



#### About us

Streetwyze uses state of the art community engagement strategies (offline and online), participatory mapping and mobile technologies, equity impact assessments, storytelling techniques, and community-generated data that can be integrated with Big Data and predictive analytics to solve the root causes of social inequity and lift up invisible community assets so that they can be leveraged for social good. Our platform and process transforms how people access, share, and leverage information about their communities and neighborhoods.

We designed Streetwyze to integrate community voice into the heart of urban planning processes and to support local driven strategies towards equitable community development and neighborhood transformation. Informed and inspired by the idea that 'community members are experts in their own neighborhoods and community knowledge should help drive innovation,' Streetwyze works with community members, designers, architects, planners, engineers, artists, activists, and businesses, to bridge the gap between local knowledge and professional knowledge, in a way that builds power and self-determination in low-income communities and communities of color, and helps transform the lives of poor, and socially vulnerable people and places. By demystifying planning processes, decoding industry speak, flipping the script, and sharing the stage in terms of who is the expert— Streetwyze is designed to catalyze critical improvements in community assets, land use, transportation, housing, health, social services, arts, culture, ecology, education, and the comprehensive social determinants of health required to holistically transform urban systems (Corburn, 2002).

#### About the author

Dr. Antwi Akom is an urban technologist with an extensive background in collaborative, community-facing technology projects, designing for the public good, and developing new models of urban innovation in the 21st century that make cities smarter, more equitable, just and sustainable. Currently he is the Founding Director of the Social Innovation lab — a joint research lab between the University of California, San Francisco, and San Francisco State University (SOULLab.co) and also an affiliate faculty member with UCSF's Center for Vulnerable Populations (CVP) at Zuckerberg San Francisco General Hospital and Trauma Center, where he researches and deploys new health information communication technologies that improve health literacy, health care delivery, digital literacies, and promote equitable health outcomes for vulnerable populations.

Prior to joining UCSF/CVP in 2016, Dr. Akom co-founded and launched a series of technology startups in the San Francisco Bay area, including Streetwyze, which has been recognized and/or collaborated with Homeless populations, Hospitals, Health Care Systems, The Obama Administration, Race Forward/The Center for Social Inclusion, PolicyLink, EcoDistricts, Google, Aclima, The Denver Housing Authority, US Bank, Residents United for Action Network (RUN), Asian Health Services, Mithun, Perkins

and Wills, Sasaki, the Movement
Strategies Center, Oakland Creative
Neighborhood Council, Bay Area
Organization of Black Owned Business
(BAOBOB), Artist Thrives Network,
Enterprise Community partners, Right 2
Root, Iron Bound Community Corp, and
the Rockefeller Foundations 100 resilient
cities to name a few.

Dr. Akom's work has also been featured in award winning publications such as: the Atlantic's City lab, The Root, Tech Republic, Green Biz, Tech Crunch, and Ed Weekly, as one of the new mobile platforms and racial, spatial, and neighborhood innovation processes designed to build power and selfdetermination with vulnerable populations and involve everyday people in the decisions that impact their everyday lives. He holds a BA in Political Science. and Economics from the University of California, Berkeley, a Masters degree in Urban Education from Stanford University, and a Ph.D. in Urban Sociology from the University of Pennsylvania. Currently he teaches courses in Health, Medicine, Nutrition, Social and Spatial Epidemiology, Urban Planning, African American studies, and Climate Justice. His most recent TEDx Talk is called Innovation Out of Poverty.





#### About the editors

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## Table of contents



#### I. PART ONE Page 6

Introduction

#### II. PART TWO Page 16

**Building Real time Community Driven** Data & Early Warning Systems That Help **Achieve Equity Goals** 



#### III. PART THREE Page 19

Understanding Neighborhood Change as an Opportunity for Partnership and Collaboration with Vulnerable Populations



#### IV. PART FOUR Page 24

**Building Trust and Social Capital:** Strengthening the Social Fabric of Neighborhoods



#### V. PART FIVE Page 26

Methods: Digital and People Powered Place-Making and Health Equity Framework



#### VI. PART SIX Page 31

Conclusion: Building Power and Self Determination with Vulnerable Populations by Integrating Community Driven Data with Big **Data and Predictive Analytics** 

#### VII. PART SEVEN Page 36

**Appendix** 



#### I. Introduction

- Why do some neighborhood transformation efforts fail while others succeed?
- Why do organizations focus on creative place-making instead of creative place-keeping with vulnerable populations?
- How can our approaches to increasing affordable housing, health, wealth, and equitable development become more effective—particularly for the most racially, socially, and economically vulnerable?
- How do we know if we are being successful without ensuring that success is measured through an equity lens?
- How do we get neighborhood transformation right?
- How can we do community engagement better with our nations most vulnerable populations?

These are important questions and serve as the foundational building blocks for this toolkit. Because successful neighborhood transformation and revitalization begins with critical thinking, the Streetwyze Toolkit helps organizations and everyday people who understand—and want to better understand the interaction between race, space, place, and waste—think more clearly about designing and directing neighborhood change efforts with vulnerable populations.

The Enterprise Opportunity Index, EcoDistricts, PolicyLink's All-In Cities, USGBC LEED in Cities, SPARCC, 100 Resilient Cities, Choice Neighborhoods, Bloomberg What Works in Cities, and other national, regional, and local initiatives represent chances to improve neighborhood revitalization for those most in need. The stated purpose of many of these efforts is to use data, standards, and certifications to allocate resources and improve residents lives.



But the real goal is and should be to create neighborhoods of opportunity that can attract people, policies, programs, businesses, goods, services, and resources that create an equitable regenerative circular economy that lifts up vulnerable populations so we can heal, transform, and thrive from the ground up—so that everyone feels like they are rooted in community.

The Toolkit is designed to help Streetwyze collaborators, and others engaged in neighborhood change efforts, to be more intentional in their racial equity efforts, engage in more authentic and meaningful community engagement, ownership, and leadership processes, be more visionary, expansive, and inclusive in human center design thinking, and transform neighborhood revitalization work through social innovation. It provides a ground up framework to help organizations move from theory to action though bottom up innovation (see TEDx Innovation Out of Poverty) which we call people powered placemaking and mapping 2 mobilize.

We offer this framework because we heard from many organizations (both large and small) that they are struggling with community engagement in general, and community engagement with vulnerable populations in particular. And many have said that they'd like to better understand gentrification and anti-displacement strategies within the larger context of the Social Determinants of Health (SDOH). Housing decisions impact health decisions, health decisions impact housing decisions, and structural racialization and institutional racism impact both health and housing. In the same way that one's zip code is a greater determinant than one's genetic code for health, wealth, and educational outcomes, we know that racism has played a leading role in the income inequality that is making our nation sick (see Unnatural Causes and Right 2 Root).

