EQUITABLE PUBLIC SPACE

ENVIRONMENTAL JUSTICE THROUGH POLICY AND DESIGN

EQUITABLE PUBLIC SPACE

ENVIRONMENTAL JUSTICE THROUGH POLICY AND DESIGN

CREDITS

UW Green Futures Lab
University of Washington
242 Gould Hall, Box 355734
Seattle, Washington 98195
206 685 0521
www.greenfutures.washington.edu

Schulze + Grassov ApS
Niels Ebbesens Vej 11, st th
1911 Fredriksberg C
Copenhagen, Denmark
+45 27 646 100
www.schulzeplusgrassov.com

Scan I Design Foundation
800 5th Avenue, Ste 4000
Seattle, Washington 98104
206 892 2092
www.scandesignfoundation.com

PROJECT AUTHORS AND DESIGNERS

Margot Chalmers
Master of Landscape Architecture, 2018
University of Washington

Adam Carreau
Master of Landscape Architecture, 2019
University of Washington

ADVISORS

Nancy Rottle
Professor, University of Washington Department of Landscape Architecture
Director, Green Futures Lab
University of Washington

Louise Grassov
Partner, Schulze + Grassov Aps
Copenhagen, Denmark

Oliver Schulze
Partner, Schulze + Grassov Aps
Copenhagen, Denmark

FOREWORD

As environmental, economic and health disparities continue to widen in cities and urbanizing areas, planners and designers are challenged with unpacking the relationships between policies, planning, design, and needed social and environmental equity. Public space equity – a concerted effort to invest in public places and processes in neglected neighborhoods and communities – is an effective and cost-efficient way to correct for and reverse environmental injustices. Yet, how can the advantages that nature and green space offer, and the invaluable public space benefits that play, movement and gathering provide, be fairly distributed and tailored to the specific needs and desires of a community, while also ensuring that people who most need these benefits are able to "stay in place" to experience them?

Adam Carreau and Margot Chalmers have probed this question, identifying and illustrating the documented benefits of public space and access to nature, and exploring the potential pitfalls of implementing policies, plans and places without leadership from the communities being impacted. In this document the pair presents considered perspectives on social equity in the dynamic urban context; potentials and case studies of tensions between efforts to uplift neighborhoods and unintended resulting displacement; processes for community participation, empowerment and stabilization; and tools and case study lessons that planners, designers and citizen activists can employ to equitably promote community health, prosperity and well-being.

This work could not have been accomplished without the generous sponsorship of the ScanIDesign Foundation, which has supported Adam and Margot's combined Internship with the UW Green Futures Lab and Schulze + Grassov urban design. Fellow MLA candidate Roxanne Glick was a valued resource and provided document feedback throughout the process, intersecting with her own thesis on community ownership. We are also deeply appreciative of the review and insights by environmental health planner Richard Gelb from the Seattle-King County Department of Public Health, who provided invaluable comments on the final manuscript. Finally, many thanks to Adam and Margot for their hard work, thoughtful research, masterful illustrations, and commitment to social justice through equitably and effectively providing public space benefits to all.

Nancy Rottle
Professor, Director, University of Washington Green Futures Research and Design Lab
June 2019

CONTENTS

INTRODUCTION

Overview 1
Environmental Justice 3

BENEFITS OF URBAN GREEN SPACE

Benefits of Urban Green Space 7
Emotional Wellbeing 9
Physical Health 13
Environmental Health 19
Economic Vitality 21

URBAN FLUX

Overview 27
Urban Flux 29
Gentrification + Displacement 31
Green Gentrification 35
Case Study: Prospect Park 37
Case Study: The Highline 41

COMMUNITY EMPOWERMENT

Overview 51
Strong Democracy 53
Community Empowerment and Participation 55
Neighborhood Alliances + Organizations 57
Community Ownership Overview 59
    Nonprofit Housing Organizations 61
    Limited Equity Cooperatives 63
    Community Land Trusts 65
    Community Land Conservancy 69

PARTICIPATION

Overview 73
Ethnographic and Cultural Relevance 75
Strategies 77

POLICIES TO PROMOTE STAYING IN PLACE

Overview 81
Create and Preserve Housing Affordability 83
- Inclusionary Zoning 85
- Ground Leases 89
- Housing Subsidies 91
- Property Tax Breaks 93

Regulating Landlord + Tenant Relationship 95

IN PRACTICE • THRIVING IN PLACE

Overview 101
Urban Green Space Design Toolkit 103
- Air Quality 105
- Habitat 107
- Hydrology 113
- Transportation 117

Case Studies on Thriving in Place 123
- Case Study: The Los Angeles River 125
- Case Study: San Francisco's Chinatown 129
- Case Study: Crown Heights 133
- Case Study: Sunset Park 137
- Case Study: Bronx River 143

Conclusion 149

INTRODUCTION

For centuries, cities have shaped nations and regions, serving as centers and catalysts of cultural, political, scientific, and commercial life.[7] Cities are comprised of dynamic and complex webs of evolving pieces, and urban public spaces make up a number of these components.[3] Although the mid-twentieth century experienced urban flight to the suburbs, research suggests that there is a pattern of migration back to the city due to both production and consumption purposes such as increased service-related jobs and preferences for city amenities.[1,10] The desire to move back to urban areas fuels hope for a sustainable future, but research suggests there are potential negative ramifications for existing long-term low-income and minority populations who cannot afford to stay in place and benefit from urban investments to "thrive in place."[6] This document is based on the belief that local communities should have available to them the processes to advocate for and achieve better environmental conditions and that local communities, regardless of race or socioeconomic status, should have equal access to quality public spaces. We believe pubic space equity is a critical component of a sustainable city.

Public Space Equity (n) – condition where decisions about, access to, and quality of public space are not distinguished by place or group affiliation.[4]

Public Space Equity (v) – a.k.a. Pro-equity (adj.) public space development – listening to and learning from those whose needs are most acute, so their priorities, concerns, ambitions, and resources are centered in place improvements and public space amenities that stabilize neighborhoods, foster belonging, and correct for historic inequities in public amenities.[4]

In order to provide urban residents with quality environments without negative impacts on existing communities, principles of environmental and social justice should be at the forefront of public space and urban greening initiatives.[9] This document outlines the benefits of public space and provides a series of tools for civic leaders, city planners, policy makers, designers and residents to utilize to foster equity in urban areas.

URBAN FLUX

URBAN GREEN SPACES

EMPOWERMENT

INEQUITABLE ACCESS
+ DISPLACEMENT

PARTICIPATION

EQUITABLE
PUBLIC
SPACE

POLICY

DESIGN

ENVIRONMENTAL JUSTICE

Origins of Environmental Justice

Environmental justice gained momentum throughout the 1960s and 1970s due to its correlation with the U.S. civil rights and environmental movements. "Environmental Racism" focused on the unequal distribution of levels of pollution and environmental stressors in low-income minority communities and workplaces. Environmental justice gained national awareness in 1982, when approximately 500 predominately low-income, African American community members staged a protest against the siting of a polychlorinated biphenyl landfill adjacent to their homes in Warren County, North Carolina. This protest led to an investigation by the U.S. General Accountability Office. The investigation discovered that three of four hazardous landfill sites are located in low-income, predominately African American communities.[5]

Environmental Justice Defined

The Environmental Protection Agency defines Environmental justice as "fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies."[2] This definition implies communities and individuals can obtain the same protection from environmental and health hazards while having equal access to decision making processes for obtaining healthy environments in which to live and work. Many scholars believe that both distributive justice and procedural justice are essential to equity and environmental justice. **Distributive Justice** focuses on how environmental benefits and burdens are distributed amongst various communities. Scholars frequently look into the impacts of environmental burdens on low-income marginalized communities and those associated with economic development, and the lack of equitable access to the benefits of nature and public space. **Procedural Justice** refers to the "politics and policies that govern resources. It also examines the exclusion of individuals by ensuring the absence of meaningful institutional spaces to address the impacts of policies on communities." This concept focuses on the "fair and equitable institutional process of a state"and the lack of representation of groups through lack of participation and limited access to information.[8] Furthermore, procedural justice examines the allotment of resources and how this results in inequalities within varying social contexts. Additionally, Environmental justice emphasizes **Intergenerational Equity**, which is defined as "the principle that the present generation should pass on to future generations enough natural resources and sufficient environmental quality that they can enjoy at least a comparable quality of life, and inherit a healthy and sustainable environmental heritage."[9] This document is based on the belief that environmental justice and social justice are crucial to restoration and development projects, ensuring that communities are able to thrive in place and retain their places of residence while benefiting from economic development and greening projects.[8,9]

SOURCES

1. Barton, Michael S. "Gentrification and Violent Crime in New York City." Crime & Delinquency, vol. 62, no. 9, 2016, pp. 1180–1202., doi:10.1177/0011128714549652.

2. "Environmental Justice." EPA, Environmental Protection Agency, 11 June 2019, www.epa.gov/environmentaljustice.

3. Gehl, Jan. Cities for People. Island Press, 2010.

4. Gelb, Richard. Personal communication. 10 June 2019.

5. Jain, Ravi, et al. "Economic and Social Impact Analysis." Handbook of Environmental Engineering Assessment, 2012, pp. 265–309., doi:10.1016/b978-0-12-388444-2.00010-5.

6. Kennedy, Maureen, and Paul Leonard. Dealing with Neighborhood Change: a Primer on Gentrification and Policy Choices. Brookings Institution Center on Urban and Metropolitan Policy, 2001.

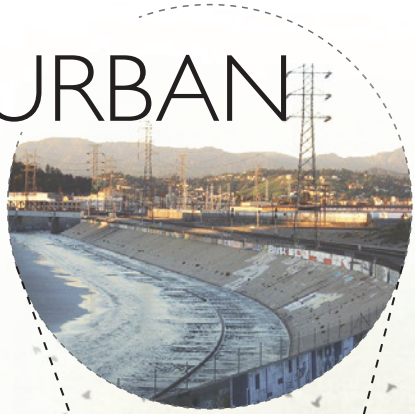
7. Leon, D. (2008). Cities, urbanization and health. International Journal of Epidemiology, 37(1), 4-8.

8. Schlosberg, David. Defining Environmental Justice: Theories, Movements, and Nature. Oxford University Press, 2007.

9. Smardon, Richard C., et al. Revitalizing Urban Waterway Communities: Streams of Environmental Justice. Routledge, 2018.

10. "68% Of the World Population Projected to Live in Urban Areas by 2050, Says UN | UN DESA Department of Economic and Social Affairs." United Nations Department of Economic and Social Affairs, United Nations, 16 May 2018, www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html.

BENEFITS OF URBAN GREEN SPACE



Green interventions of all scales have the potential to greatly improve upon the lives of those who reside in, visit, or otherwise occupy urban places. Large-scale green interventions may take the form of parks, natural areas, wetlands or waterfront improvements, while small-scale interventions may include green walls, tree and shrub plantings, and bioswales. Regardless the scale, urban green interventions may significantly improve upon community members' emotional wellbeing, mental and physical health, and the urban area's ecological wellbeing and economic vitality. Urban green interventions may improve the lives of all residents, but are shown to have particularly positive effects on the lives of low-income community members who may not have the transportation or fiscal means necessary to access such spaces. The benefits green spaces provide may be amplified for low socio-economic status neighborhoods; for example, such communities would especially benefit from the social capital development opportunities public green spaces provide.[8]

HEALTH + WELLBEING

EMOTIONAL WELLBEING

Quality, inviting and accessible-to-all public green space is an indispensable community asset.[10] Studies have found that the presence of vegetation encourages people to linger in public spaces; there are correlations between the number of trees in a space and visitors.[8] Such spaces serve as catalysts for a myriad of emotional wellbeing benefits, including supporting perceptions of safety and community identity, aiding in the development of social capital and place attachment, and providing for a variety of restorative benefits and positive childhood development

experiences.[8] To effectively support emotional wellbeing, public green spaces must be adaptable and flexible, shifting to meet the needs of all residents in the community.[10] Public spaces that are multi-functional and open to different types of programming have been shown to support community organizing efforts and social capital development, particularly in low-income, inner-city neighborhoods.[10] Equitable public spaces are capable of playing a crucial role in forming community resilience through the support of a variety of social and emotional wellbeing factors.[10]

EMOTIONAL WELLBEING


Credit:
Office of McFarlane Biggar Architects + Designers

SOCIAL CAPITAL

Public green spaces help provide people with the ability to secure benefits as part of their greater social network.[10,12] Social capital provides residents with connections that foster economic growth, empowers community participation, and allows communities to withstand and adapt to broader economic and social shifts.[2,12]


Credit:
DesignByPrinciple.com

COMMUNITY IDENTITY

Public green spaces help build a sense of community belonging and shared bonds between residents. Residents who are more attached to their community experience higher levels of social cohesion and control, and less fear of crime. Public green spaces provide space for communication and organizing, aiding in local resilience.[12]


Credit:
Wikipedia Commons

SAFETY

Attractive, well-maintained, and well-lit green spaces have been proven to improve one's perceived sense of safety.[10] The presence of vegetation may increase users, providing further safety benefits through the additional "eyes on the street."[8] Activated areas provide strong user draws, increasing the safety of public spaces.[15]

PLACE ATTACHMENT

Inviting and well-maintained public green spaces may help foster a sense of place, belonging and neighborhood stewardship. Place attachment is linked with length of residence and plays an essential role in neighborhood revitalization efforts. Public green spaces foster place attachment by providing space for lived experiences.[12]


Credit:
The Cultural Landscape Foundation

RESTORATIVE BENEFITS

Quality, well-designed green spaces provide many restorative benefits. Well-vegetated public green spaces may reduce stress, improve focus, aid in relaxation, improve mood, and relieve feelings of depression. Such spaces align with basic human needs for open space, and offer escape from the mundane in the form of fascination.[8]


Credit:
Travel Chronicals Accross Spain

CHILDHOOD DEVELOPMENT

Public green spaces are essential in supporting childhood development. Quality, well-designed green spaces encourage creative play, physical exercise, cognitive thinking and reasoning skills, collaboration, the development of social skills, and help instill a sense of community belonging and environmental stewardship.[11, 15]


Credit:
Minneapolis Park and Recreation Board

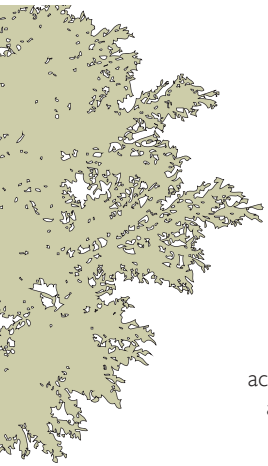
PHYSICAL HEALTH

Many studies have found positive correlations between public urban green amenities and residents' physical health.[8] Such amenities can be of varying types and scales; they may consist of parks and natural areas or of smaller green interventions, such as street trees, shrubs, green walls or swales.[15] Regardless of the type or scale, well-designed, inviting, and attractive public green amenities encourage residents to engage in physical activities and experiences, such as walking, biking, sitting, relaxing, recreating and socializing.[8] Equitable distribution of, and access to, these green interventions is key: studies have shown that close proximity of

urban parks increase a person's likelihood to exercise.[3] Not only do quality green spaces increase a person's rate of physical exercise, which in turn reduces the rate of many physical diseases, but they also improve other factors related to physical health, such as air and water quality and recovery from illness.[11] Public green spaces are also essential in setting early foundations for good physical health; urban children with access to quality parks and green amenities tend to carry these habits along with a sense of environmental stewardship into adulthood.[11]

PHYSICAL HEALTH

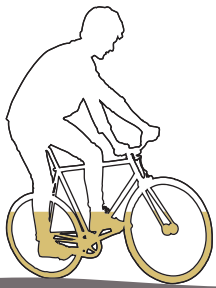
Physical exercise can take a variety of forms, from spontaneous (incidental) activity to planned recreational activities such as team and individual sports. Spontaneous activity constitutes any activity that is built up in small amounts.[19] Examples of this include, walking upstairs instead of using elevators, walking or cycling to work instead of driving, parking further away from building entrances, getting off the bus or train a few stops early to give yourself a stroll, mowing the lawn, gardening, housework and being active while watching television.[19] The design of public spaces can encourage or deter people form utilizing spontaneous activity. For example, if the commute to work contains activities (such as shopping)

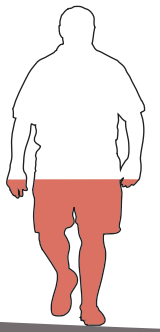


21.7%
of adults in the USA achieve the recommended amount of aerobic and muscle-strengthening exercise

17.2%
of children in the USA are obese

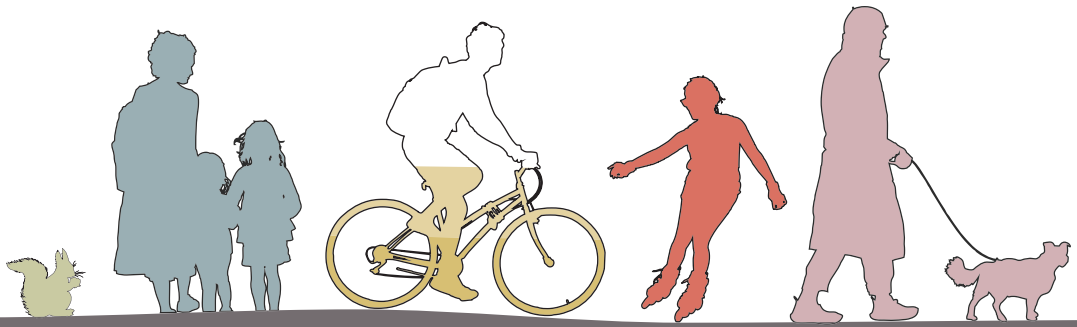
37.7%
of adults in the USA are obese



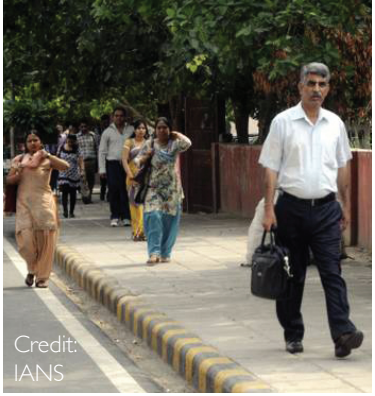


and places for people to bump into each other, individuals may be more invested in walking or biking to work. By designing interventions that promote spontaneous activity, we can begin to increase peoples daily energy expenditure.[7] Planned activities such as sports provide a number of benefits beyond physical health. These include enhanced social skills, improved mental health, increased capacity for learning and productivity and reductions in anti-social behavior.[1] Furthermore, providing physical activities for children is a great way to get the entire family involved and exercising. Whether it's a Frisbee toss, hula hooping, or dancing, families that make time to exercise together develop routines for success.[14]

Creation and enhanced access to green spaces and places for physical activity increases the amount of people exercising 3 times a week by **25.6%**




40
Credit:
visitcopenhagen


Credit:
IANS


Credit:
nps.gov


Credit:
WikiHow


Credit:
hoopnotica


Credit:
Tucker Boulder Park


SPONTANEOUS PHYSICAL FITNESS
Credit:
Laura Calvert


Credit:
Pinterest


Credit:
Carolyn Grant


Credit:
StylishByNature


Credit:
Alex Bussenius


Credit:
URBAN REC


Credit:
Aliki Seferou

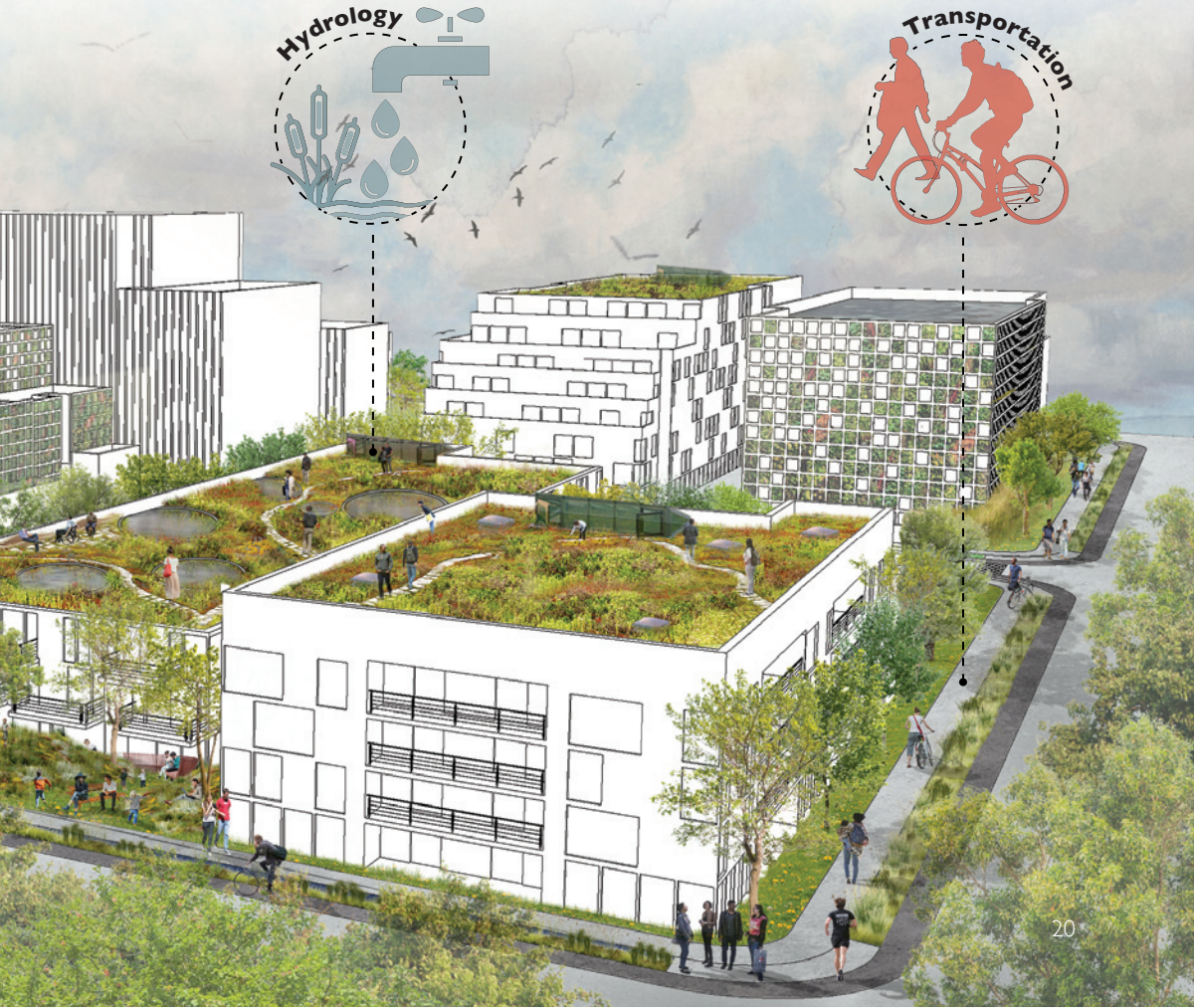

Credit:
Randy A. Simes

PLANNED PHYSICAL FITNESS

ENVIRONMENTAL HEALTH

Intentionally designed green spaces of large and small scales play a significant role in improving a region's ecological wellbeing. Providing communities with well-designed and well-functioning green spaces can help residents develop environmental stewardship and advocacy values, leading to further resource protection and conservation.[6] In particular, green spaces designed for community engagement with natural processes connect residents with their neighborhoods and help them view natural and urban processes as functions intertwined together under the same entity.[8] Well-functioning ecosystems are closely tied with human

health and wellbeing, making designing for "biometric solutions" to urban functions a crucial aspect of neighborhood design and planning.[20] Designing for biometric solutions involves closely examining the biological structure of an ecosystem, and replicating ecosystem functions through design solutions. Biometric solutions are essential in supporting resilient local, regional, and national communities, economies and ecosystems.[20] Furthermore, the equal distributional of quality urban green spaces has the potential to buffer environmental burdens and toxin exposures which have historically affected low-income minority populations.

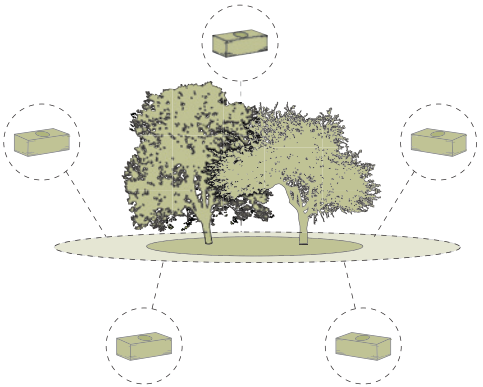


ECONOMIC VIABILITY

Urban green spaces have the potential to serve as powerful economic development tools; studies from around the world show that large- and small-scale green amenities have positive impacts on a city's tourism and employment rates, employee productivity and satisfaction, and boost commercial and retail activity, while raising property values and lowering property and city maintenance costs.[4,13] One of the most significant impacts of urban green space is its impact upon property values. Nearly 30 studies throughout the US concluded that proximity to parks (within 500' - 2,000', depending on park size) increases the value of commercial properties.[16] In turn, this incentivizes additional development and property improvement, and raises the amount of collected property taxes, benefiting city entities

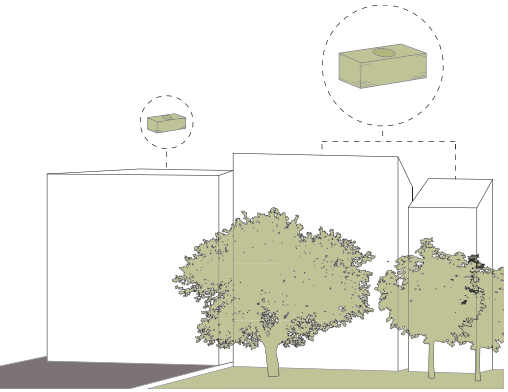
such as public school systems, that are funded by property taxes. Green spaces often attract and retain popular businesses and commercial enterprises that draw residents, visitors, and tourists, which in turn often raises the revenue a city receives from income and sales taxes. Studies have generally found that attractive, well-maintained, passive-use parks attract the highest proximate property values, while smaller parks and those that contain active uses have less of an effect on adjacent property values. Often, the rise in nearby property values can be utilized to partially or completely offset the cost of green space development.[16] While such effects may reduce housing affordability, they may also serve as stabilizing factors when local community ownership is achieved.

ECONOMIC VIABILITY



COMMERCIAL BOOST

Green amenities increase retail activity as customers are drawn to attractive spaces, and small businesses often prioritize the quality of an area's green amenities when choosing a location. A recent study found that customers were willing to pay an ~12% premium at establishments surrounded by quality green spaces and amenities.[4]



RAISING PROPERTY VALUES

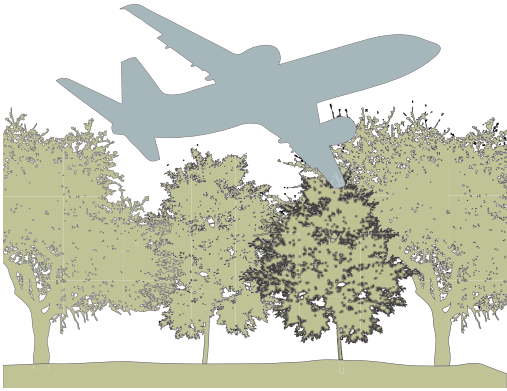
Studies from around the world have found direct and significant correlations between a property's proximity to parks and other green amenities and its value.[18] However, these benefits are only sustainable if local residents are not displaced and are able to reap the benefits of increased equity.

LOWERING MAINT. COSTS

Green amenities help reduce air conditioning and heating costs; trees and other green features may reduce cooling costs by 20-40%, and 3 adjacent trees may save a household $100-250 annually. Drainage system costs are also reduced; rain gardens, vegetated areas, and trees absorb and recycle significant quantities of water.[4]

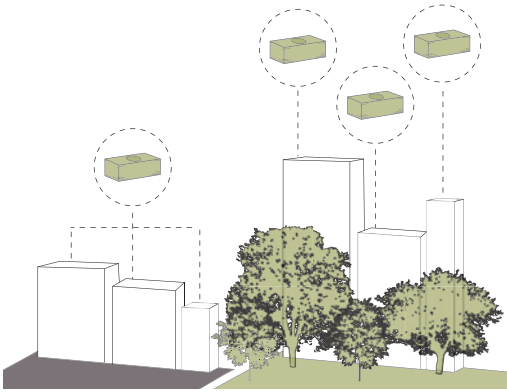
TOURISM + EMPLOYMENT

Green amenities boost tourist activity, as preference studies show tourists flock to green spaces, and employment opportunities are associated with the creation, maintenance, and visitor draw of parks and other green spaces.[4,17] Parks, gardens, and other green features help form an area's identity and narrative further increasing cultural tourism.[3]



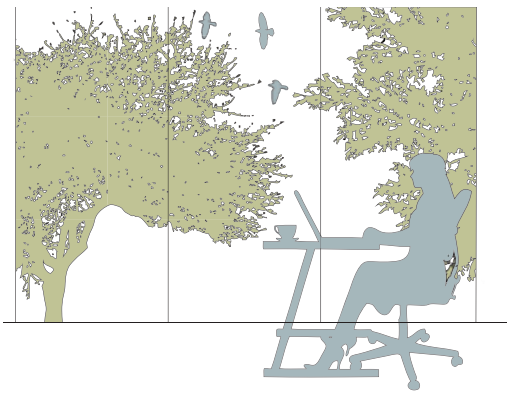
ECON. DEVELOPMENT TOOL

Many studies have shown that parks and green spaces of varying scales attract and retain businesses and residents.[9] Green amenities may be used strategically by economic development leaders to recruit commercial activity, homeowners, and industry to an area and positively impact a city's growth.[2]



EMPLOYEE PRODUCTIVITY

Studies have found that views and access to green amenities provides employees with a greater sense of job satisfaction and calmness, increasing worker producvity.[4] One study found that workers were 15% more productive in a "green" office.[5] Green amenities contribute to overall health and wellbeing, reducing sick days.[5]



SOURCES

1. "Benefits of Being Active | Getting Active." Transport and Motoring | Queensland Government, CorporateName=The State of Queensland; Jurisdiction=Queensland, 11 Oct. 2016, www.qld.gov.au/recreation/health/get-active/benefits.

