California Emerging Technology Fund
Digital Equity Ecosystem to Optimize Impact of Capacity Grant
June 2024

Overall Goals

It is essential that Overall Goals be set with quantified metrics to close the Digital Divide (Challenge), promote Digital Inclusion (Process), and achieve Digital Equity (Result)—CPR:

- Ubiquitous Deployment: Access to High-Speed Internet Infrastructure
- Universal Adoption: Getting Online All Households with Digital Literacy Proficiency
- Deep Institutionalization: Incorporating Digital Inclusion Into All Public Services

Adoption Programs Must Address 3 Barriers

Successful Adoption programs must address the 3 Barriers to Adoption (John Horrigan 2013) to get online all low-income households:

1. Cost (including the cost for both Internet service and an appropriate computing device).
2. Relevance (the reason why outreach in-language and in-culture by "trusted messengers"—the original "Digital Navigators"—is essential to explain to low-income unconnected HHs how they will benefit from being connected at home to the Internet).
3. Digital Literacy (no one will subscribe to service and acquire a device if they don't know how to use it to navigate the Internet).

The purpose of a Digital Equity Ecosystem is to provide the most cost-efficient approach to achieving these Overall Goals. A successful Adoption usually involves the following steps in assisting residents in unconnected households to: (a) understand the benefits of being connected online at home; (b) become aware of available affordable Internet service options; (c) acquire an affordable device for connecting to the Internet; (d) learn the foundational skills of digital literacy; and (e) select and sign up for home Internet service. It should be understood that community-based organizations (CBOs) who are the "trusted messengers" doing the outreach, assisting households sign up for home Internet service, and delivering the digital literacy training are what has become termed "Digital Navigator"—and CETF CBO Grantees have been doing the work of Digital Navigators for more than a decade. All programs supporting Digital Navigators must be focused on achieving Adoptions with grants paid pursuant to performance in achieving documented full Adoptions—the most meaningful outcome metric. Grant programs that pay only for inputs to Adoption—such as outreach, information distribution, or digital literacy training unrelated to getting connected to the Internet with affordable service—fall short of increasing adoption rates and are less effective in driving progress to achieve Digital Equity. Further, Digital Navigators, or any other "input" activities to the "outcome" of Adoption, need support and assistance to optimize impact, which is referred to as a "Digital Equity Ecosystem."

Digital Equity Ecosystem

The following are the 12 Essential Components of a Digital Equity Ecosystem which CETF operates at scale to achieve the most cost-effective price points with the greatest impact. A Digital Equity Ecosystem ensures optimal benefit from CBOs and Digital Navigators to do outreach and deliver services in-language and in-culture—which is their specialized expertise—and to avoid "reinventing wheels" and minimize operational overhead costs. The 12 Components begin with the highest productive foundational strategies to get the most people online and digitally-proficient with each successive Component building upon and augmenting the previous Component. The sequence of the Components matters to leverage investments and optimize impact.

- Direct Notification to Drive Enrollment in Affordable Internet Service
- Call Center to Enroll Households
- Recruitment and Training of Digital Navigators
- Outreach In-Language and In-Culture by CBO Trusted Messengers
- Digital Literacy Training by CBO Digital Navigators (Synchronous) with Proficiency Assessment
- Online Digital Literacy Resources (Asynchronous) with Proficiency Assessment
- Affordable Computing Devices
- In-Person Enrollment Events
- Public Awareness Advertising
- Tech Support
- Grant Management
- Evaluation

- Direct Notification to Drive Enrollment in Affordable Internet Service: Texting, Emailing, Mailings in multiple languages (with dedicated telephone numbers for "interactive voice response" or IVR) by a "Credible Source" (State Agency, County, School, Utility Company) doing repeated notifications (>5-7 times to achieve 90% engagement), recognizing that about 80% will be able to enroll themselves and up to 20% will need assistance, but only 5% take action on any given notification, which requires a 100:1 ratio to generate a customer contact in need of assistance on a given Direct Notification (DN) distribution. Cost ranges from nothing for texting and emailing up to $1.10 per piece mailed for an "all-in" cost for Direct Mail (a proxy for DN including selection of zip codes, printing, mailing, and management). The State Departments of Health Care Services (DHCS) and Social Services and San Diego County did Direct Notification without any additional cost. DHCS added a message on the first page of an annual mailer to all Medi-Cal recipients so that it was seen and not lost in a mailed packet (bill stuffers generally are not effective). Direct Mail into the San Joaquin Valley in January 2024 cost $75,000 for 95,548 pieces. A new CETF DN collaboration with Alameda County is costing $.80 per piece. Each DN communication includes a unique IVR number that routes through the CETF Get Connected Call Center for households who need assistance. CBO community outreach efforts also can use a local telephone number for their organization, but it is challenging to achieve cost-effective scale with DN volume.

