

A Practical Guide to Bringing Resilience Hubs to Your Community

SEPTEMBER 2026



Local Governments
for Sustainability
Les gouvernements locaux
pour le développement durable
CANADA

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Resilience in Practice

Real-life case stories and examples from communities.



Learn More

Additional resources and information to explore the topic further.



Consider This

Questions and prompts to help you reflect on how the ideas apply to your community

Acknowledgements

ICLEI Canada is part of a global network working to achieve tangible sustainability results through cumulative local actions. We support local governments by providing them with expertise and resources to take action in their communities. To do this, we bring together a wide variety of partners across government, industry, academia, and non-government organizations (NGOs) to build more sustainable, low-carbon, biodiverse, and climate-ready communities.

This resource was developed by ICLEI Canada as part of the **Coastal Climate Resilience Collaborative (CCRC)** initiative—which is supported by Natural Resources Canada’s **Climate-Resilient Coastal Communities Program**—with additional support from the **Ontario Resource Centre for Climate Adaptation (ORCCA)**.

CCRC brings together communities across the Pacific North Shore and Sunshine Coast in British Columbia to strengthen regional resilience and advance the implementation of local climate strategies. ORCCA, led by ICLEI Canada, provides technical support, local climate data, and resources to advance climate resilience, with a focus on addressing capacity gaps and accelerating adaptation efforts in Ontario and Great Lakes communities. Leveraging these networks, the guidance in this resource is practical and adaptable for local governments across Canada.

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Land Acknowledgement

We respectfully acknowledge that ICLEI Canada's work happens across Turtle Island which has traditionally been and is home to many diverse First Nations, Inuit, and Métis peoples since time immemorial. We recognize that reconciliation is a fundamental component to building net-zero resilient communities. We are committed to strengthening relationships with Indigenous groups and knowledge keepers, knowing that reconciliation requires ongoing learning, unlearning, reflection, and action. We endeavour to listen to and learn from Indigenous Peoples on an ongoing basis in the process of our work.

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Foreword

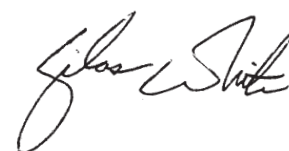
Over the past several years, ch'kw'elhp/Gibsons has felt the impacts of climate change up close, with storms that damaged our docks and flooded coastal assets, as well as cold snaps and snowfall unlike anything typical for our coastal community. Heat waves have become a norm every summer and heavy rainfalls expected every fall. These events are a reminder that climate change impacts are no longer an anticipated future, they are part of our present reality, and adapting for continued resilience is not optional.

We're a small town of roughly 5,000 people, and that means we tend to know our neighbours - we look out for one another. Town of Gibsons has innovated and already invested in climate resilience, such as our network of nature-based stormwater ponds and creek restorations. We are actively looking into strengthening our resilience by activating a network of Climate Resilience Hubs throughout neighbourhoods across the town. Resilience hubs formalize and strengthen what communities do informally. They build on the idea of community members taking care of each other and building connections by having a familiar place to go to, like our trails, community halls, or the library, or recreation centre. Activating resilience hubs means equipping these existing places for the days

when extreme weather hits to provide people with the support they need to manage through safely.

As the climate keeps changing, we must plan for those days now, together, rather than be caught without a plan when they arrive. ICLEI Canada has carefully developed this detailed guide for local governments and organizations to plan, implement, monitor, and continuously improve resilience hubs tailored to their unique community needs. This guide lays out various hub models, approaches to partnership building, and ways to evaluate progress over time, with case stories to draw inspiration from.

This guide is an invitation, as much as it is a resource, for municipalities and local governments across the country to engage with it, adapt it to their own context, and use it as a starting point for building resilience in their own communities.



Mayor Silas White
Town of Gibsons

Foreword

Climate-related disruptions are no longer distant or occasional. Across Canada, communities are dealing with hotter summers, heavier storms, flooding, wildfires, smoke, and the uneven impacts these events have on people's daily lives. When those impacts hit close to home, resilience becomes very practical: Where can people go? Who do they trust? What services are available? How do neighbours, local organizations, and governments work together?

Resilience hubs offer one promising answer. These are not just emergency spaces opened during a crisis. They serve as trusted community places that support preparedness, response, recovery, and everyday connection. They can be designed and adapted for any community. A hub in a dense urban neighbourhood, in a rural community, or an Indigenous community will reflect different risks, relationships, assets, and needs—and they should.

Work on resilience hubs also asks municipalities to think differently about their role. Local governments don't have to design a resilience hub alone or own it outright. Often,

the strongest starting point is to work with community organizations, residents, service providers, and others who already know the place, the people, and the gaps. In fact, resilience hubs present an opportunity to bring community strengths together with the planning, resources, coordination, and long-term support that local governments are well-placed to provide.

This guide is intended to help municipalities and community partners explore what resilience hubs could mean in their own context. I hope it gives you a practical starting point: to ask good questions, build the right partnerships, and begin shaping places that will help communities stay connected, supported, and ready.



A handwritten signature in black ink that reads "Ewa Jackson". The script is fluid and cursive.

Ewa Jackson

Managing Director, ICLEI Canada

Introduction

Climate change is exposing communities across Canada to more frequent and severe heat waves, flooding, wildfires, storms, and more. Equity-denied communities feel their impacts most intensely, as they often have fewer resources and less access to the infrastructure and services needed to adapt.

In response, local governments are developing climate resilience hubs (referred to as “resilience hub” or “hub” in this guide) as trusted places that support preparedness, response, and recovery from climate impacts.

This guide provides local government staff across Canada with practical, equity-informed guidance for every stage of the resilience hub lifecycle, from early planning and partnership development to service design, implementation, activation, operations, monitoring, and evaluation. It also provides practical approaches for monitoring and continuous improvement throughout this lifecycle by way of checklists, illustrative diagrams, and key performance indicators. The guide covers adaptable resilience hub models that respond to diverse community needs, and features Canadian case stories that showcase vital lessons learned, and document replicable examples.

What This Guide is

- A practical resource to understand hub models available to meet diverse community needs;
- An actionable, step-by-step set of frameworks and guidance to establish resilience hubs of various scales across Canada;
- A source for practical resources and tools, including checklists and indicators, to monitor, assess, and track the hubs’ performance and outcomes; and,
- A collection of resilience hub case stories.

What This Guide is Not

- A business case to justify or advocate for funding allocations or investment in resilience hubs;
- An engineering manual for the technical design of the hub infrastructure; or
- A checklist of mandatory criteria or standards to establish, implement, and monitor the hubs.

Who This Guide is For

- Staff in local governments, Indigenous governing bodies, and relevant organizations across Canada.

Resilience Hub Models

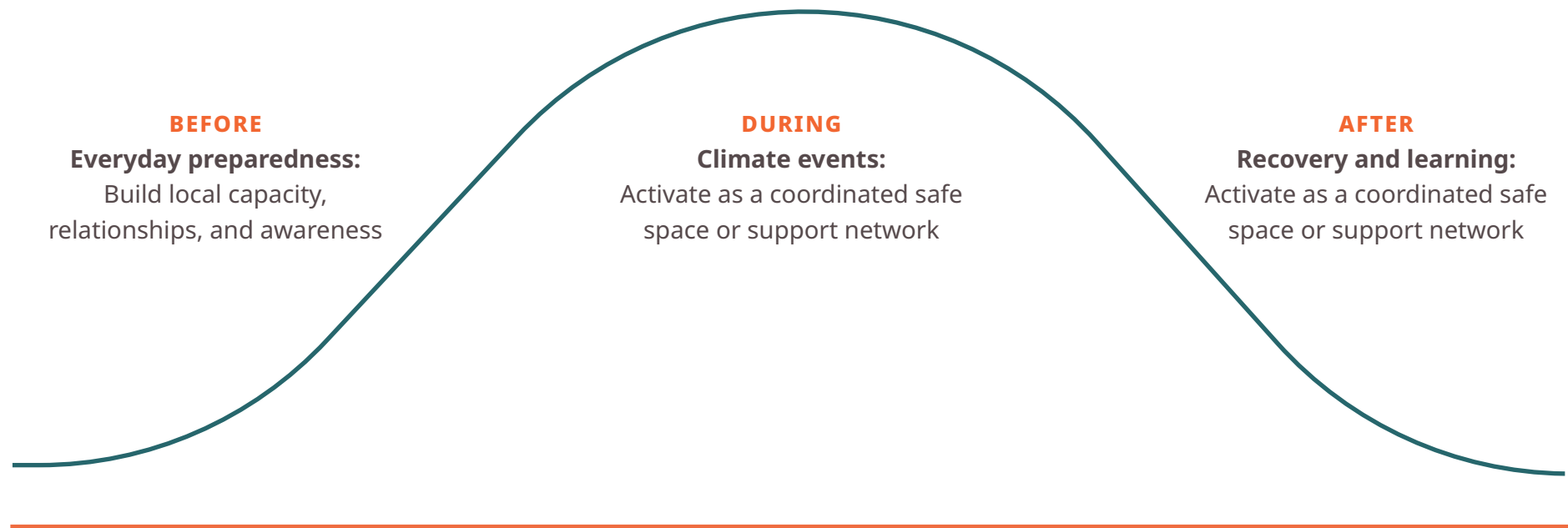
PURPOSE: This section introduces what resilience hubs are, why they matter, when they operate, what they do, and the forms they can take.



Resilience hubs are trusted community institutions that provide physical and social infrastructure needed to prevent, prepare for, respond to, and recover from climate impacts. They take many forms and serve communities of all sizes, from urban neighbourhoods to rural, northern, and remote communities. What makes something a hub is not its form, but its function: giving communities a trusted anchor to access essential services, resources, and support before, during, and after climate events. Depending on how they are planned, designed, sited, and governed, resilience hubs can also advance equity, climate change mitigation, and provide other co-benefits.

Before, During, and After Climate Events

Successful resilience hubs serve communities before, during and after climate events; not only during emergencies. In everyday conditions, hubs build local capacity through climate education and awareness, preparedness activities, energy or food initiatives, skill development, and by building community connection. During climate-related emergencies, such as extreme heat and cold, flooding, wildfire, and poor air quality, they become coordinated safe spaces with reliable information, essential services, and immediate support.



Role of a resilience hub across phases of a climate event.

Contribution to Community Climate Resilience

As communities are facing more frequent and severe climate events, they are also grappling with social isolation and inequitable access to services. Resilience hubs address both the physical and social dimensions of these challenges, while delivering many co-benefits.

Resilience hubs act as community anchors: they bring together infrastructure, people, and climate solutions in one place. By giving communities a visible, trusted place to gather resources and build relationships, they help strengthen social cohesion and local adaptive capacity, and connect long-term planning processes to demonstrated action.



For a more complete overview of resilience hub services, programs, and features, see [Planning and service co-design](#).



LEARN MORE

***Stronger Together: Deepening Social Connection for Climate Resilience** is a resource developed by ICLEI Canada and the City of Beaconsfield that supports local governments and partners to strengthen resilience by deepening social connection within communities. Inspired by the **Connecting Beaconsfield** initiative, it offers practical guidance, tools, and examples to help shape resilience approaches that are community- led, people-centred, and grounded in strong local relationships.*



Extreme Heat Preparedness



Flood Readiness



Wildfire Readiness



Energy Continuity



Food & Water Security



Support for Biodiversity



Emergency Response & Recovery



Community Connection



Education & Skill Development



Improved Equity & Access



Health & Wellbeing



Build Support for Climate Action

What services a resilience hub can offer.

Resilience Hub Models and Forms

The right resilience hub depends on your community needs, inputs, local climate risks, and available resources. Existing facilities such as libraries or community centres can be updated to serve dual purposes; temporary pop-up hubs can be activated only during extreme events; mobile hubs can bring services directly to those who need them most; or virtual hubs can coordinate information and support online.

A variety of formats are presented below. These can be combined and can evolve over time. They are presented by location (outdoor, indoor, online, etc.), by duration, and by scale.

For more on resilience hub models and possible features, see the [Planning and service co-design](#) subsection.

By Location

Outdoor

Publicly accessible spaces like parks, schoolyards, plazas, kiosks, boulevards, or repurposed parking lots can function as outdoor hubs. They act as places to share information, to shelter, as gathering points, and as emergency coordination sites. These

hubs can be permanent or temporary structures, networked or single site, and can take many forms depending on local context.

Some examples include:

- **Parks and Open Spaces:** Toronto's [Parks in Action](#) shows how spaces, from ravines to pocket gardens, host gazebos, bike stations, and plaza installations that serve as resilience hubs, introducing green infrastructure, offering environmental education, improving accessibility, and creating inviting spots for neighbours to gather.
- **Emergency Supply Structures:** [Victoria's Neighbourhood Hubs](#) are small, weather-resistant structures stocked with emergency essentials (e.g., first aid kits, drinking water, basic tools).
- **Community Gathering & Information Hub:** The [Bowen Island Neighbourhood Emergency Response Program](#) kiosks feature bulletin boards, emergency signage, communication equipment, and sheltered structures that function as meeting points during crises.
- **Repurposed Urban Spaces:** Toronto's [PlazaPOPS](#) transforms vacant lots, underused plazas, or parking areas into vibrant, safe, and accessible community hubs.



RESILIENCE IN PRACTICE: NEIGHBOURHOOD EMERGENCY RESPONSE PROGRAM (NERP)

The Neighbourhood Emergency Response Program (NERP) began as a volunteer-driven emergency preparedness initiative on Bowen Island, and evolved into a network of five neighbourhood kiosks that serve residents year-round. Volunteers identified high-traffic locations, often near mailboxes and bus stops, where covered kiosks could serve as gathering points during emergencies, and as everyday community hubs. Each kiosk displays evacuation maps, emergency contact information and community bulletins, with some equipped with AEDs (Automated External Defibrillators).

The project came together through a Bowen Island Community Foundation grant, volunteer coordination, and municipal support. The Municipality provided land access, helped navigate insurance and liability concerns, secured council approval, and now manages ongoing maintenance, as the kiosks are municipal assets. Volunteers handle information updates and emergency coordination. The kiosks doubled as COVID-19 information-sharing stations, and continue to function as sheltered waiting areas for transit users.

Inspired by a conversation with Carla Skuce and Tess Taylor, Bowen Island Municipality.



A NERP KIOSK IN BOWEN ISLAND (PHOTO CREDIT: NILOOFAR MOHTAT)

Indoor

Any indoor space within existing or purpose-built buildings designed or retrofitted to enhance community resilience and support emergency use can be a resilience hub. These spaces may be located in libraries, community centres, places of worship, recreation facilities, or other suitable facilities. Key services often include kitchens and food storage, refrigeration, tool-sharing, meeting areas, and health or mental health support. Radios, computers, Wi-Fi, charging stations, and secure storage keep people informed and linked.

Indoor infrastructure can also support inclusivity and resilience through elevators, ramps, accessible restrooms, entertainment areas, weatherization, roof and window retrofits, and backup power. Effective operational planning (accessible entries, security checkpoints, organized gathering spaces) keeps the hubs safe and functional.¹

Some examples include:

- **Everyday cooling and warming hubs:** Public libraries and civic centres serve as year-round cool and warm spaces, offering Wi-Fi, charging stations, and health resources. Toronto's Heat Relief Network activates over 500 of these "**Cool Spaces**" during heat warnings.
- **Resilience-retrofitted centres:** Arenas, recreation centres, and libraries upgraded with battery backups, green roofs, accessible features, and fire-resistant materials can be designed to stay operational during outages, and shelter residents for 72+ hours. This is the case for the **Pictou County local recreation centre**, which served as a temporary shelter for incoming power crews during Hurricane Fiona.



