



The Boston Climate Progress Report:

CREATING A CLIMATE-JUST CITY: THE TRANSITION FROM MARKET-LED TO REPARATIVE NEIGHBORHOOD PLANNING

A big lift necessary for Boston's climate progress

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**SUPPLEMENTARY
CHAPTER**



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1. OVERVIEW AND VISION

Throughout our assessment of Boston’s climate progress, we’ve found that many aspects of urban climate action are more effective when carried out at the district or neighborhood level.

In electricity planning, district-scale heating and cooling systems—whether powered by natural gas, water (for cooling), geothermal wells, or other renewable sources—use considerably less energy than systems serving individual buildings. Home energy-efficiency retrofitting and electrification ramp up faster if the focus is at the block or neighborhood level rather than the individual property. Coastline protection is not effective, and can even be harmful, if carried out at the individual property level. Some of Boston’s climate policies, such as the neighborhood resilience plans and the overlay district, already focus at the district level.

We have also pointed to the need for racial, economic, and social equity to be at the forefront of all aspects of climate action. Electrification of homes should be prioritized in environmental justice communities because it reduces indoor air pollution that contributes to asthma and related conditions in neighborhoods already overburdened with outdoor air pollution. Energy efficiency retrofitting should prioritize low-income neighborhoods where residents are more likely to be experiencing energy burden—paying a higher percentage of their income for energy. Coastal resilience in frontline communities can also add much needed green space and be combined with reducing higher levels of urban heat. While equity is a stated goal in some of Boston’s climate action, residents of frontline communities suggest more needs to be done.

What Is a Frontline Community?

Frontline communities are those that have been exposed to more economic and environmental harm than others that have more power and wealth. They are typically composed of racially and culturally distinct groups and diverse people of color who have limited financial and elective power. Frontline communities were hit hardest by the COVID-19 pandemic, for instance, and experience the most immediate and worst impacts of climate change. According to the NAACP, they are directly affected and have fewer resources and protections to adapt, pass legislation, and implement policies to their benefit.

Beyond equitable distribution of the goods of climate action, we have made the case that Boston’s legacy of racial discrimination obliges the city to repair past harms. This obligation goes beyond undoing environmental harms to increasing access to home ownership and affordable housing, improving the quality of education, building more career ladders, and increasing mobility options. We use the term *reparative urban planning*¹ to describe action to correct past economic, environmental, and social harms inflicted on Black and other communities of color.

Our task now is to figure out how to accelerate and integrate these three threads—district/neighborhood scale planning, equitable climate action planning, and reparative planning into a comprehensive and consistent process. It is not an easy task, but one that we must begin to create a climate-just city.

Reparative climate justice planning is very much aligned with Mayor Michelle Wu’s Green New Deal and we have seen the beginning of its implementation in such actions as: prioritizing the needs of East Boston in coastal resilience, free bus service on selected lines, committing \$2 billion into improving school facilities,² and investing approximately \$380 million into affordable housing and home ownership. Reorganizing the priorities of the Boston Planning and Development Agency (BPDA) and hiring a Green New Deal Director are additional steps that signal that Boston is moving away from the market-driven, developer-led planning that got us the Seaport.

We are now at a pivot point. Boston has the opportunity be a leader in demonstrating how neighborhood-based reparative climate planning can work. The question is how to implement such an interconnected approach. We don’t have all the answers. This report is designed to start a dialogue with the whole community of Boston—city government, anchor institutions, businesses, and residents—on how to move forward in creating a sustainable and equitable Boston.

As context for this dialogue, in this chapter we examine each of the threads independently. In Section 2 we examine how eco-districts, a district- or neighborhood-scale approach, can support climate justice goals in frontline communities. Eco-districts are defined areas in which a city integrates all aspects of its climate agenda to create synergies that amplify one another and accelerate achievement of climate goals. While eco-districts are often green enclaves for the wealthy, we focus on one that specifically addresses frontline neighborhoods to extract lessons that can be applied generally in Boston.

Section 3 examines different types of green zones and green justice zones—active measures to undo harms created by redlining and associated discriminatory practices. These are relatively recent strategies to link climate action to climate justice. They promote neighborhood-level initiatives in frontline communities that focus on social, economic, and environmental justice.

In Section 4, we elaborate on reparative planning as it is emerging in the field of urban planning. We present recent examples of cities integrating the three threads in their climate action. We integrate the concepts in Section 5 and present possibilities for implementation in Boston. We describe Boston's historical approach to planning and identify ideas for a transition to reparative planning at the neighborhood level. Our intent is not to be definitive, but to begin a conversation that engages all of Boston. There is precedent for this level of engagement; for example, in Chicago's first comprehensive plan.

In 1909, Daniel Burnham created the plan of Chicago. It was sponsored by a business organization interested in making the city more efficient for conducting business. Unprecedented in its time, it laid out the 19 miles of public waterfront, a system of parks and forest preserves; improved streets; located port facilities; and more. To this day, the plan defines the city. Our point in invoking it is that the Burnham Plan inspired the entire city in a way that we hope will happen in Boston. As noted in a 2009 Chicago public school curriculum on the plan:

“The Plan’s advocates were tireless, giving ‘magic lantern’ slide talks (in a variety of languages) to any group that would listen. Promotional brochures were sent to all the city’s property owners and renters paying more than \$25 per month. Articles in newspapers and magazines across the nation showcased the improvements. A short film, *A Tale of One City*, was shown over and over in the city’s movie houses. Ministers and rabbis were urged to give sermons about the virtues of city planning. A textbook summarizing the Plan, *Wacker’s Manual of the Plan of Chicago*, was adopted by city schools and a generation of eighth graders were taught the benefits of the Plan.”³

This level of engagement is what we mean by all hands on deck. It is what Boston needs to do now.⁴

2. THE PROMISE AND PERILS OF ECO-DISTRICTS

Definitions vary, but broadly defined, an eco-district refers to neighborhood-scale development or redevelopment that addresses climate mitigation and adaptation with sustainable planning strategies and by employing state-of-the-art technologies in green building, smart infrastructure, and renewable energy to create sustainable, resilient, and inclusive districts.⁵ Residents of these neighborhoods can walk or bike to most major services and have access to public transit—often referred to as a 15-minute neighborhood. In addition, their housing is energy efficient and the indoor air quality is healthy. Their neighborhoods have green stormwater management, plenty of green space, and are resilient to the effects of climate change. They have access to healthy food and maybe have community gardens. The value added by a district-scale approach is that it can create synergies among different components of the climate agenda and allow for experimentation leading to advances in application of technologies.

