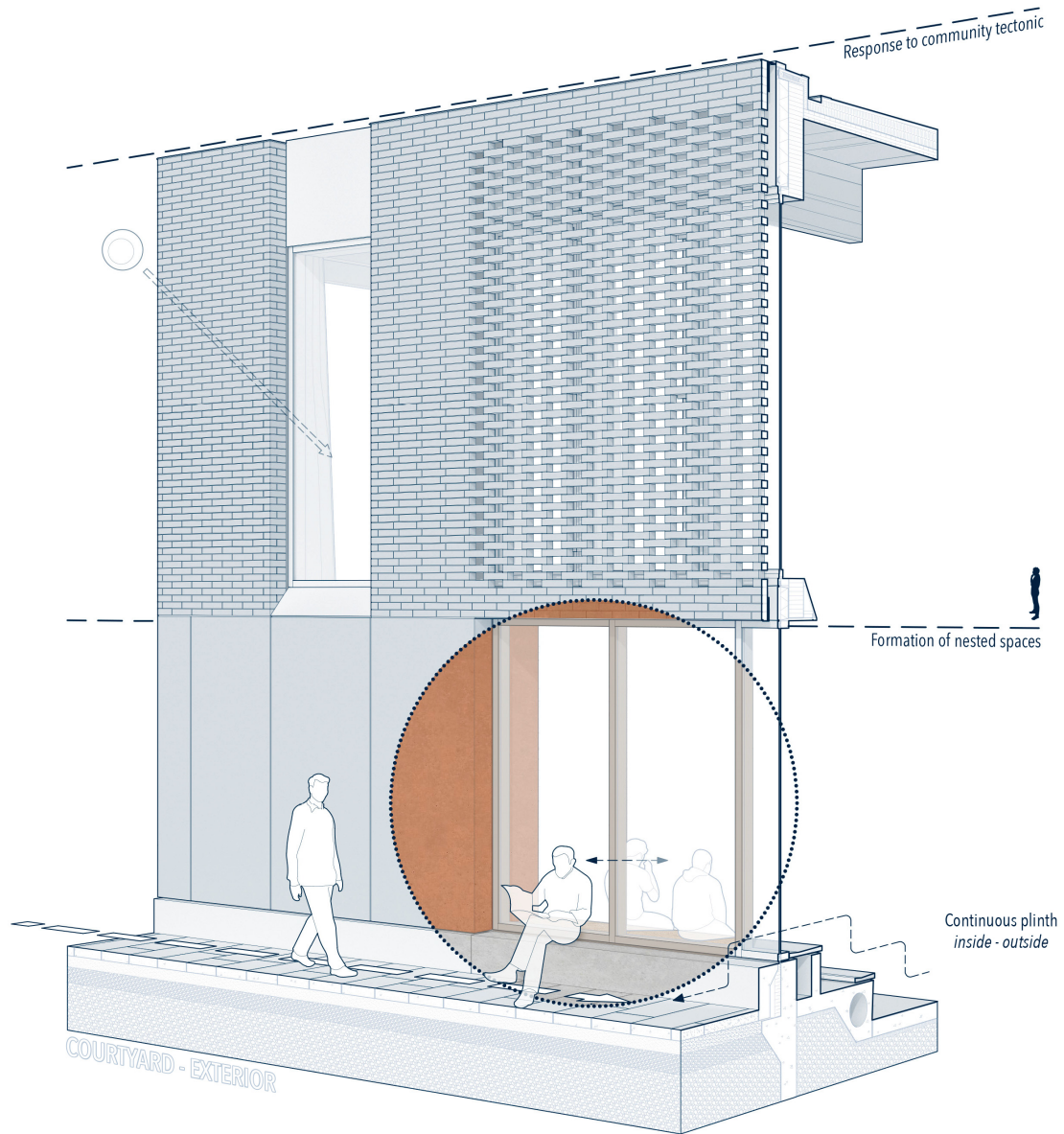
The second detail crowns the cultural room and defines the skylights that are responsible for the ample natural light allowed inside the southern portion of the *Catalyst*. Taking advantage of the lighting devices protruding out of the roof and at the centre of the exterior courtyard, seats have been set around their periphery so that individuals can gather around them and find opportunities to interact or passively observe the activities taking place in the *Catalyst*. The back edges of the skylights are adjusted to form comfortable surfaces to lean on and allow for more intimate encounters, while the lower edges make it possible for people to observe events taking place below. In that sense, the skylights also serve as visual connection between various nested spaces above and below, and have been placed strategically so that