RESILIENCE IN PRACTICE: PICTOU COUNTY WELLNESS CENTRE

When Hurricane Fiona hit Pictou County in September 2022, the Pictou County Wellness Centre became an unexpected lifeline. With most residents facing 10-day power outages, the centre—one of the first buildings to have power restored—quickly pivoted from hosting athletic programming to sheltering incoming power crews and supporting community members who needed to charge phones or access basic services. The facility staff set up 100 cots, brought in portable toilets, provided hot meals using the kitchen, and offered showers.

Following the hurricane, the centre received federal funding to formalize its role as a resilience hub. Planned upgrades include backup generators, improved accessibility, communication systems, energy-efficient windows and insulation, and enhanced emergency preparedness training. These retrofits will reduce operating costs,

while ensuring the facility can function as a safe, climate-controlled gathering space, turning a recreation centre into a permanent community anchor for climate resilience.

→ [How Recreation Centres Function As Resilience Hubs](#)

Non-Physical

Not all hubs require a dedicated physical space. Digital platforms, resident-led communication networks, neighbour check-in programs, and online learning spaces can function as stand-alone virtual hubs or complement physical hubs to expand their reach.

Some examples include:

- **Community-led communication networks:** Resident-organized networks through WhatsApp groups, Facebook groups, and other online channels help residents check-in on each other during extreme events, as is the case for the volunteer-run Facebook group '[Kamloops Area Fire Watch](#)'.
- **Information and skill-sharing spaces:** The Government of BC's [Wildfire Service Webpage](#) and free mobile app provide information on current wildfires, preparedness resources, and response updates.



RESILIENCE IN PRACTICE: INDIGENOUS CLIMATE HUB

The Indigenous Climate Hub is an Indigenous-led online platform where First Nations, Inuit, and Métis peoples, communities, and organizations can learn, share, and connect around climate change experiences and stories.

The platform provides resources and tools to monitor and adapt to a changing climate, and creates space for Indigenous leaders to build knowledge and collaborate on shared challenges. The Hub hosts online workshops and events that centre Indigenous knowledge and perspectives and the Indigenous Climate Hub podcast explores environmental stories and climate impacts from a uniquely Indigenous perspective. The platform also shares climate action funding opportunities for Indigenous communities.

→ [Indigenous Climate Hub](#)

Hyper-Local Networks

Building- or block-level networks strengthen resilience through relationships, shared knowledge, and mutual aid. Rather than relying on a dedicated facility, residents use existing spaces such as apartment lobbies, courtyards, meeting rooms, or hallways to organize, share skills, develop emergency plans, and support one another. In these models, the hub isn't necessarily a place but rather the web of relationships and the shared capacity residents build together.



375 BLEECKER STREET COMMUNITY CLIMATE RESILIENCE GARDEN
(PHOTO CREDIT: ANUSHEN SELVASEGAR)



RESILIENCE IN PRACTICE: CREW IN ST. JAMES TOWN (TORONTO)

The Community Resilience to Extreme Weather (CREW) initiative in North St. James Town in Toronto brought residents of 19 high-rise buildings together to map local resources, identify go-to people and organizations in an emergency, and develop neighbourhood-specific emergency response strategies. Working with Toronto's Office of Emergency Management, residents created what Sheila Murray, CREW Project Director, describes as a 'hyper-local' network, designed to coordinate mutual aid during extreme events.

One initiative that emerged from this work is the 375 Bleecker Street Community Climate Resilience Garden. Led by residents, the garden creates a shared and senior-friendly green space within a high-rise neighbourhood where residents can grow food, connect with neighbours, and strengthen community relationships.

- [CREW in St. James Town](#)
- [CREW "Meeting Its Moment" Tackling Extreme Heat and Connecting Neighbours](#)

By Duration

Permanent

Permanent hubs work best when integrated into local government planning, emergency management frameworks, and/or embedded neighbourhood networks. These are year-round community assets with resilient infrastructure; typically located indoors, but can be outdoors.



USED WITH PERMISSION FROM THE CITY OF VICTORIA



RESILIENCE IN PRACTICE: CITY OF VICTORIA NEIGHBOUR HUBS

The City of Victoria Neighbour Hubs are community gathering spaces built in public areas to help strengthen neighbourhood connection and support local resilience. Each hub combines seating, playful design features, storage for emergency supplies, bulletin boards, and local emergency information. They help residents connect, support one another during and after emergencies, and build stronger, more resilient communities.

The hubs are owned and maintained by the City, with ongoing care and stewardship supported by local residents. The first hub was installed in 2019 in partnership with [Building Resilient Neighbourhoods through the Connect and Prepare program](#), on Leonard Street near Cook Street Village, followed by a second hub on Harbour Road in Victoria West in 2021. The City later carried out a public engagement process to help shape the design of a third hub, which was installed on Kings Road in the Hillside-Quadra neighbourhood using a new design template.

→ [City of Victoria Neighbour Hubs Information Guide](#)

Temporary or Mobile

Hubs that are activated for a limited period or specific event can be temporary and/or mobile in nature. They use non-permanent structures, or they pop-up in existing buildings in times of emergency. Temporary hubs are flexible, come together quickly, and can be deactivated once the emergency or event passes.



WEXPOPS FROM ABOVE, DURING THE 'WEXPOPS SHOWCASE' (PHOTO CREDIT: TRIPLE POINT MEDIA)



RESILIENCE IN PRACTICE: PLAZAPOPS AS POP-UP RESILIENCE HUBS (TORONTO)

PlazaPOPS is a non-profit that turns parking lots, neglected spaces, and suburban strip malls into temporary gathering spots. Working with community groups, Business Improvement Areas (BIAs), property owners, and residents, they co-design pop-up installations tailored to each neighbourhood's character and needs. These spaces give people a place to meet, wait for the bus, grab food from a local business, or join free community events. By activating underused areas, PlazaPOPS demonstrates that resilience infrastructure doesn't always require permanent buildings.

After a successful 2019 pilot, PlazaPOPS secured three years of federal funding through Toronto's Main Street Recovery and Rebuild program, launching additional installations through 2022, 2023 and 2024, working with local BIAs and community organizations to bring each site to life.

→ [PlazaPOPS](#)

Hybrid

Hybrid hubs combine year-round programming with scaled-up capacity during emergencies. They host cooling or heating equipment, emergency supplies, and expanded staffing and volunteer networks that are activated when needed. This model balances everyday community benefits with emergency preparedness, without requiring two separate systems.



RESILIENCE IN PRACTICE: UBC RESILIENCE HUBS PROJECT (VANCOUVER)

The University of British Columbia is developing a Resilience Hubs Project to help prepare for growing climate-related threats and protect the campus community. The hubs will function as everyday community gathering spaces that foster social connection, support well-being, and promote emergency preparedness and hazard awareness. During emergency events, they will also serve as cooling centres, and provide access to essential resources, such as emergency food and water supplies.

The project team is currently exploring how existing campus spaces can be adapted to strengthen community resilience, through actions that improve accessibility, enhance communication systems, and strengthen connections among students, staff, residents, and community partners.

→ [Resilience Hubs for UBC Campus Communities](#)

By Scale

Single-site

Single-site hubs are set up at one location to serve a neighbourhood or small cluster of communities. They act as familiar and trusted places for residents to access preparedness information, take part in skill-building activities, and coordinate support during emergencies, building strong local relationships and a sense of reliability over time. This model works especially well in smaller communities and close-knit neighbourhoods.



RESILIENCE IN PRACTICE: BEACONSFIELD RESILIENCE HUB

The City of Beaconsfield is planning a Multipurpose Cultural Centre focused on climate resilience and year-round community programming. The site will function as a cooling centre with access to power, public computers, information, and food services.

The building will be designed with energy-efficient and sustainable design features, such as a green roof, storm-sensitive landscaping, and eco-friendly parking. The Centre will host workshops, events, wellness classes, and seasonal gatherings that help build awareness, relationships, and skills. It is designed to be accessible and inclusive in everyday programming and emergency situations, accounting for bilingual community groups, individuals living with disabilities, youth, seniors, newcomers, and other residents.

→ [Centre Culture Beaconsfield](#)



Networked

Networked hubs connect multiple organizations, community groups, and spaces across a neighbourhood, city, or region to coordinate preparedness, response, and recovery efforts. They may operate virtually, through multiple physical locations, or as a combination of both. Built around local relationships and assets, these hubs enable resource sharing, coordinated action, and broader community reach during climate-related emergencies.



RESILIENCE IN PRACTICE: CITY OF VANCOUVER'S DISASTER SUPPORT HUBS

The City of Vancouver has established a network of 25 Disaster Support Hubs across the city to strengthen community preparedness and response. These designated locations serve as initial gathering points where residents can meet, coordinate informal support, and access critical information during emergencies. Immediately following an event and in the weeks post-disaster, these support hubs provide a place for people to connect and receive timely updates, coordinate services, and support recovery efforts.

Depending on community needs, the hubs fill different roles, including acting as group lodging centres for displaced residents, cooling centres, warming centres, and safe reception points during emergencies such as evacuation orders. They are designed to be

integrated into household, neighbourhood, and organizational emergency plans. Locations are distributed across Vancouver, marked with yellow signage, and can be identified in advance using the [hub locations map](#) on the City's website.

→ [City of Vancouver Disaster Support Hubs](#)

Resilience hubs do not need to fit neatly into a single model. Many begin at a certain scale and evolve over time, shaped by the communities they serve, and adapting as needs and climate conditions change.

Now that you have an overview of what resilience hubs are and the different types, continue to the next section, which outlines the steps for moving from concept to establishment, including who is involved in setting up and operating the hubs.



Establishing Resilience Hubs

PURPOSE: This section introduces a four-phase approach to help local governments set up resilience hubs.



There are four interconnected phases needed to establish a hub:

1. project initiation, governance, and goal setting;
2. background research and risk assessment;
3. planning and service co-design; and
4. implementation and activation.

You can use these phases to establish hubs of different types and models, depending on your local context.

The phases described below can be applied in communities of different sizes and capacities across Canada and beyond to develop inclusive, adaptable, and scalable hubs.



LEARN MORE

For additional examples of approaches to planning, designing, and activating resilience hubs, refer to:

- ***Guide to Developing Resilience Hubs***, by Urban Sustainability Directors Network (USDN).
- ***Resilience Hub Planning and Design Compendium***, by Climate Resilience Consulting, One Architecture, and Farr Associates Architecture and Urban Design.

For deeper guidance on collaborative planning and equitable climate adaptation, see:

- ***Equitable Climate Adaptation: Considerations for Local Governments***, by ICLEI Canada.

Phase 1: Project initiation, governance, and goal setting

Resilience hubs are complex systems that serve diverse community needs, and operate in different contexts to provide information before and after climate events with potential to activate as refuge during climate emergencies. Establishing resilience hubs often requires forming a core project team to confirm project goals and identify a network of partners and service providers; as no single person or organization can address all aspects alone. This collaborative problem-solving is also a cornerstone of equitable climate adaptation, especially when you engage community organizations and equity-denied groups as key partners from the early stages of this process.

Establish the Core Project Team and Project Partners

Forming the core project team is a critical first step to establishing a hub. The core project team may be formally led by a single staff member within, for example, the emergency management or climate team. Together with others, they should form a small group within the local government that takes ownership of establishing the hub. Include senior staff as part of this team, who hold strong organizational knowledge, a deep understanding of community priorities, skills in facilitation and communication, and experience working across departments and with external partners.

The core project team is responsible for leading all the phases of the project, coordinating among partners, and keeping the initiative moving forward. The following table provides examples of local government departments that can be part of the core project team.

TABLE 1: EXAMPLES OF LOCAL GOVERNMENT DEPARTMENTS IN THE CORE PROJECT TEAM

DEPARTMENT	ROLES
Communications	Leading public awareness and outreach efforts; supporting community engagement and risk communication; coordinating internal and external communications related to resilience hub planning, activation, and public information sharing.
Emergency Management	Strategic oversight on emergency preparedness; integrating hub use and activation into local emergency frameworks.
Environment, Sustainability, and Climate Change	Guide climate-informed decision-making and coordination; ensure hub goals align with overarching climate strategy.
Health Services	Ensure hub planning reflects public health priorities and vulnerable populations' needs; support alignment with regional health partners.
Infrastructure/ Public Works	Advise on asset, maintenance, and operational considerations; support coordination of capital planning, access, and service continuity.
IT and Digital Services	Enable virtual or hybrid hub functions; manage hub user data; provide technical support during activation.
Planning and Development	Site selection and policy alignment; coordination with long-term planning and local government objectives; facilitate cross-departmental decision-making.
Parks and Recreation	Strategic oversight on site suitability and resource allocation; coordinate with partners on infrastructure priorities.
Social Services and Community Development	Advise on equity and inclusion priorities; ensure hubs reflect community needs; guide engagement with community organizations and underserved groups.

Identify external partners early in the process to ensure hub planning is collaborative. While the local government will lead the process of establishing a hub, it is critically important to create space for shared decision-making and community leadership.

Some non-government partners may be closely involved in shaping decisions, while others may contribute expertise during research, planning, implementation, or operations. Their roles and level of involvement will vary over the course of the project.

Consider engaging grassroots and community-based organizations as key partners. These organizations already play an important role in the everyday fabric of community life, particularly in building trust and maintaining social connections. People tend to turn to nearby, known places for support during crises, rather than relying on formal emergency management systems. Community organizations are closely rooted in local contexts so they have a strong understanding of vulnerabilities and day-to-day realities. They are also able to activate local spaces, such as community rooms or faith centres, quickly

and flexibly during emergencies. Being place-based, they can reach people who may not engage with municipal services and develop practical initiatives that respond to local needs.

Table 2 provides examples of partners you may engage as you design, establish, and operate your resilience hub. It is possible that not all of the partners listed below are relevant in your case. However, we recommend that you engage residents, equity-denied population, and local leaders as key partners from the outset. As you develop a list of key external partners, create an engagement strategy that clearly outlines each partner's expected role, responsibilities, required activities, and level of involvement. This will provide clarity in your communication with partners, and transparency in reporting on who was included at different stages of hubs planning and implementation.

For more information and tips on how to engage partners, see the section on **Co-designing Programming and Services with the Community**.

TABLE 2: EXAMPLES OF COMMUNITY PARTNERS AND THEIR CONTRIBUTION TO RESILIENCE HUB PLANNING, IMPLEMENTATION, AND MONITORING

PARTNER	ROLES
Academic and research institutions	Support research for needs assessment, data analysis, and evidence-based guidance for planning the hub services and programming; as well as monitoring, reporting, and knowledge sharing about hubs' performance.
Community members	Provide local knowledge and lived experience to guide hub design, services, programs, and priorities; participate in monitoring and evaluation.
Construction companies	Assist with building, retrofitting, or maintaining hubs; advise on construction feasibility, climate safety and resilient design.
Consultants	Offer specialized expertise in research, planning, design, implementation, or monitoring and evaluation.
Equity-denied groups	Provide input on equitable access and inclusion, informing priorities and programming; participate in monitoring and evaluation.
First respondents	Advise on emergency preparedness, and response protocols; participate in planning and preparedness exercises.
Funders (private and public)	Provide financial resources to supplement local government budget; advise on funding requirements.
Hub property owner	Provide access to land or buildings; coordinate for site suitability, access, and maintenance.
Insurance companies	Advise on liability, coverage, and risk management for continuity of hub operations.
Neighbourhood associations	Leverage established relationships; assist with outreach and co-delivery of hub activities; collect data for monitoring and evaluation.
Public health units	Ensure hub planning reflects public health priorities and vulnerable populations' needs; support alignment with regional health partners.
Utilities	Advise on infrastructure reliability (e.g., water, power, communications) during site selection, and support service continuity during disruptions.



LEARN MORE

For deeper insights on preparing an engagement strategy for climate adaptation projects, please see:

- ***Do It Yourself (DIY) Manual for Mobilising and Engaging Stakeholders and Citizens in Climate Change Adaptation Planning and Implementation***, by the EU Mission on Adaptation to Climate Change.

