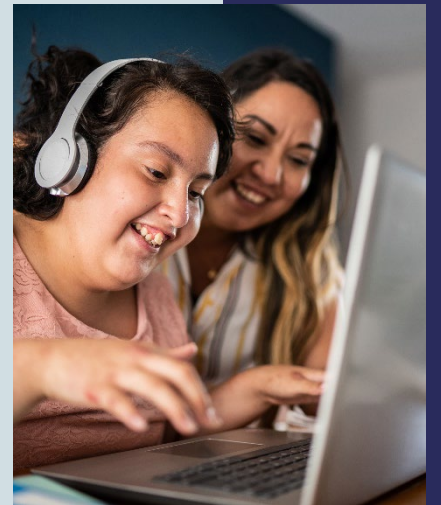
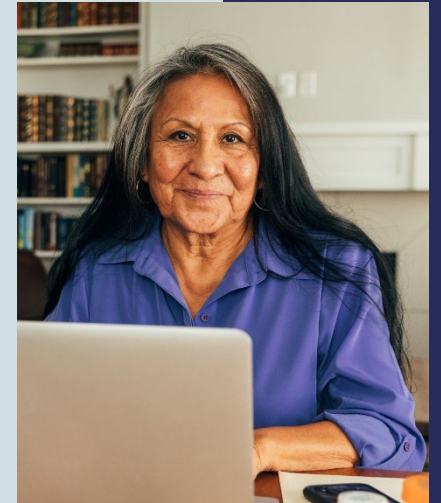


# Digital Equity Ecosystem Mapping (DEEM) Findings



BROADBAND  
FOR ALL



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# 1. Overview



# DEEM Overview

The Digital Equity Ecosystem Mapping Tool (DEEM) is an inventory of organizations that provide digital equity-related resources within California. **The DEEM Tool is an online survey of organizations that currently or could potentially work in the digital equity space.** The survey was conducted over a 6-month period, from **February** to **August** 2023.

CDT promoted the DEEM tool widely through email campaigns with multiple distribution partners, via social media, direct outreach to organizations, and at State Digital Equity Planning engagement opportunities including quarterly Statewide Planning Group Meetings, 24 Outcome Area Working Group Meetings and 17 Regional Planning Workshops.

**The goal of the DEEM tool is to capture and depict where the resource gaps may exist within California** and to identify the digital equity programs and services currently available to all Californians.





## 2. Digital Equity Ecosystem Mapping (DEEM) Survey & Results

# DEEM Survey Overall Responses

The DEEM survey has reached over 1,400 different organizations across the State. These organizations include a mix of institutions, community-based organizations, companies, and government entities.

**Over 470 respondents provided detail on either their organization and/or their programmatic offerings.** Of this cohort, over 320 fully completed the survey from start to finish.

## Key DEEM Metrics



**1,424**

Survey Reach



**472**

Respondents



**321**

Completed Surveys



**68%**

Completion rate

# DEEM Survey Responses by County

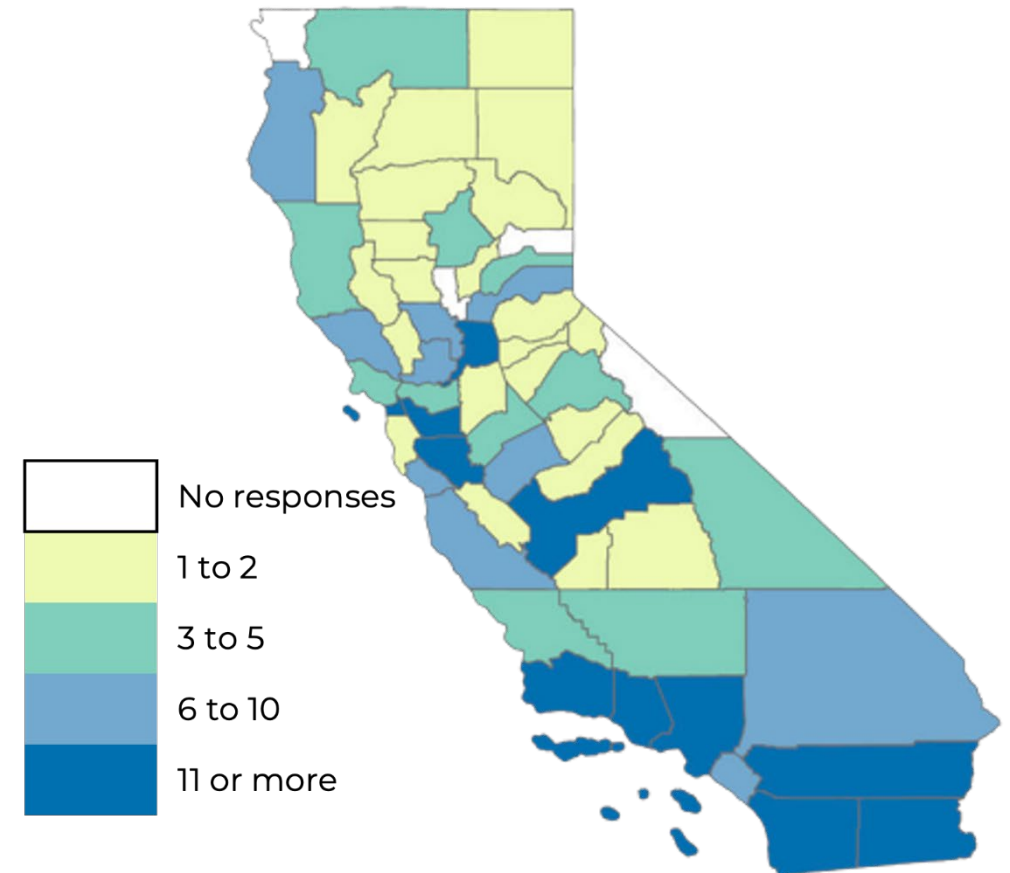
The DEEM **survey had the largest reach in Los Angeles County**, representing approximately **13 percent** of responses. At the time of this report, the survey received no responses from organizations in **4 counties**.

