BALTIMORE HUMAN PROGRESS AND HUMAN SERVICES 2035
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INTRODUCTION

What will human progress, human need and human services be in Baltimore, Maryland in 2035? What implications does it have for today's strategies for public and private human service providers and community partners? The Baltimore Human Progress and Human Services 2035 Scenarios offer a tool for the human services community to explore these questions for Baltimore in order to better inform future-oriented, long-term strategies and efforts. For this purpose, these scenarios consider a range of forces, challenges, and opportunities shaping human services and offer a plausible set of expectable, challenging, and visionary pathways for how human services and human service providers may change over the years to 2035.

These scenarios will be used at a Scenario Workshop on May 2, 2019 where participants will consider how successful their current directions and strategies would be in each scenario, what adjustments are needed and develop recommendations focused on the near term and the long-term future.

These Baltimore Human Progress and Human Services 2035 scenarios are an important part of a larger project on the futures of human services—conducted by the Institute for Alternative Futures (IAF) and supported by the Kresge Foundation. In addition to developing scenarios for the human services community in six cities and counties and two states, IAF has developed a set of national human service scenarios. The national scenarios and these Baltimore scenarios will allow human service leaders, practitioners and partners to consider their own work in the context of these alternative futures, to challenge their assumptions about the future, to identify emerging risks and opportunities, and to formulate more robust strategies with a greater potential to advance their mission over the decades to come.

WHY SCENARIOS?

The future is uncertain. However, scenarios – different stories describing how the future may unfold – can be used to bound that uncertainty into a limited number of paths. These paths help us think about different probabilities in a larger space of possibilities. Scenarios also force us to consider the systems surrounding our topic and to clarify our assumptions. People who work with scenarios find more creative options than those who plan based only on the past and present. Strategies, plans, and actions can also be “future tested” against the different scenarios to assure robust initiatives rather than continued efforts based on outdated assumptions. Scenarios are thus a powerful method for systematically addressing the uncertain future.

METHODOLOGY

The Baltimore Human Progress and Human Services 2035 scenarios presented on the following pages were developed by IAF with the Center for Urban Families (CFUF), other city agencies and community partners. In creating these scenarios, we reviewed human services programs and activities, plans and documents and did interviews with human service providers and partners. We

explored “driving forces” and developed preliminary forecasts for the city, its economy, employment, the environment, technology, as well as trends within specific areas of human services (aging, behavioral health, child family and adult, disability, housing and income supports). We used those forecasts in two days of scenario development session, April 11 and 12, where more than 40 human services leaders gathered to review and refine the preliminary forecasts and develop the distinct scenarios presented below.

We used IAF’s unique “Aspirational Futures” approach which calls for exploring and developing scenarios in each of three zones (see Figure 1 below):

- A “zone of conventional expectation” reflecting the extrapolation of known trends, the expectable future (scenario 1); What is the “most likely” future for Baltimore and human services?
- A “zone of growing desperation” which presents a set of plausible challenges that an organization or field may face, a challenging future (scenario 2); What are key challenges over the next 15 years and how might they play out for city residents and their wellbeing? and
- A “zone of high aspiration” in which a critical mass of stakeholders pursues visionary strategies and achieves surprising success (scenarios 3 and 4). Given key forces, including job loss to automation, changing attitudes and values and accelerating technology change, how is poverty eliminated or drastically reduced; how would human services evolve in these scenarios with reduced demand, more effective technology while being more “generative”?

**Figure 1**: Scenario Zones for IAF’s “Aspirational Futures”
As we developed the scenarios there were aspects of the driving forces, key changes, that call for greater explanation than the scenario narratives allow. This larger explanation is given in the Appendix at the back of this scenario report:

- **Abundance advances** – a cluster of technologies that, if applied appropriately can lower the cost of living by providing in-home and in-community production of food, energy, and many home goods. (in Scenarios 3 and 4)
- **Job loss to Automation** – estimates range from 14.5% to 47% of U.S. jobs could be lost to automation by 2030 (we’ve assumed 25% of jobs lost in all Scenarios)
- **Options for Increasing Low Income Housing Stock** – options include expanded government funding; increasing neighborhood density; encouraging accessory dwelling units; low cost 3D printed homes. (various options across the Scenarios)
- **Guaranteed Basic Income** – faced with permanently high unemployment, a Guaranteed Basic Income would give $12,000 a year to each adult and $4,000 for each child (in Scenario 3)
- **Equity Rising** - “equity rising” is a fundamental trend that is occurring as a growing awakening to fairness or equity, including health equity. Differences among races, income classes, or other groupings that are avoidable and unfair are getting more and more attention. This change in attitude to support equity or fairness can greatly influence community cohesion and policies.
- **The Human Services Value Curve** – a vision of human services developed within the human services community

As you read these Baltimore Human Services 2035 Scenarios consider how likely each is. And consider how preferable each is – which would you want to take place?
SCENARIO 1: ONE STEP FORWARD, TWO STEPS BACK

Baltimore and Human Services Overview 1

The two decades between 2015 and 2035 saw national economic growth of 1 to 2% in most years, interspersed with mild recessions. Baltimore’s economic growth in the 2020s focused on retaining and growing financial and professional services, health and bioscience technology, arts, culture and tourism, information and creative services, logistics, and advanced manufacturing. Major employment sectors continued to dominate in their number of jobs were government, utilities, education, and healthcare industries. These continued their importance, though automation led to job loss in each of those sectors and industries as well as in retail trade, food services, manufacturing and business services. While the Baltimore City poverty rate fluctuated between 18-24% across the two decades, poverty and the rising unemployment rates remained disproportionately higher for communities of color.

Baltimore had some success in harnessing its proximity to Washington, DC to increase employment and generate some new opportunities, though these government related jobs, as with all jobs, grew more in the region than in the city in 2020s. And work was changing --consulting and piece work on the “gig economy” accounted for 13% of the local economy in 2018. Participation in “gig work” increased in the 2020s.

The 2020s saw major climate and technological changes. Climate change brought Maryland and Baltimore greater instances of floods and droughts, rising sea level and periodic displacement in Baltimore’s low-lying areas. The City was able to get the community prepared – the City’s Disaster Preparedness Plan worked to build adaptive capacity and resilience of neighborhoods most vulnerable to natural hazards, major community emergencies and the impacts of climate change. During the recurring extreme weather events, the Resiliency Hubs in vulnerable neighborhoods were able to provide safe space and back up supplies. Before and after events, the Resiliency Hubs helped residents enhance their energy efficiency, weatherization, solar energy production and storage capacity.

The information environment kept growing and technology increased its impact on our lives. Virtual reality was as transforming in the 2020s as the internet, social media and video streaming had been in the 2010s. The City developed several programs to ensure internet access to low-income households.

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2 Economic Alliance of Baltimore, 2016 Regional Report
3 The City of Baltimore’s Comprehensive Master Plan, https://planning.baltimorecity.gov/sites/default/files/Key%20Trends_0.pdf
Baltimore’s historic wealth gap had been perpetuated through segregation and forced displacement policies including: racial zoning, racially restrictive covenants, redlining, expulsive zoning, discriminatory lending and suburban subsidization, and highway construction that undermined community viability. Baltimore’s high degree of spatially concentrated disadvantage took many forms, including high rates of unemployment and low-wage jobs for Black residents. And in addition to disparities in income and wealth, Black Baltimoreans faced disparities in health, housing, education, and transportation. And the wealth gap was also exacerbated by an ongoing “Black Tax” in the form of subprime mortgage and automobile lending, along with higher payments for auto insurance.

Some of these inequities were worsened in the 2020s as more young professionals moved into the City and many neighborhoods experienced gentrification that pushed out or priced out low income and Black residents. Many residents pushed out of their historic neighborhoods were met with resistance and discrimination as they moved to other areas in the County and region. While overall the socioeconomic status of the City rose, poverty remained concentrated, particularly in East and West Baltimore. And transportation inequities persisted, further limiting access to jobs.

Maryland raised its minimum wage, reaching $15 per hour in 2025. However, the increase in minimum wage had some unforeseen impacts. For example, higher minimum wage led some receiving TANF and other benefits to be “cliffed out” as they earned too much to qualify for benefits. Yet they earned too little to move out of poverty as the cost of rent and other basic needs rose faster than their rising minimum wage income.

Efforts to get greater work and income equity and have “More in the Middle” (particularly African Americans) progressed even as the nature of work evolved (many low-skilled and low-paid positions were lost to automation as well as some middle- and high-income jobs). Job training focused on higher paying jobs, as well as gig work, that would not be automated.

The City had developed a major focus on equity in its planning, food systems analysis, and sustainability and disaster emergency response work, particularly in the City’s most vulnerable, historically disinvested neighborhoods. There was a greater acknowledgment of systemic racism, and its harm, nationally and in Baltimore City. The City’s efforts to promote equity and human service providers and community leaders’ efforts to strengthen residents and promote family stability did make a difference. However, their impact was slowed by remaining systemic racism, disconnection from work and the “criminalization of poverty.”

**Human Services Overall** – Through the 2020s human services in the City became more integrated and collaborative, partially because the higher minimum wage for direct care workers forced new partnerships and ways of delivering services. Nationally, work requirements or work-seeking

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6 http://mgaleg.maryland.gov/2019RS/Chapters_noln/CH_11_sb0280e.pdf
requirements were increased for many federally-funded programs, even as job loss to automation was reducing prospects. There were periods of reduced federal funding, when Baltimore agencies and non-profit providers struggled to optimize their limited resources and the effectiveness of their programs. And slow population decline (about 1%, for some years) resulted in reduced tax base, which was another challenge for adequate funding.

There was some success in supporting family stability and community strengthening through employment and bundled and holistic services. Wrap-around services and interventions, along with the higher minimum wage, addressed some needs of low-income families and workers. Started and developed by the Center for Urban Families (CFUF), this approach became widespread among human service providers in the City.

Supported by the State of Maryland’s Total Human Services Information Network (MD THINK), data integration and cross-agency partnerships became more common and important in Baltimore – across agencies, including state and federal, schools, and health care providers. Efforts such as the Integrated Data System project of Baltimore’s Promise led the way in joining education, health and workforce data. The State of Maryland also helped coordinate data analysis for health systems and coordination generally improved. Baltimore organizations were conscious of ensuring data was coordinated safely, with respect to privacy and avoiding bias. Data allowed better predictive analytics and early intervention for human services as well as triaging of programs. Technological advances better assisted human service workers, while sometimes performing their tasks or replacing entire positions.

**Aging Services 1**

As the older population grew in Baltimore, services were pressed to meet the demand. There was a nearly 11% change in the older population in Baltimore City between 2015 to 2030, changing from around 108,000 to more than 120,000. Diabetes, dementia and Alzheimer’s in seniors worsened. Diabetes in the City grew from around 68,860 diagnosed and undiagnosed cases in 2015 to 107,000 cases in 2030, with about 1/3 of those being older adults. Alzheimer’s impacted 1 in 10 adults over the age of 65. In Baltimore, by 2030, this was more than 12,000 individuals.

By the late 2020s, social services developed a stronger infrastructure for providing people with services. Baltimore further integrated their services into public housing complexes as residents aged

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11 [Institute for Alternative Futures, Maryland Diabetes Data and Forecasts,](http://www.altfutures.org/pubs/diabetes2030/MARYLANDDataSheet.pdf) - this assumed Baltimore maintains around 10% of the state’s population
12 [Ibid](http://www.alz.org/facts/)
There were many new and expanding problems as the demographics of Baltimore evolved. Including, many seniors reached older age without adequate saving. Those who needed to remain in the workforce found it harder to do so as job loss to automation replaced many positions.

Other new and increasing problems included high rates of elder drug abuse and spread of sexually transmitted diseases as the senior population increased. Human services expanded efforts to address these.

The need for direct caregivers increased and Baltimore had problems meeting the demand. This applied to formal employed caregivers and informal kinship care. Seniors that did have savings often depleted these monies paying for skilled nursing care. This meant there was less intergenerational wealth transfer.

The strains felt by serving as caregivers whether by family members or direct care givers, sometimes negatively influenced the quality of care. Much elder care, when it was paid, remained “gig work”, with a higher minimum wage but without benefits.

Housing for seniors in Baltimore remained an issue. Zoning and regulations changed - to encourage accessory dwelling units (ADU) added to a home or built in the yard. While not aimed exclusively at seniors, many seniors took advantage of these ADUs to downsize and age in place, often family members moved into the elders’ original home on the property. Following the example of carriage houses in Mt. Vernon and Charles Village\(^\text{14}\), ADUs became popular in Baltimore. Some tiny home or container home communities were established on the perimeters of vacant spaces throughout the city. Many seniors took advantage of these ADUs and tiny homes to downsize or age in place. At times family members moved into the elders’ original home on the property. More homes became multigenerational, with both family members and unrelated residents in the home.

