

Resilience Hub Implementation Toolkit

**Lessons Learned from the Boyle Heights Resilience Hub in Los Angeles
and Practical Applications for Expanding Resilience Hubs Statewide**

BOYLE HEIGHTS ARTS CONSERVATORY | CLIMATE RESOLVE | RESILIENT CITIES CATALYST



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Introduction

Purpose and How to Use this Toolkit

Communities across California—like other communities across the nation—are facing extreme impacts resulting from climate change, with underinvested, socioeconomically vulnerable communities experiencing disproportionate burdens. As the effects of climate change become more acute, there is a growing urgency to deliver resilience projects and programs in these historically marginalized communities. Resilience hubs have emerged as a promising model to address the challenges neighborhoods face, with once-in-a-generation funding from both State and Federal sources.

This action-oriented toolkit aims to surface early insights and key lessons from a resilience hub in Boyle Heights, Los Angeles. By consolidating key lessons related to resilience hub programming, infrastructure, and funding and replication opportunities, alongside complementary case studies from across the country and a compilation of supplementary resources, this toolkit aims to support practitioners in Los Angeles and beyond who are exploring scaling this promising model.

Incorporating a community's existing infrastructure, resilience hubs are trusted physical community-serving spaces, retrofitted to withstand disasters, that enable community members to access needed services and resources before, during, and after climate and other emergencies. Hubs also act as critical social infrastructure during “blue-sky” days, addressing everyday needs by connecting locals to services and resources (often accessed outside of physical hubs themselves), providing community gathering space and programming, and fostering broader neighborhood connectivity. In these ways, hubs act as a physical mani-

festation of neighborhood resilience while deepening the relationships between communities and local governments.

A multitude of resources have been published to support community-based organizations, local governments, and other actors in implementing and supporting the development of hubs. This document aims to build upon this work while creating a new, user-friendly and accessible toolkit that consolidates resources and reflects lessons learned from the Boyle Heights Hub, the first of its kind in California, and others relevant to the California context.

Overview of the Boyle Heights Resilience Hub

A historic Los Angeles neighborhood that has served as a home to immigrants over the course of the City's history, Boyle Heights today is a community that carries on its legacy of activism and vibrant cultural contributions. Today's locals are predominantly Latino, including a significant proportion of first-generation immigrants from Mexico and other countries in Latin America. The neighborhood's median household income is just over \$36,000, and three-quarters of residents rent their homes. The relatively low median income and proximity to downtown make community members vulnerable to gentrification. Besides these economic vulnerabilities resulting from lack of investment, Boyle Heights community members also face the compounding impacts of climate hazards. The neighborhood is surrounded by 5 freeways and the area's tree canopy is relatively sparse. As also underscored in the Los Angeles County Climate Vulnerability Assessment, the neighborhood already experiences twice as many days of extreme heat compared to the citywide average, with

the severity and frequency of extreme heat waves projected to increase. Extreme heat further exacerbates the area's poor air quality.

Facing compounding threats, Boyle Heights community members risk losing access to critical services during climate-driven, as well as seismic, events. For example, drought and extreme heat threaten water quality and supply; extreme heat events also tax the power grid. In light of these risks, in recent years a coalition of partners anchored by the Boyle Heights Arts Conservatory (BHAC) along with the Chief Resilience Office of the City of Los Angeles, Climate Resolve, LADWP, and USGBC-LA, along with a series of collaborators including the American Red Cross, came together to activate the BHAC building as a pilot resilience hub.

Since 2020 partners have worked to integrate physical upgrades alongside community-led social programming so that BHAC—already a central connector of activity within the community—is better equipped to support community members on an everyday basis and better prepared to support locals with essential systems when future disasters and emergencies hit. The physical and social elements of the hub that are currently in development include solar panels, a backup battery, and water storage infrastructure, along with a community-designed resilience curriculum. In order to ensure this project is community-led, Climate Resolve has facilitated community co-design sessions, a vulnerability assessment, and a 300-person survey to help identify community priorities.