Top 10 Counties by Responses	
Los Angeles	55
San Francisco	43
Sacramento	33
Alameda	27
San Diego	27

Counties with No Responses
Sierra
Mono
Sutter
Del Norte

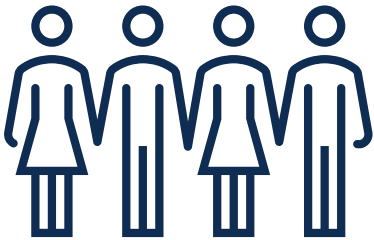
In addition to being based in one or multiple counties, respondent organizations also have **varying service area coverage** beyond their county of operation:

Respondent Service Areas	
Statewide	24%
Regional or Across Multiple Counties	34%
Countywide	41%
Citywide or Across Multiple Cities	35%
Specific to a Tribal Nation	4%



# Organization Types

DEEM Survey respondents represent a broad array of organization types within California. The three organization types surveyed within the DEEM tool include Community Anchor Institutions (CAIs), Government and Public Organizations, and Private Organizations.\*



**447**

Community  
Anchor Institutions



**261**

Government and  
Public Organizations



**256**

Private Sector and  
Non-Governmental  
Organizations

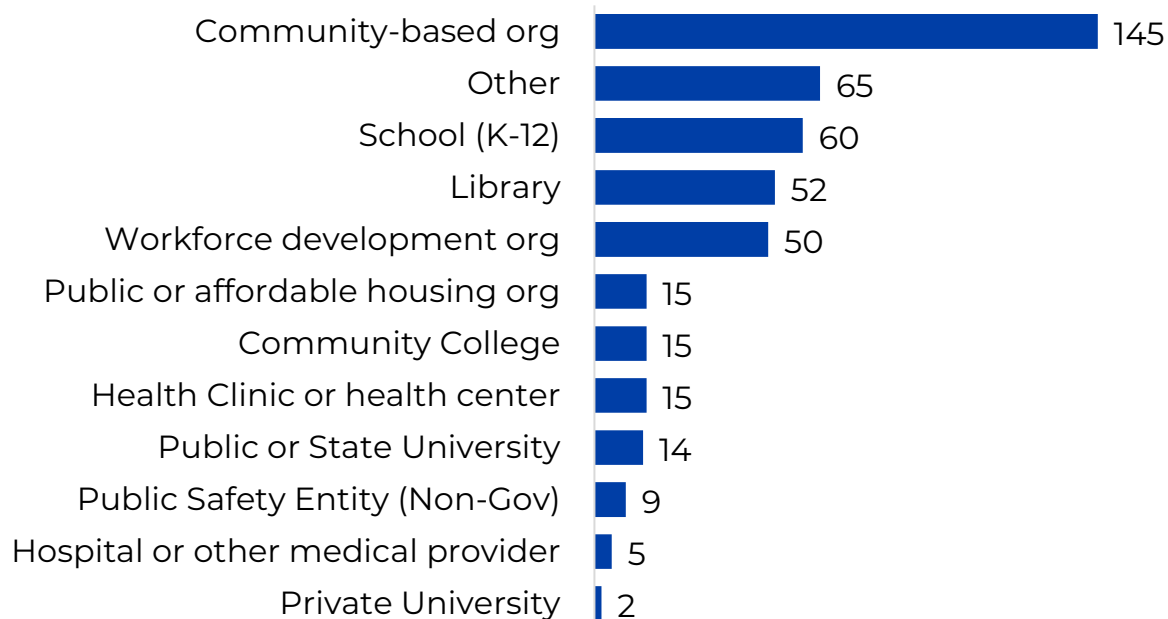
*\*Respondent organizations can belong to multiple categories.*



# Respondent Organizations

**Community-Based Organizations, K-12 Schools, and Libraries** represent over 57 percent of Community Anchor Institutions surveyed.

## Community Anchor Institutions by Subcategory\*



## Community Anchor Institutions in “Other” Category

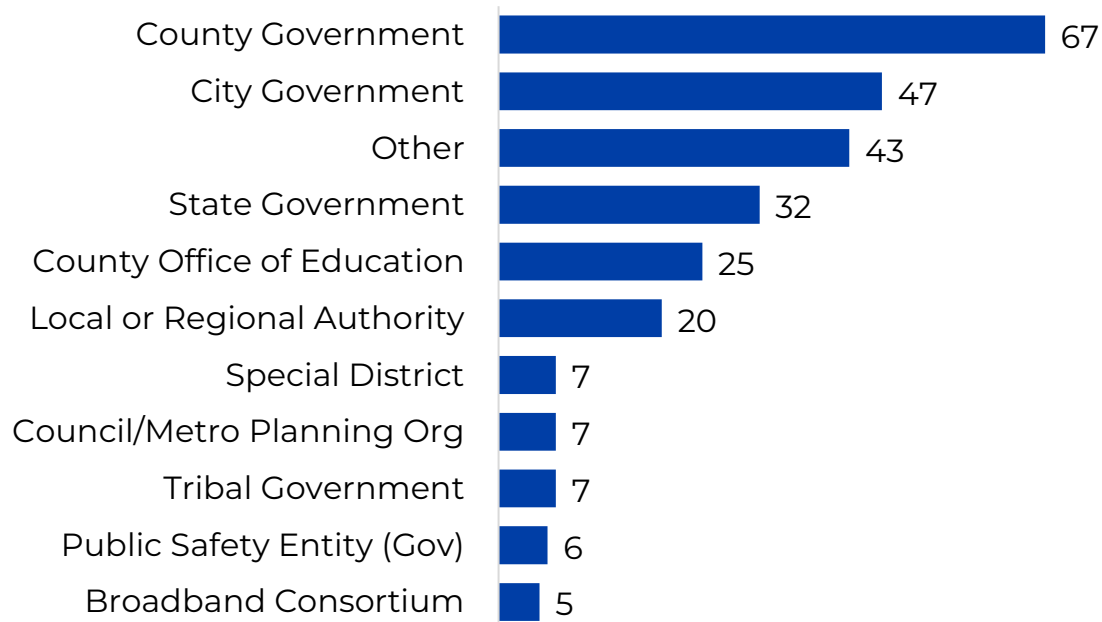
Below is a sample of organizations that selected the ‘other’ category:

- Economic Development Agencies
- Systemic advocacy
- Union
- Radio station
- Retirement Community
- Low-Income Senior Community Centers
- Adult Education

# Respondent Organizations

**County Government, City Government, and State government-related organizations** represent over 56 percent of the public organizations surveyed.

## Government Sector by Subcategory\*



## Government Sector in “Other” Category

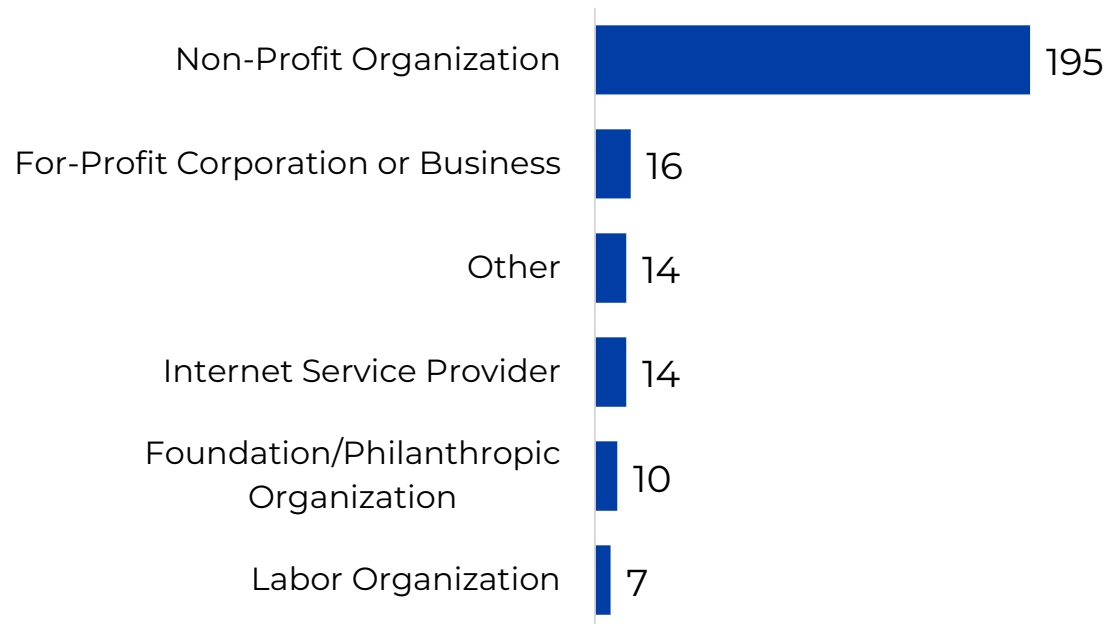
Below is a sample of organizations that selected the ‘other’ category:

- Education Consortium
- Utilities
- Regional Collaborative
- Health Departments
- School District

# Respondent Organizations

**Nonprofit Organizations** represent nearly 77 percent of the private sector entities surveyed. Though most respondents are non-profits, these organizations are dedicated to a wide range of activities.

## Private Sector & NGOs by Subcategory\*



## Private Sector & NGOs in “Other” Category

Respondent non-profit organizations are focused on the following efforts:

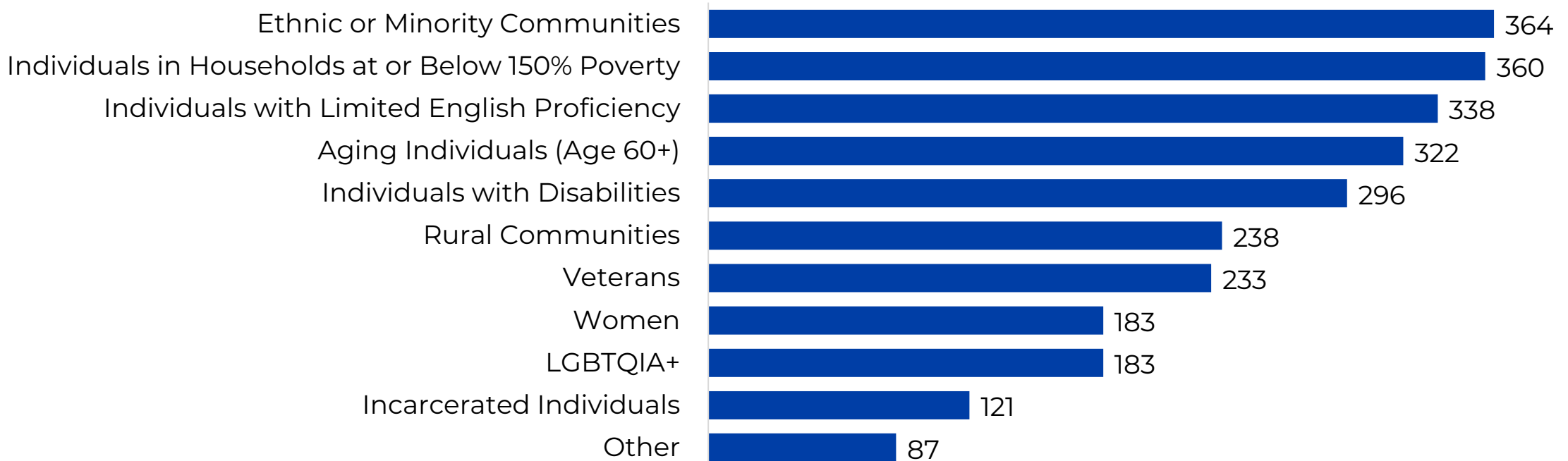
- Digital literacy, fluency and upskilling
- Workforce development
- Senior care
- Lifeline and ACP enrollment assistance
- Internship opportunities for students

\*ISPs are included in the analysis for the purpose of capturing total private sector & NGOs respondents by subcategory. Further analysis of ISP respondents may be found in section 2.1.

# Responses by Covered Populations Served

More than 320 organizations serve 4 of the 8 identified covered populations. **Ethnic or minority Communities are the most served covered population**, with three times the number of organizations offering services to Incarcerated Individuals.

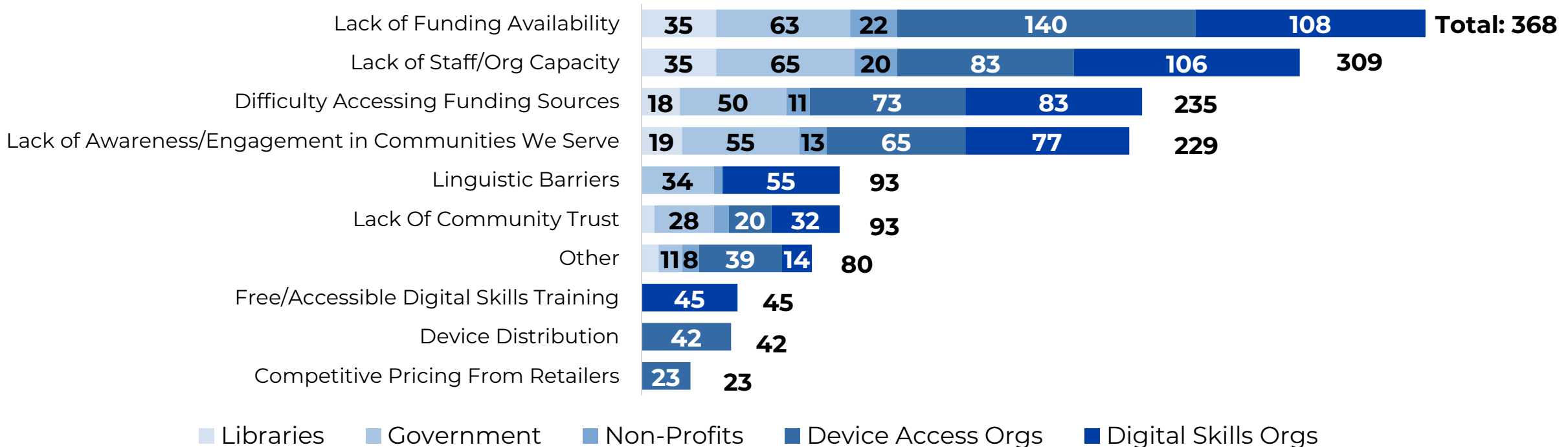
## Covered Populations\*



# Barriers Impacting Organizations

All organizations commonly **reported Lack of Funding Availability** as a barrier impacting their ability to increase their Digital Equity programming, followed by Lack of Staff and Organizational Capacity.

## Barriers Impacting Organizations





# Other Barriers Impacting Organizations

DEEM respondents reported on barriers impacting their programming, and many responses mirror the issues listed on the survey. For example, many freeform responses highlighted issues related to lack of staff training, lack of capacity and difficulties getting funding for their broadband programs.

