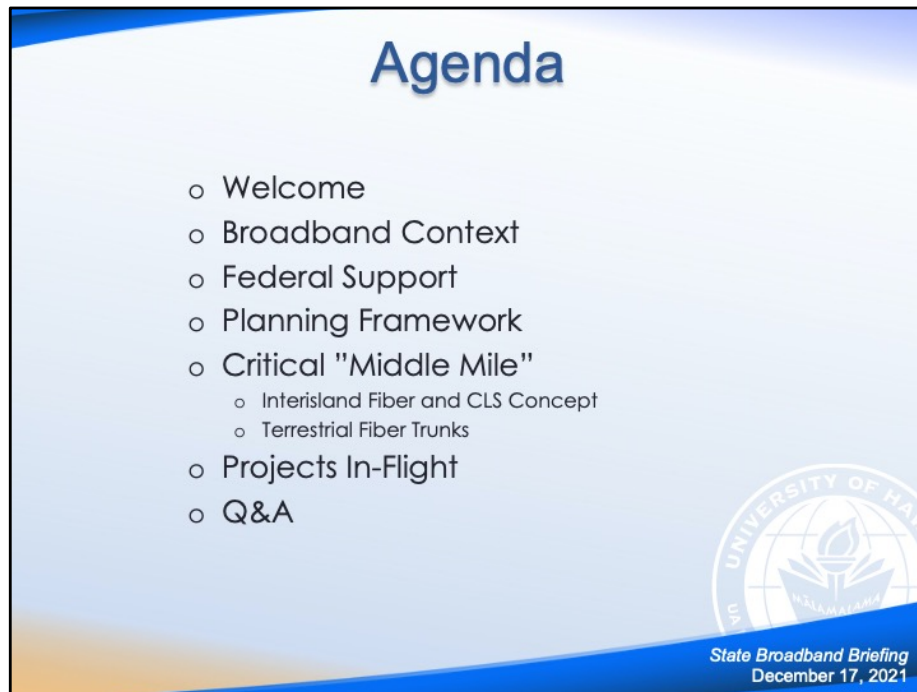


*Hawaii Broadband Update
December 2021*



*State Broadband Briefing
December 17, 2021*



Broadband Context – talking points:

Robust, reliable and affordable broadband service has long been a critical need for all of our citizens, to effectively support our 21st century society. Broadband not only touches, but is a critical need for all of our activities as we live-learn-work-and-play in Hawaii. The impacts of the digital divide have been especially highlighted during this global pandemic, demonstrating the painful isolation of those communities with poor or marginal (or NO) access to affordable broadband services.

Our work here, and as we leverage the incoming Federal investment in broadband infrastructure and support services, has the opportunity to deliver current and sustainable, long-lasting benefits to Hawaii. These one-time investments are layered on top of ongoing rural and high-cost service supports, and together has the potential to change the rules of engagement (??? ... maybe landscape) to keep Hawaii engaged in the future global economy

<roll into Federal Support slide to summarize \$, highlighting specific pools where we will concentrate our coordinated efforts>

Federal Support

- CSFRF
 - Includes reserve for IIJA-BEAD match
- ARPA
 - Broadband Infrastructure (NTIA) 20m-pending
 - Tribal Broadband Connectivity/DHHL (NTIA) 30m-pending
 - Connecting Minority Communities (NTIA) 3m-pending
 - CCPF (US Treasury) 115.5m
- IIJA
 - Broadband Equity, Access and Deployment (NTIA) 100m++
 - Tribal Broadband Connectivity/DHHL (NTIA) 60m
 - MULTIPLE competitive and other grant opportunities
 - EBB successor -> ACP (Affordable Connectivity Program)
- BBB
- Leverage Private Investments

*State Broadband Briefing
December 17, 2021*

Highlighting BB IIJA additional opportunities: Formula-based plus-up for BEAD based on "new" FCC maps (42.45B total); Digital Equity (1.25B competitive); Enabling Middle Mile Broadband Infrastructure (1B competitive); State Digital Equity Planning (60m formula); State Digital Equity Capacity (1.44B formula)

*note IIJA has other tranches of funding for other groups, e.g., HIEMA, USDA, others

FEMA State and Local Cybersecurity Grant Program

USDA Community Connect and ReConnect (competitive grant plus loan program)