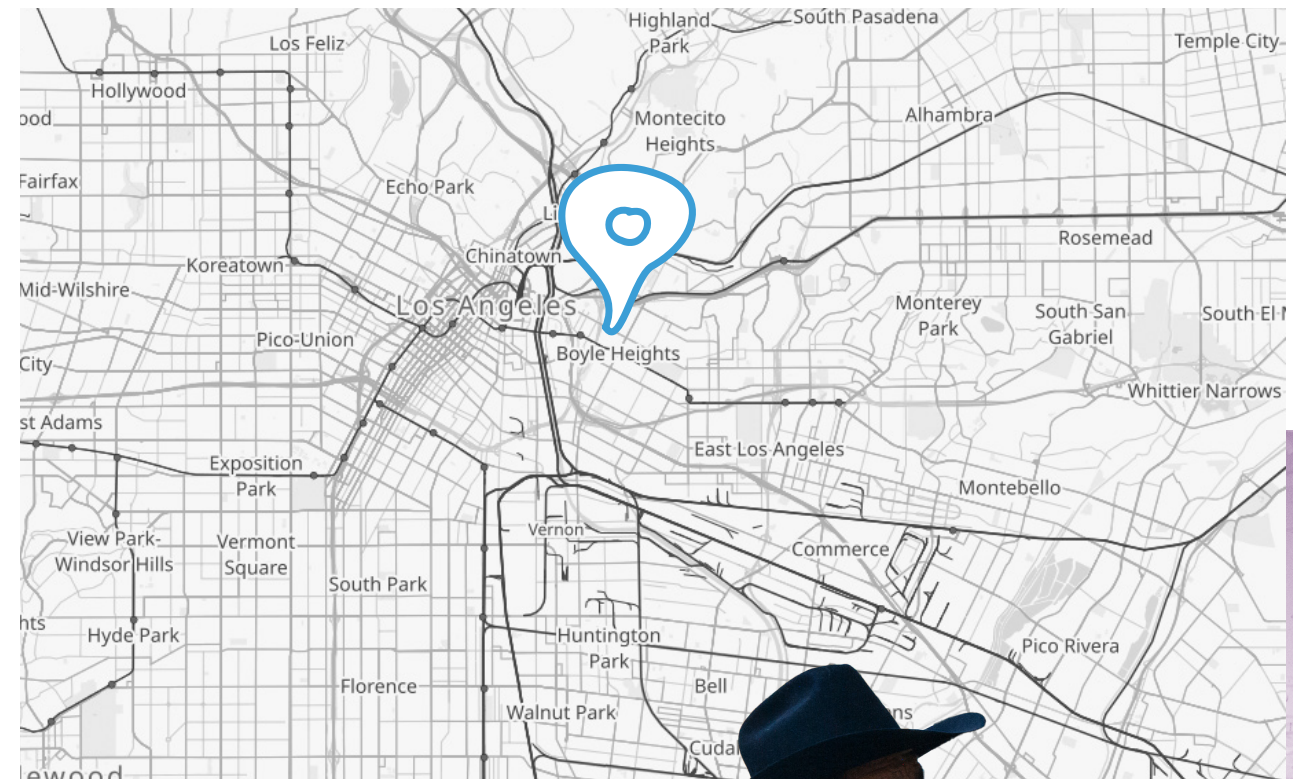


Photo: [DV8] David Patrick Valera, Flickr

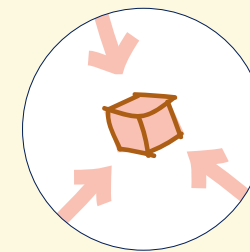
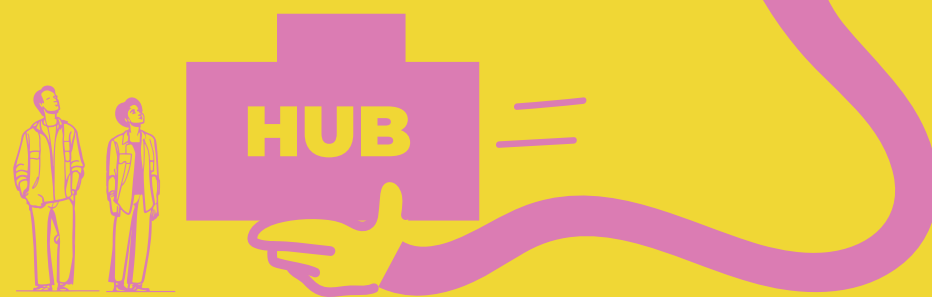
Guiding Principles Informing this Toolkit

Resilience Hubs as Outward-Facing Coordinators Working Within Existing Neighborhood Social Infrastructure

Three core themes, or principles, have emerged from implementation of the Boyle Heights hub and supplemental research—and the recognition that, while a physical resilience hub site is critical, a hub’s ability to serve a community is about much more than the site itself.

The most effective resilience hubs strengthen collaboration with existing community organizations and assets to reach community members and connect them to needed services where they are. Rather than a physical space that only serves community members who come to the site, a hub can be thought of as a central node of outward-facing activity, working via trusted community partners to reach community members.

In Boyle Heights as well as in other communities across the country, the most successful hubs leverage existing resources and institutions in a community by continuously centralizing resources, sharing information, and strengthening connections. By integrating these three primary tasks, hubs can more effectively serve community members and support social infrastructure in the community that strengthens resilience. These three roles, or guiding principles, are described further at right.



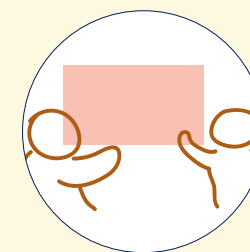
Centralize Resources

Although resilience hubs support community members before, during, and after a disaster, they are not shelters and most will not have the physical capacity to provide for all community members’ needs during a disruption. In supporting community members throughout the disaster cycle and across various physical spaces (including at home), effective resilience hubs act as resource centers that connect community members to critical tools and services no matter where they are. In practice, hubs should serve as a designated location where resources can be collected from local government or local Community-Based Organizations (CBOs) and a mechanism to organize the distribution of those resources, through the physical location as well as meeting community members where they are. In Boyle Heights for example, locals surfaced the challenges posed by air pollution. In response, the team worked with local leaders to ensure that the hub had pollution masks available for distribution to community members. Beyond disasters, the most effective hubs serve as a centralized nexus of resources—connecting community members to essential social service and preparedness resources—on an everyday basis.



Share Information

A critical component of hubs’ social infrastructure is their ability to reach and communicate with community members in ways that local governments cannot. Hubs that connect with local institutions and community organizations to establish trust and connections with community members are ultimately able to aggregate information across the neighborhood for community members in the event of an emergency and to address everyday stresses. In Boyle Heights, this network can be activated through phone trees, radio stations, and social media to reach all members of the community, especially the most vulnerable community members, in times of emergency.



Strengthen Connections

Resilience hubs exist within a broader network of community-based organizations, social service delivery partners, and other neighborhood institutions. By increasing connectivity and collaboration among these organizations, hub organizations can reach and support community members through multiple touchpoints—not just within the physical space of the hub. Successful resilience hubs integrate themselves into this network, avoid duplicating the work of existing institutions, and build relationships across the network to serve community members. To better understand the existing social infrastructure in Boyle Heights, the team held a series of asset mapping workshops with community members. Through these workshops the community identified existing, useful resources in Boyle Heights that the hub could connect to as well as lingering gaps that the hub could fill.

Weaving these guiding principles together, development of the resilience hub in Boyle Heights has underscored the importance of hubs acting in external ways as critical coordinators that best serve the needs of community members. **Throughout this document, corresponding icons next to each Key Lesson indicate how these Lessons reflect these guiding principles.**

Drawing Inspiration from Promotoras



The promotora model can serve as inspiration for how hubs can think about trusted service delivery in a way that meets community members where they are. Community health workers, known as “promotoras,” provide

connections to health services as well as outreach and education within their communities. Because they are deeply engaged and working within their neighborhoods, often meeting their neighbors at their homes or other existing gathering spaces, and because they operate with cultural competency (communicating in the language and cultural norms of their communities), promotoras are deeply trusted and have been shown to improve health outcomes in traditionally underserved communities. Vibrant promotora models have taken root in communities across California as well as in states ranging from Texas to Arizona and beyond.