One distinct theme from respondents relates to the **hesitancy or reluctance to enroll or participate in offered programs**, either due to lack of trust, skepticism or general lack of interest or awareness.

*“Many of our residents don't qualify or won't accept or apply for statewide services such as CalFresh, WIC, and more. This makes qualifying or enrolling in ACP more difficult.”*

*“Many older adults are just not interested or not capable of learning new tech skills such as navigating the internet or using a Chromebook. It's also harder to do outreach in more remote communities.”*

*“Device distribution, if done right, can be very staff intensive and requires on-going tech support and guidance.”*

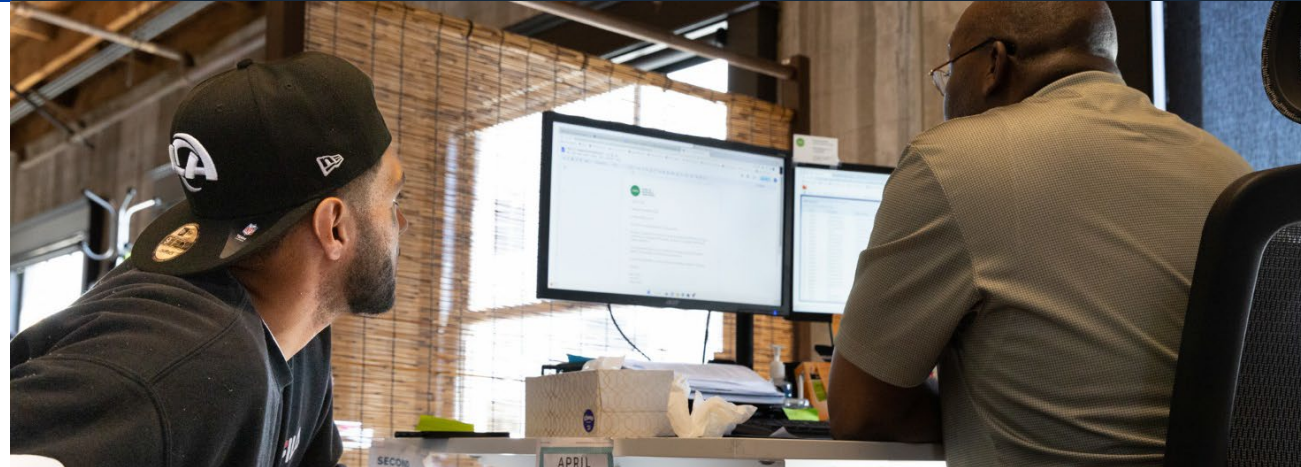
*“The communities we serve are often affected by trauma, so we need to work closely with partners to engage reluctant learners.”*

# Workforce Development

**51 organizations offering workforce development-related programs responded to the DEEM Survey.** Many of these organizations focus on promoting digital equity by providing digital skills training, career development, and job placement programs.

These organizations are helping to address a technical skills gap present in the workforce, as California employers are more likely than average to require digital skills.<sup>1</sup>

1. National Skills Coalition, *Closing the Digital Skill Divide*, 2023

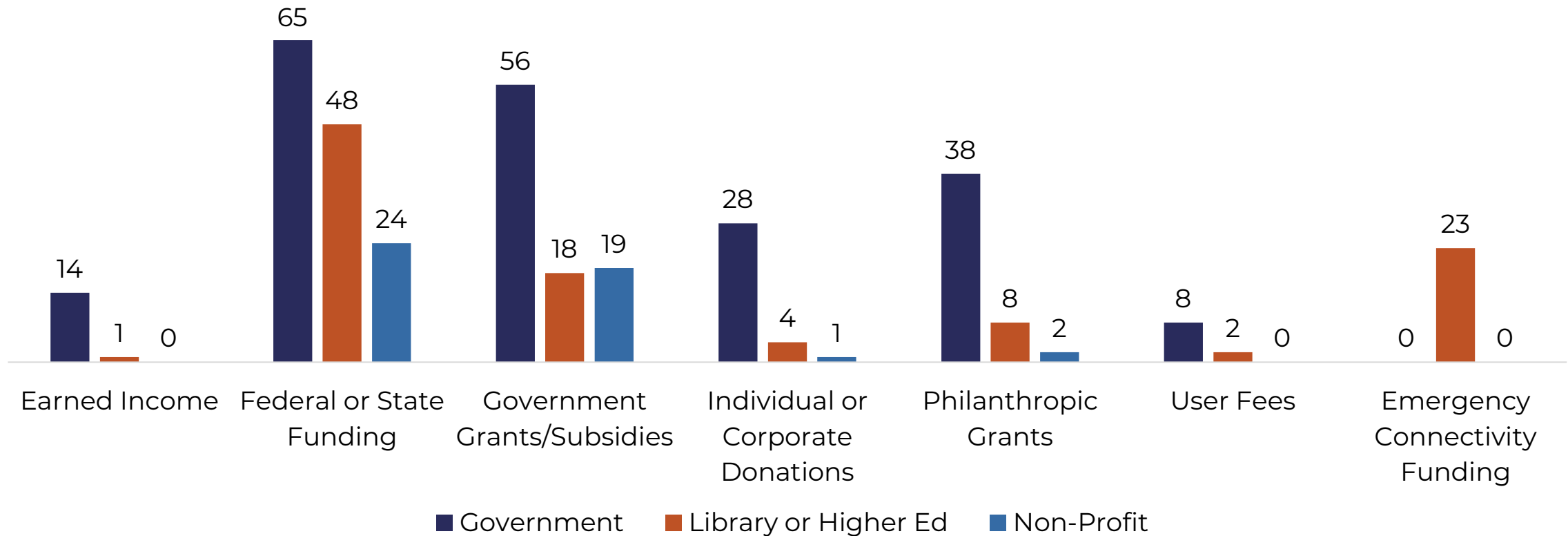


*The Center for Employment Opportunities provides transitional work for individuals on parole or probation as well as job training, resume prep, digital skills, job skill certificates and placement.*

The **Center for Employment Opportunities (CEO)** is the nation's largest provider of comprehensive employment services to people returning from jail or prison. The organization provides participants and other justice-impacted people access to a **22-week training program** that helps them learn the skills and earn the necessary certifications to pursue IT careers such as Help Desk Technicians, IT Specialists and Junior Systems Administrators. These jobs all have starting salaries of up to \$60,000 a year.

# Funding for Organizations

**Federal (e.g., NTIA BEAD & SDEP, USDA ReConnect) or State funding (e.g., CASF), Government Grants and Subsidies (e.g., ACP, E-Rate, Lifeline) are the most common sources of funding** for organizations. Libraries and Higher Education organizations are the only organizations that reported receiving Emergency Connectivity Funding.



# Funding Capacity

## **Over 60% of DEEM respondents reported difficulty in accessing funding sources.**

Several organizations reported on issues that contribute to this, including lack of eligibility, complexity involved in layering in multiple funding sources, and high need relative to available funding.

For example, while funding for programs like device access programs may be available to many organizations, these organizations have stated that the amounts available are not sufficient to meet demand.

