



Systems Of Cross-sector Integration and Action across the Lifespan (SOCIAL) Framework Report

Built Environment

Spring 2024



Report Contents

Acknowledgements	3
Opening Remarks Opening remarks from Co-Chairs Erin Peavey & Risa Wilkerson	4
The SOCIAL Framework An introduction to the Systems Of Cross-sector Integration and Action across the Lifespan (SOCIAL) Framework	5
The Built Environment Defining the built environment, its role in addressing social isolation, loneliness, and social connection (SILC), and evidence of its impact	6
The Continuum of Social Connection An overview of the report scope and intended objectives	8
Report Scope & Objectives An overview of the report scope and intended objectives	9
Framing this Report Key frameworks and concepts guiding this report	10
Cross-Cutting Considerations Cross-cutting themes and perspectives and reflections	11
Addressing SILC Across Levels of Influence Glance at key stakeholders across levels of influence	12
Evidence and Application of Proposed Solutions Background on how solutions in this report were selected	13
Promising Strategies for Addressing SILC Through the Built Environment Collection of promising strategies and related concepts for advancing social connection through the design, planning, and facilitation of the built environment	14
Making it Happen Glance at strategies that leverage collective impact for operationalizing promising practices within the built environment	20
Conclusion	23
References	24





Acknowledgements

Authors

Ashley Krombach, Foundation for Social Connection
Erin Peavey, HKS Inc
Risa Wilkerson, Healthy Places by Design
Abigail Barth, Foundation for Social Connection

Subcommittee

Dr. Carrie Henning-Smith, University of Minnesota School of Public Health
Amanda O'Rourke, 8 80 Cities
Ayanna Williams, National Recreation and Park Association
Dr. Thomas Cudjoe, F4SC Scientific Advisory Council, The Johns Hopkins University School of Medicine

Reviewers & Contributors

Jillian Racoosin Kornmeier, Foundation for Social Connection
Dr. Marlee Bower, University of Sydney
Dr. Autumn Saxton-Ross, National Recreation and Park Association
Abigail Gadbois, Healthsperien
Nate Storrington, Project for Public Spaces
Dr. Megan Henly, University of New Hampshire
Kathy Greenlee, ADVancing States
Dr. Seth Kaplan, The Johns Hopkins University School of Advanced International Studies
Lara Pinchbeck, Lara Pinchbeck: Research into Design
Erin Maruzzella, Innovations in Aging Collaborative
Megan Mazzocco, Wellbeing X Design
Jillian Finkle, Grow Smart Rhode Island
Rachel Cohen, Aging Dynamics & LinkAGES Connect
Kelsey Zlevor, MUSE Community + Design
Michelle Hoar, Hey Neighbor Collective
Jennifer Hughes, National Endowment for the Arts

The Systemic Framework of Cross-Sector Integration and Action Across the Life Span (SOCIAL) was developed by Dr. Julianne Holt-Lunstad in partnership with the Foundation for Social Connection's Scientific Advisory Council (SAC) of interdisciplinary experts.

Opening Remarks

From the Co-Chairs

As humans, we evolved in community. People gathered in small tribes to support one another, to provide protection, warmth, food, and care for children. Given our nature, being completely autonomous and independent is a threat to survival. Our basic need to be interdependent remains even though the backdrop of humanity has transformed over centuries. For decades, the healthy communities field has demonstrated that where we are live, learn, work, play, and age impacts our health. It's clearer than ever that the way our communities are designed, maintained, and activated deeply impacts our quality of life. We need collaborative approaches, across sectors and including residents, that address the root causes of health disparities and strategically integrate multi-level supports. So, we're thrilled to co-lead the development of this important report centered on the impact and intersection of the built environment and social connection. It aligns with our personal passions and professional pathways.

We both believe it's critical to strategically and intentionally create the conditions needed for health and wellbeing in all communities. We believe it's especially important to do so with those who are most marginalized because of their race, income, location, sexual orientation, and gender identity. As the U.S. Surgeon General noted in his Advisory Report, social isolation and loneliness is a public health crisis. Fortunately, social connection and community have healing effects. May this report help you work with others to translate the recommended strategies into locally informed design decisions that support connected communities wherever you are. Working together, we can all experience those healing effects locally and globally.

—Erin and Risa



I've lived in apartments, houses, in a co-housing village, a cottage in a friend's backyard, and I've nomaded in a van, sailboat, and RV. I've lived in rural communities, marinas, and towns/cities with varying degrees of walkability and density. I experienced the difference in how connected I felt to others based on how each place was designed. These experiences, layered with nearly 25 years working in the healthy communities field, taught

me why it can be ineffective, or even harmful, to tell people how to be healthy without also ensuring that they have access to resources, environments, and social networks that support healthy choices. I'm encouraged by the growing partnerships and interest in strengthening social health across the country.

Risa Wilkerson, Executive Director, Healthy Places by Design

Growing up, I was sensitive to how different spaces made me feel and how they impacted others. When I discovered the field of environmental psychology, my experiences made sense. I realized that we are all impacted by the spaces and places where we spend our lives, even though it is often unconscious. Similarly, we are finally starting to recognize the power of place to impact our human connection, trust, bonding, and



exposure to diverse people and perspectives that the world needs, especially now. I experienced the power of place firsthand to connect me to neighbors and friends during a trying time in my life, and as an architect and researcher, I am committed to paying that gift forward.

Erin Peavey, Vice President | Health & Well-Being Design Leader, HKS Inc

The SOCIAL Framework

Human beings are fundamentally social by nature. Substantial evidence documents the benefits of stronger social connections and the risks of disconnection (e.g., isolation and loneliness) for individuals, groups, organizations, and communities.⁽¹⁻⁵⁾ Research on social connection spans multiple scientific disciplines including medicine, sociology, psychology, epidemiology, neuroscience, communications, and anthropology.

Much of this research is historically conducted in siloes and relies on a wide range of research methods, which makes it challenging to develop a cohesive, systematic approach to promoting social connection.

The Foundation for Social Connection’s Scientific Advisory Council, chaired by Dr. Julianne Holt-Lunstad, developed **The Systems Of Cross-sector Integration and Action across the Lifespan (SOCIAL) Framework** to translate research into practice, accelerating progress toward a society that contributes to social connectedness across the lifespan.⁽⁶⁾ The SOCIAL framework draws upon the hybrid relationship of the (a) socio-ecological model and the (b) Health in All Policy (HiAP) framework to illustrate how every sector of society and level of influence⁽⁷⁻⁸⁾ can contribute to social connection and reduce social isolation and loneliness.^(6,9-10)

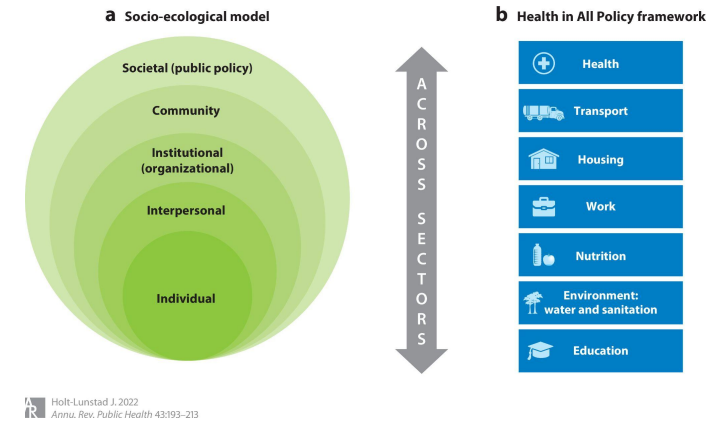


Figure 1. Socio Ecological Model & Health in All Policy

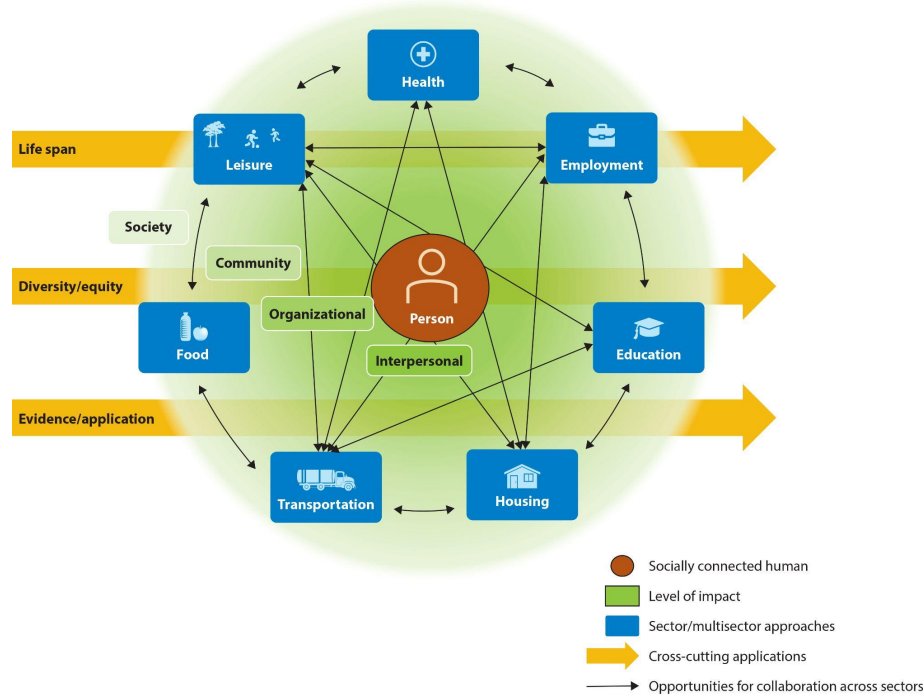


Figure 2. The SOCIAL Framework

The SOCIAL framework has four main components, which provide guidance in identifying opportunities for intervention or support for population health including:

- **Levels of Influence:** individual, interpersonal, institutional/organizational, community, and societal levels
- **Sectors of Society:** education, health care, transportation, housing, work, nutrition, environmental supports (e.g., water, sanitation), and leisure
- **Cross-Cutting Themes:** represent issues that must be addressed across all levels and sectors represented in the framework (e.g., lifespan, evidence, diversity, and equity)
- **Opportunities for Collaboration:** acknowledge and encourage approaches that operate across many sectors and disciplines

In this report, we introduce the built environment as the intersection of the transportation, housing, and environmental sectors.

The Built Environment

The built environment is where we live out our lives - the places and spaces where we live, learn, play, and work. It encompasses the infrastructure that powers our communities with water and electricity and the transportation systems we use to get from place to place.



Space Scale	Interior		Architecture		Urban
Scale of Design	Room	Building/Complex	Neighborhood	City/Metro	State/Nation
Level of Influence	Individual	Interpersonal	Organizational	Community	Society
Place Type	Housing	Schools Workplace	Leisure Retail	Healthcare Transport Public Space	Critical Infrastructure

Caption: This graphic shows the levels at which the built environment impacts our social lives, from micro (individual) to macro (society) level. Scale of design activity in the built environment, adapted from Erickson and Lloyd-Jones (2001). Levels of influence from socio-ecological model. Graphic by Erin Peavey.

In this report, we ask you to consider: what would it look like if social connection was built into the fabric of our built environment where:

- communities are knitted closely together, not just by roads, but by shared experiences and spaces.
- architecture and design are centered on the human experience and needs, rather than efficiency and builder convenience.
- connection and joy shared on public transit mirrors the energy of playgrounds, cultural centers, and cafes.
- otherwise empty spaces, such as sidewalks, alleyways, and parking lots are transformed into spaces of connection.
- education, healthcare, and markets are woven into the fabric of residential areas - ensuring that essential services are accessible.

In this vision, each pillar of the built environment works in sync. It underscores the importance of every role in shaping our shared environment and facilitating spaces that connect and foster belonging. It prompts the question: **What role can we all play in the vision of using the built environment to foster social connection?** Whether as architects, city and regional planners, local leaders, or engaged citizens, we invite you to rethink our spaces, our communities, and how we can build stronger cultures of connection through the built environment.

Defining the Built Environment

While there are varying definitions, the built environment can generally be described as the human-made or modified structures that provide people with living, working, and recreational spaces.⁽¹¹⁾ This includes housing (the places we live - also often coined as our “first place”), the workplace (where many of us spend most of our time - often coined as our “second place”), and third places (spaces where community members may commonly interact).⁽¹²⁾ We expand this definition to include the network of spaces and systems of infrastructure that support these structures: physical infrastructure and social infrastructure.