EDA multiple in-process programs

KEY TAKEAWAY here is multiple sources of funds, various different rules and allowable uses -- IMPORTANT that we plan in advance to maximize use and benefits (i.e. what we're doing now 😊)



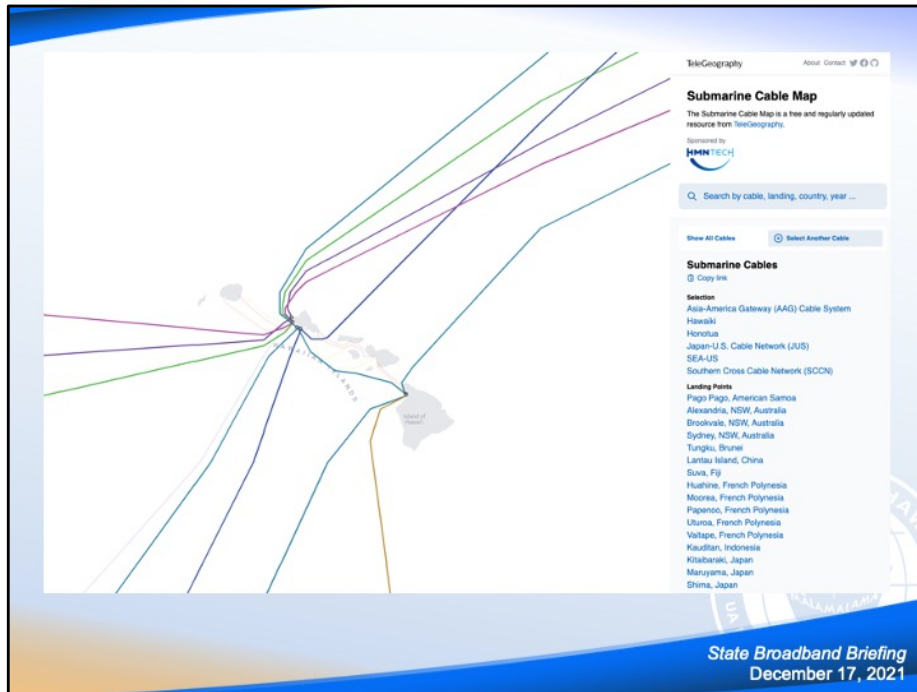
This is the planning framework that we'll use to align the strategic needs and specific project requests

AEL: content creation, outreach, support staffing (tied to IT workforce efforts), community sourcing, refocus on ACP eligibility, public comms (educational + effort transparency), community access locations

LM: supplemental to RDOF/CAF, focus on communities that have been EXCLUDED due to the census block based rules and processes (in particular, to address UN-served in areas that are "served"); Core element of most funding sources, WITHOUT consistent guidelines to craft thoughtful and reasonable approaches (we have to do work here); look to use a grant style program to provide alternative LM deployments (sustainability is key); strategy should focus on early movement to support HPHA properties

MM: core part of our work (submarine PLUS terrestrial routes)

GS: ongoing evolution of the framework, including governance and organization around asset ownership by public entity(ies)



Systems in operation (plus Endeavor) – all accessed by UH Networks

Two newest ones, Hawaiki (2018), SEA-US (2017)

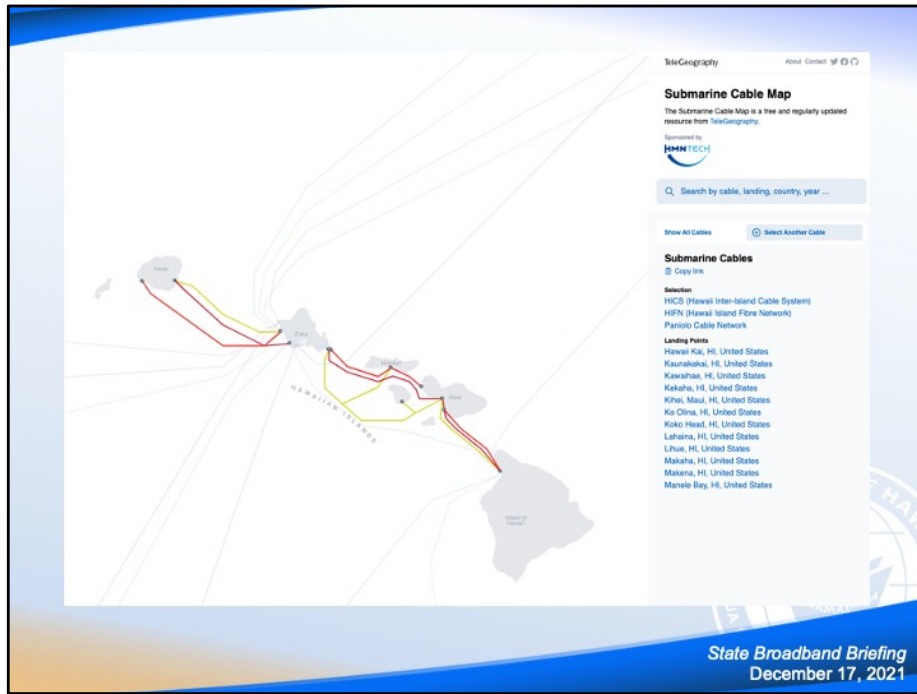
And the rest are starting to age, Honotua (2010), AAG (2009), Japan-US (2001), Southern Cross (2000)

