



THE SCANDINAVIAN EFFECT

A Diagnostic Toolkit for equitable, green
and healthy neighbourhoods and cities



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A Diagnostic Toolkit for equitable, green and healthy neighbourhoods and cities

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Unless otherwise noted, all photos in this document are from members of the Ryerson University studio group.

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TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

2.0 LAYING THE GROUNDWORK

- 2.1 About 8 80 Cities
- 2.2 Cities in Crisis
- 2.3 The Scandinavian Effect
- 2.4 The Three Focus Areas

3.0 THE PROCESS

- 3.1 Core Principles for the 8 80 Diagnostic Toolkit
- 3.2 Methodology

4.0 THE DIAGNOSTIC TOOLKIT CONTENT

- 4.1 Civic Engagement
- 4.2 Public Realm & Parks
- 4.3 Active Transportation

5.0 CONCLUSION



1.0 EXECUTIVE SUMMARY

Cities increasingly have to grapple with aging populations, climate change and poor environmental health. These issues highlight the need to create healthy, green, and equitable communities that prioritize active transportation and access to vibrant public spaces through collaborative planning.

Our client, 8 80 Cities, is a non-profit organization concerned with creating age-friendly cities. The studio group was tasked with creating a diagnostic toolkit for healthy, green, and equitable cities. The toolkit is intended to enable municipal agencies and city building groups to evaluate how they fare on an 8 80 lens. Our objective is to develop a toolkit that will enable local actors to collaboratively identify and diagnose local barriers to meaningful civic engagement, well-loved public realm and parks, and safe and accessible active transportation; and, through this process, build community capacity for transformational change towards a healthy, green and equitable community. More than just highlighting deficiencies and shortcomings, the toolkit also provides insight into some of the key actionable, high-yield changes that communities can make in pursuit of the 8 80 vision. In recognition of different places'

unique social, economic, and political landscapes, the toolkit is centred around four qualities: context specificity, co-creation and dialogue, dynamic goal setting, and replicability. This builds flexibility into the toolkit, allowing users to adapt the toolkit to be most appropriate to their setting.

The metrics contained within the toolkit were inspired by field research in Scandinavia, specifically within three areas of focus: civic engagement, public realm and parks, and active transportation. These three areas of focus stack on each other and function as an integrated system rather than as an assortment of measurements. First, our toolkit focuses on civic engagement as a broad measure. Next, the toolkit focuses on public realm and parks, because these spaces are cornerstones of the community that provide places for civic interaction. Lastly, active transportation asks how walkable and bikeable your community is.

This report supports the 8 80 Diagnostic Toolkit Prototype. It is meant to be read in conjunction with the 8 80 Diagnostic Toolkit.



“If everything
we do in our
public spaces
is good for an 8
year old and an
80 year old, it
will be good for
all people”

— 8 80 Cities

2.0 LAYING THE GROUNDWORK

2.1 About 8 80 Cities

880Cities is a non-profit organization that collaborates with municipalities, community groups and other stakeholders to create more healthy, green, and equitable communities through mobility and public space projects. They believe that if our cities are designed to fit the needs of an eight year old as well as an eighty year old, then they will be incredible places for all people.¹ The 8 80 vision is direct and powerful, and connects with people on an instinctive and emotional level. 8 80 Cities is a compassionate organization that works to bridge the gaps to make communities more inclusive.

880Cities brought our team on board to operationalize lessons and insights from the 8 80 Copenhagen Tour for civic leaders from selected Knight Foundation cities. In collaboration with 8 80, we developed a



Diagnostic Toolkit for urban decision makers to assess the quality of the built environment and urban life for two vulnerable and underrepresented populations: children and adults over the age of 80. These populations are typically underrepresented in city building processes due to ageist and ableist assumptions. As a result, children and older seniors are often unable to fully participate in civic life.^{2,3}

The diagnostic seeks to make this problem and its solutions visible to decision makers. The right of children and seniors to equal representation and compassion in city building underlies this entire toolkit. In the end, we were all once young and we are all aging and the obstacles that inhibit meaningful participation for children and seniors affect us all.



Photo by prvideotv / CC



Photo by Sabinevanerp / CC

2.2 Cities in Crisis

Today, 54% of the world's population lives in urban areas with an expected increase to 66% by 2050.⁴ Increasingly cities are under pressure to support diverse populations including children, youth, and older adults, but they are not designed that way. As our toolkit will initially target select American cities, it is important to acknowledge the specific realities of other large trends occurring across the US.

Many of us are suffering from poor health, because urban environments don't support healthy lifestyles.⁷ One indicator is the sharp upswing in obesity within America. Over one-third of the adult population and one-sixth of children are unhealthily overweight.⁸ This is a symptom of poor planning, because sprawling cities make residents reliant on automobiles: those living in spaces which are less walkable are more likely to be obese.⁹

Further evidence poor planning and harm it poses to people is found in our streets and sidewalks. Research has found that older people are twice as likely to be struck in traffic collisions.¹⁰ Additionally, children fourteen years and younger accounted for five percent of all cyclists killed and twelve percent of those injured in traffic crashes in 2015.¹¹

Preparing for the needs of an aging population is a major challenge that cities will increasingly face. Within America, those over the age of 65 years old account for 15% of the population, equating to 46 million people.¹² By the year 2060, this population will double to 98 million residents and will make

up 24% of the entire population. As life expectancy grows, decision makers must ensure that their cities are shaped through inclusive design principles that will enable elders to access the services and amenities they need to lead full and healthy lives.

These issues underline the imperative to create **healthy, green, and equitable communities** that prioritize active transportation and access to great public spaces through collaborative planning with its residents.

They are driven by global trends and solving them is not straightforward, as urban problems are complex. **One of the most profound challenges is simply the inertia of the status quo.** This Diagnostic Toolkit measures the health of a city through the 8 80 lens to break down these massive challenges into comprehensible and fixable components.



