

HAWAI'I

BEAD FIVE-YEAR ACTION PLAN



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FEDERAL FUNDS TO HAWAI'I

\$149.5 Million
Broadband Equity, Access, and Deployment (BEAD) Program

\$115 Million
Capital Projects Fund (CPF)

\$90 Million
Tribal Broadband Connectivity (TBC) Program

\$37.4 Million
Enabling Middle Mile Broadband Infrastructure Program

\$571,000
Digital Equity Act, State Plan

\$16.6 Million
Affordable Connectivity Program (ACP)

... and more to come



A high-speed Internet connection used to be a nice-to-have, but today, it is a necessity. An estimated 12,700 households in Hawai'i cannot connect to the Internet at home or are relying on outdated technology to get it, while an estimated 100,000 residents are eligible for financial assistance with their home Internet bills. Hawai'i will receive more than \$400 million in total from a number of federal programs to build broadband to unconnected communities. The coronavirus pandemic highlighted that the Internet is not just for entertainment; it is a crucial component to life, no matter where you live. Without robust, reliable high-speed Internet, kids cannot complete their homework, residents cannot telework or train online for new careers, and people may have to drive for hours to access healthcare or government services.

Under the leadership of Governor Josh Green and Lt. Governor Sylvia Luke and building on the initiatives started under Governor David Ige, the University of Hawai'i (UH) has been tasked with coordinating all of Hawai'i's broadband projects and developing a plan for how the federal funds will be spent. UH is partnering with the four Hawai'i counties, various state agencies, community organizations, the telecom industry, and others to understand each community's greatest needs as we all work toward a common goal of ensuring all residents are equipped to fully participate and thrive in a digitally connected world.

As the world's most geographically isolated population center in the world, Hawai'i relies on a network of undersea and terrestrial cables to connect with the world. This historic federal funding allows Hawai'i to strategically invest in critical infrastructure — cables and wires — and critical support services to help people get online and navigate the Internet safely.

Among these programs is the Broadband Equity, Access, and Deployment (BEAD) Program, a \$149.5 million award to Hawai'i, which prioritizes building high-speed internet access to unconnected (i.e., unserved) residential locations, and to communities with underperforming Internet connections (i.e., underserved). Over the next four years, UH will competitively award these funds to build out new and improved Internet service for the thousands of homes that are unserved and underserved in our state.

Under the #InternetForAll initiative, BEAD is one of a few federally funded programs that will help us achieve:

1. High-speed Internet availability for all;
2. Affordable access for all; and
3. Digital literacy skills for all.



THE STATE OF CONNECTIVITY IN HAWAI‘I

The state of Internet connectivity in Hawai‘i can be measured by three factors: access, affordability, and adoption.

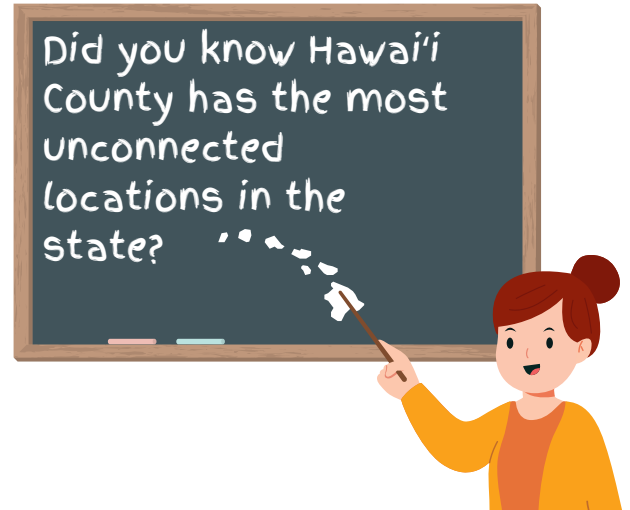
ACCESS Access means having the ability to connect to the Internet with a high-speed, reliable, wired connection. Most urban areas already have broadband access provided by private Internet service providers. Compared with other parts of the country, Hawai‘i has a relatively low percentage of homes (about 3.8%) with no available high-speed Internet (i.e., unconnected), according to the National Broadband Availability Map as of June 2023. This is different from the almost 10% of households recorded in the State of Hawai‘i Data Book (2021) that do not have Internet subscriptions either because they are unconnected or another barrier (e.g., subscription costs or lack of interest) exists.