Another aspect of older adult housing was blight prevention efforts, which focused on ensuring homes were safer. Local programs in Baltimore such as CAPABLE (Community Aging in Place—Advancing Better Living for Elders\(^\text{15}\)) and HUBS (Housing Upgrades to Benefit Seniors\(^\text{16}\)), which focus on home-based interventions and improvements for seniors, were largely successful and modeled nationally.

Medicaid providers used technology, when possible, to optimize care. In Baltimore, Zeta Center for Healthy and Active Aging expanded their TIPS program which focused on virtual wellness checks and remote nurses as technology evolved. And health care integrated behavioral health and collaborated with human service providers to better customized aging service delivery and better engage recipients in care plans. Some medical advances hit the market that slowed disease progress and disability, but the most significant of these advances were too costly to be covered by Medicare and Medicaid.


\(^{15}\) More info: https://nursing.jhu.edu/faculty_research/research/projects/capable/what-we-do.html

\(^{16}\) More info: https://civicworks.com/hubs-evaluation-and-replication/
Behavioral Health Services 1

Across Baltimore, behavioral health need increased due to the stress and trauma of social and economic exclusion, extreme weather events, substance abuse, lack of proper nutrition, violence, and particularly adverse childhood experiences (ACEs). Substance abuse and related disorders increased into the 2020s. Mental health and substance abuse treatment were increased, as was preventive care, partly due to increased health insurance coverage. There was greater understanding of the correlation between substance overdoses, traumatic brain injuries and behavioral health. This helped inform treatment. Coverage of behavioral health services, grew, while the stigma of receiving care was reduced. Gaps in behavioral health services were identified and addressed due to the federally mandated requirements stated in the Baltimore City Police Department Consent Decree. But access to treatment and recovery rates across race and socioeconomic classes remained unequal.

The prevalence of experiencing trauma, or ACEs, and the consequent long-term impacts on the person, was high in Baltimore and related to experiencing racism and/or poverty. There were efforts to increase trauma informed care (through police departments and many others), which had a positive impact in slowing the effects of ACEs. Trauma was intergenerational and affected entire families; recognition of this improved care. Mental health and treatment became somewhat less stigmatized.

The number served by Behavioral Health System Baltimore fluctuated in the 2020s as demand grew and funding varied. When demand was far higher than demand and providers needed to triage, they used predictive analytics to determine whose care was most urgent.

Some technology tools, particularly “virtual counselors” delivered effective care for some non-severe behavioral health needs, such as anxiety. But these tools were not appropriate for serving many across Baltimore.

Baltimore’s decision to not prosecute marijuana possession lowered arrests, and the implementation of the Justice Reinvestment Act helped lower incarceration rates, increase diversions to rehabilitation programs. However, incarceration rates continued to be disproportionately higher for African Americans and Hispanics. Prisons and jails remained a major site for delivering behavioral health care.

Child and Family Services 1

The need for child and family services grew, while funding for child and family services fluctuated. The delivery evolved due to greater integration of data and communication across public and private service providers, and between health, education and social service sectors.

Though the decade of the 2020s started out with a challenge for the City, an inaccurately low counting of residents in the 2020 census lowered financial resources to the City for the years to follow.
Baltimore City’s childhood poverty rates were higher than the state and national average, and the impacts of children growing up in poverty carried into the 2020s and beyond. Trauma informed care around ACEs increased. Baltimore was intentional about serving opportunity youth, defined as youth aged 16-24 who are disconnected from school and work. The number of opportunity youth continued to grow during the 2010s and early 2020s. While this group of youth had historically been difficult to acquire data on and track, more effort and innovative approaches were applied to identify and provide holistic services to this population.

Cases of child abuse and neglect were influenced by poverty, lack of resources and substance abuse. The number of children in out-of-home placements stabilized as parents were accompanied by an attorney in court. The trend of kids living with grandparents also stabilized then declined. Child care and respite care for parents helped prevent child abuse. Many of the respite programs were short term and not dependent on proof of employment.

The harm of substances such as marijuana and opioids on unborn and small children was better understood. Maryland and the Baltimore City Health Department worked to better provide those in need with real time treatment options and facilities and providers shared data.

The late 2010s brought a spike in infant mortality in Baltimore after years of decline in the number of infant deaths. Child and family service providers, in partnership with health care professionals, rallied to create a coordinated response to the crisis. The 2020s demonstrated a halt in the increase and a slow decline to previous low rates seen before the late 2010s.

Community based initiatives increased with more community hubs and centers to connect people. This had positive impacts for developing trust and systems of informal child care, as well as means to hold the community accountable. Community child care became more important as more were employed on the ‘gig’ economy and during non-stand work hours. However, community care providers were not always eligible to receive a care voucher and some community providers were unable to continue.

Other aspects of community strengthening came through fatherhood and family strengthening, such as those provided by HUD and the CFUF. And community health workers and peer navigators had a physical presence across the community, which helped connect families to services and supports.

Data integration, with privacy protections, across local agencies allowed better awareness of each child’s and family’s needs. Building on the work of Baltimore Promise, human services used predictive analytics to improve service outcomes and set priorities. And Maryland developed a longitudinal cloud-based data system and related artificial intelligence to support child welfare. Those accessing this information ensured it was used appropriately and not as a tool for profiling.

The federal funding rebound in the 2020s for programs including Head Start was stimulated in part by the “Child Care Access to Resources for Early Learning Act” that increased funding for children under the age of four and improved quality of care.

Baltimore focused on youth in education beyond pre-K. In the 2020s, Baltimore’s five-year strategic plan on digital inclusion connected more homes to internet and narrowed the “homework gap”.
Despite efforts, chronic absenteeism remained a big factor in need for services. Baltimore community college, which offered a more affordable option for higher education, focused on training for the evolving workforce and gig work.

**Disability Services 1**

During the late 2010s, disability services grew more focused, benefit levels were reduced, eligibility requirements stiffened, and barriers to access, such as needing to reapply for payments every six months strained families. And there were specific reductions in federal Social Security Disability Insurance (SSDI) payment levels and tougher eligibility standards. These changes came even as disability increased.

While acquired disabilities and developmental disabilities are affected by different policies, practices and technologies, they both contributed to the need for disability services in Baltimore. The number of those with disabilities in Baltimore slowly increased, due to the lack of access to health care, poverty and environmental challenges. A big wave in disability came with the increase of diabetes and Alzheimer’s and their accompanying disabilities, particularly among older adults. Racial and income disparities in the rates of these conditions continued.

The framework of disability as a civil rights issue advanced the rights of individuals with disabilities through policies supporting their inclusion in public and private spheres. As Baltimore pioneered anti-discrimination and anti-racism conversations and movements, anti-bias progressed alongside. Stigma, which encompassed social avoidance, stereotyping, discrimination, condescension, blaming, internalization and violence and hate crimes, slowly decreased; however, the process faced difficulties and deterrents. Advocates across Baltimore remained committed to raising awareness, inclusion and equity and promoting these values through meaningful policies.

There was greater community integration of services for those with intellectual and developmental disabilities as care shifted away from institutions; workforce and direct support professionals were challenged in maintaining their care levels. Supported employment in the City grew.

And early intervention, such as Head Start monitoring developmental milestones, were more broadly applied. Home visitations increased. Maternal child health and child welfare were a focus of community-based efforts such as those of Green and Healthy Homes, which used community health workers to address in-home issues, particularly high levels of lead.

Cases of taking children out-of-home that involved disabled children or children of disabled parents remained high. And the interconnections of substance abuse, disability and child welfare persisted, although Baltimore made efforts to increase access to recovery care.

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17 Disability Stigma and Your Patients” was developed by Arielle Silverman, PhD, and published by the University of Washington Aging RRTC. Content is based on research evidence and/or professional consensus. See more: [http://agerrtc.washington.edu/info/factsheets/stigma](http://agerrtc.washington.edu/info/factsheets/stigma)
There were technological and medical advances that lessened disabilities or lessened their impact. Low income families had access to some of these by the second half of the 2020s. And some technologies, such as virtual reality and smarter smart phones, were widely available to persons with disabilities across income levels or provided by Medicaid or Medicare. However, members of the disabled community that chose not to alter their condition or use technological aids were not discriminated against due to their choice. Public and private spaces slowly became more accommodating for people of differing physical and intellectual abilities.

Education became more inclusive of kids with developmental or intellectual disabilities; prompted in part by the increased prevalence of Autism Spectrum conditions and in part by the work of advocates across Baltimore. This led to many schools creating more inclusive classroom and school settings. Racial disparities in access to health care and disparities in access to prompt effective diagnosis of autism (vs. later diagnosis, misdiagnosis or lack of diagnosis) remained.

**Housing Services**

Baltimore’s long history of hyper-segregation and forced displacement through racist policies and practices remained a barrier for housing. The 2020s brought alternating increases and declines in housing insecurity and homelessness related to recessions, job loss, increases in domestic abuse, lingering effects of lead exposure and trauma. The city did become more effective in the 2020s in expediting the demolition of vacant blocks and supporting replacement home building. Funding for voucher and public housing units fluctuated but need outpaced supply. Overall, the unmet needs for low income housing remained high through the 2020s. Another barrier to the effectiveness of services was the “working poor”, meaning those who earned just over the amount permitted to access services and housing support. Yet, they earned too little to climb out of poverty and many paid up to 50% of their income for housing.

Baltimore’s shortage and need were greater than many other areas of the state, with long waiting lists for vouchers and public housing. Vouchers which had allowed people to move to “opportunity areas” ran out and often voucher recipients moved within the same area to houses of similarly poor or unsafe conditions. Baltimore human services worked to educate recipients around housing conditions and mobility, but patterns did not evolve much.

The City offered residents a variety of self-sufficiency programs: Family Self-Sufficiency, Jobs Plus, Section 3, People Accessing Continued Employment (PACE), Ticket to Work Program, My Goals for Employment Success, HUD’s Family Self-Sufficiency Program, and the Housing Choice Voucher (HCV) homeownership program, and housing counseling services for homeownership. And they provided a range of supportive services to families, including Resident Opportunities and Self-Sufficiency (ROSS), Child Care Program, Our House Early Head Start Program, Pre & Post Occupancy Program (POP), and Youth Programs - Boys and Girls Club, and Youth Leadership Club.

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Similarly, to the work of ConnectHome,\textsuperscript{19} in the 2020s the City ensured that all voucher and public housing residents could affectively use the internet and its connections.

The City had created a $52 million Neighborhood Impact Investment Fund to accelerate home building and small business projects in underinvested neighborhoods.\textsuperscript{20} This helped with dozens of homes and businesses though the early 2020s. Efforts such as the Bon Secours Health System which built affordable housing with supportive services, recognized the importance of housing as a Social Determinant of Health (SDOH) in improving health indicators and outcomes.

Demand for low income housing continued to grow faster than supply; though Baltimore and the region did experiment with several options to increase the stock of low-income and affordable housing, including:

- Restoring vacant homes through community land banks
- Raising the number of unrelated people who could live in private homes
- Prohibiting income-based housing discrimination, ensuring equal access for vouchers
- Eliminating restrictions on living with unwed partners in public housing
- Allowing secondary or accessory dwelling units (ADUs) to be built onto an existing home or in their yards
- Allowing and encouraging more group homes for elderly or special needs individuals
- Expanding multi-unit public and affordable housing
- Redeveloping public housing into mixed-income complexes through Choice Neighborhoods and Rental Assistance Demonstration (RAD) programs
- Encouraging affordable housing development in Opportunity Zones
- Affordable housing trust fund, city fund of 30 million
- A local voucher system that supplemented the federal voucher, although with different eligibility requirements
- Encourage tiny homes for individuals, small families, or previously homeless; including tiny homes constructed for $25,000 to $50,000 using shipping containers for the structure.

Other aspects of housing services supported by federal funds persisted, albeit with year to year variations in the funding levels. This included emergency rental assistance, domestic abuse emergency shelter, job training, financial management, child care, utility payment assistance and home weatherization.

In the 2020s more energy efficient materials, as well as installation of solar energy production and storage were added to the housing weatherization and repair work in Baltimore. Working with Green & Healthy Homes, the city launched a Community Health Worker (CHW) pilot program in the 2010s to

\textsuperscript{19} Yvonne Wenger, Baltimore public housing residents given tablets, internet connection under initiative to connect more online, The Baltimore Sun, September 4, 2018
\textsuperscript{20} Ian Duncan, The Baltimore Sun, December 18, 2018. Baltimore neighborhood investment fund to set to launch; $52 million to back building and business projects.
mitigate in-home asthma risks from mold and pests. This expanded in the 2020s to include Home Visiting Nurses for every expecting family, helping to promote healthy home environments and reduce ACE scores among young children.

