

BIWISE INDUSTRIES

Building Tech Economies in Underestimated Cities:

AN EXECUTIVE SUMMARY



Executive Summary

How does a city like Fresno, CA develop a powerhouse tech economy? How does a place once siloed as just another rural agricultural town successfully diversify its economy and become a hub for technology careers, businesses, and digital infrastructure? How does a city like Fresno become more inclusive? Can this model work in other places?

Since 2013, Bitwise Industries, a female and minority-led technology company founded in Fresno, has used a three-pronged approach to connect underestimated people from undervalued places with great jobs in the tech industry.

Technology Consulting: Custom-built tech tools that showcase the transformational power of technology

Workforce Training: Inclusive recruitment into a supportive and flexible training program

Real Estate: Thoughtful revitalization of historic infrastructure in underestimated cities

This model has helped build digital infrastructure that creates long-term opportunities, while also upskilling populations that have been previously left out of upward economic mobility.

Our success as a company and as a contributor to Fresno's growth shows that economic development anchored in equity is not only possible but is also scalable and profitable. Bitwise Industries' model, which includes deliberate network-building to cultivate welcoming environments that make people feel like they belong, is proven to reduce barriers to success for people who face the most professional and workplace challenges, including BIPOC and LGBTQ+ individuals, people with immigrant origins, and people who have involvement with the justice system or family care responsibilities or veteran status.

BITWISE INDUSTRIES' SUCCESS IS REACHING SCALE AND MOVING STATISTICAL NEEDLES TOWARD EQUITY.



Fresno's digital economy and Fresnans' well-being have improved in eight years of Bitwise Industries' operation because of the cumulative advances in equity and opportunity we've achieved. We have expanded our footprint by succeeding at solving complex technology business challenges each day with diverse, nontraditional talent that excels at cooperating, devising creative approaches, and anticipating the needs of users with lower digital literacy.

Since starting out in Fresno, we have built similar ecosystems in the California cities of Merced, Bakersfield, and Oakland. In 2021, we announced our expansion into Toledo, OH followed by Las Cruces, NM; El Paso, TX; Buffalo, NY; and Greeley, CO in 2022. This paper will affirm the growing success achieved from these new endeavors by drawing out the connections between the change Bitwise Industries is helping to make in Fresno's most challenged communities and in its once-deteriorating downtown, and the larger shifts afoot in Fresno toward equitable, forward-looking development and shared prosperity.

Technology Consulting

To have a tech economy, there needs to be demand for technology and the ability to fulfill that demand with world class talent and technology solutions. Bitwise Industries technology solutions begin with digital literacy efforts in our communities and globally, then delivering [custom software development](#), [Contact Center-as-a-Service](#), and [Salesforce implementation and administration](#), among other products that strengthen digital infrastructure in communities left behind. Bitwise's technology professionals, which include apprentices, have deep experience applying cutting-edge technology solutions to help business entities of all sizes navigate the technology landscape to find solutions to optimize their operations.

Bitwise Industries' tech consulting business is advancing digital capacity throughout the economy, and driving up demand for services and IT professionals across sectors. The more that a wide cross-section of schools, businesses, organizations, entrepreneurs, and government agencies looks to native tech talent to grow IT capacity, the more members of the community that will be exposed to and learn to use tech tools, and seek them out in the future.



CLIENT SUCCESS

Custom Apps

Bitwise Industries builds applications purposefully designed to not display ads or mine and sell users' personal data, like [TatStat](#) and [ToProovlt](#).

Custom Websites

[OnwardCA](#) was designed to simplify the process of finding geographically supportive resources—employment, training opportunities and support for basic needs—for those displaced during the COVID-19 shutdown. OnwardCA matched 100,000 visitors with emergency services or employment opportunities in its first 24 hours of being live.

Contact Center-as-a-Service (CCaaS)

Bitwise was recruited to provide CCaaS solutions for statewide broadband inclusion efforts known as [New Mexico Student Connect](#). Working in partnership with stakeholders from across the state, Bitwise ambassadors—with personal experience in digitally disconnected communities—reached out to more than 160,000 households, and directly supported more than 18,000 families in receiving subsidies and assistance to get online through the American Connectivity Fund.

Salesforce Implementation and Administration

Fresno Unified School District (FUSD) is the third largest school district in California and serves more than 73,000 students and 10,000 employees between 107 schools, featuring a minority enrollment of 90%. Bitwise modernized and simplified the entire human resource information system (HRIS) process with an enterprise-wide, fully customizable portal to streamline the HR process and better serve their students and employees.