2.3 The Scandinavian Effect

Scandinavia is praised globally as a model for healthy, green, engaged urbanism. The Scandinavian effect can be described as the genuine successes of Scandinavian cities. As a result of the achievements of cities like Copenhagen, Malmö and Stockholm, Scandinavia is sometimes perceived as possessing an unattainable level of perfection. A closer look at Scandinavian successes reveals that they were realized by forward-thinking leaders and groups making smart decisions at key points of crisis.

For example, Copenhagen is famous for its 41% utilitarian cycling rate¹³ and almost 400 km¹⁴ of cycling infrastructure. However, Copenhagen wasn't always a bike heaven, and this change was not instantaneous. In the 1960s, the city faced many of the same challenges that North American cities face today with low cycle modal share, high cycling fatalities, and environmental pollution. However, advocacy brought attention to the role the bike could play in resolving these issues. The city government took action during



Photo from 8 80 Cities (Instagram)

this moment of crisis, building extensive bike infrastructure, showing that change is possible for cities.

Since 2014, 80 Cities has run an annual trip to Copenhagen and Malmö for civic leaders from cities across America that are funded by the Knight Foundation. Many of these cities are situated in within the economically challenged Rust Belt, and need support in reversing the decay caused by suburban sprawl and de-industrialization. The purpose of these tours is to open leaders' minds to city building that differs from the common auto-centric paradigm that exists in North America. Participants return home with a deeper appreciation and understanding of how walking, cycling, and public spaces are tools to create more accessible, equitable, and healthy cities.

Our Diagnostic Toolkit seeks to address this challenge.



Photo by Tony Webster / CC

CIVIC
engagement

PUBLIC REALM
and parks

ACTIVE
transportation

2.4 The Three Focus Areas

The diagnostic toolkit is divided into the three themes: Civic Engagement, Public Realm and Parks, and Active Transportation. These focus areas overlap and are interdependent.

Civic Engagement

Good civic engagement happens when residents actively participate in shaping and utilizing their urban environment. When residents and groups from all parts of a community collaborate on city-building, the resulting community systems and built environment are inherently inclusive. Civic engagement is supported when there are shared spaces where citizens can interact with each other and the environment in biophilic cities.

Public Realm and Parks

Public spaces are where the city comes alive. When well-designed and supported, they allow individuals and groups to creatively program them to fit the needs of the communities they serve. Parks and green spaces are the critical means for urban residents to interact and connect with nature.¹⁵ They can be therapeutic to the sick, an adventure for the young and are a natural oasis for all. From nature-infused streetscapes to large parks and everything in between, these places are the veins in which recreational life in the urban context occurs.

Active Transportation

The flow of people and goods in a city is constant and essential in a city. Too often, urban transportation is planned with only a few types of users in mind. Active transportation has been a response to reducing car congestion and emission of greenhouse gases and includes all forms of human powered movement.¹⁶ By moving through the city at slower speeds, people are able to deepen their appreciation of their surroundings while improving people's health and lessening impacts on the environment and climate. Well-designed and safe walking, biking and wheeling connections make neighbourhoods and communities accessible again for people young and old. To ensure that active transportation fully achieves this goal, it must be designed and built with the vulnerable populations in mind.¹⁷



3.0 THE PROCESS

Our objective is to develop a toolkit that will enable local actors to collaboratively identify and diagnose local barriers to meaningful civic engagement, well-loved public realm and parks, and safe and accessible active transportation; and, through this process, build community capacity for transformational change towards a healthy, green and equitable community.

Why Measure?

As Peter Drucker, the father of modern business management, said, “If you can’t measure it, you can’t improve it.”¹⁸ This statement resonates beyond the realm of business. In the context of local governance, evaluating process and measuring performance is essential for informing and mobilizing progress as well as for ensuring accountability and developing trust with the public.¹⁹ Measurement and assessment make visible the public life of a neighbourhood or city.²⁰ This function of measurement has particular importance with respect to our goal - because they are so underrepresented politically, it is important to bring the experiences and challenges of vulnerable populations under 8 and over 80 to the forefront.

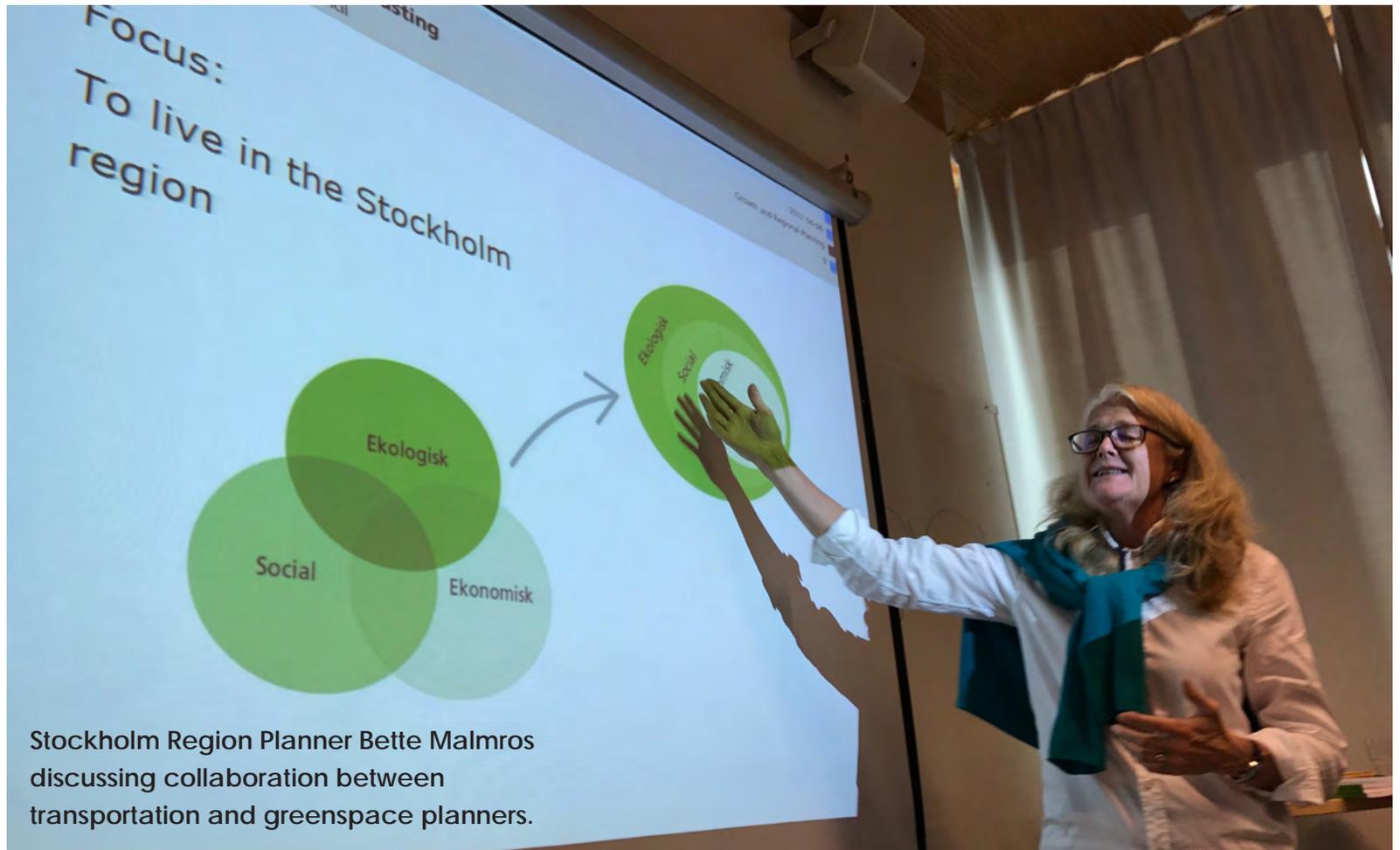
How do you Measure ‘8 80’?