To give one example, in Southern New Mexico, promotoras played an essential role during the COVID-19 pandemic in reaching and assisting community members who were otherwise disconnected and faced challenges in accessing information and needed services. These bilingual organizers, deeply rooted in rural neighborhoods, acted as a trusted link between government and the community, providing essential information and delivering services such as vaccination, COVID testing, food, and housing assistance. Promotoras conducted door-to-door visits to disseminate crucial information, becoming essential resources for community members seeking assistance. The success of the promotora model during the pandemic highlights the importance and effectiveness of meeting community members where they are, and demonstrates connectivity across social networks that resilience hubs can emulate.



Part 1: Community Programming and Resilience Curriculum

Key Lessons

1. Robust and ongoing community input should pair detailed engagement with data-driven insights.

Resilience hubs are spaces designed for the community by the community. Although resilience hubs across the country play a similar function—supporting community members as they face everyday stresses and occasional shocks—every community has unique needs that require diverse programming and approaches. To fully institutionalize resilience hubs and ensure they address local needs, intentional and funded community engagement should be paired with thorough quantitative analysis and ground truthing. This analysis should establish goals for hub functions including the services provided and disaster preparation and recovery support. Pairing data analysis with robust community engagement provides a robust narrative that can not only support hub design, but future fundraising efforts as well.

Climate Resolve integrated three data-driven community engagement approaches to ensure the Boyle Heights hub is community-led. These include: two facilitated community co-design sessions, a vulnerability assessment, and a 300-person survey to help identify community priorities.

In combining these assessment approaches, quantitative neighborhood data was used as a preliminary analysis to support the design of community engagement that probes deeper into community needs. One successful way to leverage this data for community engagement is through community input surveys. The Boyle Heights team deployed a community survey that reached 300 community members in English and Spanish to probe deeper into vulnerabilities elevated through data analysis. The survey yielded that 30% of community members are

medically dependent on electricity (either for refrigeration of medications or to power medical devices). Through both data-driven insights and community engagement, this critical challenge became a priority in the ultimate design of the Boyle Heights hub.

When consulting community members through a workshop or survey, it is important to compensate community members for their time. In administering the Boyle Heights survey, all community members who responded to the survey received small honoraria for their time. Doing so increased responses, ensured honest feedback, and honored community members’ time—critical to sustaining relationships with the community.

While engagement from the outset is important for the initial design of the hub, sustaining community engagement to iterate on hub design and programming will ensure it is deeply grounded in community needs, even as these needs may evolve, and helps to build trust among community members. This is particularly critical following major disruptions in the community that lead to reprioritization of neighborhood needs. Through ongoing community engagement, the team leading the Boyle Heights hub has been able to adapt to emerging community needs, ensure that all gaps in the community are identified, and create ownership in the community that translates into more robust use of the hub by Boyle Heights community members.

Guiding Principles:



Strengthen Connections

2. Use accessible language oriented in the community to overcome communications challenges.

Although resilience hubs offer a model that is both community-led and designed to create community benefits, the concept of a hub itself can be challenging for community members and leaders to understand. In many ways hubs act as enhanced community centers, but in communities with existing community centers, a hub can appear redundant when explained as such. It is important to spend time aligning both internally, with the team and community-based organization ultimately leading the hub, and externally, with local government officials, other partners, and community members.

A resilience hub should be defined by the community members it will ultimately serve. Hub staff should work with

the community to understand key resilience challenges in community members' own words—including in their own language—and how hub design and ongoing programming and resources can be delivered in ways that are accessible to community members and fit the unique community context. In Boyle Heights, the team held a series of conversations with community leaders to better understand everyday challenges from the community's point of view as well as the ways in which they were already contributing to community resilience. From these conversations, the team was able to define hubs as a centralized location to find and distribute resources, learn about resilience and community cohesion, and a safe space for community members to decompress and seek asylum from climate stressors.

Similarly, many successful resilience hubs, even if not designated at City-owned facilities, partner closely with local municipal partners in order to enhance service delivery for community members. Developing these connections early can result in greater opportunities for alignment that embed resilience hubs into the city's broader social infrastructure. The team developed a one-pager to articulate the need for resilience hubs in Boyle Heights, and Los Angeles more generally. The one-pager explained the concept of the hub, and provided opportunities for the City to become more involved in the initiative.

While ensuring that the hub meets community needs, it is equally important to align internally on the roles and responsibilities associated with meeting those needs. Some ways to accelerate alignment include the development of an operations manual, outlining how staff should engage with community members in times of disruption and on an everyday basis (or during "normal" days), and holding drills and training sessions for staff members. In Boyle Heights, creating the operations manual has raised critical operations needs in advance that have informed staff training for blue sky days and emergencies—even leading the team to have productive discussions about the security layout needed to ensure the building is safe and accessible.

Guiding Principles:



Share Information



Strengthen Connections



In Boyle Heights, the team held a series of conversations with community leaders to better understand everyday challenges from the community's point of view.

3. Partnerships with Community-Based Organizations (CBOs) are essential.

Successful resilience hubs act as community aggregators: aggregating resources, information, and connections in ways that build upon existing neighborhood institutions to deliver for community members. Hubs are often operated through partnerships that bring together multiple longstanding, trusted, cross-sectoral neighborhood institutions. By connecting to and working with these other critical neighborhood institutions, the hub is able to build trust with community members in ways that ultimately make the hub better able to serve community needs. Moreover, by amplifying the work of and collaborating with a network of neighborhood organizations, hubs can reach community members and share resources and services across multiple touchpoints and physical spaces. In Boyle Heights, the team worked with community members to create a neighborhood asset map outlining existing neighborhood institutions providing critical services. From this exercise, the team identified critical neighborhood institutions with which the hub could partner to build trust with community members and reach community members who were already connected to one or more of those institutions.

Once these relationships are established, successful hubs harness this network of community-serving organizations to better serve locals. One way to do this is through resilience curriculum workshops. These workshops focus on community-identified challenges—for example, food sovereignty, mental health, building resilience capacity, disaster preparedness, and community cohesion—and connect leaders in these topic areas with local community-based organizations and hub staff to identify and implement ways to better provide for community needs. In Boyle Heights for instance, the team held a resilience curriculum workshop on food sovereignty attended by community and agricultural leaders where community members learned about local food sourcing, drought tolerant fruit trees, and the indigenous relation of people and maize.

Ultimately, strengthening this social network helps to maximize a resilience hub's impact. These kinds of partnerships can help hubs improve service delivery in ways that most effectively support the needs of community members through coordination and collaboration.