*“Our capacity is severely limited and planning for infrastructure requires significant coordination across agencies, entities and community organizations. Local jurisdictions need support with coordination and more guidance from the state for local jurisdictions on policies, best practices, and the current rulemaking process if we are going to be effective at implementation and planning.”*

*“Each funding source has its own requirements which make it difficult to develop broadband projects in underserved areas utilizing multiple funds.”*

*“There is tremendous need for and value delivered through such events but lack of funding availability and limited organizational capacity restrict the ability to do more.”*

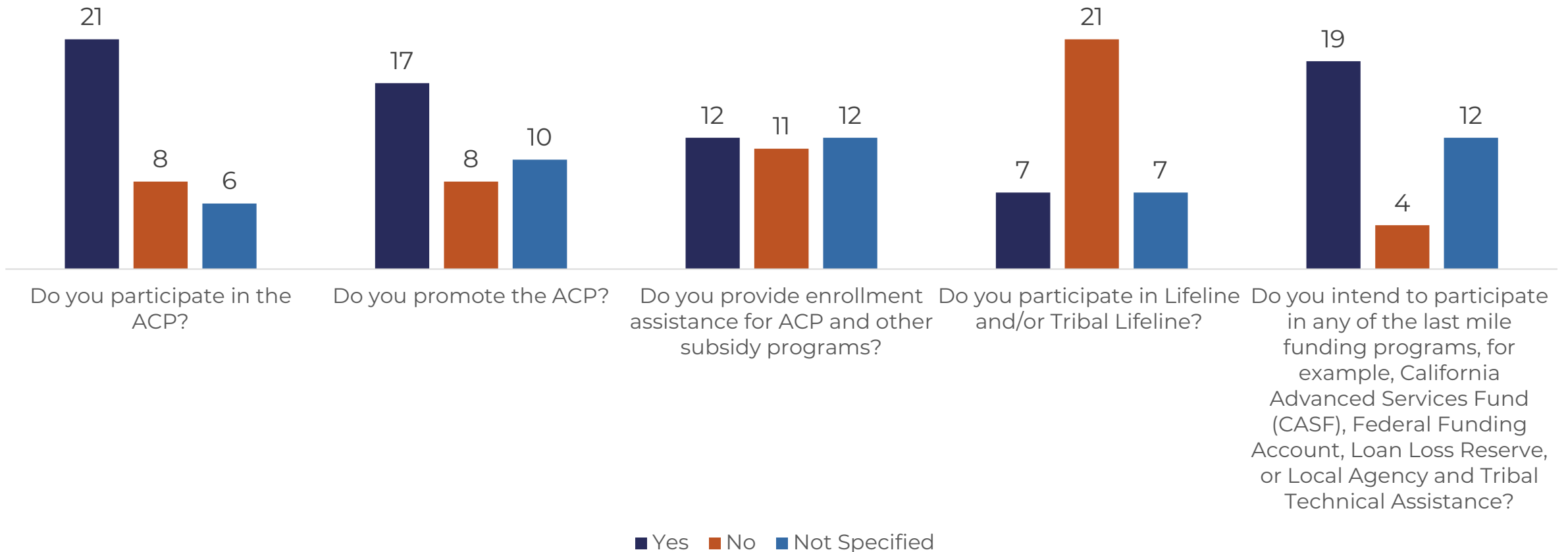


## 2.1 Digital Equity Ecosystem Mapping (DEEM) Survey & Results: ISP Respondents



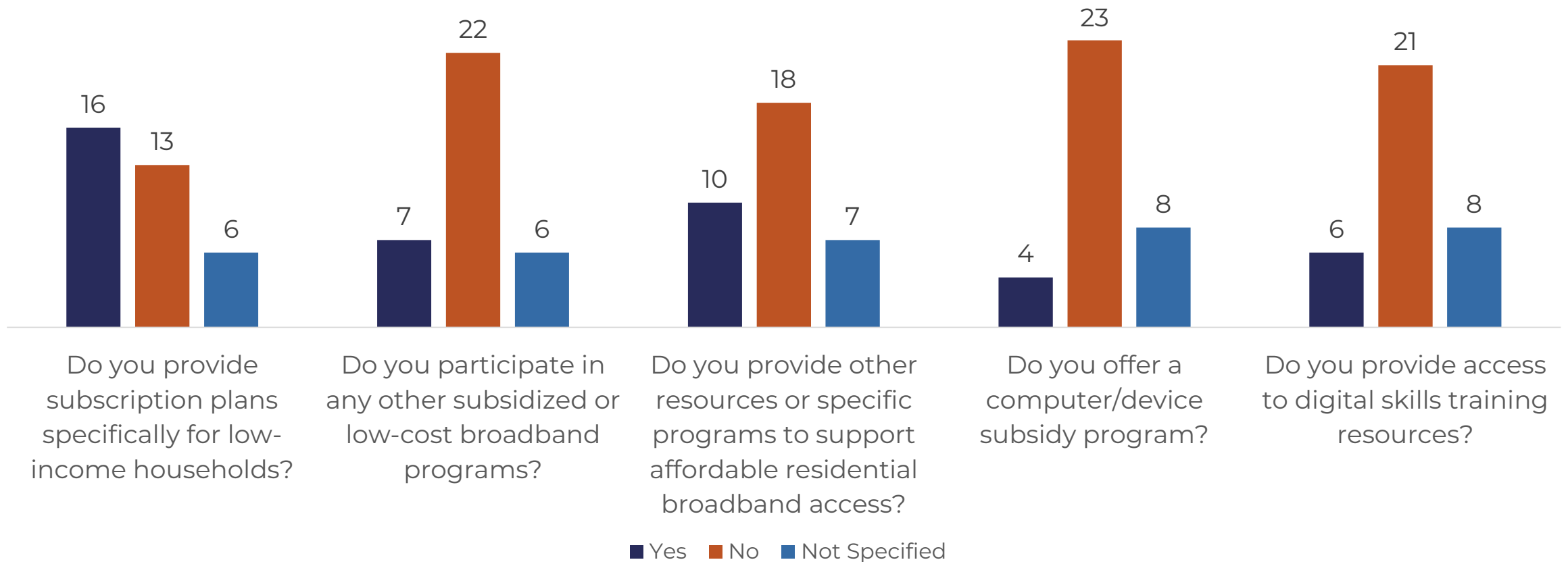
# ISPs Key Highlights

Over 60% of Internet Service Providers participate in the Affordable Connectivity Program (ACP), with a significantly smaller share (20%) participating in Lifeline or Tribal Lifeline. These results highlight the potential for more participation in broadband service subsidy programs and promotion of those programs by ISPs.