The concept of an ‘8 80 City’ is complex. Defining and measuring it is as difficult as measuring and defining ‘urban sustainability’ or ‘well-being.’ The complexity arises from the huge range of input factors as well as contested goals and accepted norms surrounding the topic.²¹ This means that there is no single, uncontroversial approach to framing, measuring and taking action towards greener, healthier and more equitable cities. In order to assess a neighbourhood’s successes using an 8 80 lens, it is important to understand what an 8 80 neighbourhood might look like, even if that concept is complex, hard-to-define, and flexible. For this reason, using Scandinavian case studies as exemplars was a critical part of developing the diagnostic toolkit.

Whether a neighbourhood or city is successful from an 8 80 perspective is a broad and multifaceted question. It is not amenable to direct measurement, so any attempt to measure requires simplification and interpretation.^{22,23} In order to develop an implementable tool, the metrics used must be

“manageable, measurable and clear.”²⁴ Developing a usable toolkit, therefore, requires clear definition of the problem and a careful selection of a subset from all potentially relevant metrics. Critical reflection becomes a method of quality control, both in developing the toolkit and when applying it. Ensuring

that measurement is consistent, rigorous and salient is also a major challenge given the difficulty of defining what an “8 80 City” looks like. An evidence-based approach to toolkit-building provides a layer of legitimacy to the cause and forms the basis for measurement that can support continued progress.



3.1 Core Principles for the 8 80 Diagnostic Toolkit

The Diagnostic Toolkit seeks to measure the 8 80 qualities of a neighbourhood or city. Based on an academic literature review, measurement tools of this type should be people-centred, revealing and critical, and evidence-based. Existing performance measurement methods for the health, sustainability or livability of cities usually take the able-bodied, racial majority, middle-income and middle-aged population as the default. By taking a people-centred approach, based on the experience of children and seniors, the toolkit shines light on barriers to participation faced by vulnerable groups in the public life of their neighbourhood and city.

The lessons learned from the the review of academic literature and existing urban evaluation tools were taken and distilled into a set of four main principles upon which the Diagnostic Toolkit rests.

Sensitivity to Context

The Diagnostic Toolkit must be sensitive to local context in order to provide specific and actionable information to the toolkit users. Local actors may have different levels of capacity for data collection. Because the 8 80 Diagnostic is strongly tied to understanding the lived experiences of the target populations, the measurement approach itself should include meaningful participation as well as context-

sensitivity.²⁵ Balance between performance and process indicators helps to ensure sensitivity to context, without losing rigour.^{26,27,28} **The toolkit should have flexibility to reflect local situations**, and not impose arbitrary standards simply for the sake of conformity. Using case studies to support the development of the 8 80 Toolkit is appropriate, because of the sensitivity to context inherent in the case study approach.²⁹

Replicability

Successfully applying an identical set of indications equally to any location is impossible, but some issues have broad relevance.³⁰ Consistency across different applications of the toolkit—replicability of process—is important. One approach is to develop a set of core indicators based on expert-driven data, and a set of sub-indicators that can be selected in collaboration with stakeholder participation.³¹ Combining bottom-up and top-down data gathering and assessment can also help mediate between context-sensitivity and replicability. Bottom-up data and processes ensure that the Diagnostic Toolkit remains people-centred, while top-down and quantitative data allows for greater replicability and comparison between different applications of the toolkit, and ensures that rigorous, unbiased evidence supports the work and conclusions drawn from the toolkit.³² One of the critical goals of replicability is to emphasize important

standards: **'unique context' must not be an excuse to maintain the status quo.**³³

Co-creation and Dialogue

Co-creation is a legitimate mode for measurement in the context of the Diagnostic Toolkit's objectives. In fact, co-creation can be more revealing - welcoming collaboration from people participating in the systems being assessed can be a rich source for understanding process and for studying the contextual determinants of success and failure.³⁴ Collaborative knowledge creation is a way to increase the relevance and legitimacy of scientific information.³⁵ Dialogue and interaction are key for co-learning and for co-ownership of the process by all those involved in its development. **Through collaboratively implementing the toolkit, the capacity level of all participants can be raised individually and collectively.** In this way,

the Toolkit Implementation itself can achieve some of the core objectives of successful community engagement.³⁶