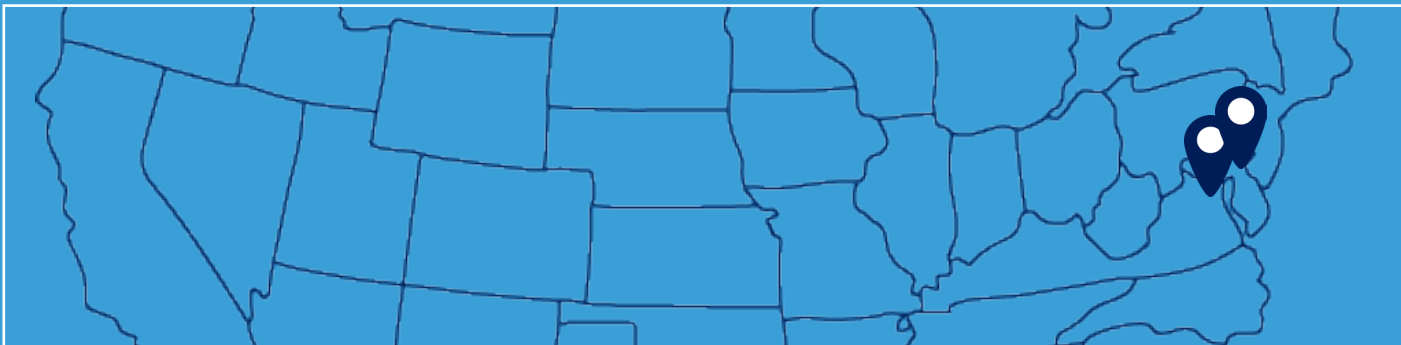
Guiding Principles:



Centralize Resources



Strengthen Connections



Washington, D.C.: Community-led design and steering committee ownership

In 2017 and 2018 the City's Department of Energy and Environment (DOEE) worked with the Georgetown Climate Center to develop a community-driven planning process in Ward 7 to inform Climate Ready DC and Clean Energy DC. The District convened an Equity Advisory Group (EAG) to develop recommendations that would inform the City's climate planning processes and brought on an equity consultant to develop agendas, facilitate meetings, and ensure the process was community-led. The EAG included 13 racially representative members of the community who lived or worked in Ward 7 and were existing or emerging community leaders. To overcome barriers to participation, all EAG members were provided stipends, childcare, and meals for participating. This group ultimately developed the concept for a Resilience Hub in DC and have worked with the lead CBO, the Faunero Center, to implement the pilot in the Watts Branch neighborhood of Ward 7.

Today this implementation continues with lead support from the DOEE. The DOEE was recently able to secure a one million dollar congressional appropriation to help implement the Hub in a currently vacant space beside the existing Faunero Center. As is currently outlined, the Hub will focus on five key functions: 1) steady-state programming, 2) climate-ready structure, 3) steady-state and disaster-ready operations, 4) communication, and 5) backup power. Although the Hub is the district's first, the DOEE is currently working to assess the feasibility of City-owned recreation centers becoming resilience hubs and to secure funding to support community and City-led Hubs in other areas throughout DC.

Baltimore: Local CBO ownership

When extreme flooding hit Baltimore in 2018, local community-based organizations stepped up to support their neighbors. Notably, one neighborhood church - Stillmeadow Community Fellowship - took on the role of an impromptu Hub at the height of the event. The church offered its space to local emergency responders, provided emergency supplies to community members and served the broader community after the storm in the months of recovery that followed. Through this event, the City recognized that many existing neighborhood-based institutions leap into action in times of a disaster - and what they needed was support from the City in the form of supplies, connection to responders, access to information and more to better support community members. The City has designated Stillmeadow Community Fellowship and organizations like it as Baltimore's first Resilience Hubs.

Today, the City has 15 partner CBOs collaborating on the Hubs Program throughout Baltimore. These organizations, led by the City's Office of Sustainability, participate in bimonthly meetings refreshing them on existing resources available to Hubs most relevant to the time of year, e.g. hurricane preparedness resources in advance of hurricane season. Four of the Hubs are currently equipped with solar + storage. The City is currently conducting feasibility assessments on the other sites, with 8 others slated to have solar + storage by the end of 2023, and is working closely with FEMA to find other funding sources.

Part 2: Upgrading Resilience Hub Infrastructure

Key Lessons

1. Conduct meaningful community engagement from the outset, both to source community-identified needs and to foster community ownership. Design charrettes are a critical tool to support innovative engagement.

While engaging community members around desired programs and social services is critical, one sometimes overlooked but equally important topic is physical infrastructure. Meaningful and consistent community engagement can help ensure that a hub's physical upgrades best reflect community goals and respond to community-specific needs.

In Boyle Heights, local community members have been significantly involved in infrastructure-related conversations—starting from the site selection process and continuing through a sequence of continued engagement emphasizing the current and potential functions of infrastructure in locals' lives. Community members' direct feedback has led to ongoing infrastructure upgrades, including solar panels, a backup battery, and water storage infrastructure. Ongoing engagement workshops have incorporated best practices, including: soliciting frequent and repeated feedback via preliminary and subsequent iterations of designs; repeatedly asking community members about ongoing gaps and components that might be missing; addressing emerging concerns; and engaging the full spectrum of stakeholders, from residents, to community members, to business owners to representatives of neighborhood institutions. While this level of engagement can result in longer project timelines, it also leads to project designs that more effectively address community needs.

The Boyle Heights team underscored that the design charrette workshop model, which included hands-on exercises to solicit community feedback, was particularly successful. Some of the infrastructure priorities that emerged in Boyle Heights directly as a result of these workshops included: the need for space to store essential medicines; refrigeration; and accessible water, particularly in the event of a disaster that might disrupt tap water access.

Elevating community priorities through these kinds of workshops should also inform site selection—and selecting a site strategically may help the team avoid obstacles later in implementation. For example, sites with specific characteristics or qualities may be better suited to incorporate elements such as solar panels and water tanks that emerge as community-identified priorities. While the building stock in well-established communities may be abundant in character, older buildings tend to be more limited in space. Solar panels, battery storage units, and water storage tanks require significant vacant space. Available space influences system size which, in turn, determines how many community members these systems can serve and for how long. In addition, buildings such as churches or community recreation centers, or other facilities owned by trusted community-based organizations, may also be preferable as they are more likely to be accessible to community members after business hours.