# ISPs Key Highlights

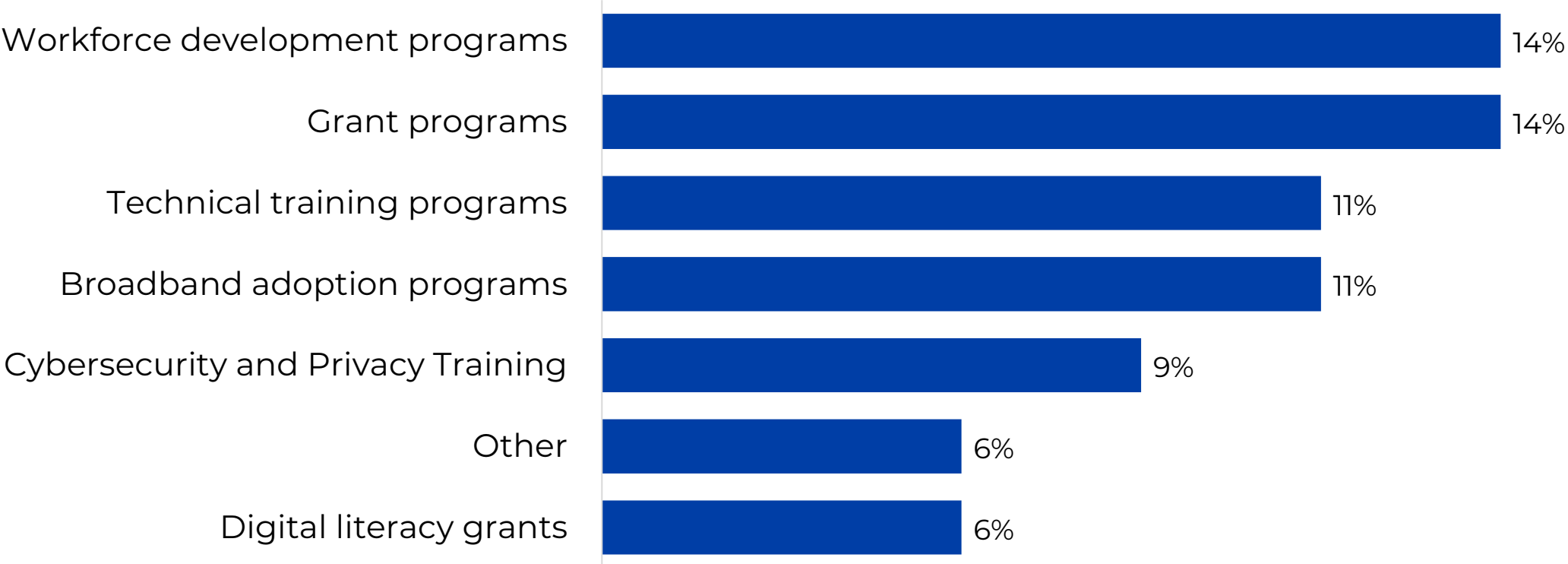
Over 60% of Internet Service Providers (ISP) indicate that they do not participate in low-cost broadband programs, device access nor digital skills training programs. With their large subscriber base, ISPs have the potential to reach many customers who may benefit from such programs. However, gap financing may be needed to help promote ISP program participation.



# ISPs Digital Equity Programming

Only a small share of Internet Service Providers (ISPs) offer digital equity programs, suggesting opportunity for increasing the availability of related programs. Notably, only five (14%) of ISP respondents offer **grants and workforce development programs**.

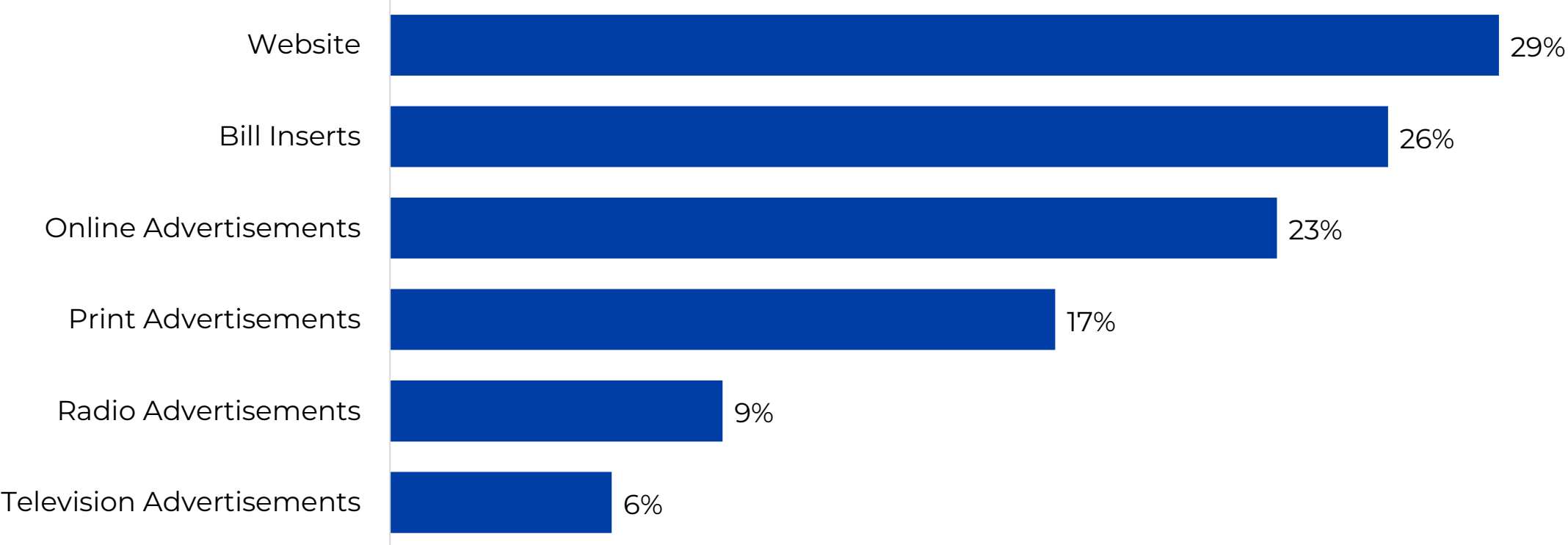
**Digital Equity Programs Offered**



# ISPs ACP Promotion

Websites are the most popular mechanism used by ISPs to promote the ACP, followed closely by bill inserts and online advertisements.