2. Benner, C., & Pastor, Manuel. (2015). Equity, growth, and community : What the nation can learn from America's metro areas (First ed.). Oakland, California: University of California Press.

3. Cianga, Nicholae, and Antoaneta C. Popescu. "Green Spaces and Urban Tourism Development In Craiova Municipality in Romania." European Journal of Geography, vol. 4, no. 2, ser. 1792-1341, 2013, pp. 35–45. 1792-1341.

4. "Economic Benefits of Green Spaces." Project Evergreen, Project Evergreen, 13 June 2016, projectevergreen.org/resources/economic-benefits-of-green-spaces/.

5. Gaskell, Adi. "A Green Office Equals A Productive Office." Forbes, Forbes Magazine, 15 Feb. 2017, www.forbes.com/sites/adigaskell/2017/02/15/a-green-office-equals-a-productive-office/#3230a8657ca5.

6. Jennings, V., Baptiste, A., Osborne Jelks, N., & Skeete, R. (2017). Urban Green Space and the Pursuit of Health Equity in Parts of the United States. International Journal of Environmental Research and Public Health, 14(11), International journal of environmental research and public health, 22 November 2017, Vol.14(11).

7. Johannsen, Darcy L, and Eric Ravussin. "Spontaneous Physical Activity: Relationship between Fidgeting and Body Weight Control." Current Opinion in Endocrinology, Diabetes and Obesity, vol. 15, no. 5, 2008, pp. 409–415., doi:10.1097/med.0b013e32830b10bb.

8. Kaiserman, Joanna. "Urban Nature for Well-Being: Design Recommendations for Psychological Benefits in Urban Public Spaces." University of Washington, 2017.

9. Kastelic, James. "The Economic Benefits of Greenspace." The Trust for Public Land, 11 Sept. 2014.

10. Kuo, F,. and W. Sullivan. 1998. Fertile Ground for Community: Inner-City Neighborhood Common Spaces. American Journal of Community Psychology 26:823-851.

11. Lohr. 2006. "Benefits of Nature: What We Are Learning about Why People Respond to Nature".

12. Manzo, Lynne C., and Douglas D. Perkins. "Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning." Journal of Planning Literature, vol. 20, no. 4, 2006, pp. 335–350., doi:10.1177/0885412205286160.

13. Nabers, Mary Scott. "Parks Not Just Amenities, but Also Economic Development Tools." EconomicDevelopment.org, EconomicDevelopment.org, 21 Aug. 2016, economicdevelopment.org/2016/08/parks-not-just-amenities-but-also-economic-development-tools/.

14. Saunders, Len. "Encouraging Family Fitness & Healthy Habits." PBS, Public Broadcasting Service, 11 Oct. 2012, www.pbs.org/parents/food-and-fitness/sport-and-fitness/family-fitness/.

15. Sherer, Paul. "Benefits of Parks White Paper." The Trust for Public Land, www.tpl.org/benefits-parks-white-paper.

16. United States, Congress, Grove City Parks Department. "Parks, Recreation, and Open Space Comprehensive Plan." Chapter 6, City of Grove City, 2011, pp. 129–143.

17. Valenti,, Marly, et al. "Planning Circulation Tracks and Green Open Space for Tourism Amenities In Old Urban District in Makassar, Indonesia." Graduate School of Architecture and Civil Engineering, Toyohashi University of Technology, Toyohashi University of Technology, pp. 1–6.

18. Walker, Chris. The Public Value of Urban Parks. The Urban Institute , 2004.

19. "What Is Incidental Activity?" Queensland Health, 2008, www.health.qld.gov.au/__data/assets/pdf_file/0029/367553/pa_incidental.pdf.

20. Young, S., & Whittington, Jan. (2012). Urban heat island (UHI) effect in the Puget Sound region adaptation and biomimetic strategies to mitigate the effects of climate change. University of Washington.

URBAN FLUX

URBAN FLUX

URBAN FLUX

Over millennia, cities have served as the centers and catalysts of cultural, political, scientific, and commercial life, and have shaped nations and regions.[14] Today, 55% of the world's population lives in urban areas, and is expected to increase to 68% by 2050.[19] The city, which today includes its surrounding metropolitan areas, is a complex web of living, constantly evolving pieces, and a static city is not a successful city.[7] However, the nature of urban flux varies widely throughout global, regional, and neighborhood scales, resulting in vastly varying consequences for different groups of residents.[14] Cities generate wealth, improve living standards and are able to provide better employment opportunities and better access to services and resources.[1,7] Urban residents also typically hold lower carbon footprints, as cities are more environmentally efficient than suburbs and small towns.[7] Density lowers heating and cooling costs, discourages automobile use, and encourages the use of mass transit and walking.[7] However, such amenities combined with metropolitan areas' increasingly important roles as economic hubs have made cities attractive centers

for the wealthy, reflected by increased housing and real estate prices and shifts in neighborhood demographics.[7] In an effort to make cities more livable, healthy and attractive, municipal planners, elected officials, and developers have been active in implementing urban greening.[1] While urban greening provides a host of health, social, ecological, and economic benefits, research has shown that it may create "green gaps," or new and deeper vulnerabilities for low-income or minority populations.[1] Urban greening is often done strategically to attract and retain wealthy residents, leading to an exclusion of vulnerable residents and populations.[1] In many occasions, for example, developers leverage rezoning ordinances and tax incentives to redevelop vacant land adjacent to green spaces into high-end residences, potentially resulting in displacement of long-time vulnerable residents.[1] To preserve cities as equitable, healthy places for all to live, urban greening must be accomplished with considerations for social equity at the forefront.[1]

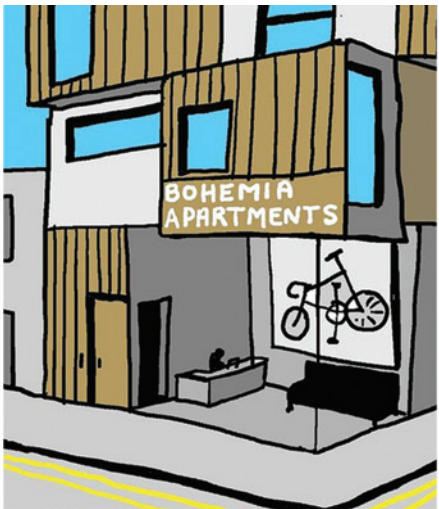
GENTRIFICATION + DISPLACEMENT

Gentrification is a process coined by the British sociologist Ruth Glass in 1964, and it entails the process of neighborhood change where lower income neighborhoods transition to more affluent neighborhoods due to residential migration.[6,17] The Merriam-Webster dictionary defines gentrification as "the process of repairing and rebuilding homes and businesses in a deteriorating area (such as an urban neighborhood) accompanied by an influx of middle-class or affluent people and that often results in the displacement of earlier, usually poorer residents."[8] Scholars have noted that in the United States, gentrification is a racialized process often associated with white middle-class individuals and families moving to low-income neighborhoods and communities of color.[16] Gentrification occurs due to a combination of both production (restoration efforts increasing property values in undervalued neighborhoods) and consumption purposes (amenities and increased service related jobs making urban areas more desirable for primarily young, white middle-class professionals).[2] This process encourages income mixing while reducing centralized poverty and residential segregation.[17] Higher income residences contribute to a higher tax base enabling public investment in infrastructure, retail, commercial and housing development.[5] These benefits are expected to trickle down to lower income residents, improving their quality of life.[17] Studies have shown that gentrification often leads to decreased crime

Credit:
G. Perry, 2015, Playing to the gallery: helping contemporary art in its struggle to be understood, Penguin

and poverty rates, increased incomes and better schools.[13] However, gentrification can lead to a number of negative direct consequences such as displacement and indirect consequences including homeownership exclusion and the exclusion from social spaces.[13] Under current policies in the United States, gentrification may be an unavoidable consequence of urbanization. However, the negative implications of gentrification such as displacement and social exclusion can be addressed through policy and design.

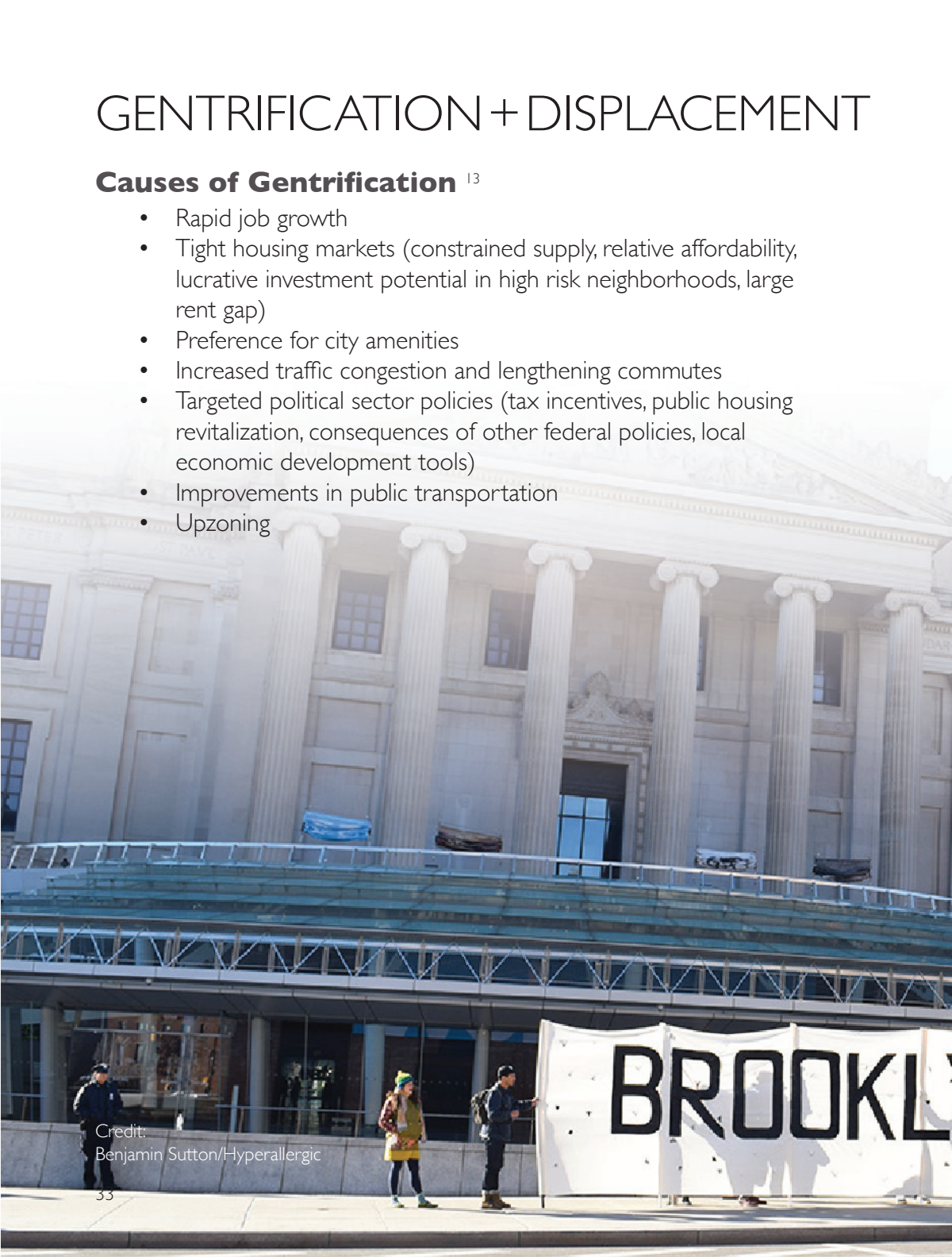
Displacement refers to the act of being priced out of a place due to physical or economic forces.[16] Physical displacement manifests itself through evictions or service disruptions, while economic displacement refers to rent increases leading to the physical relocation from a neighborhood.[16] San Fransisco's Planning Director John Rahaim explains, "Displacement can result from gentrification when neighborhoods become out of reach for people or can occur at earlier stages through disinvestment and increasing vacancies facilitating demographic turnover." Involuntary displacement often leads to a number of negative social outcomes including weakened social capital for marginalized and vulnerable groups. Furthermore, long term residents often have the feeling of being "pushed out" leading to a disconnection with their surrounding environments.[5,17]



GENTRIFICATION + DISPLACEMENT

Causes of Gentrification [13]

- Rapid job growth
- Tight housing markets (constrained supply, relative affordability, lucrative investment potential in high risk neighborhoods, large rent gap)
- Preference for city amenities
- Increased traffic congestion and lengthening commutes
- Targeted political sector policies (tax incentives, public housing revitalization, consequences of other federal policies, local economic development tools)
- Improvements in public transportation
- Upzoning



Credit:
Benjamin Sutton/Hyperallergic

Consequences of Gentrification [13]

- Involuntary or voluntary displacement of renters, homeowners, and local businesses
- Increase in real estate values and equity for owners, and increasing rents for renters and business owners
- Increasing tax revenue
- Greater income mix and deconcentration of poverty
- Changing street flavor and new commercial activity
- Changing community leadership, power structure and institutions
- Conflicts between old and new residents
- Increased value placed on neighborhood by outsiders

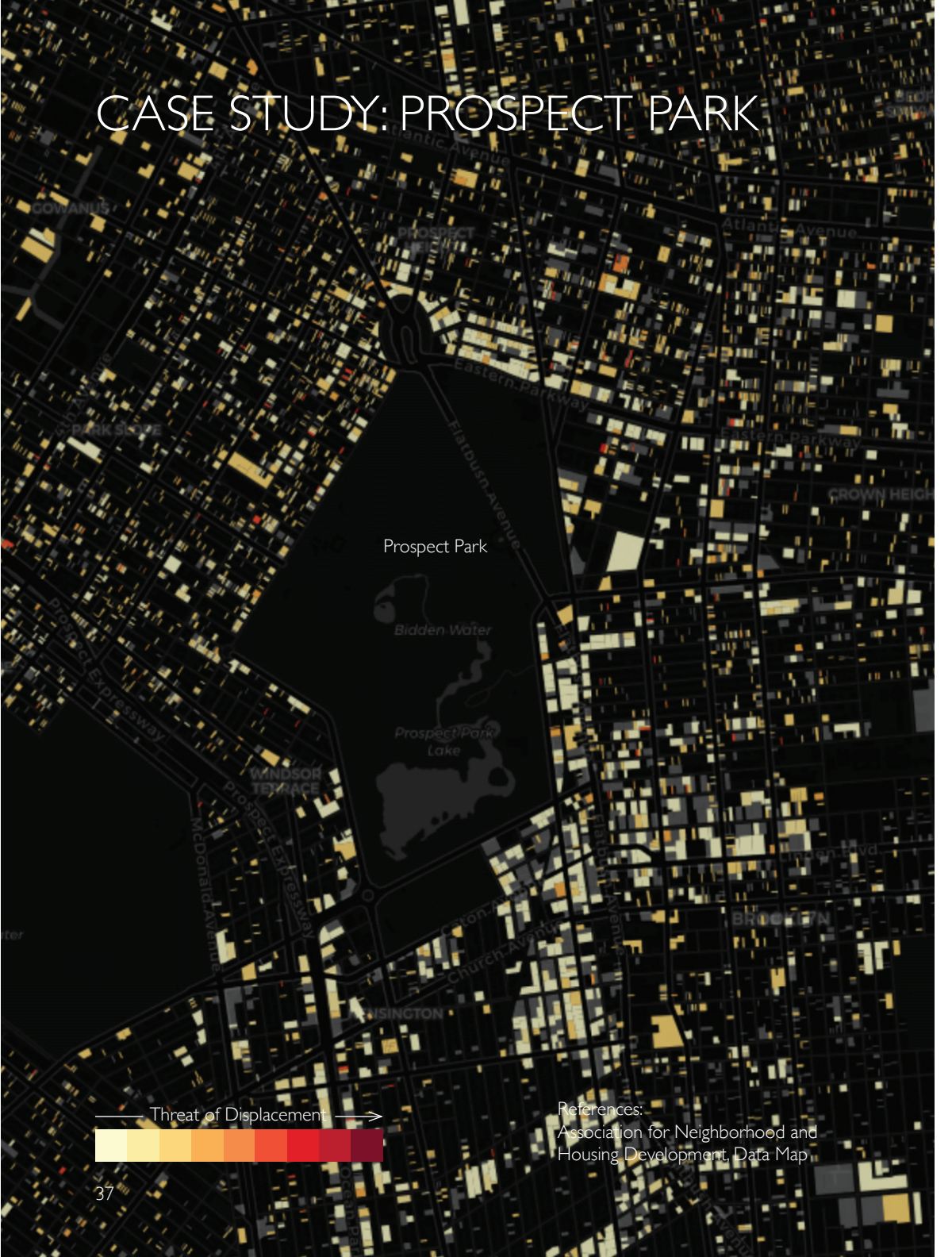
GREEN GENTRIFICATION

Studies in urban political ecology, urban geography, and planning have indicated that improvements to urban outdoor spaces - often referred to as urban greening - create elite pockets of environmental privilege for wealthy populations while excluding lower income residents from the benefits quality green space provides.[1] Conversely, poor quality environmental conditions, such as locally unwanted land uses and toxic pollutants, are often disproportionately associated with minority populations and low-income residents.[11] Quality environmental conditions, such as waterfront access and clean air and water, are often associated with wealthier and less diverse residents.[11] Housing adjacent to quality green spaces commands higher prices, ultimately constraining poor and working class residents to areas with poor quality environmental conditions.[11] The green displacement process can begin with initiatives to create or restore quality environments and amenities. These environmental benefits and amenities draw in wealthier groups, kick-starting the gentrification process and the potential displacement of low-income residents.[11] Displaced residents, along with losing social ties and support

systems, often lose or cannot afford the commutes to their jobs, making it even more difficult for them to improve their economic conditions and deepening socio-economic divisions.[11] Overall, research in green gentrification has been critical in exposing the potential relationship between the built environment and gentrification processes.[1] The following case studies illustrate extreme examples of green gentrification that have been widely studied and documented. However, there have been recent developments in countervailing measures that put social equity and environmental justice at the forefront in order to ensure marginalized and vulnerable communities reap the benefits of urban greening projects without the threats of displacement.

Rendered Plans Credit:
STUDIO V Architecture and Ken Smith Workshop

CASE STUDY: PROSPECT PARK



References:
Association for Neighborhood and Housing Development, Data Map

URBAN FLUX

Following World War II, Brooklyn experienced significant deindustrialization due to the closing of the Brooklyn Naval Yards and the shifting of port facilities to New Jersey. In the years that followed, Brooklyn's population declined due to reduced economic opportunities and white flight. Many of Brooklyn's white residents relocated to Long Island suburbs and New Jersey. In the early 1980s Brooklyn's population began to rebound, mostly due the large waves of Caribbean immigrants moving to the area. Higher wage manufacturing jobs were declining, giving way to lower wage service employment. Brooklyn's demographics became poorer and less white, resulting in urban decay. The borough experienced significant disinvestment throughout the 70's and 80's resulting in increases in crime and aid dependency. This decline impacted Fredrick Law Olmsted's Prospect Park and the environmental amenity was considered dangerous and perceived as a liability.[10]

In the 1990s, the construction of the Metrotech Center brought major reinvestment to Brooklyn. During this time, urban environmental amenities were becoming increasingly valuable,

CASE STUDY: PROSPECT PARK

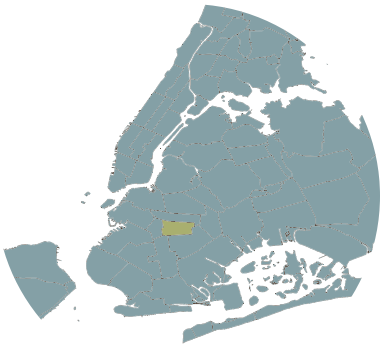
Credit:
Aaron Cantu

Credit:
amny.com

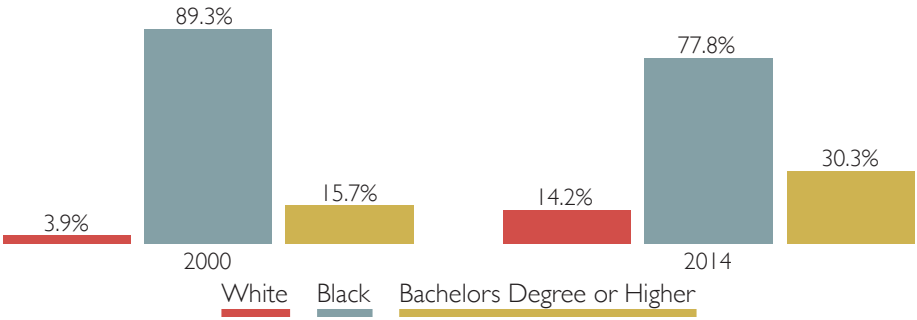
Credit:
Aaron Cantu

resulting in the reinvestment in Brooklyn's Prospect Park. Wealthy Manhattanites began to colonize Brooklyn's existing housing stock, and developers began purchasing real-estate for new construction. Building permits skyrocketed and by 2005 Brooklyn had more new residential construction permits than Manhattan. In Prospect Park, new features were introduced including, the Third Street Playground; attracting visitors that would not have used the park a few decades prior. Real-estate groups began using the park as a mechanism for moving houses and properties. In a raid on the Corcoran group, the National Fair Housing Alliance discovered a red-lined map, marking neighborhoods adjacent to Prospect Park and Brooklyn Bridge Park as areas where wealthier white residence should resettle. In neighborhoods adjacent to Prospect Park such as Park Slope, median rents have risen 51.7% while median incomes have increased 38.6% from the period of 1990 - 2009.[9] Though the reinvestment in Prospect Park, it is evident that the "greening" coupled with other economic drivers increased environmental inequality, dispersing long time residents and reducing access for poorer communities.[10]

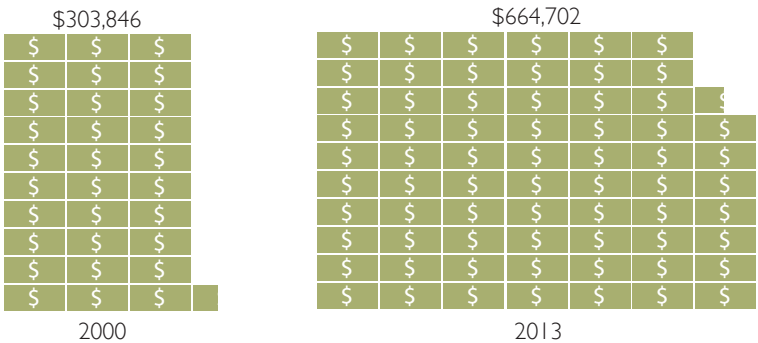
URBAN FLUX



Demographic Change in Lefferts Gardens, 2000 - 2014



Median Single Family Owner Occupied Home Value



CASE STUDY: THE HIGHLINE

The High Line is a 1.45 mile-long elevated linear park that was created on a former New York Central Railroad spur in Manhattan's West Chelsea neighborhood.[12] Designed by the landscape architecture and architecture firms of James Corner Field Operations and Diller Scofidio + Renfro, the park serves as a case

1934: West Side Line Opens to Trains

Chelsea neighborhood known for industry and affrodable housing

1980: Railway Viaduct Abandoned

Chelsea neighborhood is "gritty" + working-class

study for the effects of green space creation on a gritty, working-class neighborhood's housing market, real estate development, and character.[12] Between 1869 -1969, Chelsea was known for its industrialized nature and affordable housing costs.[4] The working railway line helped support blue collar jobs and maintained low housing prices in the midst of a rapidly changing city, until it was disconnected from the national rail system in 1980.[4] The abandoned railway viaduct, left to its own devices and overgrown with vegetation, was by many referred to as an eyesore; now

CASE STUDY: THE HIGHLINE


Credit:
Mariela Quintana


Credit:
Tom Chalmers


Credit:
Tom Chalmers

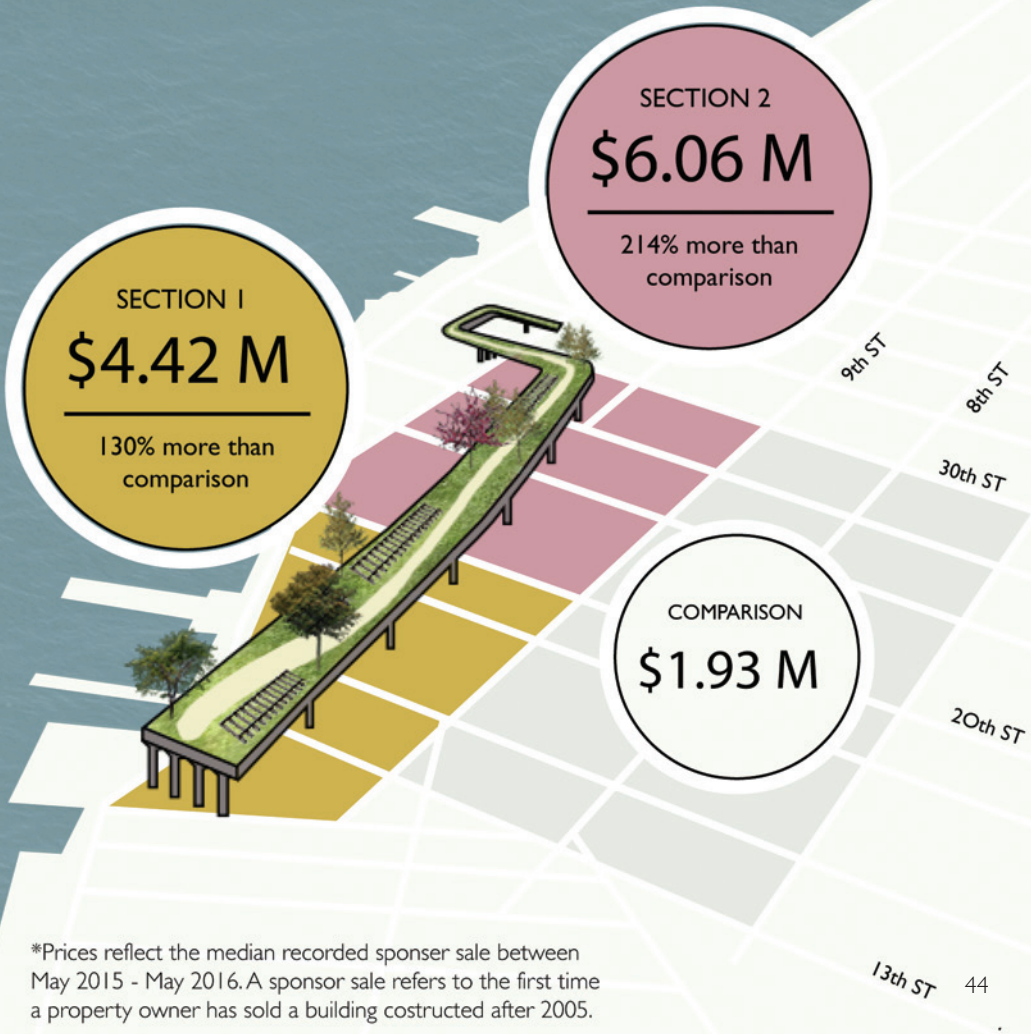
it attracts over 20 million visitors each year and has spurred a boom in luxury real estate development and high-income ammenities.[10,15] In 2005, the neighborhood was re-zoned for high-end development. Today, real estate directly adjacent to the High Line costs 130% - 214% more than comparable real estate a couple blocks away.[15]

By purely economic measures, the High Line is a huge success: it holds tremendous potential in economic gain for the city, as it is expected to generate roughly $1 billion in tax revenues the next 20 years, in addition to serving as a large tourist draw.[3] On a social standpoint, High Line co-founder Robert Hammond admits that the park has largely failed the local community it set out to serve, as most low-income and non-white residents were displaced due to the boom in adjacent luxury real estate development and neighborhood changes it caused.[3] "We were from the community. We wanted to do it for the nieghborhood," Hammond said.[3] "Ultimately, we failed."[3] Today, most of the High Line 's foot traffic consists of tourists and is overwhelmingly white.[3] Reflecting on early planning meetings,

HIGH PREMIUMS ALONG THE HIGH LINE

Sales in new developments along Sections 1 and 2 of the High Line command high premiums in comparison with new development sales in neighboring areas.