Neighborhoods are not just housing and job markets they are also ecological, educational, health and social systems. This toolkit offers a way for everyday people and local leaders to work with housing authorities, cities, business, schools, developers, and designers to create a comprehensive, holistic, inclusive, and equity driven approach to community transformation that strengthens the social fabric in neighborhoods. It offers a way to think more deeply and broadly about the relationship between race, space, place, waste, health, wealth, housing, story mapping, pop ups, and community driven data as power tools for transformative change.



#### The Toolkit has five focus areas:

- (1) Developing early warning systems that can help creative place-making and creative place-keeping efforts improve access to opportunity and achieve equity goals
- (2) Understanding Neighborhood
  Change as an Opportunity for
  Partnership and Collaboration with
  Vulnerable Populations
- Building Trust and Social Capital:
  Strengthening the Social Fabrics of
  Neighborhoods
- (4) Methods: The People Powered Place-Making Framework
- (5) Conclusion: Local Data as the Next Frontier

Our Toolkit offers innovative strategies and place-based solutions to the problems of race and poverty. Finding solutions to some of the most pressing challenges of our time: climate change, community resiliency, income inequality, crime, unemployment, and bad schools is of great importance to all neighborhood change and resiliency efforts. At the same time, the ideas expressed in this toolkit center on the role of race-making and place-making in relationship to community engagement and poverty alleviation, not the other way around. Efforts to eliminate serial poverty, gentrification, and displacement require leaders and community capacity building within local communities. How can leaders in ghettos, barrios, reservations, and in rural communities thrive when there is a general lack of investment in the neighborhoods where we live, learn, work, and play?





- What kinds of public and private investments in civic infrastructure and the built environment can help us innovate our way out of poverty?
- How are our ghettos, slums, and barrios, hot beds of civic innovation?
- What is the role of so-called "ghetto dweller" in the future production of affordable housing and building sustainable cities?
- And how can we change the negative narrative of "ghetto dwellers" and "hood rats" so that we can be seen for what we are —everyday people and community members—not slums, not informal settlements, but neighbors and neighborhoods with families living, working, playing, praying, loving, living, eating, drinking, walking, biking, and taking the kids to and from school?

These are important questions because the fastest growing cities are not skyscraper cities such as New York, Chicago, Los Angeles, Atlanta, Miami, Dubai, Singapore—places that try to make poverty invisible in an effort to attract investment. But rather informal settlements, ghettos and slums, where poor people typically face inadequate housing and infrastructure, enormous environmental health issues, land use, safety, vulnerability, and social exclusion. An estimated 1 Billion people live in slums all over the world, these communities are often beyond city planning and regulation, and account for more than 30% of the developing world's urban population. This means 1 in 7 people on the planet are experiencing spatial—and to a certain extent 20th century remnants of racial apartheid. The most formidable challenge of the 21st century city then—in the face of massive population growth, climate change, and rapid urbanization—is extending public-privatepartnerships, civic, green, and built environment solutions such as clean energy, water, sanitation, parks, protected pathways, greenways, bus-ways, health services, to include these people and places.

There is much in this document that might be called theory. But this grounded theory is rooted in the lived experience of everyday people about how neighborhoods work as communities and markets that impact our access to opportunity. Our highest aspiration for this toolkit is to provide a framework, tools, and strategies, that inform effective collective action so that communities leaders, everyday people, and the most vulnerable among us have a voice, platform, and process to prevent displacement, improve access to opportunity, and share their stories in an evidenced-based, datadriven way that strengthens cultural cohesion, community connections, and promotes economic progress for social, environmental, and community benefits for the 100% not just the 1%.





#### Our vision

Streetwyze is a human centered design process and state of the art technology and communications platform that helps our nation's most vulnerable populations improve health, wealth, and increase access to opportunity for all. Our culturally and community responsive process promotes equitable development by ensuring that community voice is placed in the heart of urban planning and decision-making processes. Because we believe that the people closest to the problem are also the people closest to the solution we work directly with community members to solve the root causes of social inequity and lift up community assets. Part design lab, part community capacity builder,

part accelerator of neighborhood innovation, Streetwyze helps transform how people share stories, analyze data, document street wisdom, and share information about building community power in their own neighborhoods. By listening, prototyping, and replicating the most innovative upstream solutions with cities, businesses, and communities, Streetwyze helps to deepen civic engagement, improve opportunity, inform policy, mobilize assets, reimagine spaces, democratize data, and generate shared wealth. Our vision is to help build more equitable, sustainable, and just cities so people don't have to leave their communities in order to live, learn, work, and thrive.



#### An invitation for collaboration

As an innovation hub that unites community voices, rigorous research, and innovative technologies,

Streetwyze transforms how people share stories, collect, analyze, and share data, as well as access and use information about their communities.

Streetwyze partners with grass roots organizations, non-profits, community-based organizations, designers, architects, planners and businesses to democratize data, develop equity indicators, and implement story mapping and place-making workshops that lift up the power of design thinking with vulnerable populations and everyday people in an effort to promote equitable neighborhood development and improve access to opportunity for all.



#### What is Streetwyze?

In today's world public data is often inaccessible, siloed within agencies, and inaccurate at the street-level. Another challenge facing community development practitioners is creating authentic and meaningful community engagement processes and practices with our nation's most vulnerable populations. The Streetwyze solution is a mobile, mapping, and SMS platform that collects local knowledge and real-time data about how people are experiencing cities and services, and turns them into actionable analytics. Because our platform is rooted in community, Streetwyze revolutionizes the flow of information between people, places, and policies in ways that were previously unimaginable by enabling those most affected by neighborhood transformation to assess, prioritize, and leverage community resources and make invisible community assets visible so they can be leveraged for social good (Akom et al, 2016).

Our state of the art technology allows users to find goods and services, take action on important issues, and serves as a connection hub for community transformation. Our People Powered Place-Making approach enables residents to share stories, integrate social media, make data interoperable, accessible, and "mappable" by allowing community-members to act as "information catalysts" - capturing and uploading community assets, place-based ratings, priority

areas and digital narratives - on a single, easy-to-use, mobile platform. By demystifying planning processes, decoding industry speak, flipping the script, and sharing the stage in terms of who is the expert—Streetwyze helps bridge the gap between "top down" professional knowledge and "bottom up" local knowledge in order to elevate community voice and build healthy, resilient, and sustainable neighborhoods for all.