AFFORDABILITY

Affordability means being able to pay for Internet service on an ongoing basis for a household without causing undue financial hardship. With the typical high-speed Internet service costing approximately \$50-\$70 per month, affording high-speed Internet is not always a given. To date, more than 45,000 of Hawai‘i's households have been enrolled in the Federal Communications Commission's Affordable Connectivity Program (ACP), which has provided over \$16.6 million in financial assistance to eligible households. As many as 100,000 households are likely eligible for this financial assistance.

ADOPTION

Adoption is defined as the ability of Hawai‘i residents who have access to the Internet to utilize the Internet independently and safely. This involves lowering barriers that would interfere with one's ability and empowering residents to navigate digital ecosystems confidently. According to a 2021 survey by the Hawai‘i Department of Labor and Industrial Relations, Hawai‘i's less digitally ready population is nearly twice as large (40%) as a comparable national study in 2015 (19%).



HAWAI‘I QUICK STATS

11,669

Unserviced Homes and Small Businesses

1071

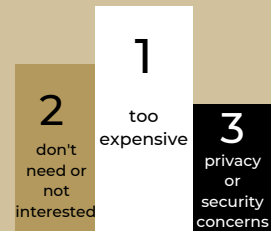
Underserved Homes and Small Businesses

3 in 5

Don't Trust Online Information

Hawai'i Digital Literacy and Readiness Study, 2021

Top Reasons for Non-Internet Use



Internet Use Survey, Nov. 2021

Island	Unserviced	Underserved
Kaua'i	383	12
O'ahu	752	135
Hawai'i	9054	335
Lāna'i	41	0
Maui	1039	561
Moloka'i	400	28

National Broadband Availability Map (NBAM), June 2023

2X

Hawai'i's Less Digitally Ready Population (40%) Compared to National Average

Hawai'i Digital Literacy and Readiness Study, 2021

45,000+

Households Enrolled in ACP

ACP Enrollment and Claims Tracker, July 2023



About 1 in 10 Households Reported No Internet Access

The State of Hawai'i Data Book, 2021



OUR GOALS AND VISION

The BEAD Program is more than just a capital improvement fund to build new cable and wires to unconnected locations. A critical component involves creating training and other support programs around these new connections to set newly connected residents up for success.

A high-speed Internet connection can change lives. Residents can work from home or visit with their doctors online, eliminating commute times, saving money on gas and parking, and wear and tear on State and County highways. Residents could grow their household incomes by opening e-commerce businesses or taking online classes to train for higher paying careers.

Children might be less likely to fall behind academically if they can catch up on missed lessons online, and families can stay more connected with family and friends far away with a stable video connection – one that is not blurry all the time. There are many more possible ways high-speed Internet can dramatically improve daily quality of life.

Over the next four years, UH will look to "braid" BEAD funds with the additional millions provided to our state to ensure our communities are all connected and that each and every resident has the necessary digital skills to confidently and successfully navigate the Internet. This broadband deployment plan has two parts:

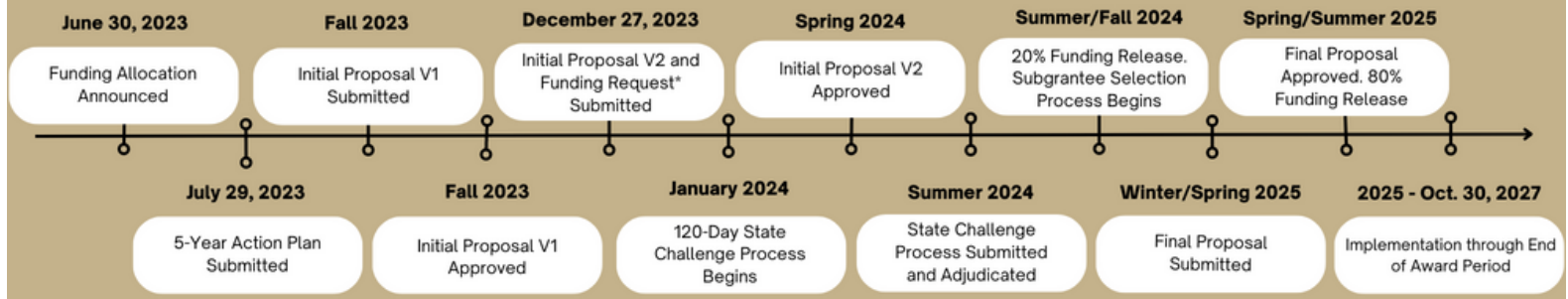
- Infrastructure — Build the cables and wires to homes and recognized community centers.
- Education — Offer a broad array of support services that help residents get online, navigate the Internet safely, realize new economic opportunities, and stay connected through financial assistance programs if eligible.