For more details on different levels of engagement at various project phases, see:

- ***Spectrum of Public Participation***, by the International Association for Public Participation (IAP2).



RESILIENCE IN PRACTICE: GRASSROOTS PARTNERSHIP IN OAKVILLEREADY

A strong example of grassroots partnership is the OakvilleReady initiative, where the Town of Oakville worked closely with the Halton Environmental Network (HEN) to engage faith-based organizations to act as resilience hubs across the community. In this initiative, HEN acted as an important bridge between the municipality and local faith centres. Drawing on its established relationships and network of local volunteers, HEN helped secure funding, initiate conversations with faith-based organizations, understand their interests and capacities, and support coordination with the municipality. HEN now serves as a lead program implementor leveraging responsive communications and outreach building on the Town of Oakville's support and capacity.

Inspired by a conversation with Trisha Henderson, Town of Oakville.

Define goals

Once you have identified the core project team and partners, the next step is to confirm the goals for the resilience hub initiative.

Review the planning and policy documents that prompted the initiative, such as climate adaptation plans, emergency management strategy, and equity or public health policies, and use these as the foundation to define your direction and goals. Any planning and policy documents that highlight community vulnerabilities, service gaps, or priority populations should also be considered.

To ensure that the resulting goals reflect both local government priorities and community needs, these must be developed in collaboration with partners including residents, and equity-denied community members. Engaging the departments responsible for these planning and policy documents can also help ensure alignment, integration, and long-term continuity of the hub initiative.

Be sure to organize goals based on the hub's operations before, during, and after climate events. Identify what the hub should provide day-to-day, how it will respond during disruptions, and what activities are needed to support the community afterward. Goals may focus on community services and programming (e.g., education, outreach, emergency support), as well as physical design and operational considerations (e.g., backup power, resilient infrastructure, and facility upgrades).

Draw on the examples of resilience hub goals laid out in [table 3](#), and tailor these to your project context. The areas of interest categories in the table are drawn from core local government service areas, and planning and policy documents linked to hub planning and operations. Please note that not all local governments may have specific plans or policies for each of these categories.



CONSIDER THIS

Review and adjust the list of departments engaged in the core project team—as well as partner organizations and individuals—to ensure the necessary expertise is included to achieve the identified goals.



TABLE 3: EXAMPLE GOALS FOR RESILIENCE HUBS



community services and programming goals



physical design and operational goals

AREA OF INTEREST	GOALS		
	BEFORE: PREPARATION	DURING: CLIMATE EVENT	AFTER: RECOVERY
Climate change adaptation	Educate locals on local climate hazards and adaptation options at home.	Activate as cooling, warming, and clean-air spaces (e.g., during heat waves, extreme cold, and poor air quality events).	Provide resources and information to support neighbourhood recovery.
	Promote green infrastructure initiatives with climate resilience co-benefits.		
Local energy and emissions	Educate the public on emissions reduction and energy efficiency at home.	- Maintain energy continuity for critical services. - Activate as a micro-grid to provide back-up power for communities during emergencies.	Evaluate and improve hub energy use, and community-scale power resilience.
	Integrate renewable energy systems into the resilience hub's physical space.		
Emergency management	- Support community emergency preparedness for local hazards. - Provide training and educational resources on emergencies and preparedness.	- Ensure continuity of essential services. - Provide safe gathering spaces - Coordinate with other hubs during emergencies.	Restore regular resilience hub services.
			Share lessons learned and resources across hubs.
Public health	- Host preventive health services and wellness programs. - Reduce social isolation.	- Provide emergency health services during extreme events. - Connect at-risk populations with health and social services.	Restore public health programs within the hub.
			Monitor ongoing health needs among resilience hub users, as appropriate.
Community safety and well-being	Support inclusive programs and community engagement.	Coordinate equitable access to emergency resources.	Connect residents to existing services and resources for recovery.
		Provide shelter/support for priority populations.	
Parks and recreation	Integrate low-impact development to improve flood management and heat mitigation.	Adjust and repurpose recreational and sport spaces to serve as temporary emergency shelters or cooling/warming centres.	Coordinate with other hubs and community organizations to re-establish public park and recreation services and safe community spaces.
Poverty reduction	Provide programs that improve access to food, housing support, employment resources, and other essential services for low-income residents.	Ensure access to emergency food, shelter, and essential services during disruptions.	Coordinate with community organizations to provide services at the hub that help residents regain stability.



RESILIENCE IN PRACTICE: OAKVILLEREADY

The OakvilleReady initiative has established resilience hubs in nine community-based organizations across the Town of Oakville to build a coordinated network of care that strengthens community resilience against climate events. This initiative was an action proposed in the Town of Oakville Climate Strategy (2015) and is now written into the town's Emergency Management Plan (2024). It was initially funded by Oakville Community Foundation and Community Foundations of Canada. Guided by the principle of “neighbours helping neighbours”, the hubs are intended to serve as care centres during extreme weather events and for year-round action and education. The overall goals are to strengthen community resilience by improving preparedness, build local capacity to respond, and encourage stronger social connections among residents.

During emergencies, hubs can act as places where people come to get factual information, charge their phones, and connect with others. They are also supported to develop up-to-date emergency and evacuation plans. While the hubs have been used in specific situations, the main focus is on building relationships and foundational readiness before emergencies happen. The Town works regularly with hub organizations through meetings, training sessions, the climate action grant program and community events to build awareness and share practical tools. The initiative also includes small-scale upgrades (e.g., bicycle racks, rain barrels, fruit

trees, depave projects, and community garden harvest sharing programs) in some sites.

Inspired by a conversation with Trisha Henderson, Town of Oakville.

→ [OakvilleReady](#)

Phase 2: Background research and risk assessment

With project initiation, governance, and goal setting in place, it is time to conduct background research to identify your resilience hub's intended users and service catchment area, ensuring these effectively meet your goals. This phase helps solidify where to locate your hub, how to design it, and how to ensure it responds to community needs before, during, and after emergencies.

Identifying users through vulnerability and risk assessment

Resilience hubs must serve individuals and groups who are vulnerable to climate impacts, providing emergency support, while building long-term capacity to prepare for, cope with, and recover from climate-related hazards.

To identify intended users, start by determining the key climate impacts affecting your community. A useful first step is to check whether your local government already has a climate adaptation or resilience plan. Climate impact assessments are a core component of these plans, providing the most relevant, local information on hazards that may affect residents, infrastructure, and services.



CONSIDER THIS

When assessing climate hazards, consider how projected climate changes interact with local infrastructure, land use, economic conditions, and social dynamics. Remember that impacts can be direct or indirect, immediate or long-term. Free, online resources can help you with this task, such as those available at [ClimateInsight.ca](https://climateinsight.ca).

Next, assess who is most vulnerable to climate hazard-related impacts. Vulnerable populations are groups that are more sensitive to climate hazards, and have limited capacity to cope with, adapt to, or recover from disruptions. This is influenced by multiple social, economic, health, and environmental factors, including income, education, health status, employment, age, housing conditions, race, ethnicity, and language. These factors often intersect, compounding risk for certain populations.

Consider conducting a vulnerability assessment to identify priority populations, and to define the appropriate service area for the hub. If a site or service area has already been identified, this assessment can help you validate whether your hub will effectively address community needs.

Before initiating a new assessment, review whether vulnerability studies have already been conducted within your jurisdiction. Some helpful local government resources may include:

- **Climate risk assessment and adaptation plans:** climate hazards, projections, vulnerability assessments, and priority populations.
- **Emergency management plans:** community risks, vulnerable populations, and preparedness needs.
- **Asset management and condition assessments:** critical infrastructure reliability, service continuity, and facility conditions for potential hub sites.
- **Community safety and wellbeing plans:** socio-economic vulnerabilities, community needs, and priority populations.
- **Public health climate vulnerability assessments:** climate-related health risks, hazard scenarios, and populations with higher health vulnerabilities.



LEARN MORE

Consult national or provincial digital climate data portals to access climate projections at regional and local scales:

- **ClimateData**, by Environment and Climate Change Canada.
- **Climate Atlas of Canada**, by Prairie Climate Centre (PCC).

Identify local vulnerabilities and conduct a risk assessment for your proposed resilience hub:

- **Climate Insight's rapid risk assessment tool**, delivered by ICLEI Canada with support from Housing, Infrastructure, and Communities Canada.
- **Climate Insight's map**, delivered by ICLEI Canada with support from Housing, Infrastructure, and Communities Canada.
- **Census of Population**, by Statistics Canada.

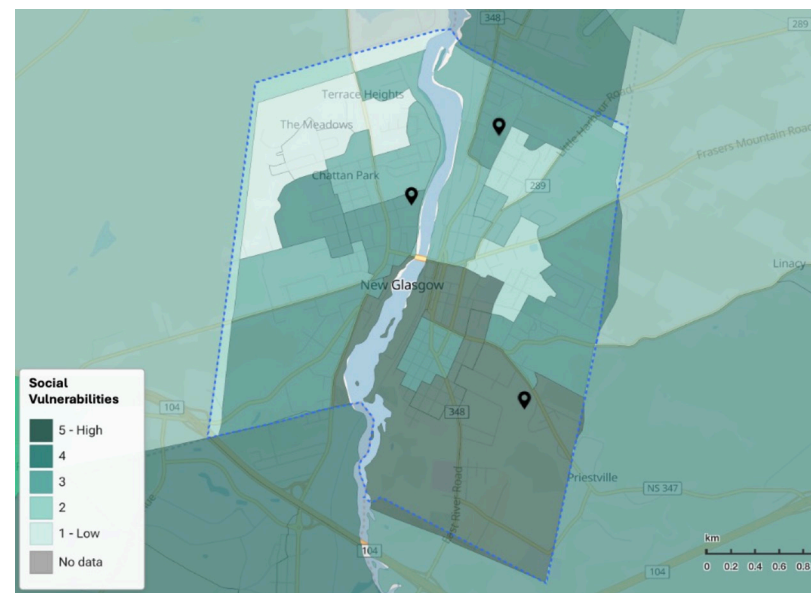


RESILIENCE IN PRACTICE: UNLOCK EXISTING ASSETS TO SUPPORT VULNERABLE COMMUNITIES

The Town of New Glasgow has established a network of three community resilience hubs, referred to locally as Comfort Centres in Nova Scotia. These hubs are intended to be activated during emergencies, offering basic relief and support during events such as extreme weather, extended power outages, or communication disruptions. The idea for the hubs came out of the Town's Climate Action Plan. Like many municipalities, New Glasgow is working within tight financial constraints, so the project was designed to build on what already exists. Three community centres across the

town, each already equipped with a backup generator, provided a practical starting point. These centres are also distributed across the town's three wards, which helps ensure broader geographic coverage. Climate Insight social vulnerability data was used to support and strengthen the approach. While the locations were largely determined by existing infrastructure, the data helped confirm that the selected sites serve areas with higher levels of social vulnerability. This evidence was also useful in making the case to Council when the policy was approved. Looking ahead, the Town is interested in expanding the range of services offered through the hubs, particularly if additional funding becomes available.

Inspired by a conversation with Rohan Mishra, Town of New Glasgow.



SCREENSHOT OF A SOCIAL VULNERABILITY MAP GENERATED USING CLIMATE INSIGHT, WHICH SHOWS THE LOCATIONS OF THE COMMUNITY RESILIENCE HUBS IN THE TOWN OF NEW GLASGOW.

If existing climate and social vulnerability assessments are limited or outdated, complement the existing data with direct input from community members and relevant organizations (e.g., community-based organizations, neighbourhood associations, service providers, community centres). Include data from local community members' lived-experiences to develop a more equitable and context-specific resilience hub. Use engagement methods such as focus groups, workshops, interviews, and community surveys to gather input. Examples of questions to gather community insights include:

- What climate-related events have most affected the community?
- Who is the most impacted by these climate-related events?
- How reliable are local infrastructure and services during extreme events?
- What areas of the city tend to experience the most outages or disruptions?
- Can you typically access the food you need during emergencies?
- Are local homes good at protecting residents during extreme weather and power outages?
- What limits access to emergency support?
- What would make a hub accessible and inclusive for you?

Please see [Appendix A](#) for more detailed prompt questions that can be incorporated into engagement around vulnerability assessments.





RESILIENCE IN PRACTICE: MAPPING COMMUNITY NEEDS BEFORE BUILDING SOLUTIONS

The First Nations Emergency Services Society (FNESS) in British Columbia conducted a comprehensive community hazard and preparedness survey in March 2025. All 203 First Nations in BC were invited to participate, and responses were received from 38 communities across all eight geographical regions that FNESS serves. The survey was designed to allow additional responses to be added over time, and analysis of results able to be updated as new responses are collected. This method of information gathering can inform potential future hub designs with foundational information about hub users and their needs.

The survey responses to date have identified wildfire, flooding, and severe storms as the most significant hazards, alongside drought, landslides, extreme heat, and industrial accidents. Results also revealed systemic vulnerabilities such as limited emergency response capacity, food and water insecurity, infrastructure and road access challenges, communication barriers, and gaps in health services and social support.

The participating communities' insight provides practical guidance for assessment of what the hub set up and programming would include. For example:

- *A wildfire or smoke-prone area may need clean air space and back-up power; a flood-prone area may require safer access routes and transportation planning.*

- *Placing the hub in close proximity to those who need it most, including Elders, people without vehicles, people with disabilities, families, youth, and displaced members.*
- *Plan for a range of functions to meet the range of needs, such as information sharing, emergency supplies, food and water support, health referrals, transportation coordination, and recovery navigation.*
- *Ensure hubs are culturally safe, community-led, and equipped to support social, emotional, cultural, and practical needs, not just logistical ones.*

Inspired by a conversation with Kaye Bright, FNESS

Identify service catchment area

Once you have identified local vulnerabilities and priority users, define the hub's service catchment area, and select a reasonably accessible location. The catchment area can be geographic, encompassing one or more neighbourhoods, census tracts, municipalities, and regions. Alternatively, it can be defined based on service reach, focusing on particular population groups, such as seniors, newcomers, or unhoused individuals, to ensure the hub meets the needs of those most at risk.

Ensure the service catchment is evidence-based and aligned with your goals. Consider proximity to vulnerable populations, access by walking and transit, existing community assets, overlaps with other services, and service gaps. Engage community

members and organizations, including those not formally part of your established resilience hub governance structure, to validate findings and ensure that the hub reflects lived experience and local realities. Surveys can help identify community members' mobility needs and preferences.

For example, in 2024, University of Alberta researchers conducted a region-wide survey of 950 people, as well as focus groups with underserved populations, to understand where the City of Edmonton should locate resilience hubs. Participants preferred hubs that are accessible within their own neighborhoods and are located in existing, familiar community spaces.²³ Building on the research findings, the City of Edmonton is implementing **Green Leagues**, a resilience hub pilot that uses community leagues to provide support during extreme heat, poor air quality, and extended power outages.



CONSIDER THIS

*Consider refining the resilience hub goals identified in the **project initiation phase**, if needed, as you develop a clearer understanding of the service catchment area.*

Phase 3: Planning and service co-design

Building on the partnerships developed and the hazard and vulnerability information gathered in previous phases, you must now choose the right hub model, programming, services, site, infrastructure, and funding resources. In this phase, shape the hub design, what it will do, where it will be, and how it will be built. Co-create the design with future users to strengthen the hub itself, as well as local cultural safety, equity, and accessibility.



LEARN MORE

For deeper guidance on equitable adaptation, see:

- ***Equitable Climate Adaptation: Considerations for Local Governments***, by ICLEI Canada.

Co-designing Programming and Services with Community

Use co-design to invite residents, partners, and equity-denied groups to participate meaningfully in decisions about hub format, programming, services, and space. When co-designing the hub, think beyond the intended users to include those who will build, maintain, staff, and program the hub. For example, consider who will manage a virtual hub platform or maintain a community garden over time. Involving future stewards early in

the co-design process builds ownership and helps create resilience hubs that are usable, trusted, and durable. This is also an opportunity to validate and enrich the findings from the **background research phase** with lived experience.