- Call Center to Enroll Households: Dedicated IVR lines for each communication channel transfer interested HHs to CBO Grantees whose staff serve as Digital Navigators for immediate assistance in-language and in-culture to enroll Unconnected, Underconnected, and Unsustainable Connected low-income households in lower-cost offers and refer them to digital literacy training resources.

Performance standards for CBO Grantees receiving referrals from a Call Center coupled with active management and coaching are critical to high-quality service for households receiving Direct Notifications and needing assistance. The CETF Get Connected Call Center direct cost is $260,000 per year: $60,000 for contract vendors and $200,000 FTE (which includes management of CBOs answering lines, auditing of enrollments, and reporting). CETF currently compensates CBOs at $65 per Enrollment of an Unconnected Household and $45 per Enrollment of Underconnected and Unsustainably Connected households.

- Recruitment and Training of Digital Navigators: CETF recruits, trains, and manages CBOs as Grantees and trains their staff to serve as Digital Navigators. CETF also trains personnel of other organizations, such as from Public Agencies (social workers, librarians), healthcare organizations (intake specialists, Promotoras), or higher education institutions (students participating in higher-education specialized courses-programs such as College Corps). CETF has an established curricula for training Digital Navigators with coaching and quarterly Learning Communities for >$10,000 annually per cohort: $6,800 Digital Navigator Trainers-Coaches + <$2,500 for dedicated IVR lines = $9,300 (which was developed at the request of SCAG for Digital Ambassadors). An ideal cohort is 15-25 Digital Navigators. Individual training sessions or series can be supported for a lower cost ranging from $1,000-$5,000.

- Outreach In-Language and In-Culture by Trusted Messengers: Direct Notification by a Credible Source needs to be augmented and reinforced by Outreach in-language and in-culture by CBOs (Digital Navigators) who are "Trusted Messengers" in their communities. A Trusted Messenger is able to address the "Relevance Barrier" to explain the value proposition to a low-income households in subscribing to affordable Internet service so they understand how it will save time and money. Outreach in-language and in-culture at scale needs to be supported with flier templates in multiple languages that can be customized easily with local CBO and/or Public Agency logos. CETF supports the development and management of flier templates in conjunction with maintaining the Internet For All Now (IFAN) website, including updating the Tool Kit available to CBOs, Public Agencies, and the public. The total cost for these combined supports for Outreach is <$150,000 annually.

- Digital Literacy Training by CBO Digital Navigators (Synchronous) with Proficiency Assessment: All households enrolled by CBO Digital Navigators through the Get Connected Call Center are referred to Digital Literacy Training resources: (a) CBO Grantees who deliver Digital Literacy Training for the first 3 Elements of the UNESCO Framework for 6 hours of training (2 hours per Element) in-person or virtually (synchronous); and (b) Online Learning courses and lessons (asynchronous). CETF provides a Base Curricula and Facilitator Guide for each Element along with a standardized Digital Literacy Skills Proficiency Self-Assessment. CBO Grantees are able to rely on the Base Curricula as sufficient or submit their own to be approved by CETF to ensure that the content aligns with the essential skills (5 Skills per Element which have been identified by CBOs and their customers). The standardized Digital Literacy Skills Proficiency Self-Assessment is vital to measuring results qualitatively and comparably among all CBO Grantees and across the state. Online Learning is an option for households not able or willing to participate in synchronous digital literacy training and is an added resource for those who do complete Digital Literacy Training.

