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RESILIENCE HUBS

A Holistic Approach to Shifting Power to Communities

K. Baja ("Baja")
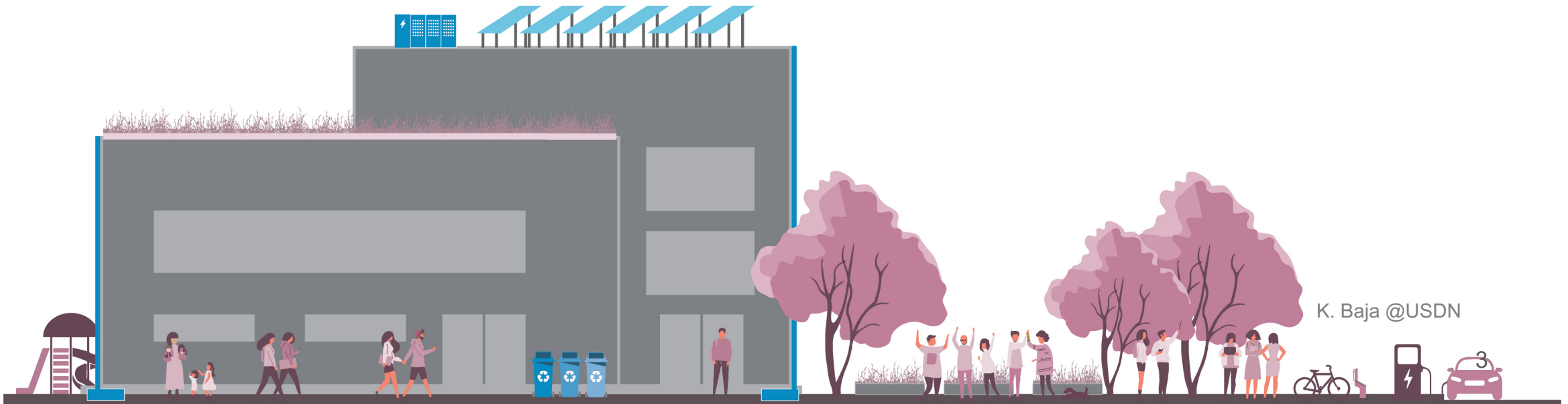Director, Direct Support & Innovation
USDN

REFRAMING RESILIENCE

The ability of our community to anticipate, accommodate, and positively adapt to or **thrive** amidst changing climate conditions or hazard events and **enhance quality of life**, reliable systems, economic vitality, & conservation of resources for present & future generations

WHAT ARE RESILIENCE HUBS?

Resilience Hubs are community- serving facilities augmented to support residents, coordinate communication, distribute resources and increase adaptive capacity while enhancing quality of life. They provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate mitigation, and social equity while also providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions.

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Resilient Services and Programming	Resilient Communications	Resilient Building and Landscape	Resilient Power Systems	Resilient Operations
The Hub has additional services and programs that build relationships, promote community preparedness, and improve residents' health and well-being.	Building relationships and respect within the neighborhood (service area) year-round. Ensuring the ability to communicate within and outside the service area during disruptions.	Strengthening the resilience of the facility to ensure that it meets operational goals in all conditions. Identify opportunities to utilize surrounding landscape for resilience benefits.	Ensuring uninterrupted power to the facility during a hazard while also improving the cost-effectiveness and sustainability of operations in all three resilience modes.	Ensuring personnel and processes are in place to operate the facility year-round and also continue operating during disruption and recovery.
Examples: • Maker Space • How To Courses (ex. computers) • Job Trainings and Recruitment • Health Services	Examples: • CERT Training with extra section for proactive outreach • Radio • Translated Info	Examples: • Air Filtration • Water Capture and reused • Weatherization • Earthquake-proof	Examples: • Hybrid Power Solutions include battery-back up and generator • Solar Panels	Examples: • Site Leadership • Accessibility • Site Retrofits and Assigned Task Management