Homelessness fluctuated through the 2020s. Homeless youth continued to be underserved and difficult to address as “couch surfing” became more common. These opportunity youth – those of school or working age – often graduated into adult homelessness. Efforts were expanded to address this demographic of need, but often teenagers already had years of trauma before being connected with services.

Homelessness and shelter diversion efforts increased, including preventive services so that homes were less frequently lost. Eviction and utility cut off prevention services remained insufficient.

**Income Support Services 1**

Efforts to bring jobs to low income Baltimoreans, particularly better paying jobs met with only slight success in the 2020s. And income support programs, such as TANF, TCA, Work Opportunities Program, SNAP or FSP, and EITC, became more necessary in the 2020s as job loss to automation increased. Other barriers to success in transitioning out of poverty included racism, hyper segregation, addiction and substance abuse, and health and life span inequity.

The 2020s Census undercount led to reduced payments for programs based on the City’s number of low-income residents.

And for immigrants, the public charge initiative, which barred noncitizens from a pathway to citizenship for having received public benefits, reduced some immigrants’ participation in income support programs.

Throughout the 2020s, TANF, TCA and Work Opportunity Program experienced periodic reevaluations. TANF payment levels were maintained, but not raised. However, transitioning away income support programs to family supporting jobs remained – the More in the Middle strategy – remained as a little fulfilled aspiration. Even for lower paying jobs barriers of child care and transportation persisted. Nationally and in Baltimore there were some efforts to address the “welfare cliff” but without solid resolution.

The Federal Earned Income Tax Credit (EITC) maintained its bipartisan support in Congress and continued to aid low income families. However, job loss to automation reduced the number of people earning enough to pay the taxes that would get refunded by the EITC. Another barrier to receiving EITC funds was that many eligible taxpayers did not know that they needed to include it in their returns, though efforts from organizations such as the CASH Campaign of Maryland helped increase the number of those filing.

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Food and nutrition income support programs evolved as well. Baltimore City historically had higher participation rates in FSP than other parts of the region. Though during the late 2010s and the 2020s the number of recipients fluctuated with period cuts – particularly to FSP, WID, and school meals. Higher barriers to qualifying further limited the number of kids getting food.

By the mid 2020s funds rebounded, particularly for SNAP/FSP. Applying for benefits was made much easier and quicker. Better information systems linked individuals and their data with other government programs which informed automatic enrollment.

Still, access to healthy food was a problem in Baltimore. Efforts to fix food deserts or “healthy food priority areas” included a tax incentive aimed to attract more food retailers to the area, urban and community agriculture, and farmers markets that accept SNAP and Maryland Market Money. Community gardens became more commonplace, aided in part by technology, which helped household food access. SNAP’s Employment and Training programs worked effectively with other employment programs. As with TANF, SNAP benefits continued to require proof of actively looking for work.

Health and human service agencies coordinate with SNAP; for example, a Medicaid participant who would benefit from certain foods or nutritional supplements could be encouraged and aided towards buying those foods.

Employment training targeted jobs that would not be automated and for which the person had the relevant capacities. But even after the training, job shortages remained in the Baltimore area and/or the people offered jobs did not have reliable transportation. Non-traditional jobs and gig work often did not qualify as the required jobs to maintain TANF or SNAP/FSP benefits.

Other programs that expanded included HUD’s Jobs Plus Initiative Program, which was a place-based program which aimed to increase earnings and employment. This program allowed participants to receive 30% of their income back upon completion of the program. This expanded beyond public housing and became available for those in the voucher system. HUD’s Family Self-Sufficiency Program (FSS) which typically involved a family for 5+ years, and any increases to the family’s rent as a result of increased earned income were placed as a credit in an escrow account. Once the family completed the program, these escrowed funds could be used for any purpose including education, homeownership or to alleviate debt.

Child care programs generally maintained bipartisan support and continued to be important to families working towards self-sufficiency. For example, the Child Care Scholarship (CCS) (formerly known as Child Care Subsidy) Program\(^\text{22}\), which provides financial assistance for child care costs, remained active but had to adapt to an evolved workforce and more flexible work hours.

\(^{22}\) Maryland.gov, Division of Early Childhood, https://earlychildhood.marylandpublicschools.org/child-care-subsidy-program
SCENARIO 2. B’MORE, B’LESS

Baltimore and Human Services Overview 2

Baltimore and the nation saw recurring economic, environmental and social challenges throughout the 2020s. Racial wealth and health disparities in Baltimore worsened, as new challenges arrived, and longstanding challenges compounded. There were high rates of job loss to automation, and in Baltimore this meant many low-wage, and some middle-wage, jobs were eliminated. Another “Great Recession” hit the economy in 2023. During this time the City’s hospitals, universities and other anchor organizations, laid off workers with devastating impacts to the community. Unemployment spiked, businesses closed, property values dropped, and some people lost their homes; as a result, the tax base was reduced. Education spending was reduced, worsening inequities in the City’s schools. Given the lack of opportunities, for many disenfranchised youths the “school to prison pipeline” remained their path.

Food deserts remained a problem in Baltimore, with more residents of high poverty areas left without access to healthy and affordable food options. Economic challenges did lead to an increase in self-sufficiency and cost-saving efforts, particularly family and community food production as well as the trading of services and other resources in low income communities. Community gardens on vacant lots across the City, when possible, continued or expanded.

Baltimore had a long history of racism and oppression which drove many excluded from the formal economy to find other means for their survival – they were resilient in finding other options. In the 2020s some immigrant or foreign-born groups were able to maintain themselves with their initiative.

During the 2020s many city neighborhood networks and social cohesion degraded. Increased illicit activity made gangs more prominent. Violence increased in many parts of the City. Police and community networks’ and institutions could do little to maintain order. Those who had the resources and capacity to leave the City often did so, further reducing the tax base and community resources.

Climate change brought more frequent and severe storms, heat waves and droughts, all while the federal government was stretched thin in providing relief funds. In Baltimore, more extreme flooding and dangerous heat levels impacted many, but disproportionately impacted low income, elderly and communities of color. Sea level rise worsened one year when a major hurricane hit Maryland. The eye of the hurricane came north on the east side of the Bay. This funneled a wall of water into the Inner Harbor, flooding downtown and nearby neighborhoods. And there were other instances of major flooding. Homes and businesses were impacted. Many families were displaced from their homes. This created pressure from those who were flooded and had insurance and enough income to move nearby to higher ground. As these populations retreated inland, this increased gentrification pressure on long-time residents of those areas. And in the 2020s, as in earlier severe weather events and
flooding that destroyed homes, communities of color received disproportionately fewer federal buyouts.

**Human Services Overview** -- Along with decreased community support and increased violence, the cuts to human services (particularly during more conservative federal administrations and around the Great Recession) seemed like hurricanes to many. The need for most types of human services grew while resources were being reduced. Federal funding levels were reduced, and eligibility was made much more stringent. Local government leaders and agencies were often in “crisis mode” and unable to strategize, vision or truly advance progress for Baltimore.

Governmental cuts meant that many turned to local nonprofits, foundations and churches, but these organizations were often struggling as well. Some went out of business. Despite limited resources, the able organizations repeatedly made efforts to provide emergency services.

Human service organizations were forced to evolve; to automate what they could, collaborate to ensure that the funds and services provided were deployed most effectively for each individual and family’s unique needs and to reinforce their overworked and underpaid employees on the importance of their mission. However, data integration was used to further discriminate against communities with the greatest needs.

Overall, about 15% of human service jobs were lost to automation in the 2020s. Many other jobs were cut when state or federal funding was decreased. Diseases of despair, including opioid and drug addiction, depression, and crime grew in Baltimore, not only among the population in many low-income neighborhoods, but among the laid off human service workers.

**Aging Services 2**

The increase in older adults crashed over Baltimore like a wave in the 2020s, especially as aging services experienced cut after cut. Despite overt need, the national funding for aging services was only 2% of all philanthropic areas in the late 2010s and this amount actually decreased. There was a greater reliance on informal and unregulated care, which worked for some but left low-income and minority elders disproportionately without adequate care. And sometimes lack of regulation led to harmful situations. The economic downturn impacted the family members of seniors, particularly stressing families with multiple generations under the same roof, which in the 2020s made up a larger percentage of families in Baltimore. Exploitation of elders increased.

Diabetes, dementia and Alzheimer’s in seniors in Baltimore worsened. Alzheimer’s impacted 1 in 10 adults over the age of 65. In Baltimore, this was more than 12,000 seniors. Diabetes in the City grew

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23 NPR, Search The Thousands Of Disaster Buyouts FEMA Didn't Want You To See
https://www.npr.org/2019/03/05/696995788/search-the-thousands-of-disaster-buyouts-fema-didnt-want-you-to-see
from around 68,860 diagnosed and undiagnosed cases in 2015 to 107,000 cases in 2030\textsuperscript{24}, with 32,000 of those being older adults\textsuperscript{25}. As access to health care declined, the health impacts of diabetes in seniors worsened.

During the 2020s and 2030s, there were great medical and technological advances. The affluent could afford high tech and high touch home care, and better treatments for Alzheimer’s and diabetes, but these were expensive and not covered by Medicare or Medicaid. Low income seniors did not get access to most of the medical breakthroughs or disability reducing technologies.

Federal policy limited immigration, which lessened the relied upon base of foreign-born caregivers in the aging service field. Many seniors continued to rely on family members when they could. (Even as the ratio of family and kin to elder changed from around 7 to 1 in 2010 to 5 to 1 in 2030). When family members did fill the role of caregivers, there were often difficult emotional, financial, and physical impacts. And family members themselves were aging or facing other barriers to their ability to provide care. There was a ripple effect of increased familial stress across Baltimore as families and seniors needed support that was often just not there. For many families, child care and higher education costs for children were compromised as middle age folks were caring for both their parents and their children. Unemployed and underemployed families often could not take in older family members, and so older adult homelessness increased.

As a result, life expectancy declined dramatically. This was on top of already huge disparities in life expectancies for Baltimoreans of different races.

**Behavioral Health Services 2**

The need for behavioral health care compounded across Baltimore, but the availability and accessibility of care was reduced. Unfortunately, as a result, morbidity increased. Overdoses and substance abuse, suicide, and physical conditions such as high blood pressure and stroke all increased deaths. Traumatic brain injuries from overdoses increased and led to more complicated need for services.

And throughout the 2020s, children who had experienced multiple ACEs and were exposed to dangerous levels of lead in their homes were growing to adulthood with significant behavioral health needs. Many did not have access to the care they needed. School systems were overwhelmed in meeting the behavioral health needs of children and their families. The number of schools that had on-site care deliverers decreased.

Health care reform left more uninsured and there were cuts in Medicaid enrollees. Service levels increased as the Affordable Care Act was reformed. Lack of health insurance was a major barrier to accessing behavioral health care. While programs such as BHSB remained committed to serving low-

\textsuperscript{24} Institute for Alternative Futures, Maryland Diabetes Data and Forecasts, http://www.altfutures.org/pubs/diabetes2030/MARYLANDDataSheet.pdf - this assumed Baltimore maintains around 10% of the state’s population

\textsuperscript{25} Ibid
income and uninsured in Baltimore, the system was overwhelmed, and funding and staff were periodically reduced.

Another problem was reduced number of providers that accepted Medicare as the senior population increased, and even when accepted not all behavioral health needs were covered.

Jails and prisons in the area remained leading sites for providing behavioral health services. Black and Hispanic populations’ arrest rates remained higher and their sentences longer than for the white population.

**Child and Family Services 2**

Increased poverty, structural racism, lack to resources, and cuts to human services were factors increasing need for child and family services, along with increased child abuse and neglect, domestic abuse, addiction, teen pregnancy, housing insecurity, food insecurity and depression. For kids, these led to more ACEs which would negatively affect their gene expression for years to come. The rate of childhood trauma continued to be higher in Baltimore than the state average, and the impacts compounded. And the need for foster care grew, but in most years, the need for placements outpaced the ability to recruit foster care homes.

Providers across the community embraced trauma informed care, which did help to mitigate the effects of ACEs, but the need outpaced delivery and trauma factors compounded.

Opioid and heroin addiction, already problems in Baltimore, continued to increase in the 2020s, and became a major contributing factor harming children and young adults directly and through their parents’ addiction.

In many low-income neighborhoods disconnected youths, those who were not in school or working, increased. The longstanding challenges of racial discrimination, educational inequity and others led too many youths to leave school without graduating and without the ability to secure family-supporting employment. Homeless youth was made worse after extreme weather events.

This was made more challenging as job loss to automation and the Great Recession reduced jobs, and unreliable transportation made existing jobs less available. This kept many individual full-time workers, and even couples, well below the self-sufficiency level. There was some migration out of the City and into suburbs and exurbs but those who left were often met with resistance and received fewer services.