Dynamic Goal Setting

A review of existing standards, status reports like the Toronto Community Foundation's "Vital Signs" and indices highlights importance of continuous goal-setting, as initial goals are achieved.³⁷ Goals cannot be static. Ensuring a framework that adjusts goals upward as neighbourhoods and cities is also a goal for the Diagnostic Toolkit since benchmarks are based on what is imaginable today, not what is needed tomorrow. As the 8 80 team has said, **it is easy for cities to go from bad to good, but much harder to go from good to great.**



Photo from 8 80 Cities

3.4 Methodology

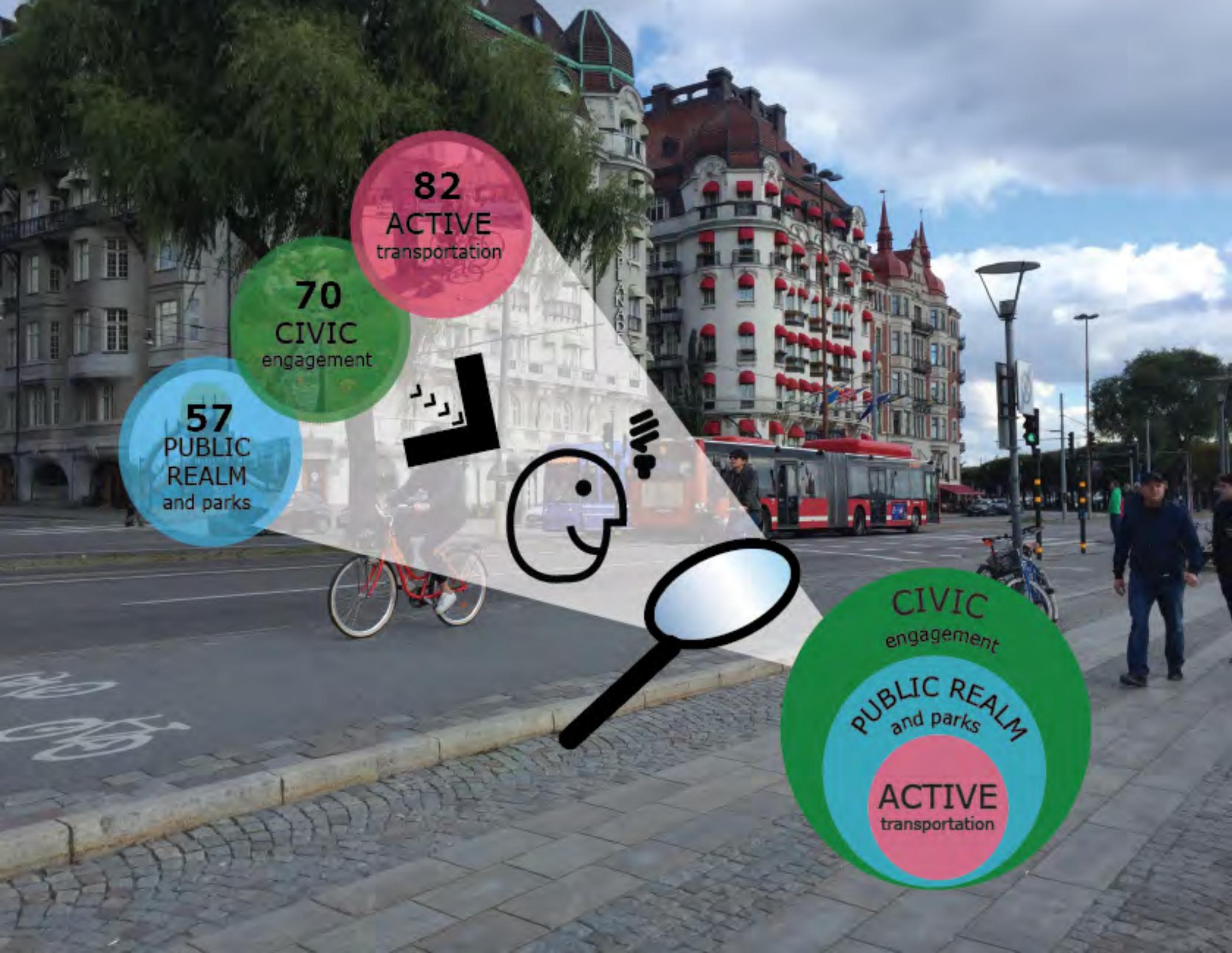
Our team worked to develop the diagnostic toolkit using an iterative process that moved between data collection, toolkit design, and prototype testing. Both the content and structure of the Diagnostic Toolkit were shaped by our research. Below is a high-level overview of our methodological process:

1. Generating Metrics

Through best practice interviews with Scandinavian professionals, field observations, academic literature review, data mining, and review of other city-measuring tools, we amassed a broad collection of potential metrics for the diagnostic toolkit. Metrics were inspired by what we did, and also what we did not see during our field research in Sweden and Denmark. For example, the incredible water contact and access to waterfront in Stockholm, evidently came across as important for a Scandinavian metric which was then supported with academic and best practice literature. On the other hand, spatial and economic segregation of non-European immigrants remains a major problem in Scandinavian cities. Despite having low inequality, Stockholm has high spatial segregation. Since plenty of literature addresses the negative impacts of spatial segregation on the health, accessibility and equity of cities, we deemed it an important metric.

From this process, we generated a long list of 209 metrics (see Appendix A). These 209 metrics are a diverse group - some are quantitative and others are qualitative, some are outcome oriented and some are process-oriented, some are easy to





82
ACTIVE
transportation

70
CIVIC
engagement

57
PUBLIC
REALM
and parks

CIVIC
engagement

PUBLIC REALM
and parks

ACTIVE
transportation

apply and others require significant work. The metrics operate at different scales, and they are not all equally relevant. Each area of focus—Civic Engagement, Public Realm and Parks, and Active Transportation—has subtopics within it, which then have specific metrics relating to that. For example, in Public Realm and Parks one subtopic is Programming which then has 23 separate metrics within it.