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Foundational Area	Core Function	Illustrative Components	Key Considerations
Resilient Services & Programs	Offering additional services and programs that build relationships, promote community preparedness, and improve residents' health and well-being.	•Childcare and Pre-K care •Health & mental health services •Senior programming •Tool checkout •Food pantry/ distribution •Workforce development/training •Culturally relevant cooking classes	•Consider how core offerings shift and evolve in the event of disruption. •What services currently exist already, and can be expanded or improved?
Resilient Communications	Ensuring the ability to communicate within and outside the Hub and service area year-around and especially during disruptions and throughout recovery. Proactive connectivity and relationship-building.	•Walkie talkies •Free Wi-Fi + access to computers •Community Emergency Response Team (CERT) training and CERT 11 •Proactive outreach •Emergency radio •Charging stations •Radio broadcasting studio	•Are translation services available in all locally spoken languages? •Prioritize and integrate proactive relationships building & check-ins. •Ensure communications networks are proactively identified and established throughout all three operational modes. •Consider mechanisms for feedback across the three operational modes to ensure ongoing co-development.
Resilient Building & Landscape	Strengthening the resilience of the building to ensure that it meets operational goals in all conditions. Connect building with opportunities for increasing resilience in surrounding areas/landscape.	•Greenhouse and urban gardens •Air filtration •Weatherization •HVAC upgrades •Rainwater harvesting •Commercial kitchen(s) •Tree planting & rain gardens •Permeable pavement & bioswales	•Consider opportunities to prioritize spaces that foster connectivity and innovative green solutions. •Are ongoing operations and maintenance considered in contracting/funding engagements? •Focus on flexibility and adaptability of spaces to accommodate a variety of uses and site activation.
Resilient Power Systems	Ensuring reliable backup power to the facility during a disruption while improving the cost-effectiveness and sustainability of operations in all three operating modes.	•Backup power (battery preferred) •Solar + storage •EV charging stations •Community solar opportunities •Energy efficiency upgrades	•Consider opportunities to bring in communities via workforce development opportunities. •Ensure ongoing monitoring and maintenance is included in implementation contracts.
Resilient Operations & Maintenance	Ensuring personnel and processes are in place to operate the facility in all three modes. Site must function well for all members of the community.	•Accessibility ramps and accommodations throughout •Visual and audio support •Security check-in (entrance)	•Are personnel and processes in place to operate the facility in all three modes? •Consider opportunities to prioritize youth and formerly incarcerated community members in site workforce development and operations opportunities.

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Citation: K.Baja

RESILIENCE HUB MODES

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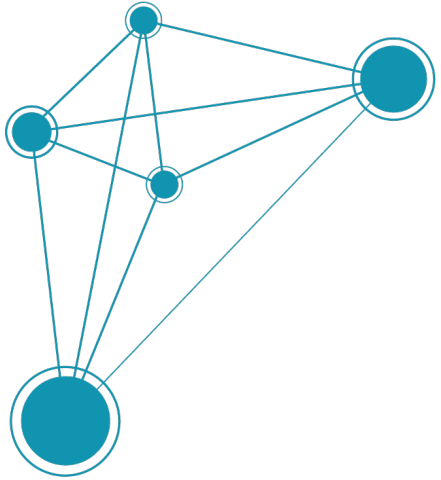| EVERYDAY	DISRUPTION	RECOVERY
- All infrastructure and services are available - No major disruptions are present - Primary focus is on community services and programming and relationship-building	- Disruption to normal everyday function for any duration. - Disruptions can include natural disasters, health-disasters (pandemic) and human-influenced disruptions. - Disruption can vary from minutes to months or years. - Short-term and long-term considered	- Process of returning to everyday mode. - The aftermath of the disruption during which the community works to restore normal or better conditions. - Can last days to years.

PHASING IN OVER TIME

IDEAL

If the Site had all the money, capacity, and support it needed, what would the site look like, feel like and function like?

Potential Examples:
- All community member needs served at the site
- Living Building Challenge criteria met
- Maker spaces and programs

NEXT STEPS/ OPTIONAL

What elements does this site need in order to better meet community needs in all resilience modes?

BASELINE

What elements do we need for this site to transition from it's current use to a community Resilience Hub?

Resilience Hub

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BASE
OPTIONAL
IDEAL

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Health & Wellness

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Fitness Opportunities		
• Showers + Restrooms		
• Health Screenings		

Medical

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Mental Health Basic First AID	• Mental Health Resources	• Mental Health Resources
• AED Supplies	• Access to Basic First Aid and Medical Supplies	• Distribution (Public Health Dept) of Meds Post-Event
• Needle Exchange, Vaccination - Flu, Etc.	• Hospital Personel Assigned to Site	
	• Potassium Iodine Stockpile	
• Medical Advisory Services	• Triage for Disruption	
• Medical Centers "Adopt-A-Site"	• Medical Professional onsite	

Food Services

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Kitchen + Meal Prep Location	• Emergency Food Services/Meals Ready to Eat	
• Storage Pantry	• Supplies for Making Food Onsite	
• Children's Food Services		
• Community Gardens and Greenhouses		

Child and Pet Care

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Playground		
• Allergies Consideration		
• Before + After School Care	• Child Care / Activities	• Child Care Post Event Assist If Schools Closed
• Dog Parks, Cat Cafes, Chicken Coops	• Separate Space for Pets (Indoor and Outdoor)	
• Partnership with Shelter/Humane Society	• Therapy Animals	• Therapy Animals Assigned to Individuals/Families