Activities for co-designing your hub can include:

- community visioning sessions or pop-up events;
- focus groups with priority populations identified in the **background research phase**;
- participatory community asset mapping, surveys or feedback rounds; and
- open calls for design ideas or sketches to share with architects or planners.

The engagement strategy that you developed in the **project initiation phase** will guide who to involve and how, though you should remain open to integrating new voices as the community evolves.



CONSIDER THIS

Consider inviting community members to submit design ideas or sketches for the final hub. Share these early ideas with an architect to ensure the hub spaces reflect the community it serves. Before designs are finalized, invite advisory groups, potential hub users and future hub operators to review and respond to the designs. Consider additional community engagement to further strengthen a sense of community ownership.



RESILIENCE IN PRACTICE: VISIONING

Hosting a visioning exercise is a creative and interactive way to work through different scenarios with community and advisory groups. As part of the Dufferin County Resilience Hub project, ICLEI Canada worked with local partners to help residents and partners imagine how a future resilience hub could function in everyday life and during emergencies.

The activity used participatory theatre and improvisation techniques to encourage place-based, experiential thinking. Participants acted out different stages of a user journey (e.g., arriving at, staying in, leaving, and reflecting on the hub), while responding to scenarios such as extreme weather events and everyday community use. Grounded in co-design and community-led planning, the exercise helped surface local priorities, values, and desired hub functions, while offering insights into how resilience hubs can support social connection, climate preparedness, access to services, and relationships with the surrounding environment.

→ [Resilience Hub Community Engagement & Visioning, Dufferin County](#)

When exploring the programming and range of services your hub needs to offer, return to your list of key partners ([Table 2](#)). It is likely that some of these partners are already delivering climate services that also provide benefits like social connection and food security. A resilience hub role is often to strengthen, coordinate, or extend what exists, and to ensure services reach priority populations identified in the [background research phase](#).



CONSIDER THIS

Under the United Nations Declaration on the Rights of Indigenous Peoples Act (UNDRIP), engagement requires moving beyond basic consultation, to co-development and true partnership. Invite Indigenous communities, organizations, or governments to inform how the hub will support Indigenous-led programming, land-based activities, traditional ecological knowledge, ceremony, or honour governance arrangements reflecting Indigenous leadership.

Infrastructure Needs and Resilience Hub Model Selection

Infrastructure enables programming, so start by establishing what the hub needs to do, then work backward to determine what infrastructure it needs to have. For example:

- Heat preparedness workshops for seniors require an accessible, air-conditioned space.
- A clean air shelter needs High-Efficiency Particulate Air (HEPA) filtration.

- Food programming needs a kitchen.

Infrastructure investment can be phased. Many hubs start in existing spaces with modest upgrades and build toward purpose-built infrastructure as funding, partnerships, and evidence of impact grow.

Refer to [Appendix B](#) to see a list of infrastructure that can enable a resilience hub to meet its goals. Many of these might be already available, such as air filters and back-up generators. Checklists in [Appendix C](#) can also help you select a site and recognize its existing potential.



RESILIENCE IN PRACTICE: PHYSICAL FEATURES

The East Scarborough Storefront (Scarborough) is an excellent model of how to integrate green infrastructure in hubs by leveraging strong community engagement. A key feature of the site is the Sky-O-Swale™, a stormwater management structure designed by local youth in collaboration with architects. The structure captures and filters rainwater through a green roof into an underground cistern that provides water for the hub's garden irrigation, while also creating a shaded outdoor gathering space. It demonstrates what is possible when stormwater management, food production, climate comfort, and community space are designed as a single integrated system.

→ [East Scarborough Storefront](#)

Built on a publicly owned former school parking lot in an underserved neighbourhood, the Bathurst-Finch Unison Hub has developed a range of physical infrastructure to support community resilience. The site enabled the development of a community garden, built by neighbouring students, that produces up to 3,500 pounds of organic food per season. Unsold produce is donated to the on-site food bank or used in community programs. A dedicated space hosts a weekly Good Food Market in partnership with FoodShare, providing residents with access to affordable fresh produce while creating a welcoming space for social connection.

Beyond food, the hub provides shared community spaces, including community rooms, a kitchen, and gathering areas that support resident groups, workshops, educational activities, and social programs.

Its roof was engineered to carry a solar array even before funding for panels was secured, meaning the building was prepared for future renewable energy upgrades. And, a rainwater cistern captures 6,000 gallons for garden irrigation, reducing reliance on municipal water supplies; the outdoor taps have never needed to be turned on.

→ [Bathurst-Finch Unison Hub](#)



BATHURST-FINCH UNISON HUB AND COMMUNITY GARDEN (PHOTO CREDIT: NILOOFAR MOHTAT)



LEARN MORE

To help identify climate-resilient features you can incorporate into your hub's physical design, see:

- *Climate Resilience Guide, Housing Design Catalogue*, by Ha/f Climate Design.
- *Climate Insight's Climate-Smart Home Explorer*, delivered by ICLEI Canada with support from Housing, Infrastructure, and Communities Canada.

With programming, services, and physical features in view, the next step is to marry these with financial realities and available space. Refer back to different hub models in the previous section, as well as the potential costs and funding resources outlined in the **table 4** that follows.

Resilience hubs can start lean, and build toward what the community needs over time. Successful hubs can begin with a simple webpage and programming hosted in a borrowed space, before expanding incrementally. The East Scarborough Storefront is an example of this approach. It began as programming in a mall before relocating to a former police station in 2007 and grew into a vibrant hub with several facilities such as community garden, gathering spaces, stormwater infrastructure, and community kitchen over years of phased renovation and community-led redesign.

When referring back to different hub models, recall that your hub can also combine these; for example, programming at a community centre can be paired with resources hosted on a digital platform, and with outdoor programming. Be creative in how different models are combined to meet local needs.



RESILIENCE IN PRACTICE: RESILIENCE HUB JOURNEYS

Montréal's early resilience work focused on offering programming, and eventually running pilot projects. As resilience work matured and rooted, it was clear that for consistency and progress, supportive infrastructure was needed. The team pivoted to look at embedding climate resilience in the city's existing network of community centres, libraries, and cultural houses: buildings already trusted and integrated in neighbourhoods. They are now looking to develop a network of physical hubs across the city.

Inspired by a conversation with Irene Cloutier, Ville de Montréal

Non-Physical and Virtual Hubs

For many communities, the most effective starting point for hub development is establishing a dedicated social media account, webpage, and phone-based outreach network.

Virtual hub options involve different levels of investment, ranging from creating a basic website to investing in a fully resourced communication platform. Starting with a virtual approach requires the least resources and can be an effective long-term model for some communities. However, virtual-only approaches tend to reach more tech-savvy demographics, so complement them with offline outreach where possible, such as scheduled programming in libraries, faith facilities, parks, or community centres.

For more information on how to reach these and more communities, refer to the [Implementation and Activation \(phase 4\)](#) outlined below.



LEARN MORE

Some examples of virtual hubs include:

- [Indigenous Climate Hub](#), by Indigenous climate leaders
- [Climate Hub, Peel Region's Climate Library](#), by Community Climate Council
- [Emergency preparedness and response portal](#), by North Shore Emergency Management (NSEM)

Physical Hubs: Site Selection and Preparation

Site selection is one of the most consequential decisions for physical hubs. Location is an equity decision. Prioritize locations that are accessible to, and trusted by, the community, particularly by equity-denied groups. Refer back to the [background research phase](#) to review locations that prioritize vulnerable peoples. Avoid placing hubs where people are already well-served.

You can use the three checklists in [Appendix C](#) to support site selection before you invest in design or planning at a specific location. The checklists are structured to surface common issues that can delay or complicate hub projects if not identified early.

These checklists can be reviewed as a team made up of the core project group and community partners to strengthen ties. Doing so can reveal additional questions, bring disagreements forward early, identify who else you need to consult, and build shared ownership of site decisions. Use the completed checklist, with notes, to brief senior leadership or elected officials within the local government.



MONTRÉAL REGIONAL PUBLIC HEALTH DEPARTMENT AND NEIGHBORHOOD ROUND TABLE COALITION, PARTICIPATORY MAPPING OF CLIMATE RESILIENCE COMMUNITY ASSETS IN MERCIER-EST, OCTOBER 2024



RESILIENCE IN PRACTICE: SITE SELECTION

Between September 2024 and April 2025, Montréal's regional public health department partnered with the Neighbourhood Round Tables Coalition, hosting participatory sessions to identify what local communities consider their critical assets for climate resilience. Working alongside organizations with existing relationships with youth, newcomers, seniors, and people with disabilities, Indigenous community members, and unhoused individuals, the project identified both physical and relational assets: social networks, trusted relationships, informal support systems, and many more insights from lived experiences. This participatory engagement will directly influence Montréal's efforts to select sites and programs for resilience hubs.

As part of this broader effort, Montréal is narrowing a large portfolio of public buildings to eight priority sites for its hub network, using three criteria: buildings that were already planned for renovations; facilities with existing or potential emergency shelter designation; and locations in equity-denied neighbourhoods. The approach connects capital planning cycles, emergency function, and equity priorities; ensuring resilience investment lands where it is most needed and most feasible at the same time.

Inspired by a conversation with Irene Cloutier, Ville de Montréal

Resilience Hub Costs and Funding

As you complete the planning phase, it is important to begin identifying funding opportunities. Because resilience hubs can take different models and forms, their costs vary widely. Budgets are impacted by the infrastructure required, operational and logistical needs, scale, location, and whether services are delivered on a permanent or temporary basis. The figure below shows how costs can differ across different hub models, or the combination of multiple models.

Resilience Hub Models and Cost Continua

Costs vary at different phases of a resilience hub project. Plan for ongoing efforts to identify, coordinate, and secure financial support throughout the project's lifecycle. Because hubs address multiple community needs and priorities, they often involve several sectors and can benefit from multiple sources of funding. Some funding sources are outlined in [Table 4](#).



CONSIDER THIS

Emphasize the hub's multi-use value in funding applications, noting both its day-to-day community role alongside its emergency response function. Funders in social services, public health, and climate adaptation may each see different aspects as aligned with their priorities.

NON-PHYSICAL

Virtual platform,
social media,
phone network

TEMPORARY

Pop-up activations,
indoor/outdoor

HYBRID

Dedicated
programming
in existing spaces

SINGLE-SITE

New build and/or
retrofit

NETWORKS

Multi-site
coordination across
a city/region

TABLE 4: FUNDING SOURCES FOR PLANNING, DESIGNING, IMPLEMENTING, OPERATING, AND MONITORING RESILIENCE HUBS

PROJECT PHASE	COST EXAMPLES	POTENTIAL FUNDING SOURCES
Planning and design	Feasibility studies, climate risk and vulnerability assessments, community engagement, site selection, architecture and engineering.	Local government planning budgets, university or research partnerships, early-stage philanthropic support.
Implementation	Building renovation or retrofit (e.g., backup power systems, heating, ventilation, and air conditioning (HVAC) upgrades, accessibility improvements, signage), new construction, outdoor infrastructure (e.g., shaded areas, tents, landscape modifications), temporary or mobile facilities, digital infrastructure (e.g., websites, data systems, social media platforms).	Federal grants (Disaster Mitigation and Adaptation Fund, Green and Inclusive Community Buildings program), provincial climate resilience funding programs, local government capital budgets, philanthropic foundations, private sector partnerships.
Operations and program delivery	Staffing, utilities, supplies and consumables, routine maintenance, training, community outreach.	Provincial social services and community development funding, local government operating budgets, third-party staff capacity programs, earned revenue, private sector sponsorships.
Monitoring and evaluation	Performance indicators, data collections, surveys, data management and analysis systems, reporting, knowledge sharing and communications.	Research and innovation grants, university or research partnerships, local government performance management budgets.



RESILIENCE IN PRACTICE: CREATIVE WAYS TO FINANCE INFRASTRUCTURE

Backup generators typically cost anywhere around \$200,000–\$400,000 each; combined heat and power systems can reach \$1 million. These collective costs exceed many grant opportunities. In order to finance these resilient upgrades, the YMCA of Greater Toronto asks the local government to co-invest. A creative way to formalize and recognize resilience infrastructure as a shared public responsibility is to leverage a retainer model, where a municipality dedicates budget to anchor institutions that can carry-out emergency response services in unique or unprecedented circumstances. This structural commitment can make hub infrastructure financeable and provides the long-term revenue certainty that attracts provincial, federal, and philanthropic funders to unlock even more potential.

Inspired by a conversation with the YMCA of Greater Toronto and Mantle Climate.

Montréal's business case connects the climate events the city has already experienced to the infrastructure needed to respond. The 2023 ice storm led eight emergency centres to open, and the city

saw similar responses to heat waves in 2018 and 2024, and to recurring flooding. They furthermore confirmed that securing a base municipal budget commitment, which is the prerequisite for unlocking provincial and federal funding. External grants follow internal commitment, not the other way around. A smart way to secure this funding is to find alignment with existing budgets across departments such as emergency services and capital renewal.

Inspired by a conversation with Irene Cloutier, Ville de Montréal.



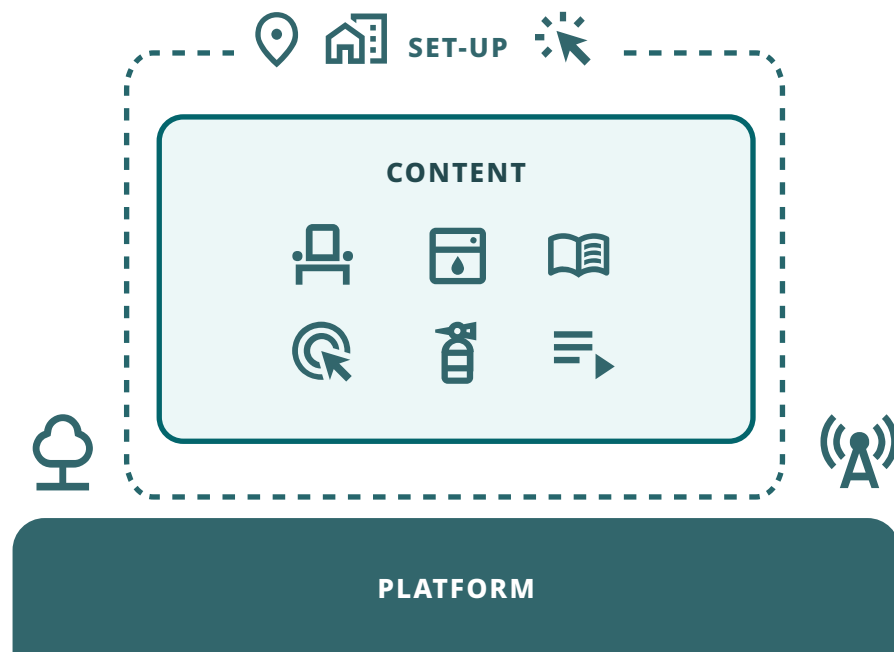
LEARN MORE

For more information on economic tools to advance climate adaptation projects, see:

- **Cost of Doing Nothing (CODN) Toolbox: Build a business case for adaptation investment**, by ICLEI Canada.
- **Getting Ready to Finance Toolkit** by ICLEI Canada
- **Economic Tools to Advance Adaptation (ETAA)** by ICLEI Canada.

Phase 4: Implementation and activation

Once you have identified your chosen hub model, sites, infrastructure needs and programming or services, the next step is to bring these decisions to life through implementation and activation.



Three Components of the Resilience Hub

Depending on the hub model, you may engage architects and builders, develop digital platforms, navigate procurement processes, secure permits, and establish protocols in place for activation and communicating activation to community members and partners.