CBO Grantees who receive referrals from the Call Center after a household has been enrolled in an affordable Internet service plan are paid $350 per household completing Digital Literacy Training with verified proficiency using the standardized Self-Assessment. If a CBO is doing the full Adoption process to include Outreach, Enrollment, and Digital Literacy Training, then the compensation ranges from $375-$400 per Adoption, depending on the circumstances and funding constraints.

- Online Digital Literacy Resources (Asynchronous) with Digital Proficiency: CETF has collaborated with the Public Library Association (PLA) to license its DigtialLearn platform to customize an Online Digital Literacy Program for the convenience of the customer and to augment Digital Literacy Training by CBOs. It is a PLA DigitalLearn sub-website *GetConnected!* with URL getconnected.digitallearn.org. Content currently is in English and Spanish;
  - English: 31 Courses, 132 Lessons
  - Spanish: 25 Courses, 134 Lessons

  Other languages, beginning with Vietnamese, will be added next Fiscal Year. CETF also worked with PLA and Davis Research to establish a separate website to measure the effectiveness using the Digital Literacy Skills Proficiency Self-Assessment. The first 10,000 participants in the Online Digital Literacy Training Self-Assessment will receive a $25 gift card. The URLs for the Self-Assessment website are:
  - myinternetlearning.com
  - aprendamosenlinea.com

  The costs to develop the Online Digital Literacy Program, including CETF personnel and the $250,000 for gift cards, will total about $500,000. However, it is now a resource available to all users. CETF currently has assigned .5 FTE (about $125,00 annually) to manage and maintain the Online Digital Literacy Program, including compilation and analysis of data. The person who currently develops flier templates, other collateral, and maintains the IFAN website also has been helping customize content for getconnected.digitallearn.org.

- Affordable Computing Devices: CBO Grantees provide information to Adopter households about sources for affordable computing devices, which include refurbished devices from reliable non-profit organizations in about 5 regions in California, most of which have been CETF Grantee partners previously. CETF budgets a refurbished laptop at $175-$225 (depending on the device and condition) and a new computing device (Chromebook) with a protective cover ($10) at a total cost of $280. The provision of a computing device for completion of the Digital Literacy Curriculum with verified Digital Skills Proficiency using the Self-Assessment is a powerful incentive and completes a full Adoption. Including a new computing device with a protective cover, the total cost for an Adoption is budged for funders, such as Community Foundations and Financial Institutions, at an "all-in" of $700.

  CETF is developing 3 revenues streams to purchase computing devices with the goal to generate at least $10M to contribute to Adoptions:
  - Donations from "Give the Gift of Connectivity" Annual Drives
  - Statewide Partnership with Revivn (Full-Service Public Benefit Corporation)
  - Financial Institutions to Receive Community Reinvestment Act (CRA) Credit

- In-Person Enrollment Events: CBO Grantees who are funded to complete a full Adoption organize and conduct their own In-Person Enrollment Events in their target community, often joining existing community festivals and fairs. However, the Digital Equity Ecosystem also needs to have the capacity to organize In-Person Enrollment Events for those households who cannot be helped by phone. This requires knowledge of CBOs and Public Agencies throughout California with the capacity to organize, mobilize, engage and train local partners, provide collateral and data collection forms, coordinate media, and support multiple simultaneous In-Person Enrollment Events. The Get Connect Call Center also functions as a support resource for In-Person Enrollment Events.

- Public Awareness Advertising: Public Awareness Advertising augments and reinforces Direct Notifications, increasing the receptivity of messages. Public Awareness Advertising can be done by ISPs (for their own affordable offers), Public Agencies, and non-profit organizations. CETF has commissioned more advertising about affordable Internet service offers than any other organization in California and has monitored the results of working through community and ethnic channels. A benchmark for Public Awareness Advertising is the 2020 Total Count Census Campaign for which the State of California appropriated $50M. CETF estimates that a beginning "critical mass" amount is $10M committed by ISPs to place their own ads in non-traditional community and ethnic channels (CETF and partners can provide data about past results--impressions and traffic generated to the Call Center) for their consideration.