01. SOCIAL DETAIL 1 | *Spectrum of Interactions Generated by Nested Spaces*

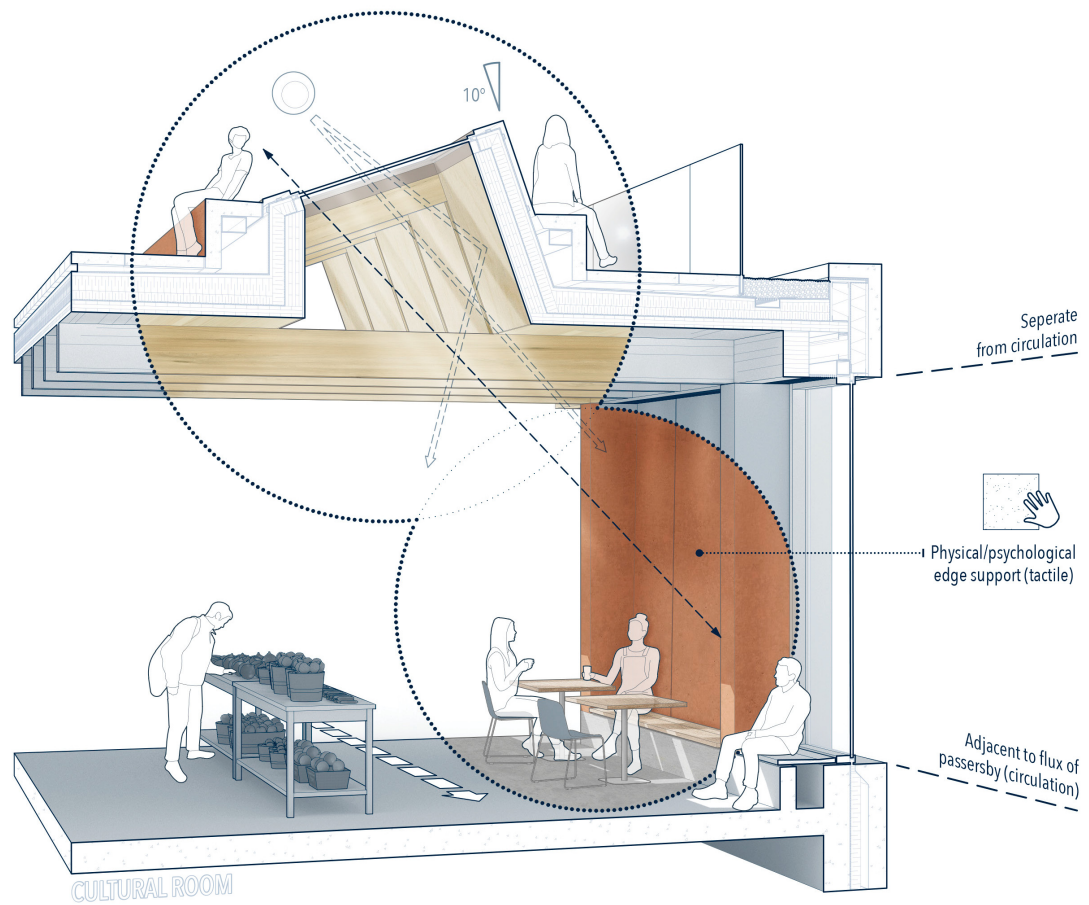
The nested spaces along the basketball court provide opportunities for a number of interactions. It can serve as a support throughout the week to welcome individuals during basketball practices and games, but also as informal space during markets and when the courtyard isn't in use.