It all sounds great, but eco-districts can create environmental gentrification—the expansion of middle-class or high-end housing into previously abandoned areas that transform post-industrial landscapes into elite enclaves. This form of gentrification can also displace low-income residents from their neighborhoods. Intentional urban planning, however, can create eco-districts in low-income communities. We turn to Malmö, Sweden, for an example that is illustrative of how to integrate multiple aspects of the climate agenda and respond to resident input in frontline communities.

Malmö's Augustenborg Eco-District

Malmö is a post-industrial city at the southern tip of Sweden that has sought to transform itself into the world's most sustainable city. It has taken both a citywide and district-scale approach to achieving this goal.

In 1998, city planners in Malmö began transforming an abandoned shipyard area, the Western Harbour, into a new urban neighborhood that integrated all aspects of the city's ambitious sustainability agenda. They knew, however, that the real test of the concept would be to implement it in an existing residential neighborhood. They chose Augustenborg, a low-income neighborhood of about 3,000 with a large immigrant and refugee population, and an unemployment rate approaching 70 percent. The city's immediate goals were to build green stormwater management infrastructure to address frequent flooding and complete energy retrofits on its

older housing stock. But planners also knew that residents had to be on board with the city's agenda and have a say in setting priorities. Further, a principle guiding the approach was that the resident mix should remain the same—city planning should not catalyze gentrification and displacement.

The Green Augustenborg project (Ekostaden Augustenborg) began in 1997. The Malmö Municipal Housing Company and city representatives began a series of meetings with residents to discuss their plans on housing retrofits and green stormwater management and solicited input from residents on what they wanted. Among the items added to the agenda in response to resident input were solar panels, community gardens, a car-sharing program, and incorporating sustainability into the school curriculum. While the process started with a meeting in which 400 residents attended, over time only the most engaged residents participated at a high level. The city staffers involved quickly learned how to initiate and execute resident meetings and how to compromise with residents to arrive at a mutually agreed upon agenda. This participatory approach has now become standard practice in Malmö's neighborhood-based planning.

All buildings (1,800 apartments) were retrofitted to be about 35 percent more energy efficient than when they were first built. Water meters were installed to encourage water conservation. These measures have made the buildings more desirable, producing a 20 percent decrease in rental turnover.⁶

A blue-green stormwater system replaced an overwhelmed combined stormwater and sewer system. Malmö officials had to work through regulatory issues to create solutions that could be used throughout the city.⁷ It took a lot of planning to develop the system that combines green roofs with green and gray stormwater management (Figures 1, 2 & 3). Ultimately, the idea for the system originated in the basement of a self-taught resident and became the basis for a new clean-tech company, Watereco AB.⁸ A key challenge was coordinating action between public and private bodies.⁹

The system was tested during an extreme rainfall event on August 31, 2014, during which Augustenborg fared considerably better than the surrounding neighborhoods that did not have blue-green infrastructure. Only one in 10 properties flooded in Augustenborg while surrounding areas endured six to 18.5 times more flooding.¹⁰

Figures 1 & 2: Green Stormwater Infrastructure in Augustenborg

Source: GRaBS



Figure 3. Green Stormwater Infrastructure in Augustenborg

Source: Jorchr/Wikimedia Commons



A two-part strategy for green neighborhood revitalization that the city debuted in Augustenborg was first to include a pilot or showcase project to demonstrate an innovation in climate action and second to create an attraction that would draw people to the neighborhood. In addition to the blue-green stormwater system, a second showcase project, Greenhouse Augustenborg, was completed in 2016. It comprises a renovated five-floor building connected to a 14-floor building (Figure 4). It was designed to demonstrate the latest in energy efficient building technology and to promote community among residents. The building is built to passive-house standard, meaning it requires no external heating sources. The 56-unit rental building earned a gold rating from the Swedish Green Building Council.

Figure 4: **Greenhouse Augustenborg**

Source: Beldrich Architects



Apartments have wall-mounted information panels that provide real-time data on energy and water use, neighborhood information, and can be used to book amenities such as the carpool or the laundry room. The panels, combined with energy-use awareness sessions, help residents decide when to run appliances to reduce energy consumption. The building itself uses smart automation systems that operate equipment during non-peak times when energy is less expensive.

Recycling often is a hassle for city dwellers because there is no space for storing it. The Greenhouse kitchens have drawers under the sink that were designed to accommodate waste separation bags. The building has electric vehicle charging stations, and a bicycle garage with a bike maintenance room in the basement with bikes and bike wagons available to residents without cost.

Residents were highly engaged in designing community-building elements to the building. There are several indoor common spaces, a public kindergarten, and a rooftop greenhouse that is usable for growing year-round. Each apartment has a balcony, half of which is covered so it creates both indoor space and outdoor space with a planting area.

The second part of the revitalization strategy, creating a feature to attract non-residents to the neighborhood, has the goal of reducing the isolation that is common to poor neighborhoods. In 2000, the Scandinavian Green Roof Institute was created to oversee green roof gardens in Augustenborg and throughout the city. Its activities include conducting research on urban agriculture and other innovation on green roofs, offering study tours and seminars (Figure 5). It quickly became internationally known and attracts thousands of visitors to Augustenborg annually.

Figure 5. **Experimental Green Roof in Augustenborg**

Source: Joan Fitzgerald



What Boston Can Learn from Malmö

Ekostaden Augustenborg illustrates four elements of reparative neighborhood planning:

- ▶ intense and integrated application of climate initiatives at the neighborhood or district level;
- ▶ focus on revitalizing a low-income neighborhood without displacement;
- ▶ resident engagement and incorporation of their requests; and
- ▶ promotion of sustainable lifestyles and community connectedness.¹¹

The building efficiency upgrades and green stormwater system used existing technology. The real innovation was in governance—both in the authentic participation by residents and in how government itself worked. Communication and collaboration across city departments and with the private sector facilitated problem-solving.¹² This contrasts with siloed departments, which is the norm and a key reason why many green innovations aren't implemented or implemented effectively.¹³ Unfortunately, even in Malmö with the best of intentions, this synergistic approach has been difficult for the city to maintain.¹⁴

Another lesson is the need for funding. Malmö would have been unable to finance the planning and implementation without the sizable municipal, national, European Union, and international funding that supported many aspects of the project.¹⁵ The Scandinavian Green Roof Institute, for example, had considerable national and private-sector funding. The Malmö success underscores the need for financial support from federal and state sources. Even with some developer funds, it would be hard for Boston to replicate Malmö's strategy with the city's own resources.