Physical infrastructure can be described as systems that provide our homes and other physical spaces with water, electricity, connectivity (broadband/technological infrastructure), and transportation (roads, bridges, paths for diverse modes of transit).⁽¹³⁾

Social infrastructure can be described as the crucial organizations, spaces, and groups that facilitate social connection and enable communities to form and sustain relationships that help them to thrive.⁽¹⁴⁾ In his 2018 book *Palaces for the People*, Eric Klinenberg notes that many aspects of our society can be important parts of social infrastructure - from public institutions (e.g., libraries, schools, parks, community centers), community organizations (e.g., churches, civic associations), and commercial establishments that operate as third places (e.g., cafes, barber shops, bookstores) to sidewalks, streets, courtyards, community gardens, and other green spaces that invite people into the public realm.⁽¹⁵⁾

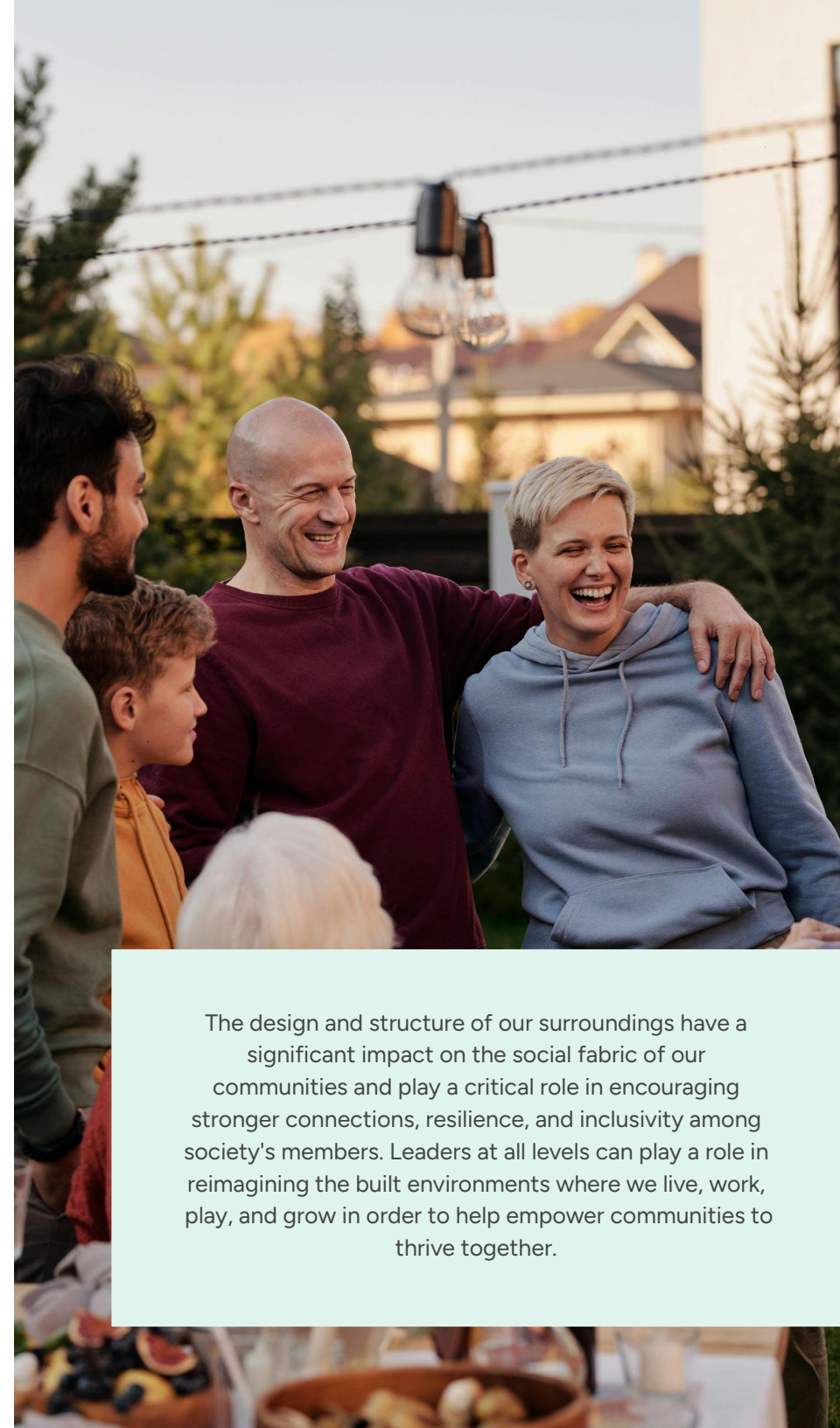
The Role of the Built Environment in Addressing Social Isolation, Loneliness, and Connection (SILC)

The built environment can be both a driver of and a barrier to social connection.⁽¹⁶⁾ It can facilitate meaningful interactions and foster a sense of community or, conversely, isolate individuals and discourage engagement. Even the smallest points of social connection including passive exchanges as someone walks by or brief interactions in shared spaces such as the supermarket or neighborhood café, can build a feeling of mutual trust, foster empathy, and generate more social capital in the broader community.⁽¹⁷⁻²⁰⁾ When designed well, neighborhoods and community environments can be fundamentally more supportive of social connection and serve as a preventative measure to avoid loneliness and minimize social isolation.⁽²¹⁾

Promising Positive Effects of the Built Environment on SILC

Research highlights the critical role of well-designed, intentional, and inclusive spaces in addressing SILC. By prioritizing human-centric design, such spaces become catalysts for community engagement and social integration. Some of the key outcomes the built environment has on addressing SILC include:

- **Increased social capital** through the design and amenities of the built environment and the roles it plays in shaping the types and quality of social ties within a community.⁽²²⁾
- **Increased diversity in the types of interactions and relationships** an individual has access to - key to the social fabric of communities and individual health.⁽²³⁻²⁴⁾
- **Increased belonging and sense of place** through built environments rich in community-based programming - leading individuals to more readily use services and contribute their time and resources back into their communities.⁽²⁵⁾
- **Improvements in social health markers** (inclusive of trust, network size, and perceived safety) through various characteristics of the built environment.⁽²⁶⁾
- **Increased civic engagement, community resilience, and preparedness** through community-level social connection.⁽²⁷⁻²⁸⁾



The design and structure of our surroundings have a significant impact on the social fabric of our communities and play a critical role in encouraging stronger connections, resilience, and inclusivity among society's members. Leaders at all levels can play a role in reimagining the built environments where we live, work, play, and grow in order to help empower communities to thrive together.



The Continuum of Social Connection

Social connection is often experienced through feelings of closeness and belonging. It can be defined as a continuum of the size and diversity of one's social network and roles, the functions these relationships serve, and their positive or negative qualities.^(8; 29-30) Social connection looks at the relationships, interactions, and ties that people share with family, friends, colleagues, others in their community, and broader social groups.

Community social connection can be experienced as a broad-based feeling of collective closeness, belonging, and equitable power and agency - fostered through face-to-face interactions, shared physical spaces, and community gatherings.

In this report, we refer to social connection in the broadest terms - considering ways communities are formed, cultivated, and nourished. The built environment can cultivate both strong ties (deep, long-lasting relationships) and weak ties (casual acquaintances) across a continuum of interactions - from casual points of connection (e.g., saying hello to a park ranger or talking with a stranger at the train station) to recurring encounters (e.g., seeing regulars at a coffee shop or having lunch with a coworker) and meaningful relationships (e.g., gathering with friends and family or building community through social groups). Through the intentional design and use of space, the built environment can serve as a foundational element in fostering healthy, socially-connected communities.

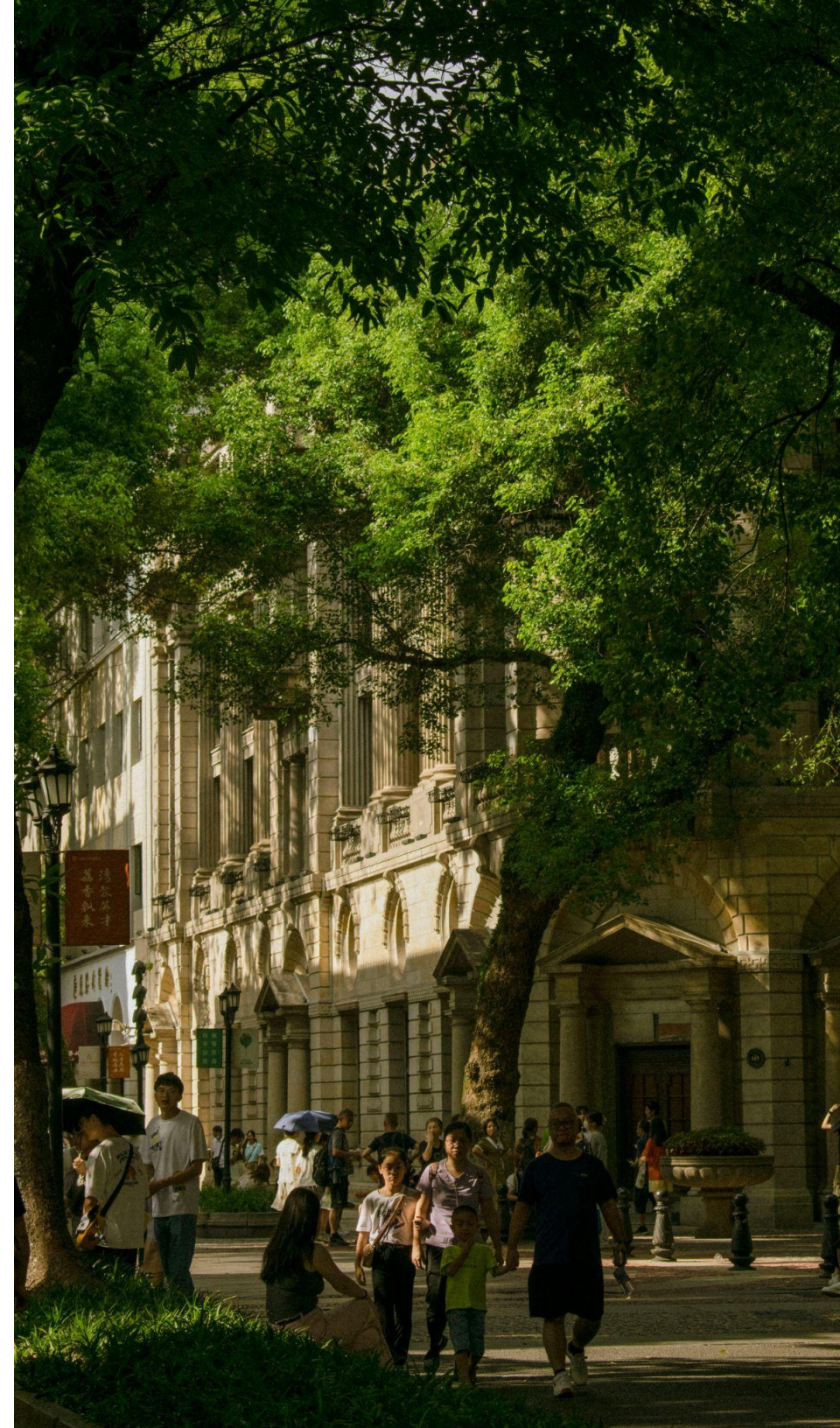
Report Scope & Objectives

This report explores the opportunities to foster social connection through the built environment. The built environment encompasses the many places and spaces where we live our lives and the people who design, create, and experience them. While definitions and scope of the built environment can vary, in this report, we focus our efforts on the intersection of several key sectors: community design, housing, third places, and transportation. After considerable discussion and input gathered from subject matter experts in the field, we centered our analysis on the community and neighborhood spaces and the connectors between them. Following this report, we aim to develop supplemental briefs exploring more of the tactics within each specific sector to expand on the strategies and concepts presented here.

In line with the Foundations' previous SOCIAL Framework reports, we discuss key stakeholders and promising strategies for fostering social connectedness and addressing social isolation and loneliness through the design, planning, policy, and use of the built environment. The following sections explore the reach of these strategies across the five socio-ecological levels of influence, highlighting the individual, interpersonal, organizational, community, and societal level opportunities to facilitate social connection. Upon this section's conclusion, readers will be equipped with the knowledge of specific strategies as well as language for helping to make the case for social connection within the built environment.

After reading this report, you will be able to:

- *Describe and understand the power of the built environment as an interconnected system of physical spaces and attributes which create networks of our cities, communities, and nations - from the street we live on, to the placement of a park, or gathering space.*
- *Identify how the design, planning, policy, and use of the built environment can negatively or positively influence our ability to be socially connected.*
- *Share promising strategies for increasing social connectedness through the design, planning, policy, and use of built environments across levels of influence for various stakeholders.*





Framing this Report

Creation and Operation of Space

In this report, we focus on solutions to make the built environment more socially connected in two ways: in the creation and in the operation of places.