Water

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Potable Water Station	• Potable Water Filling Stations	
	• Water Bottle Distribution	
	• Ice Chests and Ice Distribution	
• Water Education	• Containers Provided for Water Collection	
• Water Reuse and Water Gardens		
• Onsite Water Filtration	• Onsite Water Filtration	
• Solar Hot Water	• Solar Hot Water	

Transportation

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• EV Charging	• Shuttles to the Hub	• Shuttles to Supply & Service Centers
• Bike Classes	• Evacuation Meet Up/Assistance	
• Car/Bike/Scooter/Ride Share	• Shuttle to Shelter	
• Transit Accessible		

Accessibility

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Accessible Elevator, Accessible Bathrooms, Gender Neutral, Hearing, Visual Impairment, EEAP-Evac Assistance Enrollment	• Clear Sites - Keep Accessible, Designated Rep to Clear Doses + Keep Ramps, Site Open, Backup Powere to Elevators	• Assistance For Hearing + Visually Impaired for Recovery, Design Improvements

Storage & Resources

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Drinkable Water	• Potable Water and Water Bottle Storage	
	• Food Storage	
	• Baby Formula and Diaper Storage, Distribution	
• Supplies and Tool Storage for Community	• Supplies and Tool Storage for Community Check-out	
• Community Tool Library	• Cots, Blankets and Bassinets	
• Veteran Services and Programming		
• Water Storage Tanks		

Waste

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Site Trash Removal	• Debris Cleanup Around Site	• Debris Removal and Assistance for Residents
• Site Recycling, Bulk Recycling Pickup		
• Site Composting, Composting Toilets, Organics Collection for Residents		

Communications

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Free Internet and Wifi/Computer Access	• Charging Stations	• Recovery Hub with Resources
• Monthly Meeting Location for Community	• Door Knocking and Help/Safe Communications	
	• Reverse 911	
	• Translation Services and Support	
• Radio and Media Access	• Police and Fire Collaboration	
• HOA Meeting Location	• CERT Leaders Assigned to Blocks/Areas	
• Proactive "Open Space" Programming		
• Translation Services	• Radio and Media Communication and Support	

Education

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
	• Mold Education	
• Flood Insurance - Why Buy Early?	• How to Fill Out Your Insurance Forms Properly	
• CERT Training	• Stay Out of Standing Water	
• Bike Service and Repair		
• Programming for Elderly, Veterans, Children, and Other Special Interest Groups		

Stormwater Management / Green Infrastructure

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Shade Trees		
• Permeable Pavers		
• Bioswales		
• Greenroofs		

Floodproofing and Flood Considerations

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Shade Trees	• Backflow Prevention Devices	
• Seal Walks and Engineered Flood Vents		
• Waterproofing Site		
• Elevate Electrical and Mechanical Systems		

Energy

NORMAL FUNCTION	DURING DISRUPTION	RECOVERY FUNCTION
• Weatherization		
• Energy Efficiency		
• Solar PV and Battery Backup	• Fuel Storage and Supply	
• Passive Cooling		
• Resilient HyRs		
• Energy Storage		
• Distributed Generation/Microgrid		
• Community Solar		

RESILIENCE HUB WORKSHOP
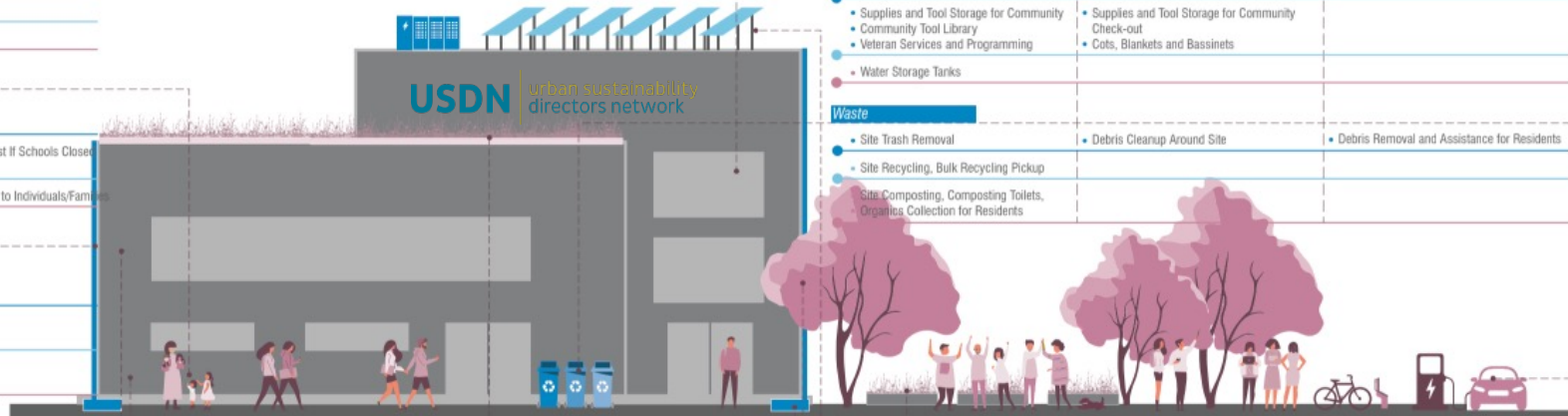
Headers
Five Main Resilience Areas
Sub-headers in blue boxes