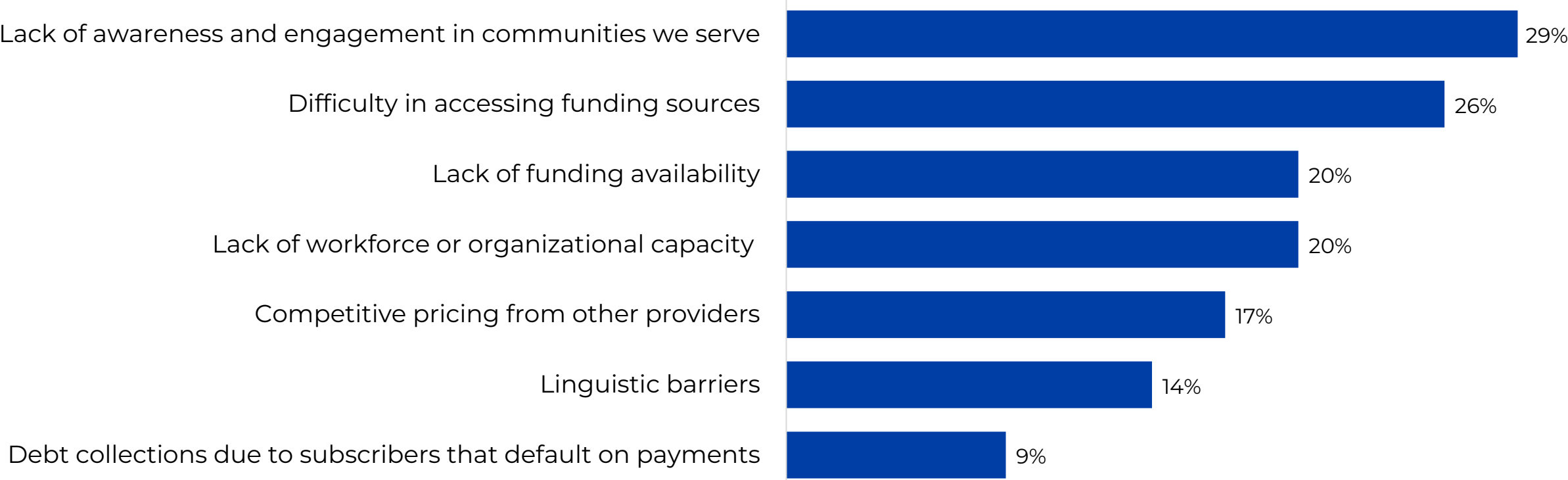
ACP Promotion by Type



# ISPs Barriers to Programming

ISPs identified **lack of awareness and community engagement** as the most common barrier to enrollment in ISP broadband programs. They also state that funding is another barrier to enrollment.

## Barriers to Enrollment in ISP Broadband Programs

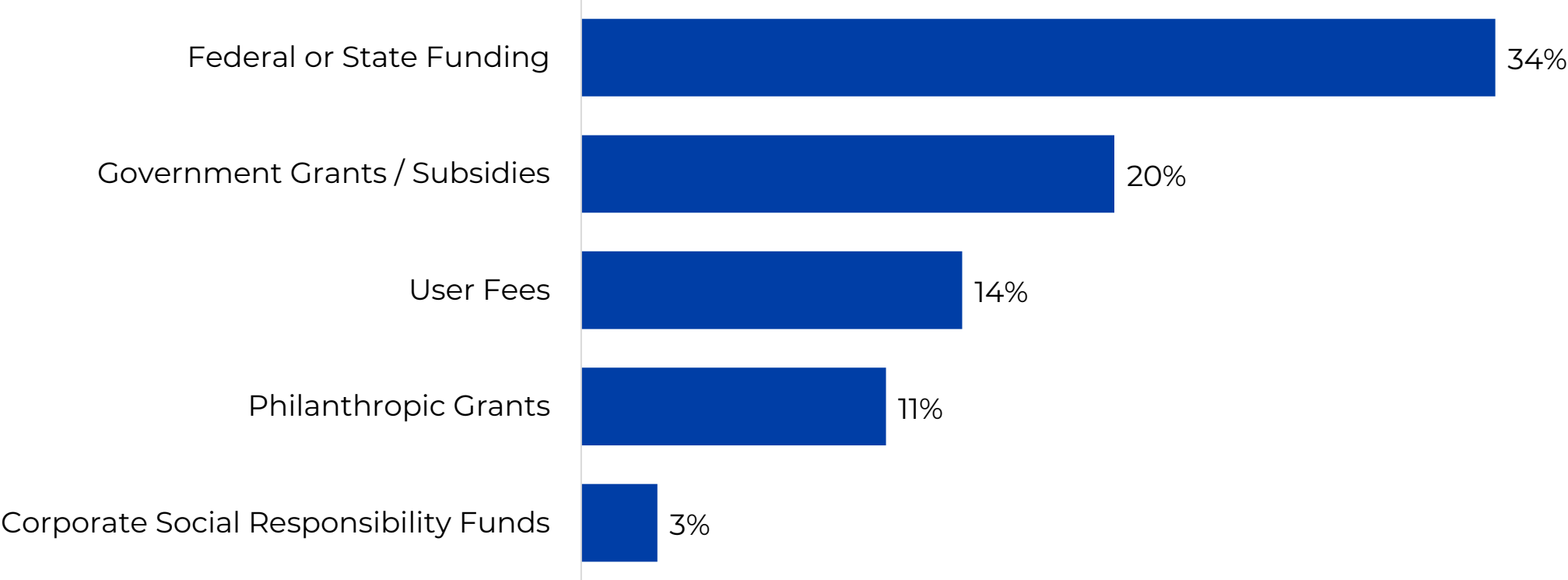




# ISPs Funding Sources

**Federal or State funding is the most common funding source** supporting ISP broadband programs. Only one ISP utilizes their corporate social responsibility funds.

**Funding Sources for ISPs**



# ISPs Subscribers and Subsidized Participants



**7.1M**

Subscribers are serviced by the surveyed ISPs. Of these subscribers, over **250,000** receive a subsidy.



**\$25 - \$40/mo.**

The average cost for a household to participate in a subsidized broadband program.

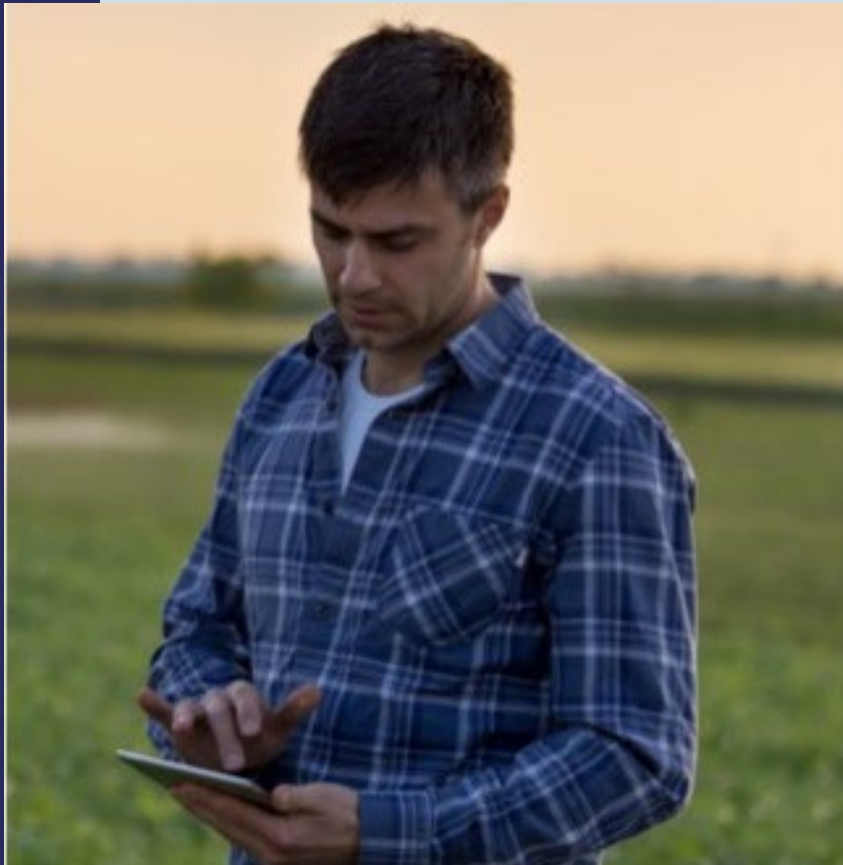
# ISPs Subscribers

Over 7 million subscribers are serviced by the surveyed ISPs, **250,000 or 3.5%** of which receive a subsidy.