To implement Malmö's planning process, Boston would have to do some trust building in its frontline neighborhoods. There was no history of participatory planning in neighborhoods in Malmö. Paradoxically, that may have been a plus since there were low expectations on the part of residents. This meant the planning process did not start at a place of mistrust. In contrast, Boston residents from frontline communities we talked to expressed frustration with how the City seeks participation. Many said that they are only reacting to plans as opposed to participating in making them and that their input was not acted upon.

Boston has used the locating of key government buildings in frontline neighborhoods as a strategy for integrating them into the city's fabric. The Bruce C. Bolling Municipal Building in Nubian Square as part of Mayor Thomas Menino's *Dudley Square Vision Project* is one example. A point for discussion in Boston's neighborhood planning should be identifying what type of attraction could be placed in the neighborhood to draw people to the area.

3. GREEN ZONES AND GREENLINING

Green zones have emerged in the United States as a strategy that, like the European eco-districts, integrates climate mitigation and adaptation strategies. Just as important, in the United States, green zones prioritize undoing past environmental harms such as high pollution or lead levels. The California Green Zones Initiative defines them as “place-based strategies and community-led solutions to transform areas overburdened by pollution into healthy and thriving neighborhoods.”¹⁶ In this sense, it may be more accurate to call them green justice zones. We look to two city-led green zones—in Minneapolis and Providence—to illustrate how they might work in Boston. We caution, however, that they are strong on process and short on outcomes. The question, then, is how to avoid the post-planning stall that both have experienced.

The California Environmental Justice Alliance coordinates the state’s green zones (Figure 6). They vary considerably in program, but all are comprehensive, community-led, solution-oriented, and collaborative.

The California green zones are not integrated into climate action plans. The advantage of incorporating them into climate plans is that it obligates the city to achieve the justice goals and even supply funding streams for implementation. We therefore focus on the first two cities attempting to establish green zones in their climate plans, Minneapolis and Providence. The Providence team looked to Minneapolis in conceptualizing its city’s approach to green zones.

Figure 6: California's Green Zones

Source: California Green Zone Initiative



Green Zones in Minneapolis

In 2013 the Minneapolis Climate Action Plan became the first in the country to incorporate green zones.¹⁷ The idea emerged from the Environmental Justice Working Group for the climate action plan, who had been observing successful green zone initiatives in California. The planning committee agreed that the approach would help the city address historic discrimination in frontline neighborhoods.¹⁸

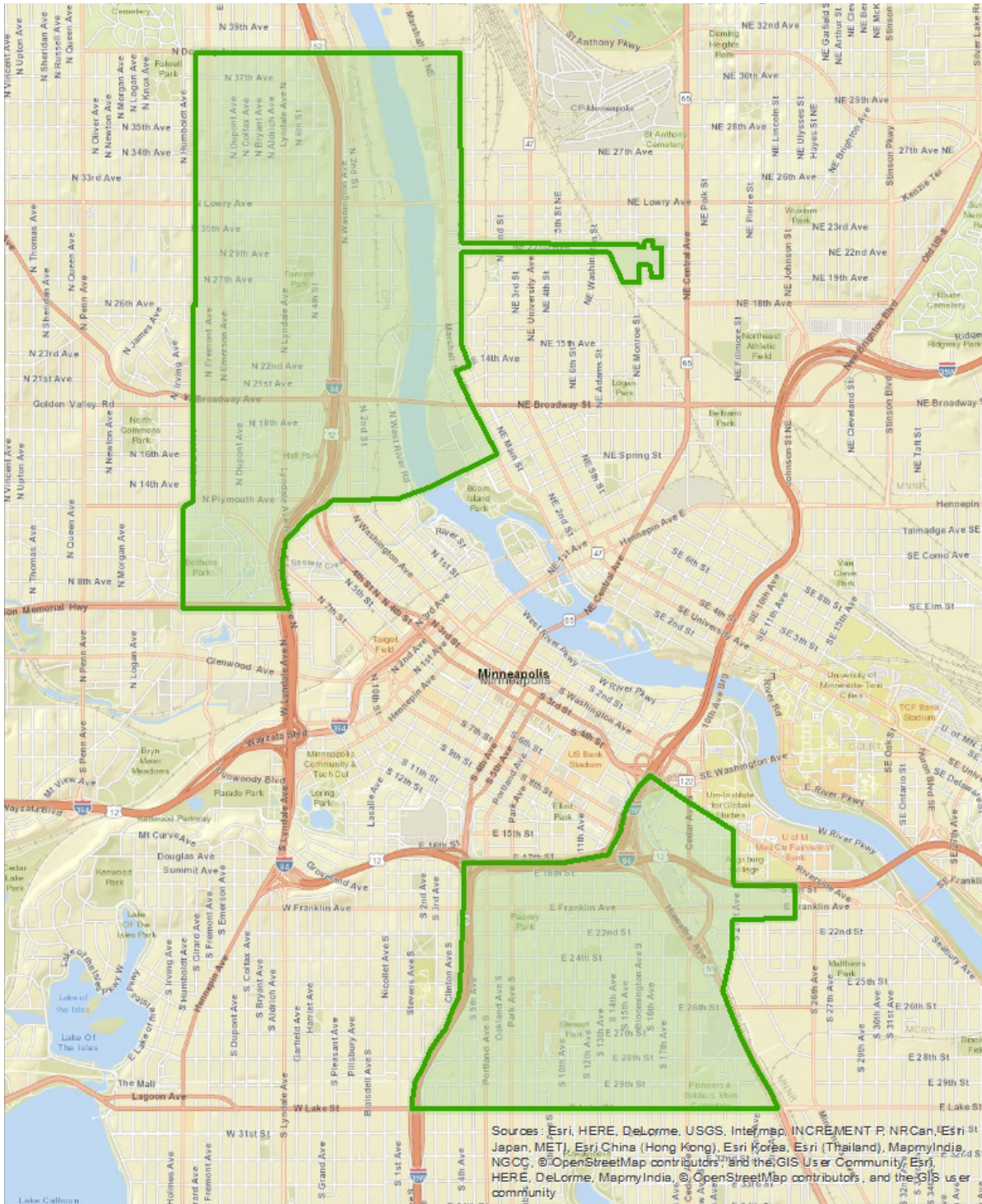
Planning for creating the zones was slow. In April 2016, the sustainability office created a Green Zones Work Group, comprising nine staff members from various city agencies and a diverse group of 10 community representatives to identify the priority communities. Initial meetings included training sessions on unconscious bias and environmental justice.