Streetwyze has been recognized and/or collaborated with Homeless populations, Hospitals, Health Care Systems, The Obama Administration, Race Forward/The Center for Social Inclusion. PolicyLink, EcoDistricts, Google, Aclima, Residents United for Action Network (RUN), Asian Health Services, Gehl, the Movement Strategies Center, Oakland Creative Neighborhood Council, Bay Area Organization of Black Owned Business (BAOBOB), Artist Thrive, Enterprise Community partners, Right 2 Root, Iron Bound Community Corp, and the Rockefeller Foundations 100 resilient cities to name a few. Our work has also been featured in the Atlantic Magazine's Citylab, Green Biz, The Root, Tech Crunch and others, as one of the new mobile platforms and racial, spatial, and neighborhood innovation processes designed to build power and self-determination with vulnerable populations and involve everyday people in community engaged design decisions that impact their everyday lives.

#### How it works

Streetwyze draws upon methods within and outside of traditional community development and planning processes, such as digital story telling, social media, story mapping, online and offline community engagement practices, participatory technology & geographic information systems (GIS), mobile GIS, Bottom up GIS, cognitive mapping, mhealth technology, Crowdsourcing, and community asset mapping. What makes Streetwyze unique is that we infuse a public health model into an asset based community development (ABCD) framework in a way that affirms and builds the capacity of people in local communities.

Our people powered place-making approach helps our nations most vulnerable populations lead, design, co-develop, co-produce, implement and evaluate the development and engagement processes that are driving impacts and investments in their own neighborhoods. In order to maximize community benefits and collective impact, our platform and process is infused with equity oriented practices that highlight how great design principles begin with the people not for the people, and end with new solutions tailored to best meet local needs (Goughnour, 2017). Our transformational rather than transactional approach is socially significant when working in low income communities and communities of color because the histories, policies, practices, and stories from outsiders often focuses on what the neighborhood as well as the people themselves are lacking (i.e, a deficit model)—rather than the assets and opportunities that can be leveraged for social good. Streetwyze is not a theory, but rather an approach that enables everyday people to influence neighborhood design in a way that achieves equitable economic development, health equity, environmental justice, arts, culture, and social justice goals.



Our multi-lingual platform and process helps residents and community development practitioners work together to facilitate the discovery and recovery of community resilience, employ design thinking in the gathering and analyzing of community assets, ground-truth and democratize data, and use innovative technology to track, monitor, and measure success and key performance indicators. In this sense, Streetwyze offers a holistic and comprehensive approach towards building partnerships that advance new ideas to achieve equity, reimagine urban development, and lift people out of poverty.



## II. Building Real Time Community Driven Data & Early Warning Systems That Help Achieve Equity Goals

#### Why local data matters

The United States has begun to take dramatic steps to restrict access to public information.

More specifically, Congress introduced a pair of bills aimed at rolling back fair housing reforms, and hidden in the "Local Zoning Protection Act" were stipulations that seek to curtail the production and distribution of data about racial segregation (Akom, 2017; Schmitt, 2017; Shapiro, 2017).

According to the National Low-Income Housing Coalition, "The bills would also prohibit federal funds from being used for the HUD database containing geospatial information regarding community racial disparities and disparities in access to affordable housing."

The lock down on local data raises serious questions about how local governments and nonprofits can develop neighborhood-level early warning systems that can help city leaders and community advocates combat gentrification, displacement, growing income inequality, and the increasing suburbanization of poverty. How can we foster two-way feedback loops between cities and communities to identify unique neighborhood characteristics if we are not being encouraged and supported to collect local data on race, space, place, and waste? How will we repurpose, visualize, and integrate the various municipal and external data sources to meet community needs if we constrict the role of local community driven data. These are important questions because across U.S. communities are aspiring to become

more economically robust, resilient, equitable, sustainable, and strong.

However, while there is little debate that mixed use communities are desirable assets, few communities have found the right package of investment, suite of services, or policy interventions that can turn burned out buildings into thriving arts and commercial corridors, innovation hubs, and culturally and community responsive spaces that truly serve community needs.

This is where Streetwyze comes into play, to help make the invisible visible.







Streetwyze is a mobile, mapping, and SMS platform that collects local knowledge about how people are experiencing cities and turns them into actionable analytics. The power of the app is that it makes local knowledge accessible within and outside of government by creating two-way feedback loops and data visualizations between neighborhoods and cities so that they co-produce policies that help secure shared benefits. By integrating community-generated data with predictive analytics, cities and community

leaders are empowered with forward-looking knowledge that can track equity indicators, identify hot spots and cool spots for equitable development, and predict future trajectories for vulnerable populations. This work is the leading edge of a new "science of cities," "equitable cities," and "data-driven cities," that build upon and extends the earlier "smart cities" work of John A. Powell's **Opportunity Mapping project** PolicyLink's National Equity Atlas, the EcoDistrict protocol, as well as private businesses like Neighborland, Zillow, and Redfin's Walkscore to name a few.



Fundamentally, early warning systems can help creative place-making and creative place-keeping effots to achieve the following equity oriented goals:

- (1) Map community assets and build community capacity
- (2) Create dynamic neighborhood specific or city wide maps that will enable artist, movers, makers and vulnerable populations to resist gentrification and displacement
- (3) Influence decision-makers and other stakeholders on ways to institutionalize equity and strengthen existing social capital, social cohesion, and social connectedness
- (4) Create new symbols and counter narratives about the neighborhood that replaces stories of decline with a stories of hope and renewal (Schubert, 2015)
- (5) Focus neighborhood place-making efforts on community strengths. Far too often place-making efforts focus on what's not working or removing the bad stuff in a neighborhood (like crime, or dilapidated housing) versus the good stuff like increasing a sense of belonging, helping people feel safe, building a youth empowerment zone, taking care of the elderly and differently abled, building next generation community benefits packages, and incentivizing and attracting more affordable housing.
- (6) Focus on building community cultural capital with vulnerable populations as a way restore neighborhood confidence
- (7) Identify culturally specific and community specific ways to brand neighborhoods and dedicate resources towards marketing neighborhoods as holistic ecosystems

Using Streetwyze as an early warning system that identifies hot spots and cool spots can enable creative place-making and place-keeping efforts to achieve equity goals in more targeted ways, serve as baseline data, and measure success and key performance indicators as changes occur over time.





## III. Understanding Neighborhood Change As An Opportunity for Partnership & Collaboration with Vulnerable Populations

According to Schubert (2015) neighborhood change can be viewed from two perspectives – as a snapshot or as a film. Streetwyze and other community-generated data platforms add important new dimensions to this powerful analogy—by offering the "selfie," "live streaming," "audio," "video," "mapping," "story-mapping," and "real-time data" to the mix of storytelling tools for vulnerable populations.