Implementation

As the core project team designs the resilience hub, consider three components: **platform**, **set-up**, and **content**. The **platform** refers to where the hub exists—as a permanent or temporary physical site, an outdoor space, as part of an existing community asset, digital platform, or a combination of these. The **set-up** refers to how the hub is organized and shaped, including the building's structure, spatial layout, infrastructure, and site plan in physical hubs, and website structure and user interface in virtual hubs. **Content** are elements within the set-up that enable programming, such as furniture, equipment, appliances, fixtures, emergency supplies, digital tools, resources, and multimedia.

These layers will inform resilience hub implementation. Now, refer back to **goals and governance** to identify which partners should take on specific, detailed implementation responsibilities.

Whether external consultants are required will depend on the hub model you have selected, as well as your organization's capacity and available resources. For example, if you are designing a new building or structure, you will engage architects, engineers, or contractors. Alternatively, you may be able to implement a hub by upgrading existing systems and assets—internally or with consultant support. For example, explore whether a municipal web platform can be adapted into a virtual hub, or whether temporary pop-up structures already exist that can be used as seasonal hubs.

Prioritize consultants and contractors with experience in community-centred and sustainable projects, and draw on existing procurement guides, such as accessible design standards, low-carbon building guides, and green development standards, to embed these priorities from the outset. Where possible, engage local trades, social enterprises, and Indigenous-owned and operated businesses to support local economic development, build workforce capacity, and draw on local knowledge. Consider companies that use local, circular, salvaged, or bio-based materials to reduce environmental impacts. Consider companies that use local, circular, salvaged, or bio-based materials to reduce environmental impacts.

You can also phase incremental investments over time to optimize resources and manage costs. This approach is particularly applicable to integrating a hub into an existing facility through retrofits. Building on the architectural concept of “shearing layers,” different components of a building or

structure can be retrofitted at different speeds over time, often bundled with other triggers, such as maintenance cycles or asset renewal.⁴ For example, when an existing roof is scheduled for repair or has reached the end of its service life, it creates an opportunity to integrate resilience measures affecting the building envelope, such as a white, blue, or green roof, solar hot water systems, photovoltaic panels with battery storage, or roof-mounted heat pumps. Please see [Appendix D](#) for other examples of how climate resilience retrofits can be integrated into other building maintenance, updates, or projects.



CONSIDER THIS

Consider accessibility of existing structures, and embed accessibility throughout resilience hub implementation by specifying accessibility-related design requirements for: physical accessibility (braille signage, step-free entrance and layout, accessible washrooms, sensory considerations), language access (multilingual signage, interpretation), and cultural accessibility (welcoming design, flexible spaces). Treat accessibility upgrades as co-benefits, not only costs.



LEARN MORE

The following are examples of sustainable and equitable procurement policies:

- **Sustainable Procurement Policy**, by the City of Mississauga.
- **Actions on Green Procurement**, by the Treasury Board of Canada .
- **Buy and Sell with Impact**, by Buy Social Canada
- **Social Procurement Program**, by the City of Toronto.
- **Transformative Indigenous Procurement Strategy (TIPS)**, by the Indigenous Services Canada.

Activation and operations

Resilience Hub activation does not require a completed facility to begin. When budgets are tight, a hub can begin operating with a single part-time coordinator supported by volunteers and partners. As community needs increase and funding and resources become available, the team can grow.

Operating and maintaining a hub require strong skills and relationships. Before the hub opens, translate the partner table from **project initiation phase** into operational agreements. Document who is responsible for specific tasks associated with hub coordination, community outreach, volunteer coordination, and specialist service delivery.

A selection of tools can be leveraged to help formalize and organize the people and relationships that will support your hub:

- **Memorandum of Understanding (MOU):** Documents the roles, responsibilities, and contributions of partner organizations (e.g., staff time, expertise, resources, and funding) during the hub operational phases.
- **Terms of Reference (TOR):** Establishes the membership, governance structure, meeting schedules, and decision-making processes for working groups or advisory bodies that support the hub.
- **Standard Operating Procedure (SOP):** Provides step-by-step instructions for routine operations, emergency activation, and deactivation/recovery, including operating hours, roles and responsibilities, communication protocols, safety and accessibility protocols, and resource and supply management.
- **Business Continuity Plans (BCP):** Identifies essential services, operational priorities, staffing needs, and contingency measures required to maintain hub functions during disruptions or emergencies.



RESILIENCE IN PRACTICE: ANCHOR INSTITUTION ROLE IN OPERATIONS AND MANAGEMENT

Anchor institutions like the YMCA of Greater Toronto offer reliable, resourced, and trusted nodes that can complement a city-led network, in coordination with municipal emergency response. Anchor institutions can say ‘yes’ when called-on in an emergency, because the relationship, preparation, and operational protocols already exist. MOUs and coordination agreements would be valuable to have in place to support this. Designing your hub’s role

clearly in coordination with the network, is what can enable the network of hubs to function under pressure.

It is also worth noting, a resilience hub operated by an anchor institution is not an emergency response organization. The YMCA of Greater Toronto works with its municipal partners very closely as to not confuse messaging or duplicate efforts, but to pick up where the municipality leaves off and offer support where needed. While municipalities lead and coordinate emergency response.

Inspired by a conversation with YMCA of Greater Toronto & Mantle Climate.

It is often best to start with a pilot activation, launching a small set of programs and services using existing spaces or platforms. Pilot resource-sharing initiatives, like tool libraries, seed exchanges, and repair programs, can extend the hub's reach beyond its physical space from the outset. Consider framing this early launch as a community event to raise community awareness and encourage participation. This allows you to test operations and gather feedback from staff, volunteers, partners, and community members on the hub's programming and overall functioning.

After evaluating the pilot and incorporating early feedback, move toward full activation by expanding programming, formalizing operational agreements, and onboarding additional staff as needed. At this stage, implement a monitoring and

evaluation framework (more details in the [monitoring and evaluation](#) section, below) to track progress, assess outcomes, and support continuous improvement. Use findings to adjust programs and operations, guide future investments, and provide evidence to support scaling and replication.

During set-up and throughout hub operations, continue seeking inputs and feedback from hub users and remain responsive, particularly to maintain an equity lens.



CONSIDER THIS

Resilience hubs should never be activated for the first time during an emergency. Practice your activation plan through tabletop exercises or simulated drills before the hub opens, and repeat periodically.

Establish formal relationships with the local Emergency Management Office before a crisis. Ensure the hub is included in local government emergency plans as a recognized community resource, participate in joint training exercises, and define communication protocols with the local government Emergency Operations Centre (EOC). Mutual aid agreements with neighbouring hubs or community organizations can provide additional surge capacity during large-scale events.

Effective activation planning includes creating specific, written protocols for each hazard scenario. Lay out what staff will do on day one of an Environment Canada



extreme heat alert, which sites to activate during an extended grid failure, which alert and air filtration protocols to engage during a wildfire smoke event, etc. Each scenario defined in advance will be easier to activate quickly if emergency strikes.

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RESILIENCE IN PRACTICE: CHILDCARE CONSIDERATIONS

The YMCA of Greater Toronto's experience during the COVID-19 pandemic revealed that childcare is a primary service. First responders and essential workers cannot remain on shift if their families are unsupported. A hub's service plan should identify childcare provision as an early activation service, particularly for communities with high proportions of frontline workers.

Inspired by a conversation with the YMCA of Greater Toronto and Mantle.





LEARN MORE

You can organize hubs based on several distinct governance and management models, each with different implications for accountability, sustainability, and community ownership. Refer to the following guide for more information on different operational and management approaches for hubs:

- **Resilience Hubs, Creating a Resilient Hub & a Spoke Network**, by Urban Sustainability Directors Network (USDN).

Reaching Your Community

A resilience hub is only as effective as the community that uses it. Getting people through the door and keeping them engaged requires more than sharing information. Clear, consistent, and locally-grounded communication is essential for a hub to function effectively. The hub is not only a physical or virtual space, but a shared resource that relies on awareness, trust and familiarity.

Spreading awareness

It is essential that residents know your hub exists, what it offers, and how to access its services before the hub is activated. Build excitement at multiple stages: as you work with community members to design the hub, when a site or model is selected, as you launch a pilot, when you choose initial programming, and in the lead-up to full activation. Make sure your partners are equipped with the language needed to be great amplifiers at

each stage. Properly engaging the local community and working with diverse partners early on means residents will already be familiar with the hub well before it opens. You've likely already built a working network of partners and service providers through this process; continue to use those relationships as key channels for outreach.

Build awareness by meeting people where they already are, rather than relying solely on new channels. Spread the word about the hub and its services in various ways, such as:

- At community gatherings, such as school events, libraries, farmers' markets, and neighbourhood festivals.
- Through trusted local messengers, including neighbourhood leaders, seniors, Indigenous liaisons, tenant representatives, and community-based organizations.
- With highly visible signage, including multilingual posters, banners, and wayfinding placed in everyday public spaces to help normalize the presence of the hub and provide clear information about where it is and how it can be accessed.
- Using digital communication to complement on-the-ground outreach; tap into social media platforms and community e-newsletters to share updates, promote events, and highlight how the hub functions in and out of emergencies.

Where possible, adapt messaging to the tone and platforms local residents and community groups already use. Consider targeted outreach to the equity-denied populations you have identified, keeping in mind that these groups are often harder to reach, as they may be more likely to lack free time, access to online and in-person community spaces, to speak your city's

dominant language, etc. This means going beyond mainstream channels through door-to-door engagement, phone calls, and partnerships with local organizations that are already trusted by underserved or harder-to-reach communities. All communication materials, whether physical or digital, must be designed with accessibility and inclusion in mind.

When hubs are located within existing facilities, such as libraries or community centres, leverage those spaces' existing communication channels. Add hub information to newsletters, bulletin boards, websites, and program calendars to integrate the hub into established routines and information flows.



LEARN MORE

ICLEI Canada's *Climate Communications Playbook: Behavioural Strategies for Community Action* offers a practical framework for communications and community engagement. Rather than relying on broad awareness campaigns, the Playbook encourages communicators to draw on behavioural science to inspire real action. The Toolkit also includes a complementary series of real-world *Climate Communications Case Stories* showing how these behavioural strategies have been applied by Canadian communities. Build on these examples to adapt what you've built and make it your own.



TABLE 5: BEHAVIOURAL AND ENGAGEMENT STRATEGIES FOR ACTIVATING HUBS, BASED ON ICLEI CANADA'S [CLIMATE COMMUNICATIONS PLAYBOOK](#).

STRATEGY	COMMUNICATION & ENGAGEMENT EXAMPLE
Social norms When people see neighbours or community members engaged, they are more likely to follow.	Give volunteers, staff, or whoever was involved in activating the hub a simple identifier like a button, a sticker, a lanyard and let word-of-mouth do the work.
Gamification Making action feel like play lowers barriers and builds momentum.	Host a prize giveaway or raffle tied to a first visit, or a seasonal resilience challenge with tiered actions; these can drive foot traffic and repeat visits.
Intrinsic value framing Connect the hub to things people already care about, like health, family, cultural identity, community pride.	Create outreach materials to show everyday services that the hub offers such as childcare programming, tool library, cooling spaces, etc.
Personalization Tailoring communications to specific audiences makes people feel seen and increases the chance they act.	Develop targeted brochures or guides for different resident groups such as tenants, newcomers, parents, seniors, or homeowners, and distribute them through channels each group already uses like a school newsletter, a faith community, or a local Facebook group.
Positive Framing Focus on opportunity, co-benefits, and achievable action rather than fear or emergency events.	Host local events, a kids' activity, or a community gathering. Lead with what the community is gaining from the hub, like a new resource, a shared space, local expertise.
Social influence People take cues from those they trust and admire.	Recruit local champions, people trusted across different community groups, and host tours or events with them. Let their networks extend your reach.
Feedback People adjust their behaviour when they can see the results of their actions.	Create a visible impact board at the hub, updated regularly, showing what the community has collectively accomplished since the hub opened, such as the number of emergency kits assembled, etc.



RESILIENCE IN PRACTICE: BUILDING COMMUNITY RESILIENCE THROUGH GAMIFICATION

Emergency Preparedness Week is a national awareness campaign held annually during the first full week of May, which encourages residents to prepare for emergencies by building emergency kits, creating emergency plans, identifying nearby meeting places or hubs, understanding local alert systems, and knowing when to shelter in place or evacuate.

As a communications strategy, the City of Brantford gamified preparedness education through a social media trivia contest. By offering participants a chance to win an emergency kit, the city increased engagement with preparedness information and encouraged residents to learn key emergency readiness concepts in an interactive way.

→ [City of Brantford Emergency Preparedness Week](#)

Building familiarity before emergencies

A key principle in resilience hub communication is that you build trust before a crisis occurs. If residents first encounter the hub during an emergency, the space can feel unfamiliar and stressful at the exact moment when reassurance is most

needed. Introduce the hub gradually as a normal part of community life.

Low-barrier programming is central to this approach. This can include free meals, charging stations, seed or tool libraries, language exchanges, and informal drop-in activities. Community skill-sharing sessions, seasonal preparedness workshops, community swaps, or open-house style events are other good options that allow residents to learn about the space without pressure or urgency.



CONSIDER THIS

Focus communication on making the hub feel like a shared community asset, not just a service activated during emergencies. Celebrate the hub through storytelling, community events, and regular updates that highlight how people are using it.

Use language that resonates locally and reflects how people already talk about their neighbourhoods and shared spaces. Avoid overly technical framing, and ground the hub in everyday community life. Keep the hub consistently visible even when it is not in emergency mode through posters, ongoing programming, and casual references in community spaces. Visibility over time builds recognition, and recognition builds trust.



RESILIENCE IN PRACTICE: WORDS MATTER

The name a community gives its resilience hub shapes whether residents find it, trust it, and use it, and whether elected officials will fund it. Montréal has grappled with this directly: “pôle de résilience” doesn’t always resonate, “climate shelter” carries homelessness associations, and naming has shifted with administrations. Other cities have landed elsewhere: New Orleans calls its hubs “[lighthouses](#),” Paris named theirs “les volontaires de Paris” (the Volunteers of Paris). Building in time for a deliberate naming conversation with the community, before communications materials are finalized is worth the investment.

Inspired by a conversation with Irene Cloutier, Ville de Montréal.

During emergency events

Ensure communication is clear, immediate, and easy to understand. Residents should not have to interpret whether a hub is open during a weather event or emergency. Define “emergency” triggers in advance, and communicate them consistently through multiple channels.

Support community access to the hub with visible on-site signage, and broader communication on neighbourhood platforms such as municipal alert systems, or 311 services. Use these channels



to direct people to the hub during emergencies. Prioritize multilingual communication to ensure activation information is accessible to all residents.

Where alert apps or emergency notification systems exist, integrate them into the hub’s emergency protocols in coordination with local public health or emergency management partners. Ensure consistency across these systems to reduce confusion and increase the likelihood that residents know when and how to access the hub when it matters most.



RESILIENCE IN PRACTICE: WORDS MATTER

During Hurricane Fiona in September 2022, residents of Pictou County faced power outages, communication disruptions, and gas shortages, both during and in the aftermath of the storm. In light of communication challenges in particular, the Municipality of Pictou County launched MOPC Alert, a notification system that provides residents with alerts about upcoming severe weather, comfort centre locations and operating hours, and other Emergency Management Office information.

→ [Municipality of Pictou County Alert System](#)

Now that the implementation of your hub is complete, the next section provides guidance on monitoring and evaluation of hub's effectiveness in meeting the goals you set for serving communities in-between, during and after climate events.



Monitoring and Evaluation of Resilience Hubs

PURPOSE: This section introduces what monitoring is, who must be involved, and how to conduct and fund monitoring.