Guiding Principles:



Strengthen Connections

2. Engage utilities and other key delivery and regulatory players early in the process.

Actors such as utilities and city governments deliver services that are essential to a resilience hub's ability to function and should be engaged early in the hub development process. This early engagement can smooth the pathway towards future partnerships, pre-empt future regulatory or design challenges—such as ensuring the local utility infrastructure can handle the proposed upgrades—and spur a more efficient design process. In addition, securing a designation as “critical infrastructure” as defined by the California Public Utilities Commission can help accelerate service restoration in the event of a power outage and increase resources available to increase redundancy. Similarly, while various hubs may have diverse models of formal or informal partnership with City government related to space and programming, collaboration with City officials beginning in the early stages of project development and

design can strengthen coordination with City services and smooth permitting processes. Collaboration with a single municipal point of contact—in the Boyle Heights case, the City of Los Angeles Chief Resilience Officer—has helped to foster this coordination.

Resilient infrastructure systems, including those related to energy and water, for example, may require ongoing and specialized maintenance or have specific use instructions in the event of an emergency. Both building owners as well as community stakeholders who frequently use the space should be involved in frequent training exercises to ensure that they are maintained and can function in the event of an emergency. For example, in Boyle Heights community members are trained in the operation of the potable water system, which requires the building owner to activate a water valve and pump in the event of a water-related emergency.

Guiding Principles:



Strengthen Connections



3. Consider the ideal facility ownership structure that best meets community needs.

Communities have diverse strengths and needs, and there is no one-size-fits all model in terms of anchor organizations that provide physical space (as well as organizational support) for resilience hubs. In some neighborhoods, a hub located within a municipal facility might best address community priorities, while in others a community-based organization might make the optimal anchor partner. As a general principle, successful hubs are run through partnerships that bring together multiple longstanding, trusted neighborhood institutions, and that generally span multiple sectors, including the nonprofit and public sectors and potentially engaging the private sector and philanthropy as well.

The Boyle Heights Arts Conservatory, for example, has been deeply engaged in providing job training and educational opportunities in the arts and creative sector, with a focus on youth, for over a decade. The organization's deep community connections and status as a trusted, beloved pillar of the neighborhood—as well as the building's historic and longstanding role as a performing arts center and home to a radio station—make the space a natural center for the community. While the building is privately owned, the operation of the resilience hub and BHAC is protected by a Memorandum of Understanding (MOU) that includes the City and the building owner. The MOU would ensure that regardless of ownership it can continue to function as a resilience hub; it also helps to facilitate coordination with the City and utilities around operation and maintenance of building systems.

Given that different models may be optimal for different communities, when considering the kind of physical space that best supports a resilience hub and property ownership structure, here are some of the factors that should be examined when considering spaces that might be owned by private, non-profit, or public entities.

- Ability to support physical upgrades and retrofits prioritized by the community (for example, solar panels, backup power systems, flood hardening, redundant water systems, or seismic upgrades). The ease of upgrades should be considered not just from the standpoint of physical feasibility, but from the perspective of ease for the site owner to implement these upgrades.
- Community trust. In some neighborhoods, a space that is not affiliated with government will be more likely to be used by community members due to lack of trust in governmental institutions (for example, undocumented community members are understandably less likely to feel comfortable accessing municipal facilities).
- Connectivity to social services. On the other hand, public-sector buildings may provide the benefit of more seamless connection to and integration with social services.
- Risk in maintaining community benefits over the long term. Hub facilities owned by private or nonprofit sector partners may ultimately run the risk of being sold—along with community-driven upgrades that are typically costly and time-consuming to implement—to new owners. Concession agreements or other long-term agreements (such as the MOU described above) could be considered to mitigate the risk that sites owned by non-public entities may ultimately be sold to private owners for private, non-hub uses.
- Operations and maintenance needs. Ongoing specialized maintenance needs—and who is responsible for these efforts—may be an important consideration, as well.

Guiding Principles:



Centralize Resources



Share Information

4. Incorporate hands-on education related to maintenance and use.

Trainings related to maintenance and use of upgraded infrastructure systems can help increase community preparedness. Upgraded infrastructure systems provide much needed redundancy for vulnerable community members in the event of a disaster, such as a power outage, extreme heat event, or water service disruption. However, specialized needs related to maintaining and operating these systems in the event of an emergency may pose a challenge. For these reasons, it is critical to train community members in advance and identify who will be tasked with activating key systems—for example, potable water and backup power—in the event of a shock.

The Boyle Heights team utilizes a best practice that combines an [Operations Manual](#) with ongoing simulation exercises and other hands-on workshops. The training manual was developed in partnership with an engineering

team but is written in accessible language for community members. The manual includes instructions related to the maintenance and use of building equipment on an everyday basis (including the water storage system, power, communications equipment, and air quality systems), as well as specific instructions related to emergency events (including extreme heat, power outage, water outage, poor air quality days, earthquake, active shooter, hazardous materials, flooding, ICE raids, fire, and pandemic). Ongoing workshops include community members as well as relevant utilities, experts, and other community-based organizations. The combination of these tactics helps to avoid a scenario where upgraded energy and water systems may not function in the event of an emergency.

Guiding Principles:



Centralize Resources



Share Information



Infrastructure Considerations Checklist

Here are some of the factors that should be considered in exploring and prioritizing potential retrofits and upgrades to resilience hub infrastructure.

- What **types of upgrades** are most urgently identified by the community?
 - Seismic upgrades
 - Backup power (including related cooling needs, support for those who have electricity-dependent medical needs, and refrigeration for food and medicine)
 - Water storage
 - Flood hardening
 - Air filtration
- What **utility infrastructure** upgrades are necessary for prioritized upgrades?
- What **permitting** is necessary for prioritized upgrades?
- What are the **funding** needs and potential sources for upgrades under consideration?
- Given permitting, design, construction, and funding considerations, what is a realistic **timeline** for implementation of potential upgrades?
- What is the degree of **complexity** and experience with implementing the proposed retrofit?
- How will community members **access** the site in the event of an emergency? Is the potential hub in a central location that is easy to access? Are there accessibility considerations that should be taken into account given a likely user population (for example, stairs for seniors)?
- Does the potential site have adequate **space** for identified upgrades? For example, solar panels require significant space. Water tanks are often too heavy to place on a roof, and when placed on the ground floor require an energy-intensive pumping system.
- What is the **age and condition** of the facility under consideration?
- Could a single firm be engaged for design and engineering to support joint **commissioning** of upgraded systems? Joint commissioning helps to ensure that upgraded systems work seamlessly together both everyday and during emergencies.
- Who and how will the **systems engage with local utilities** when systems are disconnected and reconnected?
- What are the new capacities or resources required to **operate and maintain** the retrofit once it is implemented?
- Is the **building owner** supportive of and committed to the implementation of proposed upgrades?