As more programs were cut or eliminated, faith-based providers and philanthropies did step up to provide services. As need for services became more apparent, some giving increased. And the role of nonprofit providers rose as the City population (through undercounting and out migration) decreased and the City’s role in the state, in terms of representatives and related funding, was diminished.
Child and family services worked to improve their services, even as their programs funds and staff were reduced while needs grew. Baltimore maintained mentor programs for youths. Baltimore had demonstrated historic race resilience. This contributed to the development of community resilience scoring tools that did help to determine services. As staff was reduced human service providers automated some of their work. Data systems remained a priority area and this helped the City to target the best set of services from their dwindling pool of programs and funds. This information is integrated from other community services – health care, police, and schools.

Disability Services 2

The number of people with disabilities grew year after year; much of this growth came with the aging population with more chronic diseases such as diabetes, dementia and Alzheimer's (by 2030, there were 107,000 cases of diagnosed and undiagnosed diabetes in Baltimore, with around 12,500 instances of diabetes related disability)\(^{26}\). Black and Hispanics populations remained disproportionately impacted. Other influences on disabilities included racial and economic health disparities and problems, including dangerously high rates of lead. These were exacerbated by the impacts of the 2023 Great Recession, the ongoing higher structural unemployment, and severe weather events.

Funding for disability services were reduced during the 2020s; some non-profit providers went bankrupt. With economic downturn and other barriers, more parents of children with disabilities were unable or poorly equipped to provide adequate care. The decrease in available support services for families, such as respite services, meant more children had interactions with the child welfare system and were removed from their home.

Developmental disabilities grew in the 2020s, in part due to prenatal drug abuse and lack of prenatal care. While by the mid to late 2020s some congenital conditions could be addressed in utero, and some after the person was born, these were expensive procedures, not covered by Medicaid and or most insurance plans. And as programs such as Head Start were decreased, along with decreased access to health care, there were fewer opportunities to identify intellectual developmental disabilities (IDD’s) early.

Moreover, the stigma often accompanying persons with disabilities persisted and, in some cases, worsened. This led to greater inequity. Exploitation of persons with disabilities, in many ways, increased.

The legal system was inadequately supportive of persons with disabilities, and living with disabilities was, in some ways, criminalized. The number of BEST police (Behavioral Emergency Services Team), who were trained on trauma informed care, decreased. As a result, more young people with disabilities experienced the “school to prison pipeline”.

\(^{26}\) Institute for Alternative Futures, Maryland Diabetes Data and Forecasts, http://www.altfutures.org/pubs/diabetes2030/MARYLANDDataSheet.pdf - this assumed Baltimore maintain around 10% of the state population
There were technological and medical advances that removed disabilities or lessened their impact, but most people with low-income cannot afford many of the technological advances (e.g. self-driving cars, 3D printed prosthetics and orthotics, home robots, neuro-enhancements and direct brain control of limbs) and most are not covered by Medicare or Medicaid, particularly as these were reduced. These new technologies heightened the differences between those who are sufficiently well off to be newly enabled rather than disabled, versus those negatively impacted by their disabilities.

However, some technologies were available at low-cost. Low income families could have access to some advances in virtual reality and advances accessible through smartphones that, for example, aided vision and hearing, by the second half of the 2020s. Intelligent agents could link biomonitoring and other health data with health care providers for alerts in instances of need. These were usually low cost and as they proved themselves, were provided by Medicare, Medicaid and other health care plans (particularly capitated plans). However, the increase of data sharing had some harmful impacts, including some insurers choosing not to enter the marketplace in areas with high levels of disabilities. And Medicaid eligibility for disabilities was tightened.

**Housing Services 2**

Conservative administrations, more austere Congresses, and economic downturns led to major reductions in housing assistance levels. There were some rebounds in funding in the late 2020s and 2030s. But during most years in most communities, housing services, like most other human services, had to determine who got what services, when a large share of the needy or eligible group would not get any of the services. Lotteries among the fully eligible were used as well, still with the lottery winners who get housing being a fraction of those eligible. Eligibility criteria became more restrictive, including work requirements, even as jobs were disappearing.

Loss of a job was a frequent cause for loss of housing, made worse by automation and the Recession. Other contributing factors to housing instability such as domestic violence and disabilities increased. More people lost their homes while human services had little to offer in response. Homeless populations soared while spending on them dropped.

By 2035, it was much more common to have more family members and generations living under one roof, despite housing authority and zoning restrictions. Baltimore did try to allow more unrelated individuals to share housing units and to permit secondary dwelling structures in yards or attached to existing homes. But in many row house neighborhoods the homes and backyards were too small to allow additions.

Faith-based organizations and nonprofits stepped in temporarily and met some of the need, providing shelter and meals. Service providers, churches and other non-profits were forced to unite and combine their dwindling resources to address the homeless crisis.

The Hurricane which hit Baltimore hard destroyed many poorly maintained homes; most of which were not able to be repaired or rebuilt for their original inhabitants. Flooding in low lying gentrified
areas, such as Fells Point, led some of those residents to move further inland. This shift in gentrifying areas displaced more long-time residents with fewer resources.

Trauma and housing desperation contributed to increased crime and diminished physical and mental health. Utility assistance and eviction prevention services were kept very busy.

**Income Support Services 2**

TANF, and all other cash assistance programs, experienced greater cuts and limitations- and some were fully eliminated. In the 2020s the job categories that recipients could seek to meet the requirements of TANF, TCA and the Work Opportunities Program were narrowed, further limiting the ability of recipients to find employment and maintain eligibility. And the Great Recession of 2023 made the situation worse. Many families were less able to meet their basic needs, and resorted to extreme measures, did without, or found alternative sources. Even during the better economic times later in the 2020s, TANF payments remained limited.

Baltimore’s has a long history with the informal economy. In the 2020s, for many families excluded from jobs and with reduced or no benefits, the informal economy remained their major option. This underground economy included legal and illegal efforts. By 2035, a growing number of the population in prison were former TANF recipients who had resorted to crime for survival. Other informal economy activities included increased home and community food production; sharing time and services such as child care and home repair. Human service workers and programs better recognized and supported this informal work and gig work.

Simultaneously, some immigrant communities which were excluded from receiving income supports, and some long-standing African-American neighborhoods enhanced their own micro-economic situations that included networks of food growing and child care and other traded goods and services. Some of these communities not only maintained themselves but thrived.

However, the informal economy was not taxed which hurt the tax base for public schools and other areas of needs. Many who had the resources to leave Baltimore City, did so. Those remaining had higher need for services but fewer resources and the City was without the infrastructure to support this.

During the 2020s, more people required emergency assistance, medical assistance, and temporary disability assistance but there were fewer financial resources and medical services available. The EITC had slightly reduced payment levels during 2017-2021 but grew slightly above inflation through the 2020s. Maryland maintained its earned income tax credit on Maryland taxes paid. But ongoing job loss to automation as well as recession-induced unemployment, particularly during and after the 2023 Great Recession, reduced the number of families benefiting from Federal EITC and Maryland EITC payments.

Food costs continued to increase between 2.5 and 5% each year, yet wages and family incomes declined, and the SNAP/FSP program suffered significant cuts. Food deserts were a problem for the
people of Baltimore, and the City took action to help provide more people with healthy and affordable food; however, there were many barriers to the success of the efforts. Inability to access healthy food worsened as more stores closed and the cost of fresh produce increased during times of economic and environmental shocks. Access to healthy and affordable food became more difficult. Some families and communities did increase their home and community gardening and food production.

Switching SNAP/FSP into a block grant further reduced its economic and nutritional impact, disproportionately harming low income populations. SNAP was periodically cut then supported; then, despite overt need, the SNAP program was ended all together in the later 2020s. Low income families in Baltimore were disproportionately affected.
SCENARIO 3: NOW: NEW OPPORTUNITIES WORKING

Baltimore and Human Services Overview 3

By 2035, there had been major transformations – nationally and across Baltimore. Widening inequities, and greater acknowledgement of their harm, in the late 2010s set up major changes in the 2020s. Human Services and human progress were redefined and transformed through a national and local focus on equity. This touched many policy arenas, including taxation, universal access to health care, criminal justice, housing, and the environment.

Meanwhile, the economy was evolving. Baltimore’s economic growth in the 2020s focused on retaining and growing financial and professional services, health and bioscience technology, arts, culture and tourism, information and creative services, logistics, and advanced manufacturing. Major employment sectors included government, utilities, education, and healthcare industries. These continued their importance for jobs, though automation led to job loss in each of those sectors as well as retail trade, food services, manufacturing and business services. Consulting and piece work on the “gig economy” had accounted for 13% of the local economy in 2018. In the 2020s, more of the remaining paid work shifted from jobs with benefits, to this “gig work”. Job growth in the region, beyond the City, was slightly higher throughout the 2020s.

Given the rising structural unemployment, including the loss of many middle-income and high-income jobs to automation, a federal Guaranteed Basic Income (GBI) for all citizens was put in place that provided $12,000 yearly to adults and $4,000 per child. This income largely eliminated cash transfer programs, such as SNAP/FSP, TANF and TCA, and others, but positively impacted many across Baltimore as a means to increase stability and choice. Many receiving GBI found purpose in advancing arts and culture leading to a renaissance of Baltimore’s Arts & Entertainment districts.

Along with the GBI, Baltimore made conscious efforts to help move towards greater income and wealth equity. These efforts included working to connect and empower those historically disconnected from work with new opportunities, even as the economy and jobs evolved. These efforts included the “More in the Middle” strategy to increase wealth and economic equity.

Baltimore was a national leader in pursuing equity-enhancing policies. The longstanding history of racism and oppression across Baltimore was firstly acknowledged and discussed, and then

27 Economic Alliance of Baltimore, 2016 Regional Report
28 The City of Baltimore’s Comprehensive Master Plan, https://planning.baltimorecity.gov/sites/default/files/Key%20Trends_0.pdf
addressed. Residents of Baltimore put in the work initially to vision how to dismantle harmful and oppressive structural hierarchies and policies and how to rebuild a more equitable and successful City. Then, they got to work mobilizing towards this vision.

Dialogues on racial equity and the reality of the exclusion, segregation, disenfranchisement of Black residents hit home in Baltimore. Across the community, there was an understanding that Baltimore and all of its residents deserved better. The historic hyper segregation; wealth, health and education gaps; economic exclusion and community disinvestment; police shootings and crime positioned Baltimore as ready for big changes.

Guaranteed basic income played a large role in helping leaders and residents get comfortable and supportive of new methods for services and policies, which helped garner widespread support for other transformations.

Coherent strategies established before 2020 by Baltimore groups were put in place. Leaders such as the Center for Urban Families\textsuperscript{29}, Associated Black Charities\textsuperscript{30}, and Prosperity Now\textsuperscript{31}, focused on strengthening families, affordable housing and homeownership, employment and career advancement (including in gig work, entrepreneurship, and contributing beyond paid work), higher education and other growth skills, asset building and health.

Despite growing job loss to automation, employment remained a core focus for achieving greater equity., particularly by moving people to higher paying jobs - $35,000 to $75,000 yearly (the “More in the Middle” strategy). The core of better paying jobs remained a focus for training; avoiding those jobs that had a high likelihood of automation. All workers were trained for entrepreneurial/gig economy skills and to manage their income and benefits (to the extent they had them). Baltimore emerged as a “tech hub” and opportunities to push education towards preparedness for technology increased, particularly helping lower income Black youths to enroll and succeed in programs that led to jobs in those sectors. Baltimore City Community College increased its accreditation-worthiness and all regional community colleges worked to ensure that residents got the training they need, including those related to robotics and artificial intelligence.

Investments were made in transit equity to enable those without their own cars to get to jobs (expansion of bus and subway lines; public transit providing uber-like services, including with autonomous vehicles; equitable distribution of alternative modes – e.g. bikes and scooters). And the meaning of “employment” shifted for many who did not have paid work, but were contributing through raising kids, caring for elders, and community volunteering as well as producing food and 3D printing some of their needs.

Opportunity Zones were neighborhoods to catalyze economic activity, business growth, and local hiring. Basic income supported many new entrepreneurial efforts. Community-based economies

\textsuperscript{29} Center for Urban Families, \url{https://www.cfuf.org/About-Us/}
\textsuperscript{30} \url{http://www.abc-md.org/about-abc} and Associated Black Charities’ Framework Report: An Economic Equity Approach to Transformative Change, \url{https://static1.squarespace.com/static/5728e34fd51cd4809e7aeefe0/t/574262bfe707eb8894735075/1463968451862/ABC-More-in-the-Middle-Initiative-Framework-II.0913.pdf}
\textsuperscript{31} \url{https://prosperitynow.org/files/resources/Racial_Wealth_Divide_in_Baltimore_RWDI.pdf}
increased, building on Baltimore’s historic ability to “hustle”. Several “Fab Labs” – wired, low cost, entrepreneurial spaces that focused on various industries supported new business development and gig work were built in previously disinvested areas.

