



Tribal Digital Village Broadband Adoption Program Executive Summary

ZeroDivide's "Tribal Digital Village Broadband Adoption Program" will increase broadband adoption from the 17% current baseline usage to 70% (4800 new broadband users) among members of 19 Native American tribes in rural So. California. This will be accomplished through outreach & public awareness, digital literacy training, content creation, and establishment of sustainable business models.

Problem Statement:

The National Congress of American Indians estimates that only 5-8% of Native Americans living on tribal lands have residential broadband access. A 2007 US Census Bureau study reported that broadband adoption rates by American Indians and Native Alaskans was 30%, the lowest adoption rate of any ethnic group.

A 2009 study by Native Public Media concluded that broadband adoption efforts must accompany deployment of infrastructure and be driven by the Native American tribal community. Geographic isolation and cultural differences make tribal communities especially vulnerable to disparities in broadband deployment and adoption. In addition, telecommunications companies are not interested in deploying internet to these communities due to the limited financial return on investment. Consequently some tribal entities, such as the Southern California Tribal Chairmen's Association (SCTCA), have been forced to build and operate their own broadband networks. Through their Tribal Digital Village (TDV), SCTCA maintains a high-speed wireless broadband network linking community anchor institutions of 19 Tribal reservations. This network serves as the only internet access point for thousands of tribal members. TDV has begun a major effort to expand its network to 2,000 tribal homes. However other barriers continue to prevent adoption-including affordability, lack of training, perceived lack of relevance to their lives, and lack of linguistic and culturally appropriate content.

These barriers perpetuate the digital divide and an "opportunity" divide that must be overcome to correct disparities in health, education, civic engagement and economic status among tribal members. Solution: Since 2006, ZeroDivide has partnered with TDV to expand broadband access and adoption among the SCTCA tribal communities. The proposed TDV Broadband Adoption Program will increase broadband adoption among the 8,900 Tribal community members from the current 17% baseline to 70% usage.

The program will augment TDV's deployment of a residential Tribal broadband network to 2,000 tribal homes through a comprehensive four-component broadband adoption strategy:

- 1) Outreach and Public Awareness
- 2) Basic and Advanced Digital Literacy Training
- 3) Creation of Meaningful Content,
- 4) Sustainability

This program addresses the BTOP goals of 1) providing improved access to broadband service to consumers residing in unserved and underserved areas of the country; 2) providing broadband access, education, awareness, training, equipment, and support to community anchor institutions and organizations serving vulnerable populations; and 3) stimulating the demand for broadband.

Innovative Approach:

ZeroDivide's innovative approach transforms vulnerable and underserved communities by building their capacity to understand, design, and adopt broadband and other technologies. From its inception, the TDV broadband wireless network has been a community-led effort to bring internet technology to remote Native American reservations. The proposed program will build upon this landmark effort and strengthen the tribes' ability to increase and sustain broadband and technology adoption on the reservations.

Our strategy has four key components:

Comprehensive: Our program is designed to address multiple barriers to broadband adoption, including affordability, access to computers, digital literacy training, and relevancy of content to Native Americans. In addition, the project will utilize and build capacity in community anchor institutions on reservations to support broadband adoption of tribal members. Our approach also stresses integration of broadband usage into the everyday lives of tribal members to increase their overall health and well being; support the cultural heritage of tribal communities; increase technology job skills; and improve educational and economic opportunities for tribal members.

Community-led: Tribal Digital Village was established in 2001, through processes rooted in tribal communities and traditions. As a tribal entity, TDV has significant expertise in ensuring that all programs and practices are culturally competent and incorporate community voices and input.

Ecosystem of Support: The great value of ZeroDivide's methodology is to provide an ecosystem of support for its community partners. Specifically, ZeroDivide provides TDV with technical assistance and capacity building in such areas as metrics/data collection/evaluation, business development, financial reporting, fund development & sustainability, and accessibility for individuals with disabilities. ZeroDivide can guide implementation of adoption methods based on 10 years of funding successful programs. We will leverage relationships with the technology industry, philanthropy, non-profit technical assistance providers, and volunteer organizations. For example, through ZeroDivide TDV will have access to low cost hardware and software via organizations such as TechSoup Global and the San Diego Futures Foundation, and access to CRM Salesforce.com.

Sustainability: A unique aspect of our methodology is to foster in our partners a revenue generation component to support sustained technology usage and ongoing adoption. This not only ensures long-term use of broadband, but also creates self-sustainable enterprises capable of

building definable consumer markets for future broadband services and applications. Since 1997, ZeroDivide has successfully supported several such social enterprises. The program will test TDV'S emerging ISP business model which can sustain their wireless broadband service and related adoption efforts beyond the life of the BTOP grant.

Technology Strategy:

ZeroDivide's technology strategy addresses barriers to technology adoption that go beyond affordability and network access. Thus, this project will increase sustained broadband adoption within the targeted population through a combination of training sessions delivered at locations within Tribal Digital Village (TDV)'s network of 86 tribal community centers, libraries, public safety agencies and other community anchor institutions, including 4 tribal flagship upgraded technology training centers (Pala Learning Center/Library, Rincon Indian Education Center/Library, San Pasqual Education Center/Library and The Barona Museum). These centers will leverage TDV's existing broadband network.