Miami: Neighborhood Emergency Operations Center

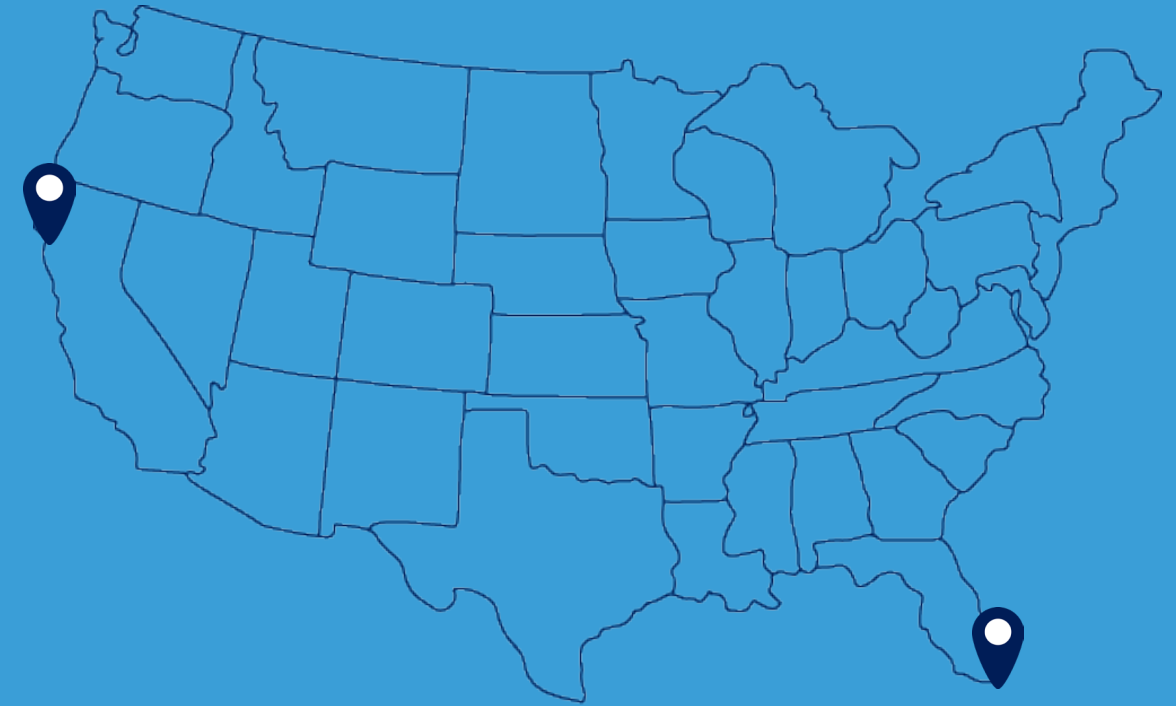
Miami-Dade County-based nonprofit, Catalyst Miami, began efforts to establish resilience hubs in 2018. Hubs were initially envisioned to be established in County operated facilities in 5 targeted low income neighborhoods across the area to foster social cohesion, build resilience, and improve governance. Due to COVID-19, the Hubs have largely transitioned from physical to social infrastructure throughout the same 5 neighborhoods.

Understanding that in the height of a storm the City or County may be unable to reach residents with needed resources, Catalyst Miami developed Community Emergency Operations Centers. The centers are made up of a coalition of community-based organizations and local leaders activated in advance of storms to collect, and later redistribute, emergency supplies. When these Centers are activated, Catalyst Miami establishes a multilingual hotline to provide residents with critical information to help them prepare. In recent years, the CEOC has been formalized and sustained through rapid response grant funding.

San Francisco Empowered Community Program: Neighborhood HUB

The Empowered Communities Program's Neighborhood HUB initiative supports neighborhoods as they create a local network of organizations that advances the community's overall preparedness on a daily basis and provides essential support to community members as they recover from a stressful event of any size. San Francisco defines a HUB as a network of local agencies and community members who reside in close proximity and have the capacity to work together during times of stress to support the needs of community members, especially the most vulnerable.

Today the HUBs work to build neighborhood resilience by fostering social cohesion and neighborhood-level solutions to resilience challenges. The City has funded neighborhood leaders to host "neighborfests" or block parties that foster cohesion, critical in disasters. HUBs operate pre-event services advancing everyday readiness of community members by delivering culturally competent preparedness messaging, including for HUB member organizations by managing continuity of operations plans and conducting interagency drills, and by convening and conducting table top exercises. Post-event, the HUB activates its Neighborhood Emergency Operations Center (NEOC) and convenes HUB members to assess impact and design and implement solutions. In mid-2020, the Neighborhood Empowerment Network (NEN) teamed up with San Francisco State University and The University of San Francisco to conduct detailed assessments of the overall efficacy of community resilience strategies. The resulting data proved quantitatively and qualitatively that the NEN's model did contribute to participating communities efforts to mitigate the impact of the pandemic on their most vulnerable community members and institutions.



Part 3: Pathways for Scaling and Replication

Needs Assessment: Prioritized Scaling Opportunities across Los Angeles.

In considering next steps for scaling citywide, there is no one-size-fits-all approach or predetermined prioritization methodology that can apply to every neighborhood. Every neighborhood citywide is vulnerable to seismic as well as climate-driven shocks that are all projected to worsen in coming years, particularly extreme heat and air pollution (further exacerbated by wildfire smoke). Many neighborhoods include a significant proportion of community members who face socioeconomic barriers as the result of decades of underinvestment and historic racism. Most neighborhoods across Los Angeles would benefit from a resilience hub.

As this toolkit demonstrates across every Key Lesson and Best Practice, community organizations are the backbone of a successful hub: and organizing to support hubs must start with the recognition that these communities are already organizing.