The group met monthly, poring over data. Minneapolis Sustainability Coordinator Kelly Muellman relates that they used an interactive mapping tool to narrow down the communities most in need, allowing the group to explore population characteristics, industrial activity, air quality, housing quality and affordability, food access, and employment. They identified two priority zones—one on the north side and one on the south side (Figure 7).

The next step was to establish goals for the zones. The workgroup reviewed data to identify specific strategies for each zone. After developing draft recommendations, the team held seven focus groups in frontline neighborhoods to get feedback. The final report called for an integrated approach that emphasized improving air quality, cleaning soil and water contamination, providing affordable green housing, adding green space, improving access to healthy food, and creating green jobs as priorities, while advancing racial equity and preventing displacement and gentrification.

Figure 7. Minneapolis Green Zone Boundaries

Source: City of Minneapolis



In November 2016, the Minneapolis City Council voted unanimously to ask the city to explore leading practices for community building without displacement from gentrification. In particular, the sustainability office called for inclusionary zoning, zoning for smaller lot and unit sizes, and financing for affordable housing. With wide community support, the City Council officially designated a northern and southern green zone in April 2017, both areas with a legacy of racially discriminatory policies such as redlining, freeway development, and industrial pollution.¹⁹

Then the work of the task forces and advisory committees charged with creating work plans for the two green zones began. The Southside Green Zone adopted its plan in December 2019, and the Northside Green Zone in March 2020.

The Minnesota Pollution Control Agency provided \$10,000 to fund the Green Zones Workgroup, which mostly paid for stipends for community participants. The local McKnight Foundation teamed with the Funders' Network program to provide \$150,000 to support the first year of the Southside Green Zone planning process. In addition to funding an equity consultant and community engagement consultants, the grant covered stipends for community participants who met to create the implementation plan, its specific action steps, and to develop a budget for implementation. In 2018, the City Council provided an additional \$75,000 to support the Southside Green Zone and \$40,000 for the Northside Green Zone planning processes. And in 2019, a City Council member earmarked \$100,000 from the city budget as a one-time addition.

It took six years from the Climate Action Plan's publication to the formation of the first green zone. The goal was to select the first activities from the recommendations of the Northside Green Zone plan by April 2020. When the COVID-19 pandemic hit, the working groups had to take three months off, meaning the budget request for the 2021 budget would not go in on time to be considered. With the city's budget deficit, no new requests are being considered, so it may be a while before the green zones receive any significant city funding. It may be that projects will be funded with federal IRA dollars.

Since the Minneapolis Green Zones were passed by resolution, not as an ordinance, they are vulnerable if political winds shift. And they are managed by a single staff person, making faster progress difficult. While planning got off to a great start with external funding, there was neither the funding nor the staff capacity for implementation. One is reminded of the moral of Aesop's fable *The Bell and the Cat*—ideas are good, but execution is better.

Green Justice Zones in Providence

Providence followed the lead of Minneapolis in putting frontline communities at the forefront of its climate action.²⁰ The city’s 2019 Climate Justice Plan identifies two green justice zones in which implementation will be targeted.

Then-Director of Sustainability Leah Bamberger worked with community organizers to develop a process in which the Office of Sustainability was an equal among partners in the planning process, which went beyond the level of inclusion in Minneapolis. After committee members and city officials went through “Undoing Racism” trainings, the planning process began.²¹ Community representatives received a \$1,300 honorarium for participating in about 10 hours of meetings per month. The committee explored ways to integrate racial equity into every aspect of the plan.

The committee produced a report, *Equity in Sustainability*, that identified 12 priorities for frontline communities, including clean streets, industrial hazards, safety, public transit, and gentrification (Figure 8).²² The committee then used the report’s priorities to build the framework for the plan. The resulting Climate Justice Plan, released in October 2019, outlines a strategy for Providence to become carbon neutral by 2050 while prioritizing the needs of frontline communities (Figure 9).²³

Figure 8. **Equity in Sustainability Report**

Source: City of Providence

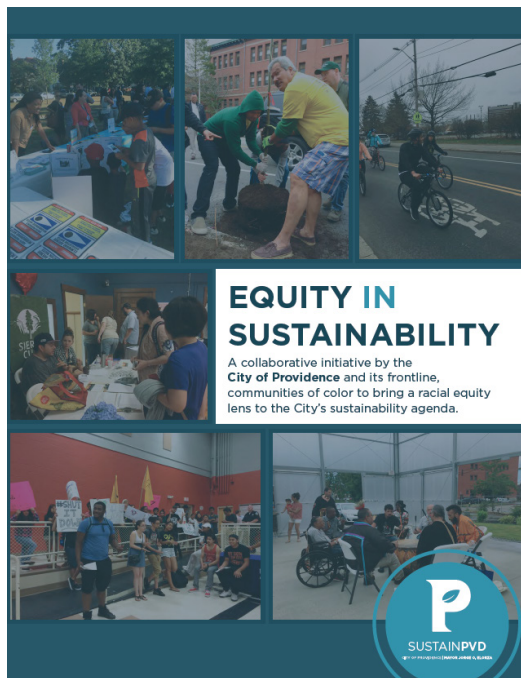
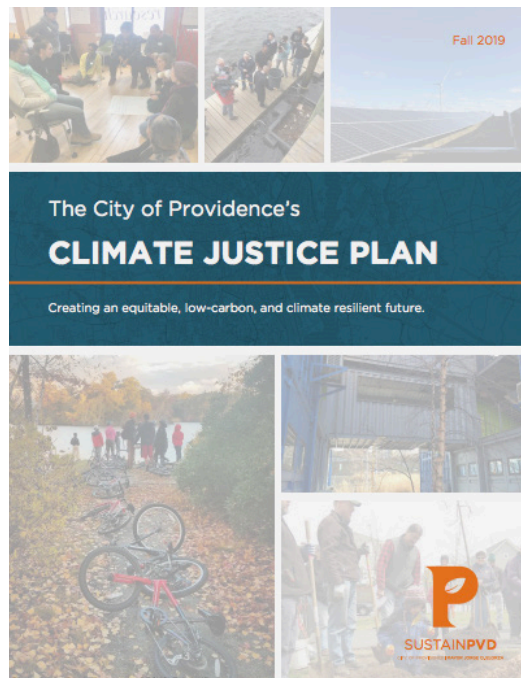


Figure 9. **The Providence Climate Justice Plan**

Source: City of Providence



The plan sought to create two green justice zones, Olneyville and South Providence. Among the potential projects in the zones are building microgrids in key facilities to maintain power when outages occur, weatherization, renewable energy development, job training, and zoning reform to prevent polluting land uses.