Three Modes
Identification of needs in Everyday, Disruption and Recovery

All Options
Identification for Baseline Optional Ideal

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WHERE ARE THEY LOCATED?

WHY ARE THEY IMPORTANT?

WHAT EXISTS AND WHAT IS NEXT?

RESILIENCE MODES

No two Resilience Hubs are alike. Each community will have different goals and priorities for all three resilience modes. The degree to which they meet their goals can be described as Baseline, Optional, and Ideal.

Baseline sites meet the minimum criteria for being a Resilience Hub and provide community benefit in all three resilience modes. Optional mode incorporates a range of expanded services and resilience-enhancing retrofits as determined by community members. Ideal Hubs meet ambitious goals that provide community benefits year-round and are fully retrofitted to support all community members.

MODE:

RESILIENT PROGRAMMING
Offering additional services and programs that build relationships, promote community preparedness, and improve residents' health and well-being.

RESILIENT COMMUNICATIONS
Ensuring the ability to communicate within and outside the service area year-around and especially during disruptions and throughout recovery.

RESILIENT BUILDINGS AND LANDSCAPE
Strengthening the resilience of the facility to ensure that it meets operational goals in all conditions.

RESILIENT POWER
Ensuring reliable backup power to the facility during a hazard while also improving the cost-effectiveness and sustainability of operations in all three operating modes.

RESILIENT OPERATIONS

EVERYDAY

- Youth mental health & career programming
- Workforce re-entering program: job fair, resume support, headshot opportunities
- Caregiving: out of school programming
- Teen Music and Hip Hop Transformation Programming
- Pre-K care

- Proactive community outreach and engagement
- Proactive training for emergency preparedness
- Resturant fundraiser event
- Community events: sisters of the center, high profile ribbon cutting of the site
- Zoom phone system

- Facilities for sports programming
- Needs weatherproofing and floodproofing and select air contitioning
- Electric commercial-grade kitchen
- Greenhouse
- Needs additional preschool classroom

- Resilience P...
- Rooftop Sol...
- Battery backup system
- Needs comprehensive site electrical overhaul

- Needs capital campaign to renovate

DISRUPTION

- Food and supply pantry
- Emergency supply provision
- Emergency first aid

- Virtual communtiy engagement
- 16 camera surveilance system
- Needs monitors and speaker system for disruption

- Needs additional refrigeration and freezer space
- Additional supplies for commerical kitchen
- Exterior storage and food distribution upgrade

- Funding for battery backup to cover entire site

- Capacity to maintain operations

RECOVERY

- Mental health programming
- Proactive training to support community members in recovery

- Support with insurance companies and claims
- Connect seniors with younger and able-bodied support for connection & care
- Active outreach to elderly

- Ways to handle waste and recycling more effectively an efficently
- Gathering space for resources and repair support
- Storage on-site for recovery materials and support

- Access to charging stations at Hub
- Access to power at Hub if power hasn't returned at home

- Need funding for additional staff to

PROGRESS REPORTS

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PROGRESS REPORTS (continued...)

	OPPORTUNITIES FOR FUNDING	OPPORTUNITIES FOR IMPLEMENTATION	OPPORTUNITIES FOR CAPACITY BUILDING
PROGRAMMING	• Funding for programmatic expansion and ongoing program operating needs • Health and mental health services	• Commercial grade kitchen • Additional pre-K classroom	• Climate preparedness training lead • Capacity to support expansion of services and programs
COMMUNICATION	• Funding for proactive community outreach • Funding for emergency communication equipment	• Supporting communication infrastructure, namely monitors and speaker system	• Site activiation training
BUILDINGS & LANDSCAPE	• Schoolhouse and gym renovations • Electric commercial-grade kitchen • New building additions	• Schoolhouse and gym renovations, • Weatherization • Commercial kitchen • Elevator	• Increase and improve storage • Training for landscaping • Training for building maintenance
POWER	• Funding for site electrical overhaul • Funding for solar + storage implementation	• Battery installation • Solar installation • Other renewable energy sources	• Training for local community members on solar • Training for community members on battery installation
OPERATIONS	• Funding for accessibility • Funding for ongoing operations and maintenance • Funding for staff in all modes	• Site accessibiltiy for all	• Capacity and partnerships to support hub in all operational modes