01. SOCIAL DETAIL 1 | *Spectrum of Interactions Generated by Nested Spaces*

The nested spaces formed as a result of fragmenting the existing community tectonic communicate with spaces found inside along the plinth. The operation was repeated at a smaller scale to form a brick sunscreen which filters light during the day and acts as a lantern at night.



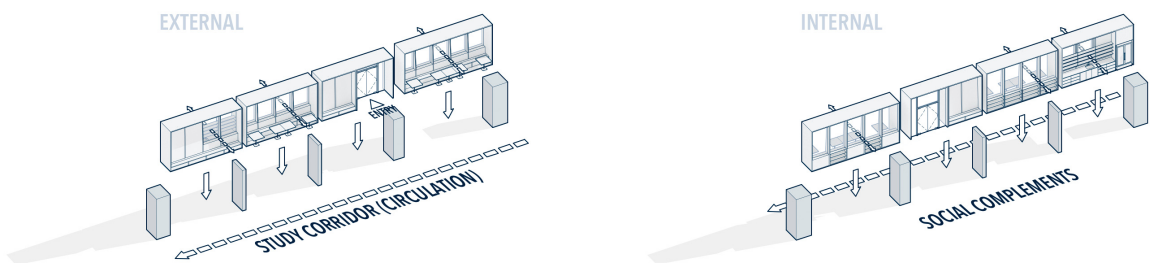
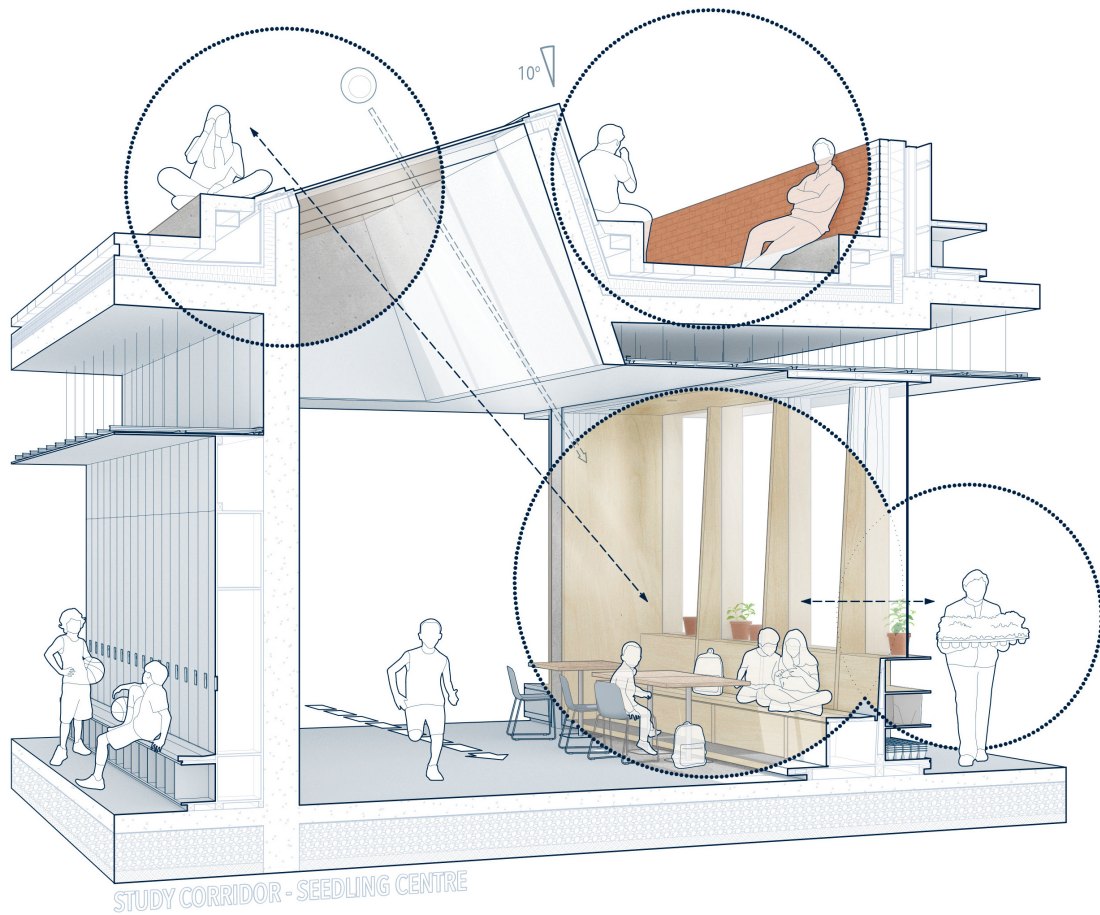
## 02. DETAIL 2 | *Visual Connection & Accentuation of Nested Spaces*