Creation refers to how we design and build environments and public spaces, considering things like architecture, materials, diversity in land use, density, and sustainability. Key stakeholders may include city/regional planners, economic development departments, architects, and engaged community members. In this report, we reference the “5D” factors of the built environment, intended to create efficient, sustainable, and accessible spaces.⁽³¹⁾ These factors are:

- **Design** refers to the architectural and planning aspects of the layout and aesthetic features of a space. It includes everything from the arrangement of buildings and public spaces to the integration of green spaces and pedestrian pathways. Thoughtful design can lead to spaces that encourage social interaction, improve accessibility, and address loneliness.⁽³²⁾
- **Density** refers to the concentration of people and buildings. While high-density areas can support more efficient public transportation systems and create vibrant communities, it is important to balance density with livability to ensure services and amenities are accessible to all residents of a community. Innovative design solutions are needed at all levels of population density.⁽³³⁾
- **Diversity** refers to the mixed-used of land to create environments that serve a broad range of activities and needs. By combining residential, commercial, and recreational spaces, communities are supported in economic vitality and improved social interaction and sense of community.⁽³⁴⁾
- **Distance and Destination** refers to the proximity to key facilities and amenities including schools, workplaces, groceries, etc. A focus on destination can lead to the development of more compact, walkable communities that provide increased access to essential services and more opportunities for social interaction and community engagement.⁽³⁵⁾

Operation refers to how spaces are used, managed, and maintained, considering things like the policies, programming, and activities they offer, and the facilitation of social connection, to optimize functionality, comfort, and ecological impact. Decisions about how spaces are operated play an important role in fostering representative and inclusive environments where all individuals feel safe, supported, and valued. Incorporating culturally relevant and developmentally appropriate activities can help activate a space in a way that engages diverse audiences. Leaders of these spaces can also prioritize the co-creation of meaningful strategies around design and operational planning by engaging various demographics to better tailor environments to meet the needs and preferences of the individuals who experience them. Key stakeholders may include policy-makers, municipal services departments, and organizations such as libraries, non-profits, and schools.

Cross-Cutting Considerations




This section provides cross-cutting themes, perspectives, and reflection prompts to consider in order to ensure inclusivity when developing, researching, and implementing approaches.

Diversity, Equity, Inclusion, Belonging, Justice, and Accessibility (DEIBJA)

To dismantle the systemic barriers and foster inclusivity in our communities, we must proactively redesign the built environment to support equitable access to spaces, facilitate diverse social interactions, and represent a broader spectrum of historical narratives and cultural identities.

While anyone can experience SIL, we know that some groups are at higher risk than others due to exposure to greater barriers, discrimination, harmful societal norms, isms, and phobias.^(25; 36) Systematic issues in the built environment, such as the placement and design of features like fences and highways, as well the lasting impact of discriminatory policies like redlining, restrict access for marginalized groups to amenities and services, segregate communities, and limit social interactions.⁽³⁶⁻³⁸⁾ Accessibility challenges further hinder individuals with disabilities,⁽³⁹⁾ and historical symbols in public spaces can perpetuate racial biases.⁽⁴⁰⁾ Disinvestment in vulnerable communities worsens these disparities and health risks.⁽⁴¹⁻⁴²⁾ A continued issue at play is the unequal distribution of income and wealth which affects property taxes and community resources through structural racism and impacts resources in lower-income rural areas regardless of race. In light of this, it's crucial to consider how historical factors and financing influence the creation and operation of spaces, and to note that access to these spaces can vary significantly between different groups.

Questions to Consider:



-  In what ways do our current built environments perpetuate harmful societal norms and practices?
-  What steps can we take in the design and planning process to confront and address existing prejudices?
-  How can we ensure that accessibility is a fundamental aspect of the initial design process?

Experience of the Built Environment Across the Lifespan

To create more interconnected communities, we must embrace intergenerational planning and design in our built environments to foster spaces that support every age, enhancing play, accessibility, and community cohesion.

Across the lifespan, we engage with and experience the built environment in different ways. For children and youth, the built environment often serves as a playground that promotes play, physical activity, and exploration.⁽⁴³⁻⁴⁴⁾ As we age, our needs, priorities, and the ways in which we navigate these spaces shift - making accessibility, convenience, and engaging community spaces that facilitate social participation more of a concern.⁽⁴⁵⁾ One way of addressing this is through universal design (UD). Universal design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability.⁽⁴⁶⁾ Additionally, intergenerational approaches to the design and planning of the built environment look at how environments can support and meet the needs of all ages and promote cross-generational connections which have demonstrated solidarity, social cohesion, and intercultural understanding.⁽⁴⁷⁾

Questions to Consider:



-  How do we anticipate and plan for the changing physical and social needs of individuals within the built environment through functional, welcoming, and supportive spaces?
-  How can planning and design evolve to support "aging in place," enabling individuals to stay in their preferred communities for life?

Application of Solutions Across Geographic Types (e.g., rural, urban)

To ensure every space promotes meaningful connections, we must contextualize solutions to meet the unique needs and opportunities of diverse environments.

Contextualizing solutions for addressing SILC through the built environment means considering the diverse environments in which a solution can be applied and adapting to meet the needs of that community. Urban environments, often marked by higher-density infrastructure and a concentration of services and amenities, present a mix of challenges and opportunities for social connection. The design and utilization of public spaces (e.g., parks, plazas, streets) can influence community engagement and foster social cohesion.⁽⁴⁸⁻⁴⁹⁾ In rural environments, fewer built structures and more land require an intentional focus on versatile and multi-solving spaces.⁽⁵⁰⁾ For example, a school may also serve as a community center, athletic facility via open-use agreements, event venue, and emergency shelter. How its use is operationalized depends on tailored strategies that recognize and meet the unique social fabric, needs, and potential of its environment.

Questions to Consider:

-  How can the principles of inclusive and equitable design be effectively scaled to suit the unique needs and contexts of diverse environments - remaining locally relevant and globally informed?
-  In what ways can the scalability of solutions be evaluated to ensure they can be adapted and applied to different contexts without losing their effectiveness or cultural relevance?

Addressing SILC Across Levels of Influence

The SOCIAL Framework identifies five levels of influence that should be considered when developing a systems-based approach to promoting social connection and addressing social isolation and loneliness. This section addresses each level by naming the key stakeholders best positioned to take action, solutions that might be implemented, policies that operate at that level of influence, and considerations for implementation.

Key Stakeholders Poised to Influence the Built Environment






Level of Influence	Key Stakeholders
 <p>Individual Individuals who have the ability to influence individual behavior and/or provide SILC resources that can be used by others.</p>	<ul style="list-style-type: none"> Engaged community members City planners/ regional planners/ economic development leaders Architects and designers Policymakers Funders
 <p>Interpersonal Interpersonal relationships that may influence behavior in the context of social networks and support systems.</p>	<ul style="list-style-type: none"> Community member with community member (e.g., friends, families, neighbors for grassroots/ local efforts) Sector leaders with sector leaders (e.g., collaboration and cross-sectoral partnerships for creation and operation of spaces) Sector leaders with community members (e.g., co-creation of spaces)
 <p>Organizational/ Institutional Entities with the power to influence organizational culture through the designing of policies, practices, and structures.</p>	<ul style="list-style-type: none"> Second places (e.g., educational institutions, workplaces) Community organizations/ nonprofits and third places (including arts, culture, and faith-based organizations, libraries) Healthcare facilities (e.g., clinics/ hospitals, dialysis/infusion spaces) Social service organizations (including mental health and addiction services) Municipal services departments (including those who oversee and fund public infrastructure, housing policy, and community services, transportation, parks and recreations, housing authorities, zoning and coding officials) Local businesses (e.g., grocery stores, restaurants, shops)
 <p>Community Entities that can collaborate to bring groups of individuals together outside of any one specific organization and foster social connection.</p>	<ul style="list-style-type: none"> Local government (e.g., elected officials, councils, parks and recreation) Indigenous communities & councils Infrastructure committees (including those focused on the development and maintenance of transit, utilities, public works) Community/ neighborhood associations and advocacy groups (including groups that advocate for residents' needs and interests, serve specific priority populations; e.g., youth, older adults, racialized populations, individuals with disabilities)
 <p>Societal Organizations, agencies, and departments with the ability to set or shift industry standards in ways that prioritize taking action to reduce SIL and foster connection.</p>	<ul style="list-style-type: none"> State and federal government (e.g., legislators, regulatory agencies) Indigenous nations Professional associations & organizations with aligned mandates National/ international organizations (e.g., World Health Organization) Philanthropic organizations Researchers Media

Table 1: Key Influences & Stakeholders in the Built Environment

Evidence and Application of Proposed Solutions

As decision-makers select approaches and programs to implement to address SILC, it's helpful to consider the level of scientific evidence supporting available solutions. The solutions mentioned in this report are considered promising practices and are based on one or more of the following criteria:

- The solution was developed based on theoretical or a conceptual framework, with at least one peer-reviewed article on the approach
- The solution has been evaluated for outcomes related to social health, social capital, social cohesion, sense of community, belonging, social isolation, and/or social connection.
- The solution was shared and endorsed by subject matter experts in the built environment field during key informant interviews.

Some solutions demonstrate an impact on one or more outcomes listed above with at least one peer-reviewed published study demonstrating effectiveness, while others have been published as case studies or in white papers. It is important to note that research examining the relationship between the built environment and SILC is still in its infancy, with many relying on less rigorous research designs (such as correlations or cross-sectional sampling), rather than the kinds of studies that can tell us more about causation (such as longitudinal studies or randomized controlled trials).⁽¹⁶⁾ Regardless, we are still able to make some generalizations about the relationship between the built environment and SILC, supported by corroboration of subject matter expertise.

Whenever stakeholders implement a solution, it is necessary to evaluate its effectiveness within their unique context. Even solutions that have been evaluated and subjected to professional peer review may need to be modified or adapted to meet the needs of sub-populations or geographic makeup of a particular built environment.

If you implement these strategies, we encourage you to consider conducting evaluation research or partnering with academic researchers to add to the body of evidence for built environment strategies that build social connectedness.



Promising Strategies for Addressing SILC Through the Built Environment

Table 2 provides an overview of the strategies to address social isolation, loneliness, and foster social connection within the built environment. This table presents the levels of influence for each strategy and the associated social connection outcomes it addresses.

Read more about each strategy and examples of community implementation on the next page.

[Find these terms in the Glossary](#)

Strategies for Addressing SILC within the Built Environment		
Strategy	Level(s) of Influence	Social Connection Outcomes
Design places to support comfort and connection		Social capital, sense of community, belonging
Create third places that facilitate natural opportunities for connection		Social capital, social cohesion, neighboring
Invest in multi-use public spaces that foster social connection and nature connection		Social capital, social cohesion, sense of community, neighborhood cohesion, reduced feelings of loneliness
Build intergenerational and age-friendly communities		Social capital, social cohesion, bonding, reduced loneliness
Use and encourage shared community housing models		Social capital, sense of community, belonging, neighborhood trust, bonding
Increase access to affordable, reliable public transportation		Social capital, social engagement, reduced isolation, social ties, sense of place
Activate streets as places for connection		Social capital, social cohesion, sense of community, neighborhood trust
Reform local zoning codes and policies to allow for shared- or mixed-use, walkable neighborhoods		Social capital, social cohesion, sense of community, neighborhood trust, reduced isolation
Expand accessibility, reliability, and affordability for broadband connectivity		Social capital, reduced isolation, social support

Table 2: Strategies for Addressing SILC Within the Built Environment

Design places to support comfort and connection

Following a scoping literature review, six evidence-based design guidelines for social connection were outlined for creating built environments that support connection⁽²⁶⁾. Combined, these make up PANACHE, or a sense of **place, accessibility, nature, activation, choice, and human scale**. At the root, these design strategies tap into our foundational needs around social connection, which include a sense of safety, proximity to others, and opportunities to connect. These design strategies can be applied from small scale (inside a shared space) to a large scale (street block). These design characteristics can help us feel comfortable, safe, and able to connect with others. We envision these design guidelines helping to ensure that the recommendations and strategies discussed in the report contribute to the creation of functional, inclusive, engaging, and sustainable spaces. These principles act as the pillars of the design philosophy, aiming to enhance quality of life and foster a sense of community and belonging within the built spaces.⁽²⁶⁾

[La Jolla, California](#): Human social dynamics, psychological needs and learning behaviors drove every design decision for UC San Diego's North Torrey Pines Living and Learning Neighborhood (NTPLL). The challenge of weaving together living and learning in one place formed the foundation for a "campus within a campus". Here, third places took not only the form of the cafes, and dining halls, but also created spaces that matched scales of belonging from the door pods, to larger shared cooking and gathering spaces. The research team found that students in the new facility reported anecdotal improvements in connectedness, and had a significant reduction in depression scores often linked to social connection.

[United Kingdom](#) Maggie's Centres are positioned across the United Kingdom to offer cancer patients and survivors a "second-home"⁽⁵²⁾ where they can find education, camaraderie, and a sense of belonging. These centers allow people to relax on the couch with a book, spontaneously socialize with friends and fellow cancer survivors, and attend formal support group meetings, among other things. The spaces provide comfort and warmth thanks to a combination of physical environment, programming, and policy decisions that have supported the location of these centers adjacent to large publicly funded hospitals. This initiative was spearheaded by architectural historian Charles Jencks, who wanted to create the supportive place his wife, Maggie, helped design while undergoing treatment for terminal cancer. Each center has been designed by a different internationally acclaimed architect.