Monitoring a hub involves establishing performance indicators, and regularly collecting and interpreting data to track progress with respect to your defined goals. Effective monitoring strengthens accountability and supports ongoing learning and improvement, ensuring that your hub fulfills the purposes for which it is originally designed.^{5,6} Good monitoring:

- Enables early detection of issues related to funding, staffing, scope, or budget.
- Identifies barriers to service-use to support informed decisions and equitable access.
- Integrates community perspectives and changing needs and priorities.
- Maintains partnerships necessary to achieve goals.
- Optimizes resources, such as time, money, and personnel, to save costs and improve hub performance.^{7,8,9}



Who is involved in monitoring

Monitoring should be a collaborative process led by a core project team with different partners. The core project team must identify which partners hold monitoring responsibilities early in the hub planning process. Refer to [Table 2](#) to make sense of which community partners can be engaged in monitoring. Table 6, outlines in more detail key roles and responsibilities associated with monitoring hubs; these should be tailored to your specific needs.

TABLE 6: EXAMPLES OF ROLES INVOLVED IN MONITORING RESILIENCE HUBS

ROLES	RESPONSIBILITIES
The core project team within the local government, Indigenous governing bodies, or public institution takes on the lead role in monitoring.	Accountable for monitoring hubs by setting indicators, coordinating partners, and allocating budget and staff to conduct monitoring, and evaluate collected data. Responsible for developing monitoring strategy; allocating budget and resources; managing and coordinating monitoring; reporting and communicating findings.
Community-based organizations (e.g., program managers, facility managers, administrative hub staff, neighbourhood representatives).	Collect operational and technical data on accessibility, usefulness, and inclusivity of the hub; participate in monitoring and evaluation activities that inform programming improvements.
Third-party consultants with expertise in evaluation and data analysis.	Assess, analyze, and interpret data (e.g. utility use, infrastructure performance, programming use, user feedback); develop evaluation reports.
Consultants with expertise in diversity, equity, and inclusion, and community engagement.	Conduct surveys on hub usability and effectiveness; conduct community consultations.
Academic and research partners.	Provide evaluation support and recommendations based on best practice research.
Emergency response staff and first responders.	Provide real-time situational observations related to hub safety and operability during emergencies.
Non-profit organizations, program coordinators, and community outreach staff.	Build capacity and provide training on monitoring.

How to monitor resilience hubs

You can develop an effective monitoring strategy for your hub as part of the planning and co-design phase to guide ongoing evaluation and optimization. Structure this strategy around three iterative steps: define meaningful indicators; establish transparent and consistent pathways to measure indicators; and interpret and communicate findings for accountability and continuous improvement.

The following several challenges can be present in to monitoring your resilience hubs were identified in interviews with staff and within existing monitoring resources:¹⁰

- **Shifting baselines:** Changing climate conditions, social systems, and funding priorities and mechanisms make it difficult to define a stable reference point for “resilience” over time.
- **Limited emergency events:** Many hubs have not yet been in “emergency mode,” either because an emergency has not arisen, and/or or because emergency activation depends on operational and administrative requirements, including those related to overnight sheltering. As a result, there is limited data available to evaluate hub performance.
- **Challenges in capturing qualitative outcomes:** Key impacts such as trust, social cohesion, adaptive capacity, and community readiness are hard to quantify. It is also difficult to attribute observed changes directly to hub interventions,

given the influence of overlapping community and environmental factors.

- **Long-term nature of adaptation outcomes:** Improvements in adaptive capacity often only become visible over years, or after rare extreme events.
- **Resource limitations:** Insufficient funding, staffing, and time can favour short-term, pilot projects. Many pilot initiatives lack predefined monitoring indicators due to short timelines, lack of sufficient funding, and changing goals.

Being aware of these challenges, and discussing them in the planning and co-design phase can make it possible to navigate and hopefully resolve them.

Step 1: Defining Indicators

Indicators are measurable variables used to track progress toward project goals and assess performance over time. They provide quantitative or qualitative evidence of trends and outcomes, helping determine whether activities are aligned with intended goals. Well-designed indicators support informed decision-making, accountability, and provide an opportunity for continuous improvement.⁵ Effective indicators:

- Track implementation progress and operational performance against your resilience and community goals
- Identify gaps and areas for improvement
- Inform adjustments to hub programming, partnerships, and resource allocation

To get a comprehensive picture of the resilience hub performance, use a combination of process- and outcome-based indicators, and of quantitative and qualitative measures.¹¹

Process-based indicators track progress by measuring whether systems and processes needed to implement and activate the hub initiative are in place and being carried out (e.g., the extent to which community members and partners are engaged in hub planning). **Outcome-based indicators** track whether the hub has achieved its intended goals (e.g., the number of people using the hub, demographic range of users).

Quantitative indicators rely on numerical data (e.g., hours of operation during an emergency, number of visitors/users in a given period, number of partnerships). **Qualitative indicators** use non-numerical data to describe experiences, perceptions, stories, and behaviours (e.g., testimonials that express sense of belonging, perceived usefulness of services).¹²

Refer to [Appendix E](#) for examples of key performance indicators that can support the evaluation of your hub. Be sure to tailor indicators to your project's specific goals, context, and priorities. Consider the following—drawn from research¹³ and conversations with Victor Reyes (Faith & the Common Good)—when selecting indicators:

- **Relevance:** Indicators should directly link to hub goals and intended outcomes.
- **Context-specific:** Indicators must be tailored to local conditions, hub priorities, and community access needs.
- **Feasible:** Monitoring must be realistic to measure given available time, budget, and capacity.
- **Sensitive to change:** Indicators must be able to capture meaningful changes in hub planning and implementation over time, including shifts in funding and priorities.
- **Actionable:** Indicators should be useful for decision-making and improving hub performance.



LEARN MORE

You do not need to monitor alone. Several resources can help with defining indicators and gathering data to track hub performance:

- **Advancing Implementation Training Initiative (AITI)** by ICLEI Canada: A comprehensive training and collaboration program designed to support municipalities and Indigenous communities in implementation and monitoring of their climate adaptation projects.
- **Regional Climate Service Centres (RCSC)**: Contact your RCSC to ask for support with monitoring activities, including research, access to localized data, development of performance indicators, and guidance on methods for measuring indicators and evaluating the hub performance. Centres across Canada include:
 - *Pacific Climate Impacts Consortium (PCIC): British Columbia and Yukon*
 - *ClimateWest: Prairie provinces (Alberta, Saskatchewan, Manitoba)*
 - *Ontario Resource Centre for Climate Adaptation (ORCCA): Ontario*



- *Ouranos: Québec*
- *CLIMAtlantic: Atlantic Canada (New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador)*
- *Northern Service Delivery Model: the North (Yukon, Northwest Territories, and Nunavut)*
- **Introducing Indicators: A first look at using indicators to measure adaptation progress**, by ICLEI Canada.



RESILIENCE IN PRACTICE: TOWN OF NEW GLASGOW RESILIENCE HUBS

The Town of New Glasgow uses hardcopy, paper sign-in sheets and supply usage logs to track the number of hub users and the types of supplies used. This monitoring tool enables post-event evaluation to identify what is lacking or in excess and will be used to report performance to the internal team and Council.

Inspired by a conversation with Rohan Mishra, Town of New Glasgow.

Step 2: Measuring Indicators

After defining your indicators, establish clear pathways to measure and use them. Design a measurement approach, plan data collection and management, and clarify who is responsible for each step.

Designing the measurement approach: For each indicator, define measurement design, including establishing a baseline to serve as the reference point to assess performance and measure progress over time.¹⁴ Where possible, collect baseline data early in the **planning and co-design phase**, before the hub is operational. For example, if your indicator measures average travel time for priority populations to access essential services during extreme events, establish a baseline by measuring current travel times to the nearest cooling centre, shelter, or community facility before the hub is established. After implementation, measure travel times again and compare it to the baseline to assess improvements in access. In addition to defining a baseline, for each indicator specify the unit of measurement (e.g., minutes, number of users, percentage) and the monitoring period (e.g., monthly, annually, during emergencies) to ensure comparability over time.

Planning data collection, analysis, and management: Identify appropriate data sources, which may include: the hub's operational records (e.g., hours of operation and service use), maintenance and inspection records (e.g. to confirm infrastructure performed as intended post-climate event), utility data (e.g., energy use or outages), and feedback from users and staff. Select data collection and analysis methods based on what each indicator is intended to measure. Quantitative methods, such as statistical and/or spatial analysis can track patterns and trends, while qualitative methods, such as surveys, interviews, focus groups, and field observations can capture user experiences, perceptions, and service relevance. A combination of both approaches is often most effective for understanding performance outcomes.

Establish clear procedures for storing and managing data, including defining how data will be recorded, where it will be stored, and how it will be maintained over time.¹²

Clarifying roles and responsibilities: Clearly assign roles and responsibilities for collecting, managing, analyzing, and reporting data. Divide these tasks among hub staff, partners, or external experts

Consider documenting challenges and barriers while measuring indicators, such as difficulties establishing baseline data, collecting or accessing data, defining indicators, and clarifying roles and responsibilities, to guide future monitoring efforts. The worksheet in [Appendix F](#) provides guidance to help you document indicators as described above. It was developed based on the T54 Monitoring and Evaluation Framework¹⁵ from the UN-Habitat Our City Plans initiative.



CONSIDER THIS

Make sure that the data collection process is ethical.¹⁶ Ensure you have:

Consent: Inform participants about the purpose of data collection and ensure they voluntarily agree to take part.

Data confidentiality and anonymity: Protect personal information by storing it securely and reporting data only in ways that do not identify individuals.

Transparency: Clearly inform participants of how their data will be used, who will have access to it, and how results will be shared.



Data confidentiality and anonymity: Protect personal information by storing it securely and reporting data only in ways that do not identify individuals.

Transparency: Clearly inform participants of how their data will be used, who will have access to it, and how results will be shared.

Data retention and deletion: Keep the collected data only for as long as necessary, and securely erase or anonymize it after a defined retention period.

When working with Indigenous communities, ensure that data collection and use align with **OCAP® principles** (Ownership, Control, Access, and Possession).¹⁷ These are:

Ownership: Recognize that Indigenous communities collectively own their data.

Control: Ensure communities have a meaningful role in how data are collected, used, and shared.

Access: Provide communities with access to their data and its interpretation.

Possession: Where possible, support community stewardship and storage of data.

Engage Indigenous partners early and throughout the process to ensure that data practices are respectful, culturally appropriate, and aligned with community priorities.

→ [OCAP principles training](#)

Step 3: Interpretation, communication, and optimization

Interpret the data gathered and draw lessons to improve hub performance. As outlined in [Table 6](#) above, the core project team should lead data interpretation, and may engage an external consultant to support analysis and interpretation.

Start by comparing measured data to baselines and goals. This process helps identify trends, strengths, and areas for improvement, and provides insights into how effectively the hub is serving your community.

Look beyond the results and consider the factors that may have influenced them. Examine progress or setback in reaching the intended outcomes (e.g., community preparedness, service use, social connectedness, and access to emergency support), and in the hub implementation process (e.g., type of services and partnerships established). Most importantly, explore how and why these changes occurred. Key questions include:

- How does monitored data compare to the hub's initial goals?
- What external factors (e.g., policy changes, seasonal variation, broader socioeconomic conditions) may have influenced the outcomes and processes?

In many cases, monitoring shows that your hub has contributed to reaching an outcome, rather than showing direct causality.¹⁸

Use the monitoring process to identify lessons learned, and future adjustments needed in the hub design, service delivery, and the allocation of resources.

Once you complete data analysis and interpretation, communicate findings and lessons learned to different partners to support information sharing, accountability, and continuous improvement. Share findings in ways that are meaningful to different audiences. When done well, this can build enthusiasm, encourage collaboration, and sustain long-term support from partners and the community.¹¹

Communicate findings differently when addressing different audiences. In broad strokes, progress will have to be communicated internally and externally. For internal audiences, like hub staff, the core project teams, or the local government departments, focus on supporting learning and improving operations. In addition to sharing key results and lessons learned, include clear and actionable recommendations. These may relate to improvements in services, operations, infrastructure, and partnerships, as well as adjustments to strategies, procedures, and allocation of resources. Engage internal partners with dashboards, meetings, reports, and workshops. The worksheet in [Appendix G](#) can help you report findings to internal audiences, and checklists in [Appendix H](#) help identify what is most important to consider when reporting findings to internal and external audiences.

For external audiences, such as funders, Council, and community members, the emphasis should be on transparency, accountability, and sharing lessons. Tailor reporting to each audience's priorities and needs. For example:

- Reports for funders may demonstrate how the hub's performance aligns with grant objectives and delivers on expected outcomes.
- Communication with Council can focus on policy alignment, cost-effectiveness, return on investment, and high-level community impacts, providing insights that support informed decision-making.
- For community members, messaging can highlight tangible benefits, such as improved day-to-day services and enhanced emergency support, including backup power, access to essential resources, and timely information. Be sure to also highlight services offered or changes made directly because of community input.

Across all audiences, consider how to make communication clear and accessible, using formats such as public-facing write-ups, newsletters, community meetings, events, social media, infographics, and videos. Choosing the right format helps ensure information is understood and used, and plays a role in building and maintaining trust.



RESILIENCE IN PRACTICE: IMPLEMENTING CLIMATE RESILIENCE CENTRES THROUGH THE YMCA OF GREATER TORONTO

The YMCA of Greater Toronto (the Y) has been advancing a network of hubs (CRHs) across its facilities to support communities during extreme weather and public health emergencies. This initiative is informed by the Y's 2018 Resilience Strategy. Building on its role as a trusted community anchor, The charity leverages existing spaces, partnerships, and programs as accessible and community-based assets for resilience. This initiative invested in staff training and emergency protocols, emergency supply kits, and strengthening partnerships with municipalities, healthcare providers, Indigenous communities, and the Canadian Red Cross for coordinated response. It also included upgrades to facility resilience such as backup power, improved building envelopes, and flood mitigation.¹⁹

Building on the project outcomes, the project team is now working to update the YMCA Resilience Strategy. Although a formal evaluation has not been conducted yet, informal observations include the following lessons learned:

- *Climate resilience investments and sustainability goals are complementary, not competing. In 2025, the Y reduced its absolute carbon emissions by 49% and emissions intensity by 58% relative to its 2009 baseline. This is in part due to Ontario's phase out of coal fired generation.*
- *Strong partnerships, especially with municipalities, are critical for coordination and effective response. This could help position*

organizations as reliable, ready-to-activate partners during climate events. For some, this could involve standing agreements or MOUs.

- *Measuring resilience is inherently challenging. Many outcomes remain intangible or only become visible during major events, with COVID-19 providing one of the few real-world tests of the CRHs.*

Inspired by a conversation with YMCA of Greater Toronto & Mantle Climate.



RESILIENCE IN PRACTICE: LIGHTHOUSE PROJECT (GREATER TORONTO AND HAMILTON AREA)

The Lighthouse Project was a one-year pilot in Toronto, Hamilton, and Brampton exploring whether existing community assets (particularly faith-based organizations) could function as local resilience hubs to support residents before, during, and after climate-related emergencies. The project was led by Faith & the Common Good in collaboration with the Community Resilience to Extreme Weather (CREW) initiative, and supported by Environment Hamilton and the City of Brampton's Emergency Management Office as partners.

The project was grounded in the idea that community resilience depends on both physical infrastructure and the relationships and trust built through strong local networks that support the most vulnerable residents. The project used asset-based community

development (ABCD) principles across the three sites, starting with what already exists (spaces, relationships, leadership) and building outward. Faith-based organizations emerged as key partners due to their trusted presence, physical space, and existing community ties that can be mobilized in times of crisis.²⁰

Although a formal monitoring process has not yet been conducted, informal evaluations have identified key lessons learned:

- *Social connections, relationships, trust, and local networks are more critical than physical infrastructure in determining how communities prepare for and recover from extreme weather.*
- *Starting from pre-existing partnerships enables faster and more effective action.*
- *Hyper-local, flexible approaches work better than standardized and uniform models as different locations require different approaches.*
- *Engagement through trusted intermediaries (faith groups and partner organizations), helps maintain trust and cultural sensitivity.*
- *Inclusivity requires intentional design to tailor the existing assets to the needs of different communities in different contexts.*

The Lighthouse Project also had several implications for practice as it demonstrates a shift from traditional emergency management toward a community-driven resilience model. It encouraged the development of similar initiatives (e.g., OakvilleReady Resilience Hub) and contributed to the development of hyper-local models for the hubs.