The skylights above the cultural room responsible for providing ample natural light inside have been strategically planned and articulated to form nested spaces with different levels of intimacy and establish a visual connection between different nested spaces.

the incoming light can help accentuate the nested spaces below.

The third detail is set between the study hall and both social complements, this time as a mediatory device with nested spaces and integrated furniture inserted between the structural columns along the workshop and the seedling centre. Organized in a system with modular units, seats make up the study areas on one side, while storage and kitchen counters make up the opposite side along the kitchen area and heavy tools area. As a result, different activities can take place simultaneously on either side of the glass panels separating both areas and generate adjacencies to allow for passive and direct encounters to take place. This can go both ways, with children and passersby being able to observe elderlies and other members of the community tend to seedlings or manufacture pieces for upcoming installations and leisure projects using the tools in the workshop. On the other hand, elderlies standing on the other side can keep an eye on the children completeing homework before their weekly practice.

In all three cases, the attempt is to demonstrate how details can help individuals find a support to feel at ease in public spaces and be able to notice other individuals visiting the *Catalyst*, either as a way to approach others or simply offer a passive contact with others that can limit the feelings of loneliness in urban environments.



*Nested spaces as intermediate connector*

03. DETAIL 3 | *Generating Proximity & Connections Between Adjacencies through Nested Spaces*

Nested spaces are inserted between the structural columns and act as mediatory devices linking the study hall and social complements together. The presence of children during basketball practices can provide a form of passive interaction for elderlies visiting the seedling centre.

## Chapter 7: Conclusion

In reflecting on the premise and objectives of this thesis, there is no way to say with certainty that the implementation of a *Social Catalyst* in communities can entirely resolve issues of loneliness and social isolation in urban environments. Instead, it is meant as a proposed response that builds on existing rhythms of a community to improve the possibilities of interaction and connection, especially in a case where several environmental, cultural and historical urban conditions are already limiting in that sense. Keeping this in mind throughout the development of this project, the intent is rather to think of the intervention as the introduction of spaces which can provide individuals with the tools to develop a connection with their community and become familiar enough that opportunities of interaction can emerge from it. As reminded by Denise Scott Brown, architecture can't force people to connect but it can help plan the crossing points, remove barriers and make meeting places useful and attractive (Jordana 2011).

By taking the time to understand the inherent patterns found in the North End community and bringing together functions that appeal to its members' needs, it can help define merging points that are visited on a regular basis and sustain a constant presence of patrons and regulars to make of the *Catalyst* a congenial public environment where individuals feel comfortable enough to initiate in conversations and interactions; especially in the case where other spheres of their life are absent of connections. It should be seen as an inevitable stop in the everyday life, and make it so that it is an anchoring point in the community even for the newly arrived. While it isn't effective in all cases, the introduction of

certain routines and activities (Cacioppo and Patrick 2008), as well as the exposure to others in even the most informal ways can allow individuals to find meaning and warm up to the presence of others. Further yet, the consolidation of functions that appeal to diverse groups of a community can generate a social cohesion and opportunities of interaction that would otherwise be impossible if these same components were taken separately.