Create third places that facilitate natural opportunities for connection

Third places are social spaces separate from an individual's typical social environments (e.g., the home and workplace) and are often cited as key factors in driving civic engagement, building social cohesion, and establishing a sense of place.⁽⁵³⁾ Common third places include libraries, community centers, public school playgrounds, parks, etc. They can also be the city block, a street corner, or [a person's front yard](#), extending beyond formal third places. Literature commonly refers to these informal third places as bumping spaces, where individuals naturally "bump" into one another.⁽⁵⁴⁾ A study exploring these spaces in a New Zealand community, following the redesign of various suburbs in response to a series of devastating earthquakes found that bumping spaces can provide meaningful social interaction and social support.⁽⁵⁵⁾ Several participants interviewed described how a simple acknowledgement or nod could provide social support when needed and often met new people, expanding their social network, in these spaces. Additionally, elements of bumping spaces, such as benches, can serve not only as a space for connection but also increase the accessibility of an area and promote intergenerational and age-friendly spaces.⁽⁵⁶⁾

When discussing third places, it is also important to call attention to privately owned, publicly accessible third places and their role in nurturing community ties through meaningful design and facilitation. For example, some shopping malls open early to provide access for walking and exercise - encouraging active living with signage and routes mapped for easy access. Discover strategies that can support the promotion of health and community in privately owned third places [in this report from the Urban Land Institute](#).

[London, United Kingdom](#): The Bumping Spaces Project created by City of London Libraries and Made By Play sought to explore improvements to social connection through interactive, playful installations that offered opportunities for sharing names and stories, checking in on neighbors, and encouraging in-person connections- demonstrating the critical role libraries play in fostering community connections.

[Willmar, Minnesota](#): Destination Playground in Willmar Minnesota is a fully accessible park designed through a cross-cultural initiative led by nearly 4,000 volunteers. The park services as an inclusive space that celebrates diversity, featuring multilingual signage, and brings together families of all backgrounds to play and connect.

[Atlanta, Georgia](#): Each Station Soccer site was envisioned as a gathering place to build community and support youth education and development, as well as transit-oriented development that attracts new commercial and residential development, enhances the public realm, and serves as the foundation for healthy and more equitable neighborhoods. The project was created through a coalition of public, private, and civic interests, to create a unique urban development ecosystem that knits communities together through mass transit and the world's most popular game - soccer.



Related Concept **Proxemics**

Proxemics is the study of how people perceive space and use it in social contexts. It was coined in the 1960s by anthropologist Edward T. Hall, who explored how individuals of different cultures, genders, and social settings interact and establish personal space. Built environment designers use proxemic norms to create spaces and environments that promote comfort and facilitate desired social interactions.⁽⁵¹⁾



Related Concept **Libraries as Community Hubs**

A growing body of literature highlights the pivotal role of libraries in building community. Libraries can serve as community hubs that better connect residents to amenities and services, promote community participation and civic engagement, and increase social capital.⁽⁵⁷⁻⁵⁸⁾ Learn more about how rural libraries are addressing social health [in this article from the Library Journal](#).

Policy Highlight **Social Prescribing**

Support social prescribing practice in medical institutions including hospitals, long-term care facilities, and community health centers to refer patients to community-based resources such as legal guidance, financial support, housing assistance, food security, time in nature, arts and culture, and volunteer opportunities

Invest in multi-use public spaces that foster social connection and nature connection

While these privately owned, public accessible spaces contribute significantly to the social fabric, the preservation of truly public spaces must remain a priority to ensure equitable access for everyone in the community. Public open space generally refers to land that is primarily undeveloped, open to public access, and designed to be highly accessible - attracting users of different ages, genders and cultural backgrounds. These may include parks, sports and recreational fields, public school grounds, greenways and trails connecting different areas of a region.⁽⁵⁹⁾ The presence of high-quality public open spaces have been found to strengthen a sense of community which is directly linked to outcomes around increased feelings of safety and security, active community participation, and civic engagement.⁽⁶⁰⁾ Natural environments, including green spaces like parks and botanical gardens, and blue spaces such as rivers and beaches, are associated with improved mental health and stronger community bonds.⁽⁶¹⁻⁶²⁾ High-quality green spaces and landscaped streets enhance social cohesion by fostering natural interactions among residents.⁽⁶³⁾ A cross-sectional study in Barcelona, Spain, found that people living in areas with higher residential green space to have stronger perceived social support and health.⁽⁶⁴⁾ Other research cites the role of natural environments in encouraging time spent outdoors and walkability - contributing to increased opportunities for social interaction and lower levels of perceived loneliness.⁽⁶⁵⁾

***Normal, Illinois:** Functioning primarily as a circle to address a challenging intersection, The Circle serves as a public open space for community members with a park, seating, and open plaza. It also includes a water feature where stormwater is cleansed providing both aesthetic and sustainable solutions. The Circle serves as a hub for community members where festivals are held, commuters stop for lunch, and children and families play in the park.*

***Cedar Rapids, Iowa:** Following a major flood, community members in Cedar Rapids, Iowa partnered with [Project for Public Spaces](#) to rebuild a major stretch of their downtown area through the creation of a new city market. NewBo City Market is open year round and offers residents access to an outdoor/indoor market, community events and activities, a commercial kitchen, and a central meeting place for local vendors.*

Build intergenerational and age-friendly communities

Leveraging universal design and accessibility in the creation and operation of community spaces ensures that everyone, regardless of age, health, or ability, can access and enjoy them - minimizing barriers to access and fostering intergenerational communities. Intergenerational communities place an emphasis on creating environments that support social interactions, cooperation, and collaborative exchange across generations through municipal planning, policy, and programming - also sometimes called age-friendly communities.⁽⁶⁸⁾ Research has found these communities to help reduce loneliness, strengthen empathy, foster social support, and build social cohesion for all ages by creating opportunities for meaningful social interactions and bridging differences across generations.⁽⁶⁹⁻⁷¹⁾ Similarly, another study found that conducting programs within community settings and utilizing existing community connections (e.g., schools, residential care facilities) demonstrated enhanced social health outcomes and increased social capital that leveraged staff trained in evidence-based practices that promote engagement and cooperation between different age groups.⁽⁷²⁾ In a report from Generations United, 92% of Americans believe that intergenerational communities can help reduce loneliness across all ages, yet only 26% (about one-quarter of the population) are aware of places in their communities that connect care and services across generations already.⁽⁷³⁾

Stakeholders can play a role in identifying existing programs, building awareness, and connecting their communities to intergenerational resources available. Generations United offers an [Intergenerational Program Certification](#) that annually recognizes programs across the county for their excellence in bridging generations. Programs are scored on their demonstration of innovation, use of best practices, and effectiveness in the communities they serve.

***Dunedin, Florida:** Initiatives such as the "My Favorite Older Person" essay contest and Intergenerational Week, among others, have become hallmarks of the city's commitment to bridging the generational divide. Named a top intergenerational community by Generations United, Dunedin exemplifies a true intergenerational community through meaningful initiatives aimed at strengthening social connections and fostering a sense of belonging among residents of all ages.*

***Jenks, Oklahoma:** Grace Living Center in Jenks, Oklahoma is co-located with Jenks Public Schools' West Elementary. Here, intergenerational learning is a part of every day - where children and residents of the living community engage in conversations, activities, and learning experiences. In this [vibrant intergenerational community](#), both children and residents alike benefit from shared interactions that foster social connection and belonging.*

***Rocky River, Ohio:** Libraries, like the Rocky River Public Library, are often community hubs that can play a role in building community through intergenerational programming. Art-based programming connects children and, soon, an intergenerational gaming program will pair young people with older adults for Esports competitions and activities.*



Related concept Green Social Prescribing

Green social prescribing combines interaction with natural environments with meaningful activity and social interaction. Studies exploring the use of community gardening social prescriptions have found improvements in social skills and a stronger sense of belonging.⁽⁶⁶⁻⁶⁷⁾



Policy Highlight Greener Parks for Health

The National Recreation and Park Association developed the [Greener Parks for Health Policy Action Framework](#) to support the creation of green infrastructure for improving health equity and community building.



Related Concept Intergenerational Volunteering

Intergenerational volunteering is a collaborative effort across different age groups on various projects or activities such as mentoring. Research has found that these initiatives can lead to increased social capital, shared purpose, and more social engagement for both the volunteer and the recipient.⁽⁷⁴⁾

Use and encourage shared community housing models

Safe, affordable, and accessible housing is an important social determinant of health and supports social connection through fostering stable and cohesive communities that enable social interactions, improve mental well-being, and allow residents to maintain healthier lifestyle.⁽⁷⁵⁾ While all housing models are important for social connection, shared community housing models go a step further by centering shared spaces and communal design. Cooperative housing is a living arrangement where residents become partial owners of a building or complex typically owned by a nonprofit corporation. Cohousing is a form of cooperative housing where private residences are centered around shared spaces.⁽⁷⁶⁾ These shared spaces may include kitchens, lending libraries, lounges, and more, and they support social bonds between neighbors.⁽⁷⁷⁾ Research notes the role of cohousing establishments in fostering higher levels of belonging, improved civic engagement, and increased social capital.⁽⁷⁸⁻⁷⁹⁾ Shared housing models support aging in place as they offer opportunities for individuals to remain in one place for a longer period of time - contributing to a stronger sense of community, connection, and neighborhood trust.⁽⁸⁰⁾ It is essential that cohousing models are designed well, with adequate space for residents to maintain adequate privacy, as well as social opportunities, and provisions to allow residents to personalize their homes to fit their identity⁽¹⁶⁾. Happy Cities and Hey Neighbour Collective, with Simon Fraser University's Department of Gerontology, are researching and creating design strategies to boost health, wellbeing, and social ties in multi-unit housing. Their report, [Building Social Connections](#) explores case studies of seven housing communities and their impact on residents.

[North Vancouver, Canada](#): Driftwood Village is an innovative housing model inspired by the City of North Vancouver's Active Design Guidelines. The housing model leverages shared common areas, co-located amenities, and "social nooks" where residents can organically meet and connect. Residents use Slack channels to coordinate meals, decorate common spaces, and plan social events, and older neighbors support parents with younger children by signing up for after-school childcare shifts.

[Wisconsin, USA](#): A housing community in rural Wisconsin transitioned to a cooperative ownership model that provided residents the opportunity to directly influence and control the management of their community for the very first time. Facilitated by the Northcountry Cooperative Foundation, this cooperative model uses community-led decision-making to foster a more equitable and stable living environment and provide leadership and training to residents.

Increase access to affordable, reliable public transportation

Expanding access to public transportation is more than a mobility issue—it's a gateway to enhancing social connections and mental well-being. Researchers have highlighted its role in reducing isolation and improving social engagement, particularly for the rural and older adult populations who may face barriers to driving or lack alternative transportation means.⁽⁸²⁻⁸⁴⁾ Increased access to safe, reliable public transportation can improve opportunities for social connection and recreation, build social capital, and increase social ties.⁽⁸⁵⁻⁸⁶⁾

A study exploring public transit across New York City found that public transit can facilitate the development and preservation of social connections among people who live in different areas of the same city.⁽⁸⁵⁾ Another study in rural Minnesota, noted the role of public transit in reducing isolation for disadvantaged groups by improving their access to necessary services and activities.⁽⁸⁶⁾ Ensuring that community members have access to regular and reliable public transportation can enhance satisfaction and usage rates.⁽⁸⁷⁾ Relatedly, prioritizing public transportation in budgets maintains quality, reliability, and supports expansion and enhancement efforts.⁽⁸⁸⁾

[St. Johns County, Florida](#): Operated by the county's Council on Aging, the Sunshine Bus provides nine routes for county-wide navigation and connections to neighboring counties. It provides door-to-door service for residents with mobility needs and welcomes all residents to use, offering discounted fares for older adults, people with disabilities, Medicaid recipients, and students.

[Atlanta, Georgia](#): Supported by a Community Placemaking grant, the city is working to transform the North Avenue MARTA station plaza in Atlanta's Midtown district into a vibrant community space. Serving the 15,000 daily transit riders and local residents, this project will encourage public transit use, address the lack of public parks, and create a space where art, performances, and more will be a backdrop to gathering and connection.



Related concept: **Active Design**

Active Design leverages architecture and urban planning to create buildings that naturally encourage daily exercise and foster social interactions. In 2015, the City of North Vancouver introduced Active Design Guidelines to enhance multi-unit housing designs which are currently being evaluated for translation into broader policy recommendations.⁽⁸¹⁾

Policy Highlight **Housing Policy Reform**

Enact comprehensive housing policy reforms that prioritize the development of safe, affordable, and accessible housing models to address housing shortages and foster social inclusion



Related Concept **Transit-Oriented Development (TOD)**

Transit-oriented design (TOD) is a way to build communities that make it easy for people to get around without needing a car, by centering transit stations. Research shows that when paired with placemaking, transit hubs can become vibrant elements of the community, fostering social cohesion and sense of place among residents.⁽⁸⁹⁻⁹⁰⁾

Policy Highlight **Non-Medical Transportation Benefits**

Increase insurance coverage of non-medical transportation benefits

Policy Highlight **Volunteer Drivers**

Adopt policies that provide legal protections, insurance coverage, and tax incentives to encourage and sustain volunteer participation in community transportation initiatives.

Activate streets as places for connection through the creation of complete and open streets initiatives

Streets are multifunctional public spaces that, when designed and utilized thoughtfully, can transform into vibrant hubs for community and connection through a variety of strategies. For example, streets can be a temporary home for street events such as festivals, parades, cultural performances, and markets. Additionally, Play Streets convert designated areas into traffic-free zones for safe children's play, while Block Parties, often organized by communities, use street spaces for social events with music, games, and meals - extending streets as a communal living room. Many of these initiatives overlap with the concept of open streets.