Map data and design inspiration from https://streeteasy.com/blog/changing-grid-high-line/

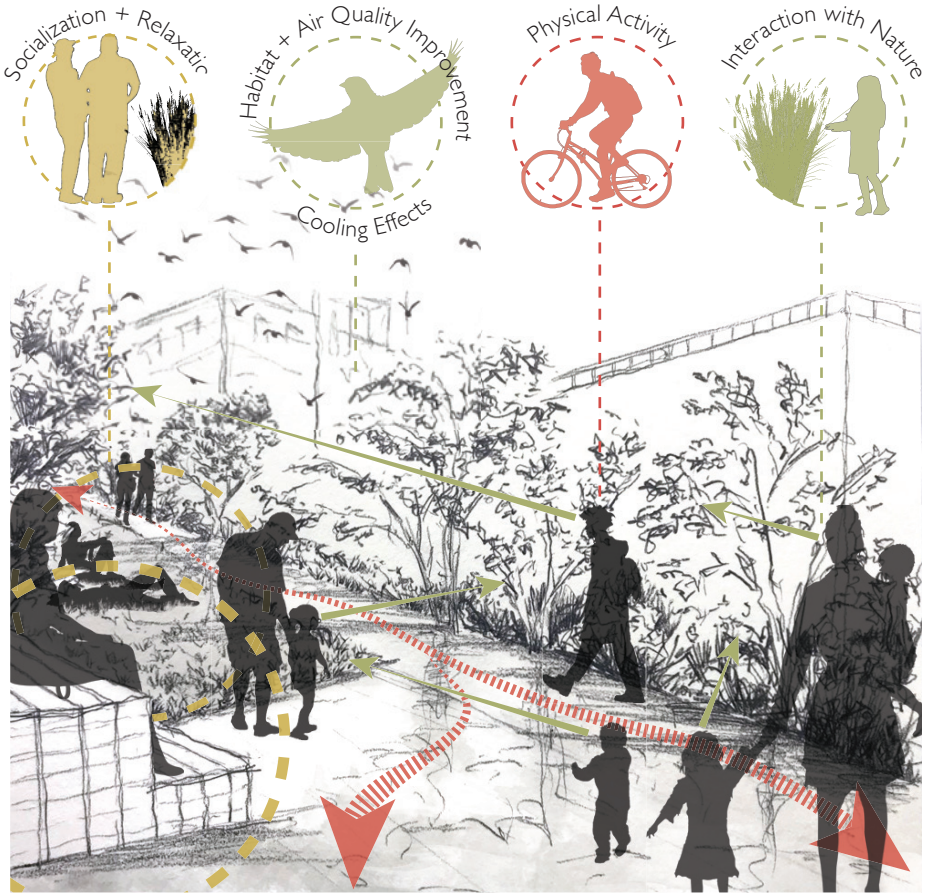


*Prices reflect the median recorded sponser sale between May 2015 - May 2016. A sponsor sale refers to the first time a property owner has sold a building costructed after 2005.

CASE STUDY: THE HIGHLINE

Hammond said that "instead of asking what the design should look like, I wish we asked, 'What can we do for you?' Because people have bigger problems than design."[3]

Hammond, who now runs Friends of the High Line (FHL), a nonprofit that funds, maintains, and programs the park, is making efforts to increase the park's appeal to a broader diversity of users.[3] In 2011 FHL launched a series of "listening sessions" with public housing tenants which concluded that what residents most needed were



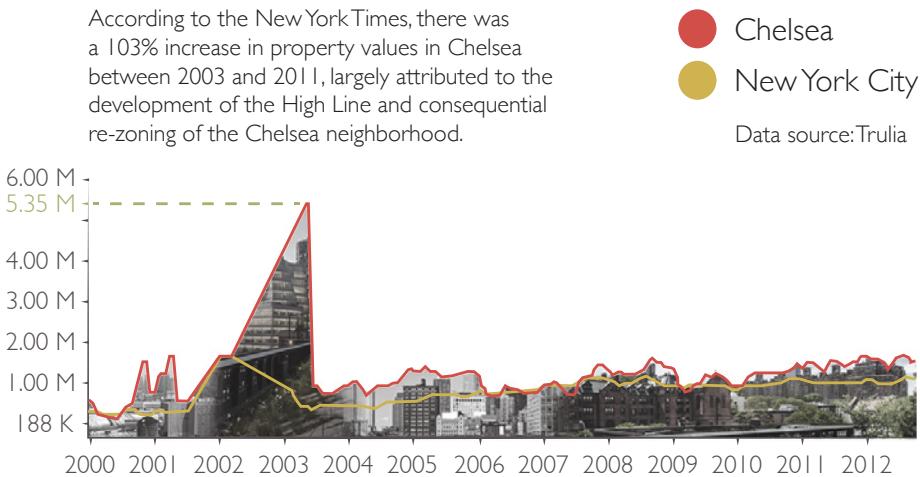
jobs and affordable living costs.[3] Residents also cited three main reasons for not using the High Line: they didn't feel as if it was built for them; "they didn't see people who looked like them; and they did not like the park's densely vegetated programming."[9]

In response, FHL launched a series of new programmatic initiatives to take place at the High Line, such as paid jobs-training programs and public housing-only events and activities.[9] Partnering with adjacent public housing developments, FHL allowed residents to develop their own programmatic scheduling, such as the popular ARRIBA!, a Latin dance party series initiated by a public housing resident.[3] To achieve broader results, Hammond formed the High Line Network to ensure new rails-to-trails projects, such as the NYC's Lowline, do not cause such vast gentrification and work to benefit all residents.[9]

Median Real Estate Sales Price

Chelsea | NYC

According to the New York Times, there was a 103% increase in property values in Chelsea between 2003 and 2011, largely attributed to the development of the High Line and consequential re-zoning of the Chelsea neighborhood.



SOURCES

1. Anguelovski, I. J., Connolly, J., Garcia-Lamarca, M., Cole, H., & Pearsall, H. (2018). New scholarly pathways on green gentrification: What does the urban 'green turn' mean and where is it going? Progress in Human Geography.1

2. Barton, Michael S. "Gentrification and Violent Crime in New York City." Crime & Delinquency, vol. 62, no. 9, 2016, pp. 1180–1202., doi:10.1177/0011128714549652.

3. Bliss, Laura. "The High Line's Biggest Issue-And How Its Creators Are Learning From Their Mistakes." CityLab, 28 Feb. 2017, www.citylab.com/solutions/2017/02/the-high-lines-next-balancing-act-fair-and-affordable-development/515391/.

4. Chelsea, eportfolios.macaulay.cuny.edu/ocejospring14chelsea/history/.

5. Curran, Winifred. "'Mexicans Love Red' and Other Gentrification Myths: Displacements and Contestations in the Gentrification of Pilsen, Chicago, USA." Urban Studies, vol. 55, no. 8, 2017, pp. 1711–1728., doi:10.1177/0042098017736503.

6. Ellen, I., & O'Regan, K.(2011-12-15). Gentrification: Perspectives of Economists and Planners. In The Oxford Handbook of Urban Economics and Planning. : Oxford University Press. Retrieved 6 Jul. 2018

7. Florida, Richard. "Why Cities Matter." CityLab, The Atlantic Monthly Group, 15 Sept. 2011, www.citylab.com/design/2011/09/why-cities-matter/123/.

8. "Gentrification." Merriam-Webster, Merriam-Webster, www.merriam-webster.com/dictionary/gentrification?utm_campaign=sd&utm_medium=serp&utm_source=jsonld.

9. Gibson, Eleanor. "High Line Creators Launch Website to Advise on Avoiding Gentrification." Dezeen, Dezeen, 4 Jan. 2019, www.dezeen.com/2017/06/22/high-line-network-website-launch-offer-advice-avoiding-gentrification/.

10. Gould, Kenneth A., and Tammy L. Lewis. "From Green Gentrification to Resilience Gentrification: An Example from Brooklyn1." City & Community, vol. 17, no. 1, 2018, pp. 12–15., doi:10.1111/cico.12283.

11. Gould, K., & Lewis, Tammy L. (2017). Green gentrification : Urban sustainability and the struggle for environmental justice (Routledge, equity, justice, and the sustainable city series). Abingdon, Oxon ; New York, NY: Routledge.

12. "History." The High Line, www.thehighline.org/history/.

13. Kennedy, Maureen, and Paul Leonard. Dealing with Neighborhood Change: a Primer on Gentrification and Policy Choices. Brookings Institution Center on Urban and Metropolitan Policy, 2001.

14. Leon, D. (2008). Cities, urbanization and health. International Journal of Epidemiology, 37(1), 4-8.

15. Quintana, Mariela. "Changing Grid: Exploring the Impact of the High Line." Streeteasy.com, 8 Aug. 2016, streeteasy.com/blog/changing-grid-high-line/.

16. Rahaim, John. "Mission Action Plan 2020 ." San Francisco Planning, Mar. 2017, default.sfplanning.org/Citywide/Mission2020/MAP2020_Plan_Final.pdf.

17. Versey, H. Shellae. "A Tale of Two Harlems: Gentrification, Social Capital, and Implications for Aging in Place." Social Science & Medicine, vol. 214, 2018, pp. 1–11., doi:10.1016/j.socscimed.2018.07.024.

18. Zwirn, Lisa. "In NYC, Meatpacking Distric Gets a Chic Transformation." Boston.com, The Boston Globe, 6 Oct. 2010, archive.boston.com/lifestyle/food/articles/2010/10/06/in_nyc_meatpacking_distric_gets_a_chic_transformation/.

19. "68% Of the World Population Projected to Live in Urban Areas by 2050, Says UN | UN DESA Department of Economic and Social Affairs." United Nations Department of Economic and Social Affairs, United Nations, 16 May 2018, www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html.

URBAN FLUX

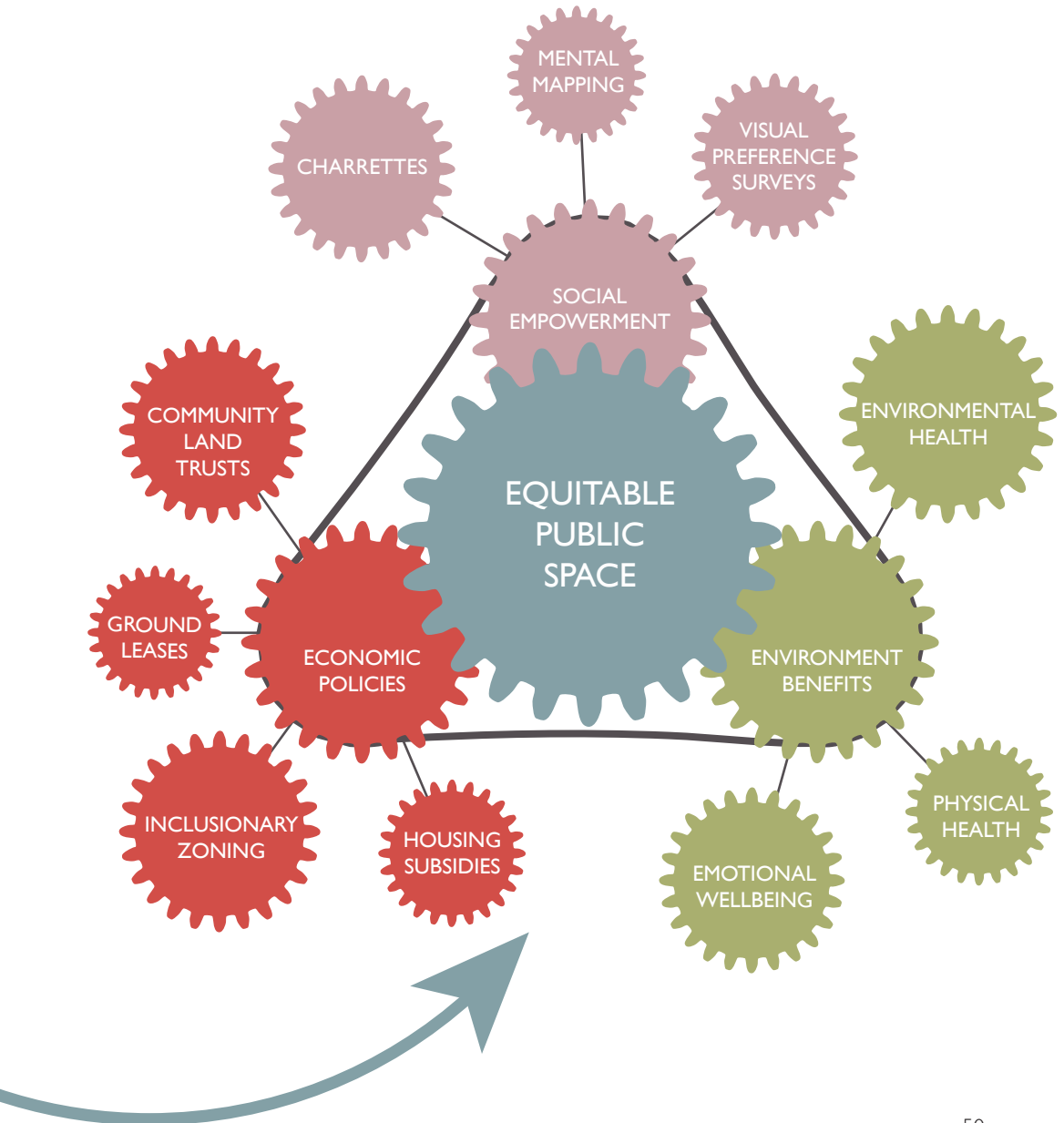
URBAN GREEN SPACES

EMPOWERMENT

PARTICIPATION

POLICY

DESIGN

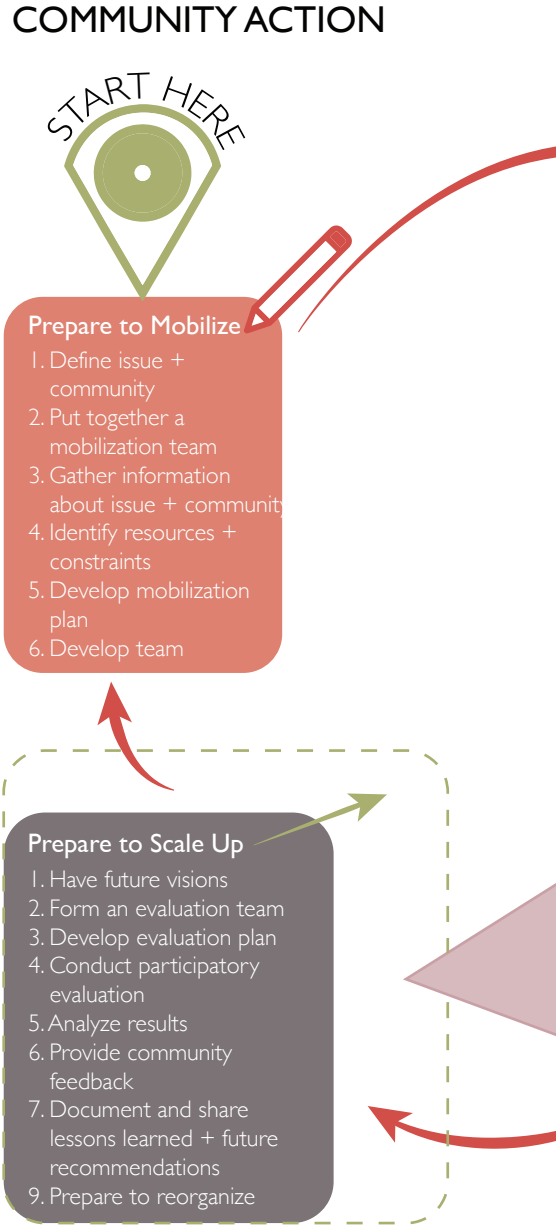

MENTAL MAPPING
CHARRETTES
VISUAL PREFERENCE SURVEYS
SOCIAL EMPOWERMENT
COMMUNITY LAND TRUSTS
ENVIRONMENTAL HEALTH
EQUITABLE PUBLIC SPACE
GROUND LEASES
ECONOMIC POLICIES
ENVIRONMENT BENEFITS
INCLUSIONARY ZONING
HOUSING SUBSIDIES
PHYSICAL HEALTH
EMOTIONAL WELLBEING

COMMUNITY EMPOWERMENT

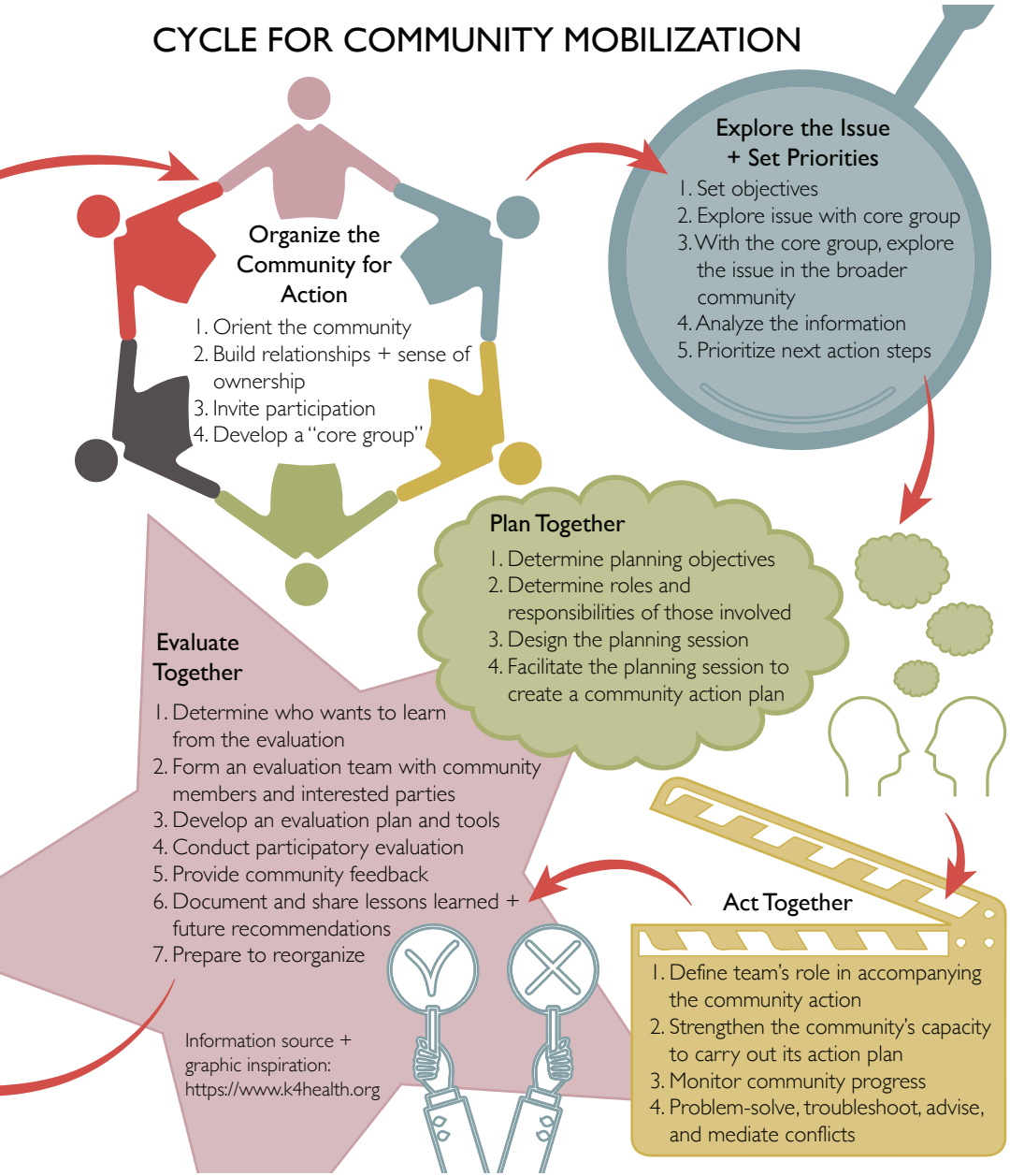
EMPOWERMENT

STRONG DEMOCRACY

A knowledgeable, empowered, and organized community has the potential to combat displacement while withstanding and absorbing shifts in socio-economic neighborhood and regional dynmics.[21] Today, many urban citizens, particularly minority populations of low socio-economic status, lack the knowledge and organizational power necessary for control over neighborhood changes, rent prices or housing situations.[21] By educating community members about their local, state and national rights as tenants and providing a variety of accessible options for communication and idea sharing, the local community has a better chance of withstanding displacement.[21] From a designer's perspective, learning from and working with vulnerable or minority communities allows for designers, decision makers, and various stakeholders to become more knowledgeable with facets of the community that may not be obvious or traceable through typical site analysis methods.[23] Participatory action research is a step designers can take to better understand community needs while encouraging community members to take active steps in improving their own situations.[1]



CYCLE FOR COMMUNITY MOBILIZATION



COMMUNITY EMPOWERMENT +

Community participation in design, planning, and housing and development sectors is essential in building equitable, resilient neighborhoods; equitable community participation, however, requires thoughtful organization and empowerment.[21] Community empowerment builds collective power through an iterative, on-going process that calls upon community development strategies such as civic engagement, capacity building, and collaboration.[23] Important initial steps in community empowerment include agitation and base building. Agitation refers to building awareness about issues facing the community, and is often done through person-to-person interaction. As a result of the awareness built by agitation, a base that shares common goals may be formed. It is from this base that community empowerment efforts may be built upon.[10]

However, there are many challenges associated with community empowerment and equitable participation, especially within low socio-economic status or minority communities. Particularly for vulnerable populations, finding time for community participation is difficult; residents have fewer resources for child and senior care, and often hold multiple jobs or long work hours.[23] Gender may play a significant role in representation, as there are often barriers such as hierarchical relationships, power differentials, and uneven domestic burdens that prevent women, especially those of vulnerable populations, from participating in traditional community planning processes.[10]

For these reasons, it is important for community organizers to be flexible in their approaches to information gathering and participation. Building one-on-one relationships, identifying and linking people based upon individual motivations, creating a positive and inviting organizational culture, and strengthening listening skills, and offering alternative communication techniques, such as storytelling, are all methods community organizers may utilize in facilitating inclusive and accessible participatory processes.[7, 10, 13]

PARTICIPATION

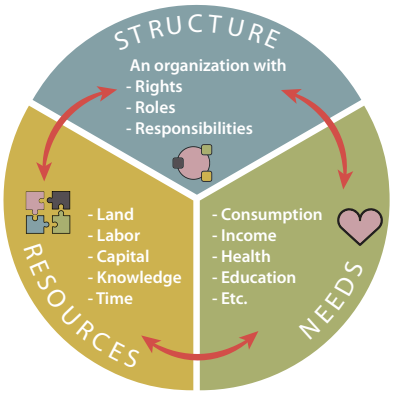
EMPOWERMENT

ENGAGEMENT

Community and civic engagement are essential steps in community organizing and participatory action.[7] Civic engagement involves involvement in electoral processes, while community engagement often involves organizing civic engagement efforts. Both types give residents greater control over the future of their communities.[9]

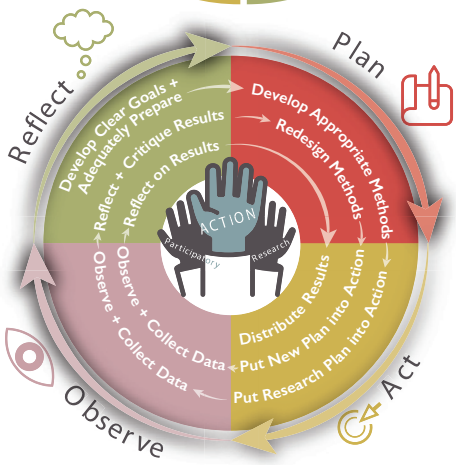
CAPACITY BUILDING

Community capacity building is a bottom-up, ongoing process that fosters the local pride and leadership necessary for community members to take responsibility for their own development and growth. It is essential to consider whose voices are represented, whose interests are being served, and whose voices are missing.[24]



PARTICIPATORY ACTION

In planning for future development, community members define their interests and priorities through taking a participatory role in the planning process. Participatory action utilizes action learning in social enterprises to build skill-sets and self-resilience, and involves a cooperative relationship between leaders and members.[25]



NEIGHBORHOOD ALLIANCES +


Credit:
Myneighborhoodalliance.org

RESIDENT CARE + ENRICHMENT

Neighborhood alliances and organizations often offer a variety of resident care and enrichment programs. These programs, offered free or at reduced costs, are often tailored to families, seniors and children, and may include meals, educational programs, physically and mentally enriching activities, and social support.[14]


Credit:
Logan Square Neighborhood Association

EDUCATION + MENTORSHIP

Many neighborhood organizations offer mentorship and education programs for children, teenagers and young adults. Some also offer mentorship training for adults. Mentorship programs often focus on relationship building, leadership development, and support in fostering safe, nurturing and responsible communities and citizens.[18]


Credit:
Jim Beckel, The Oklahoman

SHELTER+ MEALS

Many organizations provide basic needs such as shelter and meals to homeless and at-risk youth, families and individuals.[14] Meals are often healthy and facilitate connections with trained advocates and support coordination staff to help get people the help they need and facilitate a sense of worth and self-determination.[15]

ORGANIZATIONS EMPOWERMENT

DEVELOPMENT + ZONING

Neighborhood alliances serve as powerful tools for communities to influence or resist changes in local development plans and to be involved in planning and zoning efforts. They often promote more housing choices and provide municipalities with tools to make development more predictable, transparent and equitable for all.[20]

Credit:
https://ma-smartgrowth.org

RENTER'S RIGHTS

Although laws vary by state, tenants have inherent rights and typically have the right to organize. Landlords are prohibited from retaliating against tenants or tenant organizations. Tenant organizations help to educate, identify issues, set goals, assign volunteer roles, and build social capital amongst community members.[16]

Credit:
San Francisco Tenants Union

A BROADER VOICE

Neighborhood alliances may serve as a collective voice in communicating neighborhood concerns to appropriate city entities and in relaying important city-wide issues and events to the neighborhood. Often, neighborhood alliances facilitate meetings with the City Council to help communities have a greater say in local political decisions.[4]


Credit:
Finn Hill Neighborhood Alliance

COMMUNITY OWNERSHIP + ANTI-DISPLACEMENT STRUCTURES

Research suggests a strong link between home ownership and positive social benefits, such as collective efficacy, defined as social cohesion amongst neighbors and their willingness to contribute to the common good of the community.[12] Collective efficacy improves residents' perceptions regarding neighborhood safety and order.[12] Particularly when combined with sustainable mortgages, home ownership positively impacts residents' mental and physical wellbeing and allows them to invest in other areas of their lives.[12] Ownership, whether individual or collective allows for the generation of equity coupled with the potential benefits from new or upgraded open spaces. Studies have found that design also plays an important role in enhancing residents' collective efficacy and sense of community, as walkable neighborhoods and active, sociable street life increases wellbeing.[27]

Credit: Walt Smith '50

NONPROFIT HOUSING

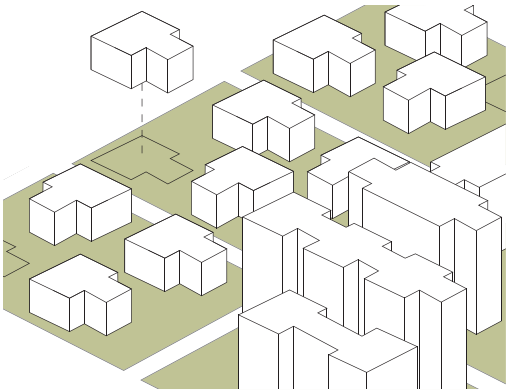
Nonprofit organizations partner with housing developers and other invested parties to address neighborhood preservation, development, and stabilization that benefits vulnerable communities.[22] Most nonprofit housing focuses on home ownership, as home owners are typically better able to thrive in place over the long-term.[6]

LIMITED EQUITY COOPERATIVE

Limited equity housing cooperatives (LEHCs) are designed to encourage home ownership amongst low- and moderate-income families. Typically, LEHCs are adapted to accommodate multiple families who share common areas and partake in decision making, and are taxed at below market-rate to help maintain long-term affordability.[17]

COMMUNITY LAND TRUSTS

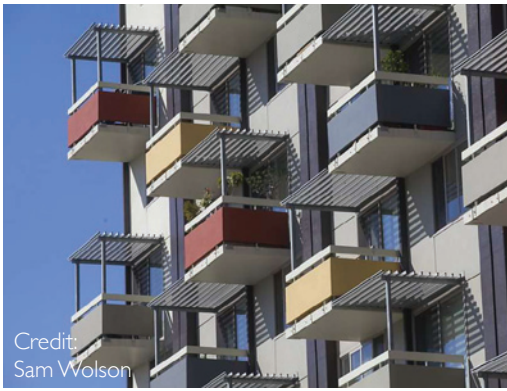
Similar to LEHCs, community land trusts (CLTs) aim to create long-term affordable home ownership opportunities. Using income limits and resale price restrictions, CLTs maintain ownership of the land and rent it via a long-term ground lease to residents who collectively own the building through shares in the co-op.[17]



NONPROFIT HOUSING ORGANIZATIONS

Nonprofit housing organizations are effective at combating displacement because they are committed to keeping homes affordable by striving to support the most vulnerable members of society and provide an array of support beyond housing, such as education, childcare and employment counseling.[2] In 2007, nonprofit organizations had produced roughly 1.5 million housing units for low- and moderate-income residence, while accounting for one-third of all federally subsidized housing.[2] Broadly speaking, there are three types of nonprofit housing organizations; community development corporations, large regional or citywide nonprofit

organizations and nonprofit providers of support housing.[2] Community Development Corporations (CDCs) have provided the most units in relation to all nonprofit housing organizations. Developed in the 1960s, CDCs are focused on quality housing and other needs of specific neighborhoods, such as economic development, streetscaping, sanitation, and neighborhood planning projects.[2,5] By 2005, 4,600 CDCs were operational and successful at developing or renovating 1.6 million low- to moderate-income units.[2] In addition to developing units, CDCs provide a number of housing-related activities and services such as tenant and home buyer counseling, homeless services, existing housing stock acquisition, home repairs, and assistance with home purchasing financing.[2] In order to acquire funds for housing development and management, CDCs receive support from the government, philanthropists and other resources.[2] National intermediaries are critical support systems for CDCs because they provide technical and financial assistance through syndicating housing tax cuts, loans and grants to cover costs.[2] Furthermore, national intermediaries provide training and professional development.[2]


Credit:
Sam Wolson


Credit:
Eric Staudenmaier


Credit:
Tiffany Halperin Landscape Arxhitecture

LIMITED EQUITY COOPERATIVES

Limited Equity Cooperatives (LECs) are often large density cooperative apartment buildings that are price restricted. Affordability is maintained by capping the transfer value of cooperative shares to limit the profits owners can make off of their units. LECs allow renters to become homeowners without having to qualify for traditional financing. Additionally, the risks and costs of homeownership are spread across a number of stakeholders, unlike traditional home ownership in which these factors fall solely on the individual or family. Collective ownership gives owners the ability to avoid the troubles of maintenance and the risk of debt financing. LECs provide the same tax advantages given to fee simple homeowners while

providing other benefits associated with homeownership, such as economic and social benefits. These advantages are assessed on shares of the cooperative rather than individual units. Many LECs are created through mortgage interest subsidies or by the government. LECs are effective when implementing mixed income housing because the combination of high- to low-income residents make it more likely that the LECs can cover operating costs and set aside reserves.[19]

Cooperative buildings have been shown to foster higher levels of social capital than private, community-based or public housing typologies.[19] Social capital is associated with lower crime, increased community participation and better building conditions.[19] LECs help increase residents' sense of agency and ownership in their communities, as common ownership and decision making are key concepts of this housing model.[11] Overall, incorporation of LECs into federal housing policies has the potential to increase homeownership for low- to moderate-income households, while creating mixed income neighborhoods and increasing civic capacity and community engagement.[19]


Credit:
Rafael Wiedenmeier


Credit:
Volker Schopp


Credit:
Joel Raskin

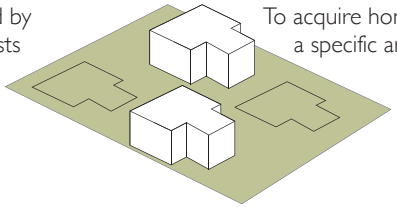
COMMUNITY LAND TRUSTS

Diverse sources of capital (public + private)

Are obtained and used by Community Land Trusts

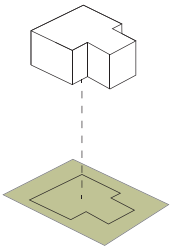
CLT

To acquire homes in a specific area



A resident purchases their house outright . . .