If we look at neighborhoods from the snapshot perspective, what we see in front of us is one moment frozen in time.

For example, lets take a neighborhood that has faced a history of a racial residential segregation, red-lining, predatory lending, and lack of access to economic capital. The cumulative impact of these policies has worked to create declining housing conditions and a dilapidated neighborhood filled with boarded up homes, empty businesses, broken windows, vacant lots, brown fields, and collectively what I refer to as Eco-Apartheid (Akom, 2011).



But if we view the same neighborhood through the lens of a film, a longer, more complex, richer, and more complicated narrative begins to unfold – a narrative that begins when the neighborhood was thriving, full of community-owned businesses, strong schools, beautiful homes, community gardens, and built on the solid foundation of community cultural wealth. social cohesion. social connectedness, and strong forms of social and cultural capital (Akom, 2006; Yosso, 2005). As the film continues we begin to see the Federal Housing Authority (FHA), the Home Owners Loan Corporation (HOLC), and the Veterans Administration (VA) determine lending practices based on race and to a certain degree gender (Conley, 2009). Behind the scenes, property ownership begins to set the stage for a legacy of economic oppression in wealth holdings, which begins to trigger a downward spiral and an erosion of confidence in the neighborhood—and to a certain extent the people who live in the neighborhood. As the neighborhood struggles to keep its cultural, artistic, community, and economic assets, values decline, and the image of the neighborhood is weakened.

New people start to move in. At this point in the film you see that even though the branches of gentrification are visible, the seeds of change were planted long ago—yet the roots are often invisible to the naked eye. When assessing, diagnosing, and unearthing these issues community development practitioners often find that their perception of the neighborhood—as well as the strategies, outcomes, and measures they have identified to "fix it"—are influenced (either consciously and unconsciously) by the tools they use to understand neighborhood change in the first place. For example, an important question to ask yourself is are you using a film or a snapshot? In the case above, relying on a snapshot of the neighborhood may be insufficient to alter the gentrification, displacement, loss of identity, and loss of belonging being told in the longer more nuanced narrative of the film. But either way there is still something wrong with both pictures. Why? Because, based on the film perspective, or the snapshot perspective, community development practitioners still may draw the conclusion that the neighborhood is failing and that the people living in the neighborhood themselves are failures too however nothing could be farther from the truth.

The problem in both cases is that the people living in the neighborhoods were never asked, equipped, enabled, trained, supported and empowered to tell their own story. As a result, community development practitioners are left with other people's version of the story at worst—or at best a few key interviews with local residents—which leave so many people out of the conversation because you cannot do this at scale. But what if cities and community development practitioners could ask the people themselves for real time data to help develop early warning system and community cultural health and wealth opportunities that could produce more equitable outcomes? This is where Streetwyze comes into play to help make the invisible visible.





In some cases this is already happening. Private businesses like Zillow use real-time data and sophisticated algorithms to track property transactions and forecast future trends (Greene and Petit, 2016). However, community groups and other community development practitioners working to improve neighborhood outcomes for our nations most vulnerable populations rarely have the opportunity to integrate communitygenerated data with Big Data and predictive analytics to anticipate and prevent root shock, homelessness, gentrification, displacement and improve affordable housing and the social determinants of health. That is until now. Streetwyze changes all that, even more so when working in partnership with cities, health care providers, artist, activists, local communities, grass roots organizations, and other collaborators on increasing access to opportunity for all.

Streetwyze's value add is that we enable the latest community-generated data technology tools to be combined with Big Data sets so that community development practitioners can anticipate, diagnosis, make a treatment plan, and act upon changes in vulnerable neighborhoods. However, we recognize that data alone—no matter how big, small, granular, sophisticated, timely, or comprehensive—is insufficient to produce just, equitable and inclusive community development outcomes (Greene and Petit, 2016). To achieve this goal the Streetwyze platform and process is guided by four fundamental principles outlined in this toolkit:

#### Equity

Before cities and community development practitioners tackle issues like income inequality, gentrification, residential segregation, and eco-apartheid, they first need clarity on the difference between equity and equality. In the context of urban planning, Equality means giving each neighborhood the same resources, while, Equity means giving each neighborhood what they need for success. Equity is the means: equality is the outcome. To maximize equity efforts they should be designed to harness community benefits toward vulnerable populations and places that have been locked out of sustainability conversations, smart city conversations, shareable city conversations, and social justice conversations (Agyeman and McLaren, 2014). They should intentionally place local leaders, artists, and activist in leadership positions in terms of community engagement & outreach and overcoming barriers—linguistic, social, economic, age, and otherwise—that have historically prevented marginalized groups from full participation. To achieve this principle we suggest implementers regularly conduct Racial Equity Impact Assessments to identify data biases and disaggregate findings to shed light on how various demographic groups are experiencing policies, programs, and practices, aimed at implementing neighborhood change.

#### Accountability

The first step toward creating a culture of accountability is to define clear roles, responsibilities, results, and governance structures that connect community engagement with community decision-making. The principle suggests implementers whenever possible, summarize key data and findings as well as make them publicly available to stimulate community dialogue. Streetwyze can help participants in neighborhood change process crowd-source data as inputs and analysis.



#### Partnership

Offers a strategy for community development practitioners to share capacities and connect with every day people and organizations that want to use new ideas to help shape urban development and lift people out of poverty. To achieve this principle we suggest implementers utilize an Asset Based Community Development (ABCD) approach that is centered on utilizing the existing gifts and capacities of people in their communities. Streetwyze partners with artists, activists, architects, engineers. developers (Equity oriented), planners, designers, and countless grassroots, POC and women-led small business and organizations to democratize data, develop equity indicators, and implement story mapping and place-making workshops that lift up the power of design thinking with vulnerable populations and everyday people in an effort to promote equitable neighborhood development and improve access to opportunity for all.

#### Action

According to the National Neighborhood Indicators Partnership (NNIP) "early warning systems" need to be paired with action (Greene and Petit, 2016). Streetwyze can help implementers apply the action principle because we infuse a public health model into an asset based community development (ABCD) framework in a way that affirms and builds the capacity of people in local communities. Our people powered placemaking approach helps vulnerable populations lead, design, co-develop, coproduce, implement and evaluate the development and engagement processes that are driving impacts and investments in their own neighborhoods.