Another area of transformation was advances in technology that made living less expensive. Low cost solar energy production and storage was enabled by breakthroughs in solar panel efficiency and storage technology. Food production was enhanced in urban agriculture, community and in-home food production. Aeroponics and other low cost, high tech growing supported much vegetable production. Cultured meat joined 3D printed food, increasing access to sustainable protein sources. 3D printing also allowed families to manufacture many of their home goods whether the printer was at the local library, the housing complex, or in their home. 3D printing even produced small homes, including many backyard “accessory dwelling units”, as low cost. These advances supported self-sufficiency and were known as “abundance advances.”

Child care and early education and school performance were improved, particularly in the lowest income neighborhoods. Baltimore built community wealth through encouraging and supporting children from a very young age, and supporting them as they develop towards new opportunities.

Human services were better equipped to focus on supporting holistic wellness, partially due to universal health care. Human services provided training on the wealth and financial literacy needed for families to successfully manage their guaranteed basic income, to optimize their use of “abundance advances,” and to have each family member pursue their contributions to the community. Community networks were strengthened, and human service workers were pillars of connectivity.

Human services used secure and conscientious predictive analytics to anticipate needs, optimize services and develop most effective partnerships. And predictive analytics provided residents a tool to hold institutions accountable for results.

While GBI funds go directly to families, agencies had greater flexibility with other funds across agencies. Many human service tasks were supported by automation, and some were fully automated. Human service workers specialize in providing human touch when needed and in doing quality assurance for the automated services.

Aging Services 3

The “age wave” that hit Baltimore, the state and the nation and increased demand for aging services was paralleled by the movement of human services towards more integrated, customized, flexible and generative services. Human services, supported by policy shifts and technology, helped elders to thrive and contribute to the community. The guaranteed basic income “topped up” those 65+ whose Social Security income was less than $12,000 annually (these were adjusted annually for inflation, as were Social Security payments).

Formal, informal, and virtual senior centers all grew, while many ceased to be “seniors only” centers. Baltimore increased its senior activities and integrated senior services into libraries, schools,
churches, cafes, and other settings, including homes and neighborhoods. The “lifeline” federal policy helped Baltimore achieve internet for all, which increased social and physical health of elders as smart home functions, personal biomonitoring, health tele-visits and virtual visits, hearing and language aids, were in place by the mid-2020s in all seniors’ homes.

A major portion of paid direct care workers serving elders remained immigrants. A return to a more welcoming immigration policy in the 2020s meant those direct care workers were available (and better paid because of the rising minimum wage). But more families were also providing care for their older family members. For these family members who forgo other paid work, their guaranteed basic income payments provided some additional family money. The socioeconomic power dynamics of caregiving, across racial and socioeconomic lines, still persisted but were better addressed through equity education and through GBI allowing more people to care for their own family members, rather than others for payment.

Senior group living and co-housing grew steadily through the 2020s, as did “smart homes.” Flexibly designed homes, with reconfigurable walls and other adaptable features, increased and were often incorporated into co-housing models. The historic row homes of Baltimore were often not the most appropriate for aging in place, so other options such as accessory dwelling units (called “granny flats” by some) and adaptable homes expanded. Multi-generational living increased among related and unrelated residents.

Universal design became widespread in the 2020s; all new developments, multi-unit housing, and many individual homes, were wheelchair accessible and community facilities were designed to be accessible for all. Transportation to and from activities was made easier as self-driving car services became ubiquitous and inexpensive, either as Uber-like services or shared ownership by senior coop groups or MTA/Baltimore Link.

Health care evolved, improved in quality, and focused on extending healthy years. Early intervention and treatments were found by the mid-2020s for Diabetes, Alzheimer’s, and many cancers. The Medicare for All program increased access to care in the state, while Medicare and Medicaid negotiated prices on pharmaceuticals and other advances to ensure that they were accessible.

Maryland’s Medicare waiver requirements, including the shift to global budgeting for hospitals and incentives for primary care moved providers to focus on prevention with seniors. This did improve seniors’ health, reducing or slowing some health events and conditions.

In the 2020s, in some neighborhoods, food deliveries for Meals on Wheels were made by small drone-copters. Nutrition programs and Health Coaching became more customer focused, including optimizing the person’s meals for their nutritional needs (informed, where the senior agreed to the data sharing, by the person’s medical records). Programs such as the Eating Together in Baltimore often used locally produced food – whether from community gardens or more high-tech urban agriculture. Community gardens, some exclusively for seniors, became a more common way of contributing and getting exercise.
Behavioral Health Services 3

Behavioral health issues were reduced through the 2020s as GBI payments and abundance advances reduced poverty; support for equity and inclusion reduced isolation; and making a contribution increased the sense of self-worth. Behavioral health care was universally accessible and increases in behavioral health literacy destigmatized receiving that care. Wellbeing increased and deeper social networks reinforced the value of behavioral health services. Wellbeing included focus on the arts, culture and play across communities.

Care were influenced by advances in understanding ACEs and genetic and environmental contributors to behavioral health. Predictive analytics aided early intervention, and some intervention was genetic. Under Medicare for All, physical and behavioral health were given parity. There were more comprehensive care models which, for example, focused on a pregnant mother through and beyond childbirth. Research advanced understanding of substance abuse exposure to newborns and traumatic brain injuries from overdoses; this research informed better care and prevention. The field of “addictionologist”, or addiction specialist, became common as did more extensive training in addiction for all providers. Maryland policy required counselors to be trained in addiction medicine and addiction specialists were compensated the same as therapists.

Care was also influenced by advances in understanding of the contribution of ACEs and genetic and environmental factors to behavioral health. Predictive analytics aided early intervention. For some behavioral health conditions that were largely genetic in their origin, in the 2020s effective genetic interventions proved successful. The Medicare for All system of the 2020s covered or provided these advances. Physical and behavioral health were given parity. Technology significantly accelerated behavioral care; effective and inexpensive software, “virtual counselors,” developed and used by leading health care providers proved to be very successful in the 2020s. These too were accessible through Medicare for All.

While behavioral health morbidity improved in the 2020s, issues remained, caused by genetic conditions; reduced but remaining accidents, trauma, abuse and neglect, and neighborhood violence; as well as the impacts of adverse childhood experiences in the 1980s and 1990s (when the current 40 and 30-year-olds were children), as well as exposure to dangerous lead levels.

The behavioral health workforce evolved. As behavioral health morbidity overall was reduced so was demand for care. Virtual counselors displaced some human therapists. The ones that remain focus on the more challenging behavioral health conditions as well as oversee the automated systems.

Service providers became less silo’ed and the Baltimore police department expanded their BEST program, which required trauma informed care training. Behavioral health often accompanied police. Crime was addressed as a social determinant of health. Baltimore’s mental health corps, drug corps, and homeless corps all collaborated. Another piece of community care came from churches and faith-based organizations which expanded their referrals for care.
While behavioral health morbidity improved in the 2020s, issues remained, caused by genetic conditions; reduced but remaining accidents, trauma, abuse and neglect, neighborhood violence; and the impacts of adverse childhood experiences for current adults.

In addition to behavioral health providers becoming more collaborative and involved in the community, virtual tools assisted their work and automated some tasks or even some positions.

Homes for adults with behavioral health issues evolved with special smart home technology. Residents do home food production and use both face to face visits and virtual reality to connect. Some called these Freedom Homes. Health care and human service agencies supported social enterprises that develop and manage these homes.

**Child and Family Services 3**

Preventative measures were prioritized across all child and family services which improved health and prosperity for families and communities. Guaranteed Basic Income payments, while relatively low, led to greater family stability, a reduction in family violence and child abuse, lowered teen pregnancy rates and increased high school graduation rates. Education, housing, transportation and child care evolved towards better enabling those in low-income neighborhoods across Baltimore to build their wealth and wellbeing.

Racial equity measures across Baltimore, including public education campaigns and greater investment in previously disenfranchised areas, accompanied the basic income policy, which helped to avoid the development of an “underclass.” Financial and wealth literacy programs were provided to help families use their basic income most effectively and understand the wrap-around services they need to thrive.

With the basic income, there was renewed focus on how each of us is contributing to society, whether we are doing paid work or supporting our family or neighborhood. Taking care of children or elders, relatives or otherwise, became a more recognized form of contribution and both formal and informal parenting and caregiving networks evolved in communities, often aided by technology.

While, for some, GBI provided income to perpetuate their substance abuse there was greater recovery support available. The need for child and family services persisted, though at reduced levels. This allowed resources- both human and financial- to be delivered in a tailored, case specific manner. Predictive analytics helped early interventions and kept more children in their homes.

Child abuse and neglect were better addressed through connecting schools and human services. In those cases where the child must leave their parents’ home the $4,000 basic income payment follows them to foster care, group homes or kinship placements. But overall, rates for out of home placement decreased.

The child care subsidy was discontinued after the basic income was fully implemented, except in instances of child disability or other costly services. More parents and communities had informal child
caring networks, although formal and regulated networks remained common. And efforts were taken to ensure that informal networks did not increase instances of abuse and neglect. Head Start and Pre-K were made universally available. The impact on learning was enhanced by better trained day-care providers and increased accessibility of neighborhood parenting and cooperative day care programs.

Some providers in the child and family service workforce shifted skills as needs decreased and moved into related positions including data analytics.

**Disability Services 3**

Disability, or its impacts, were reduced during the 2020s in Baltimore. This was due to many factors, including the slowing or reversal of chronic diseases, particularly diabetes, arthritis, Alzheimer’s, and some cancers. Developmental disabilities were somewhat reduced with reduced poverty, consistent prenatal screening and care, and safer environments. Health disparities across the state were better addressed through universal access to health care, a focus on equity, and the promotion of healthier lifestyles. This contributed to reducing disparities in health and disabilities in Baltimore City.

GBI payments led to the elimination of disability payments to many (particularly where the $1000 monthly GBI payment to each adult exceeded the SSI and state monthly disability payments) but some individuals with more severe disabilities continued to receive additional payments.

Disability was seen as a civil rights issue where discrimination should be eliminated. Baltimore was a national leader in integrating this as a value into social consciousness and policy arenas. The intersectionality of disabilities and other categories of oppression (e.g., race, gender, orientation, education, disability type, etc.) was acknowledged and addressed through actions that recognize each individual with a disability faces a different reality and requires unique tools to navigate over their barriers to wellness. Individual needs were better addressed through policy and other changes in transportation, education, employment, housing and health care. Through public education and training, stigma was lessened.

There were remarkable medical and technological advances affecting disabilities, including:

- 3D printing of home equipment and even smart prosthetics
- Sophisticated home monitoring and home care robots
- Friendly intelligent agents that act as helper, guide, counselor, therapist, translator, speech and hearing enhancer. These personal intelligent agents also communicate with family members, care givers and medical personnel about their person with disability
- By the mid-2020s direct brain control of limbs for paraplegics was available; prevention and slowing of diabetes and Alzheimer’s; and vision and hearing restoration for some
  - As the medical advances were proven effective and safe, and their initial costs dropped, they were covered by Medicare for All.
• By the late 2020s genetic analysis could predict disabilities and in utero testing and gene level repair was available in some countries.
• Self-driving cars and other vehicles increased mobility.

As the disabled community gained visibility and accommodation across Baltimore and the region, some members, when the option became available, chose not to modify their condition and that was not met with prejudice.

Mental and developmental disability screening takes place with child care providers and in physical health care exams. This allowed much earlier intervention for children. This increased the number of people who sought and received care through coordinated care networks, which include therapy, medication and a more sophisticated diagnosis process. Physical and mental services were customized for each person with a disability, and they were better guided through a continuum of care providers.

Data was used as a tool for empowerment. Human service agencies could share and integrate data to understand the degrees of disability, the genetic proclivity among family members, or environmental promoters of disability and could do predictive analytics to optimize the services they received. This family-focused data, along with community data, and data on effectiveness of services and technology allowed more effective priority setting for what services to provide.

Education became more inclusive of those with disabilities. The factors associated with autism and other conditions were better understood, which allowed both earlier detection and intervention and better medical treatment and education approaches. Better understanding of needs and technology allowed most of these students to be in regular inclusive classrooms.

Homes for adults with disabilities evolved with smart home technology geared to resident’s needs along with universal design. Group homes connected residents with services and the community. Many group living situations had an overseer that helped ensure shared resources of these creative housing developments.