Open streets, also known as Ciclovía, is a concept that temporarily closes streets to motor vehicle traffic and opens them up for recreational activities (e.g., walking, cycling) and community-based programming (e.g. markets, festivals).⁽⁹¹⁾ Evidence points to their success in helping residents to feel more connected to their neighbors by fostering social cohesion, increasing opportunities for social interaction, and improving trust and neighborhood safety.⁽⁹²⁻⁹⁴⁾ Giving streets an "inside-outside" quality where indoor activities spill onto the street (e.g., art displays, cafe seating) and implementing features such as street markets, outdoor retail, and pedestrian-friendly activities enhances public engagement, ensures accessibility, and creates a lively environment that fosters social interaction and community connection.⁽⁹⁵⁾ Beyond streets are sidewalks, parking lots, and alleyways - all opportunities to facilitate connection. Gil Peñalosa refers to sidewalks as family members of parks - a space that can host a variety of activities from socializing, exercising, and play, to dancing relaxation, and civic activity.⁽⁹⁶⁾ Libraries and restaurants are examples of organizations that frequently use sidewalks and alleyways or parking spots for dining, interactive displays, and community events. 880 Cities published the [Open Streets Trends and Opportunities Policy Brief](#) that provides key data and strategies for making the case for Open Streets that can be shared with officials or used to enhance stakeholder understanding of global Open Streets initiatives.

Another example of how streets can be activated as places for connection is through the creation of complete streets. Complete Streets is a method for creating streets that are safe and accessible for everyone by focusing on serving groups historically overlooked or underserved by traditional transportation planning, including older adults, individuals with disabilities, those without cars, and communities of color.⁽⁹⁷⁾ They transform auto-centric spaces into shared spaces for multiple modes of transportation and mobility. Increasing walkability can lead to more social interaction and in turn support strengthened trust in the community, community participation, and civic engagement.⁽⁹⁸⁾ Research has cited the many benefits of complete streets, especially for vulnerable populations, including improved safety, increased social interactions, and strengthened social cohesion.⁽⁹⁹⁻¹⁰⁰⁾ [The Best Complete Streets Policies Report](#), published by Smart Growth America, highlights the strongest complete street policies across the U.S. each year. Stories of success highlight case studies from urban to rural communities and a complete streets policy evaluation tool is available to help community leaders evaluate their own.

[El Paso, Texas](#): Through collaborative partnerships with key stakeholders across multiple sectors, El Paso sought to support walkability, livability, and sustainability by becoming the least car-dependent city in the Southwest. The coalition focused on developing a policy that would support proactive land-use planning and focus on underinvested communities. With a top-scoring complete streets policy being unanimously adopted in 2023, the city is now focusing on translating the policy into action through various projects co-created with the communities they seek to serve. El Paso, TX demonstrates a top-scoring complete streets policy using the [Complete Streets Policy Framework](#) from Smart Growth America.

[Wetumpka, Alabama](#): Following decades of deterioration in response to a destructive tornado, Wetumpka came together as a community to foster a pedestrian-friendly environment and support small businesses. Through an intentional placemaking initiative, they created more engaging, pedestrian-friendly streets, a community space, expanded social gathering opportunities, a stronger sense of social cohesion and public space ownership, and increased public trust through community engagement.

[Atlanta, Georgia](#): Atlanta Streets Alive is a monthly open street presented in partnership with the Atlanta Department of Transportation. Each month, city streets are transformed into public parks for biking, walking, skating, dancing, and playing, fostering a connection among community members.

[Philadelphia, Pennsylvania](#): Each year, the city of Philadelphia closes 50 streets to traffic so children can play. In partnership with local organizations and nonprofits, sports equipment, arts-based activities, and more are facilitated as these streets are transformed into playful spaces for community members of all ages. Some of these streets get designated as "Streets of Wonder" where play-based learning activities are facilitated by Free Library of Philadelphia and Fab Youth Philly. Beyond creating spaces for community connection, the program has also provided meal distribution to address gaps in summer meals for youth and families.



Related Concept **Placemaking**

Placemaking is a collaborative process that reimagines public spaces to boost community engagement and connection.⁽¹⁰¹⁾ This approach often integrates art and cultural elements of the community and cultivates a sense of belonging, community ownership, social connection, and sense of place.⁽¹⁰²⁾

Policy Highlight **Enhanced Federal Match Incentives**

Provide an enhanced federal match for the U.S. Department of Transportation (DOT) projects that incorporate elements of accessible community placemaking such as: traffic calming, walkable areas, recreational facilities, public arts installations, and public gathering spaces

Reform local zoning codes and policies to allow for shared- or mixed-use, walkable neighborhoods

Mixed-use development is a way to develop communities that integrate residential, commercial, and sometimes industrial spaces within a single area to create a community where people can live, work, and recreate all in one place.⁽¹⁰³⁾ Research has demonstrated that the more varied the uses of land, the more social capital increases. Diverse land use boosts social cohesion by making areas more varied and walkable, which encourages meaningful connections while higher physical and social density can decrease cohesion due to more anonymity and less meaningful interactions.⁽¹⁰⁴⁾ Studies show that neighborhoods with a mix of walking-friendly areas, unlike areas that are auto-dependent, help people interact more and build stronger community trust by encouraging the use of shared spaces.⁽¹⁰⁵⁻¹⁰⁶⁾ It is important to note that this may not always be possible in certain geographical areas. In rural areas, lower population density and greater distances between destinations may encourage more of a reliance on automobiles. Adaptations to mixed-use development could include focusing development on the creation of village centers that incorporate residential, commercial, and community facilities in a compact area and improve walkability.⁽¹⁰⁷⁾ It is also important to consider affordability and accessibility, which may come as a trade-off with mixed-use development. Some studies have found job accessibility and housing costs to be positively impacted by mixed-use development, while rental costs were found to be negatively impacted, resulting in reduced accessibility to affordable housing.⁽¹⁰⁸⁾ However, another study highlighted that with effective policy measures, mixed-land use can be effective and still maintain access to affordable housing.⁽¹⁰⁹⁾

[Jersey City, New Jersey](#): The Jersey City Planning Board voted to begin the Bayfront Redevelopment Project - a mixed-use development project bringing 210 residential units, including 35% designated as affordable housing, and almost 10,000 square feet of community space including a community lounge and kitchen, co-working spaces, recreational green spaces and more.

[Wheeling, Virginia](#): Officials took an innovative approach to transforming historic buildings into mixed-use spaces to increase the density of small businesses and housing to foster a more vibrant community life while tackling broader issues like enhancing broadband, improving food access, and being more social cohesion.

Expand accessibility, reliability, and affordability for broadband connectivity

Broadband internet access has increasingly been recognized as essential infrastructure due to its role in facilitating communication, access to essential services (e.g., education, healthcare), and participation in a growing digital world. Broadband access has emerged as a pivotal determinant of social health, and addresses long-standing accessibility issues. At least 19 million Americans are without basic internet access and this digital divide is even more pronounced in rural, tribal, and low-income communities.⁽⁴⁰⁾ Digital connectivity provides critical access to health services along with civic engagement, employment, and social opportunities (e.g. support groups, social networking, virtual group events).⁽¹¹⁰⁾ Research exploring internet use among older adults has found broadband connectivity to increase communication and social connections with family and friends, and reduce social isolation for homebound individuals.⁽¹¹¹⁾ Other researchers have noted the role of broadband connectivity in fostering social support and increasing connectivity with a broader social network.⁽¹¹²⁾ Studies show that increased access to broadband services in under resourced communities led to increased interaction with neighbors and third places (e.g., libraries, community centers).⁽¹¹³⁾ Similarly, another study highlighted the role of internet access in helping individuals feel more connected by enabling them to maintain contact with others more frequently.⁽¹¹²⁾ Additionally, for groups that have historically faced marginalization and are at risk of social isolation, the internet provides an opportunity to connect with others anonymously.⁽¹¹⁵⁾ In order for broadband expansion initiatives to work well, community members need access to affordable, reliable broadband and the devices with which to use it. This includes the skills needed to meaningfully use it and the provision of ongoing support and education to ensure everyone can navigate and benefit from digital technologies effectively. [The FCC Lifeline program](#) offers resources, tools, and support to help address gaps in access.

It is also important to note, however, that some patterns of internet use can lead to lower-quality interactions and heightened feelings of isolation. As noted in our [Action Guide for Building Socially Connected Communities](#), more community-level strategies must be developed and evaluated to ensure increased access to broadband creates more benefits than harm and for which age groups.

[Chicago, Illinois](#): Chicago Connected provides free high-speed internet to about 100,000 public school students and their families. It addresses critical needs on the city's South and West Sides, prioritizing low-income families and those facing hardships by ensuring students and their families can stay connected, reduce social isolation, and access critical services. Additionally, the city's [Broadband Challenge](#) is bringing free wifi to all public open spaces and parks, beginning with Millennium Park, a central community hub, to decrease the digital divide.

[Ames, Iowa](#): A comprehensive deployment of wireless infrastructure across various locations, including academic buildings and farms aims to enable a "Broadband Prairie" that connects rural residents, farms, schools and communities.



Related Concept Zoning Codes

Zoning codes are the process by which municipalities and/or cities divide and allocate space for different use types. This can help to separate incompatible uses, such as a children's school from a toxic industrial use, but over time, many have shown the benefits of blurring other types of uses such as housing, retail, and commercial into what is often referred to as mixed-use.



Related Concept Digital Equity Planning

Digital equity ensures that all individuals and communities have access to the necessary technology to fully engage in society - essential for civic involvement and accessing essential services.⁽¹¹⁶⁾ By improving connectivity, digital equity strengthens civic engagement, enabling people to more actively participate in their communities and democratic processes - particularly important for marginalized populations who might otherwise encounter obstacles due to restricted access.⁽¹¹⁷⁾

Policy Highlight Broadband Expansion

Increase FCC funding, improve collaboration amongst federal agencies to create a cross-agency plan to maximize joint use of broadband and technology affordability programs with braided funding and coordinated enrollment



Making it Happen: How to Implement Strategies Effectively

The following section explores the “how” behind effectively implementing strategies for advancing social connection within the built environment. When designing and implementing strategies it is important to reflect on how you do it, in addition to what you do. This means considering ways to elevate diverse perspectives through collective impact strategies and exploring ways to solve multiple issues with solutions.

The Power of Collective Impact

Collective Impact is a collaborative strategy designed to address complex issues by bringing together diverse stakeholders through a structured approach to seek change.⁽¹¹⁸⁾ By uniting community leaders, planners, architects, and residents in a common purpose, collective impact can foster innovative designs and inclusive spaces where social connection can flourish.

Multi-Solving Solutions

Multi-solving is an approach to addressing multiple issues or achieving various objectives at once with a single solution.⁽¹¹⁹⁾ It requires an expanded view of the larger picture in order to implement solutions that support everyone.

The following strategies touch all levels of influence and require a call to action around a shared vision for more socially connected communities. These strategies can contextualize the strategies shared prior and begin to connect the dots across multiple areas of impact.

Seek solutions for enhancing the built environment in partnership with community members

While placemaking can be helpful and important in revitalizing an area, it is also often associated with gentrification and displacement of the existing people, culture, memories, and buildings. Placekeeping however, is about “the active care and maintenance of a place and its social fabric by the people who live and work there.”⁽¹²⁰⁾ By partnering with and empowering the existing community members, we can help to preserve not just the buildings, but keep cultural memories associated with a locale, and support the ability for existing residents to choose to maintain their way of life if they choose.

When discussing the design and creation of spaces, we are referring to the spaces where people have lived for decades and where historical recollections have developed over centuries - a body of knowledge and lived experience that should be considered when shaping the built environment.⁽¹²¹⁾ Participatory design, or co-creation, is a process where end users of an experience are involved in design processes to ensure the needs of intersecting lived experiences are met. When design is treated as a process that includes everyone, it leads to solutions that are shaped by the people who are actually facing the problems and drives social equity in the built environment.⁽¹²²⁾

- [Rancho Cucamonga, California](#): Healthy Rancho Cucamonga (Healthy RC) initiated a transformative journey to improve community health and well-being, driven by the community. Through a collaborative approach, extensive community engagement, and ongoing efforts to revitalize Rancho Cucamonga, the community is banning together to change policies and programs along with implementing initiatives such as safer streets, sidewalk audits, and beautification projects throughout the built environment.
- [Ajo, Arizona](#): In Ajo, Arizona, the community has embraced "creative placemaking" to honor its history and revitalize its space. Partnering with the International Sonoran Desert Alliance, a group of community members organized a mural fest where muralists from all over the world came to transform alleyways and other historical buildings and celebrate Ajo's cultural history.