Workforce Training

Anchored in people and their untapped potential, Bitwise's approach to upskilling individuals from underestimated communities has unlocked experiential technical training, provided access and referral to essential services, and addresses the barriers caused by poverty and bias. Bitwise Industries' workforce training programs have been singularly successful because they proactively recruit talent from underserved communities through a holistic and personalized approach.

With an intentionally low cost of \$250 per class, Bitwise offers pre-apprenticeship classes designed to upskill people as quickly as possible. These classes walk students through the fundamentals of website design, programming, and Salesforce administration. If a student is experiencing financial difficulty, Bitwise will waive the class fees, provide the computers, ancillary equipment, and subscriptions needed for that human to succeed.

THE BITWISE ECOSYSTEM PROVIDES THE FOLLOWING WRAPAROUND SERVICES:

- Student Support Specialists
- Door-to-door transportation
- Child care
- Counseling
- Connections to other support resources



FROM STUDENT TO APPRENTICE

As students complete classes in the Workforce Training program, many become eligible to apply for a paid apprenticeship—which includes full benefits coverage. Working side by side with Bitwise industry experts, apprentices have the opportunity to hone their new skills on real-world projects that will be recognized and valued by future employers who review their portfolio of projects. This experience equips apprentices with the required skills to positively impact their future economic and social trajectory, as well as create more digital equity in their communities.

Bitwise Industries' success is reaching scale and moving statistical needles toward equity. Bitwise's commitment to not screening people as a method for exclusion means there are never any educational attainment prerequisites to taking our classes. And this proven model of providing pathways into the technology industry for people coming from stories of poverty and/or exclusion is available to work in cities across the country.



THE KNOWLEDGE AND NETWORKS PEOPLE GAIN AT BITWISE INDUSTRIES CREATES VIABLE OPPORTUNITIES TO JOIN ENTREPRENEURIAL START-UPS, FOUND THEIR OWN BUSINESSES, CREATE JOBS, AND BUILD WEALTH.

Bitwise has successfully developed an entrepreneurial ecosystem.

19%
HAVE STARTED
THEIR OWN
COMPANIES.

12%
ARE DEVELOPING
THEIR OWN STARTUPS

20%
ARE WORKING
FOR START-UPS

32%
ARE CURRENTLY
WORKING AT BITWISE

Real Estate

Bitwise Industries' workforce training programs and tech consulting operations have blossomed into a full tech ecosystem that is driving the local expansion of an industry and increasing digital equity. Bitwise real estate efforts are focused on revitalizing historic buildings in the downtown areas of underserved cities.

Bitwise buildings are designed to welcome students, apprentices, entrepreneurs, cowork tenants, and others who are unified in changing the face of the tech industry and their communities. Bitwise Industries' real estate offerings have accelerated the efforts to expand wealth and opportunity in marginalized communities. Their design and use are relentlessly focused around this purpose, and their doors are open to people and companies with limited means but abundant potential.

WHAT SETS BITWISE INDUSTRIES APART?

- Affordability and access to opportunity
- Accessible, community-oriented public events
- Shared conference rooms, gyms, restaurants and cafes
- Classrooms and offices
- Apprentices' technical presentations
- Low-cost coworking, "desk hotel" plans, and flexible rental rates
- Entrepreneurship ecosystem



BITWISE INDUSTRIES

FRESNO | BAKERSFIELD | MERCED | OAKLAND | TOLEDO
GREELEY | EL PASO | BUFFALO | LAS CRUCES

SUCCESS IS SCALABLE

Economic development anchored in equity is not only possible, but it is also scalable and profitable. Bitwise Industries' three-tiered model is proven to reduce barriers to equity. Fresno's digital economy and Fresno's well-being have improved in eight years of Bitwise's operation because of advances in equity and opportunity. By being welcoming and supportive, Bitwise attracted a workforce that is diversifying the tech field and meaningfully strengthening digital infrastructure in the most disconnected places.

HOW TO LAUNCH A TECH ECOSYSTEM AND FURTHER THE EQUITY IN YOUR CITY

1. Invest in community-wide basic digital literacy, and create and promote low-cost, short-timeline educational programs.
2. Embedding apprenticeship programs within working companies. Do proactive outreach to connect them with digital tools and assist their recruitment of local in-house tech talent.
3. Provide capital to fund overlooked people and places and advocate the benefits of hiring a representative tech labor force. Cities need to invest in both humans and physical infrastructure to change the trajectory of their community.

MORE INFO

To read the white paper in its entirety, along with the references cited throughout this quick read guide, please click [here](#) or scan the QR code below if you are reviewing this document in printed format.

Directions: On your compatible Android or Apple phone, open the built-in camera app. Point the camera at the QR code. Tap the banner that appears on the top of the screen to open website.



If you'd like to learn more, or simply want to ask Bitwise Industries any questions, please contact:

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