RETURN ON INVESTMENT

	Estimate	Economic and technical cost savings	Holistic, cascading community benefits
Structural Cost Savings	ROI of at least $4 for every dollar invested in the building retrofits, with a greater ROI for flooding, wind and earthquake mitigation [1]	• Weatherization upgrades provide daily energy savings and reduce disruption and recovery costs. • Support for proactive home weatherization and resiliency measures that ripple cost savings across the community.	• Green infrastructure investments enhance infrastructure longevity. • Enhanced productivity and reduced disposable income at risk due to disruption. • Reduced PTSD and service continuity.
Utility Cost Savings	Up to 75% decrease in energy utility costs Up to 50% in water utility cost savings [2]	• Green infrastructure-enabled temperature moderation and utility cost reduction. • Insulation and efficiency upgrades coupled with water capture and recycling infrastructure produce utility cost savings.	• Green infrastructure components such as shade trees, green roofs, rain gardens, and bioswales actively clean and cool the atmosphere.
Sustainability	$1,300 to $8,000 per year for a single green infrastructure project (i.e one shade tree planted). [3]	• Green infrastructure can mitigate stormwater, sequester carbon, and reduce energy usage for heating and cooling the site.	• Green Infrastructure components can improve air and water quality, while mitigating the urban heat island effect.
	Up to $20,000 per community resident per year [4]	• Air filtration and access to green spaces enhance air quality and can improve community health outcomes while decreasing medical costs.	• Access to community green space enhances physical activity and has been proven to improve physical and mental health outcomes.

Quick Reference for Resilience Hub Funding

	Services & Programming	Communications	Building & Landscapes	Power	Operations
Federal	• Department of Health and Human Services (HHS) • Federal Emergency Management Agency (FEMA) • Department of Labor (DOL) • Department of Agriculture (USDA) • Economic Development Administration (EDA) • Environmental Protection Agency (EPA)	• Federal Emergency Management Agency (FEMA) • Department of Health and Human Services (HHS) • Department of Housing and Urban Development (HUD) • Economic Development Administration (EDA)	• Environmental Protection Agency (EPA) • Department of Housing and Urban Development (HUD) • Federal Emergency Management Agency (FEMA) • Department of Agriculture (USDA) • Department of Health and Human Services (HHS) • Economic Development Administration (EDA)	• Department of Energy (DOE) • Federal Emergency Management Agency (FEMA)	• Economic Development Administration (EDA) • Department of Labor (DOL)
State/ Regional	• Community development funding • Education funding • Homeland security & public safety funding • Funding for senior programming • Environment Ex: Metropolitan Washington Council of Governments Cooperative Purchasing finance	• Flood communications • High heat communications funding • Emergency communications funding • Broadband • Communications preparedness Ex: New York State Broadband	• Building & Landscape • Transport • Public Works • Environment- Air and Water Quality Ex: Georgia Environmental Finance Authority Energy Performance Contracting	• Energy Efficiency • Renewables • Weatherization Ex: Maryland Energy Administration funding for resilient power systems	• Economic Development • Emergency Management • State Americans with Disabilities Act (ADA) resources Ex: Northwest Colorado Council of Governments Northwest Loan Fund for Economic Development
Philanthropic	Funders with a focus on social equity or specific areas (health, education, workforce development, arts, etc…)	Funders supporting community engagement, access to information, and emergency preparedness	Climate resilience, hazard mitigation, greenhouse gas mitigation, green infrastructure & nature-inspired solutions funders	Energy-specific funders Solar battery backup funders	Funders prioritizing workforce development, economic development, etc..