Some people in the climate community responded to the plan with concerns about slowing progress on emissions reduction goals since many of the concerns in the green zones were not directly related to climate. Indeed, the needs of green justice zone residents detailed in the plan could compete with ambitious greenhouse gas reduction goals. For example, solar and electric car adoption, as it is pursued in many cities and states, is led by people who can afford to take advantage of subsidies for solar, electric vehicles, or heat pumps first, leaving behind those who are most impacted by the climate crisis—frontline communities. Providence’s plan reverses that strategy by addressing the needs of these frontline communities first, which would require changes in priority for many subsidy programs.

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

— Jane Jacobs, [The Death and Life of Great American Cities](#)

An ordinance to codify the Office of Sustainability and the Climate Justice Plan was introduced in Providence City Council in January 2021 but has not been passed. Several environmental and racial justice, labor, and climate organizations, along with religious leaders and youth groups, have urged the Rhode Island state legislature to support a “Green New Deal.” While the legislature has passed several strong climate acts in 2021 and 2022, it has not acted specifically on green justice zones. Conflicting interests are at play in this legislation’s stalling. The organizers who created and advocated for the green justice zone legislation have alienated key environmental advocates, according to some sources. Further, it is legally unimplementable, which means that a new bill will have to be developed, further slowing the process.

What Boston Can Learn from Minneapolis and Providence

Minneapolis and Providence illustrate three aspects of reparative neighborhood planning:

- ▶ authentic participation driven by frontline community residents
- ▶ a focus on ameliorating past harms inflicted on frontline communities
- ▶ prioritizing implementation in frontline communities at the neighborhood scale

The participatory process in Providence was unique in that residents actually drove the planning process and established the goals of the plan. Both cities started the planning with training sessions on racism and understanding its role in group processes, a key step in a reparative planning process. In addition to paying residents for their time on the planning committee, Providence held the meetings at convenient times and offered meals and daycare to make participating easier.

In both cities, the usual barriers to progress are evident: inadequate funding and conflicting goals. A truly participatory planning process is an expense for a city in that residents participating in extensive meetings over weeks or months should be paid for their time. In both cities, external funding was provided by private foundations to support the planning process, including stipends for residents on the planning committees.

But a good process doesn't necessarily lead to smooth implementation. There has been almost no progress on implementing green justice zone projects in either city. While COVID can account for some delay in Minneapolis, a plan released in 2013 should be yielding some fruit by now.

Climate justice plans need financial and legislative support at the state and city level. In Rhode Island, important climate legislation has passed at the state level, but not explicitly to support the green justice zones. (It's not even on the agenda in Minnesota.) At the city level, despite strong support from Mayor Jorge Elorza, Providence has not passed an ordinance to create and fund the climate justice zones. There are several conflicting interests at play—from questions of what the Port of Providence needs for economic development and how that may subjugate environmental justice goals to whether focusing on climate justice zones could slow progress toward speedy greenhouse gas reduction. We see the limited powers cities have to advance their climate agenda in these two cases.

A broader challenge, especially when we compare a Minneapolis or a Providence with what was achieved in Malmö, is that the best planning process in the world is stillborn and an exercise in frustration unless it leads to actual and visible changes in target neighborhoods—from affordable housing to cleaner energy. Implementation costs a lot more than planning. Some public money exists at the city level. More of it will need to come from state and federal sources and from developers.

Green Zones in Oakland

Based in Oakland, Calif., the Greenlining Institute is rooted in the idea that “instead of simply fighting institutionalized discrimination... we should work to proactively bring investments and opportunity into these communities. Instead of redlining, we would work to create Greenlining.”²⁴ The initiatives focus on building economic, environmental, energy, and technological equity in frontline communities. It has undertaken community-driven planning with eight California cities, and actions taken there will collectively eliminate 197,271 tons of greenhouse gas emissions.²⁵ Like green zones and green justice zones, their focus is at the neighborhood or district level.

The Greenlining Institute is part of California’s Transformative Climate Communities (TCC) program, created in 2016 with funding from California’s cap and trade program. With quarterly auctions frequently generating more than a billion dollars, the program invests 35 percent of its proceeds in disadvantaged and low-income communities and households.