Advancing these strategic objectives through partnerships with local stakeholders and targeted community outreach inform the foundation of our Five-Year Action Plan, with concrete actions to be defined in Hawai'i's BEAD Initial Proposal, to be completed in December 2023.

Hawai'i's target to complete Universal Service access to the Internet relies on the combination of BEAD funds through 2027, other federally funded (RDOF and CAF) commitments to be fulfilled by Hawaiian Telcom, and the ability to overlay effective and affordable alternatives, such as low Earth orbit (LEO) satellite service (Starlink, Project Kuiper, etc.) for very high-cost locations. Related key middle mile investments funded by other federally broadband programs are expected to be completed by the end of 2026; these investments are expected to lower the cost of service delivery to incumbent and new market entrants. This will be key to increasing competition and availability and driving down the cost of high-speed Internet services throughout Hawai'i. Current funding supports continuous improvements to Internet connectivity in our State through 2030, with a look toward creating a sustainable Internet access market for years to come.

Hawai'i will provide universal access to high-speed Internet for all residents by 2030. Our public sector — State and counties — together with our community service providers and private employers, will work to maximize the benefits of this historic investment of public funds to achieve this vision. All residents will be connected via modern fiber optic or similar service to guarantee high-speed (100Mbps or better) access.

HAWAI'I BEAD TIMELINE



***Initial Funding Request submission required for release of 20% funds. Otherwise, subgrantee selection process will begin after approval of the Final Proposal.**



UNDERSTANDING BEAD

The BEAD Program has three priorities: (1) building out appropriate Internet solutions to households and small businesses that are unconnected (i.e. have no existing Internet infrastructure to their premise); (2) upgrading Internet infrastructure to properties with underperforming speeds; (3) and getting community anchor institutions (CAIs) connected to the Internet. This program is intended make sure each and every citizen has fast and reliable Internet infrastructure available to them. It is important to understand that though this program promises availability of Internet, residents will still need to pay a subscription to access the Internet at their residences.

The Affordable Connectivity Program offers residents an opportunity to get Internet at a reduced cost. Interested households must apply for the benefit at [getinternet.gov](https://www.getinternet.gov).

Reasons to Get Connected

Today, Internet access at home is widely regarded as a necessity to thrive in our digitally connected world. Used appropriately, the Internet offers a number of benefits, including:

- Working from home
- Telehealth and telemedicine access (less in-person doctor's visits)
- Online workforce skills development
- Remote learning (get a degree or certification at home)
- Staying in touch with loved ones
- Starting a business
- Saving time by eliminating commutes
- Accessing goods and services online

Community Anchor Institutions

Community Anchor Institutions (CAI) are community organizations or public spaces that may provide access and support services to the public. This could include outreach, access to computers or other Internet-capable devices, Internet access, and digital literacy programs serving low-income households, the unemployed, and kupuna. Existing CAI sites:

- Schools
- Libraries
- Medical/healthcare centers
- Community centers
- Community colleges
- Other institutions of higher education
- Other public facilities

WHERE WE STAND

The Five-Year Action Plan is the state's first major submission for the BEAD Program, outlining the status of our state at present and our high-level plan towards deployment of funds under BEAD. To date, the University has hired two additional full-time employees with BEAD planning funds dedicated to the effort as we gear up towards outreach and engagement activities in the second half of 2023. After submitting our Action Plan, the University will turn its focus to the Initial Proposal and Challenge Process, which will further detail the communities who will be eligible for BEAD funding and the process for which funds will be competitively awarded. Once the Initial Proposal and Challenge Process are completed and approved, a small percentage of funding will become available on a competitive basis.

USING BEAD FUNDS

It is important to understand that BEAD funds will not be available to individuals. This program will award funds on a competitive basis to entities that must apply to specific requests for proposals that will be released starting in late-2024. Parties who apply are not guaranteed funding and will need to meet the minimum application requirements, which will be defined at a later date and available for public comment in Hawai'i's BEAD Initial Proposal.

Competitive announcements will be geared towards entities capable of building Internet infrastructure to unconnected locations first, before addressing locations relying on outdated or slow technologies. In the event there is funding remaining after addressing the top two BEAD funding priorities, remaining funds may be used to create competitive digital equity programs. Application windows will be open for a limited time and will be reviewed by the University of Hawai'i using a strict scoring process to identify the best candidate from the submitted applications under each competitive opportunity. The best candidate will then be awarded funds to carry out their proposed plan and will be closely monitored to ensure that awardees are using funds appropriately and effectively, completing their projects in a timely manner according to the plan they submitted.