FUNDING – QUICK REFERENCE

FUNDING AND FINANCE PLATFORM

Resilience Hub Funding and Finance Database (Grants) - U.S. SPECIFIC GRANTS

Resilience Hub Area	Grant Name	Grant Type	Sub-Type	Resilience Hub Mode	Fund Use	Amount of Effort	Conventional Use	Considerations	Region (if appli
Services & Programming	Department of Health and Human Services Community Services Block Grant (CSBG)	Federal	General	Everyday	Multi-Area	High	Finances projects that address the needs of low-income individuals and provides services and activities addressing employment, education, housing, nutrition, health, and/or emergency services.	Funds distributed by state government	
Services & Programming	Richard King Mellon Foundation	Regional	General	Everyday	Multi-Area	Low	Offers grants for projects that build a resilient safety net for vulnerable community members.	Foundation gives priority to projects and programs with clearly defined outputs, outcomes, and an evaluation component.	Pennsylvania
Services & Programming	Department of Labor: Senior Community Service Employment Program (SCSEP)	Federal	Job Opportunities and Trainings	Everyday	Education & Engagement	High	Offers funding to support job training for older Americans.	10% match requirement.	
Services & Programming	FEMA CERT	Federal	Job Opportunities and Trainings	Disruption	Education & Engagement	High	Offers training for the implementation of a CERT (Community Emergency Response Team).		
Services & Programming	Environmental Protection Agency: Pollution Prevention Grant Program	Federal	Air Quality and Filtration	Everyday	Education & Engagement	High	Offers community pollution prevention training/tools.	50% match requirement.	
Services & Programming	Department of Health and Human Services: National Center on Health, Behavioral Health, and Safety	Federal	Job Opportunities and Trainings	Disruption	Education & Engagement	High	Provides training and technical assistance to build mental health, resilience and well-being, emergency preparedness, response, and recovery, environmental health and safety, etc. Anticipated outcome is strengthened professional development as well as improved health and safety outcomes for children and families enrolled in Head Start programs.	Must be undertaken as a 'consortium': a project carried out by a lead applicant and one or more other organizations that are separate legal entities.	
Services & Programming	Annie E. Casey Foundation	Private	Job Opportunities and Trainings	Everyday	Operations & Maintenance	Low	Funding for various job and skill training needed by the community.		
Services & Programming	GRID Alternatives	Private	Job Opportunities and Trainings	Everyday	Operations & Maintenance	Low	Nonprofit with a mission to make renewable energy technology and job training accessible to underserved communities.		
Services & Programming	USDA Urban Agriculture and Innovative Production Grants	Federal	Health and Nutritional Services	Everyday	Multi-Area	High	Supports urban gardens for food generation	Planning and Implementation grants. No match requirement.	
Services & Programming	CDC Community Health Works for COVID Response and Resilient Communities	Federal	Health and Nutritional Services	Recovery	Education & Engagement	High	Provides evaluation and technical assistance to strengthen the capacity of recipients and their partners to address disparities in access to COVID-19 related resources	Consider also the CDC's health equity toolkit Highly Competitive. Five expected awards. Funding does not cover project implementation, only technical assistance No match requirement	
Services & Programming	USDA Senior Farmers' Market Nutrition Program	Federal	Health and Nutritional Services	Everyday	Multi-Area	High	Funds addition of community supported agricultural programs than provide low-income seniors with access to locally grown produce		
Services & Programming	Department of Agriculture: Gus Schumacher Nutrition Incentive Program	Federal	Health and Nutritional Services	Everyday	Multi-Area	High	Supports projects that increases purchasing of fruit and vegetables by lower income community members		

Funding (US Grants)   Funding (Canadian Grants)   Financing (Financial Mechanisms)   Funding and Finance Overview   Add additional

ALL AREAS
SITE SELECTION & EVALUATION

City of Lost Angeles

Urban Sustainability Directors Network

Climate Resolve

PRIORITIZING WITH COMMUNITY

Accelerating Resilience L.A.

U.S. Green Building Council

SERVICES & PROGRAMMING

J.P. Morgan Chase

American Red Cross

U.S. Green Building Council

COMMUNICATIONS

Accelerating Resilience L.A.

BUILDING & LANDSCAPES

Conrad N. Hilton Foundation

LADWP

POWER

American Microgram Solutions

Conrad N. Hilton Foundation

LADWP

Clean Energy Group

OPERATIONS

J.P. Morgan Chase

U.S. Green Building Council

PARTNER/ FUNDER	Urban Sustainability Directors Network, City of Los Angeles, & Climate Resolve	American Microgrid Solutions & Clean Energy Group	U.S. Green Building Council	Accelerating Resilience L.A	Conrad N. Hilton Foundation & J.P. Morgan Chase	Los Angeles Department of Water & Power	American Red Cross
WHAT WAS FUNDED	In-kind support and technical assistance	Resilient power feasibility assessment	Community co-development and ongoing operational assistance	Community Survey	Resilient power infrastructure and installation	Financial incentives for power and building elements	In-kind Programmatic
FUNDING NARRATIVE	USDN in partnership with the City of Los Angeles identified the Boyle Heights Arts Conservatory as the host site for the Resilience Hub and brought in Climate Resolve and the U.S. Green Building Council as partners. Climate Resolve has provided in-kind staff leadership to enable Hub implementation and ongoing operations.	USDN connected the City of LA to grant funding in partnership with Clean Energy Group (CEG) which enabled a resilient power feasibility assessment with American Microgrid Solutions (AMS). These funds have been utilized to leverage additional funding.	Supported community co-development of Resilience Hub elements. Outcomes were instrumental to inform infrastructure and programmatic needs as well as to secure future funding. Brought in design professionals to navigate implementation costs and feasibility.	Supported community co-development via a community survey.	Grant support for infrastructure in addition to site programming and ongoing operations, with match requirements. Returned to fund infrastructure. Preferred programmatic grant applications. State language on Resilience Hubs and the opportunity to scale was critical for investment.	Worked with the site to offer financial incentives for electric vehicle charging infrastructure, rain barrels, as well as irrigation systems.	Existing relationships with the Climate Resolve team and the City of Los Angeles enabled in-kind programmatic support via CPR and emergency preparedness training.