Opportunities – scheduled conversations (in-person) at PTC in January

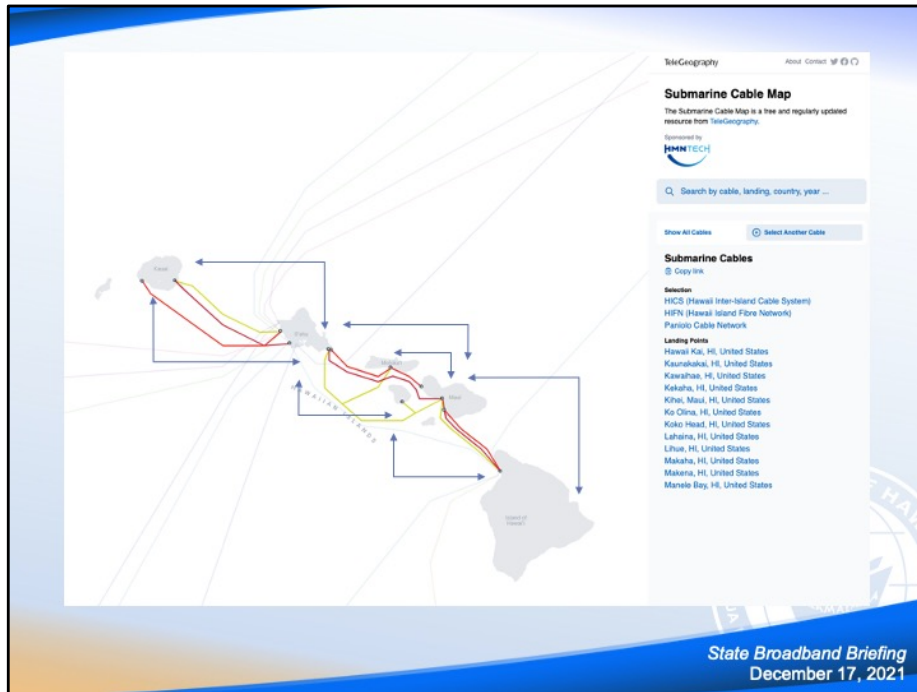
Highest probability: SAPL Phase 2-Ocean Networks