The proposed *Catalyst* further considers and acknowledges the notion of individual social capacities as a way of refining the spaces to offer ideal conditions for individuals to feel comfortable in the presence of others. It allows them to moderate interactions according to their abilities, in the event of larger gatherings and more up-close encounters. The aim of this is to foster a more manageable environment to entice the possibility of interactions in an environment that feels familiar and unthreatening.

## References

- Alexander, Christopher, et al. . 1977. *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.
- Angus Reid Institute. 2019. "A Portrait of Social Isolation and Loneliness in Canada Today". June 17. [http://angusreid.org/wp-content/uploads/2019/06/2019.06.14\\_Loneliness-and-Social-Isolation-Index.pdf](http://angusreid.org/wp-content/uploads/2019/06/2019.06.14_Loneliness-and-Social-Isolation-Index.pdf)
- Arenas, Jesús. 2007. Photograph of Sant Antoni - Joan Oliver Library - Exterior in Barcelona, Spain, by RCR Arquitectes, Modlar. Accessed on: <https://www.modlar.com/photos/1027/sant-antoni-joan-oliver-library-exterior/>
- Augé, Marc. 1995. *Non-places: An Introduction to an Anthropology of Supermodernity*. London; New York: Verso.
- Australian Psychology Society. 2018. "Australian Loneliness Report: A survey exploring the loneliness levels of Australians and the impact on their health and wellbeing." Australian Psychology Society. November 2018. <https://psychweek.org.au/wp/wp-content/uploads/2018/11/Psychology-Week-2018-Australian-Loneliness-Report-1.pdf>
- Baan, Iwan. 2014a. Photograph of Arena de Morro - aerial view in Natal, Brazil, by Herzog and de Meuron. <https://iwan.com/portfolio/gymnasium-natal-brazil/#12827>
- Baan, Iwan. 2014b. Photograph of Arena de Morro - interior in Natal, Brazil, by Herzog & de Meuron, <https://iwan.com/portfolio/gymnasium-natal-brazil/#12854>
- Beaumont, Hillary. 2012. "Everyday Life's a Challenge in a Food Desert." *The Chronicle Herald*, November 14. <https://wheelchairrights.wordpress.com/2014/08/19/everyday-lifes-a-challenge-in-a-food-desert/>
- Cacioppo, John T., and William Patrick. 2008. *Loneliness: Human Nature and the Need for Social Connection*. New York: W.W. Norton & Co.
- Castle, Helen. 2005. "The City as Dining Room, Market and Farm." *Architectural Design* 75, no.3: 8-9.
- Chronicle Herald. 1948. Black and white photograph of the Vogue Theatre on Gottingen Street in Halifax, NS.
- CIESIN (Center for International Earth Science Information Network). Columbia University. 2018. "Gridded Population of the World, Version 4 (GPWv4): Population Density Adjusted to Match 2015 Revision UN WPP Country Totals, Revision 11". Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC). <https://doi.org/10.7927/H4F47M65>.