Please note that individuals and their households will not see any direct funds given to them under this program. For residents and communities who do not have Internet available at their residential location and those consistently experiencing slow connectivity, the best course of action is to contact their Internet Service Provider first to see if Internet is available at their address and whether their slow Internet is due to old technology. If not, these individuals should contact their local county office, a local Internet Service Provider, or a non-profit organization that could submit a formal "challenge" in 2024 to determine eligibility for BEAD funding. Eligibility for BEAD funding requires that a location is unconnected or served by very old, slow technologies. Eligible locations will be identified under a competitive announcement to receive funding to build out new or improve underperforming existing Internet infrastructure.



OUR APPROACH

The good news is that compared to most other states, Hawai'i has fared reasonably well when it comes to getting residents connected to high-speed Internet service. However, those living in rural and remote areas of our state have not been as fortunate and have been historically left behind for a variety of reasons. Hawai'i's unique geography contributes to high building costs, which makes the cost of delivering service to sparsely populated regions with few customers financially difficult for private companies. Additionally, our State still has many pockets of residents with poor or no connection to the Internet for various reasons that remain unaddressed by mass market service providers.

Here are some of the actions that Hawai'i will take to achieve its two main objectives of building infrastructure and providing digital literacy support services:

1. Seek the community's help to identify unserved and underserved locations and raise awareness about the availability and potential benefits of universal access to high-speed Internet.
2. Seek the community's help to identify potential Community Anchor Institutions that could be wired for broadband access and potentially serve as future digital hubs where residents can gather for technical assistance, digital literacy training, and other support services.
3. Ensure coordination of all current and future State and Federal broadband spending projects and related service projects to promote synergy and avoid duplication.
4. Invest public funds to serve areas historically left behind and unserved by the private market. These investments are necessary to provide long-overdue digital equity to our State's rural, remote, and unserved communities. The investment will also encourage potential new players and/or innovators in the marketplace by lowering the cost of entering the market.
5. Where appropriate, leverage public funds with matching capital investment by private industry.
6. Increase the overall resiliency of Hawai'i's high-speed Internet connections to the world by replacing aging undersea cables and inter-island connections.
7. Build upon the digital equity plans and strategy being implemented by the Department of Business, Economic Development, and Tourism's (DBEDT) Digital Equity Office. Robust digital literacy is just as critical as reliable hardware and connections. Broadband adoption statistics indicate there is room for improvement in the digital literacy space.
8. Coordinate with related entities, including schools, universities, the labor community, and the local business community to align Hawai'i's future workforce training pipeline with the broadband-enabled job opportunities that will become available in the coming decade.

OUR PRIORITIES

1. Unserved and Underserved Last Mile
2. Digital Equity and Digital Literacy (Wrap-Around Services)
3. Expansion of Community Hubs
4. Community Digital Navigator Program
5. Information Technology / Cyber Workforce Development
6. Filling Connectivity Gaps

Who's in the Conversation:

- State entities (DBEDT; Department of Hawaiian Home Lands)
- Our Counties
- Internet Service Providers (Hawaiian Telcom; Charter; AT&T; Verizon; T-Mobile)
- Other telecom businesses (Lumen Technologies; Servpac)
- Electric Cooperatives (Hawaiian Electric; Kauai Island Utility Cooperative)
- County Economic Development Boards
- State chambers of commerce
- Non-profits and other philanthropic organizations
- Community service providers
- Educational institutions and organizations

Planned activities funded under this program include:

- Internet buildout to unconnected and poorly connected residences.
- Community Internet Access Hubs, or places in local communities where residents can access the high-speed and reliable Internet outside of their home at no cost to them.
- Development of a "State of the Internet" map for Hawai'i, showing unconnected or poorly connected locations, locations funded under other federal or state funds, community Internet access hubs, and locations for digital literacy programs.
- Community "Digital Navigator" program, where residents with high digital literacy skills teach those with little or no digital literacy skills how to navigate devices and the web.
- Community outreach and engagement activities to educate the community on the #Internetforall initiative and the need for Internet, as well as learning about Internet and digital literacy needs across counties and their communities.
- Broadband outreach, training, and education content creation (flyers, brochures, agendas, and curricula) for public distribution.