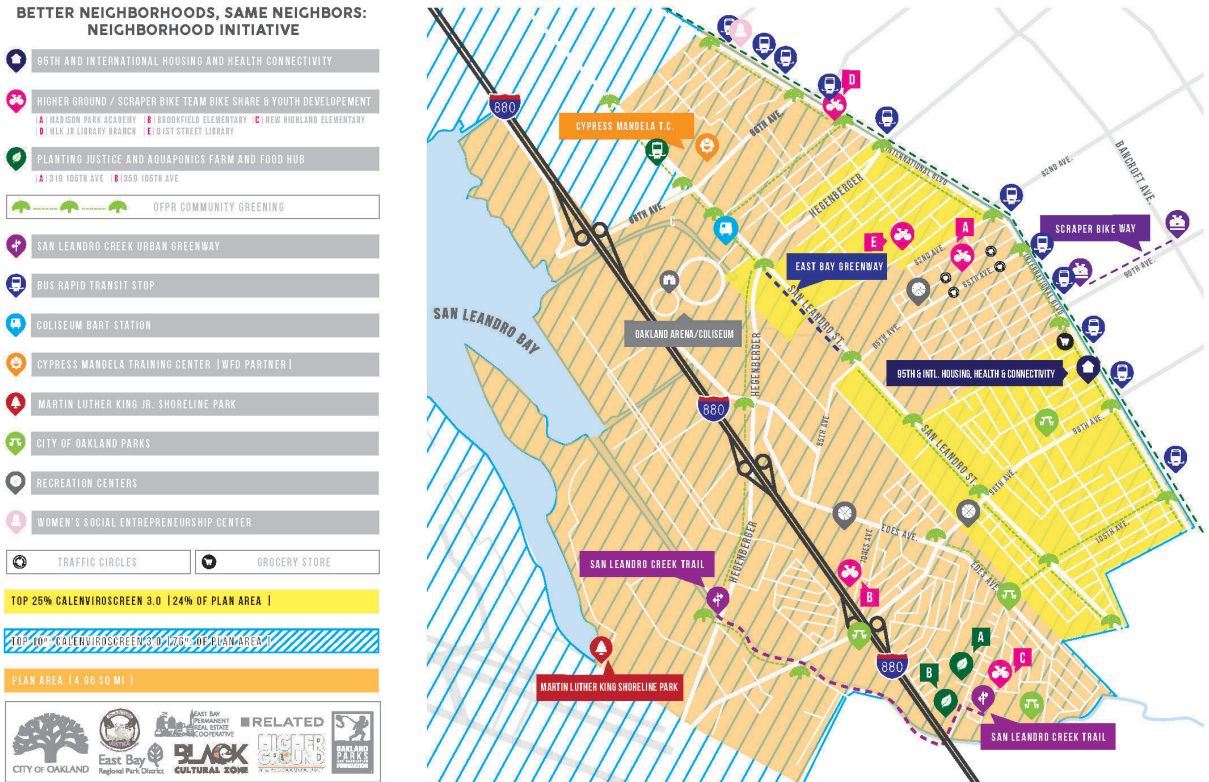
The Greenlining planning process employs a collaborative governance structure with representatives from local government, community-based organizations, and residents to ensure that needs identified by residents are built into climate solutions. The planning process is much like we saw in Providence—residents chose the goals, strategies, and projects to reduce greenhouse gas emissions and local air pollution in their communities.

In June 2020, Oakland received \$28 million from TCC funding for its East Oakland Better Neighborhoods/Same Neighbors initiative (Figure 10).²⁶ The proposal emerged from a community-led planning process of the East Oakland Neighborhood Initiative. As a staffer at the Greenlining Institute told us, “City government plays a role but doesn’t necessarily run the show.” A unique aspect of the program is that community organizations involved in the planning will receive direct funding for implementation. Among the projects in the winning proposal were:²⁷

- ▶ 55 units of affordable housing with a ground-floor health clinic
- ▶ One 1.2-mile community trail, replacing a concrete barrier
- ▶ 2,000 tree plantings
- ▶ A job-creating three-acre nursery as an aquaponic farm and food hub
- ▶ Expanded bike share program serving youth

Figure 10: Oakland's Better Neighborhoods, Same Neighbors Initiative

Source: City of Oakland



A July 2022 second-year update notes that more than half of the 60 projected jobs have been created, that construction of the affordable housing development is a year ahead of schedule and all other projects are on track.²⁸ The aquaponics farm is on track to create 27 living-wage jobs and could become an attraction in the same way the Scandinavian Green Roof Institute is in Malmö.²⁹

The TCC initiative is being implemented in the context of Oakland's Equitable Climate Action Plan, adopted in July 2020. Oakland had been moving in this direction anyway, but all California cities were motivated by a 2018 California law that required local jurisdictions to assess and plan for Environmental Justice (EJ) and to redress the disproportionate burdening of low-income neighborhoods and communities of color with environmental hazards.³⁰

We see Oakland's equity emphasis in its implementation in West Oakland, another Oakland low-income community of color that is unjustly burdened by hazardous and polluting facilities.

West Oakland is home to three freeways, the port, a wastewater treatment plant, and a jet fuel-powered peaker plant (the plant a utility uses on rare days of peak demand) that all contribute to high levels of pollution and result in higher rates of asthma, stroke, and congestive heart failure and lower life spans than are seen in more affluent communities in Alameda County. West Oakland is a priority community for the city's program to achieve deep carbon reductions in buildings with fuel switching—replacing natural gas stoves and space and water heating with electric units. Citywide, fuel switching alone could reduce greenhouse gas emissions by 18 percent. Making buildings more energy efficient would result in another 12 percent reduction.³¹

There are multiple funding pots for Oakland's climate equity work. Part of the energy efficiency fuel switching work is funded from a \$600 million infrastructure bond passed by the city's voters in 2016.³² And the state offers zero-interest, on-bill financing that is paid back with energy bill savings. Also, Oakland and Alameda County offer the Energy Upgrade California program, which offers rebates to residents and building owners for electrifying their homes—as much as \$4,500 for a single-family home and \$750 per unit for multifamily buildings.

Oakland also draws funds from California's Low-Income Weatherization Program, which promotes switching from fossil-fuel furnaces to heat pumps, a move that can electrify more than 90 percent of California's residential thermal energy use. Further, Energy Upgrade California, a public goods charge on investor-owned utility bills, is another funding source. Finally, Oakland's work receives funding from the state's Solar on Multifamily Affordable Housing program, which is using proceeds from California's cap and trade program to install solar on low-income multifamily housing. The program will offer more than \$100 million in rebates through 2030. Low-income residents will receive credits for the energy produced.

What Boston Can Learn from Oakland and the Greenlining Approach

Oakland also illustrates three aspects of reparative neighborhood planning:

- ▶ authentic participation driven by frontline community residents
- ▶ a focus on ameliorating past harms inflicted on frontline communities
- ▶ prioritizing implementation in frontline communities

An authentic participation process sometimes means the city has to act on what the community wants, which may mean changing goals. One staff member of the Greenlining Institute told us East Oakland residents said they don't need EV chargers, but they wanted more buses—electric buses. She noted that climate action plans often have an element of, “We have to hit this number to reach our goal and we have equity requirements—so let's put the things we're advocating for in those places. That's checking a box, not equity.”