- Clement, Catherine. 2012. "Connections and Engagement". Vancouver Foundation, June. <https://www.vancouverfoundation.ca/sites/default/files/documents/VanFdn-SurveyResults-Report.pdf>
- D'Hombres, Béatrice, et al. 2018. "Loneliness —An Unequally Shared Burden in Europe. European Union". [https://ec.europa.eu/jrc/sites/jrcsh/files/fairness\\_pb2018\\_loneliness\\_jrc\\_i1.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/fairness_pb2018_loneliness_jrc_i1.pdf)
- Dolley, Joanne, and Tony Matthews. 2018. "'Third Places' Where Urban Loneliness doesn't Dwell." *The Newcastle Herald*, April 13. <https://www.newcastleherald.com.au/story/5340934/third-places-where-urban-loneliness-doesnt-dwell/>
- Dunbar, R.I.M., et al. . 2005. "Discrete Hierarchical Organization of Social Group Sizes." *The Royal Society Publishing* 272, no.1561: 439-444.
- Ellard, Colin. 2017. "A New Agenda for Urban Psychology: Out of the Laboratory and Onto the Streets." *Journal of Urban Design and Mental Health* 2, no.3. <https://www.urbandesignmentalhealth.com/journal2-ellard.html>
- Erickson, Paul. 2004. *Historic North End Halifax*. Halifax, NS: Nimbus Publishing Limited.
- Eurostat. 2017. "Over Half of Sweden's Households Made Up of One Person". European Commission, May 9. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20170905-1?inheritRedirect=true>
- Gehl, Jan. 2010. *Cities for People*. Washington, DC: Island Press.
- Gehl, Jan. 2011. *Life Between Buildings: Using Public Space*. Washington, DC: Island Press.
- Gehl. 2019. "Towards a Human Scale City: Cogswell District Design Input Review 2019". NY: Gehl.
- Glancey, Jonathan. 2014. "Sporting Chance." *The Architectural Review* 236, no.1410: 60-71.
- Goldberg, Jeff. 2017. Photograph of Princeton Dinky Train Station in Princeton, NJ, by Rick Joy Architects, Esto. [https://www.estostock.com/?77711127719210697640&EVENT=WEBSHOP\\_SEARCH&SEARCHMODE=SERIES&SHOWSERIES=1.26227&MEDIALOGROUP\\_SCOPE=1&MEDIANUMBER=00131815](https://www.estostock.com/?77711127719210697640&EVENT=WEBSHOP_SEARCH&SEARCHMODE=SERIES&SHOWSERIES=1.26227&MEDIALOGROUP_SCOPE=1&MEDIANUMBER=00131815)
- Grant, Jill L., and Nathan Roth. 2015. "The Story of a Commercial Street: Growth, Decline, and Gentrification on Gottingen Street, Halifax." *Urban History Review* 43, no.2: 38-52.
- Gregory, Rob. 2009. "Library and Senior Citizens' Centre by RCR Arquitectes, Barcelona, Spain." *The Architectural Review*, July 1. <https://www.architectural-review.com/today/library-and-senior-citizens-centre-by-rcr-arquitectes-barcelona-spain>



- Haiven, Larry. 2020. "Landlords Getting the Final Word on Heritage Designation won't Work." *The Coast*, August 10. <https://www.thecoast.ca/halifax/landlords-getting-the-final-word-on-heritage-designation-wont-work/Content?oid=24591933>
- Halifax Municipal Archives. The Chronicle Herald. 1948. Black and white photograph of The Vogue Theatre along Gottingen Street in Halifax, NS, Halifax Municipal Archives.
- Halifax Municipal Archives. 1950. Black and white photograph of Halifax Farmer's Market, Halifax, Nova Scotia, 1950.
- Hartman, Hattie. 2014. "Natal's Other Arena." *The Architect's Journal*, September 1. <https://www.architectsjournal.co.uk/buildings/natals-other-arena-arena-do-morro-by-herzog-and-de-meuron>
- Holt-Lunstad, Julianne, et al. . 2015. "Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review." *Perspectives on Psychological Review* 10, no.2: 227-237.
- INSPQ (Institut National de Santé Publique du Québec). 2016. *Material Component of the Deprivation Index for the Halifax CMA*. Scale: N/A. Map from GIS data, using ArcGIS Pro. Halifax, NS: INSPQ.
- Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York: Random House.
- Jokinen, Tom, and Greg Kelly. Producers. 2019. Charles Montgomery in "Lonely Together: The plight of urban isolation." Radio episode, 53:59. CBC, March 15. <https://www.cbc.ca/radio/ideas/lonely-together-the-plight-of-urban-isolation-1.5057995>
- Jopling, Kate. 2017. "Combatting Loneliness One Conversation at a Time: A call to action." Jo Cox Commission on Loneliness. [https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb\\_dec17\\_jocox\\_commission\\_finalreport.pdf](https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_dec17_jocox_commission_finalreport.pdf)
- Jordana, Sebastian. 2011. " Interview: Robert Venturi & Denise Scott Brown, by Andrea Tamas". April 25. <https://www.archdaily.com/130389/interview-robert-venturi-denise-scott-brown-by-andrea-tamas>
- Klinenberg, Eric. 2019. *Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization and the Decline of Civic Life*. New York: Penguin Random House LLC.
- Koolhaas, Rem. 1999. "The Impact of Shopping on the Urban Condition." Video, 1:30:37. The AA School of Architecture. <https://www.youtube.com/watch?v=UZpX7lzxFg0>
- Laing, Olivia. 2016. *The Lonely City: Adventures in the Art of Being Alone*. New York: Picador.