FUNDING AND FINANCE SNAPSHOTS
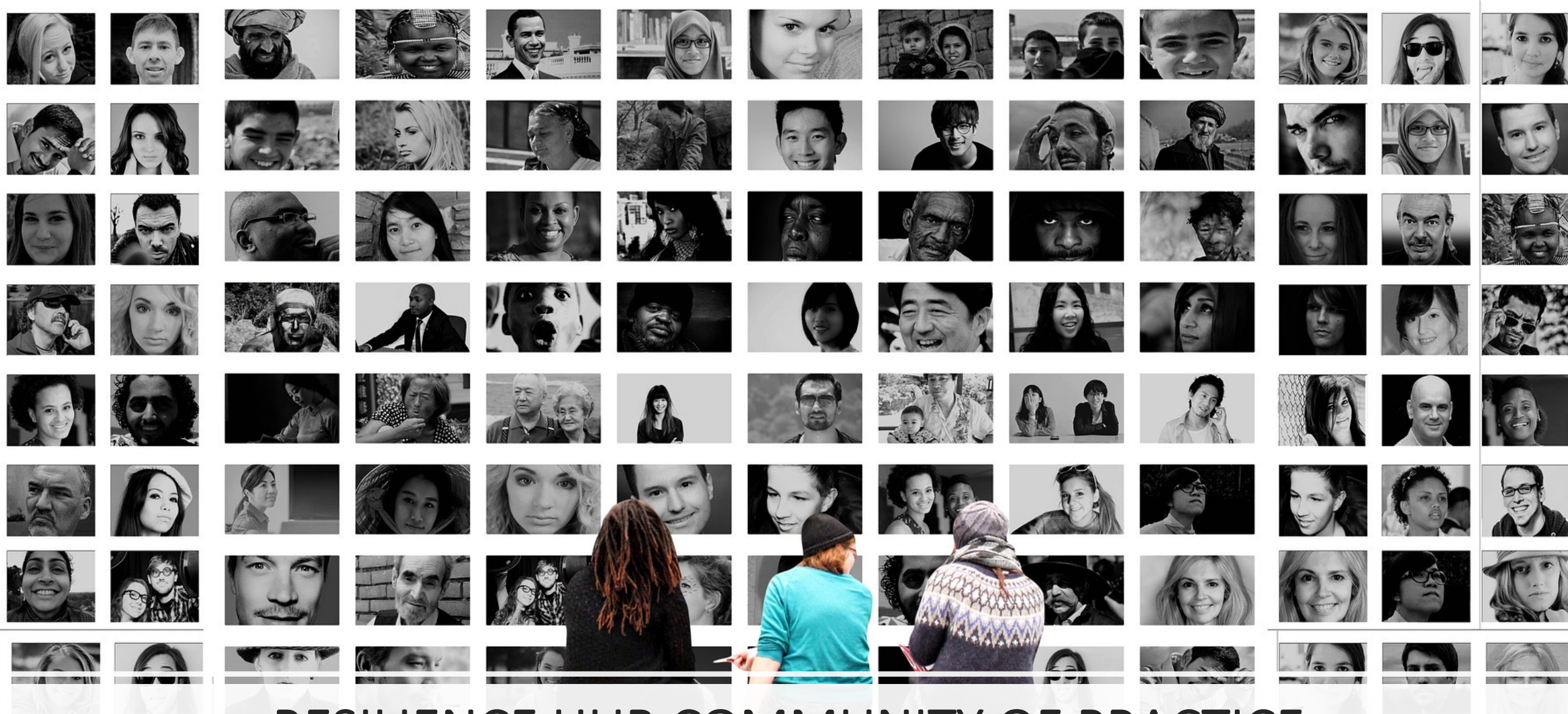
RESILIENCE HUB COMMUNITY OF PRACTICE

RESILIENCE HUB VIDEO SERIES

What is a Resilience Hub?

