

Understanding the Digital Access Opportunity Index (DAOI)

A Tool for Measuring and Targeting Digital Inclusion Impact in Santa Barbara County

WHAT IS THE DAOI?

The Digital Access Opportunity Index (DAOI) is a composite score measuring conditions shaping a community's ability to access and benefit from digital technology. A higher score indicates greater opportunity; a lower score signals greater vulnerability and unmet need. The DAOI goes beyond simple connectivity rates to capture the economic, social, and infrastructural forces that either enable or block meaningful digital participation.

THE 14 INDICATORS: WHAT THEY MEASURE AND WHY

Domain	Indicator	Why It Matters for Digital Inclusion
Economic Capacity	Median Household Income	Primary predictor of ability to afford devices and broadband subscriptions
	Poverty Rate — Families w/ Children Under 18	Child poverty concentrates device and connectivity gaps with immediate educational consequences
	SNAP Households w/ Children Under 18	SNAP receipt signals households most likely to face affordability barriers and benefit from subsidized access programs
	Unemployment Rate	Unemployment limits income available for digital spending and increases need for online job search tools
Digital Access	Rent Burden (35%+ of income)	High rent leaves less discretionary income; internet access is often sacrificed when housing costs dominate budgets
	Children Under 18 with No Computer and/or No Internet	Direct measure of the digital gap affecting school-age youth; a leading indicator of educational inequity
Human Capital & Inclusion	Speaks English Less Than Very Well	Limited English proficiency compounds digital barriers: navigation, setup, help-seeking, and trust are all impaired
	Less Than High School Degree	Lower educational attainment correlates with lower digital confidence, skills, and perceived relevance of internet
	Children Age 3–4 Enrolled in Early Education	Low early enrollment signals reduced institutional contact, limiting pathways to digital literacy and device access
Household Stability / Support Need	Female Householder, No Spouse Present	Single-parent households face heightened resource constraints affecting both affordability and time for digital skill building
	Uninsured Children (Under 19)	Lack of health insurance is a proxy for broader social vulnerability and reduced access to institutional support systems
	Cognitive Disability	Cognitive disabilities require accessible technology and specialized support; often underserved by standard outreach
	Rural Housing Share	Rural households face infrastructure deficits — fiber/cable may not exist regardless of affordability or willingness to adopt
	Foreign-Born Share	Immigration status, distrust of institutions, and language barriers compound non-adoption independent of income level

HOW TO READ A DAOI SCORE

70-100	Very High Opportunity
60-69	High Opportunity
50-59	Moderate Opportunity
40-49	Low Opportunity
Below 40	Very Low Opportunity

USING THE DAOI AS AN IMPACT MEASUREMENT TOOL



Target & Prioritize
Use zip-level DAOI scores to rank communities for outreach priority. Cross-reference with affordability index to distinguish infrastructure gaps from non-adoption barriers.



Design Interventions
Individual indicator scores reveal which domains are weakest. Low English proficiency + low income = multilingual navigator program. High rural share + low income = infrastructure advocacy + satellite/hotspot solutions.



Track Change Over Time
Re-score DAOI annually using updated ACS data. Rising scores in targeted zip codes validate program impact. Flat or declining scores signal where additional investment is needed.



Support Grant Applications
DAOI scores and indicator maps provide evidence-based justification for CASF, BEAD, and SDEP grant narratives. Very Low Opportunity zip codes (below 40) make the strongest case for targeted investment.



Communicate to Stakeholders
A single composite score translates complex, multi-dimensional inequity into an accessible metric for elected officials, funders, and coalition partners. The 14-indicator breakdown tells the story behind the number.

Important Note: The DAOI measures opportunity conditions, not connectivity alone. A high score does not mean digital equity has been achieved — it means structural barriers are lower. Conversely, a low score is an urgent call for multi-domain intervention. The index should always be used alongside census-tract-level affordability data for neighborhood-level precision.