. . . but leases the land from the CLT



They pay an annual fee to the CLT to support operations . . .

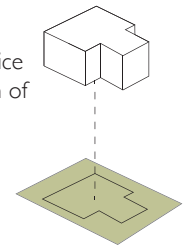
CLT

. . . and the CLT keeps permanent ownership of the land

Current resident sells their house at a price determined by the CLT, earning a portion of the increase in value of their home . . .

CLT

. . . while the CLT keeps the land



A new resident purchases the house at a price thats been kept affordable . .

. . . and agrees to the same requirements pertaining to resale

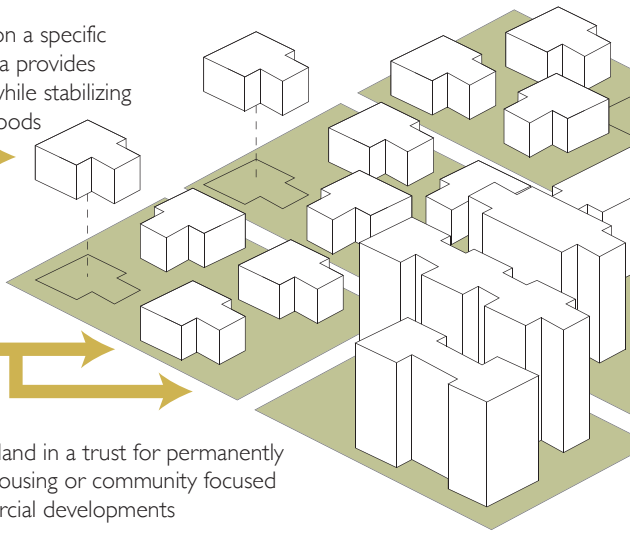
1/3 CTL Residence

1/3 Community Members

1/3 Expers and Stakeholders

CLT

The CTL's focus on a specific geographical area provides affordable housing while stabilizing neighborhoods

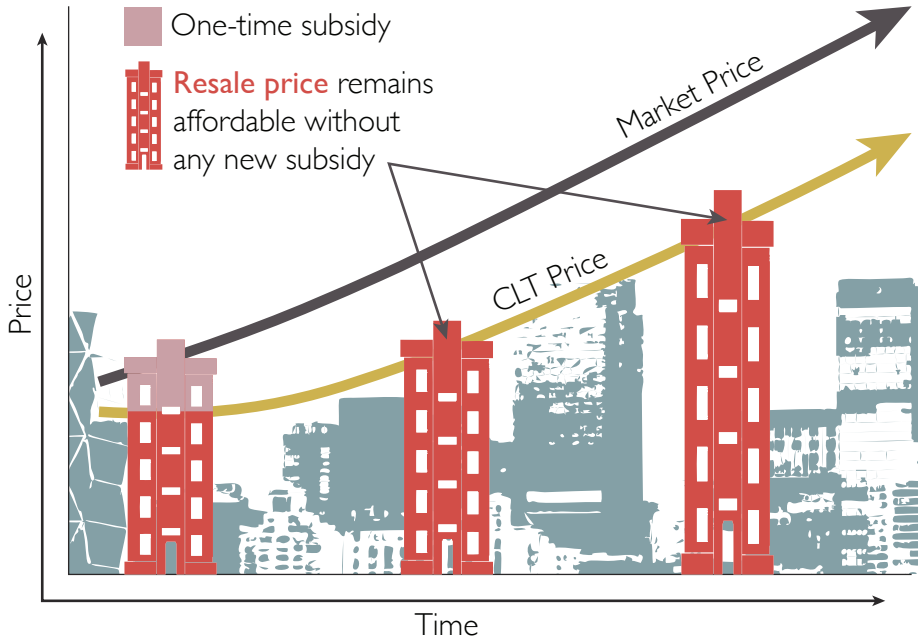


The CTL can own land in a trust for permanently affordable rental housing or community focused commercial developments

Map data/inspiration form https://community-wealth.org/content/infographic-community-land-trusts

EMPOWERMENT

Community Land Trusts (CLTs) are typically private, nonprofit corporations that acquire land in specific target areas with intentions of owning the land for long periods of time. CLTs separate the cost of land from the house, reducing the overall cost of owning a home for qualified low- to moderate-income individuals or families. CLTs allow for private use of the land through long-term ground lease agreements. Contractual controls within the ground lease make the properties permanently affordable. Furthermore, most ground leases ensure that the CLTs have the first option to purchase the land upon resale, ensuring permanent affordability. Leaseholders can make improvements on the land and to their homes, however resale restrictions apply to maintain affordability. Efforts of individual members have been crucial to the formation of most CLTs and local community groups are the third major factor in start up support. In the past three decades, municipal governments have taken an interest in sponsoring CLTs to provide permanent housing affordability.[8]



Credit: Rick Jacobus

COMMUNITY LAND TRUSTS

A variety of types of CLTs can be found throughout the country, due to varying city and state laws. In 2006, the City of Chicago developed the Chicago Community Land Trust, staffed by the City of Chicago Housing Department. In this citywide CLT, the city provides land and/or subsidies to make affordable homes available for income qualified individuals or families. In exchange for subsidies and reduced property taxes, the CLT homeowners agree to resale restrictions ensuring affordability. The affordable sales price comprises of the original affordable price plus any increase in market value, giving homeowners a return in their investments. The subsidies then stay with the home, prolonging its affordability.[3]

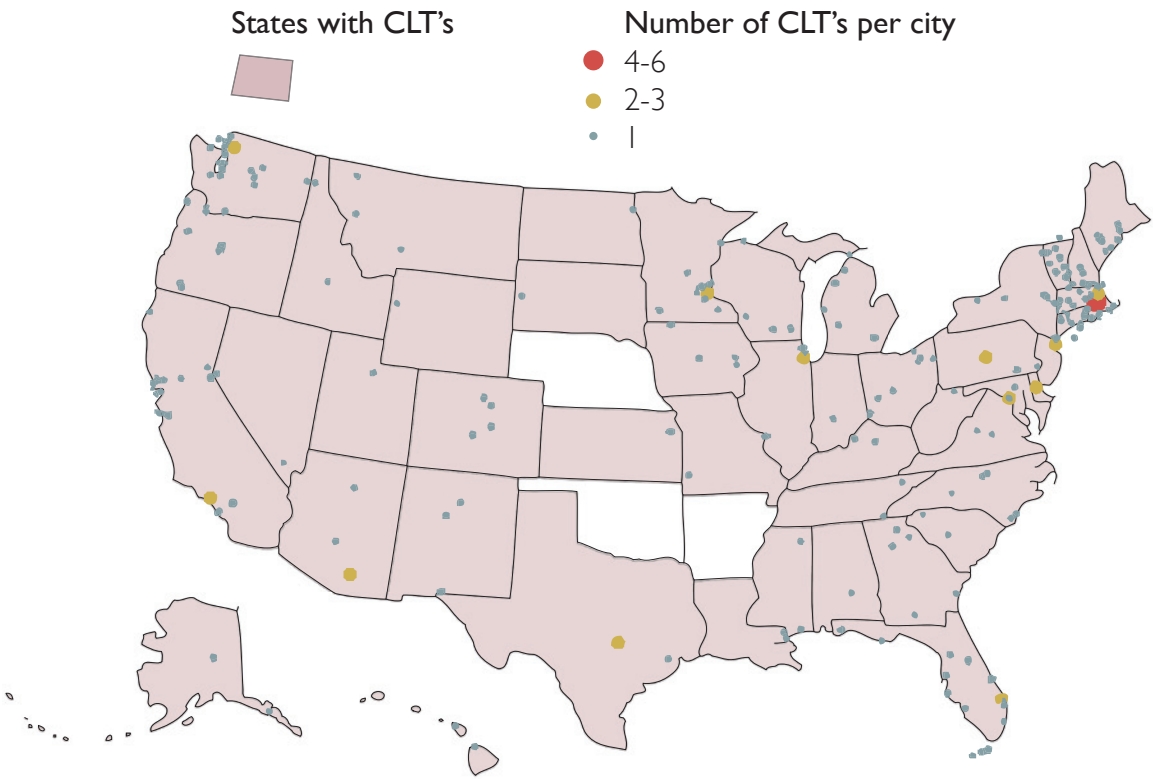
Chicago Community Land Trust (CCLT) Pricing Example		
Price Examples	**Market Home**	**CCLT Home**
Market Value	$ 240,000	$ 240,000
Purchase Price	$ 240,000	$ 165,000
Annual Property Taxes (estimated)	$ 4,200	$ 2,888
Required Income	$ 76,000	$ 53,900
Monthly Cost	$ 1,900	$ 1,347

Credit: Chicago Community Land Trust


Credit: lopezclt.org


Credit: caloncymru.org

EMPOWERMENT



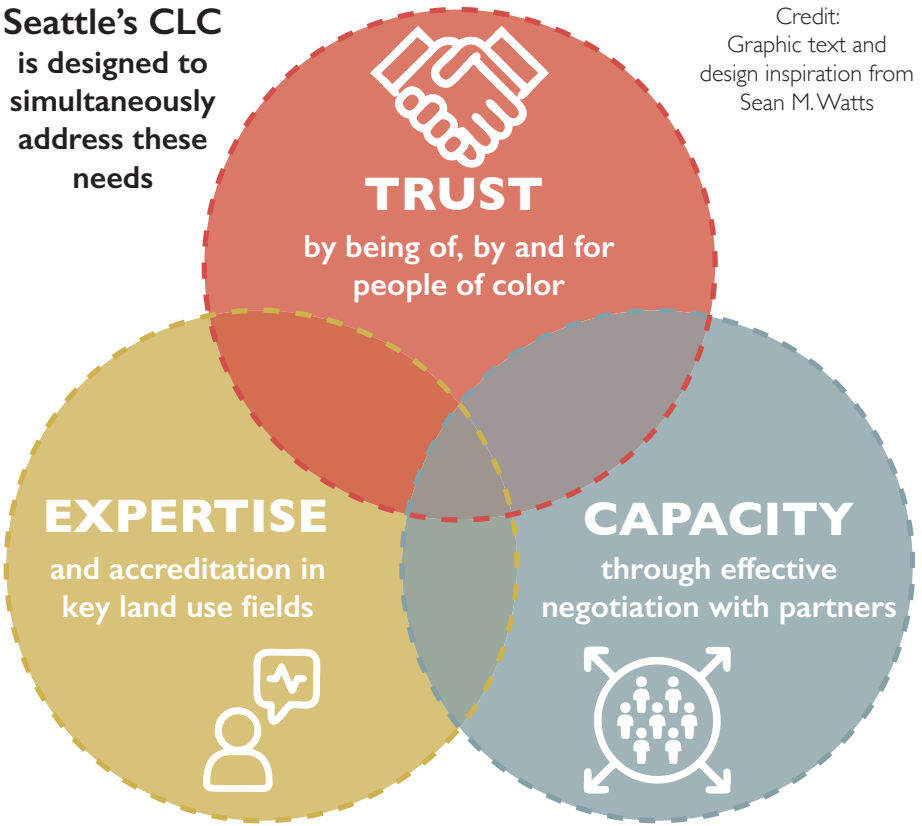
Map inspiration and date by Yesim Sungu-Eryllmaz for the national CLT Academy, 2008


Credit:
Andrew at Blogger


Credit:
kendall.org

COMMUNITY LAND CONSERVANCY

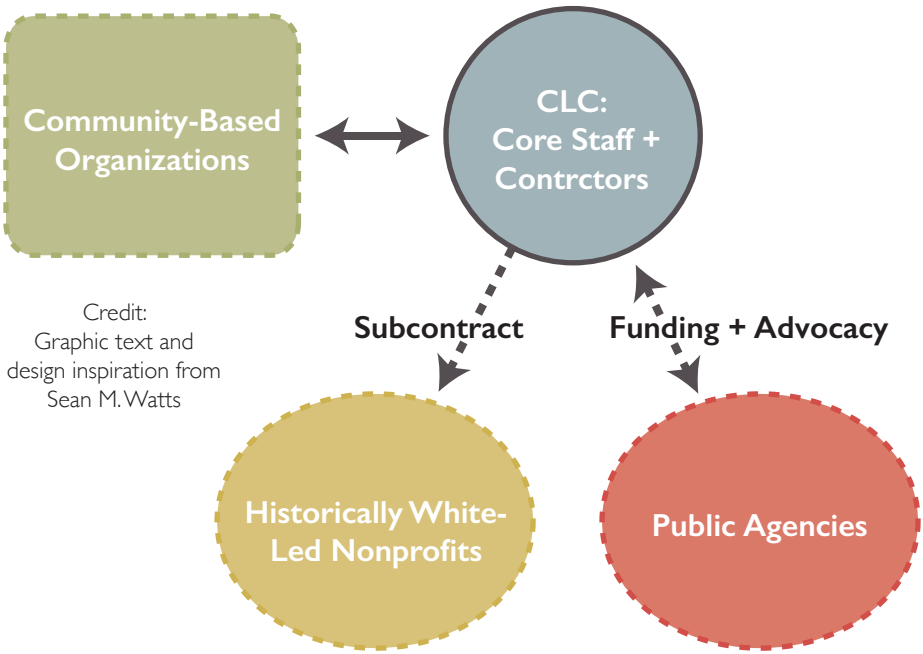
Community Land Conservancies function similar to Community Land Trusts. These organizations advocate for community development and empowerment, the provision of affordable housing, and the acquisition of land for open space and conservation. In Seattle, residents of the Duwamish Valley are disproportionately affected by environmental burdens. The community has voiced their concerns about the negative repercussions of gentrification and are challenged by the lack of trust, low barriers for development and high barriers of influence. Seattle's CLC would fill this void by acquiring and retaining land to integrate open space into development planning while advocating for publicly accessible open



Credit:
Graphic text and design inspiration from Sean M. Watts

space in developments. Seattle's CLC would act as a technical advisor and partner with Community Based Organizations on land use issues while increasing the social, political and economic influence of underserved communities in development planning. Seattle's CLC would strive to create affordable and livable neighborhoods, with the conviction that socioeconomic status should not determine peoples' access to nature and residents should not have to choose housing over green communities or vice versa. The CLC would simultaneously address the values of trust, expertise and capacity to empower the local community in providing people with affordable homes and green neighborhoods: trust by being of, by and for people of color; expertise and accreditation in key land use facilities; and capacity through effective negotiations with partners.[26]

Seattle's Community Land Conservancy Proposed Structure



Credit: Graphic text and design inspiration from Sean M. Watts

Core Staff: Executive Director, Director of Strategic Partnerships
Contract Team: Land Use Law, Real Estate Finance + Development

SOURCES

1. Baum, Fran, et al. "Participatory Action Research." Journal of Epidemiology and Community Health, 2006 Oct, no. 60(10), Oct. 2006, pp. 854–857., doi:10.1136/jech.2004.028662.

2. Buckley, Robert M., and Alex F. Schwartz. "Housing Policy: The Evolving Subnational Role." Oxford Handbooks Online, 2012, doi:10.1093/oxfordhb/9780199765362.013.0023.

3. "Chicago Community Land Trust Homebuyer Fact Sheet." Chicago Community Land Trust, www.cityofchicago.org/content/dam/city/depts/dcd/general/housing/CCLTHomebuyerFactSheet2016.pdf.

4. "City Council Meetings with the Neighborhoods." History of Kirkland, City of Kirkland, 2019, www.kirklandwa.gov/depart/CMO/Neighborhood_Services/Council_Neighborhood_Meetings.htm.

5. "Community Development Corporations (CDCs)." Community-Wealth.org, Democracy Collaborative, 18 Feb. 2014, community-wealth.org/strategies/panel/cdcs/index.html.

6. Edmiston, Kelly D. (2012). Nonprofit housing investment and local area home values. Economic Review (Kansas City), 97(1), 67-96.

7. Enrique, Lorena, & Cynthia. (2016). Minority Voice in Community Design Building Processes. Procedia Engineering, 145, 372-379.

8. Greenstein, Rosalind, and Yesim Sungu-Eryilmaz. "Community Land Trusts: A Solution for Permanently Affordable Housing." Democracycollaborative.org, dev.democracycollaborative.org/sites/clone.community-wealth.org/files/downloads/article-greenstein.pdf.

9. Kselman, Julia. "Defining Our Terms: A Conversation on Community Organizing and Related Terms ." Bolder Advocacy, Alliance for Justice, 2011.

10. Lee, Roz, et al. "BUILDING A BASE FOR COMMUNITY ORGANIZING with a Focus on ONE-ON-ONE MEETINGS." The New York City Organizing Support Center, The New York City Organizing Support Center, July 2000.

11. "Limited Equity Cooperatives." Shared Equity Homeownership, Watermelon Web Works LLC, 25 June 2009, www.homesthatlast.org/models/limited-equity-cooperatives/.

12. Lindblad, M., Manturuk, K., & Quercia, R. (2013). Sense of community and informal social control among lower income households: The role of homeownership and collective efficacy in reducing subjective neighborhood crime and disorder. American Journal of Community Psychology, 51(1-2), 123-39.

13. McCleery, E. (2007). (Re)-conceptualizing Housing for Women with Participatory Planning and Design, ProQuest Dissertations and Theses.

14. "My Neighborhood Alliance - Helping Communities Grow Stronger." My Neighborhood Alliance, Neighborhood Alliance, 2012, www.myneighborhoodalliance.org/.

15. "Offer. Build. Ally." Teen Feed, Teen Feed, 2019, www.teenfeed.org/.

16. "Organizing Your Neighbors." Community Alliance of Tenants, Community Alliance of Tenants, 2019, oregoncat.org/know-your-rights/how-do-i-defend-my-rights-as-a-tenant/organizing-tenants-basics/.

17. Ortiz, Lillian M. "Will Limited-Equity Cooperatives Make a Comeback?" Shelterforce, National Housing Institute, 5 Oct. 2018, shelterforce.org/2017/04/25/will-limited-equity-co-ops-make-comeback/.

18. "Parent Mentor Program." Logan Square Neighborhood Association, Logan Square Neighborhood Association, 2019, www.lsna.net/Parent-Engagement/Parent-Mentor-Program.html.

19. Perkins, K. (2007). The future of limited equity cooperatives. Cornell Real Estate Review, 5, 1-5.

20. "Planning & Zoning." Massachusetts Smart Growth Alliance, Massachusetts Smart Growth Alliance, 19 July 2018, ma-smartgrowth.org/issues/planning-zoning/.

21. Portney, Kent E., and Jeffrey M. Berry. "Mobilizing Minority Communities." American Behavioral Scientist, vol. 40, no. 5, 1997, pp. 632–644., doi:10.1177/0002764297040005009.

22. Rase, Nancy, and Paul Weech. "Growing a Stronger Nonprofit Housing Sector." Shelterforce, National Housing Institute, 4 June 2017, shelterforce.org/2013/07/17/growing_a_stronger_nonprofit_housing_sector/.

23. Richardson, M., Gauvin-Racine, J., Jobson, S., Sasseville, N., & Simard, P. (2013). WHAT DO "PARTICIPATION" AND "ACTION" REALLY ME AN IN PARTICIPATORY ACTION RESEARCH? SOME OBSERVATIONS FROM A COMMUNITY DEVELOPMENT PROJECT WITH MINORITY ENGLISH-SPEAKING COMMUNITIES IN QUEBEC. Journal of Eastern Townships Studies, (40), 11-31,107-108.

24. Stuart, Graeme. "What Is Community Capacity Building?" Sustaining Community, The University of Newcastle Australia, 10 Mar. 2014, sustainingcommunity.wordpress.com/2014/03/10/ccb/.

25. Velasco, Xunaxi Cruz. "Participatory Action Research (PAR) for Sustainable Community Development." Post Growth Institute RSS, The Post Growth Institute, 20 Aug. 2013, postgrowth.org/participatory-action-research-par-for-sustainable-community-development/.

26. Watts, Sean M. "A Community Land Conservancy." A Community Land Conservancy. A Community Land Conservancy, 3 June 2019, Seattle.

27. Wood, Frank, & Giles-Corti. (2010). Sense of community and its relationship with walking and neighborhood design. Social Science & Medicine, 70(9), 1381-1390.

PARTICIPATION

PARTICIPATION

ETHNOGRAPHIC + CULTURAL

Collaborative planning and applied ethnography has the potential to foster more effective participation in the design and planning process. These practices can promote consensus building and inclusionary argumentation while providing stakeholders with the opportunity to become critically aware of their practices, processes and cultural relations, thus increasing the effectiveness of participation. Like cities, local communities are always changing and in order to foster inclusivity within a community in flux, it's important to uncover the varying parts and features that compose the population. Maginn raises the concept of "thick descriptions" which emphasizes diving deeper than the surface of facts and events to

reveal meanings in order to garner a comprehensive understanding of the culture of communities. Failure to fully comprehend the cultural dynamism could lead to newly emerging or established sub-communities to be overlooked. Additionally, it is critical for policymakers to become aware of their own cultural practices and to understand and reflect on the polices and structures they administer.[5]

Inclusive structures and processes can take the form of transparent agendas, mutual respect and understanding of all agents views and experiences, freedom of stakeholders to express their fears without retaliation and a commitment to consensus building as opposed to power grabbing. Conflicts and mistrust are inevitable when dealing with decision making structures, and emotions and politics can be highly charged when neighborhoods and communities are subject to rapid change. It is essential to embrace community diversity and conflicts when undertaking genuine and inclusive participation and it can lead to increased institutional capacity within policy agents, resulting in more productive policy outcomes.[5]


Credit:
thehagueacademy.com


Crédit:
REDD-Engagement (Mainstay)


Credit:
Elvert Barnes

STRATEGIES

Designers and planners may engage community members in the design process to create spaces that best serve the community.[3] Participatory design invites all interested parties to participate in the design process in order for designers to better understand and meet the their needs.[3] Furthermore, participatory design has the potential to foster participants' sense of community ownership, stewardship, and connection.[1] Participatory design may be useful during all stages of the design process, from conceptual idealization to construction.[3] Studies show that design participation may lead to improvements in participants' overall sense of self-efficacy.[1] When orchestrating participatory design, designers must be aware of their own mindsets, experiences, and position in society as it relates to the cultural and economic context of the community.[4] This is critical in gaining an empathetic understanding of their own decisions and responses while designing for and working with the community.[4] It is important for designers to approach the participatory design process in ways that bolster the community's self-worth and sense of ownership; community members must feel heard and empowered to bring about change.[4] Participatory design is a valuable tool in distributing urban and public space resources, and in better shaping spaces that truly reflect the democratic process, represent diverse populations, and fight social injustice.[4]

Credit:
d+b !ntersection

DESIGN CHARRETTES

Design charettes are intensive workshops that bring stakeholders and experts together for long-range or focused design collaboration, brainstorming, or other design events. Charettes often consist of multi-day sessions that create achievable design ideas using collaborative approaches responding to current site issues.[9]

VISUAL PREFERENCE SURVEY

This public engagement tool helps stakeholders determine which aspects of a design they prefer or features, functions, or characteristics they would like to see in their community.[2] These surveys bridge language and communication barriers and may be conducted in conjunction with a variety of large- to small-scale formats.[8]


Credit:
Bourdreaux Inspired Design

MENTAL MAPPING

Mental maps are based upon a person's experience of an area, and are a unique, selective representation of reality. Mental mapping may be used as a research tool to visualize how different people and demographics experience and use urban spaces. This technique may be used to design a better fit between place and user.[7]

Credit:
Mental Charlois

INTERVIEWS/QUESTIONAIRES

Interviews are an effective way of collecting qualitative data.[10] Interviews may be tailored to fit the needs of the study and done in-person or using less direct methods, such as a mail or online survey.[9] Exloratory interviews help guide the direction of a project or design, while mail-in interviews may collect data at a larger scale.[9]


Credit:
AmericanCA.com

SOURCES

1. Bartlett, M'Lis. "PARTICIPATORY LANDSCAPE DESIGN WITH URBAN MINORITY TEENS: BUILDING COLLECTIVE EFFICACY FOR LANDSCAPE STEWARDSHIP ." University of Michigan, M'Lis Bartlett , 2015.

2. Berl, Tyler, and Marcia Scott. "The Visual Preference Survey (VPS) ." The Institute for Public Administration, Complete Communities , 2018, cpb-us-w2.wpmucdn.com/sites.udel.edu/dist/a/390/files/2014/02/visual-preference-survey-ppt-122ow1r.pdf.

3. Elizarova, Olga, and Kimberly Dowd. "Participatory Design in Practice." Designing for Everyone: The Role of Accessibility in Service Design | UX Magazine, UX Magazine, 14 Dec. 2017, uxmag.com/articles/participatory-design-in-practice.

4. Green, Jared. "Participatory Design Must Evolve." THE DIRT, The American Society of Landscape Architects, 8 Oct. 2018, dirt.asla.org/2018/02/07/participatory-design-must-evolve/.

5. Maginn, Paul J. "Towards More Effective Community Participation in Urban Regeneration: the Potential of Collaborative Planning and Applied Ethnography." Qualitative Research, vol. 7, no. 1, 2007, pp. 25–43., doi:10.1177/1468794106068020.

6. Rasmussen, Christina. PARTICIPATIVE DESIGN & PLANNING IN CONTEMPORARY URBAN PROJECTS. Urban Planning & Management, Aalborg University, June 2012, projekter.aau.dk/projekter/files/65227327/ParticipativeDesign_Planning.pdf.

7. Sulsters, Willem A. "Mental Mapping, Viewing the Urban Landscapes of the Mind ." Cite Seer X, The Pennsylvania State University, 2018, citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.469.8617&rep=rep1&type=pdf.

8. The Transportation Planning Capacity Building Program. "Public Involvement Techniques." SECURITY CONSIDERATIONS IN TRANSPORTATION PLANNING: A WHITE PAPER By Steven E, United States Department of Transportation, 2018, www.planning.dot.gov/publicinvolvement/pi_documents/4c-g.asp.

9. Todd, Joel Ann, and Gail Lindsay. "Planning and Conducting Integrated Design (ID) Charrettes ." Optimize Energy Use | WBDG Whole Building Design Guide, National Institute of Building Sciences, 19 Nov. 2016, www.wbdg.org/resources/planning-and-conducting-integrated-design-id-charrettes.

10. Xerez, Romana, and Jaime Fonseca. Mixing Methods in Urban Research: Exploring City and Community Social Capital. Institute for Social and Political Sciences , Technical University of Lisbon, Portugal, 7 July 2011, www.rc21.org/conferences/amsterdam2011/edocs/Session%201/RT1-2-Xerez.pdf.

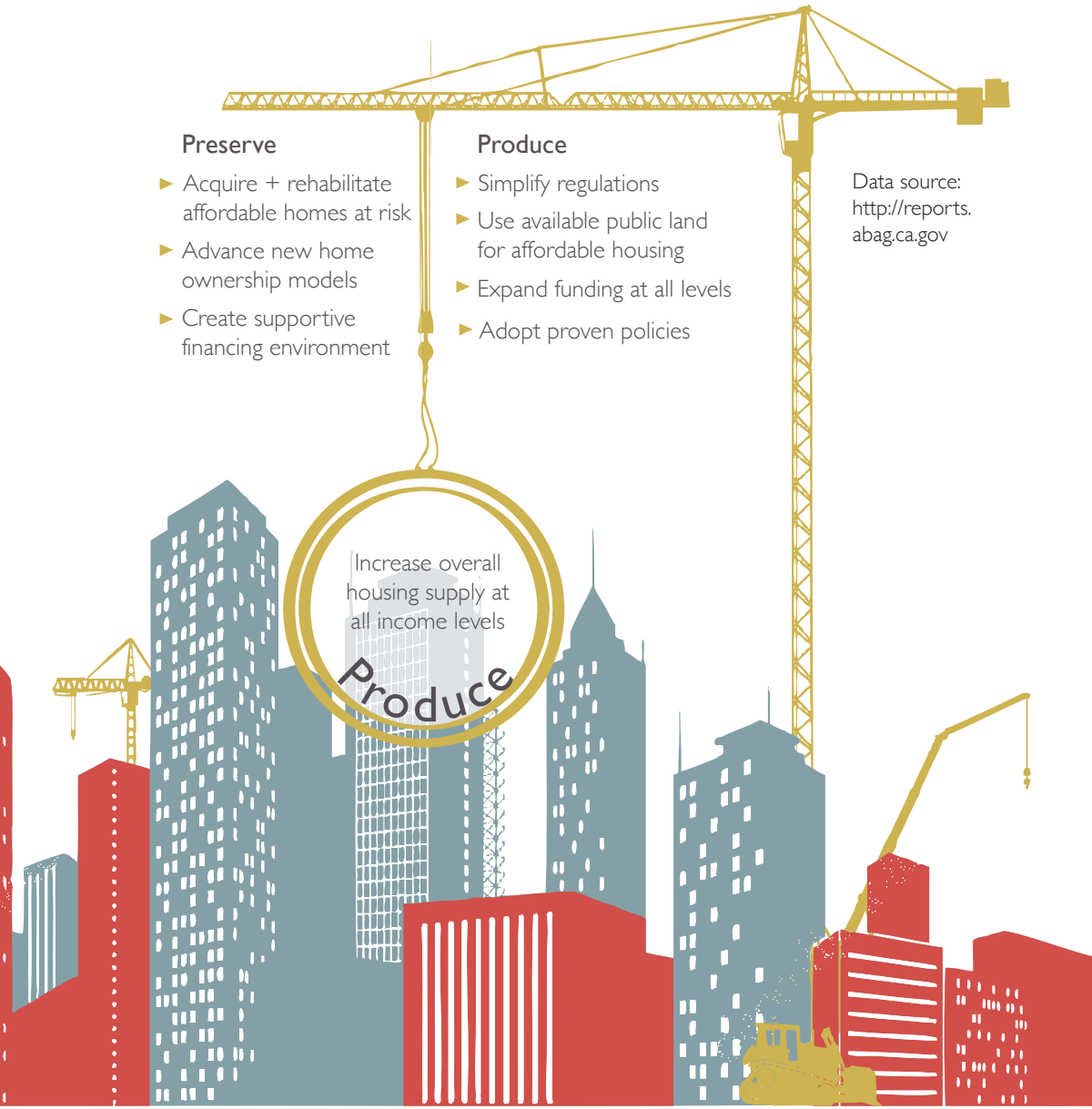
POLICIES TO PROMOTE STAYING IN PLACE

POLICY

CREATE + PRESERVE HOUSING

A variety of policy and planning methods can encourage and facilitate the development and preservation of affordable housing. Major infrastructure investments, such as transit investments, create amenities that benefit residents of all income levels and spur revitalization. However, this causes housing and land prices to experience sharp increases, often causing displacement of vulnerable residents. It is especially important for low- to moderate-income families to have long-term access to easy public transit options, as these serve as connections to essential services such as employment, child care and education. Methods this document will explore are inclusionary zoning, ground leases, housing subsidies, and property tax breaks. Such initiatives encourage the development of sustainable and inclusive communities, ensure long-term affordability, serve very low-income residents, and preserve and foster affordable housing opportunities at a broader city scale so that residents can benefit from public space investments rather than being vulnerable to potentially higher housing costs. Federally-funded rental assistance subsidies are necessary to help communities thrive in place.[6]

AFFORDABILITY POLICY

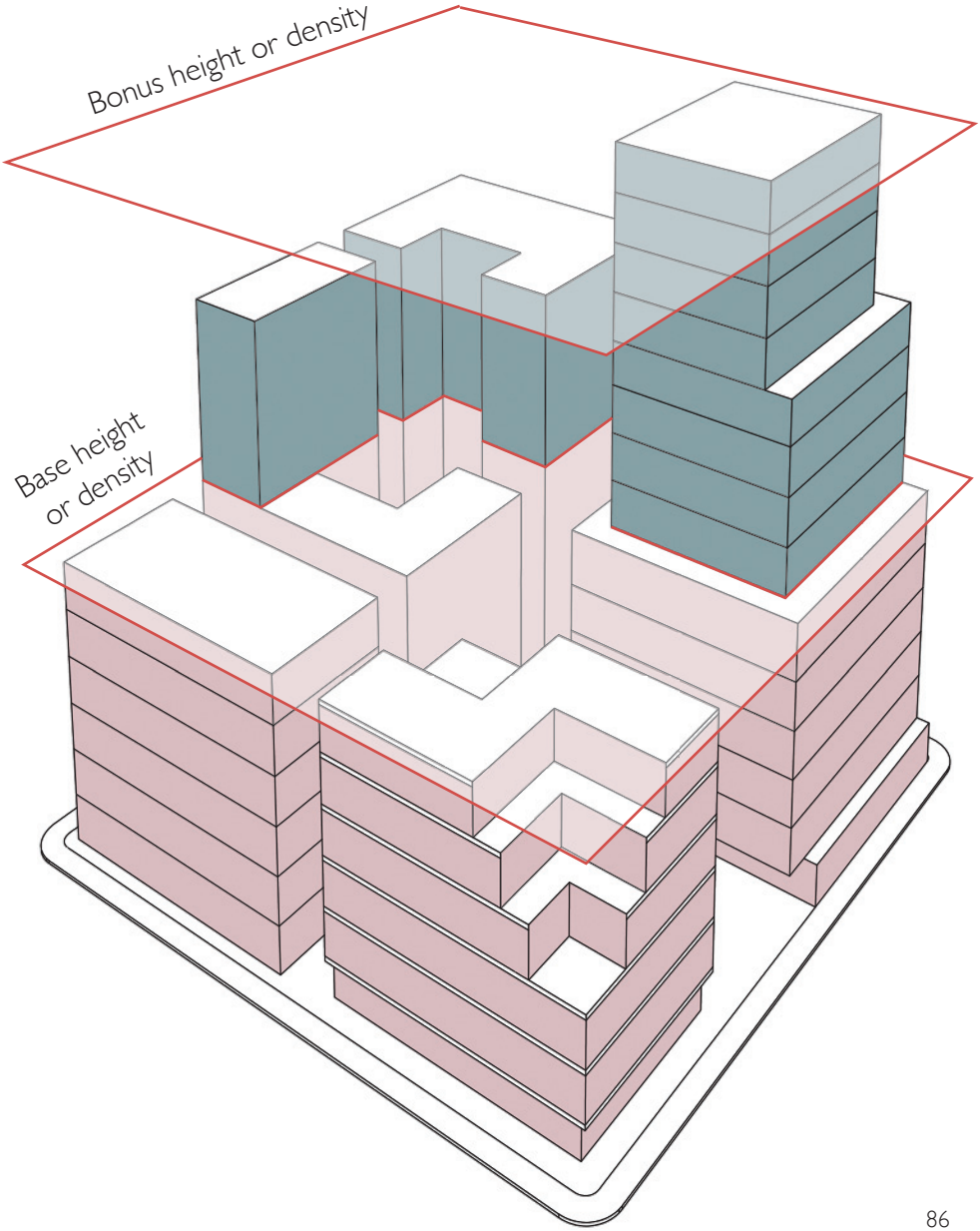


INCLUSIONARY ZONING

Inclusionary zoning, also known as inclusionary housing, is a policy that was developed in the 1970s as a response to exclusionary zoning, or "snob zoning."[11] Inclusionary zoning is one of a city's main tools in maintaining neighborhood diversity and keeping high opportunity areas affordable.This strategy promotes the mixture of high-, middle-, and low-income residents residing in the same buildings or neighborhood communities. Often, this has been shown to improve the living conditions, quality of education, and career opportunities for low-income residents.[11] Inclusionary zoning requires or incentivizes private developers to provide a percentage of

Information and graphic inspiration from Grounded Solutions Network

Voluntary Inclusionary Zoning Incentive



INCLUSIONARY ZONING

Credit:
Carlos Osorio

Credit:
Lucy Wang

Credit:
B'nai B'rith Housing News Service

below-market rate units in a given project. This tool requires little to no public subsidies, and participation and support in inclusionary zoning programs can strengthen community relations while providing greater leverage in future projects.[11]

Inclusionary zoning may be mandatory or voluntary.[11] It may allow payments in lieu, require affordable units to be onsite or offsite, require new construction or preserve existing affordable units.[14] It can target different incomes, provide different percentages of market-rate to affordable units, and can make affordable units permanent or expirational.[14]

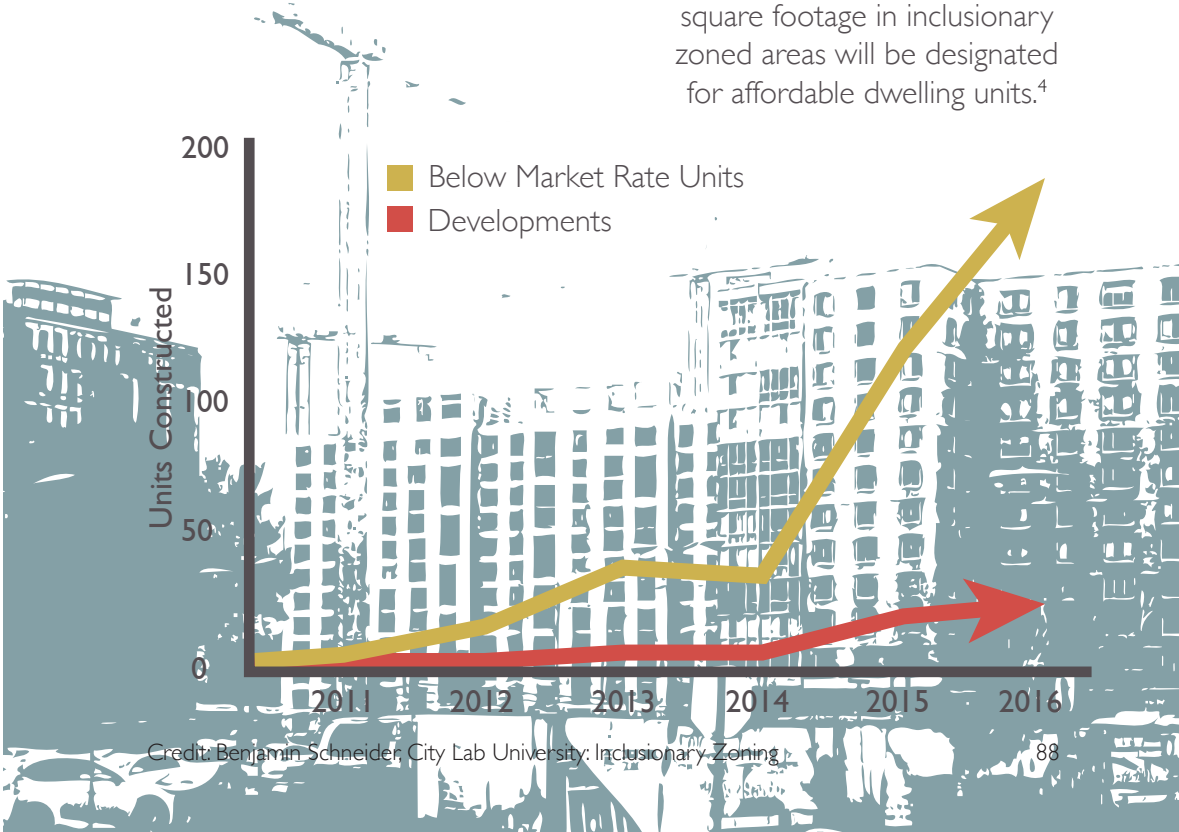
Voluntary inclusionary zoning is optional and is incentivized for developers to use in projects. An example of an incentive would be to allow for greater density if enough affordable units were provided. Developers choose to use this tool if the value of added density surpasses the cost of generating the affordable units.[14]

Mandatory inclusionary zoning requires a certain percentage of market-rate development to be reserved as affordable units. This strategy is effective

at creating new affordable units where market-rate rents are enough to cross-subsidize the construction and management of affordable units. If the required affordability is too costly, developers may choose to build alternative structure types. In areas where market-rate development is minimally viable, mandatory inclusionary zoning may make development unfeasible in the short term. However, cities can counter this by providing subsidies or allowing higher rents in affordable housing units for certain periods of time. For example, NYC's Mandatory Inclusionary Housing Program allows affordable units to be as high as 115% of the AMI for a maximum of ten years in order to offset the cost of construction of below market rate units.[14]

Washington DC's Inclusionary Zoning Program

8% -12.5% of a buildings square footage in inclusionary zoned areas will be designated for affordable dwelling units.[4]



Credit: Benjamin Schneider, City Lab University: Inclusionary Zoning

GROUND LEASES

City or organization maintains ownership of the land. . .

while renting it to a developers or homeowners on a long term basis.[14]

POLICY

With a ground lease, the city maintains ownership of the land while renting it out to developers on a long-term basis, typically between 75 to 99 years. If the city chooses to develop affordable housing on the piece of land, it can lease the land to the developer at a discount and provide terms of affordability requirements within the contract. By leasing the land, the city maintains ownership once the long-term lease is over, ensuring that the land will be used for the supply of affordable housing. Drawbacks to this policy include the lease typically resulting in less revenue than a sale and the city retaining some legal obligations to the property as a landlord, requiring additional oversight costs.[14]

Burlington Vermont's Community Land Trust (BCLT) is a prime example of how ground leases effectively provide affordable housing.[1] The BCLT views secure, quality housing as a basic human right, not a commodity to be bought and sold.[13] The BCLT purchases single-family lots, containing single-family homes, and sells the house to a low-income individual or family.[1] The BCLT retains ownership of the land, ensuring that the land will always remain affordable.[1]


Credit:
Champlain Housing Trust


Credit:
Brenda Torpy


Credit:
Eric Peterson

HOUSING SUBSIDIES


Credit:
Halkin Mason


Credit:
LDA Architects


Credit:
Hertha Hurnaus

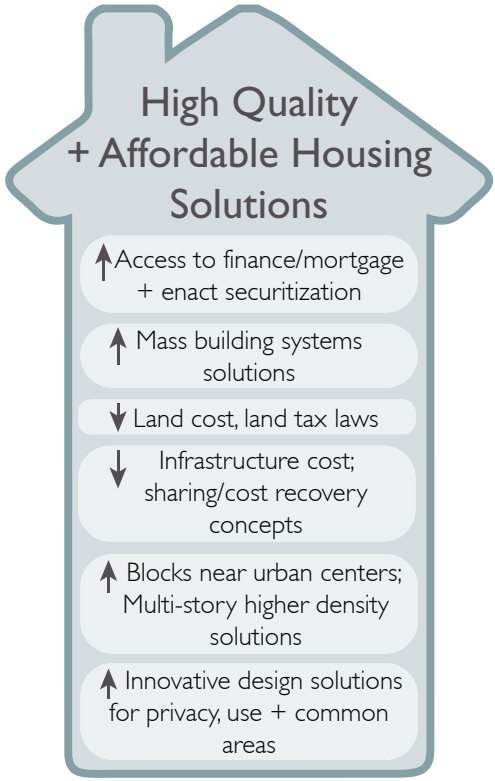
Housing subsidies are economic assistance programs that reduce housing costs for low- to moderate-income individuals and families.[9] There are two types of subsidies; supply-side subsidies and demand-side subsidies. Supply-side subsidies are administered by the government to landlords to encourage the development or retrofitting of existing housing stock.[9] Demand-side subsidies are subsidizes (vouchers) given by the government to low- to moderate-income families to allow people to afford housing.[9] One of the most used subsidies in the United States aimed towards encouraging the development and rehabilitation of affordable housing is the Low-Income Housing Tax Credit (LIHTC).[8] The LIHTC allows a reduction of federal income tax for tax credits received.[3] The federal tax credits are awarded to specific housing developments and the amount of credits are determined by a state's population. Rental housing developments can obtain this tax credit if 20% of the units are affordable to individuals and families earning half of the metropolitan area's median family income or if 40% of the units are affordable to residents earning 60% of the area's median income.[3]

It is important to note that although very low-income families face extreme hardships in the housing market, they often qualify for considerable and long-term housing assistance. Families hovering just above the poverty line that have regularly fluctuating incomes and expenses, however, often face the most housing difficulties. This growing demographic fails to qualify for the benefits of common housing assistance models, as they may be able to pay rent during some months but not others. For this demographic, a flexible subsidy program in which each family receives a stipend, distributed over the course of a year, that they can use for rent payments during difficult months or save for other expensive when rent is affordable, is a viable option for long-term stability. D.C. Flex, initiated by the the District of Columbia Department of Human Services, exemplifies this program, with the mission of alleviating rent burdens for people whose income fluctuates over the course of a year, rather than those who live in constant poverty.[2]

PROPERTY TAX BREAKS

Property tax breaks are an effective measure in deterring displacement by providing and preserving affordable housing. As real estate values increase in a specific neighborhood, property taxes will tend to increase on a similar trend. Tax breaks can be targeted towards rental properties as an aim to preserve affordable units. Tax breaks targeted towards owner occupied units can deter displacement of vulnerable homeowners. In New York City, Chicago and Seattle, certain programs exist that exempt or reduce taxes for owners of multifamily buildings who undertake substantial renovations for affordable units.[14]

Escalating housing markets can be profitable for homeowners in the region, but vulnerable residents may find the need to refinance or move to more affordable locations.[14] Providing property tax relief can give long-term homeowners and low-income residents the ability to thrive in place.[14] Boston's city council, for example, in an effort to retain long-time homeowners in at-risk neighborhoods, passed a bill that allowed homeowners whose taxes have grown by 10% or more to defer property tax payments until they sell.[10]

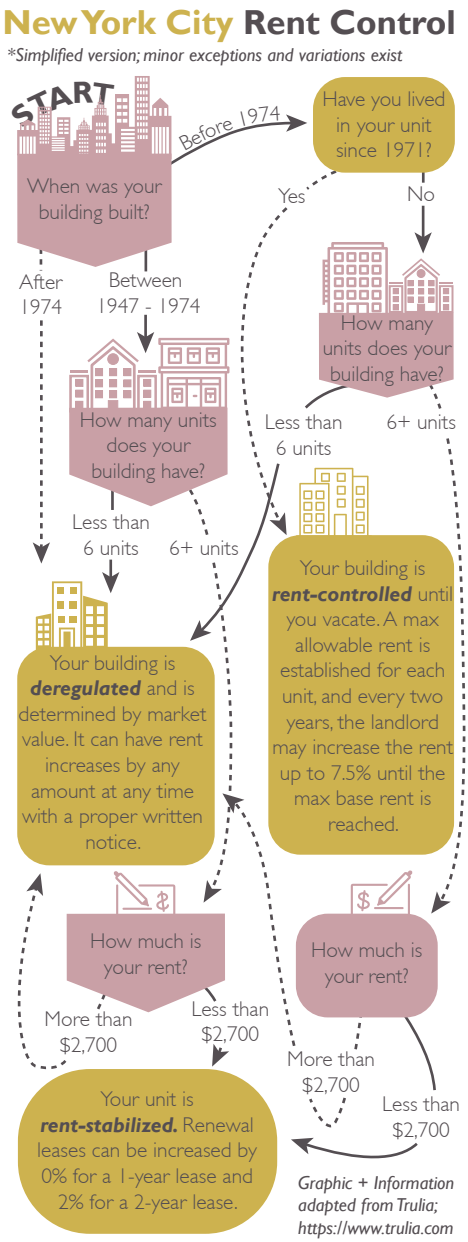


1. Inspiration/information source: CCHLT
2. Information source: Loay Ghazaleh

REGULATING LANDLORD + TENANT RELATIONSHIPS

LANDLORD-TENANT RELATIONSHIPS + RENT REGULATION

Many low-income or minority citizens face regulatory policy barriers to quality, affordable housing.[5] For example, exclusionary zoning has prevented low-income and racial minority residents from accessing employment, education, and health services and opportunities - such residents often face displacement when new development arrives.[12] However, there are certain regulatory aspects regarding the private rental sector, such as rent regulation, that help low-income and minority residents remain in place.[12] The landlord-tenant relationship is grounded in both contract and property law, and may vary by state.[5] Rent regulation limits the amount and frequency with which landlords can increase the rent charged to tenants, allowing them to increase rents at a fixed rate or a rate indexed to market factors.[4] Rent regulation sets the legal framework for rent control and rent stabilization laws that create affordable housing, particularly in areas affected by exclusionary zoning or physical site characteristics.[4]



REGULATING LANDLORD + TENANT RELATIONSHIPS

ANTI HARASSMENT LAWS

Landlords may attempt to pressure or intimidate a tenant by disrupting peaceful use of a rental unit.[5] Harassment often is the result of personal discrimination, and there are a variety of federal and state anti-harassment laws in place to protect tenants.[5] The Fair Housing Act mandates that no landlord can refuse housing to a potential tenant based upon nationality, sex, region, race, familial status, or disability.[12] Fundamentally, all tenants have a right to livable, habitable housing, including electricity, heat, and working plumbing.[12] What further constitutes as livable conditions varies by state, in addition to how landlords must provide these conditions, and what tenants may do if their housing falls short.[12] Habitability is often the most common issue renters face, as it depends upon proper enforcement.[12] Often, local and state code enforcement offices are underfunded or fail to effectively monitor and police the conditions of rental properties.[12] Because of this, it is essential that tenants are informed of and feel empowered to enforce their rights. Throughout the country, tenant rights organizations work to ensure renters have access to the information and resources they need in order to understand and enforce their lawful priviledges.[12] It is advised that in the event of discrimination, tenants should directly contact the Department of Housing and Urban Development, which has its own investigators to pursue landlord violators, in addition to a local tenant rights organization that can provide more immediate advice and support.[12]

Credit:
The New York State Senate

KNOW AND ENFORCE YOUR RIGHTS ASSISTANCE

It is essential for renters to understand and feel empowered to enforce their rights to equitable and habitable housing.[12] Many low-income and minority community renters are unaware of the rights they possess that may improve or stabilize their housing situations.[4] As mentioned previously, there are several organizations renters may turn to for assistance. On a federal level, the Department of Housing and Urban Development protects consumers from discrimination and and aims to provide affordable housing options, offering free rent-related counseling in every state.[4,12] In cases where a low-income tenant's rights are being violated, the Department of Justice (DOJ) may provide free legal service.[4]

Credit:
Shutterstock +
SF Anti-Displacement Coalition

SOURCES

1. Abromowitz, David M. "Community Land Trusts and Ground Leases." Affordable Housing and Community Development, doi:10.22215/etd/1992-02210.

2. Anzilotti, Eillie. "Housing Assistance Needs a Basic-Income Approach." Fast Company, Fast Company, 9 Oct. 2018, www.fastcompany.com/90246135/housing-assistance-needs-a-basic-income-approach.

3. Buckley, Robert M., and Alex F. Schwartz. "Housing Policy: The Evolving Subnational Role." Oxford Handbooks Online, 2012, doi:10.1093/oxfordhb/9780199765362.013.0023.

4. Davis, Sarah. "Renter's Rights: A Simple Introduction To Landlord-Tenant Law." Money Under 30, Money Under 30, 12 June 2018, www.moneyunder30.com/renters-rights.

5. Eberlin, Erin. "16 Examples of Landlord Harassment." The Balance Small Business, Dotdash, 2 Nov. 2018, www.thebalancesmb.com/is-your-landlord-guilty-of-harassment-4125876.

6. Haughey, Rick, and Ryan Sherriff. "Challenges and Policy Options for Creating and Preserving Affordable Housing near Transit and in Other Location-Efficient Areas." Urban Institute , Urban Institute, Dec. 2010, www.urban.org/sites/default/files/publication/26866/1001489-Challenges-and-Policy-Options-for-Creating-and-Preserving-Affordable-Housing-near-Transit-and-in-Other-Location-Efficient-Areas.PDF.

7. Johnson, Brian. "Here's How DC's Inclusionary Zoning Program Works." Greater Greater Washington, Greater Greater Washington, ggwash.org/view/39157/heres-how-dcs-inclusionary-zoning-program-works.

8. Keightley, Mark P., and Jeffrey M. Stupak. An Introduction to the Low-Income Housing Tax Credit. Library of Congress, Congressional Research Service, 2014, An Introduction to the Low-Income Housing Tax Credit.

9. King, P. "Housing Subsidies and Welfare." International Encyclopedia of Housing and Home, 2012, pp. 627–631., doi:10.1016/b978-0-08-047163-1.00022-9.

10. Price, David. "7 Policies That Could Prevent Gentrification." Shelterforce, Shelterforce, 28 Aug. 2018, shelterforce.org/2014/05/23/7_policies_that_could_prevent_gentrification/.

11. Schneider, Benjamin, and CityLab. "The Ultimate Primer on Inclusionary Zoning." CityLab, 6 Sept. 2018, www.citylab.com/equity/2018/07/citylab-university-inclusionary-zoning/565181/.

12. Thorsby, Devon. "7 Things You Should Know About Tenant Rights." U.S. News & World Report, U.S. News & World Report, 11 Oct. 2018, realestate.usnews.com/real-estate/articles/7-things-you-should-know-about-tenant-rights.

13. Torpy, Brenda, and Mary Houghton. "Enabling Low-Income Families to Buy Their Own Homes While Holding the Land in Trust for the Community." Burlington Community Land Trust , NYU/Wagner Research Center for Leadership in Action , Nov. 2004, wagner.nyu.edu/files/faculty/publications/20.pdf.

14. Yager, Jessica, et al. Gentrification Responses: A Survey of Strategies to Maintain Neighborhood Economic Diversity. Wagner School of Public Service, 2016, Gentrification Responses: A Survey of Strategies to Maintain Neighborhood Economic Diversity.

IN PRACTICE

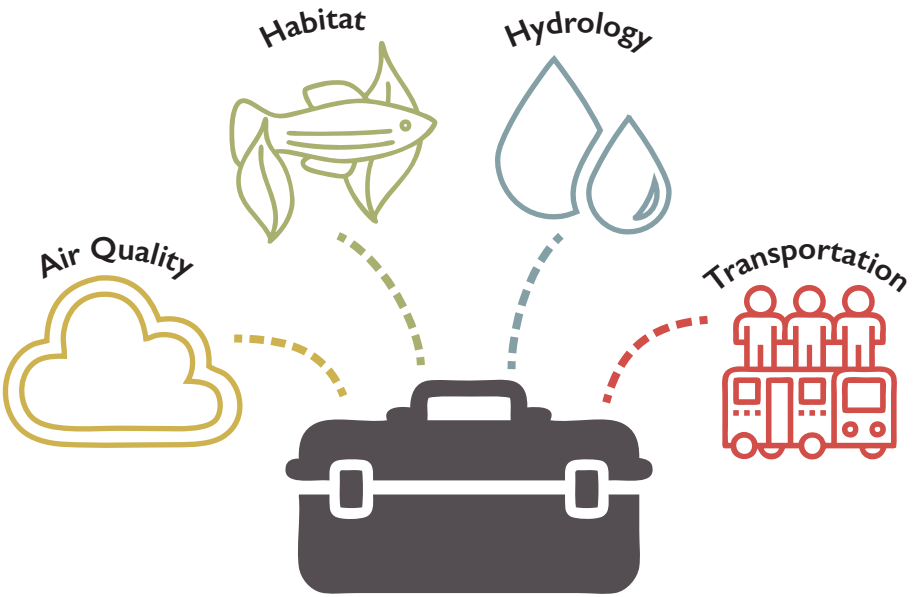
URBAN GREEN SPACE DESIGN TOOLKIT

The design toolkit highlights design interventions that can promote healthy communities and environments for all demographics and income levels. Air quality, habitat, hydrology and transportation were selected as four essential components of urban green space design. Within these categories are specific design interventions that can lead to a magnitude of short- and long-term physical, social, and environmental benefits.

THRIVING IN PLACE CASE STUDIES

The selected case studies illustrate the successes and shortcomings of urban greening projects across the United States. These case studies emphasize community empowerment and participation throughout the design and planning process. These studies illustrate the struggle for local community members to benefit from these greening projects without displacement, while focusing on lessons learned to promote environmental justice.

URBAN GREEN SPACE DESIGN TOOLKIT

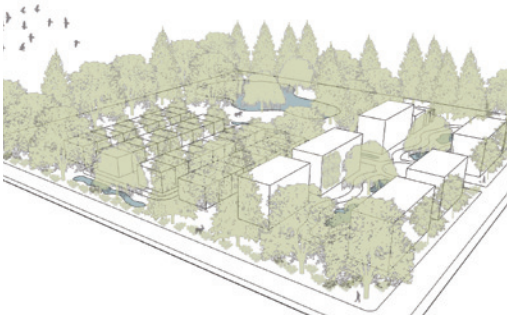


AIR QUALITY

Acute air pollution and high summer temperatures have deadly consequences on urban dwellers, typically within elderly populations. The addition of densely-spaced and connected urban green spaces at a variety of scales is shown to significantly improve air quality while increasing urban cooling effects.[32]

HABITAT

Habitat provision provides a multitude of benefits and can improve residents' long-term health and viability. The provision and maintenance of healthy, diverse, native and naturally-occurring vegetation and landscapes improves a neighborhood's ecological function while providing the base for strong resilient communities.[30]



HYDROLOGY

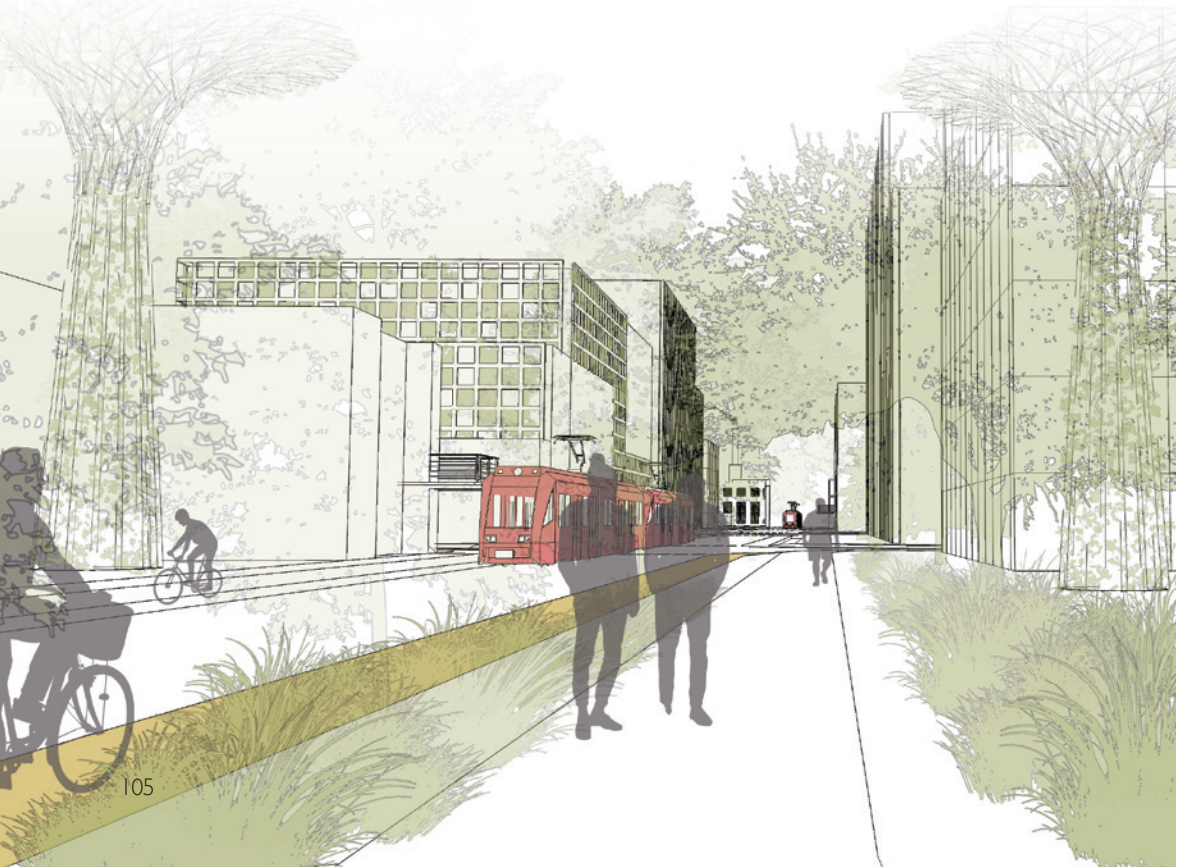
Multi-functional urban green spaces can support a healthy hydrological cycle through programming and facilities that store and filter stormwater runoff. Interventions such as recreational stormwater capturing amenities, green roofs and urban tree canopies can improve neighborhood function, aesthetics and livability.[15]

TRANSPORTATION

Quality and equitable public transportation is essential to human and ecological health and wellbeing. Streets and public transit are multi-functional forms of public space in which social capital and a sense of neighborhood pride and place may be built, and are places that may serve ecological functions and opportunities for recreation.[32]

AIR QUALITY

Studies across the globe have shown that the addition of a variety of scales and types of urban green spaces has significantly improved air quality and provided urban cooling effects at the site, neighborhood and city level. Acute air pollution and high summer temperatures have deadly consequences on urban dwellers, and reports have documented disproportionate heat and air pollution burdens on low-income neighborhoods and vulnerable residents. Greater densities of urban green space types correlate with higher air quality and lower land surface temperatures; studies have found that densely-spaced and connected smaller green spaces provide better cooling effects than large, grassy individual parks. By densely layering a diversity of plant species, designers can contribute to a city's overall resiliency to heat and air pollution.[32]



URBAN TREES

Urban trees play an essential role in maintaining healthy urban air quality, as mature, large trees are powerful contributers to cooler and cleaner air.[14] A Barcelona study found that urban forests remove over 300 tons of air pollutants every year and prevent 5,000 tons of CO2 emissions from being released into the atmosphere.[1]


Credit:
Justin Feldman

VEGETATION

Urban vegetation may be planted at a myriad of scales and vertical planes. Grouped and layered plantings of mixed species and the use of groundcovers as opposed to pavement often prove effective in filtering out air pollutants.[13] Green walls, green roofs, and other planted areas may cool air temperatures and increase air quality.[1]


Credit:
William Achnitz III

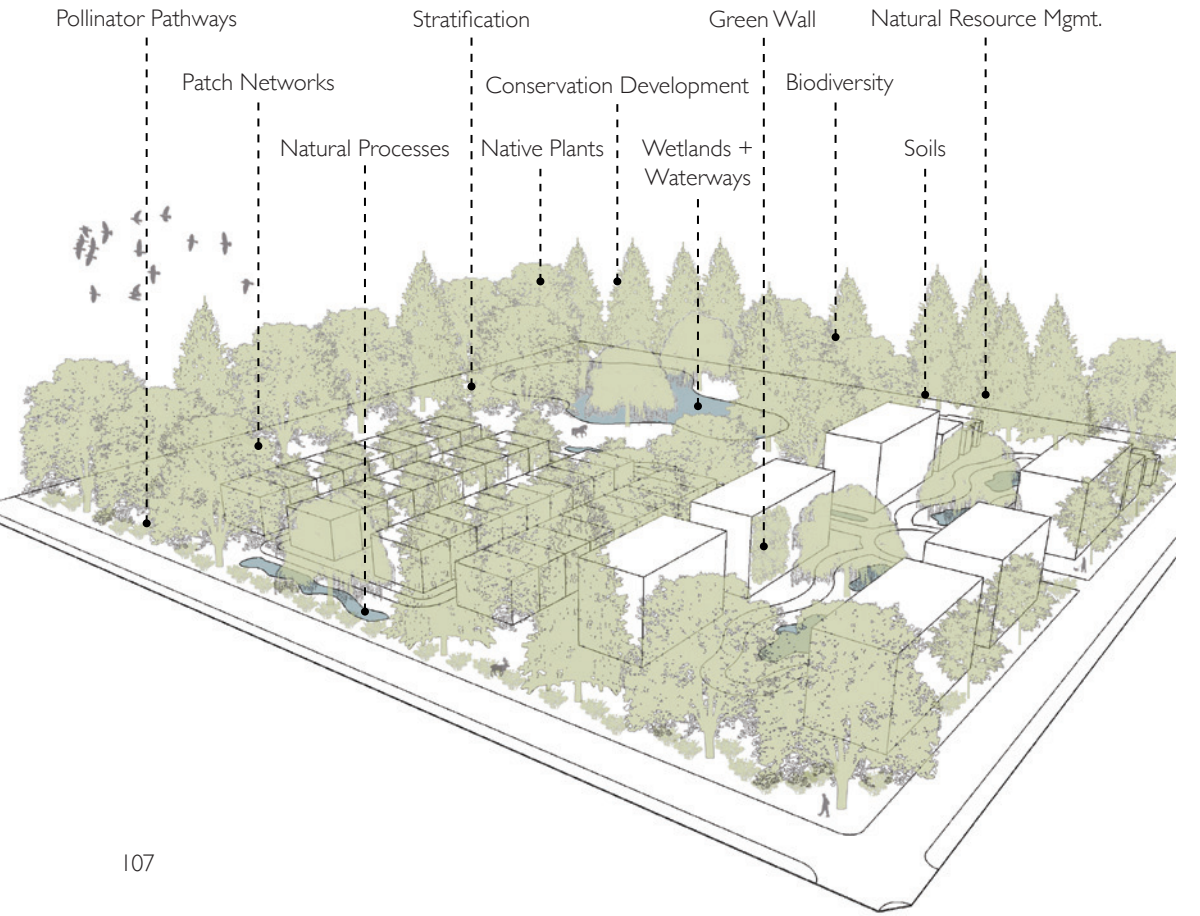
MULTI-MODAL TRANSIT

Fossil fuel emissions from automotive transit are the most significant contributors towards urban air pollution. Providing alternative transportation options is an essential step in reducing a city's CO2 emissions and in improving air quality. Detached sidewalks, bike lanes, bus and train routes all contribute to cleaner city air.[32]

Credit:
DKS

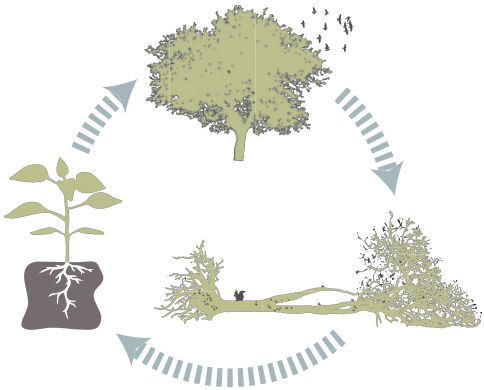
HABITAT

Public green spaces of multiple types and scales provide a great number of habitat benefits. Green spaces that are multi-functional - simultaneously accommodating human activity, enjoyment, ecological health and habitat conservation - are valuable community resources that work to improve residents' long-term health and viability. Environmental functions provide invaluable short- and long-term positive impacts on the a region's hydrological, climate, and habitat health. The provision and maintenance of healthy, diverse native and naturally-occurring vegetation is essential for a neighborhood's long-term ecological function and integrity, providing the base for strong and resilient communities.[30]



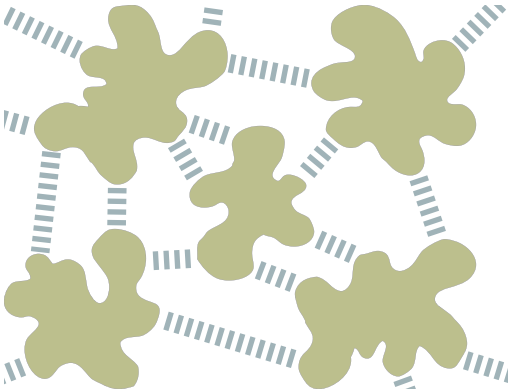
NATURAL PROCESSES

Natural processes work in conjunction with one another forming a complex web of interconnected parts. Processes such as fires, floods, succession, sediment transportation and soil formation shape our world and create healthy and resilient natural communities.[23]



PATCH NETWORKS

Due to processes including deforestation, urban sprawl and agricultural intensification, the once large and continuous landscape is now comprised of spatially separated habitat patches. The long term persistence of species depends on the connectivity of these fragmented patches through a network of links and nodes.[27]



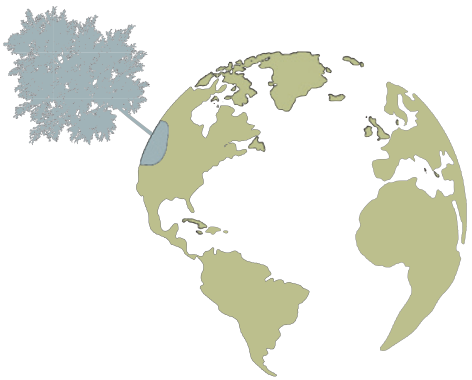
POLLINATOR PATHWAYS

Pollination serves vast ecological and commercial values; agriculturally, pollination may directly serve commodity production, indirectly contribute to crop propagation, or contribute through a variety of food-chain relationships.[22] It's estimated that if bees went extinct, half the amount of fruits & vegetables would be available.[8]

HABITAT

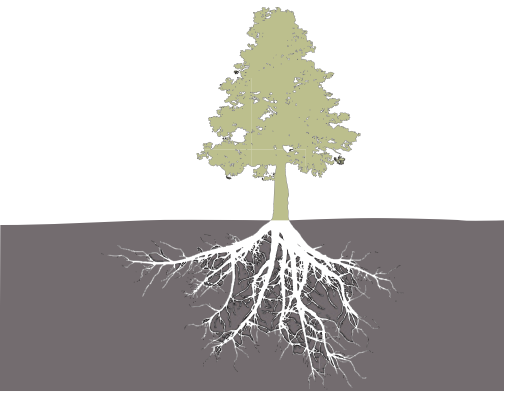
STRATIFICATION

Stratification refers to the vertical layering of vegetation. From lowest to highest these layers consist of the subterrianean level, understory shrub level, under canopy, midstory, canopy and emergents. It is critical to design for multiple stratification levels to encourage healthy soils, waterways and biodiveristy.[9]



NATIVE PLANTS

Native plants thrive in an area's particular natural microclimates. Thus, they typically have higher rates of survival and lower maintenance costs. Native plants are able to thrive and provide stable habitat for a variety of region-specific birds, amphibians, mammals, insects, fish and other creatures.[19]



SOIL

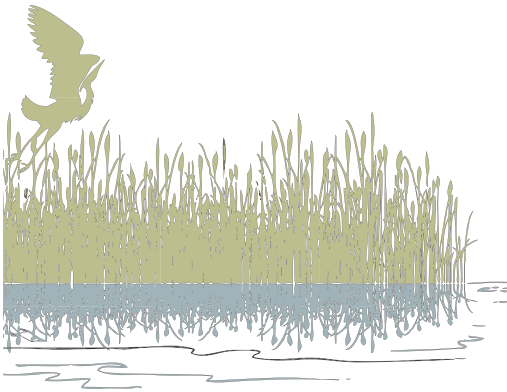
Healthy, place-specific soils are essential components to vegetative success. Soil provides plants with air, nutrients and water, and stability during periods of stress. Critical, "interconnected" soil properties that designers must take into account when choosing vegetation include texture, density, structure, nutrients, pH, and organic matter.[11]

RIPARIAN CORRIDORS

Vegetated green spaces are essential for promoting healthy riparian corridors. Vegetation is essential for stormwater mitigation and water filtration, as it functions across multiple stratification scales in collecting, distributing and filtering excess water. At the site-scale, plants may be used to impact larger regional watersheds and systems.[30]

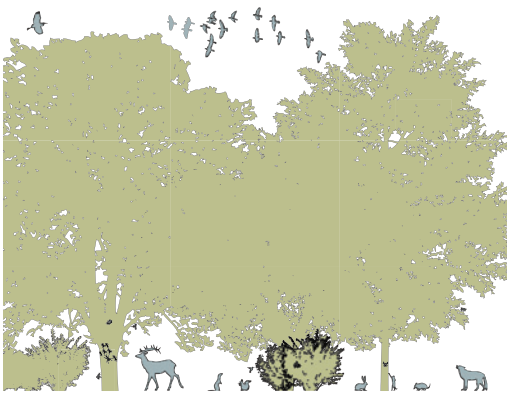
WETLANDS

Wetlands play an important role in waterway health, habitat provision, and regional biodiversity. A simple and cheap way to purify water, they collect, store and filter excess rainwater, slowly releasing it back into the groundwater system. These multi-functional areas also provide diverse species habitat and pleasant recreational spaces.[29]



BIODIVERSITY

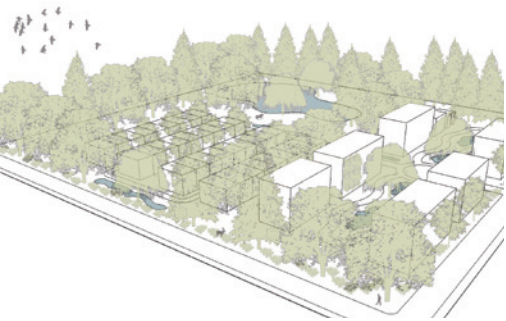
Green spaces play a valuable role in supporting local and regional species biodiversity. Green space design must be complex, adaptable and functional to support optimal biodiversity. Species loss affects ecosystem function, so it is imperative to design and manage for spaces to achieve a high level of biodiversity function.[10]



HABITAT

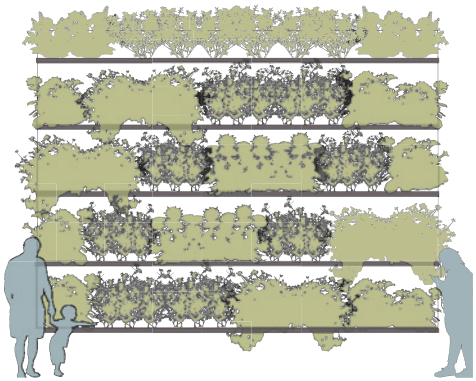
NATURAL RESOURCE MGMT.

For green spaces to provide optimal ecological and human health benefits, their management must be based upon results from ecosystem evaluation techniques. Ecosystem management is site-specific; often, designers recommend vegetation management techniques that yield positive habitat and hydrological health results.[5]



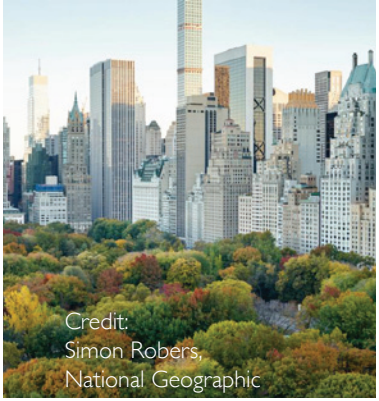
CONSERVATION DEV.

Traditional development is the leading cause of resource degradation and biodiversity loss in the US. There are a variety of conservation development models and land use techniques that serve to mitigate ecological degradation by utilizing design features chosen through ecologically-based planning and design.[19]



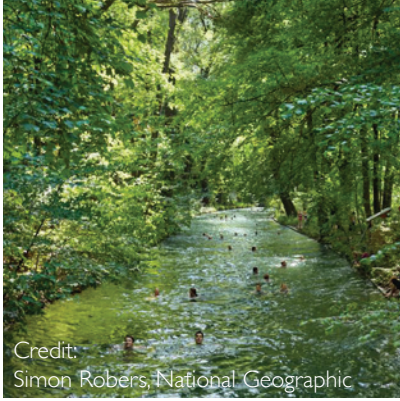
GREEN WALLS

Some of the many benefits of green walls include urban heat island effect reduction, habitat provision, and aesthetic improvement. There are two main types of green walls that can be installed at a range of scales: green facades, in which climbing plants cover a surface, and living walls, which are comprised of pre-vegetated panels.[27]



Credit:
Simon Robers,
National Geographic

Credit:
GenerationYonkers.com



Credit:
Simon Robers, National Geographic

Credit:
Van den Berg et al.,
UN Habitat

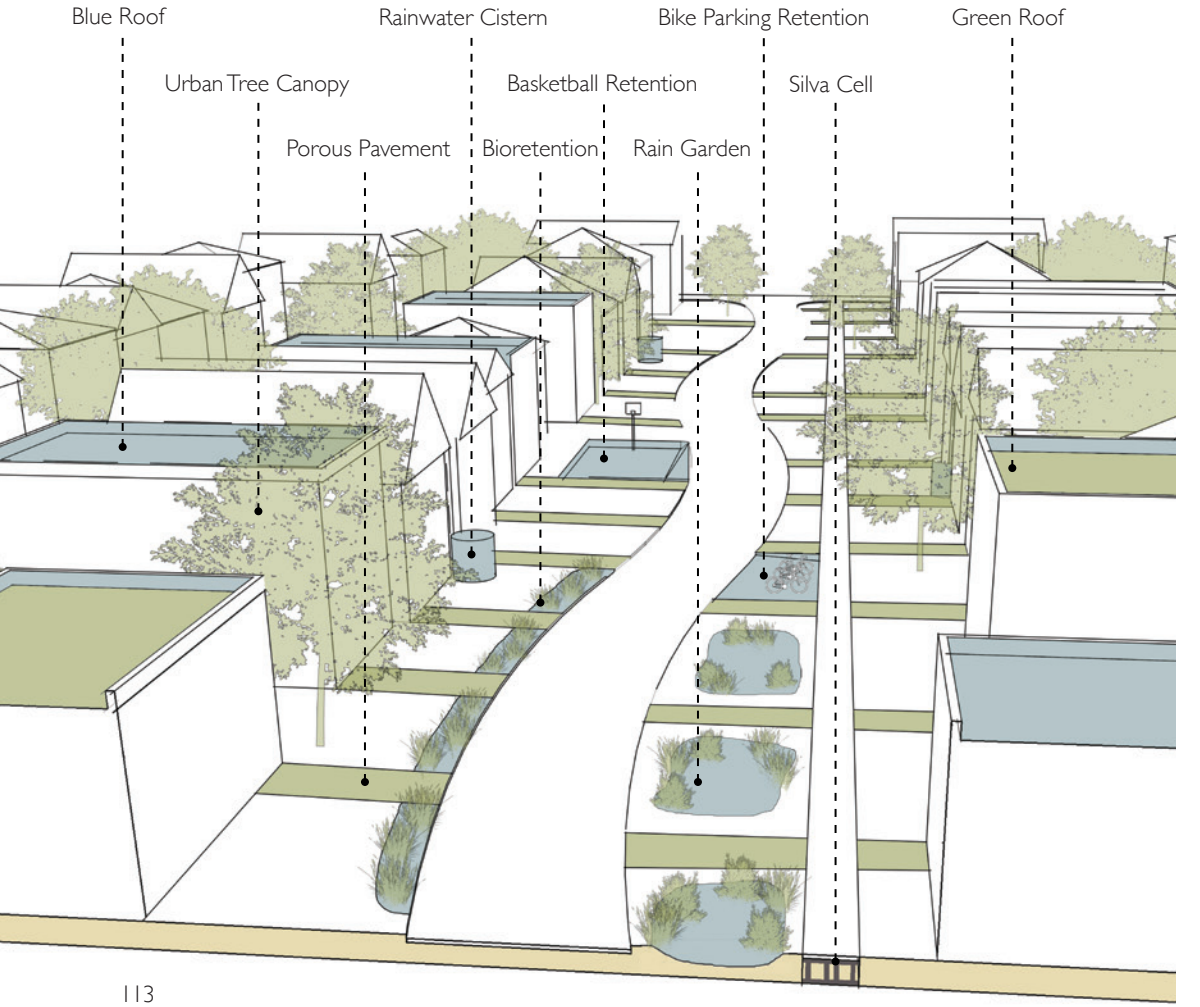
Credit:
LiveWall

Credit:
City of Perth

Credit:
Joop van Houdt/Rijkswaterstaat

HYDROLOGY

Neighborhood green spaces function at many different scales to support a healthy hydrological cycle.[1] Quality public green spaces are multi-functional; design, programming and facilities may be adapted to store and filter stormwater runoff, preventing widespread pollution and flooding.[15] There are a variety of biometric solutions that can be applied on a range of scales to aid in hydrological function. Many of these interventions also work to improve neighborhood aesthetics and livability.[15]



PERVIOUS PAVEMENT

Pervious pavement allows water to flow vertically through hard surfaces. This paving system removes sediment and and other pollutants from the surface runoff. Pervious pavers reduce and re-distribute stormwater volume while encouraging groundwater infiltration. These systems can be used for pedestrian and vehicular traffic.[15]


Credit:
stormwater.allianceforthebay.org

SILVA CELLS

These modular building blocks increase stormwater infiltration and treatment, soil volume and tree root growth potential. The structural building blocks support traffic loads while containing healthy, uncompacted soil. Furthermore, Silva Cells are able to accommodate utility systems, making them ideal for urban environments.[26]


Credit:
Margot Chalmers

URBAN TREE CANOPY

Trees reduce urban stormwater rates and volumes though interception, evapotranspiration, throughfall and flow attenuation.[15] Trees are also essential for improving urban air quality; they aid in reducing the urban heat island effect and help offset carbon emissions through carbon sequestration.[15]


Credit:
Ted McGrath

HYDROLOGY


Credit:
Adam Carreau

BIORETENTION

Bioretention features are open, vegetated cells designed to infiltrate and convey stormwater runoff. Pollution mitigation occurs though remediation by soils and facultative vegetation. These systems treat stormwater runoff as it is conveyed and eliminate the need for costly conveyance systems.[15]


Credit:
Jimmy Hollen

GREEN ROOFS

Green roofs reduce stormwater impacts through collecting rainwater and slowing its release. Stormwater volume is reduced through evapotranspiration by the plants. Green roofs provide additional benefits including thermal insulation, habitat for local fauna, and spaces for people to use and enjoy.[15]


Credit:
Ossip van Duivenbode

REC. CAPTURING AMENITIES

Recreational capturing amenities are recreational facilities that have the ability to collect and store stormwater runoff. These systems reduce runoff volumes and peak flow rates by retaining water during rain events. When the facilities are not inundated with rainwater, they provide recreational opportunities for communities.[15]

RAIN GARDENS

These planted depressions absorb stormwater while filtering pollutants through soil particles, microorganisms and phytoremediation. Rain gardens are comprised of sandy soil for infiltration, and organic matter to foster microbial activity. Rain gardens function best at small scales along driveways or in a property's low lying areas.[15]


Credit:
Webster University

BLUE ROOFS

Blue roofs reduce runoff volumes and peak flow rates by collecting and storing rainwater. Rain collects in detention cells or in larger basins and evaporates. As the water vapor rises it condenses and forms clouds, perpetuating the hydrological cycle. This system is low maintenance in comparison with green roofs.[15]


Credit:
inhabitat.com

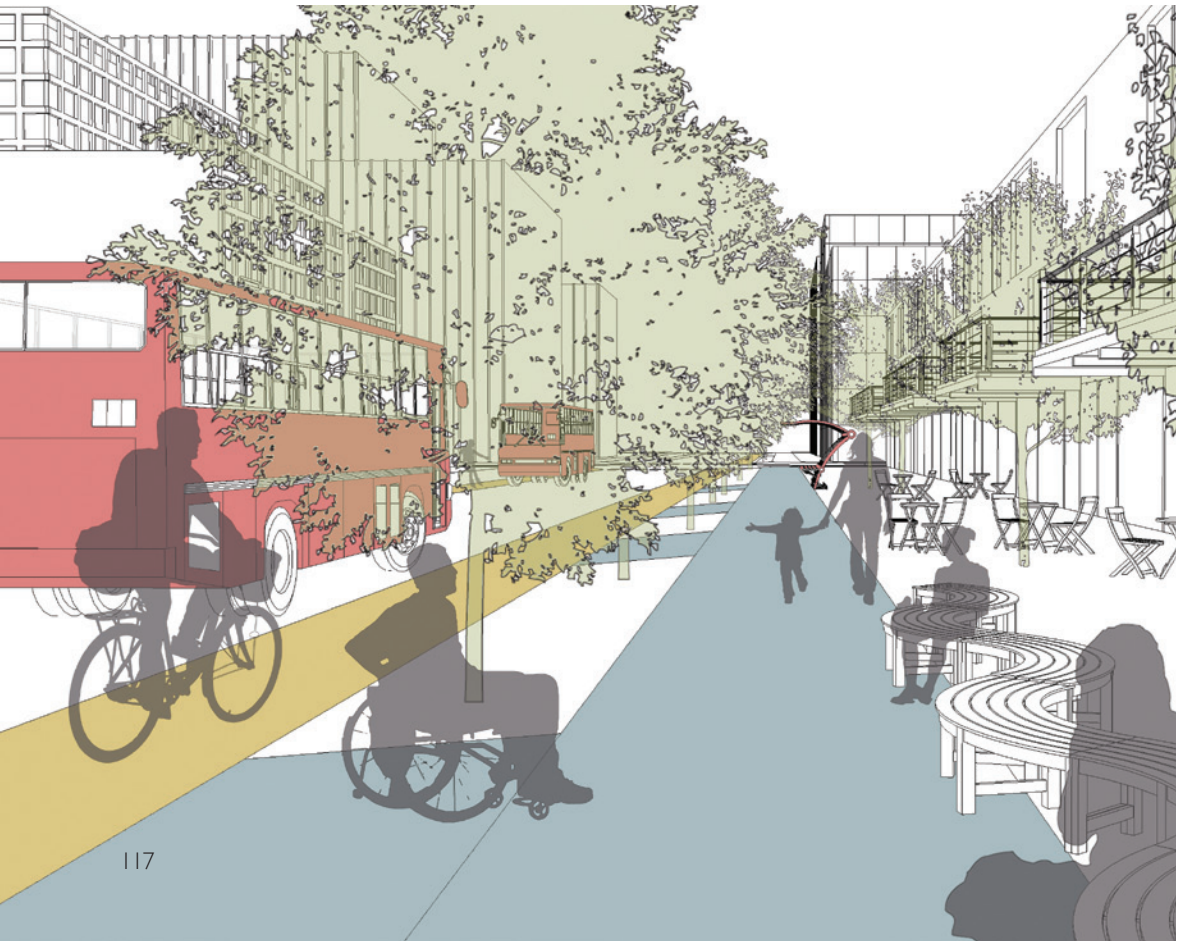
RAINWATER CISTERNS

Rainwater cisterns harvest rainwater from roofs for reuse and storage. Cisterns reduce runoff volumes and peak flows by capturing the water that would typically flow into a conventional stormwater system. The rainwater may be recycled to support vegetation and lawns between rainwater events.[15]


Credit:
The Owner-Builder Network

TRANSPORTATION

Transportation plays a critical role in the creation of quality public urban spaces and promotion of human and ecological health and wellbeing.[18] It is important to design and promote a framework that promotes quality and equitable transportation options; this includes designing for mixed-use and human-scale development, walkable cities, diverse and non-auto centric street typologies, and traffic calming techniques, and infrastructure such as public transit shelters, bike lanes, and detached sidewalks. Streets and public transit are multi-functional forms of public space in which social capital and a sense of neighborhood pride and place may be built, and places that serve ecological functions and opportunities for recreation.[31]



MIXED-USE DEVELOPMENT

Mixed-use development provides positive effects on residents' physical and emotional wellbeing, as these walkable models also promote social interaction in shared private and public outdoor spaces.[18] This development type encourages inclusive, connected communities by allowing for greater opportunities to access services.[31]


Credit: KPS

HUMAN SCALE DEVELOPMENT

Human-centric design incorporates a system of inviting, inclusive public spaces that improve quality of life by enhancing urban livability and social and economic vibrancy.[12] Place making may be used as a tool to create human-scaled cities that allow for equitable opportunities for social interaction and a variety of transportation options.[6]

Credit: Zachary Shahan

WALKABILITY

Walkable cities are essential in promoting equality in neighborhood health, wellbeing, and financial vitality.[18] Creating networks of inclusive, human-scale public spaces and building facades, and promoting urban greening, mixed-use development, public transit, and protected pedestrian and bike lanes contribute to equitable walkable cities.[2]


Credit: Let Ideas Compete

TRANSPORTATION

Credit:
WSTA

PUBLIC TRANSIT

Public transit is a "mobile form of public space," and providing for a variety of public transit options that evolve with the urban fabric is essential in promoting equitable urban spaces.[1,2,17] Providing quality public transit to low-income neighborhoods allows for greater access to services, education and employment opportunities.[7]


Credit:
Krista Jahnke

PUBLIC TRANSIT SHELTERS

Well-designed public transit shelters are essential components of public transportation systems, and should be designed to be inviting, visible, safe, comfortable, convenient, informative, and visually attractive to commuters and community members. Location of the shelter and design that reflects the urban character are also important.[3]

Credit:
Nolan Gray

STREET TYPOLOGY

Streets are public spaces that play powerful roles in creating and maintaining a quality urban social fabric. Studies have shown that limiting cars and parking spaces, reducing driving speed and increasing pedestrian and bicycle access improves urban equity, social interaction and urban vibrancy though increasing urban "living space."[25]

TRAFFIC CALMING

The myriad of design strategies for reductions in speed limits and vehicle volumes play a large role in creating safe, inclusionary and inviting streetscapes and public spaces.[25] Traffic calming increases vertical equity by benefiting residents who are physically, socially and economically disadvantaged, as well as pedestrians and bicyclists.[16]


Credit:
Rafael Perez Martinez

BIKE LANES

The provision of protected, equitably-distributed bike lanes allows for a safe, affordable form of transit for those who cannot afford other options.[21] Bike lanes provide a more equitable access to services and jobs, in addition to serving as a source of exercise.[4] Biking also provides an alternative perspective on one's urban fabric.[4]


Credit:
Griffin Bohm

DETACHED SIDEWALKS

Detached sidewalks serve to increase walkability through making walking safer and more pleasant for residents. They contribute to safer, more socially and economically vibrant cities through increasing "eyes on the street" and creating a unique sense of place. It is important to design for equitable distribution of detached sidewalks.[24]


Credit:
Katarina Hall

SOURCES

1. Anguelovski, I., Connolly, J., Masip, L., & Pearsall, H. (2018). Assessing green gentrification in historically disenfranchised neighborhoods: A longitudinal and spatial analysis of Barcelona. Urban Geography, 39(3), 458-491.