2. Sorting, Filtering and Constructing

In filtering and sorting the long-list of metrics, we were guided by the overall toolkit objective: each metric must be useful to toolkit users trying to create a healthy, green and equitable 8 80 Neighbourhood. This is why we included metrics for engagement specific to children and seniors, whimsical design of children's play spaces, how children get to school, and whether there is seating while waiting for transit.

More specifically we applied three key filters to guide our winnowing-down of the metric long list:

1. What does the best practice and academic literature say about evaluating this phenomenon?
2. Does this metric speak to the experience of an 8 year old or an 80 year old?
3. Does this metric reflect a success or shortcoming of one of the places where we conducted field research?

Applying this approach, we developed an integrated, succinct and high-impact toolkit. The metrics stack on each other and function as an integrated system rather than a grab bag of exclusive measurements.



3. Prototyping and Testing

The diagnostic toolkit is intended to be undertaken by people embedded in a community, who know it well, not simply through a dry data mining exercise. Therefore, we prototyped the diagnostic toolkit by imagining how it might be applied to a specific neighbourhood. New Toronto, located in Etobicoke, was selected as the test neighbourhood as it shared some commonalities with American Midwestern cities where 8 80 Cities is actively engaged. These are the factors that played into picking this neighbourhood:

- The median income³⁸ is comparable to the Rust Belt and Midwestern cities³⁹
- Residential built form is primarily single-family homes
- Employment in the area still has an industrial character
- Located along the waterfront, like the Scandinavian cities studied

The prototyping of the diagnostic toolkit illustrates how it can be applied on a neighbourhood scale (see Appendix B). The diagnostic toolkit can be modified by 8 80 Cities and community leaders, using the metric long list as a menu of options.





4.0 TOOLKIT CONTENT

This section of the report shares the best practices and lessons learned for each of the areas of focus in the 8 80 Diagnostic Toolkit. Summarized here are best practices case studies, academic literature reviews, lessons from the field and illuminating narratives from selected cities. This section is intended to ground the 8 80 lesson and vision in a rigorous data-picture.

In conjunction with appendices A, B and C, this section can be used to guide 8 80 in expanding, updating and customizing the 8 80 diagnostic toolkit prototype.

Each of the three areas of focus are broken down into subtopics which helped guide the creation of the metric long list.

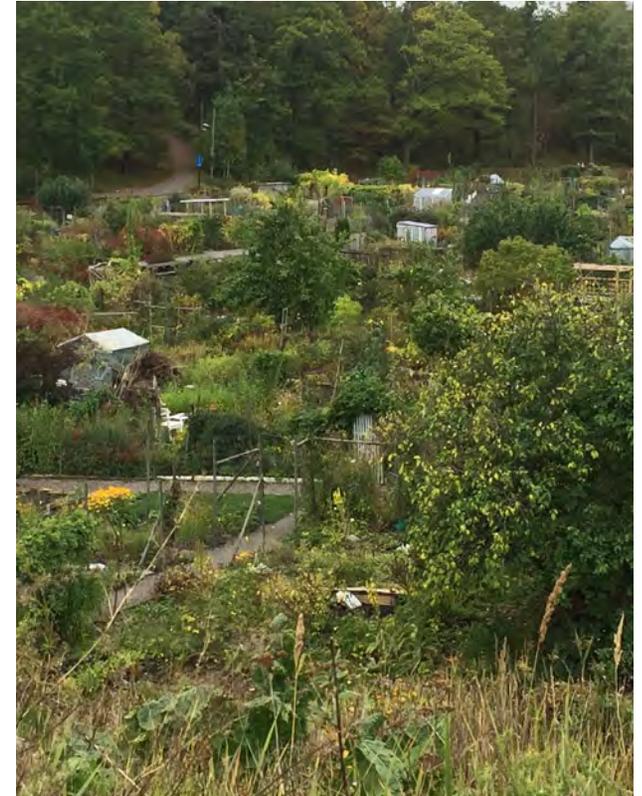
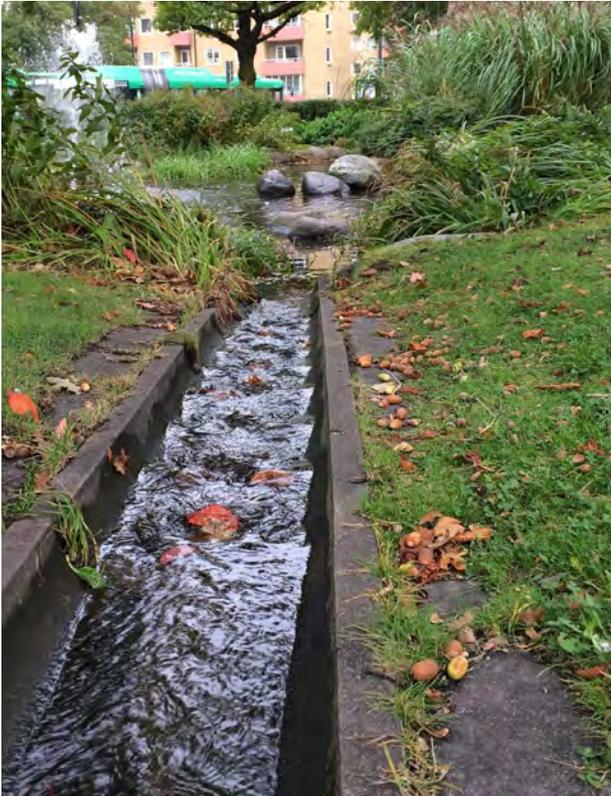
While the majority of the report is grounded in Scandinavia cities, stories and content from other cities was also critical. This is important, because success exists in many forms, and Scandinavia does not have exclusive domain over urban success. This next section will describe what should be measured from each area of focus, the levers of change, what works, and highlight some key metrics from the long list.