- Tech Support: Tech Support is needed as a referral resource for CBO Grantees who often are contacted by the household Adopters that they assisted when there is a problem with the computing device. It is not cost-effective for each CBO to have Tech Support expertise in-house. Tech Support is a logical extension of community services for refurbishers, which also are conducting workforce skills development as part of their operating model. CETF also has trained high-school students as part of their curricula to provide Tech Support to CBOs. This student model also can be adapted by Community Colleges. CETF expects >5% of Adopters to need Tech Support and recommends planning to accommodate <10%

- Grant Management: Grant Management involves recruiting and vetting CBOs (including conducting informational workshops), preparing and processing Grant Agreements, monitoring and coaching Grantees, conducting Learning Communities (Communities of Practice), collecting and auditing Grantee performance (including Adoption Master Rosters), and processing Grant Payments. CETF does Grant Management at a relatively-low cost (less than 10% with decreasing percentages with volume of funds flow-through) because Grants are performance-based and management processes have been established and refined through experience over time to support Grantees in achieving results.

- Evaluation: Evaluation must be integrated into all operations by collecting essential data from the beginning to support "continuous improvement" with tools to make it as easy as possible for Grantees to submit reports and by compiling data as feedback to Grantees. There should be Monthly Summaries and Quarterly Progress Reports to ensure pace of Adoptions is on track to achieve the obligation target. Evaluation data and reports are used in Learning Communities to invite peer coaching and foster peer accountability.

It should be noted that there are economies of scale and blended costs if all Components of the Digital Equity Ecosystem are managed as a coherent system that results in less than $1,000 per Adoption with all-in costs including administration (see below the Projection of Possible Impact).

Summary of CETF Existing Assets and Resources to Support Digital Equity Ecosystem

The California Emerging Technology Fund has developed a cost-effective Digital Equity Ecosystem that is operated as seamless continuum of supports for CBOs so they can focus on outreach and delivery of services in-language and in-culture to reach the most low-income households. The following are the CETF assets and resources to support the Digital Equity Ecosystem:

- Working Relationships Statewide with Spectrum of Community, Public, and Private Partners
- Operations at Scale for Cost-Effective Implementation and Grant Management
- Ability to Partner with New CBOs as Additional Trusted Messengers to Build Local Capacity
- Understanding and Experience in Planning and Managing Direct Notification
- Tool Kit and Templates for Affordable Internet Service Offers in Multiple Languages
- Get Connected Call Center with Ability to Accommodate Multiple Communications Channels
- Curricula to Train Digital Navigators and Coach to Success
- Digital Literacy Training Curricula and Facilitator Guides (UNESCO Framework 6 Elements)
- Digital Literacy Skills Proficiency Self-Assessment for Common Metrics
- Online Learning Platform with Curriculum Content and Self-Assessment Process
- Experience in Organizing and Supporting In-Person Enrollment Events Statewide
- Knowledge in Public Awareness Advertising in Community and Ethnic Media Channels
- Established Strategies to Generate Revenue Streams for Computing Devices
- Data Analysis to Benchmark Costs and Project Possible Impacts
- Deep Experience in Integrating and Managing All Components of Digital Equity Ecosystem

CETF Public Comment on the Draft Digital Equity Plan to Set Goals – January 2024

CETF concurs with the construct of Access, Affordability, Adoption to organize the approach. The Examples of Specific Barriers for Covered Populations are a faithful summary of input during the planning process. These insights underscore why outreach to Covered Populations is most effective when conducted by "trusted messengers" who are composed of and have established working relationships with the Covered Populations and communicate in-language and in-culture. At the same time, the "common barriers" for Covered Populations are essential to inform effective strategies to achieve Digital Equity. The most significant of these "common barriers" are: (1) low income; (2) need for information in-language and in-culture; (3) lack of awareness about affordable Internet service; (4) need for digital literacy; and (5) availability and access to an appropriate affordable computing device. The results of the 2023 Statewide Digital Equity Survey reveal a striking concentration of poverty for all digitally-disadvantaged residents within every Covered Population. As previously presented to the Statewide Planning Group, the following are the percentages of the Covered Population digitally-disadvantaged households (Unconnected and Underconnected)—who are low-income, underscoring the concentration of poverty that should be the primary lens for targeting resources):

- Overall Population 69.6%
- Covered Households 100%
- Language Barrier 81.7%
- Racial and Ethnic Minorities 77.7%
- People with Disabilities 75.8%
- Women 73.9%
- Aging Individuals 69.2%
- LGBTQIA+ 62.5%
- Rural Residents 58.3%
- Veterans 57.7%

Poverty is more defining for being digitally-disadvantaged than any other factor for Covered Populations. This underscores the relevance of Affordability in the assessment of the Current State of Broadband and Digital Inclusion which is even more urgent as a challenge given the Federal Communications Commission (FCC) "freeze" of the IIJA Affordable Connectivity Program (ACP) as of February 7 absent action by Congress to extend and reauthorize ACP.