Key recommendations for practitioners include:

- *Invest in social infrastructure as core resilience infrastructure. Hubs are less about buildings and more about coordinated community relationships and check-ins during crises.*
- *Use existing community assets as the starting point, and strengthen them over time whenever funding is available.*
- *Strengthen cross-sector partnerships and sustained collaboration between municipalities, social services, non-profits, and grassroots organizations.*
- *Prioritize long-term coordination roles to maintain partnerships and continuity beyond pilot phases.*
- *Integrate simple continuous monitoring approaches, like regular check-ins and mixed qualitative-quantitative tracking, to optimize the process and keep momentum.*

Lessons learnt and recommendations for practitioners inspired by conversations with Victor Reyes (Faith & the Common Good), Beatrice Ekoko (former staff of Environment Hamilton), and Sheila Murray (CREW).

- [Lessons from Lighthouse project in North St. James Town](#)
- [Lessons from Lighthouse project in Brampton](#)
- [Lighthouse Project, Hamilton](#)

How to fund monitoring activities

Integrate monitoring expenses into the overall resilience hub project budget early in the planning and co-design phase (refer to Table 4). In practice, monitoring is rarely funded as a standalone activity. It is usually bundled into broader resilience, infrastructure, or climate adaptation funding, and delivered as part of implementation, operations, or program evaluation activities.

Expenses for monitoring hubs include:

- **Data collection:** Staff time, conducting surveys, interviews, community engagement activities, and workshops.
- **Tools and technology:** Sign-in systems, dashboards, sensors, equipment for tracking infrastructure usage and performance.
- **Training and capacity building:** Training staff and partners on data collection methods, indicators, ethical data practices, and monitoring procedures.
- **Analysis and evaluation:** External experts in data analysis, management, and reporting.
- **Reporting and communication:** Design and production of reports, dashboards, visualization tools, and knowledge-sharing materials.

Some monitoring costs may be part of ongoing program operations,²¹ supported by funding resources outlined in the planning and co-design phase (see [Table 4](#)).

For example, certain logistical expenses, such as staff time to notenumbers of visitors, and metres tracking generator usage, are part of routine program delivery. Additional funding may be available from local government budgets, or sources like federal and provincial programs, private sector partners (e.g., insurance providers, financial institutions, real estate sector), philanthropic organizations, and academic institutions. See Table 7, for more details on how different funding opportunities can support monitoring.



TABLE 7: OPPORTUNITIES TO FUND RESILIENCE HUB MONITORING

FUNDING TYPE	EXAMPLES OF SUPPORTED MONITORING ACTIVITIES
Capacity programs	Funding interns, coordinators, or temporary staff to support data collection, reporting, surveys, and ongoing monitoring activities.
Asset management budgets	Monitoring facility performance, building condition, and infrastructure maintenance.
Infrastructure grants	Tracking performance of infrastructure upgrades, post-implementation evaluation, and reporting on infrastructural resilience investments.
Research and innovation grants	Developing indicators, modelling, pilot evaluations, data collection analysis, and reporting.
Emergency management funding	Emergency response tracking, service usage during events, and hub performance evaluation during emergencies.
Public health funding	Monitoring hub's ability to respond to the health consequences of extreme climate events.
Utility or energy efficiency programs	Tracking energy use, emissions, and performance of building systems (heating, cooling, and backup power reliability).
Private sector sponsorships	Acquiring and using monitoring tools, digital platforms, community-based data collection, and reporting systems.



CONSIDER THIS

When designing a monitoring approach for hubs, begin by identifying the systems, routines, and data that are already in place. Many useful insights are already being captured through day-to-day operations such as facility logs, sign-in sheets, service records, staff observations, and maintenance reporting. Use existing resources to embed monitoring into routine workflows, increase efficiency and feasibility, and reduce costs by avoiding duplication. Once existing resources are fully utilized, identify remaining gaps, such as specialized indicators, surveys, or analytical tools, and then explore targeted funding or partnership opportunities to support these additional monitoring needs.



Final Words

Resilience hubs are among those multisolving solutions that deliver climate adaptation alongside community co-benefits. They act as community anchors, bringing together infrastructure, people, and climate solutions in one place.

You are now equipped with information and resources to set-up and monitor hubs in your community regardless of its location and size. As highlighted through examples and case stories from across Canada, different resilience hub approaches exist in practice. This flexibility is a strength, allowing each community to adapt the model to their own needs, capacities, and resources.

Hubs can start small and evolve over time as capacity, partnerships, and funding grow. What defines a hub is not its form, but the function it serves. It may be a physical space, a temporary or hybrid setup, or even an online platform that connects and mobilizes communities.

We encourage you to draw on your community's existing resources and work, such as climate vulnerability and risk assessments and established partnerships, to establish a hub that makes the most of available knowledge, time, and funding. Keep your hub initiative alive by actively monitoring progress, supporting ongoing learning and improvement, and integrating the evolving needs of communities.

The steps outlined in this guide can also be applied to other climate adaptation initiatives. Feel free to adjust and use them in ways that fit your local context.

You do not have to do this work alone. ICLEI Canada is here to support you through tailored guidance, capacity-building, peer-to-peer connection, and shared learning.

→ Visit icleicanada.org or

→ email iclei-canada@iclei.org to learn more.



Appendices

Appendix A: Examples of questions that can be incorporated into the engagement process to support vulnerability assessments

THEME	PROMPT QUESTIONS	INTENDED AUDIENCE
Climate impacts	- What climate-related events have most affected your community in recent years? - What were the main impacts and challenges experienced? - Are certain groups disproportionately affected? How so/in what ways? - What impacts took the longest to recover from?	Residents, community members and leaders, equity-denied groups, social service providers
Essential services and needs	- Is it hard to access cooling, heating, food, health services, and transit during emergencies? - Are there neighbourhoods with limited grocery access? - How long do service disruptions usually last, and who is most affected?	Residents, emergency responders, service providers, community organizations, equity-denied groups, health providers
Utilities and critical infrastructure	- How reliable are electricity, water, wastewater, and telecommunications during extreme events? - Which areas experience the most frequent outages or service disruptions? - How long do outages typically last? - Are there critical facilities (e.g., long-term care, shelters, high-rise buildings) that depend on backup systems?	Utilities, infrastructure departments, emergency management, housing providers, residents
Housing	- How well does local housing protect residents during extreme heat, cold, flooding, or power outages? - Are certain housing types or areas more vulnerable?	Housing providers, tenant associations
Systemic Structural inequalities and barriers	- What systemic barriers (e.g., income, language, transportation, digital access, trust) may prevent people from accessing support during emergencies? - What would make a resilience hub more accessible and inclusive?	Equity-denied groups, social service providers

Appendix B: Matrix to help plan resilience hub infrastructure, programming and services^{22, 23}

RESILIENCE HUB GOAL	PROGRAMMING AND SERVICES	ENABLING INFRASTRUCTURE
<i>Before emergencies: Preparing</i>		
Maintain general emergency preparedness	Emergency response planning and drills; early warning and alert system coordination; activation of hub protocols during declared emergencies; tabletop exercises and simulations.	Communications equipment; emergency storage; backup power
Build capacity , education, and social connection	Climate hazard safety and awareness sessions; emergency preparedness kit workshops; wildfire smoke box fan workshops; seasonal risk mapping with residents; community ambassador and volunteer training; climate leadership programs; youth programming and mentorship; phone trees and check-in networks; peer support network development; intergenerational programs; newcomer welcome and integration programming; multilingual outreach.	Flexible community rooms; multilingual signage; digital platforms; accessible meeting space
Maintain trusted outreach and communications	Multilingual newsletters and updates; social media and digital communications; print resource distribution; trusted messenger networks; resource directories.	Digital platforms; multilingual signage; communications infrastructure
Restore and expand public health and social services post-emergency	Ongoing health needs monitoring; preventive health and wellness programs; social isolation reduction programs; connection to housing, employment, and essential services for low-income residents.	Flexible program space; accessible washrooms; digital platforms
Share resources and build a community of reuse	Host repair events; swap events; tool library; educational events about circularity and reuse; develop a resource-sharing network.	Flexible program space; accessible washrooms; digital platforms; storage space
Advance food security	Community gardens and seed libraries; healthy food distribution and host local markets; community kitchens; harvest and preservation workshops; neighbourhood food-sharing networks; food skills programs.	Community kitchen; garden infrastructure; refrigeration; composting; water fountain
Support green infrastructure and low-impact development	Education on rain gardens, permeable surfaces, and urban greening; community stewardship of green spaces; nature-based solutions programming.	Rain gardens; permeable surfaces; bioswales; native plantings; outdoor gathering areas

Reduce carbon emissions and support energy resilience	Energy efficiency education; renewable energy literacy programs; low-carbon community skill-building	Solar+ battery systems; energy monitoring; EV charging; renewable energy infrastructure
Advance reconciliation and land-based connection	Indigenous-led land stewardship and ecological knowledge programming; cultural connection and ceremony; territory-specific environmental programming developed with and by Indigenous communities	Flexible and culturally appropriate gathering and ceremony spaces; outdoor land access (must be informed and led by local Indigenous groups)
RESILIENCE HUB GOAL	PROGRAMMING AND SERVICES	ENABLING INFRASTRUCTURE
<i>During emergencies: Climate Events</i>		
Protect vulnerable residents during extreme heat	Cooling centre; wellness checks; heat preparedness outreach	Cool rooms ; air conditioning; ceiling fans, shaded outdoor space; water dispensers; outdoor misting station; sleeping areas
Provide warmth and protect vulnerable residents during extreme cold	Warming centre; hot meals; emergency shelter, check-in programs	Sufficient heating infrastructure; kitchen; insulated space; sleeping areas
Provide continuity of essential services during power outage	Device charging; medical equipment support	Generator; electric vehicle charging; solar photovoltaic and battery back-up; communications equipment (e.g., additional plugs, variety of charge ports and cables); reliable Internet and cellular coverage
Protect from smoke inhalation during poor air quality events	Air quality information; N95 mask distribution; box fan filter workshops; communication protocol with public health to direct people to filtered spaces during high Air Quality Index days	Air quality monitoring display; clean air shelter space; HEPA and/or Minimum Efficiency Reporting Value (MERV) 13 filtration systems in designated clean-air spaces; airtight building envelope

Coordinate emergency response during flooding or severe storms	Emergency supplies distribution; information coordination; recovery navigation; 72-hour emergency kit; food security and Personal Protective Equipment (PPE) distribution (e.g. N95 masks); equipment lending for storm preparation	Temporary shelter space; waterproofing of building envelope and critical infrastructure; elevated floor; elevated mechanical and electrical rooms
Deliver health coordination and services	Vaccination and testing; first aid; health referrals; wellness programming; mental health and trauma support; climate-related illness care; rest and recovery space; connection to public health partners	Private screening room; handwashing stations; enhanced ventilation; accessible washrooms; AEDs; emergency supply storage
RESILIENCE HUB GOAL	PROGRAMMING AND SERVICES	ENABLING INFRASTRUCTURE
<i>After emergencies: Recovery</i>		
Support recovery , mutual aid, and community learning	Mutual aid networks; recovery navigation; rebuilding social connections; community debrief and learning sessions; documentation and lessons learned	Flexible gathering space; information bulletin board

Appendix C: Questions to consider when selecting a site—existing or new structure—for your resilience hub

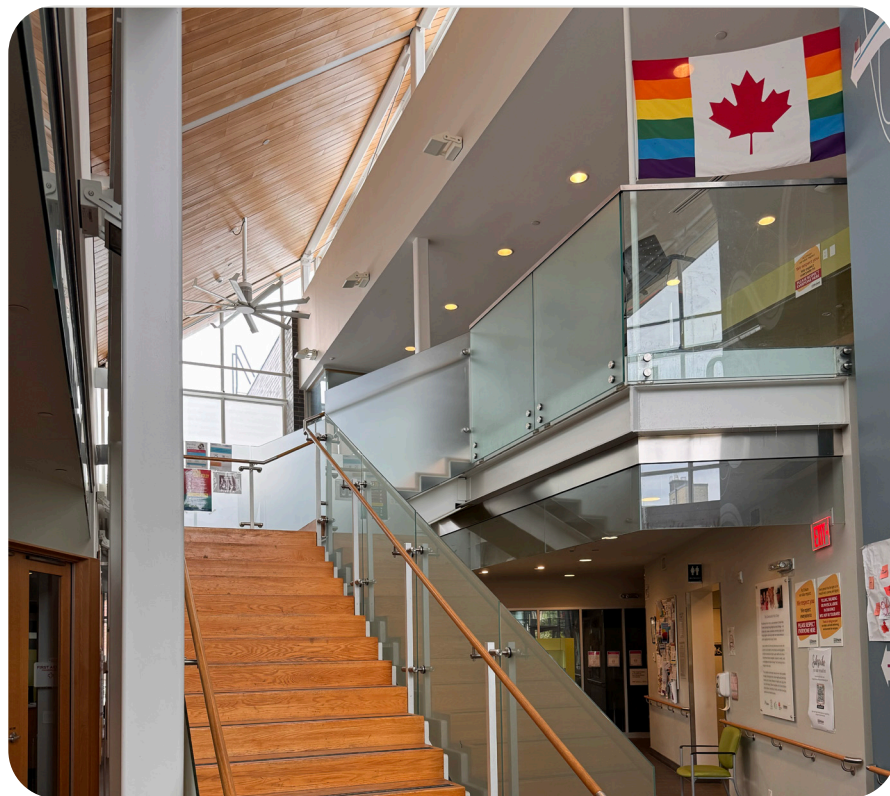
Any Site: Questions to ask before selecting a site for any physical resilience hub.

- Is the site located in or near the intended users, and/or within the catchment area identified in the planning and co-design phase?
- Is the site owned publicly or by a mission-aligned organization, or is a long-term tenure arrangement achievable?
- Is the site known and trusted in the community? Does the site feel safe for vulnerable groups?
- Are partners and operators able to support hub operations from this location?
- Is the site accessible by public transit, active transportation, and emergency vehicles (e.g. adequate turning radius, clearance, and route)?
- Does the site have the potential to align with programming and infrastructure needs as outlined in Appendix B? (e.g. Is there sufficient space for a heating and ventilation systems upgrade, can bioswales be installed?)
- Is the site located within an area at risk of flooding, wildfire, or urban heat island effects?
- Is the site within an area regulated by a conservation authority?
- Does current zoning permit the proposed hub uses (community assembly, emergency shelter, health services, food distribution etc.)?
- Are there Indigenous land rights, treaty obligations, or duty-to-consult requirements associated with this site?

Existing Structure: Questions to ask when considering an existing facility for your hub.

- What programming and services exist? Are people already spending time at this site?
- Can existing programming continue during renovation, or are temporary disruptions acceptable and/or space re-arrangements possible?
- Is the site indoors, outdoors, or both? Does it support year-round use?
- Can the space be activated at all hours for emergency use?
- Does the site have the physical space and features to support the programming and services identified in Appendix B?
- Is there reliable potable water?
- Has a building condition assessment or capital needs assessment been completed or budgeted?
- Is the building structurally sound? Are the foundation, roof, envelope, and load-bearing elements in acceptable condition?
- If the building pre-dates 1990, has an asbestos, lead paint, or hazardous materials assessment been completed? Are there contamination concerns from prior site use?
- Is the building heritage-designated or on a local, provincial, or federal heritage register? Note that heritage designation restricts exterior alterations and can require heritage impact assessments.
- What code upgrades will be triggered by the scope of renovation (e.g., accessibility, fire, energy)?