4.1 Civic Engagement

Civic engagement refers to individual or collective action for the purposes of tackling public concerns and shaping community change. A wide range of political and nonpolitical activities fall under the umbrella of civic engagement, including volunteerism, electoral participation, and organizational involvement.⁴⁰

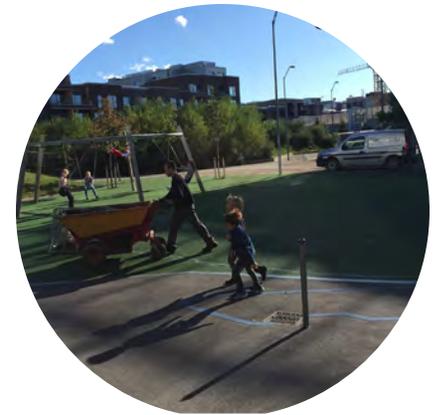
Civic participation of children and seniors—[two of the most vulnerable and marginalized groups in society](#) – is critical to building healthy, green, and equitable communities. What these groups need in order to fully participate in civic life is often greater than what able-bodied working-age people need. By truly addressing the barriers to participation for children and seniors, and by taking their perspectives seriously, cities and neighbourhoods can be made great for everyone.⁴¹



Children's Engagement

Too often, planning agencies default to an adult-oriented approach to city building and omit the needs of children. **The lack of children's voices** in planning and policy creates environments where children feel alienated and ignored by their communities. For example, safety is reduced to issues of violence and crime.⁴² Concerns over improving neighbourhood safety in California led to the implementation of "tough love" policy measures that criminalized youth, directed greater funding towards building more juvenile prisons, and eliminated legal protections for youth. Neighbourhood youths, however, did not identify these measures as the solutions to improving neighbourhood safety. They suggested increasing the number and access to publicly-accessible safe spaces, such as libraries, and making home life safer.⁴³ This disparity between approaches highlights the need to engage children in dialogue in order to understand how they view and navigate space. Once children and youth have been listened to and respected, spaces and programs can be designed that meet their actual needs and preferences.

While children's voice in community decision-making is loudly promoted in public discourse, it is rarely practiced on the ground.⁴⁴ **Adult attitudes are the greatest barrier to having meaningful engagement with children.** Too often, children are assumed to be lacking the knowledge, capacity, and competence to make well-informed decisions.⁴⁵ Children's ability to create meaningful change is questioned and there is resistance in granting them too much decision-making influence.⁴⁶ There is therefore a lot of doubt regarding whether engaging with children is beneficial. These deep-seated reservations over children's engagement originate from societal stereotypes rather than an accurate assessment of children's capabilities.⁴⁷



Planning and city building has far-reaching implications for children since they are the ones who will live the longest with the outcomes from decision-making. Several arguments in academic and public discourse have been advanced in favour of youth involvement in city building processes.

First, children have rights. These rights are enshrined in the United Nations Convention on the Rights of the Child, which has a total of 140 signatories and 196 parties globally.⁴⁸ The Convention covers social and economic rights, as well as protection from neglect, abuse, and discrimination. Examples include the right to life, to health care and education, to freedom of thought, and to the respect of children's opinions.⁴⁹ Even in countries where the Convention has not been signed or ratified, children should have a right to have a say on decisions that impact their lives.

Second, by bringing children to the conversation, adults gain a better understanding of the needs and preferences of children and youth, and vice-versa. This social learning helps to promote intergenerational understanding and enables better decision-making and policymaking. In a report published in summer 2017, "Building Better Cities with Young Children and Families," 8 80 Cities describes some of the existing best

practices for engaging children under 5. Meaningfully engaging very young people requires flexibility and the use of a range of methods, from home visits to guided play to child-led tours of space. These innovative consultations bring fresh and important perspectives to planning processes that are often mired in a business-as-usual approach.

Third, children want to make a difference in their community.⁵⁰ By opening up opportunities for children to participate in processes where they can make an impact, they are able to develop feelings of empowerment and competence, develop decision-making skills, gain knowledge on their rights and options; and increase self-awareness of their role as capacitors for change. This in turn may have a long-term influence on their involvement in community service, political activism, and other forms of civic engagement.⁵¹

Lastly, children express desires to build neighbourhoods and cities that have diverse land uses, animated streetscapes, spaces for social interaction⁵², and environments that facilitate walking and cycling.⁵³ The perspectives gained from children can greatly assist in building cities that are livable for all ages.



Children's Engagement in Malmö

In Malmö, about 20 themed playgrounds were designed, each with a different whimsical and child-friendly theme: music, fairy tales, outer space, spirals, water, just to name a few.^a These playgrounds are very popular and well-used by children. In planning and designing the themed parks, school children located within the catchment area of a planned park gave their input on their choice of theme for the playground.^b

Seniors Engagement

It is equally important to engage with seniors. The global population of people aged 65 and older is expected to increase by 17% from 617 million in 2015 to 1.6 billion by 2050. Of that, the “oldest population” – people aged 80 and older – is expected to increase more than threefold from 126.5 million in 2015 to 466.6 million in 2050.⁵⁴ The dramatic increase in the number of seniors requires that civic leaders prepare for this demographic shift.

The goal of age-friendly communities is to allow for active ageing, defined as “the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age”.⁵⁵ This means identifying the needs and capacities of

different seniors, and adapting the city’s structures and services so that they are accessible for and inclusive of the elderly.⁵⁶ Providing opportunities for seniors to be engaged in shaping city building is critical to the development of age-friendly communities. However, older people have largely been neglected in discussions surrounding city building.⁵⁷ Ageism and ableism negatively impact civic engagement opportunities for the elderly. Specifically, stereotypes against physical and cognitive functions of older adults act as significant barriers for seniors seeking to be engaged in their community.⁵⁸



The exclusion of older seniors from local city-building organizations and planning institutions hinders the development of age-friendly communities. Like children, older seniors have needs that differ from working-age adults. Where planning processes accommodate the needs and preferences of older seniors, they will be more accessible to all populations, particularly people with disabilities of other ages.