Particularly in neighborhoods that have been historically marginalized and underinvested over generations, community members and community organizations have come to the forefront time and again in the absence of public, private, or philanthropic investment. Strong and vibrant community organizations not only build social cohesion: they have historically played an essential role in connecting and delivering critical social services to community members. It is the role of resilience hubs to bolster and support these community-based organizations and the critical work they are already doing every day, with these community-based organizations leading the way.



With these insights in mind, as a broad framework, two factors can be considered when considering scaling to new neighborhoods:

1. Mapping of existing community-based organizations.

- What is the current CBO landscape?
- What existing deeply trusted community-based organization or group of organizations is poised to lead (and interested in leading) design and delivery of a resilience hub?

2. Understanding of neighborhood climate, economic, and social vulnerabilities—including to what extent community members are accessing services relative to their need.

USDN compiled a [vulnerability assessment](#) that includes one framework for data analysis. Some of the metrics that Climate Resolve considers when understanding neighborhood-level vulnerability in Los Angeles include the following outlined in the checklist to the right. [Cal-Adapt's Local Climate Change Snapshot Tool](#), [USC's Neighborhood Data for Social Change](#), and [CalEnviroScreen](#) are all essential neighborhood-level data sources.

While it is important to start with an understanding of existing neighborhood organizations and social infrastructure, and additionally examine neighborhood-level data, ultimately scaling analysis is contextual and can be approached neighborhood by neighborhood based upon the unique features of each community.

- Number of extreme heat days, both historic and projected
- Number of dry spell days, both historic and projected
- Demographics
- Percent immigrant
- Average number of asthma-related emergency room visits
- Average number of cardiovascular related emergency room visits
- Percent of individuals who do not live within 1 mile of a grocery store
- Number of stores and food providers that accept Supplemental Nutrition Assistance Program (SNAP) benefits
- Percent of linguistically isolated households
- Percent of households with no internet subscription
- Number of acres of park per 1,000 People
- Percent of population using public transit
- Percent of renters who are cost burdened
- Percent of crowded households
- Average voter turnout
- Number of unsheltered homeless people
- Pollution burden
- Average percentile of particulate matter
- Average percentile of airborne toxic chemicals
- Average percentile of drinking contaminants

Funding Guidance

The most successful resilience hubs are able to combine various types of funding sources in innovative ways—satisfying diverse funding requirements while delivering for community needs. Stacking funding and financing remains an ongoing challenge for many resilience hubs. For example, organizations might find it easier to secure federal funding to cover capital improvements but more challenging to unlock other sources for long-term staffing and operation needs.

Resilience hubs present an opportunity to catalyze a new partnership and funding model. Because funding streams are just as siloed as governments it will take creativity to braid funding streams together not just to launch new resilience hubs, but to sustain them—while co-designing with the community and securing early wins.

Hubs have distinct and diverse funding needs to support successful implementation. These funding needs include:

- Planning, including community co-design and engagement,
- Building retrofits, and
- Sustaining programming and operations.

Given the diverse funding needs required to implement resilience hubs and the current lack of explicit funding streams for resilience hubs, the most successful hubs are able to combine diverse funding sources from three primary categories: philanthropic funding, state funding, and federal funding. These sources can each support specific functions of resilience hub implementation and continuation. These funding sources and alignment opportunities, and examples of current funding sources, are described below.



1. Philanthropic Funding

Of the three funding sources, philanthropy provides the most flexible funding to project owners that is best suited to support kickstarting hub planning, provide support for community organizations leading programming and operations, or fill other gaps. Although foundations may not have designated specific resilience hub program areas, a growing number of foundations interested in neighborhood revitalization, community development, environmental justice, and disaster resilience may serve as funding sources. The following series of helpful resources can guide project owners as they research philanthropic funders:

Justice40 Accelerator Featured Funding Opportunities [↗](#)
Funding opportunities (philanthropic, federal, and state) researched and regularly updated by the Justice40 Accelerator.

The Funders Network [↗](#)
Network of over 170 national, regional, and community foundations committed to building sustainable, prosperous, and just communities.

Mosaic - Tides Foundation [↗](#)
RFPs traditionally released in October-December that seeks to strengthen the power of the environmental field by strengthening movement infrastructure.

Climate Resilience Fund [↗](#)
Fund collaborating with small and large funders, serving as a hub for investor and strategic partners working to advance climate-smart strategies; regularly post active funding opportunities.



2. State Funding Available in California

Community Resilience Center Grant Program

One promising source of funding positioned to accelerate scaling across California includes the [Community Resilience Center grant program](#). The 2021-2022 State budget allocated \$100 million towards Community Resilience Centers via both planning and implementation grants administered by the Strategic Growth Council. This funding will support multi-stakeholder partnerships in implementing facility construction and upgrades alongside services and programming to establish Community Resilience Centers. This program is included in an [advance payment pilot program](#) that will allow winning applicants to receive grant payments in advance as opposed to via reimbursement—a strategy that may make these grants more accessible to smaller community-based organizations.

Activities and upgrades supported by this grant are diverse and include those that support communities following disasters and provide services everyday. [Guidelines and application materials](#) for the program are now available, with awards expected in late 2023.

While the program is designed to be flexible to support diverse needs in communities statewide, core components include:

- Multi-stakeholder partnerships;
- Robust, continuous community engagement;
- Physical amenities on the site;
- Community services and programming.

Fairground and Community Resilience Centers Grant Program

An additional \$150 million was allocated in the 2021-2022 State budget to support the [Fairground and Community Resilience Centers Grant Program](#), administered by the California Department of Food and Agriculture (CDFA). While just under \$95 million of this allocation will support infrastructure enhancements in Fairgrounds statewide, \$38 million total will support Community Resilience Centers in communities statewide, through implementation grants of at least \$5 million each. Award announcements are expected in summer 2023.

[Grant guidelines](#) specify that funding will prioritize disadvantaged communities as defined by CalEnviroScreen and the Disadvantaged Communities Mapping Tool for Transformative Climate Communities (TCC). Activities supported by the grant will improve current and new community focused infrastructure that builds preparedness for emergency events (with a focus on climate driven emergencies) while also delivering improved social infrastructure such as social services or workforce development. Tribal communities, CBOs and other nonprofits, and public sector entities (among others) are all eligible. Example activities highlighted by CDFA include emergency shelter facilities with backup power; workforce development programs; emergency preparedness trainings; and cooling facilities.