Course curricula will provide basic technology skills training to access vital individual, community and business benefits via online content/applications that require broadband connectivity. Individual participant content and applications training includes access to 1) online job listings and career-building content; 2) financial and banking information; 3) free internet-based telephony; 4) digital media and social media; and 5) home entertainment. Community-wide content and applications include access to 1) tribal/governmental resources; 2) health care information and alternative health care; 3) community-relevant digital content; and 4) extended learning. Business specific content and applications include: 1) e-commerce and online auction sites where Native American artists and craftspeople can sell their goods; 2) access to business and financial information; 3) the ability to send and receive large files; and 4) small business access to a global customer base.

Curricula will be broken out into two main tracks: 1) Basic Computer Skills, including computer vocabulary, file structuring, word processing, spreadsheets and internet/email; and 2) Broad Applications, including broadband telephony, e-commerce, access to content, and basic digital video/audio.

Technology training sessions will utilize 10 new HP TouchSmart 9100 VS663UT Intel Core 2 Duo T6570 2.10GHz, 2GB DDR3, 250GB HDD, 23" TouchScreen LCD, Windows 7 Professional PCs at each location. A portable laptop, projector and screen will be acquired to run demonstrations and trainings. In addition, the Pala Learning Center will be equipped with a static projector and screen.

Concurrent with this application is Southern California Tribal Chairmen's Association/TDV's request to the Rural Utilities Service under the Broadband Initiatives Program, to expand TDV's network to 2000 homes via a 300 mile point-to-point infrastructure. This network will provide low-cost service of up to a 3/3 Mbps broadband connection to residents who currently have no other viable home broadband access options within the three-year period.

Areas to be Served: The reservations of 19 federally recognized tribes that are members of the Southern California Tribal Chairmen's Association. The reservations are primarily located in San Diego County, California, and are scattered within an area beginning in southern Riverside County, California, and stretching southward 150 miles to the U.S.-Mexico border.

Target Population: 8,900 enrolled tribal members of 19 Native American tribes in Southern California and 2,000 residents living in communities adjacent to the tribes.

Demographic Information: The vast majority of the target population is Native American, including 8,900 enrolled tribal members. The additional 2,000 residents living in communities near the tribes are Native American and Hispanic. Based on year 2000 Census figures, 77.94% of the population was born on the reservations. 68.39% of the population is not in the work force and 26.85% is employed. 41.47% of the population has an income less than \$24,999 and 29.73% of the people live at or below the poverty line. 26.05% of the people at the poverty line are families with children. 41.33% of the population is under 18 years old and 11.74% is over 55. 35.14% are ESL (English as second language). 16.14% of the population is disabled. Of those with disabilities, 28.64% live at or below the poverty line.

Qualifications: ZeroDivide is a 501(c)(3) public foundation supporting technology adoption in underserved communities. Established by community leaders from California's most underserved populations, Zerodivide has expertise in overcoming barriers to technology adoption in disadvantaged communities.

In the past 10 years, ZeroDivide has worked to build technology capacity among nearly 450 community anchor institutions and increase technology (including broadband) adoption in the communities it serves. In addition to the technology outcomes of our programs, we have increased graduation rates among low-income and at-risk youth in Long Beach; increased access to health care for limited English proficient and low-income individuals in San Francisco; and media content distributed via broadband networks throughout California to better reflect the state's diverse populations. ZeroDivide has the management staff and qualifications to replicate and scale models, including:

- a. Technical, organizational and financial capacity
- b. Ability to leverage experience and philanthropic/corporate relationships
- c. A track record in stimulating broadband demand and adoption in vulnerable communities

Tribal Digital Village was established in 2001 through a community planning process among the SCTCA tribes, initiated by their successful application for a 3 yr, \$5 million grant from the Hewlett Packard Company (HP). As a result, TDV was established to deploy a high-speed wireless internet data network linking the major community anchor institutions of 19 Tribal reservations throughout Southern California. TDV led the construction and deployment of the network, trained tribal youth to participate in building and creating the network, and trained staff and residents on computer and internet use. Over the last 9 years they have continued to maintain the network, providing customer service and troubleshooting everyday network issues. This staff also manages the network recovery from major disasters such as the San Diego fires in 2008. The TDV staff are from tribal communities. HP funding ended after three years, further underscoring the need for BTOP monies to provide sustainability in this dramatically underserved population. SCTCA is applying for a BIP grant to support the expansion of its wireless broadband network infrastructure (TDVNet Tribal Home Deployment).

Outcomes: This program will result in 4,000 new broadband users at 2000 tribal homes, 750 new users at community anchor institutions, and 50 new business users—for a total of 4,800 new users. Combined with the existing 1,500 broadband users, there will be a total of 6,300

broadband users at the end of this program.

Job Creation: 11 jobs saved or created (using Nat'l Council of Economic Advisors method)

Overall Cost: ZeroDivide proposes an overall project budget of \$986,060. Of this amount, ZeroDivide requests \$686,157 in BTOP Sustainable Broadband Adoption funds and will provide \$299,903 in cash match for 30.4% of the project costs.