For example, in a study analyzing park design for seniors in Los Angeles, participants spoke about importance of integrating elements that make parks welcoming to visitors. This included having a legible park layout; safe sidewalks and crosswalks; signalized intersections that allow for sufficient time to cross the street; proximity to public transit; pavements that allow for easy access by wheelchair users; sufficient seating; and natural features.⁵⁹ These same elements also help make the space accessible to people in all stages of life. The inclusion of seniors in planning processes is vital to the process of building healthy, green, and equitable communities for everyone.



Moving Forward with Civic Engagement

In developing an age-friendly community, it is important to be mindful of the local context. Age-friendly communities need to recognize heterogeneity within populations. **Children's and seniors' experiences are influenced by abilities, gender, health, income, race/ethnicity, and more.** These factors all play a role in shaping how individuals and

communities interact with community organizations, civic institutions and local planning processes. Developing age-friendly communities therefore also involves reconciling conflicting interests and concerns.



4.2 Public Realm & Parks

Public realm and parks are shared public spaces where civic life and cultural expression occur.⁶⁰ They include all the places to which citizens have visual or physical access. This commonly includes parks, parkettes, town squares, streets, sidewalks, as well as the physical characteristics of the space such as public art installations, benches and trees. When planning for age-friendly and inclusive public realm and parks, one must consider the unique needs of children and the elderly population. The following will investigate some of those needs and outline how parks can benefit these populations.

Health and Access

Having a healthy, green, and equitable public realm is a crucial component of promoting positive health outcomes in communities. Those living in proximity to attractive and accessible public space are found to have higher levels of physical activity.⁶¹ This contributes to better health, and can be helpful in shaping children's lifelong habits as well as promoting longevity of seniors. Being within close proximity to greenspace and bluespace is positive as green space has the ability to reduce stress, and water possesses its own special healing qualities.⁶²



It has been said that the public realm is the stage where social life occurs.⁶³ Social isolation is a very real and grave issue that seniors face as they age. A 2006 study showed that 30% of seniors are at risk of social isolation.⁶⁴ Efforts to reduce social isolation can occur by providing quality public spaces within close proximity to where seniors live, and planning appropriate programming and activities for these groups to engage in.

Quality of Public Space

Providing a plethora of space for public life to occur is important to create a vibrant, green and equitable city. However, these spaces need to have identities and possess physical traits which draw people in and allow them to stay. They must be comfortable, engaging and entertaining spaces.

The quality of public parks and the facilities that they provide have the effect of encouraging their use for a range of age groups.⁶⁵ For young children and older adults, having the ability to access public washroom facilities can be instrumental in park use and duration of stay. Providing drinking fountain infrastructure within parks provides the public with a healthy means to stay hydrated.⁶⁶ Furthermore, having adequate and comfortable seating options provide those with limited mobility the opportunity to spend longer times experiencing the public realm and parks.

Adventure for Youth

Play has been deemed a right for all children as per the United Nations High Commission for Human Rights.⁶⁷ It leads to the development of children's, "imagination, dexterity, and physical, cognitive, and emotional strength".⁶⁸ Creating space in the city for children to explore and feel a sense of adventure can trigger curiosity and benefit their development. While all public spaces should be engaging, this characteristic is deeply important in playgrounds, because they are formative spaces for children. If children's play spaces are not whimsical and adventurous, it is less likely that other spaces will be.⁶⁹

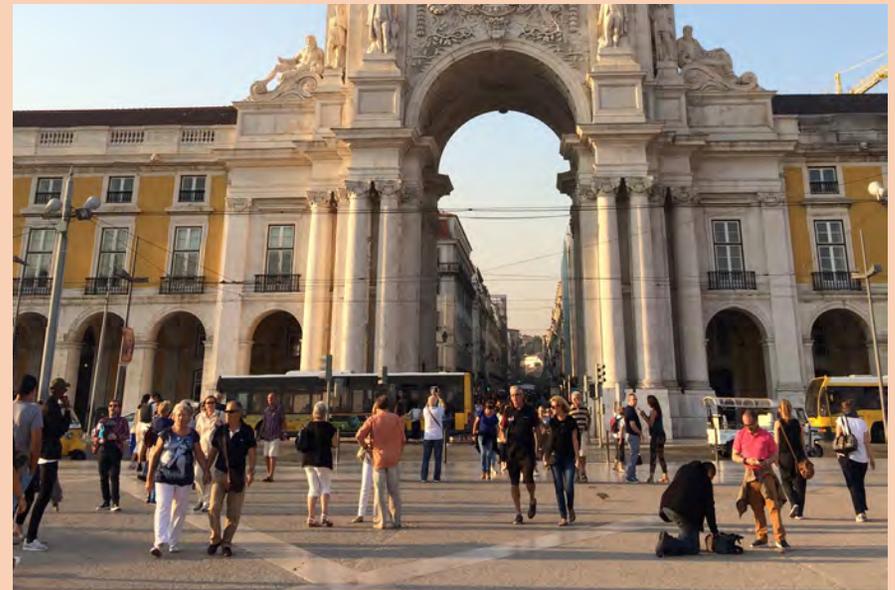


Moving Forward

Good quality and plentiful public realm and parks are necessary for all ages within our communities. The importance of designing these spaces to accommodate the needs of the young and the old must be emphasized. The qualities of a public space must be engaging for the young and provide adequate and frequent seating for those with mobility issues, which may be a prevalent barrier for the elderly accessing park space. When designing these spaces, the other two focus areas must be weaved throughout to ensure thoughtful and connected spaces persist in the urban fibre.