3. Federal Funding

The federal government has recently allocated unprecedented levels of funding that provide opportunities to enhance neighborhood resilience and support climate-ready communities. These funding streams are typically best suited to support building retrofits, but may also be able to enhance planning and programming efforts. These funding streams are rapidly evolving. Below is an overview of legislation and other initiatives with relevant links and resources:

- [Inflation Reduction Act](#): Invests \$369 billion to reduce greenhouse gas emissions by as much as 42% by 2030, including \$60 billion focused on environmental justice.
- [Infrastructure Investment and Jobs Act](#): Invests in clean transit, green jobs, and public infrastructure to further reduce our carbon footprint and support climate resilience in communities.
- [Justice40](#): Ensures that 40% of all federal investments flow to environmental justice efforts to promote safer and healthier communities.
- [30x30](#): Envisions the protection of 30% of land and water in the US by 2030.

Federal departments and agencies are regularly posting relevant funding opportunities. Below is a list of relevant funding opportunities stemming from recent and existing legislation for resilience hubs:

EPA Environmental Justice Thriving Communities Technical Assistance Centers Program [↗](#)

These centers will provide training and other assistance for partners in underserved communities to build capacity for navigating federal grant application systems, writing strong grant proposals, and effectively managing grant funding.

Greenhouse Gas Reduction Fund [↗](#)

Provides financial and technical assistance for projects that reduce or avoid greenhouse gas emissions and other forms of air pollution, with a particular emphasis on projects in low-income and disadvantaged communities. The overarching objectives of the GGRF are to (1) reduce emissions of greenhouse gasses and other air pollutants; (2) deliver benefits to low-income and disadvantaged communities; and (3) mobilize financing and private capital to stimulate additional deployment of greenhouse gas and air pollution reducing projects.

Heat.gov [↗](#)

This centralized portal consolidates funding opportunities for communities facing the impacts of extreme heat.

FEMA Hazard Mitigation Grant Program [↗](#)

Provides funding to state, local, tribal and territorial governments so they can develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities - including through retrofitting existing buildings. This grant funding is available after a presidentially declared disaster.

Department of Energy's Renew America's Nonprofits [↗](#)

Seeks applications that address energy efficiency upgrades, which enable scalable impacts, create innovative partnerships, and leverage funding and economies of scale.

The Governor's Office of Planning and Research hosts a [Federal Grants Resources](#) portal that consolidates information and technical assistance geared towards state agencies, local governments, institutions of higher learning, and nonprofit organizations in California on how to find, apply and manage federal grants.

Beyond this State resource, given dynamic funding opportunities, the other resources and third party organizations listed below consolidate additional, regularly updated information about federal funding opportunities from across multiple Agencies.

- [Build.gov](#): Open funding opportunities featured by the White House.
- [Justice40 Accelerator](#): Funding opportunities (philanthropic, federal, and state) researched and regularly updated by the Justice40 Accelerator.
- [Local Infrastructure Hub](#): National program designed to connect cities and towns with the resources and expert advice they need to access federal infrastructure funding in order to drive local progress, improve communities, and deliver results for community members.
- [Justice 40 Funding Finder](#): Portal aggregating Justice 40 funding opportunities by focus area, eligibility, and agency.
- [Evergreen Action](#): Summary of opportunities unlocked through the IRA.
- [National Governors Association](#): BIL grant tracker.
- [National Association of Counties](#): Consolidated infrastructure opportunities for counties.



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SPOTLIGHT ON BEST PRACTICES

Sharing Lessons from Boyle Heights at the National Adaptation Forum

Climate Resolve, the Boyle Heights Arts Conservatory, and Resilient Cities Catalyst shared emerging lessons about resilience hubs from the organizations' collaborative work at a symposium focused on fostering neighborhood resilience through cross-sectoral projects at the October 2022 National Adaptation Forum.

The symposium underscored how Boyle Heights partners (along with a similar model featured during the session in Kashmere Gardens, Houston supported by the Northeast Houston Redevelopment Council) are developing the hub as a connective network of existing community assets and services and are working with partner organizations to integrate communications between spaces for community members to easily access necessary information before, during, and after emergencies.

This interactive discussion highlighted how the Boyle Heights Arts Conservatory's status as a trusted neighborhood institution made the organization a natural fit to serve as a resilience hub. Even before efforts to formalize the location as a resilience hub, families were already using the physical space beyond designated hours, with the space already serving families' needs. In this respect the space was already informally serving as a hub. Importantly, BHAC had a longstanding role in the community as a trusted gathering place and filled an important gap, especially given the lack of trusted City-owned facilities in the neighborhood.

Another key lesson and success that was highlighted was the way in which conversations around hub design have been led by the community of color that the center is established to serve. Hub partners have worked to elevate the longstanding knowledge that community leaders bring to the table and their own resilience in their communities—as opposed to a disconnect that can otherwise happen when funders and partners do not understand that communities can and should be leading these efforts.



Appendix: Key Resources

USDN Resilience Hubs Guidance Document [↗](#)

Guidance document created to assist local governments, community-based organizations, and other partners establish resilience hubs in their communities.

USDN Resilience Hubs White Paper [↗](#)

Establishes definitions and captures ideas drawn from experiences in USDN cities to assist local governments, community-based organizations, and other partners implement and support resilience hubs.

Baltimore City Community Resiliency Hub Program [↗](#)

One of the first resilience hub networks established and operating in the United States, Baltimore's Community Resiliency Hub Program is a community-centered initiative that increases community capacity to prepare for, withstand, and respond to natural hazard impacts and emergency situations.

Washington DC Community Resilience Hubs Approach [↗](#)

Approach overview pursued by the District of Columbia to co-design and begin establishing their resilience hub network.

Catalyst Miami Resilience Hubs Overview [↗](#)

Lessons learned from the implementation of Catalyst Miami's original and updated resilience hubs model.

PSE Healthy Energy Resilience Hub Mapping Tool (beta) [↗](#)

Tool designed to help Californians identify potential resilience hub sites and community needs.

Curriculum Example [↗](#)

Boyle Heights Food Sovereignty Resilience Curriculum overview.

Download the online version of this toolkit with links to key resources here:

