

Jobenomics Baltimore City

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By: Chuck Vollmer

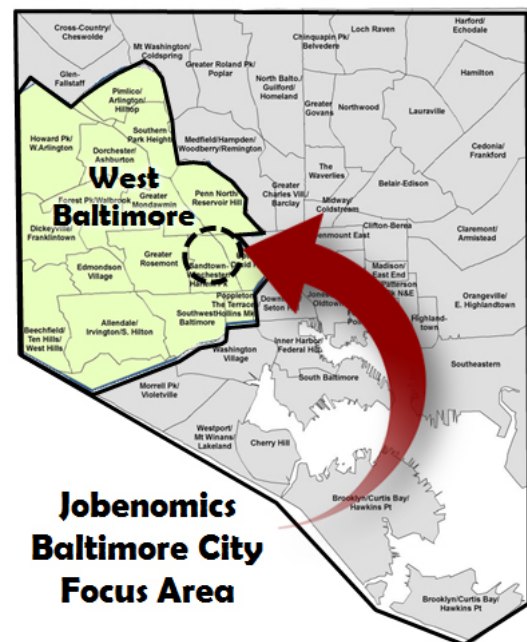
13 September 2016

The Jobenomics Baltimore City initiative serves as a good example of what the Jobenomics National Grassroots Movement is trying to achieve with state and local communities.

In April 2016, Jobenomics was contacted by Baltimore City leaders in regard to developing a potential Jobenomics Baltimore jobs creation initiative. After a few meetings, Jobenomics developed an initial framework for the Baltimore Metropolitan Area (MSA). In June 2016, Jobenomics and Baltimore City community leaders met with State and County economic development officials. The State of Maryland, Baltimore County and Baltimore suburbs are performing better than the national average in job creation, but Baltimore City (an independent city within the metropolitan area) is not. The consensus of the State and County economic development officials was that priority must be given to areas with the highest potential for job creation, namely Baltimore suburbs with high skills and resources. By comparison, Baltimore City's urban labor force has lower skills with fewer resources. As a result of the June meeting, Jobenomics Baltimore was rewritten as Jobenomics Baltimore City focused on West Baltimore's most distressed neighborhoods—the area where Freddie Gray's death in police custody in 2015 fueled latent unrest into full-fledged riots and violence.

Over the next several months, these core community leaders are organizing seminars and meetings with other community leaders to discuss the Jobenomics Baltimore City plan and its initial business and jobs creation strategy. These community leaders will include state and local government officials, corporate executives, non-profit organizations as well as the new mayor's transition team that will be assembled after the election in November 2016 (several of the core community leaders are slated to be on the Mayor's Transition Team). Based on the result of these meetings Jobenomics will determine if there is reason to commence fund raising operations for pilot projects in Baltimore.

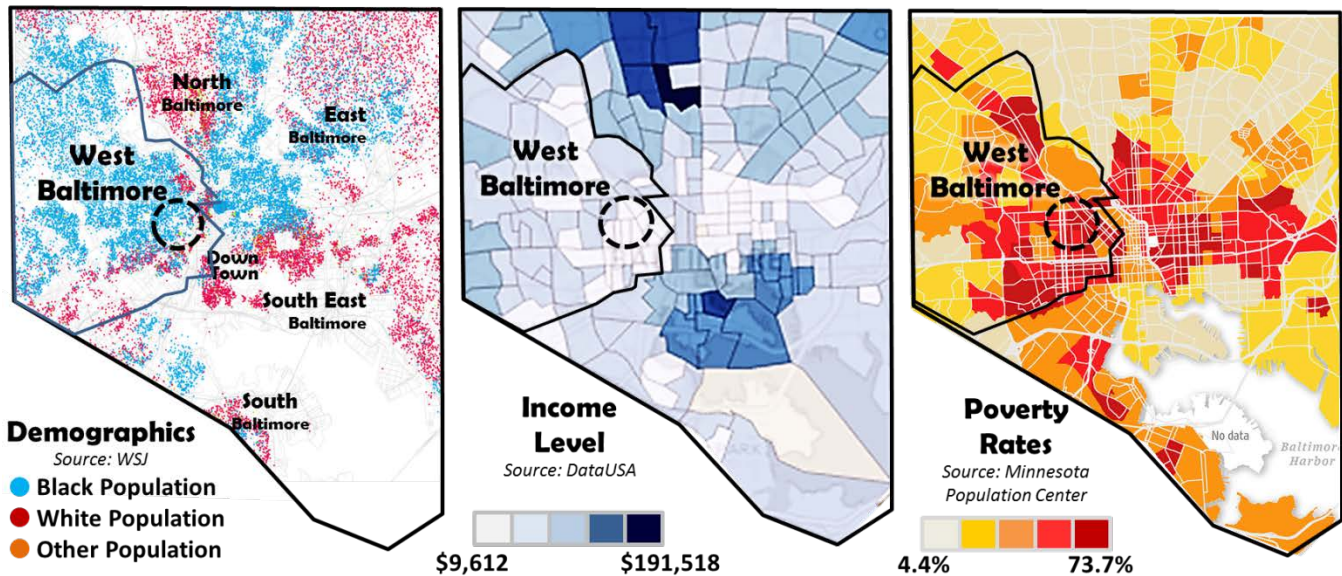
Based on Jobenomics Baltimore City's goal of restoring the labor force, Jobenomics analyzed Baltimore City labor force skills, major corporations and businesses within the city limits, current job openings and emerging business opportunities offered by the Energy and Network Technology Revolutions. The result of this analysis produced the following initial net new jobs framework which was enthusiastically endorsed by the half-dozen community leaders on the Jobenomics Baltimore City team. Creating 100,000 net new jobs by 2026 became the 2026 Jobenomics Baltimore City milestone with emphasis on minorities, women and new workforce entrants. Jobenomics Baltimore City business and job creation plan



focuses on the poorest neighborhoods and expands outward in West Baltimore and then to the rest of City.

The Jobenomics Baltimore City plan incorporates national, state, county, metropolitan, city and neighborhood statistics regarding demographic, economic, employment, unemployment, business, cultural, educational and job skill data unique to the Baltimore City workforce.

Demographic, Income & Poverty Statistics



In 1950, Baltimore City's population topped out at 950,000, of whom 24% were Black. Today, the Baltimore City population is 632,000, of whom 64% are Black, 30% White and 6% Hispanic/Asian/Mixed. West Baltimore's population is 213,000 and overwhelmingly Black. By race and ethnicity, the 14 West Baltimore neighborhoods are 98%, 97%, 96%, 96%, 94%, 93%, 92%, 92%, 93%, 89%, 84%, 83%, 73% and 46% Black. Perhaps not surprisingly, the most mixed race neighborhood (46% Black, 39% White, 8% Asian, 4% Hispanic and 3% Mixed) was Freddie Gray's neighborhood.¹

Baltimore City's median income levels, by neighborhood, range from a low of \$9,612 to a high of \$191,518. The national per capita income is \$47,669. Maryland per capita income is \$56,127.²

Approximately 60% of the adult working age population in the City is employed. Two-thirds of the employed personnel have jobs outside of Baltimore City due the lack jobs in the City.

The national average poverty rate is 14.8% and varies by family size. Maryland's average poverty rate is 10.0%. The Baltimore County poverty rate is 9.7%. The average Baltimore City poverty rate is

¹ Statistical Atlas, Map of Race and Ethnicity by Neighborhood in Baltimore, Black, <http://statisticalatlas.com/place/Maryland/Baltimore/Race-and-Ethnicity>

² DataUSA, Baltimore City, MD, Income by Location, <http://datausa.io/profile/geo/baltimore-city-md/#economy>

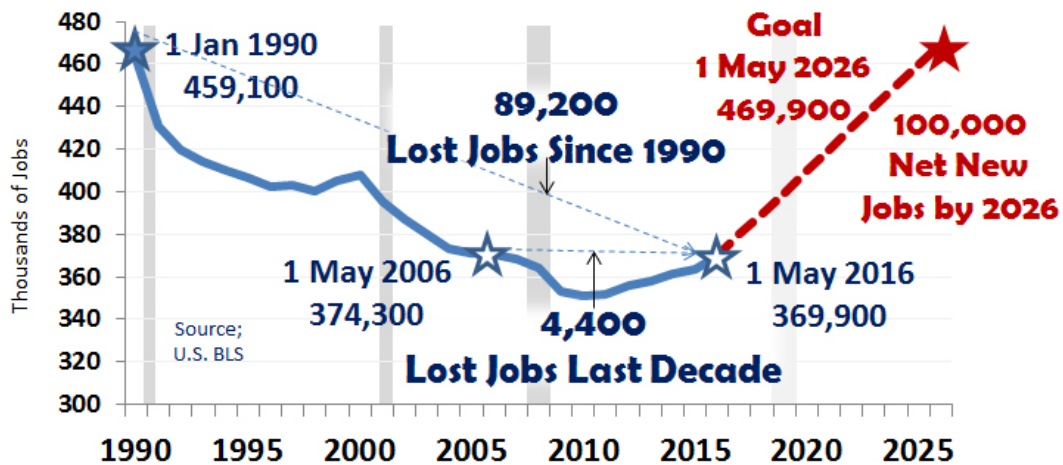
23.6%.³ Baltimore City neighborhood poverty rates range from a low of 4.4% to a high of 73.5% in West Baltimore’s predominantly Black neighborhoods.⁴ The most common race or ethnicity living below the poverty line in Baltimore City is Black (104,000), followed by White (26,000) and Hispanics (6,000). Females, age 25 to 34 (12,900), are the largest single demographic living in poverty.⁵

The percent of female-headed households with children under 18 in Baltimore City averaged 55% of all households. In some areas of the city (such as Cherry Hill, Upton and Druid Heights—a walkable 8-block distance from the proposed Jobenomics Baltimore City Operations Center), the percentage is as high as 77.4% for all female-headed households.⁶ The percentage of single minority female-headed households is likely to be even higher.

Low income levels coupled with high poverty leads to high crime. Baltimore City ranks within the top 20 most dangerous cities in America. Violent crime rate is one of the highest in the nation, across communities of all sizes (both large and small). The chance of a person being a victim of a violent crime (murder and non-negligent manslaughter, armed robbery, aggravated assault and rape) is 1 in 73. The chance of a person being a victim of a violent crime or property crime (burglary, larceny, motor vehicle theft and arson) is 1 in 16.⁷

Based on statistical research, neighborhood tours and meetings with West Baltimore community leaders, the Jobenomics Baltimore City team agreed to an overall goal of restoring Baltimore City’s labor force, which would go a long way to increasing incomes, alleviating poverty and reducing crime.

Jobenomics Baltimore City Employment History



³ DataUSA, Baltimore City, MD, Poverty by Race & Ethnicity, <http://datausa.io/profile/geo/baltimore-city-md/>
⁴ Wall Street Journal, WSJ analysis of U.S. Census Bureau data via Minnesota Population Center of the University of Minnesota, Diversity Index, <http://graphics.wsj.com/baltimore-demographics/>
⁵ DataUSA, Baltimore City, MD, Poverty by Race & Ethnicity, <http://datausa.io/profile/geo/baltimore-city-md/>
⁶ Baltimore Neighborhood Indicators Alliance-Jacob France Institute at the University of Baltimore, Census Demographics (2010-2014), Percent of Female-Headed Households with Children under 18 (2010), http://bniajfi.org/vital_signs/data_downloads/
⁷ Neighborhood Scout, Crime rates for Baltimore, MD (analysis of FBI data), <http://www.neighborhoodscout.com/md/baltimore/crime/#description/>



In January 1990, the City had 459,100 jobs. By May 2016, the City had 369,900—loss of 89,200 jobs since 1990 and a loss of 4,400 over the previous decade.⁸

The Jobenomics Baltimore City team decided on an employment goal of 100,000 net new inner-city jobs by 2026, which would slightly exceed the City's 1990 employment level. The team also agreed on the principle that jobs do not create jobs, businesses do, especially small businesses that can support the needs of the local community. Consequently, it was decided that the Jobenomics Baltimore City's small business creation effort should focus primarily on minority, women and new workforce entrants—the demographics with the highest need and potential in West Baltimore and the City at large.

100,000 net new jobs is an aggressive but achievable goal for a city with a population of 621,000 and an employed workforce of 369,900. 100,000 new workers increase the employed workforce by 27% over the next decade, or 2.7%, per year. 2.7% is aggressive but achievable if focused on high growth occupations. Most of Jobenomics targeted occupations are forecast by the U.S. Department of Labor to grow faster than 2.7% per year over the next decade. Home health, nursing, occupational and physical therapy jobs are all projected to grow over 3.0% per year. Trainers, construction workers, counseling, computer, medical assistant jobs are projected to grow up to 2.9% per year.⁹ These projections are based on a business-as-usual approach. The Jobenomics approach is much more aggressive with a standardized skills-based training process targeted at local high growth business and employment initiatives. If the Jobenomics Baltimore City plan is successfully implemented, population decay should reverse itself upward and employment increase.

Baltimore City does not lack human resources to fulfill the Jobenomics Baltimore City plan. Over the next decade, a large percentage of the City's 96,000 new workforce entrants, now aged 6 to 18, will enter the workforce ready for meaningful jobs and careers. A high percentage of Baltimore City's 62,000 unemployed who are looking for work may be able to finally land a job, the right job. A reasonable percentage of Baltimore City's 182,000 able-bodied adults who are no longer looking for work may decide to change their minds. Jobenomics Community-Based Business Generators will work with established educational and training organizations to add an extra dimension to workforce and business development for these new workforce entrants, the unemployed and underemployed, as well as the discouraged, underutilized and sidelined nonworking adults. In addition, the Generators will assist unfulfilled workers who are dissatisfied with their current job, retrain to find employment opportunities more fulfilling.

Jobenomics Baltimore City initiatives include a number of interesting new next-generation and socially conscious job opportunities that should be able to attract 25,000 to 50,000 from outside the City. Since the end of the 2007 -2009 Great Recession, Millennials (now numbering 75.4 million people) have reversed the migration from urban to suburb and are seeking socially-conscious and interesting employment opportunities.

⁸ U.S. Bureau of Labor Statistics, Baltimore Area Employment – March 2016, http://www.bls.gov/regions/mid-atlantic/news-release/AreaEmployment_Baltimore.htm

⁹ U.S. Bureau of Labor Statistics,, Occupational Outlook Handbook, Growth Rate (Projected), <http://www.bls.gov/ooh/>

Kevin Plank, the CEO of Under Armour, is looking for such people—10,000 of them to work in his new 4-million-square-foot headquarters on 266 acres in the Port Covington district of Baltimore City. Plank and other community leaders like him want to transform Baltimore as a model and destination city. While the Jobenomics Baltimore City plan is not likely to be involved in Under Armour’s direct hiring, it will help develop new business and high quality employees for Under Armour’s indirect workforce that is projected to be five times as large (30,000 jobs). The Jobenomics Baltimore City team will work with One Baltimore, Visit Baltimore, Innovation Village, BLocal and Baltimore Tourism to develop businesses tailored to making Baltimore City a model destination city. A 25% increase in tourism alone will create 20,000 new jobs.

Given these new opportunities, untapped labor force resources, community support and help from above, the goal of 100,000 net new jobs by 2026 is a very achievable. In addition to jobs, if the Jobenomics Community-Based Business Generator is as successful as envisioned, it should be able to create as many as 2,000 new small businesses and significantly more self-employed businesses. The Plan also will provide post-startup support that will increase the lifespans of new business and support their growth into medium and large-sized businesses.

As of this writing, the Jobenomics Baltimore City plan has four major objectives, each with four sub-objectives. These objectives are specific to Baltimore City according to the needs of the community as expressed by the current cadre of community leaders. As more community leaders join the initial cadre and commit themselves and their organizations, the plan’s objectives/sub-objectives will be modified to meet their needs.

Jobenomics Baltimore City’s Initial Net New Jobs Framework

Industry/Occupation	Job Zone Skill Level	Jobs		Total Jobs	% of 100K Goal
		Direct (Est.)	Indirect (Est.)		
Manufacturing	1-5	5,750	28,750	34,500	35%
Under Armour	1-5	3,000	15,000	18,000	18%
Foreign (EB-5)	1-5	1,000	5,000	6,000	6%
Urban Mining	1-3	750	3,750	4,500	5%
Light Industrial	1-3	1,000	5,000	6,000	6%
Healthcare and Social Assistance	1-4	6,375	19,125	25,500	26%
Personal Care Aids	1-2	2,000	6,000	8,000	8%
Home Health Aids	1-2	2,000	6,000	8,000	8%
Nursing Assistances	1-2	2,000	6,000	8,000	8%
Direct-Care Center	1-4	375	1,125	1,500	2%
Demolition and Construction	1-4	6,000	18,000	24,000	24%
Demolition Labor	1	1,500	4,500	6,000	6%
Construction Labor	1-2	1,500	4,500	6,000	6%
Live-Baltimore/Retire-Baltimore	1-4	1,500	4,500	6,000	6%
Renewable Energy Initiative	1-4	1,500	4,500	6,000	6%
Digital Economy	1-5	4,000	12,000	16,000	16%
E-Commerce Self-Employed	1-4	2,000	6,000	8,000	8%
On Demand Work (e.g., Uber)	1-3	1,000	3,000	4,000	4%
E-Business Consultants	4-5	500	1,500	2,000	2%
Independent Contractors	3-5	500	1,500	2,000	2%
Total	1-5	22,125	77,875	100,000	100%

Out of the 100,000 net new jobs, 35% will be related to Manufacturing, 26% to Healthcare and Social Assistance, 24% to Demolition and Construction and 16% to the emerging Digital Economy. Both direct and indirect jobs are listed. Direct jobs are actual full-time positions created by business. Indirect jobs are created by other businesses that come into existence due to the economic growth provided by direct employment. Jobenomics uses a direct/indirect ratio of 1:5 for goods-producing business and 1:3 for service-providing businesses. Job skill zone levels are also listed.

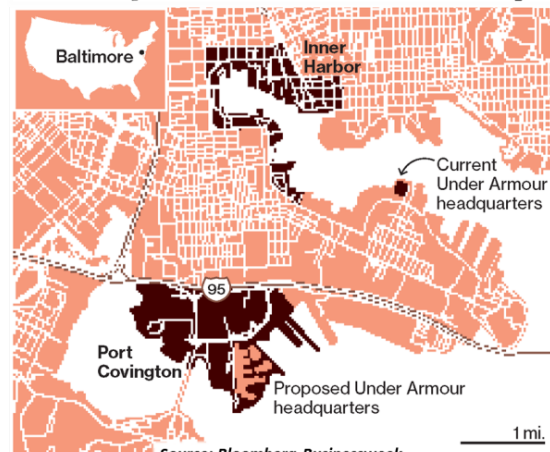
Manufacturing. The first objective is to restore the Baltimore manufacturing labor force by adding 34,500 jobs (5,750 direct and 28,750 indirect). While Jobenomics does not view manufacturing as a major contributor to net new job creation in America (mainly due foreign competition and automation), Baltimore City is an exception.

Baltimore was a major war production center in World War II replete with steel, shipyards and aircraft manufacturing plants. After WWII, Baltimore lost 100,000 jobs in manufacturing alone. Today, the Baltimore region's manufacturing workforce is about 5% of the labor force compared to 30% in the heydays of the 1950s.

Baltimore City has a rich history of manufacturing. Consequently, it makes it easier politically, publically and culturally to accept major manufacturing initiatives. While only 5% of the workforce, Baltimore still has 100 operational manufacturing companies including major manufacturers like Northrup Grumman (aerospace, defense and information technology), Under Armour (apparel), McCormick & Co. Inc. (food products), BD Diagnostic Systems (medical devices) and AAI (unmanned systems) that employ approximately 15,000 direct employees in the metro area. The City is also replete with adequate, but aging, manufacturing infrastructure and a Tier 2/3 subcontractor manufacturing base. Despite all their challenges, Baltimore City citizens are eager and willing to work as evidenced by extremely large queues of Baltimoreans at job fairs. Most importantly, Baltimore City has a major manufacturing champion, Kevin Plank the CEO of Under Armour, who is personally committed to Baltimore City labor force restoration with next generation jobs and financing to make these jobs a reality.

Kevin Plank was featured on the cover of the 28 June 2016 edition of Bloomberg Businessweek pledging to “jump-start Baltimore”.¹⁰ Baltimore City is Plank’s “adopted city” and he is committed to providing jobs in Baltimore City in preference to exporting these jobs outside the City as well as abroad. In January 2016, Under Armour announced plans to build a 4 million square foot headquarters, employing 10,000 direct employees, on 266 acres that Plank had acquired in the Port Covington district of Baltimore City. In addition to

Under Armour’s Current & Future Headquarters In Baltimore City



¹⁰ Bloomberg Businessweek, Under Armour’s Quest to Dethrone Nike and Jump-Start Baltimore, by Rachel Monroe, 28 June 2016, <http://www.bloomberg.com/features/2016-under-armour-kevin-plank/>



the new Under Armour headquarters, according to Under Armour's plan, "Port Covington will be home to 7,500 housing units, a hotel, shopping, and two light-rail stops". Plank's master plan also includes 13 million square feet of offices, 13,500 homes, stores and restaurants, and 42 acres of parks. In June 2016, the City's Planning Commission unanimously approved the master plan that can be obtained at this footnoted website¹¹.

The Jobenomics Baltimore City team intends to work with Under Armour (and other likeminded corporate executives) to help develop Under Armour's indirect workforce that is estimated to be five-times the size of the direct workforce with emphasis on minority-owned business, and training and certified lower skilled workers.

The indirect workforce will be drawn from the local community, trained and certified by the business generators to mass-produce small service-providing businesses in areas like transportation, accommodation, food and beverage, retail (convenience stores, salons, barber shops, etc.) and other indirect services businesses. In regard to Under Armour's Tier 2/3 subcontractor manufacturing base, the Jobenomics plan calls for attracting domestic and international textile, information/network technology, commercial/residential development, and renewable energy firms to help meet the needs of Under Armour as well as new and expanding Tier 2/3 firms.

In addition to the above, Jobenomics is working with local officials on an Urban Mining initiative. Urban mining is defined as a process of reclaiming raw materials and metals from municipal waste streams including construction and demolition material, municipal solid waste, electronic waste and tires. These waste streams contain combustible and non-combustible materials. Combustibles are carbon-based matter that has caloric value that can be converted to marketable products via waste-to-organic and energy via waste-to-energy technologies. Non-combustible elements can be reclaimed via waste-to-material technology. Urban mining offers a number of benefits including reclamation of valuable raw materials and metals that can be sold as commodities or used for local manufacturing applications, reducing the impact on landfills and exporting of toxic waste, mitigating environmental pollution associated with traditional surface and subsurface mining operations, and producing revenue for local business and job creation.

Jobenomics Baltimore City's Net New Job Framework is tailored to the demographics of Baltimore City. Emphasis is being given to lower skill zones that tend to be more predominant in the poor sections of the inner-city. To date, the Jobenomics Baltimore City plan has been endorsed and led by community leaders who are now obtaining endorsements and support from corporate executives, government officials, opinion leaders and non-profit organizations, all of whom will be involved in the finalization and implementation of an actionable Jobenomics Baltimore City plan.

Healthcare and Social Assistance. The second objective is to enhance Baltimore City's healthcare and social assistance labor force by mass-producing small and self-employed direct-care businesses in order to create 25,500 net new jobs (6,375 direct and 19,125 indirect).

¹¹ Under Armour, Presentation to the Urban Design & Architecture Review Panel, 28 January 2016, <http://technical.ly/baltimore/wp-content/uploads/sites/3/2016/02/012816-UDARP-UA-Global-HQ.pdf>

So far this decade (January 2010 to July 2016), the U.S. Healthcare and Social Assistance sector added 2,640,000 jobs—the largest sector of the thirteen labor sectors in the United States. Over the next decade, the U.S. Department of Labor projects 3.8 million new U.S. healthcare and social assistance jobs, or 40% of all new U.S. jobs, which is twice the amount of the next fastest growing sector.¹² Over the same time period, the Maryland Department of Labor projects 435,000 new healthcare-related jobs, second only to government growth of 500,000 workers, and 45,000 new social assistance-related jobs.¹³ Creating the Jobenomics plan to create 6,375 direct healthcare and social assistance jobs in Baltimore City by 2026 is a very small fraction of the 435,000 projected new Maryland healthcare jobs when Baltimore City is the hub for Maryland regional medical services.

Seven of the top ten major employers in Baltimore City are involved with healthcare. These esteemed Tier 1 corporations include: John Hopkins Hospital, University of Maryland Medical System, MedStar, LifeBridge, Mercy Health, St. Agnes and Kennedy Krieger Institute. Each of these employers has Tier 2/3 firms involved in healthcare. Jobenomics Baltimore City plan is create a “Tier 4” cadre of small and self-employed healthcare businesses that can work as independent contractors or be acquired by higher tier corporations.

The Jobenomics Baltimore Plan also calls for creation of a Direct-Care Center as part of an overall Direct-Care Initiative focused on healthcare, eldercare and childcare. A Direct-Care Initiative would provide in-home services from local small, micro and self-employed businesses managed by community-based direct-care centers equipped with the latest information systems connected to a network replete with real-time teleconferencing and mobile phone direct-care apps.

A number of factors are expected to lead to job growth in direct-care technology development as well as direct-care business and job creation: (1) growing population, (2) longer life expectancy, (3) chronic and age-related disease growth, (4) improved service-providing technology and (5) increasingly generous healthcare, social assistance and welfare programs.

Today, direct-care jobs are primarily funded through public funds. A direct-care initiative, designed around a community information and coordination center, could be largely paid by clients who need some assistance to retire at home or working families who can’t afford the high cost of daycare.

According the Bureau of Labor Statistics, in-home personal care service sector is projected to increase by 1.3 million jobs (a 70% growth rate compared to 14% for all U.S. occupations) from 2010 to 2020 with a median pay of approximately \$20,000. While \$20,000 is well below the \$33,000 median pay for all occupations, it is attractive to new workforce entrants, retirees who need supplemental income and contingent workers who often work multiple part-time jobs as a matter of choice.

¹² BLS, Employment Projections (2014-2924), Table 2. Employment by major industry sector, <http://www.bls.gov/news.release/ecopro.t02.htm>

¹³ Maryland Department of Labor, Maryland Long Term Occupational Projections (2014 - 2024), <https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>

Community-based direct-care centers will also help establish and manage home-based healthcare, eldercare and childcare businesses. By 2020, assisted-living facilities are projected to have a 17 million bed shortfall for aging and disabled baby boomers—in-home eldercare services by home-based caregivers could solve the assisted-living shortfall. Today, only 8% of childcare arrangements are conducted in a caregiver's own home. This percentage could be expanded significantly and safely if managed by a Direct-Care Center. Affordable childcare is a major issue for female-headed households in Baltimore City and nearby suburbs.

Mass-producing self-employed, home-based childcare businesses that are safety managed could have significant impact on homebound mothers. More mothers could have home-based childcare businesses to supplement their income. More mothers could be emancipated from the home to pursue other occupational pursuits. The requisite childcare skills are natural for mothers who are or have raised children. Jobenomics believes that mothers should be afforded the opportunity to monetize these skills. Micro and self-employed businesses are ideally suited to provide direct-care, either on full-time or part-time basis. These businesses are relatively easy to start.

The principal role for government (federal, state and/or local) would be to fast-track policies, regulations and licensing arrangements conducive to in-home care by small and self-employed businesses. Today, the regulatory environment is so burdensome only larger companies can provide the full range of direct-care services. Small and self-employed businesses could provide basic in-home services that would not require extensive regulation and licensing. If teenage babysitters do not need government licensing, why should adults that want to start a self-employed business?

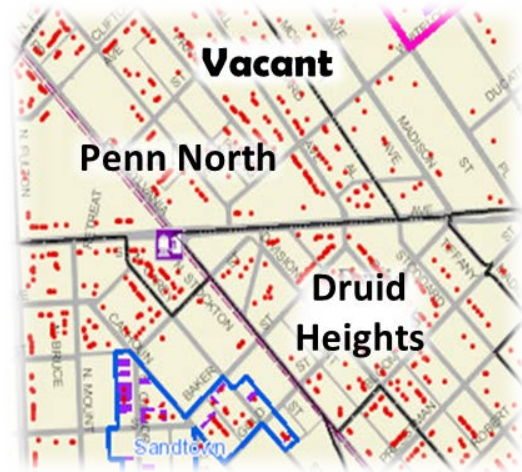
In addition to training and certifying basic caregiving skills, a Direct-Care Center would provide proper regulatory oversight and quality control. The Direct-Care Center would also work with larger established businesses that provide services higher up the skills chain. Small and self-employed businesses can provide basic services at a lower cost than larger businesses, which is extremely important to the elderly and parents who cannot afford the price of current caregiving services.

If Airbnb (a trusted community marketplace for people to list, discover, and book unique lodging accommodations around the world) can grow from zero to 500,000 homes in 34,000 cities in eight years, direct-care centers could implement home-based eldercare and childcare services in hundreds of thousands U.S. households in a relatively short period of time. By unleashing the power of new technology, like Airbnb did, it is not unreasonable to expect a quadrupling of the current in-home personal care employment growth rate. In Baltimore City, the net result could be thousands of net new jobs and micro businesses for its most financially distressed demographic.

Demolition and Construction. The third objective is to restore the Baltimore construction labor force by adding 24,000 demolition and construction jobs (6,000 direct and 24,000 indirect).

Baltimore's plan to demolish tens of thousands of residential buildings and commercial properties could lead to tens of thousands of new jobs and businesses if properly planned. Baltimore City's Vacants to Values (V2B) program identifies for-sale vacant homes, commercial buildings, and lots that need to be demolished or refurbished.

According to V2B, population loss and other economic factors over the past 60 years have left Baltimore with upwards of 17,000 vacant and boarded structures.¹⁴ West Baltimore's Penn North and Druid Heights neighborhood vacancies are the red dots on the map. Based on location, population trends, and market demand, about 5,500 of vacant buildings have good potential for redevelopment. Market demand for the remaining 11,500, however, is very limited. These 11,500 properties are candidates for demolition. Under V2B, the Baltimore City commits \$10 million per year in demolition funding, which is a good start. Much more funding could be obtained for developers to design and build planned residential communities as envisioned by Kevin Plank and likeminded social engineering architects.



According to Baltimore Neighborhood Indicators Alliance, Baltimore City owns 31,092 vacant properties but issued only 4,300 demolition permits due to limited funding.¹⁵ An additional 5,492 properties are in the process of rehabilitation. Baltimore City has a total of 204,295 residential homes, many in need of repair and upgrading. In 2014, 7,822 homes were sold at a median sales price of \$126,325, which is a very low price compared to other East Coast communities. If 100,000 new jobs were added to the workforce as envisioned by the Jobenomics Baltimore City plan, many thousands of demolition, renovation and construction jobs would be needed.

The Jobenomics Baltimore City plan recommends working with V2B to integrate the current demolition, renovation and construction efforts into a small business and job creation plan in association with Jobenomics Community-Based Businesses Generators. Jobenomics has identified a dozen related short (several weeks in duration) federally certified training programs that could quickly mass-produce startup businesses.

The Jobenomics Baltimore City team is working with the investment community to create a \$100 million micro-business fund for demolition and construction related business startups. This fund would use the 30,000 derelict homes and properties owned by Baltimore City as collateral for the fund. This fund would be secured in ways similar to the federally-funded Home Affordable Refinance Program (created by the Federal Housing Finance Agency to help homeowners refinance their mortgage), Freddie Mac (a government owned enterprise created to buy U.S. home mortgages) and Ginnie Mae (a government owned enterprise created to help make affordable housing a reality for low- and moderate-income households).

Jobenomics also believes that HUD Section 3 financial assistance could be used to startup demolition, renovation and construction businesses. HUD Section 3 financial assistance is expended for housing

¹⁴ Vacants to Values, Demolition Site Maps, <http://www.vacantstoavalue.org/Developers.aspx#demomaps>

¹⁵ Baltimore Neighborhood Indicators Alliance-Jacob France Institute, Housing and Community Development (2010-2014), http://bniajfi.org/vital_signs/data_downloads/



or community development, targeted at public housing and low income residents and businesses. Section 3 is the legal basis for providing jobs for residents and awarding contracts to businesses needing financial assistance.¹⁶ Properly orchestrated, HUD Section 3 could underwrite labor force restoration and business creation efforts in West Baltimore. To qualify for HUD Section 3 financing low income is defined as 80% or below the median income of the Baltimore metro and to qualify as a business at least 51% of the business must be owned by Section 3 residents. Both of these stipulations are easily met in West Baltimore.

The Jobenomics Baltimore City plan calls for the development of Live/Work/Play communities. Live/Work/Play consists of major new modern multilevel, multifaceted, high-tech, sustainable Live/Work/Play communities near the Inner Harbor, which would be a large draw for the Millennial Generation-Y and Generation-Z domestic and international college graduates entering the workforce.

Jobenomics is discussing the possibility of modifying the HUD Section 8 Housing Choice Voucher program to attract low income college graduates (most graduates do not have an income) to the City as opposed to paying poor inner-city residents to move to the suburbs.¹⁷ Using these vouchers in this way would be of interest to developers and investors to build modern Live/Work/Play apartments and condos, as well as planned residential and retirement communities. Live/Work/Play communities would also be of interest to Under Armour for their future employees who would work at the Port Covington headquarters and campus. Under Armour plans to build two light rail stops and a water taxi to connect employees to Downtown Baltimore and the Inner Harbor.

Jobenomics Baltimore City envisions incorporating Live Baltimore into the planned community process. Live Baltimore is a tax deductible non-profit that emphasizes Baltimore City's attractive features: sports, entertainment, low housing costs and other features of city living. Live Baltimore's target generation is Millennials—the largest U.S. demographic with 83 million people. This year, Millennials surpassed Baby Boomers and Generation X as the largest component in the U.S. labor force with 53.5 million workers. Jobenomics Baltimore City also envisions a Retire Baltimore initiative. Retire Baltimore would create low-cost, high-quality assisted-living and skilled-care retirement communities close to Baltimore's leading medical centers and staffed by locally trained and certified caregivers. The Direct-Care initiative will provide low cost services to Retire Baltimore. The ultimate goal is to make Baltimore City an attractive and affordable live/work/play/retire community for the upcoming Millennial and retiring Baby Boomer generations.

¹⁶ HUD.GOV, Section 3 Brochure, http://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/section3/section3brochure

¹⁷ Under the current Administration, the total number of voucher households has grown to more than 2.2 million. According the U.S. Department of Housing and Urban Development, the housing choice voucher program is the federal government's major program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market. Since housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments. Source: http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/hcv/about/fact_sheet

Digital Economy. The fourth objective is to enhance Baltimore City’s labor force by adding 16,000 jobs (4,000 direct and 12,000 indirect) related to the emerging digital economy. The Digital Economy objective is likely to be the most important of all four objectives from a long-term point of view.

The U.S. economy is currently 95% traditional and 5% digital. The U.S. traditional economy is growing at approximately 2% per year and the digital economy is growing at 20% per year. If these growth rates continue, the digital economy would equate to $\frac{1}{4}$ of the U.S. economy by year 2026 and $\frac{1}{2}$ by 2033. Consequently, it is essential that all U.S. communities prepare their digitally-oriented labor force for this explosive growth.

The emerging Digital Economy (also known as the Internet Economy, New Economy, Gig Economy Apps Economy, Uber Economy and Shared Economy) is transforming the planet via e-commerce, e-retailing, e-business, m(mobile)-commerce, h(health)-commerce as well as the Internet-of-Things. The Digital Economy will favor an independent home-based, self-employed, flexible and task-oriented part-time workforce over the traditional corporate full-time workforce. The Jobenomics Baltimore City plan will help to develop the digital infrastructure, training and business development to support the emerging digital economy and the ever-growing Baltimorean contingent workforce that is dependent on the web for task-oriented work.

To be economically robust, the Baltimore City economy depends on good jobs that reside inside city limits. In 2010, 54.2% of population worked outside of the City. In 2014, 67.1% did—a rise of 24% or 6% per year. The impact of the 2015 riots is yet unknown but many citizens believe that the exodus may worsen especially with Baltimore City’s most talented and upcoming youngsters who are entering the workforce. This brain drain has to be reversed. Next-generation talent and skills must be retained in order for the Baltimore economy to grow. Since the digital economy is not geographically constrained, Baltimore’s digital natives could work anywhere from home.

Compared to similar sized East Coast cities (Washington 659,000, Boston 659,000), Baltimore City employment opportunities are limited for the upcoming generation, known as Generation Z—born 1996 to present, now 21 years old and younger. Generation Zers are called “Screenagers” due to the amount of time they spend on the Internet and Smartphones. For the most part, Baltimore’s Screenagers are digital natives just like all other digital natives across the world. Moreover, digital skills are largely taught during the 7 hours a day that these youngsters spend online. As the world’s digital economy matures, Screenagers will be at the helm.

Baltimore City’s Screenage population is 177,500 or 21% of the population. 67,000 screenagers, 15-21 years old, are now entering the workforce. The Jobenomics Baltimore City plan will help them prepare for entry as well as starting their own business. The digital economy offers standard and contingent career opportunities that are generally not suitable for older non-digital generations. 72% of surveyed American Screenagers want to start their own business. Baltimorean Screenagers are likely to feel the same. While much of this is wishful thinking, the digital economy will provide many of these Screenagers with opportunities that could make their wishes come true. A Jobenomics Community-Based Business Generator would significantly enhance the probability of success in this regard as well as productively pursuing self-interests and self-sufficiency.

Properly planned and structured, the digital economy will not only mitigate the brain drain leaving the city, but maintain indigenous Screenager talent. As discussed in the previous section, modern high-tech Live/Work/Play communities would also draw Screenage talent from outside the City. The fusion of inside and outside talent would constitute a formidable force for economic and workforce development in Baltimore City.

The Jobenomics Baltimore City plan also includes a Sharing/On-Demand Economy component. The Sharing/On-Demand Economy is a new wave of peer-to-peer, access-driven businesses that are characterized by (1) the ability of individuals to share (goods, knowledge, money, time, skills, content, etc.) rather than buy or own or (2) fulfill consumer demand via the immediate provisioning of goods and services. In sharing, the trend is towards usage, as opposed to possession, of underused or idle assets. Consumers and entrepreneurs will be the greatest beneficiaries of the sharing economy. Such peer-to-peer sharing concepts can provide additional income for owners, while providing cheaper alternatives to consumers. For consumers, the sharing provides cheaper goods and services by quickly satisfying consumer needs via internet-connected applications.

With major business successes, like Uber and Airbnb, the sharing/on-demand economy is much more than a fad or trend. It is an emergent ecosystem that is upending mature business models across the globe. If successful, the sharing/on-demand economy is likely to usher in a transformation as significant as the personal computer did when it was introduced in the 1990s.

Shared-mobility is at the forefront of the new model of global, multi-modal, on-demand, share-mobility transformation that is currently taking place on five continents, in over 30 countries and in hundreds of cities. Shared-mobility offers an attractive alternative to owning (including fractional ownership) a vehicle as well as providing a meaningful alternative or supplement to conventional public transit systems. Car-sharing and personal vehicle-sharing applications can provide greatly needed low-cost services for the disabled, elderly and low-income groups. Leading ride-sharing and ride-hailing application providers include Uber, Lyft, Rideshare, Getaround, Rydes, Ridejoy, Carma and Zimride (Enterprise Rent-A-Car). Leading car-sharing providers include Zipcar (11,000 cars and 730,000 members), Enterprise Car Share, Hertz on Demand, Gar2go, City CarShare, Uber and Lyft.

Uber serves as an excellent example of a Jobenomics Baltimore City On-Demand/Shared-Mobility application. Each month Uber adds approximately 50,000 new drivers for each of its ride-hailing services: UberX (lowest cost fares), UberXL (larger cars and vans), UberSUV (SUVs seating up to six people), UberSELECT (entry-level luxury service) and UberBLACK (commercially registered and insured limos). Lesser known Uber ride-sharing and ride-hailing applications include UberPOOL (car and van pooling), UberESPAÑOL (UberX with a Spanish-speaking driver), UberTAXI (Uber app to hail a traditional taxi service), UberWAV/ACCESS/ASSIST (wheelchair-accessible and special-need vehicles with certified drivers), UberBIKE (Uber vehicles with a bike rack), UberRUSH (vehicles for custom and on-demand delivery of goods and service), UberHOP (flat fare rush hour ride-sharing) and UberLUX (luxury cars).¹⁸

¹⁸ Uber, Newsroom, <https://newsroom.uber.com/>

In Washington DC, Uber is experimenting with an integrated metropolitan shared-mobility approach (UberDC) that combines UberTAXI with ride-sharing (UberPOOL) and ride-hailing (UberX, UberXL and UberSUV) services to reduce traffic congestion, emissions and costs as well producing new small businesses and jobs. The significance of UberDC should not be underestimated. If successful, UberDC could be a prototype for an integrated public shared-mobility transit system. The Jobenomics Baltimore City plan envisions an UberBaltimore initiative similar to UberDC with sponsorship from leading companies like Under Armour and the leading Baltimorean medical institutions.

The leading on-demand, shared-accommodation company is Airbnb. Other Airbnb-like companies include FlipKey (owned by travel giant TripAdvisor and offers over 30,000 rental listings in over 1100 cities), HomeAway (over 1 million worldwide listings), VRBO (Vacation Rentals by Owner with 800,000 listings in 100 countries), Roomorama (specializes in professionally-managed and trusted holiday homes, homestays and vacation rentals), Couchsurfing (offers rentals that foster cultural exchange), OneFineStay (handpicks extraordinary residential, loft and penthouse rentals), 9flats (specializes in alternatives to a hotel with 250,000 homes worldwide), Travelmob (specializes in matching travelers with hosts renting out villas and apartments for short- and long-term rentals) and Travelzoo (specializes in aggregating discounted accommodations and plots them on Google Map for last minute travelers).

Airbnb serves as an excellent example of a Jobenomics Baltimore City On-Demand/Shared-Accommodation application. Founded in 2008, Airbnb is a trusted community marketplace for people to list, discover and book online, via a mobile app, unique accommodations around the world. Airbnb has connected 60 million guests to unique travel experiences, at any price point, in more than 34,000 cities and 191 countries. As its name suggests (Airbnb derived its name from “airbed” and “bed and breakfast”) 90% of Airbnb’s bookings are pleasure and family oriented. 10% are business travel related.

Airbnb’s economic impact has been phenomenal, especially for their accommodation providers (hosts). Using New York City as an example, Airbnb’s serviced 400,000 visitors who generated \$632 million in economic activity with \$105 million in direct spending in the outer boroughs, in neighborhoods that don’t typically benefit from tourism dollars. 87% of Airbnb New York City hosts typically earn \$7,530 per year. Equally important, 62% of these hosts report that this additional income allows them to remain as homeowners as well staying in their own homes.¹⁹

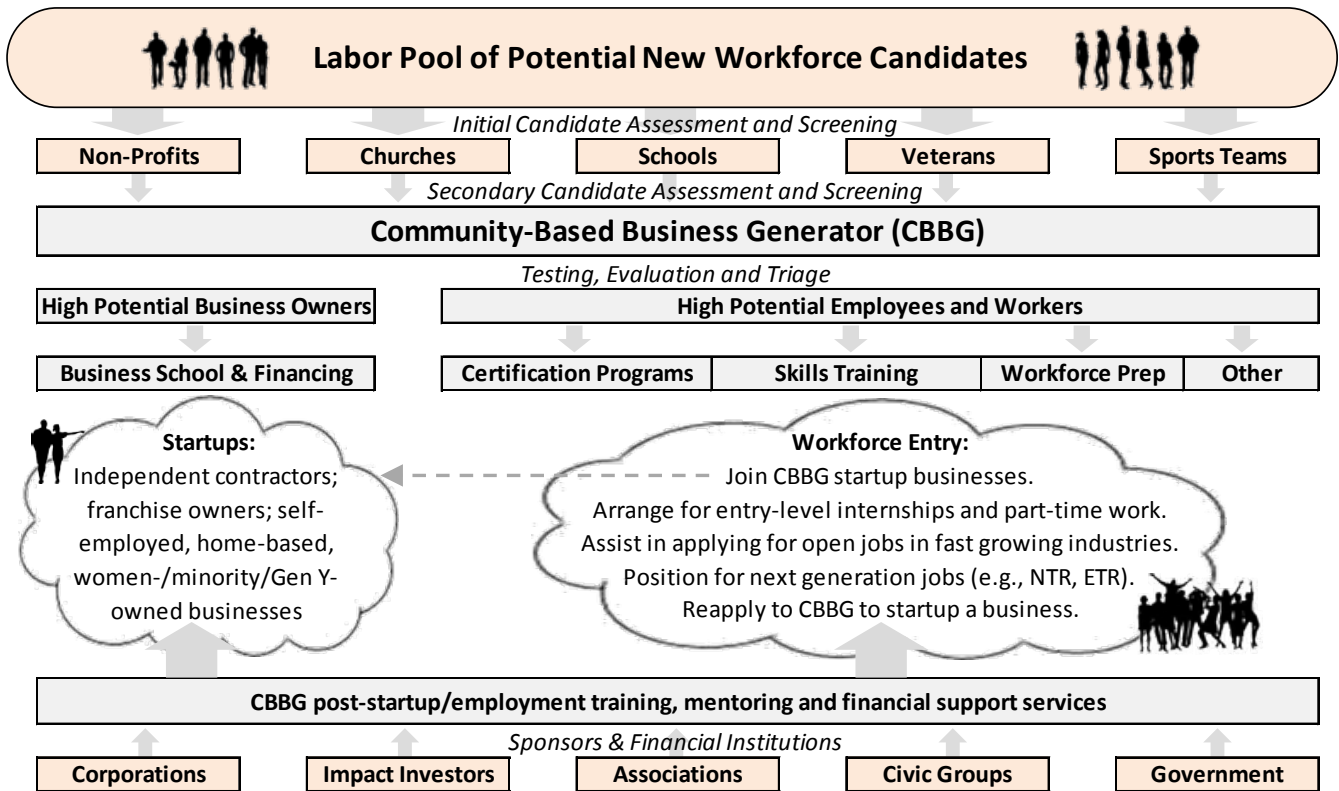
The Jobenomics Baltimore City plan envisions working with Airbnb and other on-demand, shared-accommodation companies in regard to enhancing Baltimore’s tourist industry and providing temporary housing for the 26,000 new direct hires planned by Under Armour.

Jobenomics Community-Based Business Generator Concept. The way that government and big business can plan, manage and support small business and job creation is via community-based business incubators, business accelerators and business generators.

¹⁹ Airbnb, About, <https://www.airbnb.com/about/about-us>, and Economic Impact, <http://blog.airbnb.com/economic-impact-airbnb/>

Business incubators tend to focus on high-tech, silver bullet innovations that have extraordinary growth and employment potential. Business accelerators focus on expanding existing businesses in order to make them larger and more profitable. The Jobenomics business generator concept involves mass-producing small and self-employed business with emphasis on lower-tech but plentiful service-providing businesses at the base of America’s economic pyramid. Many cities have business incubators, usually located at or around universities or technology parks, and business accelerators that are associated with mezzanine financing institutions. Jobenomics is working with cities and states to create business generators to mass-produce startup small and self-employed businesses.

Jobenomics Community-Based Business Generator Concept



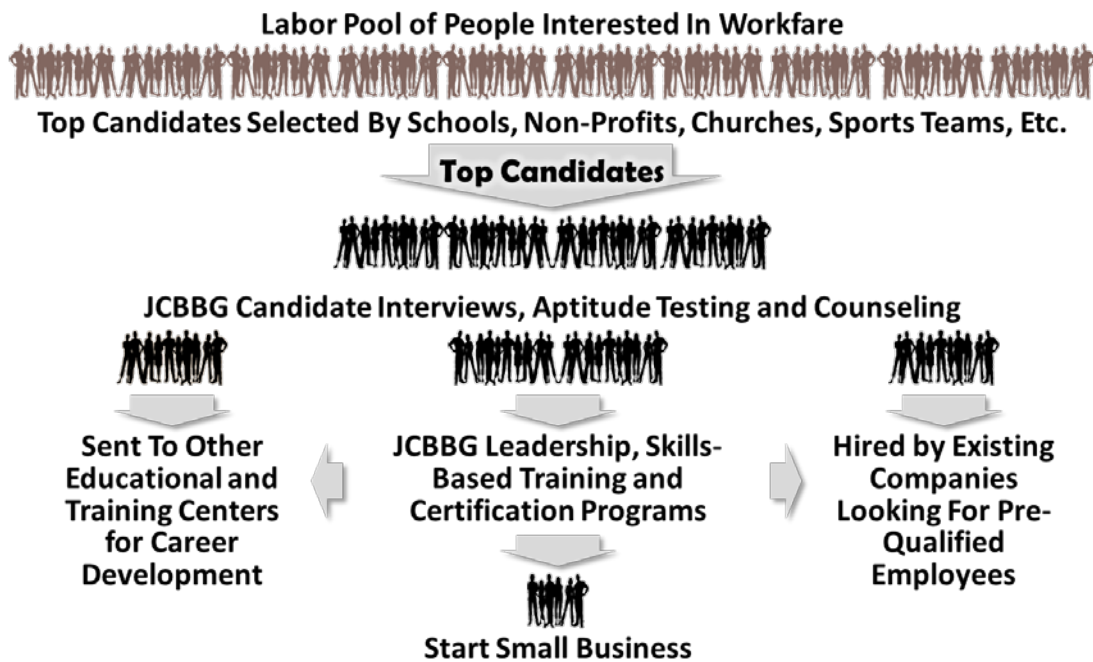
Jobenomics Community-Based Business Generators mass-produce startup businesses by: (1) working with community leaders to identify high-potential business owners and employees, (2) executing a due diligence process to identify potential high quality business leaders and employees, (3) training and certifying these leaders and employees in targeted occupations, (4) creating highly repeatable and highly scalable “turn-key” small and self-employed businesses, (5) establishing sources of startup funding, recurring funding and contracts to provide a consistent source of revenue for new businesses after incorporation, and (6) providing mentoring and back-office support services to extend the life span and profitability of businesses created by the Jobenomics Community-Based Business Generators.

The process starts by using community leaders to identify high potential job seekers. Churches, non-profit institutions, schools, sports teams and veterans groups are a great source for identifying talent, desire and fortitude. These organizations provide the first phase of the triage process by screening

and assessing high performance people who are known to them. The second stage is accomplished during onboarding that involves Jobenomics screening and assessing. The third stage uses aptitude and personality tests to determine potential career paths.

Once completed, candidates will be separated into a business leader group or a high potential employee group for training. The leader group will undergo management and startup business training. The employee group will undergo skills training based on the role that they will assume in the startup business (operational, technical, mechanical, financial, marketing, administrative, etc.). After the training is completed and certifications awarded, the team will commence startup operations under the guidance and assistance of the Jobenomics Community-Based Business Generator team. Jobenomics contends that Community-Based Business Generators could vastly improve the rate of startups and expanding businesses, and reduce the rate of contracting and closing businesses.

Jobenomics Community-Based Business Generator Process



A Unique Community-Based Business And Workforce Development Process

Starting with a notional pool of tens of thousands of candidates, Jobenomics will work with local civic organizations (churches, non-profits, sports teams, etc.) to identify and nominate the top 30% to 50%, who they know, for the Jobenomics Community-Based Business Generator program. This is the first stage of the due diligence process to separate the proverbial wheat from the chaff.

These nominees will then be subjected to standard aptitude and attitude tests in order to identify and assist (1) those that should be sent to other educational (GED and postsecondary) or training (vocational) centers for career development, (2) those that are qualified and suitable for immediate employment with existing companies, and (3) those that desire and have an aptitude for starting a small or self-employed business. Jobenomics Community-Based Business Generator will help all people who enter the program to find meaningful employment and career paths.



Jobenomics envisions that 25% of the nominees would seek a traditional education and training path, 25% would be hired directly by existing business who are looking for quality workers, and 50% would seek a more independent and self-sufficient route offered by a small business startup or self-employment.

Of the 50% that choose the Jobenomics Community-Based Business Generator training and certification process, Jobenomics anticipates that approximately 25% will eventually implement a small business startup or incorporate as a self-employed business. The 75% that undergoes but does not complete the Jobenomics Community-Based Business Generator process will be certified (with empirical data by professional testing and evaluation) as high-quality candidates for immediate employment or traditional education/vocational training.