Development, planning, and community engagement tools like Streetwyze are important - however they are not solely the ends themselves. Community development practitioners need to think critically about which governance structures and grass roots organizations are best situated to embed the Streetwyze platform, process, and principles in an effort to create neighborhood early warning systems that increase access to opportunity for vulnerable populations. Public agencies should break silos and share data. However. establishing Streetwyze within communitybased organizations may be the best way to ensure its longevity, uptake, and trust as a community-driven technology platform designed to integrate community voice into the heart of urban planning processes and to support local driven strategies towards equitable community development and neighborhood transformation.



#### Ask Yourself:

- Are you tired of people telling you what's wrong in your community instead of what's right?
- Are you ready to talk about the opportunities, strengths, and the weaknesses that are impacting your community?
- Is it important that your community organization has an early warning system for the pressing community issues?
- Are you interested in finding out what hidden community resources residents use and consider assets and why?
- Would you like to enable vulnerable populations to share their stories of urban decline and urban renewal in an evidencedbased data driven way that can influence neighborhood change?

Streetwyze was designed to help **YOU** begin to answer these questions in collaboration and partnership with vulnerable populations.

## IV. Understanding Neighborhood Change Strengthening the Social Fabrics of Neighborhoods

In 1995 a scorching heat wave covered the city of Chicago for three days, heating it like an oven and killing over 700 people making it one of the most deadly disasters in modern American history (Klinenberg, 2017). I start here because a brilliant young sociologist named Eric Klinenberg, who grew up in Chicago, set out to find out, whom did the heat wave of 1995 kill? What role did community resiliency, social capital, social cohesion, and social connectedness play in who lived and who died? And what role could social infrastructure play in saving the lives of vulnerable populations (Klinenberg, 2002)?

These are important questions because when community development practitioners study resiliency we usually focus on hard infrastructure and the built environment: housing, transportation, communication, food and water systems—what I refer to as surviving resiliency. And this makes sense. Chicago's physical infrastructure failed miserably. The power grid overheated, roads and bridges were frozen in gridlock paralyzing the emergency support infrastructure—and people died.

But when Klinenberg got down to the street level to find out what was really going on, he discovered something unexpected. Klinenberg compared two similar neighborhoods one Black and one white and discovered that during the heat wave, residents of the white community (Englewood) retreated to their homes—which apparently were more like microwaves—and since people inside of microwaves don't mix,

Englewood's death rate was amongst the highest in the city. On the other hand, the Black neighborhood (Auburn Gresham), which had a reputation for being one of the worst in the city had one of the lowest death rates at three deaths per 100,000 people, which was much lower, in fact, than many wealthier and whiter neighborhoods in other parts of the city (Klinenberg, 2002, 2017).

Why is this important? And what does this have to do with social capital and building trust with vulnerable populations?

I start here because it turns out what Klinenberg discovered that is so important for community development practitioners to learn and understand is that the variables that best explained patterns of death during the heat wave were not rooted in hard infrastructure, but rather, in social infrastructure—meaning social capital, social cohesion, and social connectedness. The concept of social capital implies that the social connections among neighbors have a value that can save lives. Trust is like a glue that holds neighborhoods together during good times and bad times (Schubert, 2015).



It's impossible to effectively implement a community engagement strategy or develop a plan to improve the community without trust (Schubert, 2015).

Yet, time and time again community development practitioners enter neighborhoods championing a top down perspective, rather then taking a bottom up approach—or what we call a people powered place-making perspective—that insist on community members and every day people leading, designing, co-developing, co-producing, implementing and evaluating the development and engagement processes that are driving impacts and investments in their own neighborhoods.

Applying a people powered place-making approach in communities is important, but it can be difficult. Race, class, gender, sexual orientation, age, disabled/differently abled biases, differences in cultural norms, values, preference, attitudes, standards, lived experience and the history of race-making and place-making can all be serious obstacles in building the kind of trust that can help bring people together for a shared common purpose. However, for the people powered place-making approach to be effective, breaking down these barriers is an important component in equitable community development and neighborhood change.



#### Ask Yourself:

- How does your current approach to neighborhood revitalization help build social capital, social connectedness, and social cohesion with vulnerable populations?
- How does your current approach to building power and self-determination with vulnerable populations?
- What changes could you make in your approach that could build social capital and trust with vulnerable populations?
- How can a people powered place-making approach and the Streetwyze Mapping 2 Mobilize platform support this work?
- What strategies can help you build trust among neighborhood residents?
- What strategies can value and encourage the growth of social and cultural capital?

Streetwyze was designed to help **YOU** begin to answer these questions in collaboration and partnership with vulnerable populations.



### V. Method: Digital and People Powered Place-Making and Health Equity Framework

So far this this toolkit has introduced Streetwyze as a platform and a processes that can help you integrate community voice into urban planning processes and support local driven strategies towards equitable community development. Now let's turn our attention to introducing our People Powered Place-Making framework, which is grounded in 6 areas: Traditional, Transactional, Transformational, What was, What is, and What If.

We adopted and modified this framework from Right 2 Roots, Feelings to Action framework which is committed to moving people from different racial, ethnic, and gender backgrounds, different positions of power, different ages, abilities, and religions, into a common dialogue to achieve collective goals (Goughnour, 2017). One important difference is that the Right 2 Root framework does not foreground the role of race-making in the place-making process. Our framework highlights the role of structural racialization and social innovation in transforming the status quo. Implementation of the People Powered Place-making process requires that people outside the community learn with and from people within the community to better understand the perspective of those who are most underserved. By lifting up the most vulnerable among us, we increase access to opportunity for all (Goughnour, 2017).

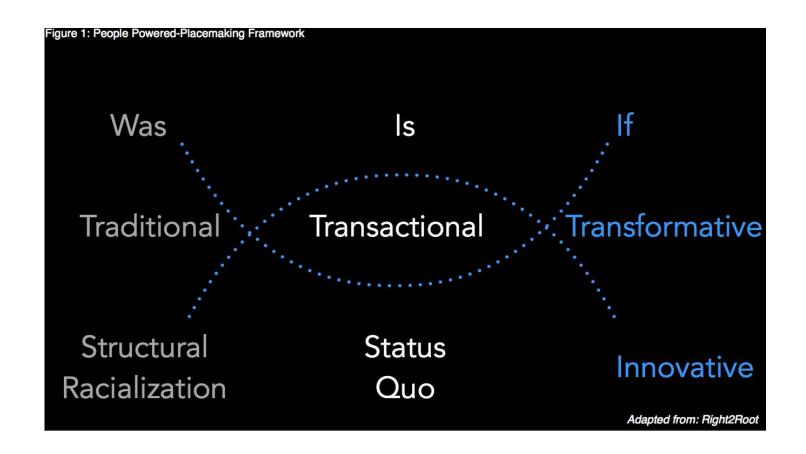
Finally, the People Powered Place-Making framework suggests that successful planning and development efforts address at least six of the following critical areas (this is not an exhaustive list).

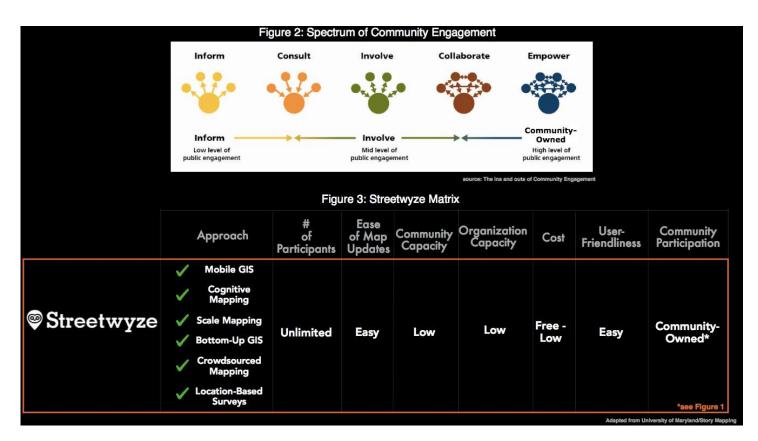
## People Powered Place-Making Framework:

Enables residents to share stories, integrate social media, make data interoperable, accessible, and "mappable" by allowing community-members to act as "information catalysts" - capturing and uploading community assets, place-based ratings, and integrating Local knowledge with professional knowledge in ways that Build Power and Self-Determination with vulnerable populations to improve the Social Determinants of Health (For more See J. Corburn, Street Science).

- (1) Linking authentic and meaningful community engagement processes to decision-making (i.e, Streetwyze and other process like Participatory Budgeting processes)
- (2) Thinking of the local real estate market in relation to vulnerable populations and racial equity impact assessments
- (3) Neighborhood image and brand from the perspective of the community and other key stakeholders
- (4) Increasing Social Capital, Social Cohesion, and Social Connectedness of Vulnerable populations
- (5) The Built Environment
- (6) Governance









#### Ask Yourself:

These questions were adopted from Race Forward for more information See Race Forward's Racial Equity Impact Assessments

- Which racial/ethnic groups may be most affected by and concerned with the issues related to this proposed issue?
- Have stakeholders from different racial/ethnic groups— especially those most adversely affected—been informed, meaningfully involved and authentically represented in the development of this proposal?
- Who's missing and how can they be engaged?
- Which racial/ethnic groups are currently most advantaged and most disadvantaged by the issues this proposal seeks to address?
  How are they affected differently?
- What quantitative and qualitative evidence of inequality exists? What evidence is missing or needed?

- What factors may be producing and perpetuating racial inequities associated with this issue?
- How did the inequities arise? Are they expanding or narrowing?

  Does the proposal address root causes? If not, how could it?
- What are the success indicators and progress benchmarks? How will impacts be documented and evaluated?
- What three things are people saying about this neighborhood?
- What three things do you want people to say about this neighborhood?
- Does this neighborhood have a name? Who gave the neighborhood its name?
- **Does** that name support or undermine the community's efforts to build a positive image?



## 10 Design Principles for Online Data Tools for Health Equity Action

Data tools hold tremendous power to amplify community efforts to advance health equity through policy and systems change—if they are designed with equity in mind. PolicyLink and Ecotrust offer the following principles to guide data tool creators in building tools that strengthen community action toward health equity: when everyone has a just and fair opportunity to be as healthy as possible, regardless of race, income, or other socially defined characteristics.

#### 1. Build Community Power

Communities that bear the brunt of health inequities must be at the forefront when creating data tools to advance health equity. Community knowledge is paramount to accurately understanding problems and crafting solutions that work. Intentional community partnerships and thoughtful design processes strengthen community capacity and can result in stronger advocacy and better data tools.

#### 2. Address the Root Causes of Inequity

Online data tools for health equity should acknowledge the root causes of health inequity, which are not primarily individual health behaviors but rather stem from structural inequities and systematic differences in the social, economic, and environmental resources and assets that affect health and well-being.

#### 3. Lead With Your Health Equity Goal, Not the Data

The broader equity outcome—e.g., preventing displacement, building healthy communities, or ending police violence—should drive the design of the tool rather than the data or technology. Be clear about the tool's purpose, then provide data, maps, and analysis to help users achieve that goal.

#### 4. Make Data Actionable

Ensure that your tool inspires and supports community actions toward policy and systems change. Offer viable solutions to improve material conditions that incorporate the experiences of marginalized people, including those for whom data may not be readily available.

#### 5. Disaggregate Data

Understanding how conditions and opportunities vary for different groups, including their histories and the policies affecting them, is critical to developing and advancing tailored equity solutions. Disaggregate data by race/ethnicity, gender, nativity, ancestry, income, and other factors to the extent possible.

#### 6. Move Beyond Maps and Numbers

Maps and statistics are important staples of equity data tools, but different types of visualizations and qualitative data can help convey information that builds political will, supports community action, and provides a more comprehensive view of an equity issue.

#### 7. Emphasize Assets and Opportunities

While uncovering disparities can be valuable for compelling action, it can have the unintentional effect of perpetuating inaccurate and negative stereotypes about communities. Data tools should also focus on community assets and strengths that can be built upon.

#### 8. Provide Clear Explanations

Make your tools as user friendly as possible by providing clear explanations of what the data shows, why it matters, and what users can do about it. Provide definitions of indicators and data sources.

#### 9. Contribute to Data Democracy

Open access to public data is critical for fair representation and transparency, and to allow advocates access to the data they need. Ensure that the data and metadata are affordable and available to impacted communities to ensure long-term accountability.

#### 10. Honor Indigenous Data Sovereignty

Sovereign tribal nations have the right to govern the collection, ownership, and application of data about indigenous nations and people. Data on or about indigenous people should be subject to the laws and governance of indigenous nations.

Source: PolicyLink & EcoTrust: "Powering Health Equity Action with Online Data Tools: 10 Design Principles"



#### **Emphasize Assets and Opportunities**

Health equity strategies often begin with community assets and strengths that can be built upon to catalyze positive change. Data on inequities is important for understanding where to target resources, making the case for policy change, and tracking progress over time. But it is important to provide a balanced view of communities that reveals opportunities and resilience as well as challenges and needs (while avoiding the default to individual behavior as the cause of health disparities).