The 2023 Statewide Digital Equity Survey also provides a sound basis to estimate the number of digitally-disadvantaged households and residents who must be reached to achieve Digital Equity. This data can be very helpful in defining the scale of the challenge and helping limited target resources to achieve Digital Equity. For example, based on the 2023 Statewide Survey:

- 9% of the Overall Population HHs are Unconnected (about 1,189,583 HHs and 3,550,982 residents) and 3% are Underconnected (about 396,528 HHs and 1,183,661 residents).
- 13% of Covered Households are Unconnected (about 355,342 HHs and 1,060,718 residents) and 5.8% are Underconnected (about 158,537 HHs and 473,243 residents).
- 14.8% of Households with a Language Barrier are Unconnected (about 603,880 HHs and 1,802,620 residents) and 3.8% are Underconnected (about 155,050 HHs and 462,835 residents).
- 12.2% Latino Households are Unconnected (or about 628,893 HHs and 1,877,285 residents) and 3.3% are Underconnected (or about 170,110 HHs and 507,790 residents).

While there is some overlap among these population segments, in estimating the magnitude of the digitally-disadvantaged to be reached to achieve Digital Equity, this data indicates that there are no less than 2.5M HHs to get connected to the Internet, which will require a robust Adoption strategy as well in an infrastructure program for Deployment. Another important indicator of digitally-disadvantaged residents is the number of California HHs who were eligible for ACP, which is more than 5.8M (5,844,797 HHs was the March 2022 baseline). With more than 2.9M HHs enrolled in ACP, almost 2.9M, who are the most digitally-disadvantaged and economically-fragile to reach.

These 2.9M HHs are the poorest, most economically-fragile, and most digitally-disadvantaged residents and should be the focus of the Digital Equity Capacity Grant.

2023 Statewide Digital Equity Survey

The 2023 Statewide Digital Equity Survey was sponsored by California Emerging Technology Fund and California Department of Technology and conducted by University of Southern California Annenberg School for Communication and Journalism.

The percentages below from the 2023 Statewide Digital Equity Survey have been applied to the attached Projected Digitally-Disadvantaged Households by Covered Populations to determine the percentage impact of the Get Connected! California Partnership on the overall need in the state.

Socio-Economic Demographic Group Region Covered Population	**Percent Connected**			**Percent Unconnected**	**Total Percent Digitally-Disadvantaged**
	Total (Rounded)	**At Home** (Rounded)	**Underconnected** (Smartphone Only)	Priority Target for Adoption	Unconnected + Underconnected
All California	**91%**	**88%**	**3%**	**9%**	**12%**
Covered Populations					
Covered Households*	87%	81%	5.8%	13.0%	18.8%
Racial Ethnic Minorities	92%	88%	3.6%	8.4%	12.0%
People with Disabilities	91%	87%	3.9%	8.7%	12.6%
Aging Individuals	91%	87%	3.6%	9.2%	12.8%
Veterans	92%	89%	3.2%	7.7%	10.9%
Language Barriers	85%	81%	3.8%	14.8%	18.6%
Rural Residents	89%	86%	2.8%	10.8%	13.6%
Other Socio-Economic Demographic Groups					
Low-Income	87%	81%	5.8%	13.0%	18.8%
African-American	92%	88%	4.4%	7.7%	12.1%
Asian	96%	94%	2.2%	3.5%	5.7%
Latino	87%	84%	3.3%	12.2%	15.5%
Spanish-Speaking	78%	74%	3.9%	21.8%	25.7%
60 and Older	91%	87%	3.6%	9.2%	12.8%
High School Diploma	91%	90%	0.5%	8.6%	9.1%
No HS Diploma	79%	75%	4.5%	21.0%	25.5%
Regions					
San Joaquin Valley	89%	87%	1.8%	11.1%	12.9%
San Diego County	91%	87%	3.5%	9.9%	13.4%
Los Angeles County	91%	88%	2.5%	9.5%	12.0%
Central and Pacific Coast	91%	89%	2.3%	9.2%	11.5%
North Bay North Coast	93%	91%	2.0%	7.3%	9.3%
Inland Empire	93%	90%	3.1%	6.7%	9.8%
Orange County	94%	92%	1.5%	6.6%	8.1%
Bay Area	94%	91%	3.3%	5.7%	9.0%
Sacramento Valley	95%	94%	1.2%	5.3%	6.5%
Other Rural California	94%	91%	3.3%	5.3%	8.6%