- Lawrence, Julie. 2018. "Loneliness is a public health issue, says chief medical officer". *The Signal*, February 2. <https://signalhfx.ca/loneliness-is-a-public-health-issue-says-chief-medical-officer/>
- Lee, Ellen E., et al. . 2019. "High prevalence and adverse health effects of loneliness in community-dwelling adults across the lifespan: role of wisdom as a protective factor." *International Psychogeriatrics* 31, no.10: 1447-1462.
- Lefebvre, Henri. 2004. *Rhythmanalysis: Space, Time and Everyday Life*. London: Continuum.
- Lerner, Jaime. 2011. "Urban Acupuncture." *Harvard Business Review*, April 18. <https://hbr.org/2011/04/urban-acupuncture.html>
- Lewis, Eric. 2018. Black and white photograph of Sobey's Market on Gottingen Street in Halifax, NS. Accessed on February 21: <https://www.halifaxexaminer.ca/featured/a-durable-dog-is-the-bestest-kind-of-dog-morning-file-wednesday-february-21-2018/>
- Lippai, Cecilia, & David Weberman. 2016. "Space, Place and Politics" in *Space and Pluralism: Can Contemporary Cities be Places of Tolerance?*, edited by Stephano Moroni and David Weberman, 15-34. New York: Central European University Press.
- Macleod, Ryan. 2016. "The Halifax Index 2016." *The Halifax Partnership*. [https://halifaxpartnership.com/sites/default/uploads/pages/downloads/HP\\_HalifaxIndex2016.pdf](https://halifaxpartnership.com/sites/default/uploads/pages/downloads/HP_HalifaxIndex2016.pdf)
- McCarter, Robert. 2016. *The Space Within: Interior Experience as the Origin of Architecture*. London: Reaction Books Ltd.
- McGregor, Phlis. 2015. "Halifax: A City with Two North Ends - Part 1." *CBC News*, April 14. <https://www.cbc.ca/news/canada/nova-scotia/halifax-a-city-with-two-north-ends-part-1-1.3031005>
- McHarg, Ian. 1969. *Design with Nature*. New York: Natural History Press.
- Montgomery, Charles. 2013. *The Happy City: Transforming our Lives through Urban Design*. New York: Farar, Straus & Giroux.
- Munro, Nicole. 2020. "Store Locations, Finances Still Challenging North-End Halifax Grocery Shoppers." *The Chronicle Herald*, February 9. <https://www.thechronicleherald.ca/news/local/store-locations-finances-still-challenging-north-end-halifax-grocery-shoppers-408951/>
- Murthy, Vivek. 2017. "Work & the Loneliness Epidemic." *Harvard Business Review*, September 26. <https://hbr.org/2017/09/work-and-the-loneliness-epidemic>.
- Norwood, Robert. 1953. Black and white photograph of Outside Old City Market in Halifax, NS. Nova Scotia Archives.