High probability: Hawaiki Nui

Others: ECHO, GO



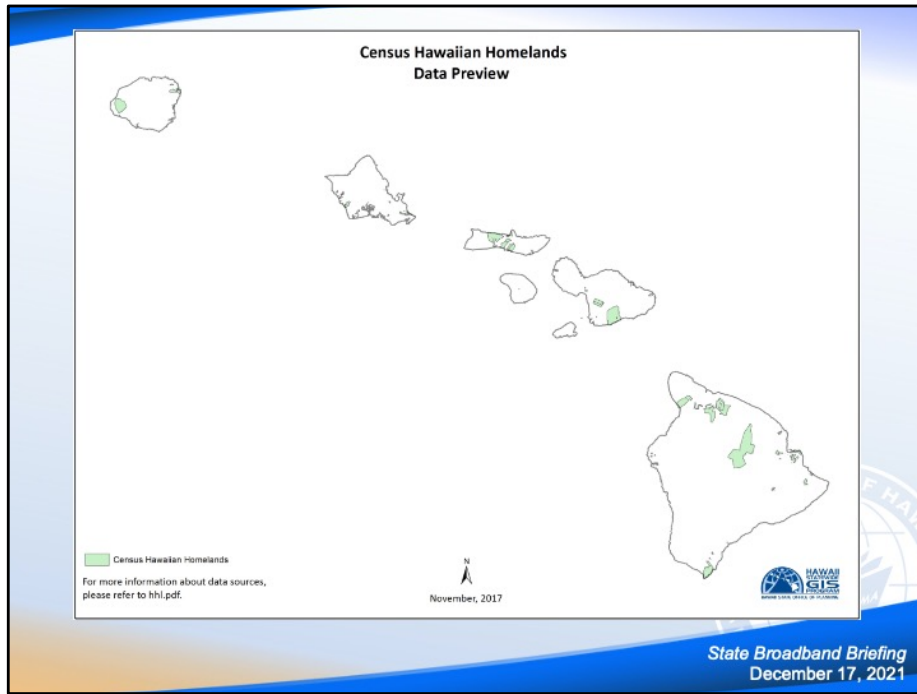
Existing Inter-Island cable systems



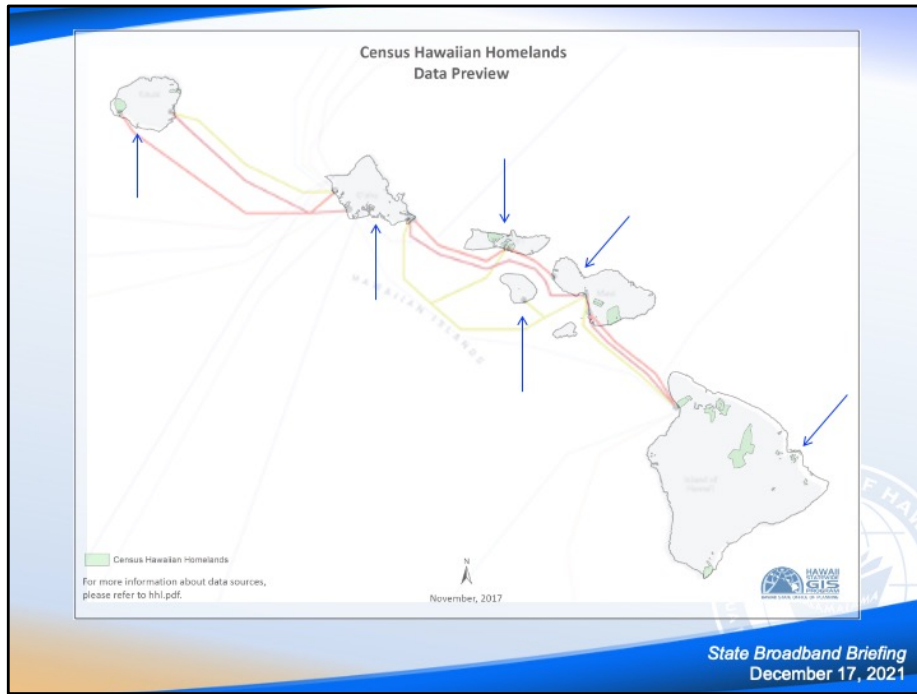
Existing Inter-Island cable systems PLUS new segments to provide at least 2-3 paths to each island (new + Paniolo)

Trans-Pacific landings at Hilo and Honolulu

AND terrestrial paths connecting CLSes and commercial colocation facilities and local carrier network (HT + Spectrum + Lumen)



DHHL locations (from State GIS)



DHHL locations, overlaying existing interisland plus ...



DOT: Ed Sniffen (25m contract with HT for fiber and neighborhood wifi mesh)

DHHL: Tyler Gomes (advance work to prepare for 30m NTIA award, with 60m more in IIJA)

Telehealth: Christina Higa (UH – describe work in progress, grants available, opportunities)

EBB/ACP: Laura Arcibal (DOH – lead for EBB outreach efforts and transition to ACP)

HPHA: Hakim (Update on partnerships and efforts)

Broadband Hui and community networks: Burt Lum (DBEDT)

Then possibly also ...