*Covered Households: 150% Federal Poverty Level (FPL)

The 2023 Statewide Digital Equity Survey found that the overall lack of awareness of affordable Internet service offers is the biggest hurdle in reaching low-income households in all Covered Populations. For example, only about 1/3 (33.5%) of Covered Households eligible for the federal Affordable Connectivity Program (ACP) were aware of program (23% Unconnected HHs; 43% Underconnected HHs; 32% Connected HHHs) and even less (25.8%) are aware of Internet Service Provider (ISP) lower-cost affordable Internet service offers. Further, 61% of Unconnected HHs cited Cost as a factor with cost being rated the most important factor: 35.6% cited Cost as the primary reason for not being connected while only 2.7% (less than 3%) cited the lack of infrastructure. About 1/3 of the Unconnected HHs also cited the lack of digital skills and a computing device as a barrier. Thus, the leading and linchpin strategy in the Digital Equity Ecosystem is Direct Notification to reach Covered Populations, which involves a Credible Source (Public Agencies, Schools, Health Plans, and Public Utilities, which are different than Trusted Messengers) directly informing households on existing major public assistance programs (Medicaid/Medi-Cal, SNAP/CalFresh, WIC, Pell Grants, Tribal TANF) that they are eligible for an affordable lower-cost Internet service plan and providing them with a telephone number of the Get Connected Call Center so that Digital Navigators can immediately assist them. Community Outreach in-language and in-culture by community-based organizations (CBOs) as Trusted Messengers augments and reinforces the Direct Notification.

<u>Concentration of Poverty is the Overall Lens on Covered Populations</u>

The common factor among the Digitally-Disadvantaged HHs for all Covered Populations is poverty. Below is the data from the 2023 Statewide Survey that underscores the concentration of poverty by Covered Population which supports the approach and strategies in the GCCP Work Plan. By focusing on reaching Covered Households through Direct Notification to participants in major public assistance programs, the Digitally-Disadvantaged HHs in all other Covered Populations are likely to be reached.

Percentage of Digitally-Disadvantaged Households Who are Low-Income

Population	**% Poverty**
Overall Population	69.6%
Covered Populations	
Covered Households	100%
Language Barrier*	81.7%
Racial/Ethnic Minority	77.7%
People with Disabilities	75.8%
Aging Individuals (60+)	69.2%
Rural Residents	58.3%
Veterans	57.7%

*Home Primary Language Not English

Distribution of Covered Populations Among Digitally-Disadvantaged Covered Households

The following percentages of Covered Populations represented within the Unconnected and Underconnected HHs statewide are derived from the 2023 Statewide Survey. However, they are reasonably reliable to apply to any region or jurisdiction with significant numbers of low-income households. They can be used to estimate the number of low-income Unconnected and Underconected HHs for each Covered Population.

Covered Populations	All Covered Households	Unconnected Covered Households	Underconnected Covered Households
Covered Households	100%	100%	100%
Language Barrier	56.3%	68.5%	50.0%
Racial/Ethnic Minority	80.4%	90.7%	73.9%
People with Disabilities	32.8%	30.2%	52.9%
Aging Individuals	32.7%	51.0%	55.6%
Rural Residents	17.2%	22.6%	11.1%
Veterans	15.3%	16.7%	33.3%

It is important to underscore that socio-economic data must be gathered on each household served by Covered Population in implementing Competitive Grants, Capacity Grants, and CPUC CASF Adoption Account Grants and then compared to the expected distribution by Covered Population.

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