Public Squares in Lisbon, Portugal

Public spaces of Lisbon are considered an extension of living space that helps to maintain social cohesion and neighbourliness. However, many neighbourhoods lacked a common public square. Lisbon was inspired by other cities that ensured a quality public space for all residents within a 15 minute walking distance. A municipal campaign promised "A Square in Each Neighbourhood." So far, roads have been converted into 32 new public squares in the city, utterly transforming public spaces in the hearts of neighbourhoods from hostile streets to multifunctional gathering spaces that prioritize people.^c





4.3 Active Transportation

Active living is an integral part of having a healthy population. Research shows that active transportation is associated with positive health outcomes, such as a reduced risk of obesity, diabetes, and cardiovascular diseases.⁷⁰ Despite these benefits, walking and cycling as a modal share is far less common than driving. For example, research tracking changes in transportation choices to school in the Greater Toronto Hamilton Area revealed a substantial shift in walking and cycling modal share towards automobile usage. In 1986, 44.1% of students 11-17 years old walked to school, while only 14.2% used an automobile as their means of transportation. In 2011, 32.5% of students walked to school, while the automobile modal share increased to 33.3%.⁷¹ Similar trends were also identified in the United States. In 1969, 40.7% of students 5-18 years old walked or cycled to school. By 2001, only 12.7% walked or cycled to school.⁷²

Safety

The increasing trend towards chauffeuring children to school points to barriers in the built environment that discourage people from cycling and walking to their destinations. The most frequently cited deterrent is the concern over safety, particularly with car traffic volume and speed,⁷³ as well as a lack of appropriate pedestrian and cycling facilities.⁷⁴

Removing perceptions of danger is fundamental to encouraging greater walking and cycling rates. Within the walking environment, the lack of a safe space for pedestrians profoundly impacts the walkability of a community. Uneven sidewalks, narrow sidewalks, the absence of sidewalks, and unsafe intersections and crosswalks are all significant barriers to walking.⁷⁵ High traffic volumes and dangerous road crossings have a greater impact on seniors' decision to walk than working-age adults,⁷⁶ suggesting greater risk aversion among older adults.⁷⁷

Echoing similar concerns related to traffic safety, both novice and experienced cyclists of all ages tend to prefer to cycle as far away from car traffic as possible. They indicate a preference for separated cycle tracks over bike lanes,⁷⁸ and are generally averse to shared space designs, such as sharrows.⁷⁹ Equally important is a preference for wider cycle paths, where children and adults express that it is more enjoyable when the path is wide enough for side-by-side riding.⁸⁰

The perceived risks associated with walking and cycling are not imagined, but real. In cities that accommodate car travel, roads are hostile and dangerous environments for pedestrians and cyclists. The absence of a safe, navigable space puts users in significant harm. In Toronto for example, 43% of pedestrian fatalities reported from 2011 to 2016 occurred in places where there were neither traffic signals nor crosswalks.⁸¹ Likewise, in places where there are inadequate or no cycling infrastructure, cyclists are at greater risk of injury. In Toronto and Vancouver, researchers found that



42% of the injuries occurred on major streets with no cycling infrastructure, while only 12% injuries that occurred at sites with cycling infrastructure.⁸²

Greater investments towards building pedestrian and cycling infrastructure can have a positive impact on mitigating the dangers of active travel. Cities that design their streets to keep seniors and children safe have the corollary benefit of keeping everyone safe.

Convenience

Bicycling and walking should be made as convenient as possible in order to shift modal share in favour of more active modes. Bicycle and pedestrian friendliness must therefore be considered in all aspects of urban planning and design. This means ensuring that pedestrian and cycling routes are well-connected to important community places, such as parks, grocery stores, libraries, and community centres. The availability of amenities, such as seating, railing, ramps, water fountains, are features that also greatly improve the walking experience.⁸³

Moving Forward

As cities will increasingly grapple with the impacts of aging, climate change, and weight-related illnesses, auto-dependency will not be sustainable in the long-term. Active transportation modes are more equitable than the car. Not only is active transportation considerably cheaper than driving, populations who are unable or lose the ability to drive – such as children and seniors – have greater reliance on walking and cycling to get around. Planning for active transportation will play a significant role in building healthy, green, and equitable communities.

Lisbon, Portugal

Copenhagen is touted as one of the world's best cycling cities, but its transformation from car-dominated metropolis to cycling city can be hard to relate to, because it happened in the 1990s. Lisbon, Portugal is undergoing that transformation today. The current cycling modal share in Lisbon is 1.7% but the city aims to have a 7% cycling rate by 2020.^d

Lisbon's story shows that you don't need universal acceptance to implement positive change - the city's first bike lanes and paths were implemented by the Open Space department, because the Transportation department was hostile to cycling. Today, Lisbon has set an ambitious goal for cycling in the city, committing to exceeding 200 km of bike lanes by the end of 2017.^e Much of this progress is thanks to a small dedicated team within the Transportation Department that works with external advocates and consultants, as well as a few supportive politicians to expand and implement a cycling network and make Lisbon the next Copenhagen.



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5.0 CONCLUSION

Our diagnostic toolkit will help civic leaders identify key actionable items through three areas of focus: civic engagement, public realm and parks, and active transportation. We designed the diagnostic toolkit so that it can be used at the city- or neighbourhood-level in any city. The power of the toolkit is its ability to act as a catalyst for community capacity building. Designing cities specifically for children and seniors creates great places for everyone.

Moving forward, we suggest using the long list of over 200 metrics to adapt and test our prototype for different cities. The toolkit will need to be tailored to specific locales so that it reflects the unique characteristics of social, economic, and political landscape of these places. This will involve an iterative process of identifying local needs and preferences in dialogue with residents.

The diagnostic toolkit that we have prepared has several limitations. First, time constraints limited the time we had available to comprehensively

test the toolkit in a diverse array of locales. Second, the toolkit is not designed to rank communities against one another, nor does it aim to distill the myriad strengths and weaknesses of a community into a single numerical score. Our aim was to motivate communities and instill a sense of urgency without leaving them feeling completely inadequate and hopeless. Lastly, there is an illusion of Scandinavia representing an unattainable utopia. While our toolkit is based on Scandinavian examples, we have attempted to demystify the “Scandinavian Effect” and present approachable case studies. However, being able to perform field research in other countries would have been useful to create a more holistic and comprehensive vision.

Our toolkit is only the first step for 8 80 Cities to further its mission to create more equitable, green, and healthy cities for everyone. It is our hope that this diagnostic toolkit will inspire and catalyze change in cities. It is easy to go from bad to good, but hard to go from good to great.

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