Invest in neighborhood associations that are led by residents and community members

Studies show that neighborhood associations play a crucial role in fostering social connection, strengthening social cohesion, increasing civic engagement, and building the social networks of community members.⁽¹²³⁻¹²⁵⁾ In a study focused on a community garden neighborhood association, researchers found residents who participated regularly in meetings were more familiar with their neighbors compared to non-participants.⁽¹²⁵⁾ An additional advantage, particularly for renters as opposed to homeowners, includes a boost in trust towards racial minorities and enhanced cooperation among community members.⁽¹²⁶⁾

- [Winnemucca, Nevada](#): A volunteer-led program, now supported by the mayor and local officials, was created to transform Winnemucca into an "Age-Friendly" and "Dementia-Friendly" community. Community volunteers developed and implemented an action plan around enhancing outdoor spaces, improving transportation and housing affordability, increasing civic participation, and organizing social events.
- [San Jose, California](#): The Strong Neighborhoods Initiatives enabled residents across 19 communities to suggest and prioritize improvement projects. Forming the Neighborhood Council, which has become a permanent part of the city's decision-making process, has fostered a new generation of community leaders that drive active community participation despite challenges with funding.
- [New York City, New York](#): Founded by a local resident, The 34th Avenue Open Street Coalition in Jackson Heights, New York, has transformed 30 blocks into a permanent communal space that functions as a linear park. This area hosts a variety of community events, significantly enhancing social interaction and community among one of the world's most diverse populations.
- [Minneapolis, Minnesota](#): Minneapolis allocates city funds to support neighborhood associations throughout the city and has recently restructured its funding distribution to emphasize equity. Additionally, the city offers the "Equitable Engagement Fund," which neighborhood associations can access by showing how their activities will focus on engaging underserved communities. In a recent [report](#), they discuss the history and impact of neighborhood funding using a racial equity lens and provide guidance to neighborhoods.



Stakeholder Action Host a Community Listening Session

Use the [Action Guide for Socially Connected Communities](#) to facilitate community listening sessions to discuss the current state of social connection within the built environment, identify opportunities, and brainstorm solutions.



Stakeholder Action Create and Support Volunteer Groups

Research shows volunteering can improve social connection and reduce feelings of social isolation and loneliness - not only for the individuals receiving services, but also the volunteers themselves.⁽¹²⁷⁻¹²⁹⁾

Facilitate cross-boundary collaboration, partnership, and investments

Cross-sector collaboration is important to drive long-lasting, systemic change for housing, transportation, and public spaces. This also includes cross-boundary partnerships across county, city, and state lines. These partnerships expand on the sharing of best practices, resources, and solutions to combat social isolation and can lead to the development of scalable and adaptable models that address the unique needs of diverse communities and leverage diverse perspectives to tackle multifaceted issues.⁽¹³⁰⁾ For example, urban-rural partnerships can provide insights into how different environments influence social connectivity and how interventions can be tailored to suit different demographic and geographic contexts. Similarly, collaboration between public transit authorities and housing developers can prioritize transit-oriented development while state and municipal collaboration can be effective in streamlining resources and policies across different governance levels.

- [Massachusetts, USA](#): AARP State President, Sandra Harris and Dr. Caitlin Coyle of UMass Boston Gerontology came together to advance social connection across the state of Massachusetts. They convened a taskforce of community leaders, nonprofit organizations, and policymakers to develop strategies for enhancing social connections. Four years later, the 40-member Taskforce not only facilitates cross-boundary collaboration between local and state leaders, it also promotes public awareness of social health and pilots new methods to combat loneliness and isolation for all ages.
- [Ohio](#): USDA-funded Extension programs are effectively enhancing connections between rural and urban areas. As part of a project at Ohio State University, aimed at bridging urban and rural divides, the program has explored economic flows, cultural diversity, and environmental challenges across the urban-rural continuum. It highlights the dynamic interactions between urban and rural areas, emphasizing the need for comprehensive approaches to development that recognize these complex relationships.
- [United States](#): The Safe Routes to Parks initiative, a coordinated effort between the National Recreation and Parks Association and the Safe Routes to School National Partnership, with support from the Centers for Disease Control and Prevention (CDC), is a community-driven effort aimed at ensuring community members have equitable access to local parks and green spaces. Cross-sectoral collaboration between local governments, health departments, urban planners, and more is vital to developing comprehensive strategies enhancing walkability, pedestrian infrastructure, and their connection to third places.

Implement certification programs and provide technical assistance and resources to support the evaluation of innovative, impactful, and sustainable use of space

Although today no single program fully addresses the design of the built environment for social connection, a few touch on parts of this. The WELL Building Standard, an evidence-based certification to support the health and well-being of people and organizations, includes factors related to community connectivity and interaction.⁽¹³¹⁾

Beyond offering and leveraging certifications, stakeholders can also share resources and best practices, provide technical assistance, or support other stakeholders in optimizing spaces for social connection. [AARP Livable Communities](#) provides resources for people looking to leverage the built environment, and its partners in planning, programming, policy and technology to create places where people are able to live (and age) well, a major part of that includes in their social connections.

- [Maine](#): A \$2.5 million initiative to support older adults and caregivers, through the development of a statewide program that connects them to local aging resources, was announced in collaboration with various state and local agencies and the University of Maine Center on Aging. This initiative will provide training to community navigators who will help residents access necessary services and resources and aims to foster stronger community ties by providing technical assistance and financial support to enhance service accessibility and social opportunities for Maine's aging population.
- [Jacksonville, Florida](#): The AARP provides a range of resources, tools, and examples to help anyone design more livable connected communities including for people with special needs, often left out of larger conversations on social connection. The Arc, in Jacksonville, Florida, one of the first communities of its kind, aims to provide livable, more connected communities for adults with intellectual and developmental disabilities (I/DD). This parent-led housing model became a blueprint for others in creating safe, inclusive, and supportive environments.



Stakeholder Action Host a Social Connection Workshop

Use the [Action Guide for Socially Connected Communities](#) to facilitate a social connection workshop - bringing together diverse stakeholders to work toward common goals and shared interests. Map resources to identify opportunities to build off one another's assets and strategically align efforts.



Stakeholder Action Use Data to Drive Action

The [Sharecare Community Well-Being Index](#) is a comprehensive tool, using 600+ health risk factors (including social factors) to evaluate the well-being of communities. Tools like this can be helpful to organizations and communities to use data-driven approaches to improve well-being and social connection outcomes.

Conclusion

Research has affirmed the critical role that social connection plays in leading healthier, fuller lives and preventing and combating numerous physical, mental, and social health risks.⁽²⁵⁾ Social connection is also vital for our communities. Research has found that people who live in socially connected communities are more likely to feel a sense of belonging and collaborate to help their neighbors.⁽¹³²⁾ Additionally, community members that feel a strong sense of belonging in their community are 2.6 times more likely to report being in very good health and 3.2 times more likely to report having very good mental health than people without this sense of belonging.^(133; 105) As explored in this report, the built environment is more than just a background to our day-to-day - it is a key player in fostering vibrant, socially connected communities. Intentional design, placemaking, and reimagining places and spaces beyond their primary function bring people together and breathe life into the community. A well-designed built environment can foster social connection, promote a sense of belonging, and promote civic engagement while poorly designed spaces hinder social cohesion and exacerbate social isolation. We all can prioritize the creation and facilitation of public spaces that meet the physical needs of the community and nurture its unique social fabric. The built environment is not just about building and infrastructure - it is about designing the settings for life's most meaningful connections. Strategies focused on promoting and strengthening social connection and reducing SIL throughout the built environment hold tremendous promise in building environments that connect. Researchers, architects, city/ regional planners, community leaders, and other stakeholders have worked hard to pioneer evidence-based solutions and forge a path toward a more socially connected future. While this evidence demonstrates significant promise, the gaps within the research and the limited scope of some evidence-based programs also suggest untapped opportunities to accelerate progress.

SOCIAL Framework in Action

We hope that the SOCIAL Framework and this report on the Built Environment serve as helpful resources for the existing evidence, approaches, and policies and that they spark ideas for new evidence-based approaches, policies, and future areas of investigation. We would love to learn about how you may take action based on the information reviewed in this report. Please share more by completing this brief form.

[Provide Feedback](#)



References

1. Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. *Perspect Psychol Sci*. 2015;10(2):227-237. doi:10.1177/1745691614568352
2. Pinquart M, Duberstein PR. Associations of social networks with cancer mortality: A meta-analysis. *Crit Rev Oncol Hematol*. 2010;75(2):122-137. doi:10.1016/j.critrevonc.2009.06.003
3. Holt-Lunstad J, Smith TB, Layton JB. Social Relationships and Mortality Risk: A Meta-analytic Review. *Brayne C, ed. PLoS Med*. 2010;7(7):e1000316. doi:10.1371/journal.pmed.1000316
4. Zalta AK, Tirone V, Orłowska D, et al. Examining moderators of the relationship between social support and self-reported PTSD symptoms: A meta-analysis. *Psychol Bull*. 2021;147(1):33-54. doi:10.1037/bul0000316
5. Lyra TM, Heikkinen RL. Perceived Social Support and Mortality in Older People. *J Gerontol B Psychol Sci Soc Sci*. 2006;61(3):S147-S152. doi:10.1093/geronb/61.3.S147
6. Holt-Lunstad J. Social Connection as a Public Health Issue: The Evidence and a Systemic Framework for Prioritizing the "Social" in Social Determinants of Health. *Annu Rev Public Health*. 2022;43(1):193-213. doi:10.1146/annurev-publhealth-052020-110732
7. As stated in Holt-Lunstad (2018), the socio-ecological model underpinning the SOCIAL Framework has "a hierarchy of levels of influence" that shape our social relationships. The hierarchy's depiction as concentric circles reflects how the levels shape one another from both the top-down and bottom-up, thereby highlighting the need to address social connection at every level ^(1, 8)
8. Holt-Lunstad J. Why Social Relationships Are Important for Physical Health: A Systems Approach to Understanding and Modifying Risk and Protection. *Annu Rev Psychol*. 2018;69(1):437-458. doi:10.1146/annurev-psych-122216-011902
9. CDC. Health in All Policies. Office of the Associate Director for Policy and Strategy. Published June 18, 2019. Accessed January 31, 2023. <https://www.cdc.gov/policy/hiap/index.html>
10. CDC. The Social-Ecological Model: A Framework for Prevention. Centers for Disease Control and Prevention. Published January 18, 2022. Accessed January 31, 2023. <https://www.cdc.gov/violenceprevention/about/social-ecologicalmodel.html>
11. Basic Information about the Built Environment | US EPA. (2024, February 8). US EPA. <https://www.epa.gov/smm/basic-information-about-built-environment>
12. Oldenburg, Ray (2000). *Celebrating the Third Place: Inspiring Stories about the "Great Good Places" at the Heart of Our Communities*. New York: Marlowe & Company. ISBN 978-1-56924-612-2
13. Physical Infrastructure | PHCPI. (n.d.). <https://www.improvingphc.org/improvement-strategies/inputs/physical-infrastructure>
14. Latham, A., & Layton, J. (2019). Social infrastructure and the public life of cities: Studying urban sociality and public spaces. *Geography Compass*, 13(7). <https://doi.org/10.1111/gec3.12444>
15. Klinenberg, E. (2021, August 16). Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and The Decline of Civic Life by Eric Klinenberg. The OECD Forum Network. <https://www.oecd-forum.org/posts/palaces-for-the-people-how-social-infrastructure-can-help-fight-inequality-polarization-and-the-decline-of-civic-life-by-eric-klinenberg>
16. Bower, M., Kent, J. L., Patulny, R., Green, O., McGrath, L., Teesson, L., Jamalshahni, T., Sandison, H., & Rugel, E. J. (2023). The impact of the built environment on loneliness: A systematic review and narrative synthesis. *Health & Place*, 79, 102962. <https://doi.org/10.1016/j.healthplace.2022.102962>
17. Riess H. The Science of Empathy. *Journal of Patient Experience*. 2017;4(2):74-77.
18. Hu T, Zheng X, Huang M. Absence and Presence of Human Interaction: The Relationship Between Loneliness and Empathy. *Frontiers in Psychology*. 2020;11.
19. Putnam RD. Bowling Alone: America's Declining Social Capital. In: Crothers L, Lockhart C, eds. *Culture and Politics: A Reader*. New York: Palgrave Macmillan US; 2000:223-234.
20. Hunt V, Layton, D., Prince, S., Why diversity matters. McKinsey&Company; 2015.
21. Hyypä M. Healthy ties: Social capital, population health and survival. 2010.
22. Cabrera, J. F., & Najarian, J. C. (2015). How the built environment shapes spatial bridging ties and social capital. *Environment and Behavior*, 47(3), 239-267. <https://doi.org/10.1177/0013916513500275>
23. Ali, T. (2018, November 21). Diversity of social relationships is just as important as quantity in staying healthy as we age. Copyright 2022 the Regents of the University of Michigan. <https://sph.umich.edu/pursuit/2018posts/social-relationship-diversity-important-in-aging-112118.html>
24. Allen, K., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: a review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87-102. <https://doi.org/10.1080/00049530.2021.1883409>
25. United States. Public Health Service. Office of the Surgeon General.: (2023, May) *Our Epidemic of Loneliness and Isolation: The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community*