- Can the structure support additional roof loads for rooftop solar, green roof, mechanical equipment, etc.?
- Are HVAC systems at or near end of life? Is there a natural opportunity to upgrade to resilient systems? Does the current mechanical room have space for added capacity for heating, cooling, and ventilation systems?
- Can the building envelope be upgraded for airtightness with insulation, window replacement, air sealing?
- Is there space for backup power systems—generator or battery—with adequate ventilation?



BATHURST-FINCH UNISION HUB (PHOTO CREDIT: NILOOFAR MOHTAT)

Any Site: Questions to ask before selecting a site for any physical resilience hub.

- Is the full project timeline realistic given community needs (typically 5–10 years from site identification to occupancy)? If community needs are urgent, consider whether an existing space can provide interim programming while the new build proceeds.
- Are there regulatory concerns or considerations for the site? What range of assessments/studies are needed?
- Are there existing policies on climate resilience, or emergency facilities that could support or expedite development permit approval?
- Is the site serviced by reliable, resilient, and sufficiently-sized water, sewage, storm drainage, and electrical services?
- Does the site orientation support passive resilience (e.g., solar access, natural ventilation, and summer shading)?
- Is the building site outside of overland and coastal floodplains, interface-fire risk, and extreme heat zones? Or can resiliency be added by design? (e.g. Can the ground floor be elevated above the local flood risk level?)
- Can the roof structure be designed to support solar panels, green roof substrate, and rainwater harvesting from the outset?
- Are development charges, parkland dedication, and other approval-related costs understood and budgeted for?

Appendix D: Examples of bundling climate resilience upgrades with building updates in response to capital planning triggers

BUILDING SHEARING LAYER	TRIGGER	POSSIBLE BUNDLED CLIMATE RESILIENCE RETROFITS
Site (effectively permanent)	landscaping project; parking lot resurfacing; stormwater infrastructure renewal; green infrastructure funding	Grade site to direct water away from building; set ground floor elevation above local flood risk level; install permeable paving; design bioswales and rain gardens; plant native shade trees positioned for summer cooling; create accessible outdoor gathering areas with shade structures; establish community gardens with irrigation; ensure accessible pathways from transit stops; install outdoor lighting for evening and emergency activation
Structure (50–100+ years)	Major structural repair; foundation waterproofing; seismic or structural upgrade	Engineer roof structure to carry rooftop solar, green roof substrate, and mechanical equipment loads; install hurricane ties; set structural load capacity; waterproof foundation walls and install drainage membrane; install sump pump with battery backup; add backwater valve on sewer connection; raise critical electrical equipment above potential flood level; confirm or improve seismic performance if in a risk zone
Skin/exterior (20–50 years)	Roof replacement; window or cladding replacement; major exterior renovation; energy efficiency or building envelope funding	Consider blue, green, white/cool roof; add or increase insulation; install structural supports and conduit rough-in for rooftop solar even if panels come later; install or upgrade roof drainage and rainwater collection to cistern; consider an air-tight envelope (windows and sealing); durable cladding
Services (7–15 years)	HVAC replacement; electrical panel upgrade; solar or battery funding secured; plumbing overhaul; new local government emergency designation	Specify MERV-13 or HEPA filtration in new air handling units; install energy recovery ventilator to support airtight envelope; install air quality monitoring display; electrify energy sources
Space plan/interior (3–10 years)	Interior renovation; new tenant fit-out; accessibility grant; operator change	Design for flexibility—operable partitions, moveable furniture, multi-use zones that shift for emergency activation; designate and equip dedicated emergency storage space (ventilated, lockable); create a private screening or wellness room; ensure accessible routes throughout and upgrade washrooms to accessible standard; install multilingual wayfinding and emergency communication signage throughout; upgrade data and communications infrastructure; add dedicated device charging stations
Stuff (daily–yearly)	Any time; annual maintenance cycle; new funding; operator or staff change	Provide emergency supply kits (N95 masks, box fans with filters, device first aid, water); stock warming and cooling supplies (blankets, hydration, fans); set up charging stations; emergency supply storage; build an equipment lending library; test backup generator under load annually; install, inspect, and replace HEPA and MERV filters on schedule; restock supply kits; test emergency lighting and communications;

Appendix E: Samples of process- and outcome-based indicators that can be used to track the performance of hubs in terms of resilience and equity ( qualitative and  quantitative indicators are colour-coded)

INDICATOR TYPE	PROCESS-BASED INDICATORS	OUTCOME-BASED INDICATORS
<i>Access/reach</i>		
Geographic reach	- The extent to which walkability analysis was used when selecting hub locations. - The extent to which social vulnerability data was used when selecting a site.	% of priority populations within a defined walking or travel distance from the hub - Average travel time for priority and vulnerable communities to reach the hubs
		The extent to which users from diverse community groups can reach the hub by public transit during normal and emergency conditions
Architecture and physical design	The % of universal and accessible design principles, based on recognized frameworks, integrated in design.	% of users reporting sense of safety in and around the hub
	The extent to which safety protocols have been considered in physical design.	The extent to which users can access hub spaces and services before, during, and after emergencies.
Digital accessibility	Percentage of hub online resources that undergo an accessibility review before publication.	The extent to which users can access hub information during normal and emergency conditions
	The extent to which community language needs for accessing hub resources are assessed during the planning phase.	- Average load time of hub digital platforms during peak or emergency periods. - Number of languages offered on hub information platforms (websites, apps, notices). compared to the goal number.
Operational accessibility	- The extent to which planned hours of operation align with established operating goal hours. - Number of extended operating hours planned for emergency activation compared to the established target.	% of community members using the hub during regular hours and during emergency conditions. - Total number of extended operating hours during evenings and weekends.
	The degree to which operational staff trained to support people with mobility, sensory, or cognitive challenges.	Users' reported sense of independence and confidence accessing services without requiring excessive assistance.

<i>Service relevance and quality</i>		
Service inclusivity	- The extent to which needs of different communities and vulnerable residents are accounted for in service planning and design. - The extent to which priority populations are identified and targeted in outreach compared to goals.	% of services that reach priority or vulnerable populations. % of users reporting that services meet their needs.
		User reports of facing barriers or supports when interacting with hub staff, services, or platforms.
Service quality	Degree to which annual service audits or reviews have been implemented.	- Number of service complaints per 100 users. - The capacity of cooling/warming spaces. - Number of users that can be accommodated by emergency facilities (e.g., shelter capacity in people).
	- Degree to which user feedback systems are implemented and informing services. - The extent to which procedures are implemented to scale up services during emergencies.	- Users' reported awareness of services. - The extent to which users report satisfaction with quality of services before, during and after emergencies
Community preparedness and capacity building	Number of community preparedness programs planned compared to the established targets and goals.	- Enrollment rate in preparedness programs. % of users reporting preparedness and behavioral changes after using services.
	The extent to which emergency training, workshops, and skill-building have been implemented.	Community members' perceived readiness and confidence to respond to climate-related emergencies.
Essential services during emergencies	% of staff trained in emergency service delivery compared to goals.	- Number of essential services provided during and after emergencies (e.g., water, communication, food, electricity, shelter, etc.). % of users reporting satisfaction with essential services during emergencies.
	Level of readiness to provide essential services (water, communication, food, electricity, shelter, etc.) during emergencies.	The extent to which individuals report being able to access and benefit from essential services after emergencies.
Health and wellbeing	Number of community health support needs identified and considered in hub planning.	- Number of individuals using the hub's health and wellbeing programs and services. % of priority or vulnerable populations accessing health and wellbeing services.
	The extent to which physical and mental health check-ins and support services have been implemented.	The degree to which users feel improvement in their physical/mental health after using hub services
Cultural sensitivity	Percentage of hub programs developed with input from diverse cultural communities.	% of users reporting that hub services are culturally inclusive.
	The extent to which inclusion has been integrated into decision-making processes, compared to goals/plans.	The extent to which community members feel their cultural practices are supported by hub services.

<i>Infrastructure resilience</i>		
Resilient structure	Number of completed inspections or tests of waterproofing features per year compared to goal.	- The level of structural functionality during and after extreme weather events (e.g., flooding events, thunderstorms, etc.). - The extent to which users are satisfied with the hub's structural performance after precipitation and temperature events.
	- The extent to which floodplain and climate risk maps inform site selection and design. - The extent to which net-zero strategies are considered in hub design and/or retrofit planning (e.g., passive and reliable warming/cooling, etc.).	- Number of flooding or water-related damage incidents affecting the hub. - Number of times the hub had to close due to extreme weather events.
Resilient water and wastewater system	- The extent to which planned backup water supply and wastewater management systems are considered in hub design. - The extent to which stormwater management and water reuse options (e.g., bioswales, permeable pavements, green roofs, rainwater harvesting, etc.) are considered in hub design.	- Numbers of water or wastewater service disruptions during emergency events. - Numbers of days and hours water and wastewater systems have been available during emergencies.
	% of wastewater and water infrastructure inspected and maintained compared to plans.	Users' perception of water quality, reliability, and safety during normal and emergency conditions.
Resilient power	The extent to which backup power needs and options (e.g., generators, batteries, solar storage) are assessed during hub planning and design.	- Duration (days/hours) of power availability during power outage events. - Number of power interruptions affecting hub operations.
	Number of power resilience strategies incorporated into hub design	Users' perceptions of reliability and stability of power supply during emergencies.
Resilient communications	The extent to which emergency communication protocols and tools have been considered.	% of users that report having access to data and telecommunications during emergencies.
	Number of emergency communication channels available (e.g., internet, radio, SMS) identified and planned.	Users' perception of the reliability and clarity of hub communications during emergencies.

<i>Governance and operations</i>		
Roles and responsibilities	The extent to which governance structure, roles, and responsibilities are clearly defined.	% of staff reporting clear understanding of their roles and responsibilities during emergencies.
Capacity and resources	% staff training implemented in operational and emergency procedures	- Staff-to-user ratio during peak or emergency use. - The length of operational delays due to staff shortages in emergencies.
	The extent to which back-up staff or volunteers are in place for emergency conditions.	The degree to which users are satisfied with staff performance during emergencies.
Community representation	Number of community members and priority populations engaged in the hub design and implementation.	The % of priority populations represented in governance bodies compared to goal levels.
	The extent to which processes are in place to engage communities and vulnerable groups in the hub design and implementation.	The extent to which users feel their voices and perspectives are considered in hub decisions.
Partnerships	Level of formal coordination implemented with community-based organizations, utilities, and social service providers.	Number of services, resources, or programs delivered through partnerships with external organizations
Monitoring processes	Frequency of implemented monitoring/reporting cycles.	Time lag (days/weeks) between monitoring data collection and action taken.
	The extent to which performance monitoring and reporting systems are implemented.	- The extent to which lessons learned are documented and shared. - The extent to which improvements are made based on the monitoring.

Appendix F: Worksheet for measuring indicators, adapted from UN-Habitat's T54 Monitoring and Evaluation Framework

GOAL	The resilience hub goal to be evaluated.
INDICATOR	The process-based or outcome-based indicator used to measure progress toward this goal. These can be qualitative or quantitative.
Baseline	The baseline value of the indicator before resilience hub implementation, used to measure progress and impact.
Indicator source	Describe where or how the indicator will be obtained.
Unit of measure	Unit in which the indicator is measured.
Sources of information	The specific data sources from which information will be collected to measure the indicator.
Institution in charge of data collection	The organization, team, or individual responsible for gathering the data needed to measure the indicator.
Method	The process and approach used to measure the indicator, specifying how data will be collected and analyzed.
Monitoring period	The specific interval or schedule for collecting and reviewing data for the indicator, such as weekly, monthly, quarterly, annually, or before/after an intervention.

Appendix G: Worksheet for reporting on findings from monitoring and evaluation, for use with internal audiences.

PROJECT MONITORING CONTEXT	
Goal #	The hub goal being evaluated.
Indicator #	The specific indicator used to assess progress toward the goal.
Monitoring period	Start (mm/dd/yy) to end (mm/dd/yy)
OBSERVED PERFORMANCE	
Comparison to baseline	Key trends and changes based on comparison between measured data and baselines.
Successes	What worked well, and which factors contribute to positive outcomes. Any emerging co-benefits also can be documented here.
Challenges	Barriers, limitations, or gaps that affected performance or prevented achieving the goal.
Lessons learnt	Key insights to inform future actions and improvements.

RECOMMENDATIONS	
Recommended actions	Key improvements needed (e.g., services, operations, partnerships, etc.), with priority levels (high, medium, low).
Responsible entity	Organization or team responsible for implementing actions.
Timeline for implementation	Start (mm/dd/yy) to end (mm/dd/yy)
COMMUNICATION AND LEARNING	
Intended audience	Internal audiences who should receive these findings.
Communication method	Approach for sharing findings (e.g., meetings, reports, dashboards, newsletters).
Follow-up and review	When and how the progress will be reassessed.

Appendix H: Considerations when reporting monitoring findings to internal and external audiences.

CHECKLIST: INTERNAL REPORTING	
To ensure monitoring leads to clear, actionable next steps, consider:	
	Clarity of findings and insights: Clearly show what has changed and why it matters.
	Credibility of analysis: Acknowledge data limitations, uncertainties, and assumptions.
	Relevance for decision-making: Articulate implications for operations, services, or strategy, and answer the question “so what?”.
	Actionability: Recommend specific actions to clearly indicate what should happen next to improve hub performance.
	Accountability: Clearly assign next steps and responsibilities of the core project team (e.g., the local government departments) and key partners (e.g., the hub staff).
CHECKLIST: EXTERNAL REPORTING	
Sharing results from monitoring can strengthen accountability, build trust, and influence policies, funding decisions, and best practices. For best results, ensure:	
	Strategic focus of content: The purpose, target audience, and key messages are clearly defined, highlighting hub services, changes in community preparedness, and key lessons learned to improve operations and services.
	Audience relevance: The content, tone, and level of detail are tailored to different audiences, reflecting their roles. For example, content will shift for audiences who were involved in hub planning and delivery, who are hub users, or who provide funding and support.
	Clarity and accessibility: The information is presented in plain language, with a clear structure and minimal jargon, using visuals or storytelling where appropriate to illustrate resilience outcomes and local impacts.
	Timelines: Findings are communicated at the right time to inform climate resilience planning, emergency preparedness activities, and funding cycles.
	Two-way engagement: Opportunities for feedback, questions, and dialogue are provided to validate findings, incorporating community experiences and climate resilience needs.
	Relationship-building: Communication supports ongoing collaboration among the local government, community organizations, services providers, and residents to support long-term resilience and trust. ²⁵

CHECKLIST: EXTERNAL REPORTING

Sharing results from monitoring can strengthen accountability, build trust, and influence policies, funding decisions, and best practices. For best results, ensure:

- | | |
|--|---|
| | Strategic focus of content: The purpose, target audience, and key messages are clearly defined, highlighting hub services, changes in community preparedness, and key lessons learned to improve operations and services. |
| | Audience relevance: The content, tone, and level of detail are tailored to different audiences, reflecting their roles. For example, content will shift for audiences who were involved in hub planning and delivery, who are hub users, or who provide funding and support. |
| | Clarity and accessibility: The information is presented in plain language, with a clear structure and minimal jargon, using visuals or storytelling where appropriate to illustrate resilience outcomes and local impacts. |
| | Timelines: Findings are communicated at the right time to inform climate resilience planning, emergency preparedness activities, and funding cycles. |
| | Two-way engagement: Opportunities for feedback, questions, and dialogue are provided to validate findings, incorporating community experiences and climate resilience needs. |
| | Relationship-building: Communication supports ongoing collaboration among the local government, community organizations, services providers, and residents to support long-term resilience and trust. ²⁵ |

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