Internet Service Provider	Subscribers	Subsidized Subscribers	Internet Service Provider	Subscribers	Subsidized Subscribers
Catalina Broadband Solutions LLC	3,000	50	Sierra Nevada Communications	2,000	-
Lone Pine Communications	791	50	Ranch WiFi LLC	4,500	200
Conifer Communications	3,000	-	Hollywood Backdoor Alliance United, Inc.	20	20
Velociter Wireless Inc	1,500	12	Cox Communications	100,000	200,000
Oasis Broadband	2,000	2	SpaceX	1,750,000*	50,000
Zavala Communications LLC	34	6	Stream IT Networks	750	-
Velocity Communications	1,500	-	Sky Valley Network LLC	1,235	-
Anza Electric Cooperative	2,900	50	Zinnia Networks Inc dba Matrix Broadband	1,200	10
Communications of America Workers Local 9003	9,999,997**	-	Spectrum Pacific West, LLC	5,200,000*	-
Ukiah Wireless	1,230	2	Cal.net	10,000	3,000
Cruzio Internet	6,000	500			
unWired Broadband LLC.	27,000	-			

*\*This figure includes the company's total subscriber base, including outside of California.*

*\*\* Not included in the total, this figure includes the sum of subscribers from the companies that the union workers are a part of.*

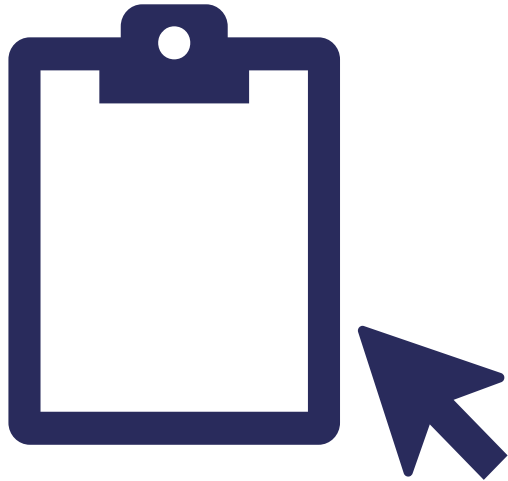


## 3. Appendix

# Data Cleaning Methodology: Total Reach

A total of **1,424 people** accessed the online survey through various distribution means. This is the Total Reach of the survey.

**1,424** TOTAL REACH  
1,300 DEEM  
111 DEEM ISP  
13 DEEM for Tribes



# Data Cleaning Methodology: Void Responses

However, **846** of these people did not attempt a single question in the survey. These are void responses which we are eliminating from the Total Reach.

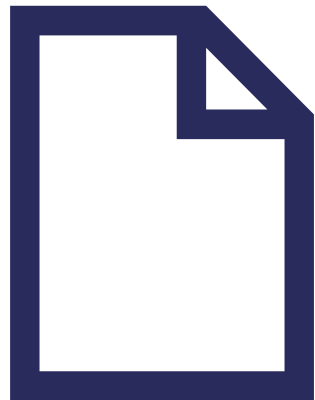


**1,424** TOTAL REACH

— **846** VOID RESPONSES

# Data Cleaning Methodology: Void Responses

Of the remaining respondents, **106 responses** included individuals testing the functionality of the survey and others with non-valid inputs, such as placeholder or mock names, organizations, and programs. These were removed since they do not count as actual engagements.



**1,424** TOTAL REACH

— 846 VOID RESPONSES

— 106 TEST RESPONSES



# Data Cleaning Methodology: Valid Responses

After removing all the invalid responses discussed in previous pages, we are left with a total of **472 Valid Responses** for the online DEEM survey in California. We use these responses for survey analysis.



**1,424** TOTAL REACH

— 846 VOID RESPONSES

— 106 TEST RESPONSES

**= 472** TOTAL VALID

432 DEEM

5 DEEM ISP

35 DEEM for Tribes

# Data Cleaning Methodology: Valid Responses

Of the Valid Responses, **321 respondents** made it all the way to the end of the survey. These are the Complete Responses. The Completion Rate is the share of Complete Responses from Valid Responses.



$$\begin{array}{r} 321 \text{ COMPLETE} \\ \text{RESPONSES} \\ \div \\ 472 \text{ VALID} \\ \text{RESPONSES} \\ = \\ 68\% \text{ COMPLETION} \\ \text{RATE} \end{array}$$

# Definitions: Survey Responses

TERM	DEFINITION
<b>Total Reach</b>	Number of people who accessed the online survey through various distribution means. Each person starting the survey is given a unique ID on the survey platform.
<b>Invalid Responses</b>	Survey responses where one or more of the following conditions is met: <ul style="list-style-type: none"><li>• The entire survey response is blank</li><li>• Some of the response columns indicate that the respondent was testing the survey or did not put in any relevant or useful information (such as organization name, contact, program info, etc.)</li><li>• The survey respondent is an internal tester</li></ul>
<b>Valid Responses</b>	Survey responses after eliminating all the Invalid Responses. Valid Responses are used for survey analysis.
<b>Complete Responses</b>	Valid Responses where the respondent went through the entire survey, from the beginning to the end. A Complete Response does not mean that the respondent answered every survey question.

# Organizations Captured

<b>COMMUNITY ANCHOR INSTITUTION</b>
<b>School (K-12)</b>
<b>Library</b>
<b>Health clinic or health center</b>
<b>Hospital or other medical provider</b>
<b>Public safety entity (non-government)</b>
<b>Private university</b>
<b>Public housing or affordable housing organization</b>
<b>Community-support or community-based organization</b>
<b>Workforce development organization</b>

# Organizations Captured

<b>GOVERNMENT OR PUBLIC ORGANIZATION</b>
<b>Tribal Government</b>
<b>State Government</b>
<b>County Government</b>
<b>Local or Regional Authority</b>
<b>Council or Metropolitan Planning Organization</b>
<b>Public Safety Entity (Government)</b>
<b>County Office of Education</b>
<b>Special District</b>
<b>Tribal Government</b>

# Organizations Captured

<b>PRIVATE SECTOR AND NON-GOVERNMENTAL ORGANIZATIONS</b>
<b>Internet Service Provider</b>
<b>Labor Organization</b>
<b>Foundation/Philanthropic Organization</b>
<b>Non-Profit Organization</b>
<b>For-Profit Corporation or Business</b>

# Thank You



Broadband for All