Health care and human service agencies supported the social enterprises that develop and manage these homes where people live well in a common environment of support. These management organizations provide property management, cleaning, home health care aides (equipped with language translation and speech augmentation earpieces), and other services needed to keep the home’s residents independent. These homes have residents of various ages, income levels and abilities.

**Housing Services 3**

Starting the 2020s with more than 30,000 vacant homes; hyper segregation; and inequities in transit, employment, education, and food access, the decade saw real transformations and movement toward equity and inclusion. Public housing and housing vouchers were expanded in the 2020s. Low income folks were also receiving their GBI payments, and while 30% of the adult’s payment goes to
their public housing monthly cost – for multi-adult households and those with jobs, some were able to move toward home ownership.

GBI payments did lead to a migration across Maryland, and the nation, to lower cost areas outside of more city centers and suburbs, including to rural communities where families could also produce more food and be more self- and community reliant. There was some outmigration from dense areas of concentrated poverty in Baltimore, but important housing developments also kept people in the City and facilitated the shift from a renter to owner mindset.

Housing services joined other human services in the City in using assessments that defined each person or family’s path to thriving and developed a unique plan for the family. For example, some clients need a monetary stipend, some need stipend and job training and other services, and some need those plus parenting training. Many agencies joined in providing this continuum of services where people easily flow in, out, and across the spectrum per their needs.

Households became more generative of some of their needs as they produce and co-produce food and other necessities. This included solar and wind energy harvesting, efficient energy storage. HABC, apartment building owners, Baltimore Gas & Electric and other energy providers, HUD and the City worked to refurbish and make units more energy efficient, but also to install solar and wind power and to develop in-building and in-community energy storage. The cost savings were passed on to renters, through incentives and regulations. Utilities were managed as facilitating agencies, rather than profit-seeking businesses.

And households and communities grew more of their own food. The City’s urban agriculture programs blossomed in the 2020s, including community gardening, commercial urban agriculture (both often hi-tech), and in-home growing of vegetables and cultured meat. And 3D printing done with printers in the HABC complexes and libraries could, at low cost, provide many needs.

From 2021 onward, rebounding from the previous cuts, federal housing funding increased in response to growing need and lack of housing accessibility across communities.

Over time the major public housing complexes were redeveloped as mixed income, attractive neighborhoods. The community focused on deconcentrating poverty through stimulating small and multi-unit low income housing throughout all areas of the City and surrounding counties.

Accessory dwelling units were promoted, often with “tiny home” or “container home” innovations when attached to or replacing Baltimore’s row houses. Dozens of blocks of vacant homes were rebuilt or demolished and replaced. By 2030, 10,000 homes had been replaced. ADUs and tiny homes were marketed and viewed as desirable by many and occupied by residents across income levels. This helped avoid any stigmatization around the homes. Some ADUs aided multigenerational living by giving grandparents or returning family a place to live.

Given the rise in support for equity and inclusion better off neighborhoods across Baltimore incorporated ADUs into the fabric of the area and figured out how to promote inclusion and deal with increased traffic in the neighborhood.
Baltimore’s intentional work towards social inclusion and social connection enabled more equitable housing and more equitable communities. Areas that had historically been disenfranchised were invested in – from schools to housing and beyond. This allowed people to want to live, and thrive, in areas where their families had lived for generations.

Housing services were well integrated, consumer focused, and use predictive modeling and advanced analytics to anticipate emergency housing needs. Human service deliverers and their partners' systems know if there have been layoffs or other challenges and could check with families if they are at risk of missing utility or rent payments. Rent control was put in place with the GBI payments to prevent price gouging.

Housing was also better addressed through a regional approach. This meant Baltimore providers partnered with others and joined resources with the County.

Homelessness remained but was drastically reduced. Stigma around homelessness was also reduced. The basic income served to alleviate portions of chronic homelessness, but crisis related homelessness (due to environmental emergencies, violence, or behavioral health) persisted. Independent living facilities for homeless youth increased. The integration of mental and behavioral health with health care, and having these services be more accessible, helped reduce homelessness among those with severe behavioral health.

**Income Supports 3**

Income support programs were reduced during the late 2010s (and some eliminated altogether). But the programs were redefined in the 2020s with the creation of the federal guaranteed basic income (GBI). GBI payments provided a low but stable income to all citizens, $12,000 a year for each adult and $4,000 yearly for each child. Given the guaranteed income payment, EITC, TANF, TCA, SNAP/FSP and associated programs were largely eliminated once the GBI was fully in place. Some protections were put in place to ensure that recipients did not have their total income support payment levels reduced (e.g. disability payments over $12,000 were continued). And some programs such as emergency and medical assistance, as well as housing support, were continued. Regulations for rent control were put in place, to ensure that landlords did not simply raise rent levels because tenants were receiving GBI payments. Protections against predatory lending, particularly targeting elders and young people, were put in place to help avoid the GBI being taken advantage of.

Ensuring that each individual was making a contribution, whether through paid work, child or elder care, or volunteering, became important for all sectors to support, particularly human services.

Training for employment evolved, including free community college. This focused on skills for paid work, particularly jobs and gig work that would not soon be automated; as well as skills for community work that helped ensure contribution and purpose apart from paid work. Participation in arts and culture expanded across Baltimore, which allowed individuals to express their energy, intelligence and receive recognition.
Home ownership was encouraged, including through the use of land trusts, cooperatives; down payment savings match programs; renovation, energy savings, and energy production assistance; and reform of credit scoring. Wealth literacy, financial literacy, including managing home ownership vs. renting was provided, particularly for those in the most disinvested neighborhoods.

While the GBI substituted for SNAP/FSP payments, food insecurity in Baltimore was further reduced by a variety of means. Self-production of food in homes and in neighborhoods utilizing both traditional and technology assisted growing including hydroponics, aeroponics, vertical agriculture, 3D printed foods, cultured meat and other advances. The city was successful in achieving their Healthy Food Environment Strategy\textsuperscript{32}, which included: retaining and attracting supermarkets; improving small grocery, corner and convenience stores; enabling public markets to anchor the healthy food environment; supply chain support for healthy food distribution and small businesses; maximizing federal nutrition assistance and meal programs; and supporting urban agriculture, emphasizing historically disenfranchised populations and geographies.

However, some food insecurity remained, as did homelessness, pockets of poverty, as well as soup kitchens and other feeding programs. All food and nutrition services were integrated fully with other social services, often with volunteer or employment opportunities offered so that clients are provided meaningful ways to help others meet their food needs. The role of food in forming community and spiritual connection with others was recognized as an important facet of providing people with security, and this was celebrated in community programs and supported by state and federal funding agencies, even as specific cash or income supports diminished.

Beyond food, other “abundance advances” lowered the cost of living. Low cost solar and other sustainable energy production and storage, 3D printing of home goods and electronics, trading of time and services met the needs of many low-income populations in Baltimore at reduced cost or no cost. Housing costs were reduced by use of 3D printing of homes or home components, using tiny homes, and increasing energy efficiency.

Child daycare payments were reduced because of the GBI. Some low-income parents stopped working and developed cooperative day care. These informal providers were trained to make this shared care useful for each child’s development. Other low-income parents used part of the $4,000 yearly payments for each child to pay for childcare if they continued to work. Some federal child care funding remained available in the case of disabled parents or children with special needs.

Immigrant income support and services were maintained in Maryland, particularly food assistance, the Family Investment Programs (FIP) and its cash assistance component or Temporary Cash Assistance (TCA), as immigrants do not receive GBI benefits. Though immigration reform, there was a path to citizenship meant that many became citizens in the 2020s.

\textsuperscript{32} Baltimore City 2018 Food Environment Brief, https://planning.baltimorecity.gov/sites/default/files/City%20Map%20Brief%20011218.pdf
SCENARIO 4: ALL BOATS RISE

Baltimore and Human Services Overview 4

Human services became more ‘human’, as did communities and economics. Human service providers supported change as networks of human connection transformed Baltimore.

Growing inequities during the late 2010s reinforced a major shift – they heightened a deeper value shift in the U.S., toward more empathy, equity, inclusion and sustainability. This in turn reinforced transformations during the 2020s, in federal policies in taxation, education, public safety and justice, the environment (including combating climate change), immigration, health care, human services and a national minimum wage. That minimum wage grew to be a living wage in the 2020s, but much labor was shifting from jobs to piece work or consulting on the “gig economy” (with little or no benefits) and millions of jobs were lost to automation.

On the ground in Baltimore, the community acknowledged the deeply rooted harm of systemic racism across the community and took action to rebuild. This progressed across newly forming and strengthening community networks. White members of the community got comfortable being uncomfortable in having racial discussions and there was a greater acknowledgement of the trauma which had continuously been inflicted upon Black communities from slavery, through Jim Crow, segregation, redlining and unequal education, employment and policing. Truth and Reconciliation dialogues expanded from those begun in 2014 by the Episcopal Diocese, to other churches, community groups and local public radio. Reparations were part of these dialogues in Baltimore and similar dialogues occurring throughout the country. They led to reparations-related policies nationally and in many cities and states.

Including in Baltimore - in the 2020s, the City began Baltimore Neighborhood Reparations modeled after proposals from the Baltimore Black Workers Center. This involved restructuring the City budget (including reducing expenditures on policing and prioritizing areas of health, the arts, housing, community development and others) and allocating 10% of the budget for community reparations, to be invested into around 20 historically redlined, disinvested and structurally disadvantaged neighborhoods for upwards of 30 years. Each neighborhood receiving reparations, elected neighborhood council members to represent how the community wants to allocate the funds towards community determined priorities, including housing, work and food cooperatives to improve Black wealth, employment and quality of life.

Other policies reinforcing greater equity included Racial Equity TIFs (Tax Increment Funding) used like social impact bonds to address issues including unsafe lead levels in Black neighborhoods and Racial Equity Enterprise Zones located directly in redlined Black neighborhoods to catalyze economic activity, business growth, and local hiring in said neighborhoods. Also, the effort to get Blacks into better paying jobs, the “More in the Middle” approach\(^{34}\) sought appropriate training, hiring by government and their contractors as well as by anchor institutions, and greater transportation equity. This was essential for moving to greater race equity, especially given the growing job loss to automation taking place throughout the country.

There was greater investment in schools in previously disinvested neighborhoods. Baltimore, through efforts such as the Kirwan Commission, established Schools of Excellence. Educational gaps decreased, and schools expanded their roles as human service providers including reaching children earlier to nurture, aspire and help reduce exposure to traumatic experiences. When children were exposed to trauma, schools and human services supported them through adulthood. And the reach of Baltimore schools expanded beyond teaching. They became centers of community. And the neighborhoods around the schools were improved, which had a ripple effect across the City.

In addition to schools’ expanded role as true community centers, education transformed. As the economy was transforming nationally and more jobs were being lost to automation, Baltimore saw an opportunity to have education provide training for entrepreneurship and new jobs created with technology. High schools and Community Colleges focused on preparation for jobs that would yield a high return for graduates. Anchor organizations of the community, such as Johns Hopkins, increased contracts and apprenticeship with Baltimore’s youth which led to higher employment rates and fewer disconnected youth.

Large corporate, philanthropic, and nonprofit organizations, including the anchor institutions of Baltimore, hired leadership and recruited Boards of Directors that better represented the demographics of the City.

Another shift that supported more equitable employment and desegregation was addressing the transportation barrier. Baltimore used equity as a key determinant in developing a more extensive and efficient public transit system, including by the mid-2020s having a fleet of self-driving cars that got residents the “last mile” from the subway or bus route to their workplace or home.

Technology advanced to support equity and sustainability in energy, food, local manufacturing, and low-income housing. These were effectively “abundance advances,” supporting family and community self-sufficiency that lowered the cost of living.

**Human Services Overview** -- Human services were better established in the community and in a position to support community visions. Human services promoted thriving -- with a wellness model, addressing the physical, mental, and emotional well-being of individuals and families. This included classic human services, plus coaching and assistance in using “abundance advances” and in

enhancing everyone’s personal sense of meaning and contribution, as well as supporting the community’s movement to greater community self-reliance. Human services became more integrated, automated, efficient and effective.

Programs were coordinated across Federal, State and City/County levels, with accelerated eligibility determination and enrollment, data integrated across agencies and sites and customized care with predictive analytics. Human services intertwined with economic development plans, transportation, housing, public safety and recreation, along with churches and other community organizations. Human services operated across a continuum of lifespan, addressing needs across ages and stages and for entire families. Recognizing the growing structural unemployment, income support payment levels for TANF, SNAP/FSP, TCA, and EITC were raised. And the time limits for receiving them were removed. The TANF program was renamed “Aid to Families” (that includes singles). The work of human service providers related to “abundance advances” included ensuring that policies and regulations were in place where they were needed (e.g. regulations and incentives to have landlords install solar energy production and storage and pass the savings on to renters)

Human service workers and their organizations coordinate across previously silo’ed areas of need and provided holistic services in clients homes (both virtual and in-person services) and at locations throughout the community. Some human service tasks were automated, and even some positions, but the human aspect of human services still comes first.

**Aging Services 4**

Baltimore’s hard work to embrace and integrate equity as a core value for services helped aging services better address physical and social needs of the increased number of older adults. Community reparations helped address resource disparities and position communities to better embrace and care for their older populations.

Formal, informal, and virtual senior centers all grew - integrating senior services into libraries, schools, churches and other settings. Most senior centers changed their names to community centers and engaged multiple generations.

Senior group living and co-housing grew steadily through the 2020s, as did “smart homes” for many seniors. Some housing programs were exclusively for seniors, and efforts were taken to ensure that amenities such as activities were included for residents of all neighborhoods. Aging services and communities refocused from simply functioning to thriving.

Many smart homes supported in-home food production, including through technology. And community food production increased as well. By the late 2020s many seniors in public housing remain active as food producers growing in-home and working in community gardening. Some elders are employed in the high-tech urban agriculture that spread across the City. The Green Network Plan and Farm Alliance encouraged this food growing, including in sites designed and modified specifically
for seniors, expanding on the model of Senior Rock\textsuperscript{35}. These efforts supported food and nutrition programs across the city.

The workforce for aging services was better trained and supported, including technology supports. Language translation tools helped increase interconnectivity.

Smart phone-linked tools advanced and coordinated with smart home applications, which helped provide early intervention for some instances of dementia and served as a helpful tool to complement services and caregivers.

Health care evolved, including a single payer system. More elder health care was delivered remotely or in virtual space. Prevention and treatments were found by the mid-2020s for Diabetes and Alzheimer’s. These and other breakthroughs are covered by Medicare. Maryland’s Medicare waiver requirements, including the shift to global budgeting for hospitals and incentives for primary care, moved providers to focus on prevention with seniors.

Aging protective services used predictive analytics and integrated data (from health care, police, schools, other human services) to anticipate potential abuse and neglect. Increased education around elder abuse recognition and resources was influential in reducing instances.

**Behavioral Health Services 4**

Human services expansion in and across community networks shaped behavioral health care need and delivery. And community reparations helped move more resources to previously underserved communities. Baltimore’s Schools of Excellence served as community centers, and hubs for behavioral health care for students and beyond. Reparations helped increase investment and tax base for services.

Knowledge grew about the role of key environmental factors, early life trauma, and genetic disposition on behavioral health. ACE’s informed care was embedded across services, including into Head Start and other similar programs. This allowed behavioral health screening, intervention and prevention from a very young age. The Head Start model of developmental consciousness informed care became universally applied across school systems.

Universal health care increased access to care, and behavioral health conditions were destigmatized. Some technology tools and software helped provide effective care.

Special homes for adults with behavioral health issues evolved with smart home technology geared to resident’s needs. Residents do home food production with aeroponics, use virtual reality to relate to other communities and generally, make themselves as self-reliant as possible. Some call these

Freedom Homes. Health care and human service agencies support the social enterprises that develop and manage these homes.

Severe mental illness and intellectual and developmental disability remain, though they were reduced. Some of this behavioral care is provided by the services from the Medicare for All system, shifting some care away from City funded providers such as BHBS. BHBS’ took on oversight and quality control of behavioral care from Medicare funded providers. And BHBS and others continued to provide services including psychiatric assessment, emergency services, in-school supports, substance abuse treatment, care coordination and other efforts.

Child and Family Services 4

Community networks strengthened the delivery of child and family services, which were better equipped to address intergenerational trauma. Schools came to serve as community centers and main hubs of services. These schools were led by visionary “CEOs” who guided the framework of social, emotional and academic development which merged education, human services and community-based organizations to help holistically support a child and their family.

Baltimore prioritized youth development as a key area for health, public safety, and economic growth. Baltimore created more low-cost entrepreneurial spaces for the advancement of varied industries and a developing workforce. And with greater emphasis on entrepreneurship and the gig economy, Baltimore made combined and conscious efforts to help support small and minority-owned businesses.

Through increased collaboration and data sharing between human service providers, schools, nonprofit institutions and community groups, the city of Baltimore had a clearer picture of the number of opportunity youth; who they are and their needs and strengths. By connecting multiple funding streams including foundation funding, private donations from key city businesses and individuals with high net wealth, opportunity youth are reconnected to education and work opportunities along with wrap around services for physical and mental health, housing and transportation. As a result, Baltimore experienced a generational decline in poverty rates and increases in social mobility of residents as well as improved economic development.

Efforts such as Baltimore’s Promise, The Baltimore Workforce Funders Collaborative, and the Jobs Opportunities Task Force - and others - were all successful in proactively training the workforce for new jobs or those not likely to be automated. In addition to job training, family services provided training in self-sufficiency practices and abundance advances.

Data integration and partnerships allowed predictive analytics to be used as a helpful resource through which community members could hold institutions accountable for results and identify low-performing or harmful programs and practices. And predictive analytics served as a tool early intervention, as well as for educators and training providers to identify early signals of effectiveness or ineffectiveness and customize learning plans with individuals.
As communities and families grew stronger, child abuse and neglect was reduced, as was the need for foster care. There were more resources helping children stay in-home or with family members in healthy environments. Care reached future mothers before their pregnancies and services continued through pregnancy and onto the child’s developmental years.

Schools of Excellence, which included early childhood learning and Pre-K, became universal. Head Start expanded and helped monitor developmental milestones of children. Sometimes these programs were aided by technology tools.

Disability Services 4

Disability, or its impacts were reduced, in part by reductions in drug use, consistent pre-natal care, better genetic screening, slowing or treating of chronic diseases, particularly diabetes, arthritis and Alzheimer’s, and safer and healthier work places and work styles. Developmental disabilities were reduced somewhat with reduced poverty, consistent prenatal care, and safer environments. Access to health care, and reparations enhancing neighborhoods, helped more people with disabilities to have a better quality of life.

“Disabled” became viewed and named as “differently abled.” This accompanied Baltimore’s equity and inclusion movements, which helped to address and alleviate various types and levels of stigma around persons differently abled. Embracing inclusion, in public and private spheres, as a pillar of civil rights, helped Baltimore transform the lives of differently abled people. Baltimore embraced accommodation, rather than assimilation, which led to greater social and economic justice for the community.

Health and human services were community based. They became more integrated; sharing data and developing partnerships across all levels of delivery, which brought about several positive results. Mental and developmental disability screening takes place with physical health care exams and in child care programs, which increased the number of people who sought and received care. Differently abled community members were guided through a continuum of care providers, including public agencies and non-profits. Support services, such as respite care, expanded and more children were kept in home.

Data integration helped care providers understand genetic proclivity among family members and environmental promoters of disability. Care providers used predictive analytics to optimize the services they provided. Family and community data, along with data on effectiveness of services and technology, allowed more effective priority setting for what services to provide.

Predictive and preventive measures worked in combination with remarkable medical and technological advances affecting disabilities. This included:

- Self-driving cars enhanced mobility;
- 3D printing of home equipment and even smart prosthetics;
- Sophisticated home monitoring and home care robots;
- Friendly intelligent agents that act as helper, guide, counselor, therapist, translator, speech and hearing enhancer;
- By the mid-2020s direct brain control of limbs for paraplegics, slowing or prevention of diabetes and Alzheimer’s and vision and hearing restoration was available for many.

As these medical advances were proven effective and safe, and their initial costs dropped, they were covered by Medicare for All.

Even with technology advances, human connection was the key component of services for those differently abled. Technology aided this connectivity as virtual reality and other tools allowed people to better express and represent themselves, as they self-defined.

Education became more inclusive of differently abled children. A commitment by schools to greater inclusiveness, aided by technology, led most of these students to be taught in regular, inclusive classrooms. Reparations helped close the educational gaps between Baltimore schools.

Many homes evolved with special smart home technology geared to resident’s various needs. These technologies changed the role of human service workers, as they served more in providing oversight. Residents do home food production and use virtual reality. Across Baltimore, supportive housing takes different forms, including some tiny homes and adaptive homes, and include people of all backgrounds and different abilities.

**Housing Services 4**

Housing services in Baltimore were transformed through community connectivity and innovation. Federal, state and local policies took advantage of a growing movement for equity and inclusion to build more dense, mixed income housing with ample very low-income units. While there were objections in some neighborhoods, the increased commitment to social inclusion and equity led most residents to support the transformations. Over the 2020s, the City, HABC and partners were able to redevelop some public housing complexes into thriving mixed income multi story villages; and redevelop thousands of row houses. They phased in a 5-step plan to accomplish this:

1. **Democratic Empowerment:** The State of Maryland and City of Baltimore passed a new “Commonwealth Community” initiative, which allowed communities to vote on whether they would like to incorporate as a community-owned entity, starting with all public-owned and vacant land in the area.

2. **Housing Security:** These commonwealth communities were backed by a new HUD initiative that capped rent increases for tenants at a fixed percentage, backed by federal housing vouchers.

3. **Housing Mobility:** To secure the right to housing throughout the country, these vouchers are portable at the current rate of subsidy, so that the longer the renter lives in a Commonwealth Community, the greater the percentage value of their voucher that would go toward their rent.
4. **Community Ownership**: Whenever a homeowner in a Commonwealth Community wants to sell their property, the community itself would have the first right to purchase the property, using federally-backed housing loans. Loans were accessible by members of all communities.

5. **Inclusive Growth**: In exchange for these benefits, Commonwealth Communities agreed to a rate of continued housing growth, with the first right of occupancy to existing renters, and additional units required to be distributed equally across all income levels.

Baltimore and Federal housing practices, policies and ethics better allowed residents to move up the housing ladder. Federal vouchers paid the differential in instances of growth of value, which allowed residents to move homes and transfer the voucher along with them. Baltimore invested in the people of the community to be peer navigators to help people move through the housing system. Some of these were human service workers whose previous jobs were no longer needed as demand was reduced.

Areas that increased in their prosperity/value grew in a manner that intentionally avoided exclusivity. And for Commonwealth Communities, they were able to ensure that the people who actually live in a community benefitted most from its growth and development. This was related to human service providers help in strengthening neighbor networks and relationships.

Human service providers expanded beyond housing services and provided more holistic life coaching. The first human touch with providers opened doorways to needed services for success. Human service providers were more adept to connect clients to a variety of services and needs. And technology aided easier or automatic enrollment of services and took advantage of technology as helpful tools and were involved in the design of technology tools to ensure they avoid bias. But human service providers are still the ambassadors. Many of these ambassadors had deep relationships that extended for years.

Regulations changed to allow more secondary dwelling units built onto homes or in yards; and to allow more unrelated individuals in housing. The City and state provided incentives and regulations to have landlords and utility companies install low cost energy production and storage and pass the savings on to renters.

Home ownership for low income residents was encouraged – many on vouchers or in public housing took advantage of HUD’s Family Self-Sufficiency Program which placed a portion of the increases in the family’s rent, due to increases in earned income, to be credited to an escrow account. After around five years, residents could use that as part of their down payment in purchasing a house or for other purposes. The higher income support payment levels, and new strategies for increasing affordable housing, allowed even the unemployed or underemployed, if they managed their income effectively, to become home owners.

Households became more generative of some of their needs as they produced and co-produced food and other necessities. This included solar and wind energy harvesting, efficient energy storage technologies, and low-input high-yield home and community food production.

Housing services were well integrated, consumer focused, and use predictive modeling and advanced analytics to anticipate emergency housing needs. Human service deliverers and their partners’
systems know if there have been layoffs or other challenges and can check with families if they are at risk of missing utility or rent payments. Housing services coordinated with other agencies in using self-sufficiency assessment tools to determine needs and identify best, case-specific plans of action for each person/family.

Homelessness was reduced because of more consistent work with higher wages, better income support for those not employed, increases in low and very low-income housing stock, and more consistent access to behavioral health services. The remaining homeless persons and families received more personal attention and services from local agencies. There was better awareness of the services available, and how to access them. Other aspects of effective housing services in the 2020s included: aiding aging in place, combining wellness focused medical services and education with housing, and involving landlords in prevention strategies.

Income Support Services 4

Income supports were shaped by Baltimore’s on the ground efforts, community connections and accompanying policies to address systemic racism and move to greater equity. Income supports for individuals and families were also made more impactful through the reparation related investments in formerly disinvested neighborhoods.