Most cities would be envious of Oakland's multiple funding streams. Yet even with this level of funding, a Greenlining Institute analysis of the first five years of the TCC program cites insufficient funding as a barrier to achieving goals. In its first year, the TCC disbursed \$140 million, which dropped to \$10 million in year two.³³ Recognizing the need for more funding, TCC tapped into the state's general fund in 2022 to increase the amount distributed to \$94 million.³⁴

Despite this investment, it will still take years to undo past harm. A simple internet search brings up numerous articles on disproportionate amounts of air pollution, toxic waste, and diesel fumes in West Oakland.

A takeaway from Oakland's practice is how neighborhood organizations (in East Oakland) and city planners (in West Oakland) both implement initiatives with multiple objectives in one neighborhood—not unlike an eco-district or green justice zone.

In the end, we must raise the question of whether these district-scale approaches are truly transformative in creating big system changes. The answer is yes and no. Malmö got the process right with respect to neighborhood input and delivered on mitigation and resilience in Augustenborg. It was partly able to deliver because of financial support from higher levels of government. Minneapolis and Providence also got it right on process but have been unable to deliver outcomes. Oakland, like Malmö, was able to deliver on both process and outcomes.

4. REPARATIVE NEIGHBORHOOD PLANNING

At its simplest, reparative planning starts by acknowledging the historical role urban planning has played in marginalizing Black people and other people of color, and then undoing past harms. Rashad Williams, Assistant Professor of Urban Planning at the University of Pittsburgh, coined the term *reparative planning* and defines it as undoing wrongful gains and losses.³⁵ He notes that it is a form of corrective justice that goes beyond calls for distributive justice, concluding that anything less reinforces the racial status quo.³⁶ Linking reparative planning to climate action creates the imperative that communities that have experienced the “first and worst” of climate change impacts—frontline communities—should be the first to receive the benefits of climate action. It defines success by outcomes, not intentions.¹⁴⁵

Boston has a practical and economic imperative to become net-zero by 2050 and to build resilience to sea-level rise, storm surges, urban heat, and more frequent storms that cause flooding. The City also has a moral obligation to repair past economic, environmental, and social harms inflicted upon frontline communities. Integrating these obligations can create neighborhoods that are accessible, affordable, vibrant, and connected. This vision is aligned with Mayor Wu’s Green New Deal for Boston.

Building on the two types of district/neighborhood planning presented in this chapter—eco-districts and green justice zones—and integrating them with Williams’ concept of reparative planning, we have identified five reparative planning strategies that are complementary (Figure 11).

Figure 11. Reparative Planning Strategies

Source: Derived from the Greenlining Institute and Rashad Williams by the author.

- ▶ Build healthy and climate resilient frontline communities.
- ▶ Address root causes of inequities faced by residents of frontline communities.
- ▶ Build education and training pathways for residents in the green economy.
- ▶ Cultivate and build community leadership across issues to advance reparative planning.
- ▶ Commit to building authentic participation into planning processes.

Building from the Minneapolis green zone framework, we further identify the elements of reparative planning for climate justice (Figure 12). At its core are the strategies defined above.

Like the Green New Deal for Boston, reparative planning seeks to create systemic transformation. The question is what exactly do we need to do to get there?

Figure 12. Elements of Reparative Planning

Source: Joan Fitzgerald



From Private Developer-Led to Reparative Planning—the Pathway to a Climate-Just City

Historically, the practice of planning in Boston has deferred to developers in the private sector. The need to expand the tax base means that City Hall is in a constant balancing act between holding developers accountable and scaring them away. The profits made from private development, however, suggest that the City has much more leverage than it has been willing to use.

Developer-led planning is what got us the new Seaport neighborhood. In the late 1990s the area of the Seaport was almost nothing but parking lots—a 600-acre clean slate on which a vibrant and sustainable neighborhood could have been developed. Indeed, Boston developed a comprehensive plan for the area in 1999, The Seaport Public Realm Plan, with the intention of defining a vision that could be used as leverage when negotiating with developers. Since then, several more plans have been released addressing different foci and sub-neighborhoods—from the Municipal Harbor Plan in 2001 to the Fort Point District 100 Acres Master Plan in 2008 to the South Boston Waterfront Sustainable Transportation Plan (2015) to Coastal Resilience Solutions for South Boston (2018). All these plans have been largely ignored. Instead, as in the rest of Boston, planning occurs at a parcel level, not at a district level. While some broad requirements are applied to developers, most resilience or community benefit decisions are made at the negotiation table. The result: the Seaport, criticized by many as sterile, a traffic nightmare, and vulnerable to sea-level rise. It was dubbed by the *Boston Globe* as “A Brand New Boston—Even Whiter Than the Old.”

With 70 percent of its revenue from property taxes, Boston defers to developers because it has a large percentage of nonprofit-owned real estate that generates limited tax revenues. Instead, nonprofits such as universities, hospitals, and churches are asked to make payments in lieu of taxes. Universities in particular don't pay the amount the City requests, and even when they do make payments, they are in the form of community benefit credits for initiatives that benefit Boston residents, rather than dollars to the city.³⁷

There are four essential tasks to transitioning to reparative planning. The first is holding developers accountable for planning with communities and for contributing to the city's climate justice goals. The second is to develop a strategy for holding universities and other nonprofit institutions (including cultural institutions) accountable to greater investment in the climate justice vision in their surrounding communities. The third is to empower residents of frontline communities to work with the City in planning their own climate justice strategies. The fourth is to embed strategies to prevent gentrification and displacement into all development and revitalization.

Task 1: Holding Developers Accountable for Inclusive Planning

In August, the City took a step in making developers more attentive to meeting community needs. A new BPDA planning process requires that developers lay out their plans for being more inclusive in their neighborhood impact plans and that they specify their diversity, equity, and inclusion plans. To date, clear metrics of success and timetables and sanctions that hold invested parties accountable for achieving measurable results have not been put in place. Without metrics and sanctions, there is not much motivation for change. Putting them in place has to be a priority.

A key question to be addressed is: What other strategies are needed to increase developer accountability?

Another aspect of task 1 is bringing communities in sooner so they are not just responding to the developer's idea. What communities want is sometimes quite different from what developers plan. Communities have some political clout to vote against plans they don't like but often lack the planning and financial resources to implement the plans they would prefer. Instead, through the BPDA approval process, they provide input on developer proposals and negotiate for amenities that offer immediate and tangible results, such as funding a small park or a cash gift to a youth group. The process is reactive.

A key question is: How to invite input without slowing down the process too much?

The final aspect of the first task is to develop a strategy to create more community-based developers and to diversify Boston's development and construction sector.

