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Bitwise Industries: West Virginia Pathways to Equity in Tech



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Johnathan M. Holifield is the Senior Vice President of Bitwise Industries. From 2017 – 2021, he served as Executive Director of the White House Initiative on Advancing Educational Equity, Excellence, and Economic Opportunity through Historically Black Colleges and Universities (HBCU) and Advisor of the Domestic Policy Council, where he architected the first federal HBCU competitiveness strategy. He authored *The Future Economy and Inclusive Competitiveness: How Demographic Trends and Innovation Can Create Shared Prosperity for All Americans*. Holifield's contributions include leading formation of CincyTech, securing more than \$40M of funding support, creating Ohio's first information technology high school, establishing Ohio's first statewide STEM entrepreneurship program, and much more.

I have an enthusiastic commitment to cultivating assets, including my own talent, to capitalize on top opportunities. As a teenager, I left a winless high school football team to walk on at West Virginia University, where I earned a football scholarship, was elected team captain and a student government leader, and eventually became an NFL player.

Over the course of my career, I continued to nurture personal development, growing from a civil rights lawyer and advocate and government reformer to national economic inclusion and competitiveness pioneer, to presidential appointee and architect of a new federal strategy to advance historically Black colleges and universities.

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calamitous COVID-19 pandemic creates new opportunities to do that. No doubt the pressures and expectations to close economic inequity gaps have only continued to build. As a promising course for the future, I am excited to share an approach to empower West Virginia's underestimated humans in tech for the post-pandemic era.

“West Virginia’s underestimated humans can secure economic equity by gaining personal ownership stakes in the tech economy.”

The sum of these eclectic experiences is a single intention: Creating conditions to cultivate undervalued, under-tapped, and underestimated human potential.

Driven by clear-eyed recognition of challenges facing the state, my enthusiasm for West Virginia's possibilities is deeply held, like when we sing *Country Roads*, “*all my memories, gather ‘round her.*” Simply put, I believe in West Virginia.

Encouraged by West Virginia Forward to “[I] look for disruptive trends that create opportunities for differentiation,” the

A bold way to meet this objective is to laser-focus on equity. Not purely because of its characteristic of fairness, but rather for its equally important quality associated with ownership. Sharply cutting to the chase, West Virginia's underestimated humans can secure economic equity by gaining personal ownership stakes in the tech economy. This point should be distinctly understood for the way ahead described herein to resonate and ignite new action.

There is an unmistakable shift toward human talent as the global differentiator in a dramatically changed and rapidly changing world. There is no greater economic

imperative for our nation than to nurture the talent of underestimated people – connecting forgotten communities to the tech economy – to improve their performance, productivity, and living standards.

This is precisely what Bitwise Industries does!

Founded and headquartered in Fresno, California in 2013 and expanded to nine other cities, we are a for-profit, mission-driven company, delivering robust digital solutions to customers while developing the most representative tech talent in the country – and we do this at scale. Our mission is to “Build tech economies in underestimated cities,” fueled by underestimated humans.

Underestimated cities mean socioeconomically poorer places, which tend to conjure an emotion that leads to well-fitting examples found in West Virginia. When it comes to underestimated humans, think ALICE (Asset Limited, Income Constrained, Employed) populations.

Bitwise Industries partners with organizations and entities across multiple sectors – including local, state, and federal government, business, community, and philanthropy – to convert their routine tech services procurement and regular talent development investments into tech-based economic mobility pathways. These pathways provide apprenticeship employment, apprentice wraparound support, and permanent employment – all in tech.

We help communities transform underestimated humans into sources of local economic competitive advantage, creating new pools of tech talent that can support growth of existing local industries, as well as attract and perform tech work from across the nation. Bitwise Industries’

apprenticeship employment pathways endow underestimated humans with capacities and capabilities to acquire ownership interests in tech, while achieving economic equity and getting life-changing cash into their pockets. For us, equity = ownership.



Why ownership in tech?

Make no mistake about it, to realize economic equity requires alignment with the economic inequity closing sectors of the economy and obtaining personal ownership of valued assets within those sectors. Tech is among the best economic sectors to produce the desired results.

Measured by revenue, the Information industry, i.e., the tech economy, is the 8th largest in the U.S., at \$2.3 trillion in 2023. Moreover, tech plays an increasingly vital role in almost all other sectors, such as healthcare, advanced manufacturing, transportation, education, and energy. One of the surest ways to overcome economic inequity is to gain personal ownership of an equitable piece of tech.

It is difficult to imagine any asset with the potential to appreciate more in value than the tech skills of underestimated humans. Meaningful upward economic mobility begins with accessing tech opportunities through apprenticeship employment and acquiring personal ownership of tech skills. These assets have values that continue to appreciate over time, leading to higher wage incomes.

Rising incomes improve the ability of underestimated humans to purchase personal ownership of fixed assets, which are also appreciating assets, such as lands, homes, businesses, and intellectual property.

The historically potent combination of personal ownership and appreciating assets – **tech skills and fixed** – translates into real opportunities for wealth creation that closes economic inequity gaps.

In the same way that equity confers upon the holder a personal ownership stake in a home, building or business, tech skills confer upon the holder a personal ownership stake in the tech economy.

Typically, students entering Bitwise Industries’ apprenticeship employment make less than \$21,000 per year, on average. Learners earn a living wage of about \$35,000 during apprenticeship employment. Upon completion of the apprenticeship, students obtain new jobs that increase annual average earnings to \$62,000. After three years of tech employment, those earnings grow to \$81,000 per year. This is real economic mobility and how the equation equity = ownership is tangibly expressed for real-life effect.

Notably, of the over 15,000 individuals who have participated in apprenticeship

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employment programs, 60 percent are Black or Brown, 60 percent are women, 40 percent are first-generation immigrants, and 40 percent are LGBTQIA+.

Making the invisible economy visible

Bearing none of the visible hallmarks of earlier economic eras (e.g., agricultural, industrial), the tech economy has been practically invisible to underestimated humans. To secure equity in tech, West Virginia's leading stewards of local economies – from government to business to economic to innovation to workforce to community development – must tangibly offer underestimated humans new economic mobility pathways to tech. These stewards are singularly best able to illuminate the tremendous opportunities in the tech economy and cultivate with Bitwise Industries the

most favorable conditions for underestimated humans to compete and win in tech.

The upshot is that the Bitwise Industries story is about equity. Breathing life into the simple equation (equity = ownership), we illustrate that equipping underestimated humans with the skills to gain ownership stakes in tech is a powerful solution for which the time has come. Until now, the tech economy has altogether missed underestimated humans and communities, not only in West Virginia, but in similarly situated places throughout the U.S.

Bitwise Industries provides new ways to change that. The remaining question is whether we have the will? **✓**