https://www.youtube.com/watch?v=14ZvT8iklug

Cambridge Community Center Resilience Hub

https://youtu.be/9NnWf-k3iao

Boyle Heights Resilience Hub

https://www.youtube.com/watch?v=muPZBDrdEvM

USDN PARTNERS HAVE ACCESS TO:

- Resilience Hub Operations Manual (*Editable Template*)
- Resilience Hub Cost Estimates
- CERT Level 11 Training
- Resilience Hub MOU Guidance Document
- Resilience Hub RFP Guidance Document
- Guidance for Hub 'Baseline', 'Optimal', and 'Ideal'
- Resilience Hub 'Return on Investment' Two-Pagers
- Resilience Hub Design Document
- Resilience Hub Fiscal Snapshots
- Community Co-Development Guidance
- Candidate Site Evaluation Tool
- Resilience Hub Analysis Tool
- USDN Five Foundational Areas One-Pagers
- Resilience Hub Funding and Finance Platform
- Resilience Hub Legal Considerations
- How to Operationalize a Hub in Disruption
- Guidance on Growing a Resilience Hub Network

- Resources for Centering Human Connectivity and Adaptive Capacity
- Sample Partner Resilience Hub Operations Manuals
- Partner Resources for Community-led Planning
- Partner Resources for Hazard Assessment
- Partner Resources for Performance
- Resilience Hub Cost Estimate Sheets
- Resilience Hub & Spoke Model

USDN RESOURCES- WEBSITE

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WHAT?

WHY?

HOW?

Resilience Hubs are community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing quality of life. Hubs provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate change mitigation, and social equity while providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions.

Climate change is happening now. Due to a history of marginalization and disinvestment, people of color, immigrants, refugees, and lower-income populations experience increased exposure and sensitivity to climate hazards and a reduced capacity to adapt. Resilience Hubs are intended shift power to neighborhoods and residents, provide opportunities to address root causes of disproportionate exposure and sensitivity to climate impacts, and enhance communities' capacity to adapt.

Resilience Hubs are flexible both in their application and design. Sites are as diverse as the communities they serve. Hubs typically require enhancements and upgrades that improve their capacity to provide service in all three operating conditions (everyday, disruption, and recovery). Upgrades can range in complexity and cost. This website and the *USDN Guide to Developing Resilience Hubs* provide guidance for developing a Resilience Hub in your community.
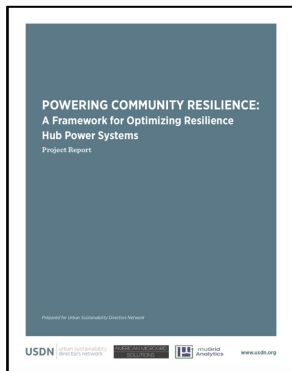
http://resilience-hub.org/

USDN RESOURCES

RESILIENCE HUBS
Shifting Power to Communities and Increasing Community Capacity
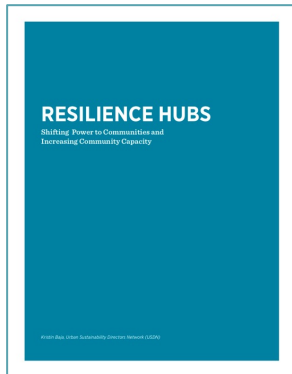
- Introduction to Hubs
- Simple and Easy to Understand
- Power Shifting and basic language as the focus

GUIDE TO DEVELOPING RESILIENCE HUBS
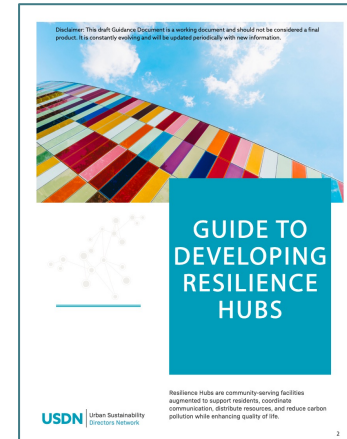
- Step-by-Step Guidance for Hub Development
- Steps align with Analysis Tool

POWERING COMMUNITY RESILIENCE:
A Framework for Optimizing Resilience Hub Power Systems
Project Report

- Solar & Storage Framework
- Techno-Economic Feasibility Analysis
- Cost of energy
- Hybrid Solution

- Project & Site Team
- Program Goals
- Services & Specs
- Site Survey
- Security & Kitchen Assessments

RESILIENT NEIGHBORHOODS

- Multiple Hubs within Neighborhood or Area

- Specialize in specific elements (ex. services and programming) within the neighborhood

- Ideal for larger areas with multiple trusted sites (already exist)

- Connectivity and cohesiveness

- Connection to nature and nature-based solution integration

- Works at the Nexus of Equity, Resilience and GHG Mitigation

QUESTIONS?

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