Many of the initial candidates are likely to prefer working for existing companies rather than going through the Jobenomics process. Anticipating this, Jobenomics will implement a “pipeline” to connect these individuals who have undergone some level of due diligence to companies that are hiring. Consequently, the Jobenomics management team includes a nationally recognized leader who developed such a pipeline system that has matched 250,000 veterans with companies. This system is ideally suited for matching Jobenomics candidates to local employment vacancies.

The overall objective is to mass-produce small and self-employed businesses, which makes the Jobenomics Community-Based Business Generator process unique as a traditional business and workforce development center. Traditional workforce development processes focus on preparing potential workers for employment by existing businesses—usually large corporations. For marginalized individuals at the base of the American economic pyramid (especially those in depressed urban and rural areas) the odds of employment at existing businesses are slim as evidenced by the long lines at traditional job fairs versus the low percentage of people hired.

The Jobenomics process focuses on preparing workers for starting a business, whether they actually start one or use the experience to be more competitive to get a job. In today’s world, gainful employment is difficult and oriented to those that are currently employed, credentialed or high-skilled. Conversely, a common complaint that Jobenomics often hears from companies is that they have a very hard time (1) finding good people who want to work, (2) who have the right attitudes and aptitude for work, and (3) who have workforce credentials, experience or related skills.

Every nominee that enters the Jobenomics process will setup a self-employed business, which can be incorporated in a matter of days, and undergo elementary business training. The reason for setting up a small business is to make them more competitive in today’s job market. Many employers prefer to “try before they buy”. An incorporated self-employed individual can position themselves for subcontract or contingent work (1099) as a prelude to standard full-time work (W2). Even if a self-employed individual never receives an income as a self-employed business, that individual can present themselves with credentials (Employer ID Number, website, business card and skills resume) that align with the business community. In addition, Jobenomics will provide additional credentials regarding the individual’s workforce aptitude, skills and suitability tailored to the specific hiring opportunity. Jobenomics credentialing, along with letters of recommendation from the nominees’

sponsoring organization, will greatly distinguish the individual from the masses of unemployed or new or returning workforce entrants.

Today, the United States does not have standardized national, state or local processes to create or mass-produce startup businesses. The U.S. startup process is largely ad hoc. By instituting a community-based (all jobs are local) standardized, repeatable and scalable process to mass-produce startup businesses, millions of new establishments could be created across America. By being part of a small business team, team members will be motivated to grow the business in order to make it more profitable, which facilitates upward mobility, higher wages, better benefits, potential equity positions, and, perhaps most importantly, a sense of camaraderie and purpose.

Job creation is the number one issue facing U.S. communities in regard to economic growth, sustainment and prosperity. Jobs do not create jobs, businesses do, especially small businesses that currently employ 80% of all Americans and created 80% of all new jobs since the end of the Great Recession.

Unfortunately, most economic development efforts are focused on big business and government employment solutions that have not been very effective growing the U.S. labor force. In fact, the U.S. labor force is in a state of decline as evidenced by the eroding middle-class and the transformation from standard full-time to part-time and contingency workers. With the next fifteen years, Jobenomics forecasts that the contingent workforce will replace traditional full-time workforce as the dominant force of labor in the United States—a trend that is largely unknown to policy-makers and the American public.

Jobenomics asserts that the four demographics with the highest need and growth potential include women, minorities, new workforce entrants, and the large cadre of financially distressed citizens who want to work or start a business. These demographics are ideally suited for starting new businesses that can accommodate the growing contingent workforce and attract new labor force entrants that often do not share the same employment dream of older generations.

Jobenomics believes that new small, emerging and self-employed businesses could create 20 million new jobs within a decade, if properly incentivized and supported. Notwithstanding filling the 5+ million open U.S. jobs positions, the emerging Energy Technology Revolution (ETR) and the Network Technology Revolution (NTR) could create 20 million net new American jobs within a decade given proper leadership and support.

Using the Jobenomics Community-Based Business Generator process of mass-producing highly repeatable and scalable “turn-key” small and self-employed businesses, America could create tens of millions of jobs that would transform the U.S. labor force, middle-class and economy as well as providing hope and jobs for marginalized urban and rural American communities.

Economic Impact to Baltimore City. Jobenomics estimates that the economic impact would be **negative \$5-\$10 million** if the Jobenomics Baltimore City initiative proved to be unsuccessful after the initial pilot projects. On the other hand, if Maryland and Baltimore City community leaders embraced the concept and supported mass-producing small businesses and jobs, the economic impact could exceed **\$6 billion per year**. 100,000 new jobs at an average salary of \$50,000 are worth **\$5 billion a year** to Baltimore City.

If companies, like Under Armour agreed to support the EB-5 foreign investment and manufacturing initiative, Baltimore City should benefit in numerous new startup businesses in textile- and wearable technology. Corporate support would also help justify developers and financial institutions to invest and build major new modern multilevel, multifaceted, sustainable Live/Work/Play communities near the Inner Harbor which would be a large draw for the Millennial Generation-Y and new Generation-Z domestic and international college graduates. These “digital natives” are flocking to modern high-tech communal working areas with local personally, a sense of purpose, and 24/7 food/beverage/entertainment options. Other real estate investments in new green commercial buildings, residential communities and open spaces would be significant. An e-waste/e-scrap/e-demolition material reclamation facility could produce profits of up to \$50 million per year, and potentially \$200 million per year if Baltimore City can divert the exported e-waste stream from its container shipping facilities. Raw reclaimed materials (copper, aluminum, steel and plastics) could be used at cost for building industrial manufacturing plants in Baltimore. The total economic impact of these initiatives could be between **\$500 million to \$2 billion per year**.

Even a moderate Jobenomics Baltimore City success would receive national and international attention and vastly help improve Baltimore City as a “destination city” for tourism, vacations, sporting events and business conferences. According to Visit Baltimore²⁰, over 24.5 million domestic visitors and 1.8 million international visitors came to Baltimore City in 2014. The direct economic impact from visitor spending in 2014 was \$5.2 billion spent on lodging, food/beverage, entertainment and transportation. The economic value of tourism beyond direct visitor spending included \$2.7 billion in salaries (82,379 jobs; 56,919 directly employed and 25,460 indirectly employed) that were pumped back into the local economy, and approximately \$0.5 billion that were collected as taxes and fees by the State and Baltimore City government. The total economic impact of tourism to Baltimore City was around \$8 billion in 2014. If the Jobenomics Baltimore City helped improve Baltimore City as a “destination city” by 25%, the additional economic impact could be **\$2 billion per year**.

If 40% (current percentage of the U.S. contingent labor force) of the 100,000 new jobs joined the contingent workforce and would become contingency workers (temporary workers, part-time workers, day laborers, self-employed, task-oriented workers, shared economy workers, independent contractors, consultants, freelancers). If half (20,000) of these workers were Jobenomics Community-Based Business Generator graduates, they would likely be part of a small business startup. If each startup contained 10 employees, **2,000 new small businesses** would be created.

Concluding Thought. Whether the Jobenomics Baltimore City plan will be realized is too early to predict. Fulfillment will be only achieved when consensus is achieved by community leaders and a decision is made to commence with several pilot projects. Today, only one thing is for sure. In the short three months since inception, the Jobenomics Baltimore City plan has changed the Baltimorean workforce development dialog from a project-by-project approach to a more strategic small business and labor force development approach focused on developing skills for those at the bottom of

²⁰ Visit Baltimore, Annual Report And Business Plan Fiscal Years 2015–2016, http://baltimore.org/sites/default/master/files/pdf/ar_2015_final_web.pdf



Baltimore's economic hierarchy. The notion of creating 100,000 net new jobs by 2026 was initially received as whimsical. Based on reaction to the plan in its current incarnation, 100,000 net new jobs for Baltimore City is no longer a fanciful notion but an achievable possibility.