Focusing solely on disparities can unintentionally further what sociologist Maggie Walter calls the "de cit data/problematic people (DD/PP)" correlation. Because dominant narratives around racial disparities are informed by the values and racial hierarchies of settler states and slavery, this correlation posits that "the problematic people are the ones who, through their behavior and their choices, are ultimately responsible for their own inequality."

Equity data tools must move beyond this awed and damaging conclusion by highlighting the systems and policies that cause racial health inequities. Situating data, especially cross-sectional data that does not capture change over time, within the broader institutional context helps users to understand the role of public policy in establishing and perpetuating racial health inequities. Failing to provide this context can undermine community strengths and cohesiveness and perpetuate harmful stereotypes and the stigmatization of marginalized communities.

Relatedly, online equity data tools should strive to alleviate harm and safeguard against potential harm relating to privacy and con dentiality. This is especially true when it comes to collecting and publishing more sensitive information about individuals (e.g., immigration status, eviction history, etc.). Even if the tool development process is community-centered, the potential for harm is still present because it is hard to control how others might use the data.

#### How to apply this principle:

- (1) Identify community assets and resources to highlight throughout the tool.
- (2) Avoid publishing identi able data.
- (3) Anticipate how might others misuse or misrepresent data.
- (4) Allow for community members to share their stories and experiences of their community.

## Visualizing Local Knowledge of Community Assets

Streetwyze's mobile mapping platform allows community members to share local knowledge about how they are experiencing their neighborhoods and cities and turns them into actionable analytics. The power of the app is that it makes local knowledge accessible within and outside of government by allowing everyday people to share community assets and opportunities—creating two-way feedback loops and data visualizations between neighborhoods and cities so that they co- produce policies that help secure shared bene ts. By integrating community-generated data with public datasets, cities and community leaders are empowered with forward-looking knowledge that can track equity indicators and social determinants of health in real time.

Source: PolicyLink & EcoTrust: "Powering Health Equity Action with Online Data Tools: 10 Design Principles"



# VI. Conclusion: Building Power and Self Determination with Vulnerable Populations by Integrating Community Driven Data with Big Data and Predictive Analytics

In 2008, during a deeply divisive and hotly contested Kenyan presidential election, a group of technologist and software developers created a platform that allowed residents to report acts of post-election violence via email and SMS (Text). The innovative platform was called Ushahidi – meaning "testimony" in Swahili. What makes Ushahidi's story so powerful and relevant to the birth of Streetwyze and outside-the-box thinking on how to empower vulnerable populations with respect to neighborhood change—is that they had a profound impact on media coverage of the election by increasing reporting on violence from everyday people. Ushahidi has since matured into a technology leader in Africa, headquartered in Nairobi, with a brilliant global team that is helping to improve the bottom up flow of information with vulnerable populations.

But what about "crisis mapping" and Mapping 2
Mobilize platforms right here in the United States with low-income communities and communities of color?
What tools, platforms, and processes do we have to make the invisible visible, address pressing social issues, standardize local data, and lift up community voice, assets, and integrate local knowledge with Big Data, with our nations most vulnerable populations? Yes, there are platforms like YELP, SeeClickFix, and NextDoor that are doing important work. But with whom and for whom? How do these platform institutionalize equity? Do first wave Civic tech platforms and processes speak to the invisible and barely audible issues of race-making and place-making with vulnerable populations?

For example, Nextdoor has been accursed of racial profiling (O'Donovan, 2017), SeeClickFix is one-dimensional and focuses more on problems rather than solutions, and 70% of YELP users are White which means they have very little penetration in low-income communities and communities of color.

The good news is that there are new waves of civic tech platforms—born now (2.0-3.0) and in the pipeline (4.0-5.0)—that are specifically designed to address racial equity, and this work should be lifted up and shared. For example, there are equity specific platforms such as PolicyLink's National Equity Atlas, that disaggregates eight economic indicators by race/ethnicity, nativity, and ancestry to highlight and address racial inequality (Ross, 2017). For issues related to children and youth there are platforms like diversitydatakids.org which has created a Child Opportunity Index that measures relative opportunity across a metropolitan area, calculated based on 19 indicators of educational, health, environmental, social, and economic opportunity, and allows for better targeting of resources and counters the invisibility of subgroups being left out of the data revolution.



Like Ushahidi, having its own environmental monitoring data has proven invaluable for the CCDV (Eaves, 2014). "Previously, community groups reporting problems to state or local authorities experienced a 'black hole' as problems disappeared into a bureaucracy where they were hard to trace or to consider in context of other incidents" (Eaves. 2014). With community-driven data about environmental incidents within the valley, it has became easier to spot trends, problems and repeat offenders. This in turn helped the CCDV build power and self-determination in the valley. Today the CCDV's mapping platform is known as the Innovation Value Access Network or IVAN - and it has spread to several regions in California. More intriguingly - and exceptionally rare for these types of crowd-sourced approaches - the CCDV like Streetwyze platform and SeeClickFix are a few of the platforms working to connect community driven data and local knowledge with official databases across various governmental and environmental agencies.



Universities, non profits, and foundations are also creating research and action platforms to address issue specific areas such as gentrification, displacement, and the social determinants of health. For example, there is John Powell's pioneering work on Opportunity mapping 1.0 and 2.0 with the Haas Institute for Fair and Inclusive Society and the Kirwan institute which in many respects gave birth to the data visualization movement in affordable housing and access to opportunity for vulnerable populations here in the United states. Other institutions such as

UC Davis have developed Putting Youth on the Map to make sure that young people's experiences are lifted and heard. The Robert Wood Johnson Foundation—the largest private heath foundation in the world—has developed **The County Health** Rankings & Roadmaps to detail health outcomes across all counties in the United States, and to describe the health factors that influence those outcomes. Recently, new disruptive technologies are changing the way we practice medicine with vulnerable populations. For example, in Oakland, California a program called the **Family Information** and Navigation Desk (FIND) and nationally an organization called **Health Leads** screens patients for basic needs, train health care professionals to understand why these inequities exist, and connects them (potentially with Streetwyze and other community-driven data platform) to basic services that they need.

During the Summer of 2017 Streetwyze collaborated with the Social Innovation and Urban Opportunity Lab (**SOULLab.co** – the first joint research lab between UCSF and SFSU), as well as Google and Aclima to mount Google Street view cars with environmental air quality sensors to track and "ground-truth" PM 2.5, Black Carbon and other forms of air pollution that are disproportionately impacting low income communities and communities of color via asthma and other health disparities. In this manner, Streetwyze is beginning to partner with leading grass roots, environmental, health, arts, culture, and technology organizations to create sustainable, high-impact and cost-effective social needs interventions that connect residents to the community-based resources they need to be healthy—from parks, open space, food, air, water, transportation, education, employment, social support, affordable housing and the major social determinants of health account for half of health outcomes while health behaviors account for just 30 percent (RWJF, County Heath Rankings, 2017).