References

26. Peavey, E. (2020). Connecting IRL: The antidote to loneliness. HKS, Inc.
27. National Academies of Sciences Engineering and Medicine (NASEM). Enhancing Community Resilience through Social Capital and Connectedness: Stronger Together! Washington, DC: The National Academies Press; 2021.
28. Office of the Assistant Secretary for Preparedness and Response. Community Resilience. U.S. Department of Health and Human Services. <https://www.phe.gov/Preparedness/planning/abc/Pages/community-resilience.aspx>. Published 2015.
29. Foundation for Social Connection. (2023). Action Guide for Connection. <https://action4connection.org/>
30. Behavioral, C. B. O., & Adults, L. I. O. (2020). Social isolation and loneliness in older adults. In National Academies Press eBooks. <https://doi.org/10.17226/25663>
31. Ewing, R., & Cervero, R. (2010). Travel and the Built Environment. *Journal of the American Planning Association*, 76(3), 265–294. <https://doi-org.ezproxy.snhu.edu/10.1080/01944361003766766>
32. Peavey, E. (2021, July 5). Is Your Environment Making You Lonely? *Psychology Today*. <https://www.psychologytoday.com/us/blog/designed-happiness/202105/is-your-environment-making-you-lonely>
33. Wang, P., Liu, K., Wang, D., & Fu, Y. (2021). Measuring urban vibrancy of residential communities using big crowdsourced geotagged data. *Frontiers in Big Data*, 4. <https://doi.org/10.3389/fdata.2021.690970>
34. Bahadure, S., & Kotharkar, R. (2012, June). Social sustainability and mixed land use. In *Proceedings of International Conference on Advances in Architecture and Civil Engineering (AARCV 2012) (Vol. 21, p. 725)*.
35. Carson, J. J. K., Conway, T. L., Perez, L. G., Frank, L. D., Saelens, B. E., Cain, K. L., & Sallis, J. F. (2023). Neighborhood walkability, neighborhood social health, and self-selection among U.S. adults. *Health & Place*, 82, 103036. <https://doi.org/10.1016/j.healthplace.2023.103036>
36. LeVan, C. A. (2016). Neighborhoods that Matter: How Place and People Affect Political Participation.
37. Sarah B. Schindler, *Architectural Exclusion: Discrimination and Segregation through Physical Design of the Built Environment*, 124 *Yale L. J.*1934 (2015). Available at: <http://digitalcommons.maine.gov/faculty-publications/8>
38. Rothstein, R. (2012, December 17). Race and public housing: Revisiting the federal role. Retrieved from www.epi.org/publication/race-publichousing-revisiting-federal-role/
39. Zallio, M., & Clarkson, P. J. (2021). Inclusion, diversity, equity and accessibility in the built environment: A study of architectural design practice. *Building and Environment*, 206, 108352. <https://doi.org/10.1016/j.buildenv.2021.108352>
40. Socially Connected Communities: Solutions for social isolation. (2021, March 4). Healthy Places by Design. <https://healthyplacesbydesign.org/socially-connected-communities-solutions-for-social-isolation/>
41. Geller, A. B., Polsky, D. E., & Burke, S. P. (2023, July 27). Neighborhood and built environment. *Federal Policy to Advance Racial, Ethnic, and Tribal Health Equity - NCBI Bookshelf*. <https://www.ncbi.nlm.nih.gov/books/NBK596398/>
42. Canfield, C. F., O'Connell, L., Sadler, R. C., Gutiérrez, J., Williams, S., & Mendelsohn, A. L. (2022). Not built for families: Associations between neighborhood disinvestment and reduced parental cognitive stimulation. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.933245>
43. McGrath, L., Hopkins, W. G., & Hinckson, E. (2015). Associations of Objectively Measured Built-Environment Attributes with Youth Moderate–Vigorous Physical Activity: A Systematic Review and Meta-Analysis. *Sports Medicine*, 45(6), 841–865. <https://doi.org/10.1007/s40279-015-0301-3>
44. Grow, H. M., Saelens, B. E., Kerr, J., Durant, N., Norman, G. J., & Sallis, J. F. (2008). Where are youth active? Roles of proximity, active transport, and built environment. *Medicine and Science in Sports and Exercise*, 40(12), 2071–2079. <https://doi.org/10.1249/mss.0b013e3181817baa>
45. Zheng, Z., Liu, W., Lu, Y., Sun, N., Chu, Y., & Chen, H. (2022). The influence mechanism of community-built environment on the health of older adults: from the perspective of low-income groups. *BMC Geriatrics*, 22(1). <https://doi.org/10.1186/s12877-022-03278-y>
46. 46 becomes: About Universal Design - Centre for Excellence in Universal Design. (n.d.). Centre for Excellence in Universal Design. <https://universaldesign.ie/about-universal-design>
47. Cortellesi, G., & Kernan, M. (2016). Together Old and Young: How Informal Contact between Young Children and Older People Can Lead to Intergenerational Solidarity. *Studia Paedagogica*, 21(2), 101–116. <https://doi.org/10.5817/sp2016-2-7>
48. Qi, J., Mazumdar, S., & Vasconcelos, A. C. (2024). Understanding the Relationship between Urban Public Space and Social Cohesion: A Systematic Review. *International Journal of Community Well-Being*. <https://doi.org/10.1007/s42413-024-00204-5>
49. Aelbrecht, Patricia & Stevens, Quentin. (2018). Public Space Design and Social Cohesion: An International Comparison.
50. Nugrahaini, F. T., Azizah, R., Muhtadi, M., & Rosyid, I. R. (2023). Multifunctional open space facilities planning in a rural area. *Civil Engineering and Architecture*, 11(5A), 2877–2885. <https://doi.org/10.13189/cea.2023.110803>

References

51. Hall, E. T. (1963). *The Silent Language*. Garden City, NY: Doubleday.
52. Glover, T. D., & Parry, D. C. (2009). A third place in the everyday lives of people living with cancer: functions of Gilda's Club of Greater Toronto. *Health & place*, 15(1), 97–106. <https://doi.org/10.1016/j.healthplace.2008.02.007>
53. Oldenburg, R. (1999). *The great good place*. [https://en.wikipedia.org/wiki/The_Great_Good_Place_\(book\)](https://en.wikipedia.org/wiki/The_Great_Good_Place_(book))
54. Bagnall, A and South, J and Di Martino, S and Southby, K and Pilkington, G and Mitchell, B and Pennington, A and Corcoran, R (2018) A systematic review of interventions to boost social relations through improvements in community infrastructure (places and spaces). Technical Report. What Works Centre for Wellbeing.
55. Banwell, K., & Kingham, S. (2023). Living well in your local neighbourhood: The value of bumping and gathering places. *Wellbeing, Space and Society*, 4, 100124. <https://doi.org/10.1016/j.wss.2022.100124>
56. Ottoni, C. A., Sims-Gould, J., Winters, M., Heijnen, M., & McKay, H. (2016). “Benches become like porches”: Built and social environment influences on older adults’ experiences of mobility and well-being. *Social Science & Medicine*, 169, 33–41. <https://doi.org/10.1016/j.socscimed.2016.08.044>
57. Sørensen, K. M. (2021). Where’s the value? The worth of public libraries: A systematic review of findings, methods and research gaps. *Library & Information Science Research*, 43(1), 101067. <https://doi.org/10.1016/j.lisr.2020.101067>
58. Samsuddin, S. F., Shaffril, H. a. M., & Fauzi, A. (2020). Heigh-ho, heigh-ho, to the rural libraries we go! - a systematic literature review. *Library & Information Science Research*, 42(1), 100997. <https://doi.org/10.1016/j.lisr.2019.100997>
59. Francis, J., Wood, L., Knuiman, M., & Giles-Corti, B. (2012). Quality or quantity? Exploring the relationship between Public Open Space attributes and mental health in Perth, Western Australia. *Social Science & Medicine*, 74(10), 1570–1577. <https://doi.org/10.1016/j.socscimed.2012.01.032>
60. Francis, J., Giles-Corti, B., Wood, L., & Knuiman, M. (2012). Creating sense of community: The role of public space. *Journal of Environmental Psychology*, 32(4), 401–409. <https://doi.org/10.1016/j.jenvp.2012.07.002>
61. White, M. P., Elliott, L. R., Grellier, J., Economou, T., Bell, S., Bratman, G. N., Cirach, M., Gascón, M., Lima, M. L., Löhmus, M., Nieuwenhuijsen, M., Ojala, A., Roiko, A., Schultz, P. W., Van Den Bosch, M., & Fleming, L. E. (2021). Associations between green/blue spaces and mental health across 18 countries. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-87675-0>
62. Wang, X., Ouyang, L., Lin, J., An, P., Wang, W., Liu, L., & Wu, L. (2023). Spatial Patterns of Urban Green-Blue Spaces and Residents’ Well-Being: The Mediating effect of neighborhood social cohesion. *Land*, 12(7), 1454. <https://doi.org/10.3390/land12071454>
63. Hassen, N., & Kaufman, P. (2016). Examining the role of urban street design in enhancing community engagement: A literature review. *Health & Place*, 41, 119–132. <https://doi.org/10.1016/j.healthplace.2016.08.005>
64. Davdand, P., Bartoll, X., Basagaña, X., Dalmau-Bueno, A., Martínez, D., Ambrós, A., Cirach, M., Triguero-Mas, M., Gascón, M., Borrell, C., & Nieuwenhuijsen, M. (2016). Green spaces and General Health: Roles of mental health status, social support, and physical activity. *Environment International*, 91, 161–167. <https://doi.org/10.1016/j.envint.2016.02.029>
65. De Vries, S., Van Dillen, S., & Groenewegen, P. (2013). Streetscape greenery and health: Stress, social cohesion and physical activity as mediators. *Social Science & Medicine*, 94, 26–33. <https://doi.org/10.1016/j.socscimed.2013.06.030>
66. Howarth, M., Brettle, A., Hardman, M., & Maden, M. (2020). What is the evidence for the impact of gardens and gardening on health and well-being: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription. *BMJ Open*, 10(7), e036923. <https://doi.org/10.1136/bmjopen-2020-036923>
67. Veen, E., Bock, B., Van Den Berg, W., Visser, A., & Wiskerke, J. (2015). Community gardening and social cohesion: different designs, different motivations. *Local Environment*, 21(10), 1271–1287. <https://doi.org/10.1080/13549839.2015.1101433>
68. Generations United. (n.d.). *Intergenerational Programs & Spaces - Generations United*. <https://www.gu.org/explore-our-topics/intergenerational-programs-spaces/>
69. Zhong, S., Lee, C., Foster, M., & Bian, J. (2020). Intergenerational communities: A systematic literature review of intergenerational interactions and older adults’ health-related outcomes. *Social Science & Medicine*, 264, 113374. <https://doi.org/10.1016/j.socscimed.2020.113374>
70. Generations United. (n.d.). *Making the case for intergenerational programs - generations united*. <https://www.gu.org/resources/making-the-case-for-intergenerational-programs/>
71. Simionato, J., Vally, H., & Archibald, D. (2023). Circumstances that promote social connectedness in older adults participating in intergenerational programmes with adolescents: a realist review. *BMJ Open*, 13(10), e069765. <https://doi.org/10.1136/bmjopen-2022-069765>
72. Jarrott, S. E., Turner, S., Juris, J., Scrivano, R. M., & Weaver, R. (2021). Program practices predict intergenerational interaction among children and adults. *the Gerontologist*, 62(3), 385–396. <https://doi.org/10.1093/geront/gnab161>
73. Generations United, & The Eisner Foundation. (2018). *All in together: Creating places where young and old thrive*.