2. Benfield, Kaid. "The Ten Steps To Walkable Cities." SmartCitiesDive, Industry Dive, 2018, www.smartcitiesdive.com/ex/sustainablecitiescollective/ten-steps-walkability/96836/.

3. "Bus Shelters." Project for Public Spaces, Project for Public Spaces, 31 Dec. 2008, www.pps.org/article/busshelters.

4. "Building Equity | Race, Ethnicity, Class, and Protected Bike Lanes: An Idea Book for Fairer Cities." People for Bikes, People for Bikes; Alliance for Biking & Walking, 2018, peopleforbikes.org/wp-content/uploads/2017/07/EquityReport2015.pdf.

5. Burger, Joanna. "Environmental Management: Integrating Ecological Evaluation, Remediation, Restoration, Natural Resource Damage Assessment and Long-Term Stewardship on Contaminated Lands." Advances in Pediatrics, U.S. National Library of Medicine, 1 Aug. 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC4026064/.

6. Ciovica, Monica. "Transition Tales #6: In Search of the Human Scale." New Europe | Cities in Transition, Pakhuis De Zwijger, 18 Oct. 2016, citiesintransition.eu/publicatie/transition-tales-6-in-search-of-the-human-scale.

7. "EQUITY AND TRANSPORTATION in the United States." Equity and Transportation in the United States, Tufts University, 2018, sites.tufts.edu/equityandtod/whyequity/.

8. "Future - What Would Happen If Bees Went Extinct?" BBC News, BBC, 4 May 2014, www.bbc.com/future/story/20140502-what-if-bees-went-extinct.

9. "GCSE Bitesize: Rainforest Vegetation Levels." BBC, BBC, www.bbc.co.uk/schools/gcsebitesize/geography/ecosystems/tropical_rainforests_rev3.shtml.

10. Green, Jared. "Designing for the Full Range of Biodiversity." THE DIRT, American Society of Landscape Architects, 18 June 2010, dirt.asla.org/2010/05/19/designing-for-the-full-range-of-biodiversity/.

11. Green, Jared. "Designing with Soils." THE DIRT, American Society of Landscape Architects, 16 Nov. 2013, dirt.asla.org/2013/11/16/what-makes-soils-healthy/.

12. Jia, Judy Zheng. "The 'Human Scale' in Public Urban Areas." Sustainable Cities , The World Bank, 6 Dec. 2016, blogs.worldbank.org/sustainablecities/human-scale-public-urban-areas.

13. Kaiserman, Joanna. "Urban Nature for Well-Being: Design Recommendations for Psychological Benefits in Urban Public Spaces." University of Washington, 2017.

14. Kinver, Mark. "Growth of City Trees Can Cut Air Pollution, Says Report." BBC News, BBC, 31 Oct. 2016, www.bbc.com/news/science-environment-37813709.

15. LID: Low Impact Development: a Design Manual for Urban Areas. University of Arkansas Community Design Center, 2010.

16. Litman, Todd. "Traffic Calming Benefits, Costs and Equity Impacts." Victoria Transport Policy Institute, Victoria Transport Policy Institute, 7 Dec. 1999, www.vtpi.org/calming.pdf.

17. Lovell, Briana. "Transit Planning and Social Equity: A Comparative Analysis in West Seattle." University of Washington, University of Washington, 2012.

18. Manzo, Lynne C., and Douglas D. Perkins. "Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning." Journal of Planning Literature, vol. 20, no. 4, 2006, pp. 335–350., doi:10.1177/0885412205286160.

19. Mason, R., Hitchcock, Jason, U.S. Fish Wildlife Service. Chesapeake Bay Field Office, Irvine Nature Center, & Adkins Arboretum. (2003). Native plants for wildlife habitat. Annapolis, MD: U.S. Fish and Wildlife Service, Chesapeake Bay Field Office.

20. Milder, Jeffrey C. "Framework for Understanding Conservation Development and Its Ecological Implications | BioScience | Oxford Academic." OUP Academic, Oxford University Press, 1 Oct. 2007, academic.oup.com/bioscience/article/57/9/757/233721.

21. Misra, Tanvi. "Bike Advocacy's Race Problem." CityLab, The Atlantic Monthly Group, 24 July 2018, www.citylab.com/equity/2018/07/is-bike-infrastructure-enough/565271/.

22. National Research Council . Committee on the Status of Pollinators in North America. (2007). Status of pollinators in North America. Washington, D.C.: National Academies Press.

23. "Natural Processes." Current Water and Land Use at Rock Creek Park, www.explorenaturalcommunities.org/ecology-basics/natural-processes.

24. Peters, Adele. "50 Reasons Why Everyone Should Want More Walkable Streets." Fast Company, Fast Company, 24 Aug. 2016, www.fastcompany.com/3062989/50-reasons-why-everyone-should-want-more-walkable-streets.

25. "Reclaiming City Streets for People: Chaos or Quality of Life?" European Commission Environment, EUROPEAN COMMISSION Directorate-General for the Environment, 2018, ec.europa.eu/environment/pubs/pdf/streets_people.pdf.

26. Roberts, Rachel. "DeepRoot." University of Washington Lecture. University of Washington Lecture, Seattle, Gould Hall.

27. Saura, Santiago, and Begoña de la Fuente. "Connecting Habitat Patches in Fragmented Landscapes." Current Conservation, www.currentconservation.org/issues/connecting-habitat-patches-in-fragmented-landscapes/.

28. 17. Sharp, Randy. "6 Things You Need to Know About Green Walls." Building Design + Construction, Building Design + Construction, 1 July 2007, www.bdcnetwork.com/6-things-you-need-know-about-green-walls.

29. "Urban Wetlands." Urban Green-Blue Grids for Sustainable and Resilient Cities, Atelier GROENBLAUW, 2018, www.urbangreenbluegrids.com/measures/urban-wetlands/.

30. Young, S., & Whittington, Jan. (2012). Urban heat island (UHI) effect in the Puget Sound region adaptation and biomimetic strategies to mitigate the effects of climate change. University of Washington.

31. Zamorano, Luis, and Erika Kulpa. "People-Oriented Cities: Mixed-Use Development Creates Social and Economic Benefits." 2018 Will See High Meat Consumption in the U.S., but the American Diet Is Shifting | World Resources Institute, World Resources Institute , 23 July 2014, www.wri.org/blog/2014/07/people-oriented-cities-mixed-use-development-creates-social-and-economic-benefits.

32. Zupancic, Tara, et al. The Impact of Green Space on Heat and Air Pollution in Urban Communities: A Meta-Narrative Systematic Review. David Suzuki Foundation, 2015.

CASE STUDIES ON THRIVING IN PLACE

Credit:
Image Editor

LOS ANGELES RIVER, CA

The Los Angeles River revitalization project emphasis collaboration and involvement among a variety of stakeholders from local individuals to government and state agencies. The project's holistic approach to diversity, inclusivity and involvement sets this project apart from typical large-scale urban greening initiatives.[18]

Credit:
Randy Shaw

CHINATOWN, CA

San Francisco's Chinatown is one of the oldest low-income Asian American enclaves in the United States. This case study sheds light on how to mitigate the negative consequences of gentrification in a booming real-estate market through a well organized community and anti-displacement measures and policies.[5]

CROWN HEIGHTS

The Crown Heights case study illustrates a welcoming and diverse neighborhood facing threats of displacement due to a perceived increase in value by outsiders and inflated real-estate prices. The study highlights local groups and organizations that are fighting to combat displacement while empowering local residents.[6]


Credit:
propertyclub.nyc

SUNSET PARK

Sunset Park is one of the last functioning industrial centers in New York City. After the remediation of a former brownfield site into a park in 2014, local residents have been fearing displacement. This case study examines the efforts of community groups such as UPROSE in empowering the local residents to thrive in place.[11]


Credit:
Adam Carreau

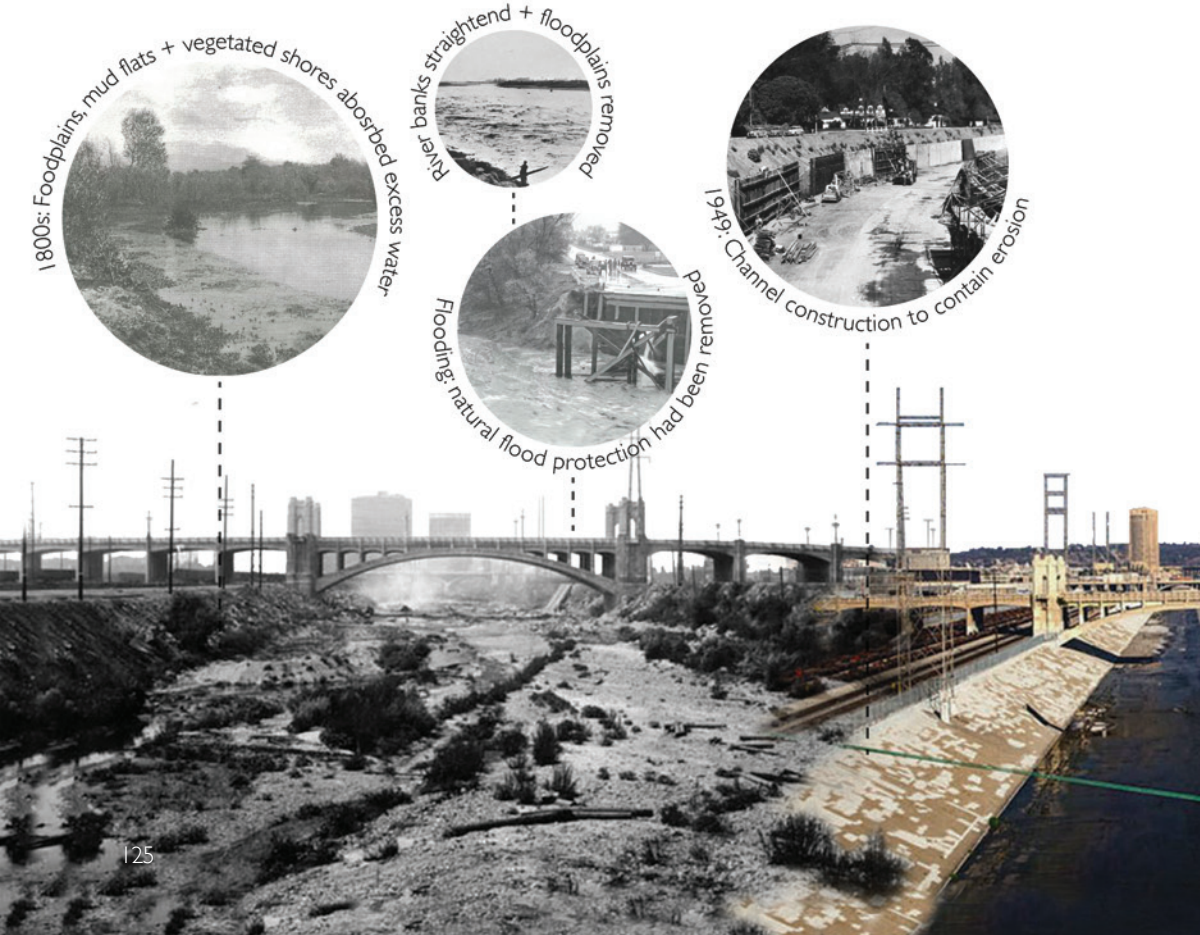
BRONX RIVER

The Bronx River case study sheds light on how grassroots organizations coupled with governmental support can transform an environmental burden into an amenity. The study illustrates successes when environmental justice is placed at the forefront of efforts and participation is garnered from all groups despite differences.[21]

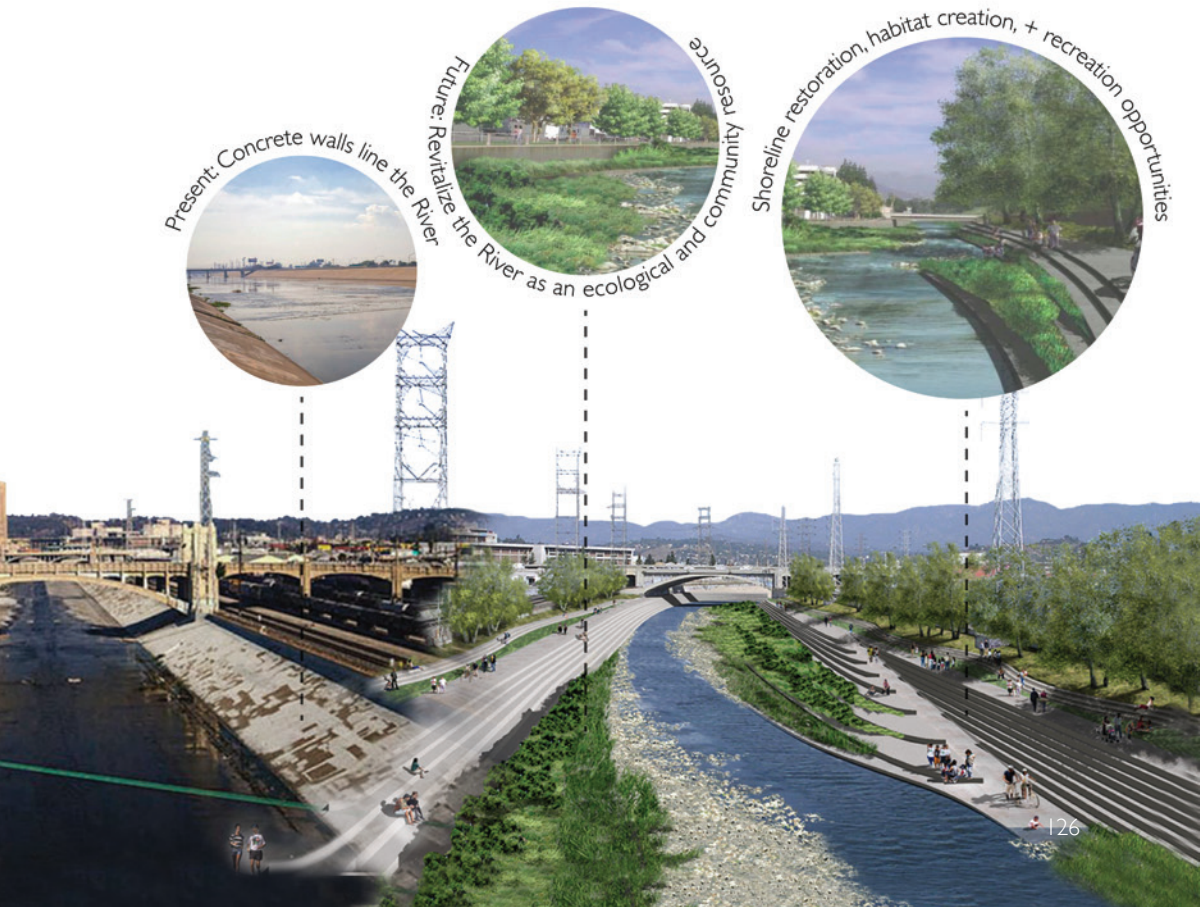

Credit:
Rocking the Boat

LOS ANGELES RIVER Los Angeles, CA

The revitalization of the Los Angeles River is a collaborative process between multiple public and non-profit organization stakeholders.[13] Running 51 miles through LA's urban and diverse neighborhoods, the revitalization project focuses on a 32-mile stretch between Canoga Park and downtown LA.[13] A river with a rich history, the Los Angeles River serves as the "original source of life" for the City of Los Angeles.[13] The river, surrounded by floodplains and mudflats, allowed for rich and diverse habitat in LA's semiarid region and provided livelihoods for the Tongva and later, the Spanish colonists who built early city settlements.[13,18] The LA river was essential in cultivating LA's economic value and growth; straightened and contained, the river served as an important transportation corridor



and provided power for the city throughout the 19th and 20th centuries.[13] Today, the LA River Corridor is home to more than 1 million people, 480,000 workers, 35,000 businesses, 390,000 housing units and 80 schools.[18] In response to flood control, the river was channelized and fully lined with concrete along almost its entire length.[15] This habitat destruction, coupled with years of neglect, causes many residents to consider the river an "eyesore" that detracts from the overall quality and "livability" of the area.[13] However, the river's natural, community, and economic resources present significant opportunities to revitalize its surrounding neighborhoods.[18] The Ad Hoc Committee on the Los Angeles River, established in 2002, aimed at "enhancing existing communities" by creating a safe environment



LOS ANGELES RIVER Los Angeles, CA


Credit:
City of Los Angeles; LARiver.org


Credit:
Studio-MLA


Credit:
Studio-MLA

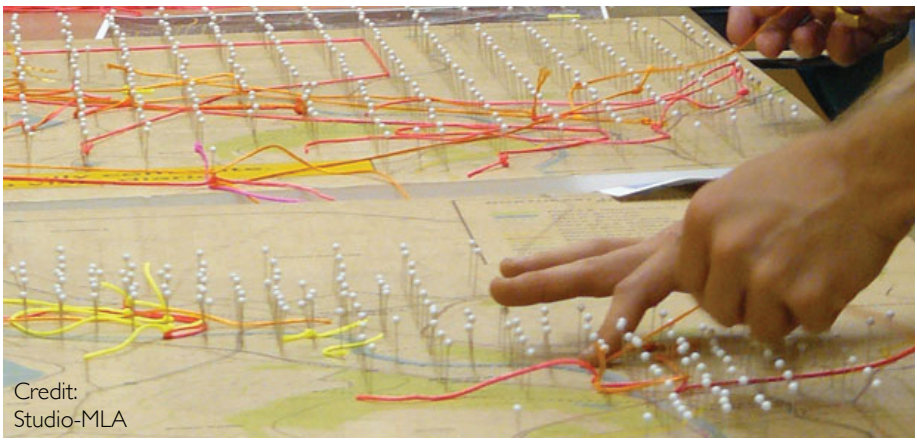
with increased open space, parks, trails, recreation, environmental restoration, riverfront commerce and living, new employment and tourism opportunities, economic development, and a renewed sense of civic pride.[18]

The LA River Revitalization's holistic approach to diversity, inclusivity and involvement among its stakeholders sets itself apart from typical large-scale urban greening initiatives. The project itself is a collaboratively managed, joint effort between the City of LA, the County of LA, and the US Army Corps of Engineers. The revitalization process is guided by the Arts, Parks, Health, Aging and River Committee, and is coordinated by the County of Los Angeles utilizing a Memorandum of Understanding (MOU). The MOU was created to address the maintenance, security, liability, and project implementation measures each agency is responsible for.[18]

Project coordinators emphasize that "every individual, organization, and business in the Los Angeles region is a key River stakeholder."[18] Residents and other stakeholders are encouraged to participate in decision-making activities such as well-publicized workshops,

meetings and other events. To encourage inclusivity, all meeting public materials and notifications are translated into Spanish, and Spanish-speaking translators attend public meetings and workshops; other languages are translated if requested. To further gain diverse perspectives, initiatives such as online surveys and the LA River Stories, a series of video interviews aimed at capturing people's experiences with the LA River in its current state and their desired hopes for its future, are conducted and put online for all to access. All meetings are well-documented online, with public comment sections available to those who could not attend.[18]

However, it should be noted that the recent selection of designers to lead the revitalization project has raised some concern among local residents fearing displacement and gentrification. Large, world-renowned firms like Frank Gehry Partners and the Olin Studio were chosen to oversee the development of the Master Plan, as opposed to smaller, local firms collaborating with long-time community activists. Due to this, many fear that the design and development process will show a greater disregard for community input and involvement, and the famous firm names will raise real estate prices, attract expensive development, and cause shifts in the character and demographics of local neighborhoods.[25]



Credit:
Studio-MLA

CHINATOWN San Francisco, CA


Credit:
Patricia Chang


Credit:
Katelyn Siegel


Credit:
Judy Bellah

In San Francisco, more than 14,000 residents live in Chinatown's 20-block, densely packed core.[16] The neighborhood is in close proximity to the Financial District, Downtown and affluent neighborhoods such as Russian Hill. Due to San Francisco's booming real estate market, it was expected that Chinatown would face significant gentrification due to development and speculation pressures. However, a number of anti-displacement policies coupled with a well organized community has preserved this area as a low-income enclave for the Asian American community.[5]

San Francisco's Chinatown is one of the oldest ethnic enclaves in the United States. A significant portion of housing was built as single room occupancy (SRO) residential hotels or small rooms in commercial structures and community spaces. Due to discriminatory housing practices preventing Chinese immigrants from property ownership prior to the 1960's, many of these residential quarters were overcrowded and poorly maintained. The Chinese community's "spatial segregation and social isolation" created "an impenetrable social, political, and economic wall'

THRIVING IN PLACE

Chinatown
North
Chinatown
Polk Gulch

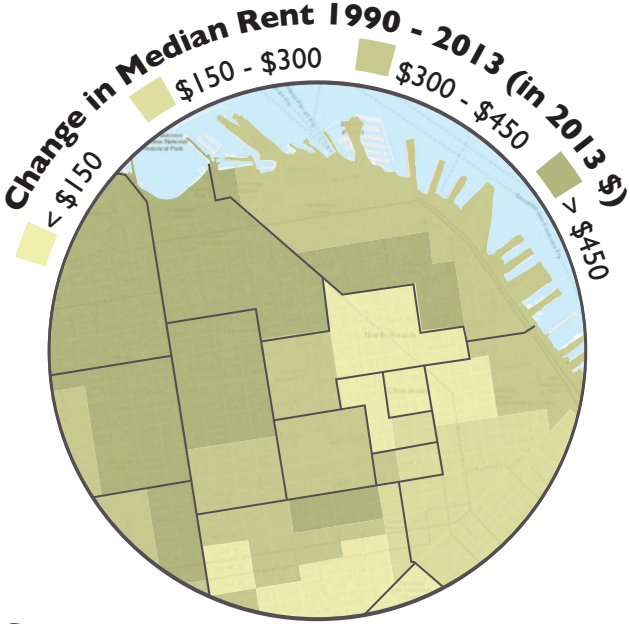
allowing for the formation of strong social networks and self sufficiency within community institutions, cultural activity and small businesses. Today, more than 19% of the renter households are overcrowded and housing affordability is still a pressing issue. Despite these issues the median rent in Chinatown has been relatively stable since the 1990s due to the large number of rent-controlled and subsidized units.[5]

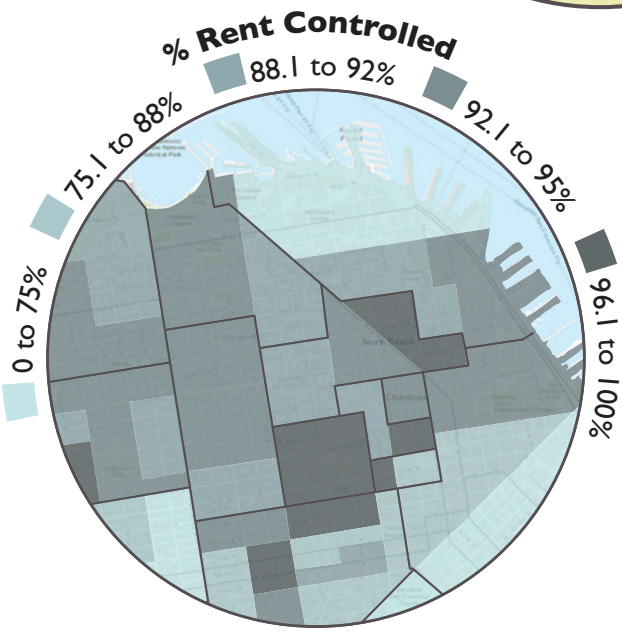
A series of policy interventions and planning efforts have preserved Chinatown's historic character and affordability. From the mid 1970s to mid 1980s, 1,700 residential units were converted to office spaces, and increased capital from Asian firms raised commercial and residential rents. The Chinatown Resource Center (currently known as The Chinatown Community Development Center), advocated for structural changes in the land use policy, recognizing the unsustainability of the project-by-project approach. The Chinatown Resource Center rallied residents, community-based organizations and City officials to downzone the neighborhood (previous zoning plans had set the height limit much higher than the existing building fabric). In 1986 the Rezoning Plan's aim was to preserve the "virtually irreplaceable" affordable housing in Chinatown by prohibiting demolition and banning the conversion of residential building into different uses. Furthermore, Chinatown's SRO's structures were granted protection by the 1980 citywide Residential Hotel Ordinance. This ordinance made it difficult for developers to convert residential hotel rooms to commercial use by requiring the replacement of lost affordable units.[5]

Despite earlier successes, Chinatown currently faces an array of challenges. Recently there has been a limited increase in affordable units and the current zoning ordinances limit the ability to rebuild existing structures as affordable housing if they were to come down in an earthquake. Furthermore, the opening of a new subway station in 2019 coupled with eviction pressures has spiked fear of gentrification in the community.[5]

Successes

- Chinatown Community Development Center
- Citywide Hotel Ordinance of 1980
- 1986 Rezoning Plan
- Community identity
- Tight social networks
- High rate of civic engagement
- Strong political engagement
- Presence of many non-profit organizations
- 1000-member Community Tenants Association





Hurdles

- Poverty rate increase (18% in 1980 to 26% in 2013)
- 54% of renters pay more than 30% of their income
- Development of new affordable housing has been limited
- Aging housing stock
- Limited ability to rebuilding existing affordable housing if it is destroyed
- Ellis Act Evicitions
- Proposed subway station (2019)