For those primarily concerned with regional equity there are platforms like the **Denver** and **Atlanta** Regional Equity Atlas' that visualize "the benefits and opportunities that a robust public transportation network can create" in order to advocate for transit funding. And in the Portland area there is an emerging partnership with the Eco-Trust, Coalition of Communities of Color, Right 2 Root, and Streetwyze to building the groundwork and infrastructure for a 3.0 Atlas that will serve the Portland Region and the greater Northwest.

In addition to the important mapping and data visualization work being done with national and regional equity Atlas' there is a new set of technologist and data providers providing disaggregated data for specific policies and issue areas. For example, there is the Aboriginal Mapping Network (AMN), a joint initiative of the Gitxsan and Ahousaht First Nations and Ecotrust Canada, which is a mapping and communications platform to support Indigenous people facing the challenges of land use, water use, natural resource protection, sacred ground contestation, and treaty negotiations by using GIS and information and communication technology (Lonebear, 2016; Walter 2016; USIDSN, 2017). To track and eliminate issues of gentrification and displacement there is the **Anti-Eviction Mapping Project** which documents the "dispossession and resistance" of San Francisco Bay Area residents to put pressure on elected officials and developers. There is also the **Urban Displacement Project** which is a research and action initiative of UC Berkeley in collaboration with researchers at UCLA, community based organizations, regional planning agencies and the State of California's Air Resources Board (ARB). The tool maps gentrification in the Bay Area and Los Angeles over time and features an interactive map of anti-displacement policy measures. Complimentary work such as the Narratives of and Resistance Oral History Project by the Anti-Eviction Mapping Project maps nearly 40 stories from tenants who have faced

eviction over the last decade in the San Francisco Bay Area, and from youth who are impacted by the displacement crisis. "By placing the stories on an online map, we aim to create a living archive, documenting deep and detailed neighborhood and personal histories" (Ross, 2017).

For pressing issues around retail and restaurant exploitation and policy brutality there are platforms like **Clocking-In** which highlights the racial and gender inequities in the restaurant, retail, and domestic industries to build power among those workers and inform organizing campaigns. To resist police brutality and promote better community and law enforcement relationships platforms like Mapping Police violence exist, which was born out of the Black Lives Matter Movement to fill the void of comprehensive national data on police killings by helping users take action on the disparities shown by the data through a widget titled "Demand Action from Your Representatives" (Ross, 2017). Also, there are platforms like My90 which collects public feedback to improve trust, transparency, and public safety working directly with law enforcement.

This work is the leading edge of a new science of cities and community driven digital place-making and place-keeping. Some of the most innovative work being done in this regard is by small grass roots organizations like Comite Civico Del Valle (CCDV) in Imperial County, California. CCDV was founded in the 1980s to promote the voting rights of migrant workers and to improve access to education for their children. Around 2000, with large-scale burns in farming fields and local industry's toxic emissions negatively impacting the health of the community, the organization began to address environmental justice and climate justice issues (Eaves, 2014). The CCDV began by building a Ushahidi web-like platform that could gather data about environmental health hazards from community residents and map those incident reports.



Online and offline platforms and processes for institutionalizing equity in neighborhood transformation efforts must acknowledge the root causes of racial inequity and other forms of social inequity. Contrary to popular belief, health and wealth inequities are not primarily caused by individual behaviors but instead stem from systematic differences in the social, economic, and environmental assets and resources that affect health wealth, and overall well-being (Ross, 2017). "These differences are caused by structural racism, unequal power relations, and policies and resource allocations that create the inequitable conditions in which people live, work, and play" (Ross, 2017). From redlining to voter ID laws to exclusionary zoning practices and more, public policies have fostered racial inequities in health, wealth, and opportunity at the federal, state, and local levels" (Ross, 2017). For community-driven data and technology tools to advance racial equity, they need to support community decision making and actions that address these "upstream" drivers of racial and social inequity. In the spirit of nurturing this nascent field and contributing to its growth and evolution— Streetwyze was designed to achieve these goals.

Streetwyze is a human centered design process and state of the art technology and community engagement platform that transforms how people share stories, collect, analyze, and share data, as well as access and use information about their communities. Streetwyze partners grassroots, POC and women-led small business nonprofits, community-based organizations, artist, activists, designers, architects, planners, and Big Data technologists to democratize data, develop equity indicators, and implement story mapping and place-making workshops that lift up the power of design thinking with vulnerable populations and everyday people in an effort to promote equitable neighborhood development and improve access to opportunity for all.

What is innovative about the Streetwyze Platform is that community groups, artists, advocates, and everyday people working to improve the neighborhoods where they live, learn, work, and play, rarely have had the opportunity to integrate their lived experience into big data sets, computer simulations, and advanced modeling techniques to improve access to opportunity and help cities



function more effectively. By demystifying planning processes, decoding industry speak, flipping the script, and sharing the stage in terms of who is the expert—Streetwyze helps bridge the gap between "top down" professional knowledge and "bottom up" local knowledge, in order to elevate community voice and build healthy, resilient, and sustainable neighborhoods for all.

Streetwyze has been recognized and/or collaborated with Homeless populations, Hospitals, Health Care Systems, The Obama Adminstration, Race Forward/The Center for Social Inclusion, PolicyLink, EcoDistricts, Google, Aclima, Residents United for Action Network (RUN), Asian Health Services, Gehl, the Movement Strategies Center, Oakland Creative Neighborhood Council, Bay Area Organization of Black Owned Business (BAOBOB), Artist Thrive, Enterprise Community partners, Right 2 Root, Iron Bound Community Corp, and the Rockefeller Foundations 100 Resilient Cities to name a few. Our work has also been featured in the Atlantic Magazine's Citylab, Green Biz, The Root, Tech Crunch

and others as one of the new mobile platforms and racial, spatial, and neighborhood innovation processes designed to build power and self-determination with vulnerable populations and involve everyday people in community engaged design decisions that impact their everyday lives.

The Streetwyze app is at the forefront of innovation, creative place-making, place-keeping, and local knowledge mobilization for cities and communities. In the future we envision this real-time, crowd-sourced, early warning system becoming a critical component of participatory planning initiatives with Community Development practitioners in the U.S. and beyond.