DOE: Keith Hayashi (ECF and related efforts)

HSPLS: Stacey Aldrich (works in progress)

NTIA proposals: Burt (Broadband Infrastructure), Garret (Connecting Minority Communities)

Connection to IT workforce development: Garret

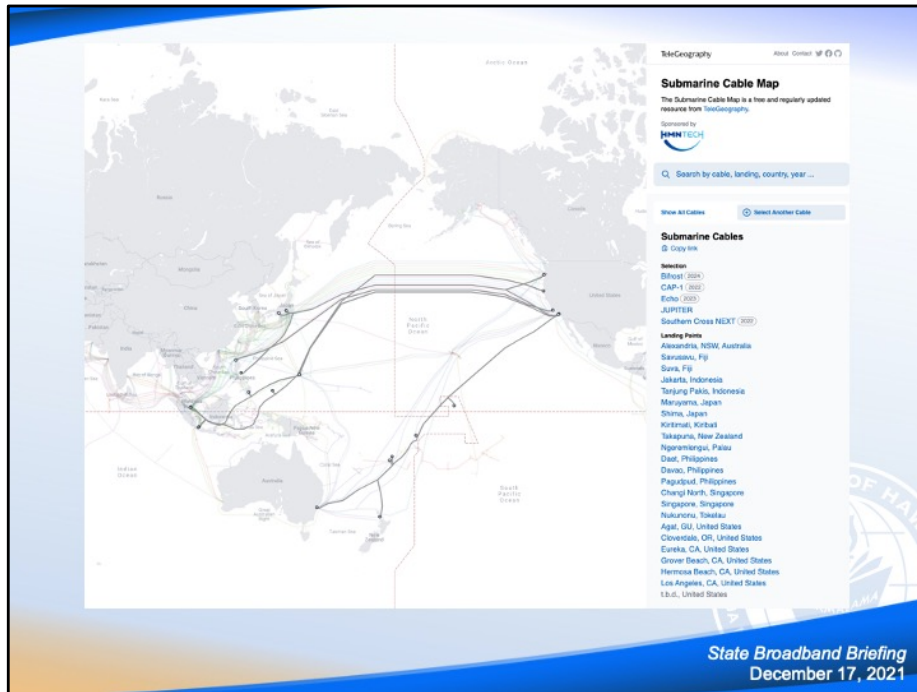
Questions?



State Broadband Briefing
December 17, 2021







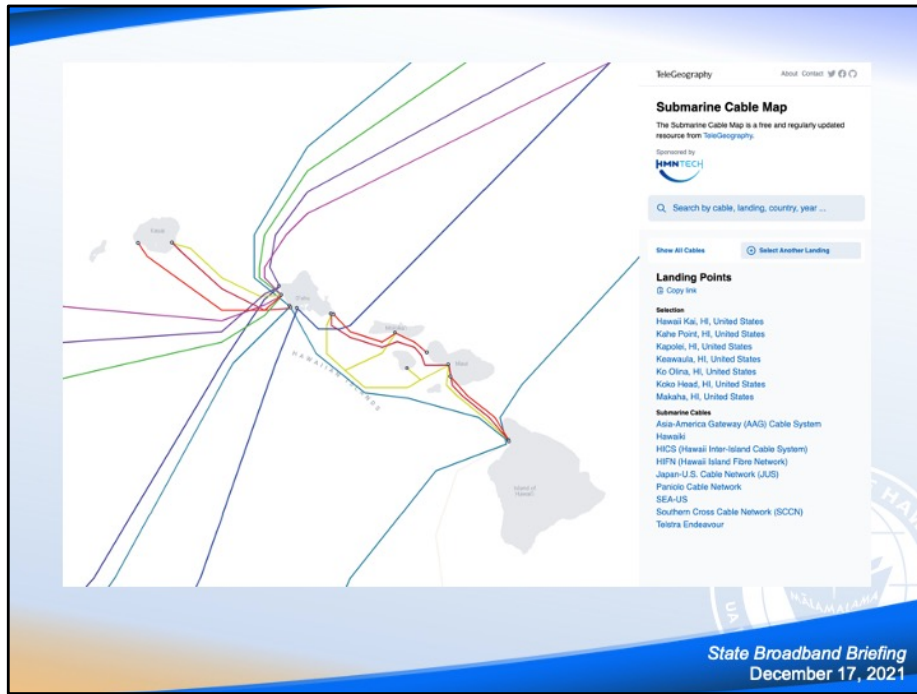
Bypassed ... Planned Trans-Pacific systems (JUPITER RFS 2020)

Southern Cross NEXT (under construction now)

CAP-1 (2022)

Echo (2023)

Bifrost (2024)



Oahu Cable Landing Stations – INTERCONNECTED FIBER RING(S), PLUS, commercial colocation facilities, DoD, Government



Connected Nation conceptual design