- Office for National Statistics. 2018. "Loneliness - What Characteristics and Circumstances are Associated with Feeling Lonely?" Office for National Statistics, April 10. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/lonelinesswhatcharacteristicsandcircumstancesareassociatedwithfeelinglonely/2018-04-10#which-factors-independently-affect-loneliness>
- Oldenburg, Ray. 1996. "Our Vanishing 'Third Places'." *Planning Commissioners Journal* no.25, (Winter 1996-97): 6-10.
- Oldenburg, Ray. 1999. *The Great Good Place : Cafés, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. Cambridge, Mass.: Da Capo Press.
- Onishi, Norimitsu. 2017. "A Generation in Japan Faces a Lonely Death." *The New York Times*, November 30. <https://www.nytimes.com/2017/11/30/world/asia/japan-lonely-deaths-the-end.html>
- Pallasmaa, Juhani. 2020. "Loneliness and Solitude: Art, Architecture and Existential Space." Open Access Audiovisual, 1:04:22. Escola Tècnica Superior d'Arquitectura de Barcelona, February 20. <https://upcommons.upc.edu/handle/2117/178893>
- RCR Arquitectes. 2005. Base drawing of Sant Antoni - Joan Oliver Library Section in Barcelona. <https://www.miesarch.com/work/2809>
- RCR Arquitectes. 2005. Base drawing of Sant Antoni - Joan Oliver Library Ground Floor Plan in Barcelona, Spain. <https://www.miesarch.com/work/2809>
- Saunders, Dylan. 2018. "Internal Migration: Overview, 2015/2016." Statistics Canada, June 5. <https://www150.statcan.gc.ca/n1/pub/91-209-x/2018001/article/54958-eng.htm>
- Savage, Maddy. 2019. "Why so Many Young Swedes Live Alone." *BBC*, August 22. <https://www.bbc.com/worklife/article/20190821-why-so-many-young-swedes-live-alone>
- Simmel, Georg. 1950. *The Sociology of Georg Simmel*. Translated by Kurt H. Wolff. Glencoe, IL.: Free Press.
- Simmons, Rachel. 2018. "Why are Young Adults the Loneliest Generation in America?" *The Washington Post*, May 3. <https://www.washingtonpost.com/news/parenting/wp/2018/05/03/why-are-young-adults-the-loneliest-generation-in-america/>
- Smithson, Alison. 1968. *Team 10 Primer*. Cambridge, MA: MIT Press.
- Statistics Bureau of Japan. Ministry of Internal Affairs and Communications. 2020. *Statistical Handbook of Japan*, September. <https://www.stat.go.jp/english/data/handbook/pdf/2020all.pdf#page=1>

- Statistics Canada. 2016. Families, Households and Marital Status: Key Results from the 2016 Census. August 2. <https://www150.statcan.gc.ca/n1/daily-quotidien/170802/dq170802a-eng.htm?HPA=1>
- Statistics Canada. 2017. "2016 Census: 150 Years of Urbanization in Canada." Statistics Canada, February 8. [https://www.statcan.gc.ca/eng/sc/video/2016census\\_150yearsurbanization](https://www.statcan.gc.ca/eng/sc/video/2016census_150yearsurbanization)
- Statistics Canada. Annual Demographic Estimates: Canada Provinces and Territories, 2019. "Analysis: Population by Age and Sex." <https://www150.statcan.gc.ca/n1/pub/91-215-x/2019001/sec2-eng.htm>
- Statistics Canada. 2020. "Canada's Population Estimates: Subprovincial Areas, July 1, 2019." February 13. <https://www150.statcan.gc.ca/n1/en/daily-quotidien/200213/dq200213a-eng.pdf?st=IQTrGqg->
- Tang, Jackie, Nora Galbraith, and Johnny Truong. 2019. "Insights on Canadian Society: Living Alone in Canada. Statistics Canada". Statistics Canada, March 6. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00003-eng.htm>
- UN (United Nations). Department of Economic and Social Affairs, Population Division. 2019. *World Urbanization Prospects: The 2018 Revision*. <https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf>
- UN (United Nations). Population Division, World Population Prospects. 2017. "Median Age of the Population. Historical Estimates Until 2015." <https://ourworldindata.org/age-structure>
- Whyte, William H. 1980. *The Social Life of Small Urban Spaces*. New York: Project for Public Spaces.
- Young, Elaine. 2019. "Halifax." *The Canadian Encyclopedia*, March 7. <https://www.thecanadianencyclopedia.ca/en/article/halifax>