References

74. Whear, R., Campbell, F., Rogers, M., Sutton, A., Robinson-Carter, E., Sharpe, R., Cohen, S. H., Fergy, R., Garside, R., Kneale, D., Meléndez-Torres, G. J., & Coon, J. T. (2023). What is the effect of intergenerational activities on the wellbeing and mental health of older people?: A systematic review. *Campbell Systematic Reviews*, 19(4). <https://doi.org/10.1002/cl2.1355>
75. Maqbool, N., Viveiros, J., & Ault, M. (2015). The Impacts of Affordable Housing on Health: A research summary. ResearchGate. https://www.researchgate.net/publication/339366232_The_Impacts_of_Affordable_Housing_on_Health_A_Research_Summary
76. Cooperative Housing - USDN Sustainable Consumption Toolkit. (n.d.). <https://sustainableconsumption.usdn.org/initiatives-list/cooperative-housing>
77. Ruii, M. L. (2015). The effects of cohousing on the social housing system: the case of the Threshold Centre. *Journal of Housing and the Built Environment*, 30(4), 631–644. <https://doi.org/10.1007/s10901-015-9436-7>
78. Berggren, H. M. (2016). Cohousing as civic society: cohousing involvement and political participation in the United States*. *Social Science Quarterly*, 98(1), 57–72. <https://doi.org/10.1111/ssqu.12305>
79. Sanguinetti, A. (2014). Transformational practices in cohousing: Enhancing residents' connection to community and nature. *Journal of Environmental Psychology*, 40, 86–96. <https://doi.org/10.1016/j.jenvp.2014.05.003>
80. Dominguez, O., Kanyuk, J., & Adsit-Morris, C. (2020). Social wellbeing and sociability in multi-family housing design. *Happy Cities*. <https://admin.happycities.com/wp-content/uploads/2020/11/HappyHomesReport.pdf>
81. Hey Neighbour Collective. (2024, February 11). Building social connections: Housing design policies to support wellbeing for all - Hey Neighbour Collective. Hey Neighbour Collective. <https://www.heyneighbourcollective.ca/2023/09/building-social-connections-housing-design-policies-support-wellbeing/>
82. Reinhard, E., Courtin, É., Van Lenthe, F. J., & Avendaño, M. (2018). Public transport policy, social engagement and mental health in older age: a quasi-experimental evaluation of free bus passes in England. *Journal of Epidemiology and Community Health*, 72(5), 361–368. <https://doi.org/10.1136/jech-2017-210038>
83. Matsuda, N., Murata, S., Torizawa, K., T, I., Ebina, A., Kondo, Y., Tsuboi, Y., Fukuta, A., Okumura, M., Shigemoto, C., & Ono, R. (2019). Association between public transportation use and loneliness among urban elderly people who stop driving. *Gerontology and Geriatric Medicine*, 5, 233372141985129. <https://doi.org/10.1177/2333721419851293>
84. Henning-Smith, C., Evenson, A., Kozhimannil, K. B., & Moscovice, I. (2018). Geographic variation in transportation concerns and adaptations to travel-limiting health conditions in the United States. *Journal of Transport & Health (Print)*, 8, 137–145. <https://doi.org/10.1016/j.jth.2017.11.146>
85. Public transit infrastructure and urban social connectedness. (2019, August 9). CEPR. <https://cepr.org/voxeu/columns/public-transit-infrastructure-and-urban-social-connectedness>
86. Mattson, J. W., & Peterson, D. (2021). Measuring benefits of rural and small urban transit in Greater Minnesota. *Transportation Research Record*, 036119812199001. <https://doi.org/10.1177/0361198121990014>
87. Stojić, D., Čirić, Z., Sedlak, O., & Horvat, A. M. (2020). Students' views on public transport: satisfaction and emission. *Sustainability*, 12(20), 8470. <https://doi.org/10.3390/su12208470>
88. National Academies of Sciences, Engineering, and Medicine, Transportation Research Board, Transit Cooperative Research Program, Stein, N., Middleton, S., Plumeau, P., Robert, W., & Perrin, R. (2021). Prioritization of Public Transportation Investments: A Guide for Decision-Makers. In *Transportation Research Board eBooks*. <https://doi.org/10.17226/26224>
89. Nursanty, E. (2023). CREATING PLACES OF IDENTITY AND SOCIAL INTERACTION: EXAMINING THE RELATIONSHIP BETWEEN TRANSIT-ORIENTED DEVELOPMENT AND PLACE MAKING. *Alur*, 6(2), 103–114. <https://doi.org/10.54367/alur.v6i2.3064>
90. The impact of Transit-Oriented Development on Social Capital. (2018, April 26). Mineta Transportation Institute. <https://transweb.sjsu.edu/mntrc/research/Impact-Transit-Oriented-Development-Social-Capital>
91. Eyler, A. A., Hipp, J. A., & Lokuta, J. (2015). Moving the Barricades to Physical Activity: A Qualitative Analysis of Open Streets Initiatives across the United States. *American Journal of Health Promotion*, 30(1), e50–e58. <https://doi.org/10.4278/ajhp.131212-qual-633>
92. Hipp, J. A., Eyler, A. A., Zieff, S. G., & Samuelson, M. (2014). Taking physical activity to the streets: The popularity of Ciclovía and open streets initiatives in the United States. *American Journal of Health Promotion*, 28(3_suppl), S114–S115. <https://doi.org/10.4278/ajhp.28.3s.s114>
93. Zieff, S. G., Musselman, E., Guedes, C., Chin, D. P., Ferrey, A., Martinez, C., Rivera, N., Sundararaman, A., & Walesch, O. (2022). Neighborhood social environment at an open streets initiative. *Journal of Community Practice*, 30(1), 20–33. <https://doi.org/10.1080/10705422.2022.2026852>
94. Torres, A., Steward, J., Strasser, S., Lyn, R., Serna, R., & Stauber, C. E. (2016). Atlanta Streets Alive: a movement building a culture of health in an urban environment. *Journal of Physical Activity and Health*, 13(2), 239–246. <https://doi.org/10.1123/jpah.2015-0064>
95. Torres, A., Sarmiento, O. L., Stauber, C. E., & Zarama, R. (2013). The Ciclovía and Cicloruta programs: promising interventions to promote physical activity and social capital in Bogotá, Colombia. *American Journal of Public Health*, 103(2), e23–e30. <https://doi.org/10.2105/ajph.2012.301142>

References

96. A street you go to, not just through: principles for fostering streets as places. (n.d.). <https://www.pps.org/article/8-principles-streets-as-places>
97. Complete Streets - Smart Growth America. (2024, January 4). Smart Growth America. <https://smartgrowthamerica.org/what-are-complete-streets/>
98. Leyden, K. M. (2003). Social capital and the built environment: the importance of walkable neighborhoods. *American Journal of Public Health*, 93(9), 1546–1551. <https://doi.org/10.2105/ajph.93.9.1546>
99. National Regional Planning Council. (2014). A Health in All Policies Approach to Complete Streets Ordinances
100. Bas, J., Al-Khasawneh, M. B., Erdoğan, S., & Cirillo, C. (2023). How the design of Complete Streets affects mode choice: Understanding the behavioral responses to the level of traffic stress. *Transportation Research Part A: Policy and Practice*, 173, 103698. <https://doi.org/10.1016/j.tra.2023.103698>
101. Akbar, P. N. G., & Edelenbos, J. (2021). Positioning place-making as a social process: A systematic literature review. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1905920>
102. Ellery, P. J., & Ellery, J. (2019). Strengthening Community Sense of Place through Placemaking. *Urban Planning*, 4(2), 237–248. <https://doi.org/10.17645/up.v4i2.2004>
103. Nabil, N. A., & Eldayem, G. E. A. (2015). Influence of mixed land-use on realizing the social capital. *HBRC Journal*, 11(2), 285–298. <https://doi.org/10.1016/j.hbrcj.2014.03.009>
104. Sonta, A., & Jiang, X. (2023). Rethinking walkability: Exploring the relationship between urban form and neighborhood social cohesion. *Sustainable Cities and Society*, 99, 104903. <https://doi.org/10.1016/j.scs.2023.104903>
105. Glover, T. D., Todd, J., & Moyer, L. (2022). Neighborhood walking and social connectedness. *Frontiers in Sports and Active Living*, 4. <https://doi.org/10.3389/fspor.2022.825224>
106. Zhu, X., Yu, C., Lee, C., Lu, Z., & Mann, G. V. (2014). A retrospective study on changes in residents' physical activities, social interactions, and neighborhood cohesion after moving to a walkable community. *Preventive Medicine*, 69, S93–S97. <https://doi.org/10.1016/j.ypmed.2014.08.013>
107. Love, H., & Powe, M. (2020, November 26). The necessary foundations for rural resilience: A flexible, accessible, and healthy built environment. *Brookings*. <https://www.brookings.edu/articles/the-necessary-foundations-for-rural-resilience-a-flexible-accessible-and-healthy-built-environment/>
108. Danya, K., & Jin, J. (2019). The Effect of land use on housing price and rent: Empirical evidence of job accessibility and Mixed land use. *Sustainability*, 11(3), 938. <https://doi.org/10.3390/su11030938>
109. Mixed-use developments may actually reduce housing affordability,. (2020, November 24). *Waterloo News*. <https://uwaterloo.ca/news/news/mixed-use-developments-may-actually-reduce-housing>
110. Benda, N. C., Veinot, T. C., Sieck, C. J., & Ancker, J. S. (2020). Broadband Internet Access Is a Social Determinant of Health! *American Journal of Public Health*, 110(8), 1123–1125. <https://doi-org.ezproxy.snhu.edu/10.2105/AJPH.2020.305784>
111. Choi, N. G., & DiNitto, D. M. (2013). The Digital Divide among Low-Income Homebound Older Adults: internet use patterns, eHealth literacy, and Attitudes toward Computer/Internet Use. *Journal of Medical Internet Research*, 15(5), e93. <https://doi.org/10.2196/jmir.2645>
112. Boase, J., & Wellman, B. (2006). Personal relationships: on and off the internet. In *Cambridge University Press eBooks* (pp. 709–724). <https://doi.org/10.1017/cbo9780511606632.039>
113. Kearns, A., & Whitley, E. (2019). Associations of internet access with social integration, wellbeing and physical activity among adults in deprived communities: evidence from a household survey. *BMC Public Health*, 19(1). <https://doi.org/10.1186/s12889-019-7199-x>
114. Willard, S., Van Rossum, E., Spreeuwenberg, M., & De Witte, L. (2020). Perceived impact of an online community care platform for Dutch older adults on local participation, informal caregiving, and feelings of connectedness: Pretest-Posttest Observational study. *JMIR. Journal of Medical Internet Research*, 22(12), e20304. <https://doi.org/10.2196/20304>
115. McKenna, K. Y. A., & Bargh, J. A. (1998). Coming out in the age of the Internet: Identity “demarginalization” through virtual group participation. *Journal of Personality and Social Psychology*, 75(3), 681–694. <https://doi.org/10.1037/0022-3514.75.3.681>
116. Huffman, A. (2024, January 11). Definitions - National Digital Inclusion Alliance. National Digital Inclusion Alliance. <https://www.digitalinclusion.org/definitions/>
117. Center for International Cooperation. (2023, August 8). Digital Equity as a Platform for Equality, Inclusion | CIC. Center on International Cooperation. <https://cic.nyu.edu/resources/digital-equity-as-an-enabling-platform-for-equality-and-inclusion/>
118. Graybeal, F. (2022, April 14). What is collective Impact - Collective Impact Forum. Collective Impact Forum. <https://collectiveimpactforum.org/what-is-collective-impact/>
119. Multisolving. (2023, January 23). Home - Multisolving Institute. Multisolving Institute. <https://www.multisolving.org/>
120. Manklang, M. (2018, August 22). Creative placemaking, placekeeping, and cultural strategies to resist displacement — U.S. Department of Arts and Culture. U.S. Department of Arts And Culture. <https://usdac.us/blogac/2017/12/11/creative-placemaking-placekeeping-and-cultural-strategies-to-resist-displacement>
121. Bizjak, I., Klinc, R., & Turk, Ž. (2017). A framework for open and participatory designing of built environments. *Computers, Environment and Urban Systems*, 66, 65–82. <https://doi.org/10.1016/j.compenvurbys.2017.08.002>

References

122. Mahabadi, S. M., Zabihi, H., Majedi, H., & Development, I. J. O. a. a. U. (2022). Participatory Design; a new approach to regenerate the public space. ResearchGate. https://www.researchgate.net/publication/361333002_Participatory_Design_A_New_Approach_to_Regenerate_the_Public_Space
123. Ruef, M., & Kwon, S. (2016). Neighborhood associations and social capital. *Social Forces*, 95(1), 159–190. <https://doi.org/10.1093/sf/sow053>
124. CDC - Healthy Places - Social capital. (n.d.). CDC.gov. <https://www.cdc.gov/healthyplaces/healthtopics/social.htm>
125. Alaimo, K., Reischl, T. M., & Allen, J. O. (2010). Community gardening, neighborhood meetings, and social capital. *Journal of Community Psychology*, 38(4), 497–514. <https://doi.org/10.1002/jcop.20378>
126. Hays, R. A., & Kogl, A. (2007). Neighborhood attachment, social capital building, and Political Participation: A case study of Low- and Moderate-Income residents of Waterloo, Iowa. *Journal of Urban Affairs*, 29(2), 181–205. <https://doi.org/10.1111/j.1467-9906.2007.00333.x>
127. Casiday, R. (n.d.). Volunteering and health: what impact does it really have? ResearchGate. https://www.researchgate.net/publication/228628782_Volunteering_and_Health_What_Impact_Does_It_Really_Have
128. Piliavin, J. A., & Siegl, E. (2007). Health Benefits of Volunteering in the Wisconsin Longitudinal Study. *Journal of Health and Social Behavior*, 48(4), 450–464. <https://doi.org/10.1177/002214650704800408>
129. Yeung, J. W. K., Zhang, Z., & Kim, T. Y. (2017). Volunteering and health benefits in general adults: cumulative effects and forms. *BMC Public Health*, 18(1). <https://doi.org/10.1186/s12889-017-4561-8>
130. Baciu, A., Negussie, Y., Geller, A., & Weinstein, J. N. (2017, January 11). Partners in promoting health equity in communities. *Communities in Action - NCBI Bookshelf*. <https://www.ncbi.nlm.nih.gov/books/NBK425859/>
131. Well. (n.d.). WELL Standard. WELL Standard. <https://v2.wellcertified.com/en/wellv2/community>
132. Reports & infographics – My health my community. (n.d.). <https://myhealthmycommunity.org/explore-results/reports-infographics/>
133. Hu, T., Zheng, X., & Huang, M. C. (2020). Absence and presence of human interaction: the relationship between loneliness and empathy. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00768>