Boston has few Black, Latino or Asian developers, construction companies, or workers in real estate development who can operate at the scale of current development projects nor is there a pipeline within the vocational, community college, and university system for cultivating more of these professionals. Development entities, environmental organizations, professional associations, schools at all levels, unions, policy makers, and communities must work together to create these pipelines for an environmental justice workforce, as was the case in the early stages of planning for the Big Dig project. That project failed to achieve long-term diversity penetration in the real estate development and environmental fields due to budget cuts. Similar cuts must be avoided now as new federal funds become available to train workers to mitigate past environmental injustices.

The mayor's \$2 billion investment in schools is significant and long overdue. The green technology and related careers pipeline starts with high schools. The BPDA has started initiatives in Madison Park Technical Vocational High School related to planning and design. Also, the BPDA and several schools, including the Boston Architectural College, Roxbury Community College, Benjamin Franklin Institute of

Technology, and Northeastern University initiated educational programs to diversify the design, development, construction, and building maintenance sectors. More education and training programs that prepare residents of frontline communities for the range of occupations and professions comprising real estate development and green technology need to be developed and linked to the city's community colleges, universities, and employers. Students need mentoring so they can create new businesses in these and other green technology areas. Boston also needs a strategy to promote more minority-owned businesses and bring them to the attention of developer procurement managers.

A key question is: How can we organize all the players—high schools, job training providers, community colleges, and universities—in developing career pathways in green construction and other green technologies?

Task 2: Holding Nonprofits Accountable for Investment in Their Communities

The second task is to motivate nonprofit institutions that are not paying their fair share in supporting the city. Many of these organizations are members of the Green Ribbon Commission (GRC), which has encouraged members in these sectors to reduce emissions and build more resilience but has not done enough to motivate them to add building climate justice in communities to their missions. They should be pressured to invest in their surrounding communities to create a greener future.¹⁴⁷ At a minimum the GRC could request or require that member organizations place a community advocate on their Boards and/or establish advisory groups on environmental justice (with paid members) to help develop specific strategies to address how the stakeholder institutions can best focus their resources on achieving measurable results in this area.

A key question here is: What mechanisms does the GRC or city government have in holding stakeholders accountable?

Task 3: Empowering Residents of Frontline Communities

The third task is to empower residents to engage in determining the needs of their communities. Over the years, “participation” has meant the City asking for input after a plan or development has been created. It is difficult to get broad participation and when it does happen it is often the same small number of people. Residents of Boston's frontline communities (East Boston, Roxbury, Dorchester, Mattapan) are not satisfied that their input is acted upon and sometimes comment that it is even deliberately ignored.

It is essential to have an officially recognized structure for engaging with community members. And like the planning committees in Minneapolis, Providence, and Oakland, they should have a strong voice in shaping the agenda, not just reacting to the plans of the City or a developer. And they should be paid for their time.

There is a history of that very process in Boston where, under Mayor Ray Flynn in the 1990s, neighborhood-based coalitions were formed by the neighborhoods themselves in response to a federally funded and city-managed effort to reduce unhealthy neighborhoods. Boston's communities were encouraged to self-define and form neighborhood-based coalitions composed of a school group, a neighborhood health institution, a youth group, a local business, a public safety entity, and a social services organization. About two dozen of these Healthy Boston coalitions were created and then trained by a local community capacity-building technical assistance group to define and address pressing local health needs, and to work together to develop community-based strategies to overcome their prioritized health deficiencies. The result, over a two-year period, was the substantial reduction of teen pregnancies and infant mortality in one neighborhood, the mobilization of Viet Nam veterans to reduce gang violence in a second, and the creation of a task force to reduce sexually transmitted diseases among homeless teenagers in a third. The program was linked to the City's Safe Neighborhoods program, which received greater national publicity as it eliminated teen murders over a two-year period and cut the city's overall murder rate by 80 percent.

That's the type of planning we could reinitiate—with a climate justice mission. Several questions need to be addressed before initiating a new planning process:

- ▶ Who should comprise neighborhood planning committees? (keeping in mind competing agendas)
- ▶ How is membership decided or terms of service determined? Who decides?
- ▶ What is the level of participation promised (see Figure 13)?
- ▶ How much would neighborhood planning committees cost to operate and how would they be funded?

A useful framework for defining the role of the residents in decision making was developed by the International Association of Public Participation (Figure 13). Providence used a version of this framework that went one step beyond empowerment to “defer.” That is, the city would defer to the community on goals. The promise may not be empowerment. What is important in assessing a city's commitment to shared decision making is whether it delivers on its promise to the public, not whether it achieves the highest level of participation.

A key question is: How is such a planning process sustainable in the long run?


Figure 13: IAP2 Spectrum of Public Participation

Source: IAPP

IAP2 Spectrum of Public Participation



IAP2's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The Spectrum is used internationally, and it is found in public participation plans around the world.

INCREASING IMPACT ON THE DECISION 					
	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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Task 4: Embedding Anti-Gentrification and Displacement Strategies into All Plans

Malmö delivered on its intention of not displacing the existing population through its sustainability planning. It succeeded because most of the residences are social housing owned by the city. The other cities presented here say preventing gentrification and displacement is at the top of the agenda—but nobody has really figured out how to do it. We have seen the process of gentrification unfold in East Boston. So, residents might be skeptical of an eco-makeover of their neighborhood. Using zoning powers to create anti-displacement zones is one option that's been known for a long time, but seldom used.³⁸ Anti-displacement zoning, floating zones, housing trust funds, and luxury housing taxes (as we will be implementing in Massachusetts) are among the strategies tried in cities across the country. And of course, the creation of new affordable housing that is being delivered by Mayor Wu, along with protection of non-public affordable housing, is essential. Anti-displacement strategies should be built into applications for federal housing funding.³⁹

Key questions are: What are the specific anti-displacement strategies that Boston will employ in its reparative planning? How can they be built into development projects?

5. CONCLUSION

In this chapter, we have presented examples of climate justice planning from other cities, identifying their strengths and weaknesses. We have suggested an approach—reparative neighborhood planning—to achieve greater climate and racial justice. And we have raised several questions that the community of Boston needs to discuss to move forward. It is our hope that this chapter and entire report is the beginning of a longer discussion with all of Boston’s stakeholders on creating a vision for a climate-just city.

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