CROWN HEIGHTS Brooklyn, NY

The Crown Heights neighborhood, adjacent to Prospect Park in Brooklyn, is an example of a dynamic, diverse neighborhood in which residents of varied cultures and backgrounds are coming together to respond to socio-economic shifts in the broader neighborhood.[6] A neighborhood with a vibrant past, Crown Heights has experienced many demographic shifts over the years.[6] During the early 1900s, Crown Heights was developed as an upper-class residential neighborhood, and prior to World War II, Crown heights was considered one of NYC's most desirable areas to live.[1] In 1960, the neighborhood was made up of 70% white residents; by 1970, 70% of the residents were black, many of whom were from Caribbean descent, and the remaining 30% largely consisted of Lubavitch Hasidic Jews.[6] Tensions between the African-American and Carriean communities and the Lubavitch community slowly escalated, resulting in the re-writing of symbolic borders and landmarks, and cumulating in the 1991 Crown Heights riot.[6] After this event, symbolic borders were demolished and new groups of people began moving into the neighborhood alongside property developers.[6]

Today, despite an increasing white population, the majority of Crown Heights residents are African-American, Carribbean and Caribbean-American, in addition to a significant population of Lubavitcher Hasidic Jews.[12] In fact, due in part to factors such as Brooklyn's increasing popularity and "hip" reputation and rejuvenation of green spaces such as Prospect Park, the white population has doubled up to 16%, and the numbers of Hispanic and Asian residents are also increasing.[12] Despite some cultural divisions, Crown Heights is considered by many to be welcoming, with a thriving stoop life and engaged community members across cultural backgrounds.[17] However, cost of living is increasing and forcing some residents out of their homes; between 2014-2015, the cost of homes increased by 14%.[12] One contributing factor to the surge in real estate costs is the $2.4 million restoration of Flatbush Avenue, on the northeastern perimeter of Prospect Park.[1] In addition, Prospect Park is re-designing two new park entrances and redeveloping the northeastern

corner of the park, including transforming the former Rose Garden and restoring the woodlands area.[3] These public space improvements are attracting development.[7] The city is considering plans to demolish an old Crown Heights spice factory and replace it with two 39-story high-rises that, standing over 400', would bring nearly 1,600 apartments to the neighborhood in addition to new retail opportunities.[7]

In response, groups to combat gentrification and help vulnerable populations thrive in place have formed and provided massive pushback to development efforts that would propel the gentrification process.[7,26]

CROWN HEIGHTS Brooklyn, NY

Crown Heights Tenant Union (CHTU), for example, began meeting in 2013 as a response to "rampant gentrification, displacement, and illegal rental overcharges in the neighborhood."[2] The CHTU is supported by the Urban Homesteading Assistance Board, which works to "empower local residents through building strong tenant associations and providing technical assistance to building residents seeking to democratically control and manage their homes."[2] The CHTU recognizes a real estate cycle in Crown Heights in which low-income tenants are pushed out, and the new tenants are charged rent surpassing the legally regulated limit. Since its establishment, over 40 buildings in the CHTU have come together to demand new, stronger protections that are actively enforced to guarantee tenants' rights. To demand stricter enforcement of existing tenants' rights and the implementation of new protections that eliminate landlord-favoring loopholes, the CHTU uses a collective bargaining strategy. The CHTU encourages and organizes a stronger tenant voice in decisions impacting rental housing, and advocates for a five year rent freeze and restrictions on tenant buyouts. The CHTU has adopted what it refers to

Data source: Crown Heights Tenant Union

as a unique "unite and fight" strategy, where long-term tenants and new neighborhood residents, of diverse cultural backgrounds, unite with the goal of shifting policies and landlord behavior.[2]

Other anti-displacement organizations that are involved in maintaining the Crown Hill neighborhood as a livable neighborhood for all are Equality for Flatbush and the Movement to Protect the People.[8,23] Founded in 2013, Equality for Flatbush (E4F) was created in response to the increase in tenant and police harassment due to gentrification, and describes itself as a "people of color-led, multi-national grassroots organization" that focuses on affordable housing and anti-gentrification organizing.[8] Its goals include ending NYPD murders and putting an end to the displacement of low- to middle-income residents of communities across Flatbush, East Flatbush and Brooklyn.[8] E4F has organized "No Eviction Zones" in 9 Brooklyn neighborhoods, including Crown Heights.[8] It is currently fund raising to create "The E4F Rapid Response Legal Fund", which will provide free legal services by reputable attorneys to tenants, homeowners, small business, and those impacted by police violence across Brooklyn.[8] The Movement to Protect the People (MTOPP) is an organization that strives to create safe, harmonious[...]friendly, prosperous [and] beautiful neighborhoods" where all residents can thrive in place over the long-term.[23] MTOPP's mission is to protect moderate- to low-income residents from being displaced due to gentrification, and to do this, mobilizes and educates community members, organizes petitions, and engages with city planners and real estate developers as advocates for "true" affordable housing.[23] Although Crown Heights is still experiencing gentrification, anti-gentrification efforts and organizations have been effective to slow this process, build awareness, and mobilize a diverse community to fight for its tenant rights.

Credit: Colorlines

SUNSET PARK Brooklyn, NY

Sunset Park, a New York City enclave located in southwestern Brooklyn, has historically enjoyed relative obscurity in comparison with public parks located closer to Manhattan or Brooklyn.[22] The 25-acre park was constructed in the 1890s; the waterfront area in which it was developed became the location for Bush Terminal, a 250-acre shipping terminal scheme that provided industry jobs for residents and shaped the area's character and economy.[11] Today, Sunset Park is one of the last functioning industrial centers in New York City, and is densely populated with Asian and Latino groups.[11] Known for its heterogeneity and ethnic neighborhoods, the Sunset Park neighborhood, which offered an affordable cost of living, has been home to many waves of immigrant communities throughout its history.[11] In 1964, the Economic Opportunity Act designated Sunset Park a federal poverty area; at the same time, the opening of the Verrazano-Narrows Bridge set into motion white flight from the area.[11] Throughout

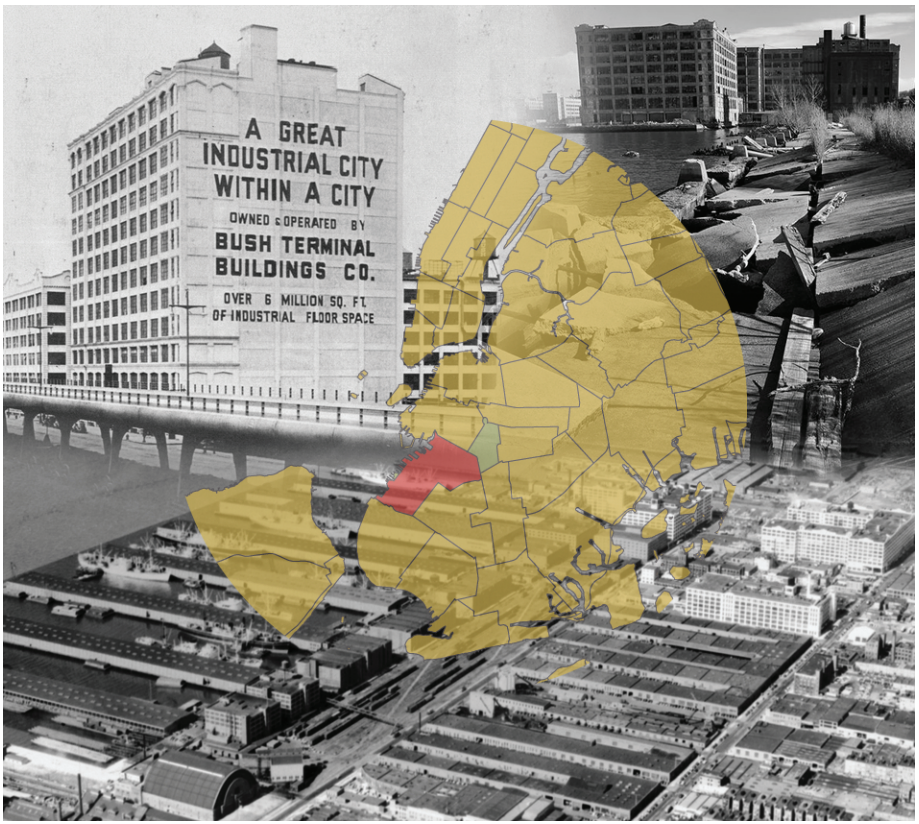
Credit:
Adam Carreau

the following decades, Mexican, Ecuadorian, Dominican, Indian, and Chinese populations restored the neighborhood's vitality through rehabilitating housing and creating vibrant communities and blue-collar economic opportunities.[11] More recently, throughout the 1980s - 2000s, an influx of Chinese residents moved into the Sunset Park neighborhood after getting priced out of Manhattan's Chinatown due to increasing rents, in addition to significant Latin American populations.[11,4] Sunset Park itself has been a popular social gathering spot for diverse residents; large patches of grass host informal soccer games, chess tables attract older populations, and attractive plantings serves as scenic backdrop for teenagers and families.[22]

Sunset Park had long been the neighborhood's only public park; in recent times, Bush Terminal Piers Park, a former brownfield, was renovated to create new athletic open space and waterfront access.[14] Opened in 2014

SUNSET PARK Brooklyn, NY

after 10 years of planning and construction, renovations to the space were largely the result of local community advocacy groups working to make Sunset Park a more livable neighborhood for those that reside there.[11,19] UPROSE, a Puerto Rican-originated, Latino-based, multi-ethnic advocacy group fundamental to the Bush Terminal Piers Park's success, encouraged "the park to reflect the needs and visions of the Sunset Park community," as Sunset Park suffered from a "severe lack of open space," a complete lack of waterfront access, and a disproportionate number of environmental burdens.[11] Although lacking in amenities and creative, fun design features, especially when compared with Brooklyn Bridge Park, located in a wealthy



community, the development of Bush Terminal Piers Park is noted as "a long-awaited step in making Sunset Park's waterfront accessible to Brooklyn's working families."[11] In other words, the renovations were an urban greening effort to directly serve existing community residents, many of whom had long advocated and mobilized for waterfront access.[11]

However, the new waterfront access added to and helped make known Sunset Park's other assets, such as more affordable housing and dynamic cultural character, to make it a prime target for developers, particularly those in creative industries looking to transform Bush Terminal Piers Park's surrounding warehouses.[11] As soon as the park opened, a building block adjacent to it sold for nearly 20% above asking price.[11] UPROSE, the advocacy group that played a major role in making the renovations to Bush Terminal Piers Park possible, recognized the risks of displacement vulnerable residents of Sunset Park were facing and is currently advocating for maintaining the area's industrial


Credit:
Adam Carreau


Credit:
Adam Carreau

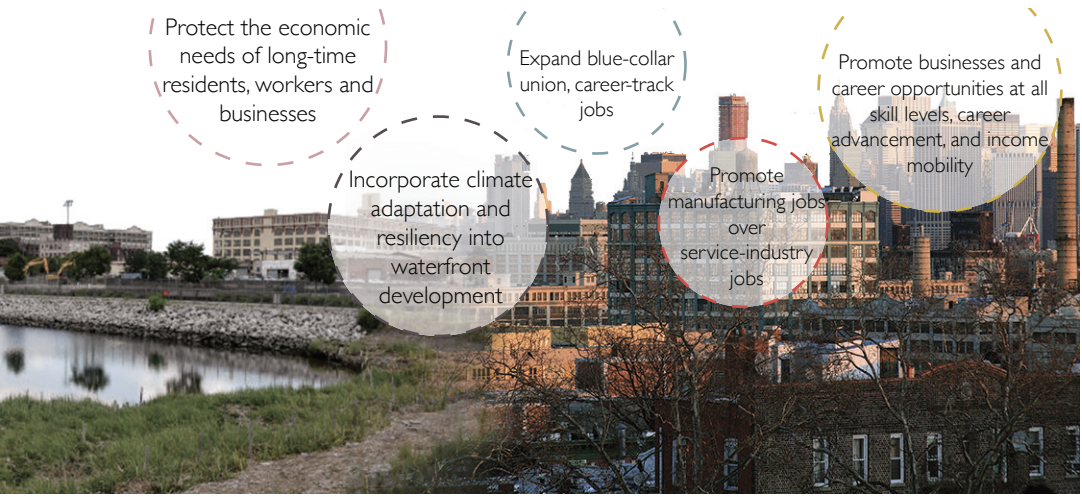
Credit:
Adam Carreau

SUNSET PARK Brooklyn, NY

working-class and working-poor jobs, as the waterfront is a viable working port facility, while maintaining a strong environmental justice vision for the region's future.[11] UPROSE believes supporting and maintaining a working, industrial economy is key to resisting displacement, as deindustrialization is often the first step in the gentrification process.[20]

UPROSE supports sustainability and resiliency initiatives in the Sunset Park neighborhood through offering community education and organizing, indigenous and youth leadership development, and outlets for cultural and artistic expression.[24] The organization considers itself a lead advocate of climate justice, adaptation and resiliency; it considers its work to occur "at the intersection of social, racial, economic, environmental, and climate justice, where different campaigns and initiatives naturally feed into, complement, and support one another."[24] Along with doubling the amount of public green spaces in Sunset Park, UPROSE has led a successful urban forestry campaign, provided funding for youth college tuitions and research expeditions, and facilitated many community-based plans.[24] Three major tools that it uses to do accomplish its goals are community organizing, youth organizing, focusing in particular at generating leadership

skills among at-risk youth, and the promotion of cultural expression to celebrate, honor, and bridge Sunset Park's diverse communities.[24] UPROSE played a leading role in improving Sunset Park as a desirable and quality place to live for its existing residents; its leader, Elizabeth Yeampierre, has acknowledged the attractiveness of these improvements to outside developers and gentrifiers.[10] In response, UPROSE has taken a lead role in anti-gentrification organizing; Yeampierre states, "our communities are being told that unless we live next to a waste transfer station or a power plant, we don't deserve to live there."[11] UPROSE continues to advocate for the preservation of blue-collar jobs and working-class businesses, and works towards ensuring economic development, equity, and resilience in Sunset Park.[11] The organization operates under the principle that "urban policy and planning initiatives for sustainability and resilience must foreground racial equity and justice in Sunset Park," and promotes heavy community participation in the urban planning process.[11] Overall, the Sunset Park neighborhood is an interesting, on-going case study of a neighborhood advocating for environmental improvements, quality of life, and long-term economic viability for its long-time residents while maintaining an affordable cost of living and minimizing displacement.[11]



BRONX RIVER Bronx, NY

The Bronx River revitalization project sheds light on how community empowerment coupled with governmental support can lead to positive environmental, community and economic outcomes. Demographically, the South Bronx area is one of the poorest counties in the country where 43% of the population lives below the poverty line. 53.3% of the population in the Hunts Point and Longwood communities is on income-assistance programs, while in the nearby Morrisania neighborhood 61.2% of the population is on income-assistance programs. These neighborhoods are comprised largely of minority populations where 74.8% of residence are of Hispanic origin, 22,1% are of black non-Hispanic origin and 1.3%

are of white non-Hispanic origin. Predominately black and low-income communities located on the southeast portion of the river have been the most impacted by environmental burdens. The communities in the Hunts Point and Point Morris neighborhoods have been subject to a host of locally unwanted land uses with more than two dozen waste transfer stations, a sewer treatment plant and a sewage sludge pelletizing plant.[21]

In order to combat the degradation of the Bronx River, a group of community volunteers established the Bronx River Restoration group to clean and restore the river in 1974.[9] After gaining momentum over the next two decades, the Bronx River Working Group (renamed to the Bronx River Alliance in 2001) was established. In 1997, it brought together over 60 grassroots groups (including non-environmental community-based groups and environmental justice groups), the New York City Department of Parks and Recreation and the National Park Service Rivers and Trails Program.[9] The group's mission is centered around an environmental justice implementation strategy that relies on community ownership, empowerment and public

Credit: Natural Areas Conservancy

Credit: revitalization.org

Credit: Rocking the Boat

BRONX RIVER Bronx, NY

participation.[9] The leadership of the group known as the board of Alliance takes pride in consisting of "a number of community and environmental activists, drawn from the participants in the Working Group," as apposed to solely powerful elites.[21] Board leaders are gender balanced, ethnically, geographically and economically diverse and contain members from youth-based organizations to large well-resourced environmental nonprofits.[9] In order to maintain community ownership, annual meetings with all partnership groups are held to ensure the board members include community members, not just wealthy elites.[9]

The group relies on a series of strategies for implementation to ensure that environmental justice and community empowerment are at the forefront of their efforts. The group's first strategy to address displacement and the negative ramifications of gentrification is to "create principles and institutions that protect communities."[9] By putting the safety and public heath of communities along the river at the forefront of their efforts, the Alliance is promoting the wellbeing of communities that have been disproportionately affected by environmental burdens.[9] Strategies such as "planning and operation" strive to link planning and monitoring systems with community empowerment, environmental justice and capacity building.[9] Furthermore, youth and elderly engagement programs have been established to ensure the intergenerational transfer of knowledge and equity for generations to come.[21] Through bottom-up community empowerment coupled with top-down coordination and investment, the Bronx River Alliance has enhanced public space and environmental quality along the southern Bronx River while providing marginalized communities the tools and power to thrive in place.[21]

Please visit http://bronxriver.org to learn more about the Alliance and their commitment community empowerment and environmental justice.

Strategies to Thrive in Place

Establishing a Diverse Advocacy Group

- Garner participation from all groups despite differences
- Encourage gender balanced, ethically, geographically and economically diverse leadership
- Maintain a well staffed organization

Implement Anti-Displacement Strategies

- Schedule annual assemblies to discuss and implement strategies that address economic development.
- Establish partnerships to develop affordable housing

Lessons Learned

Government Support is Key

- Citizens and officials work towards a common goal

Continuity of Effort is Crucial

- Sustained effort to enhance river
- Institutional knowledge and influence passed to next generation

River Renewal and Empowerment are Symbiotic

- Effects of river restoration has a rippling effect on communities
    - Falling crime rates, increasing property values, community led repair of abandoned buildings

Credit: SWA/Balsley

SOURCES

1. "A Brief History of Crown Heights." Crown Heights Central Jewish Community Council, Wordpress, 2019, chcentral.org/visitors-guide/a-brief-history-of-crown-heights/.

2. "About Us." Crown Heights Tenant Union, Crown Heights Tenant Union, 2019, www.crownheightstenantunion.org/about-us.

3. Brown, Nicole. "2 New Entrances Coming to Prospect Park." Am New York, Am New York, 26 Apr. 2018, www.amny.com/news/prospect-park-flatbush-avenue-restoration-1.18268163.

4. Chan, Huiying Bernice. "Mapping Displacement and Resistance in Sunset Park." Open City, Asian American Writer's Workshop, 1 Nov. 2018, opencitymag.aaww.org/displacement-and-resistance-in-sunset-park/.

5. Crispell , Michael, and Nicole Montojo. "Anti-Displacement Policy Case Study: San Francisco's Chinatown." Policy Case Studies | Urban Displacement Project, Mar. 2016, www.urbandisplacement.org/policy-case-studies.

6. "Crown Heights from the 1950s to Today." Remembering Crown Heights, WordPress, 2019, wp.nyu.edu/crownheights/history-and-geography/crown-heights-from-the-1950s-to-today/.

7. Culliton, Kathleen. "Massive Development Could Tower Over Prospect Park, Records Show." Stone Mountain-Lithonia, GA Patch, Patch Media, 13 Feb. 2019, patch.com/new-york/prospectheights/massive-development-could-tower-over-prospect-park-records-show.

8. "FIGHTING GENTRIFICATION // HOLDING POLICE ACCOUNTABLE." Equality For FlatBush, Equality for Flatbush, 2017, www.equalityforflatbush.org/.

9. "Founding Principles ." Bronxriver.org, bronxriver.org/.

10. Gonzalez, David. "In Sunset Park, a Call for 'Innovation' Leads to Fears of Gentrification." The New York Times, The New York Times, 21 Dec. 2017, www.nytimes.com/2016/03/07/nyregion/in-sunset-park-a-call-for-innovation-leads-to-fears-of-gentrification.html.

11. Gould, Kenneth Alan, and Tammy L. Lewis. Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice. Routledge Taylor & Francis Group, 2017.

12. Gregor, Alison. "Crown Heights, Brooklyn, Where Stoop Life Still Thrives." The New York Times, The New York Times, 19 Jan. 2018, www.nytimes.com/2015/06/21/realestate/crown-heights-brooklyn-where-stoop-life-still-thrives.html.

13. "Historical Background." LA River Index, Creative Commons.org, 2018, riverlareports.riverla.org/flood-risk-management/historical-background/.

14. Kadinsky, Sergey. "Bush Terminal Park, Brooklyn." Hidden Waters Blog, Wordpress, 4 Dec. 2018, hiddenwatersblog.wordpress.com/2018/12/04/bushpark/.

15. Kudler, Adrian Glick. "9 Views of the LA River before and after It Was Paved in 1938." Curbed LA, Vox Media, 8 Jan. 2019, la.curbed.com/2015/8/19/9936922/la-river-history-before-concrete-after-photos.

16. Leong, Kathy Chin. "With Change Bubbling, San Francisco's Chinatown Strives to Stay Authentic." The New York Times, The New York Times, 16 Oct. 2018, www.nytimes.com/2018/10/16/business/san-francisco-chinatown-gentrification.html.

17. Living Apart in Crown Heights. YouTube, YouTube, 17 Aug. 2011, www.youtube.com/watch?v=uWstkOcEs5I.

18. "Los Angeles River Revitalization." Ecosystem | Los Angeles River Revitalization, City of Los Angeles, 2017, lariver.org/blog/about-la-river.

19. Melcher, Henry. "Bush Terminal Piers Park Finally Opens in Sunset Park, Brooklyn." Archpaper.com, The Architect's Newspaper, 10 Nov. 2014, archpaper.com/2014/11/bush-terminal-piers-park-finally-opens-sunset-park-brooklyn/.

20. Rubin, Jesse. "Fighting Gentrification on Brooklyn's Waterfront." The Indypendent, The Indypendent, 27 May 2017, indypendent.org/2017/05/fighting-gentrification-on-brooklyns-waterfront/.

21. Smardon, Richard C., et al. Revitalizing Urban Waterway Communities: Streams of Environmental Justice. Routledge, 2018.

22. "Sunset Park: At a Glance." Streeteasy.com, Zillow, Inc., 2019, streeteasy.com/neighborhoods/sunset-park/.

23. "Who Are We?" The Movement To Protect The People, 2019, www.mtopp.org/.

24. "Who We Are." UPROSE, UPROSE, 2019, www.uprose.org/mission.

25. Wurster, Clea. "Clea Wurster: LA Shouldn't Let River Revitalization Project Fall Prey to Gentrification." Daily Bruin, Daily Bruin, 24 June 2018, dailybruin.com/2018/06/24/clea-wurster-la-shouldnt-let-river-revitalization-project-fall-prey-to-gentrification/.

26. Zagare, Liena. "Editorial: Anti-Gentrification Activists Should Stop Trying to Silence a Local Blogger. Enough Is Enough." BKLYNER, Corner Media Inc., 27 Oct. 2018, bklyner.com/editorial-anti-gentrification-activists-should-stop-trying-to-silence-a-local-blogger-enough-is-enough/.

CONCLUSION

Researchers agree that in today's rapidly urbanizing world, the provision of urban green spaces and sustainable transportation networks is essential for environmental quality and emotional and physical health and wellbeing. As cities are becoming more desirable places to live, there are potential negative consequences for existing minority and low-income communities who cannot afford to stay and reap the benefits of new amenities. Practices such as urban greening can have potential negative ramifications if the voices of local communities are overlooked and if principles of environmental and social justice are not at the forefront of greening efforts. By putting procedural equity and distributional equity at the forefront of urban greening initiatives, communities that have dealt with disinvestment and environmental burdens can reap the benefits associated with the infusion of new urban green spaces.

Through community empowerment and strategies such as nonprofit housing organizations and community land trusts, local ownership can be realized. Then, with benefits from the incorporation of responsively-designed public space and urban greening projects, truly heightened equity can be achieved. Inclusive participation in both policy and design may increase both procedural and distributional equity, resulting in environmental justice for all individuals regardless of race or socioeconomic status. Policy interventions to create and preserve affordable housing coupled with regulating landlord and tenant relationships can aid in the retention and provision of affordable housing stock, allowing long-term residents the opportunity to stay in place.

Through case studies from the LA River Revitalization project to the Bronx River Restoration project, it is evident that although ongoing struggles exist, empowered communities who put environmental justice principles at the forefront can reap the benefits of urban greening projects. Combining strategies that prevent displacement while offering the benefits of public and green space can result in the ability for community members to truly "thrive in place."

URBAN FLUX

URBAN GREEN SPACES

EMPOWERMENT

INEQUITABLE ACCESS
+ DISPLACEMENT

PARTICIPATION

EQUITABLE
PUBLIC
SPACE

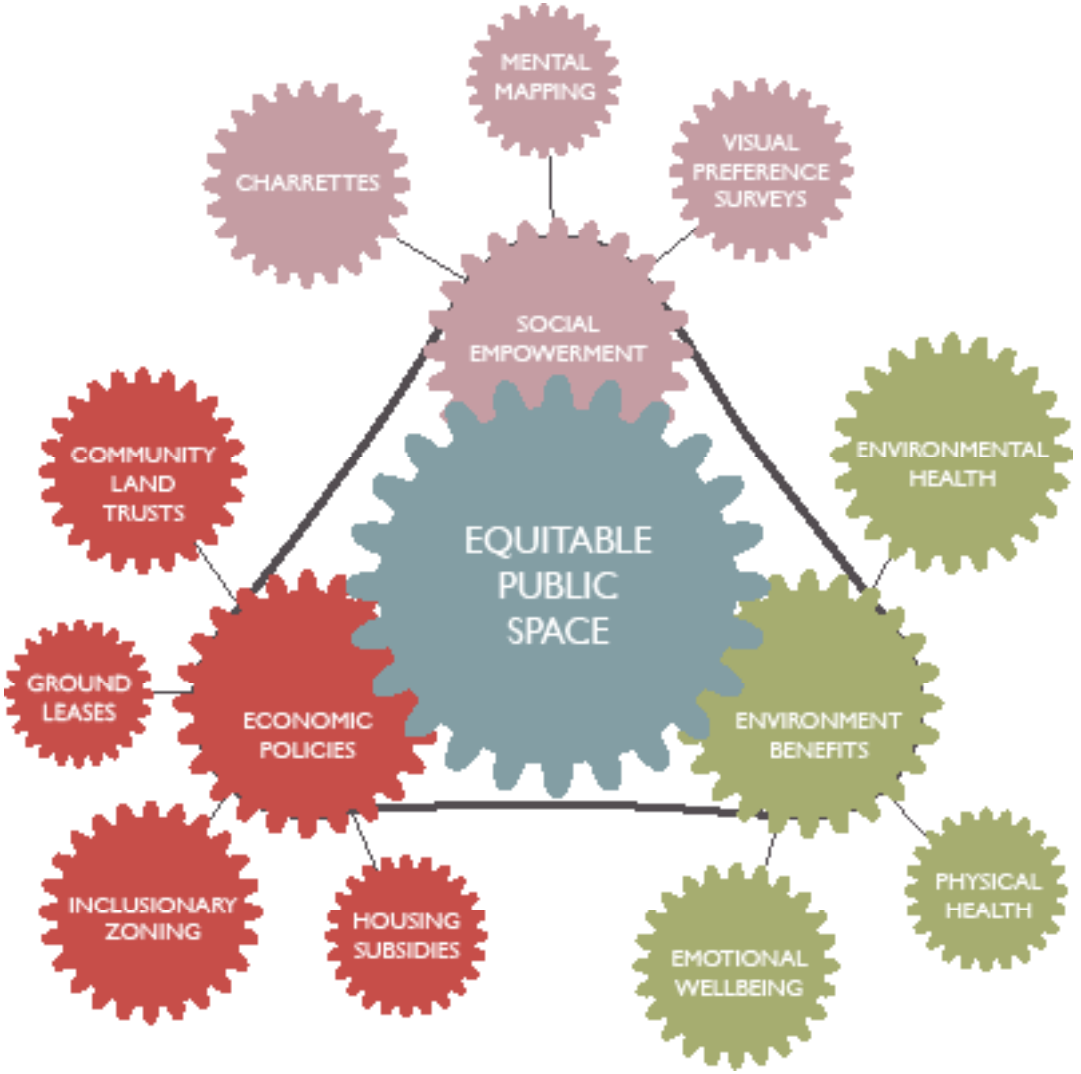
POLICY

DESIGN

"As we nurture the natural environment, its abundance will give us back even more."

- Majora Carter

Urban revitalization strategist, president and founder of the Majora Carter Group, founder of Sustainable South Bronx, MacArthur Fellow and Peabody Award winning broadcaster.


MENTAL MAPPING
CHARRETTES
VISUAL PREFERENCE SURVEYS
SOCIAL EMPOWERMENT
COMMUNITY LAND TRUSTS
ENVIRONMENTAL HEALTH
EQUITABLE PUBLIC SPACE
GROUND LEASES
ECONOMIC POLICIES
ENVIRONMENT BENEFITS
INCLUSIONARY ZONING
HOUSING SUBSIDIES
PHYSICAL HEALTH
EMOTIONAL WELLBEING

In today's world, **public health** and **public realm** practitioners have access to rich **analyses** of **disparities** in **community conditions**. Our unpacking of **types** and **scales** of **built environment** and **public space inequities** are **vivid** and **compelling**. We understand the problem. Margot Chalmers and Adam Carreau offer a **critical** contribution by conveying for **community** and **civic leaders**, **city planners**, **policy makers**, and **project managers** how to **be part** of the **solution**.

Equitable Public Space – **Environmental Justice** through **Policy** and **Design** is **practical** guide for the **array** of **actors** who have a role in **advancing solutions** that will be **remedial** to **humans** and the **ecosphere** upon which **we depend**.

- Richard Gelb

Environmental Health Planner at Public Health – Seattle & King County