Income support programs became, in the 2020s, more flexible and better coordinated. Personal and family self-sufficiency was aided as “abundance advances” lowered the costs of living. These developments were preceded by reduced funding and greater restrictions on income support programs during the Trump administration. Requirements to be seeking or gaining work were tightened even as many jobs were being shifted to piece work and many other jobs were lost to automation. In the 2020s the work requirements for accessing income support programs were reduced, and broader education or training as well as volunteer efforts were allowed. And it was recognized that, given the growing structural unemployment, key income supports would not be temporary for many. Other policies included raising the minimum wage to a living wage, efforts to slow job loss to automation, and to provide pay level protection and benefit creation for “gig workers”.

The Department of Labor and related programs of WIOA also shifted to an equity focus and those who were displaced by job loss to automation received long term investment of skills and entrepreneurial training. Stigma around receiving services was reduced.

The EITC was affected by the increase in the minimum wage. This led to cost increases and inflation, disproportionately affecting low income workers. The federal “poverty level” was adjusted accordingly and incorporated local variations in cost. EITC was amended to apply proportionately to single individuals and childless couples as it had to those with children and EITC income ceilings were raised. Maryland’s EITC policies mirrored these federal policy shifts. Those who were able to get full time jobs by the late 2020s were making $30,000 yearly or $60,000 with two full time employed family members. This put them above the EITC ceiling levels for getting the credit. But millions of workers were part time or doing piece work on the “gig economy” and they remained below the EITC level and they received the tax credits.
Housing supports, particularly public housing and housing choice vouchers increased in the 2020s. Baltimore and the state stimulated the development of low and very-low income housing through a variety of incentives, regulation and zoning changes. Trainings and educational programs helped move Baltimoreans into a “homeowners’ mentality” that increased assets and generational wealth. People were trained and empowered to understand the housing market and how they could achieve their goals within the market. And many in public housing and on rental vouchers took advantage of HUD programs to build savings for a house down payment.

SNAP/FSP and other nutrition programs rebounded in the 2020s; expanding their incentives to buy fruits and vegetables, particularly from local sources. This reduced food insecurity, as did in-home and in-community food growing.

TANF payment levels expanded, as did the length of time they could be received. “Temporary” was removed from the programs name (as was “needy”) as it became Aid to Families (AF), that included singles as well.

Job training and placement focused on jobs that were not likely to be automated in the next decade and those new jobs that had been created as technology advanced. Work development programs focused on, and were successful in, strategies such as those of the Baltimore Workforce Funders Collaborative: employment engagement, focus on disadvantaged workers, high quality training, comprehensive strategies to barriers to employment, job placement and follow up, and data collection, assessment and quality improvement.

Public-private partnerships invested in modernizing education, workforce, and human resources to transition Baltimore to a major economic hub and leader on embracing the gig economy. Efforts were taken to ensure that the workforce had appropriate skills and access to resources to thrive on the entrepreneurial market. Institutions of higher education became lower cost, accessible via public transportation and re-structured to provide micro-credentials and build needed capacities more quickly.

Training also focused on how to increase family self-sufficiency by making effective use of the various “abundance advances” (low cost energy; 3D printing of household items and electronics; and home production and community co-production of food). In-home and in community food production included traditional soil-based gardening, but also hydroponics, aeroponics, 3D printed foods, and cultured meat. This was in addition to many of the city’s other efforts to increase food security.

Some of the caseworker assistance for those in the Work Opportunities Program were provided by artificial intelligence. These virtual caseworkers were able to arrange day care assistance, transportation, job training and other needed services while determining eligibility for other programs and automatically enrolling. However, some preferred human caseworkers and the balance between human and technology was customized for each person.

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36 The Baltimore Workforce Funders Collaborative, Strengthening Baltimore’s Workforce: Reflections and Lessons Learned, Baltimore Workforce Funders Collaborative
The regulations for income support programs, both federal and state, were adjusted to allow integration of support payments for an individual or family – this allowed both an aggregation of the funds and broader choice on how the funds were spent.
APPENDIX: MORE DETAIL ON KEY DRIVERS

- Job Loss to Automation
- Abundance Advances
- Universal or Guaranteed Basic Income
- Affordable Housing Options
- Human Services Value Curve

Job loss to automation

Job loss to automation and cognitive computing will have a major impact on the economy, family income, and the need for human services in the years ahead. We believe this has been happening and it will eliminate more jobs through the 2020s. As with past disruptions of this type, new jobs will be created. Some of these new jobs are identified in the sources below. And there will be teaming of AI and human workers. Yet overall, the number of new jobs created is likely to be far fewer than the jobs lost.

For this report, we have used the Forrester estimate of a net loss, by 2025, of 7% of U.S. jobs (see first bullet below). And we assume that net job loss will accelerate in the later 2020s and 2030s. We have worked with human service experts to apply and check forecasts for specific human service jobs as well. Below are highlights of the forecasts that indicate the range from which we developed the forecasts we are using in our scenarios.

- Forrester forecasts in the report “The Future of White-Collar Work: Sharing Your Cubicle With Robots” that cognitive technologies such as robots, artificial intelligence (AI), machine learning, and automation will replace 22.7 million (or 16%) of U.S. jobs, while 13.6 million will be created — a net loss of 7% of U.S. jobs by 2025. Office and administrative support staff will be the most rapidly disrupted. Newly created jobs will include robot monitoring professionals, data scientists, automation specialists, and content curators.


- Within five years (of 2016), robots and intelligent agents will eliminate many positions in customer service, trucking and taxi services, amounting to 6 percent of jobs, according to a Forrester report. “By 2021, a disruptive tidal wave will begin,” said Brian Hopkins, VP at Forrester Research. “Solutions powered by AI/cognitive technology will displace jobs, with the biggest impact felt in transportation, logistics, customer service, and consumer services.”


- McKinsey Global focuses on probability of tasks within occupations being automated and determined that 49% of time spent on tasks could be automated with current technologies, but only 5% of total jobs could be automated away in the report by McKinsey Global (2017).


- An OECD policy brief forecasts that an average of 9% of U.S. jobs (13 million) are at high risk for automation; these are jobs for which 70% of the tasks could be automated. OECD (2016). Policy Brief on the Future of Work: Automation and Independent Work in a Digital Age.
A study by the UK office of PWC analyzed the workforce in several countries. In terms of specific sectors, it found different degrees of risk for automation. The following economic sectors have varying probabilities of automation, represented as a percentage: transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%). Overall, the U.S. jobs at high risk of automation by the early 2030s was 38%.


One of the most cited studies is from Oxford University researchers Frey and Osborne. They project about 47% of total U.S. employment is at risk for automation by 2030.


The Bain & Company 2018 report “Labor 2030: The Collision of Demographics, Automation and Inequality” states that “In the U.S., a new wave of investment in automation could stimulate as much as $8 trillion in incremental investments and abruptly lift interest rates. By the end of the 2020s, automation may eliminate 20% to 25% of current jobs, hitting middle- to low-income workers the hardest. The study estimates an average annual displacement of 2.5 million workers from 2020 onward over the next 10 to 20 years. Bain & Company. (2018).


New Jobs Created

While there will be a net loss of positions, technology will create new jobs. A World Economic Forum report states that by 2022, new technologies and automation will create 133 million jobs and eliminate 75 million, for a net gain of 58 million.


The CEO of IBM asserts that ultimately AI will create jobs – including programmers, developers, and jobs that manage the relationship between AI and humans.


The number and types of jobs projected span a wide range. Forrester forecasts that by 2027, there will 14.9 million jobs created (although there will be a loss of 24.7 million jobs in the same period). New jobs will be created in software, engineering, design, maintenance, support, training, and other specific areas.

This is how many U.S. jobs robots will create over the next 10 years. Retrieved from

• Types of jobs created include robot monitoring professionals, data scientists, automation specialists, and content curators. Many new jobs will be in the fields of software, engineering, design, maintenance, support and training. Other future jobs include avatar designers, synthetic acting casting agents, roboticians, fluid interface engineers and programmable surface designers.


• Of the 2030 workforce of 2.66 billion, around 8–9% will be in new occupations.


• There are several main AI technologies which are advancing and may change business operations. These include: natural language generation, speech recognition, virtual agents, machine learning platforms, AI optimized hardware, deep learning platforms, semantic technology, biometrics, image and video analysis, and robotic process automation. These technologies may replace positions or they may supplement tasks within positions.


• There are many projections about the future of work evolving through robots and humans working together across various sectors. For example, established and traditional jobs may need additional skills to monitor the interactions between humans and robots, such as newly specialized lawyers and new human resources positions to guide staff as robots enter the workplace.

• It is projected that by 2020, 20% of businesses will have workers that monitor and guide neural networks.


• A report by Capgemini, found 63% of organizations which have implemented AI at scale say AI has not destroyed any jobs in their organization. Rather, four out of five organizations say AI has created new roles in their organizations. These organizations also believe that AI will make complex or difficult jobs easier.

Abundance Advances

Technological advancements which could become widely used in the 2020s, have the ability to lower the cost of living while supporting equity and sustainability. These tools can increase self-sufficiency and help families and communities meet some of their needs. These include technologies for low cost energy production and storage; in-home and in-community food production; and 3D printing of home goods, electronics, and even homes. We label these ‘abundance advances’.

Energy Abundance

A variety of advances in energy production and storage are likely to lower the cost of this basic item. This includes solar, hydrogen, nuclear and even fusion energy. An important aspect of low-cost energy is the potential to transform lives of low-income communities.

Low-cost Solar Energy

Low-cost solar energy production and storage is likely in the 2020s. New solar cell technologies for low-cost production include nantennas, kerovskite and perovskite materials. These are new materials and technologies that will likely provide highly effective solar cells.

- Perovskite cells are an efficient photovoltaic technology that have the potential to be produced at low-cost.
- Hybrid perovskite cells may double the efficiency of solar cells, and ultimately lower cost.
- Perovskite cells for solar energy are being created at the fastest pace in solar energy history. As reported in Solar Magazine, the cells must achieve increased durability and scalability of production to be a widespread use but do hold great potential.
- Another advancement lowering the cost of solar energy is a new manufacturing process which claims the ability to reduce the cost of silicon wafers, “the platform for a solar power cell”, by half.
- A breakthrough by University of Cambridge researchers in developing semi-artificial photosynthesis that uses algae to split water into its components of oxygen and hydrogen. This could yield a potent new generation of solar panels capable of producing unlimited amounts of energy, using only sunshine and algae. It could also provide low cost hydrogen for use by fuel cells.
  • Other advances include a solar cell designed to be full spectrum with the ability to capture nearly all of the solar spectrum.
  • Solar and energy storage costs have been declining and are likely to continue to fall. “These declines reflect innovation and benefits from mass production and are welcome signs on the road to greater adoption of
Fuel Cell, Nuclear, and Other Energy Forms

Other forms of sustainable energy, such as small-scale fusion and fuel cell production, may make low-cost energy more available. Small-scale fusion uses small power stations to produce more sustainable heating and electricity at a low cost. A fuel cell is an electrochemical cell that converts energy from fuel into electricity via an electrochemical reaction.

- Nuclear fusion power has the potential to produce nearly four times the energy as nuclear fission with very low carbon emission and could provide accessible, clean energy. Tokamak Energy’s ST40, was successful in 2017 in achieving first steps toward fusion energy. Developers hope to have a successful power generator by 2025 and be delivering fusion energy to the grid (in the UK) by 2030.


- Small scale nuclear (fission) power stations are being proposed and in 2018 one developer argued they would be online in 8 years – by 2026. The company, NuScale, is aiming for commercial operations in 2026 for a plant in Utah comprised of a dozen 50-megawatt reactors. Retrieved from Polson, J. (2018, April 10). First Small-Scale Nuclear Reactor May Be Just Eight Years Away. Available at https://www.bloomberg.com/news/articles/2018-04-10/first-small-scale-nuclear-reactor-may-be-just-eight-years-away.

- Hydrogen fuel cells have been proposed as a clean source of energy. Though it has been costly to develop the feedstock for hydrogen, recent research published in the Journal of Catalyst has found that ammonia can be used to stimulate hydrogen fuel. Cited in Robitzki, D. (2018, April 30). Cheap Hydrogen Fuel Was a Failed Promise – But its Time May Have Arrived. Retrieved from https://futurism.com/ammonia-hydrogen-fuel.

- According to an article published on Energy Central, fuel cell technology will change daily lives in five ways. These are: cleaner vehicles with less or no carbon emission, more reliable power for homes and buildings, enhancing mobile phone charge and design, incorporation into fossil fuel design to bridge the gap with

3D Printing

3D printing for distributing and manufacturing of goods may disrupt global supply chains and allow local and customized production of goods, often using sustainable and upcycled materials. 3D printing has the potential to impact the lives of low-income communities, including through 3D printing of home goods and even whole homes, transportation aids and vehicles, and prosthetics. Communities can become empowered through low-cost 3D printing, and as 3D printers become more affordable they can be shared and accessed in libraries, community centers or the equivalent of Kinkos stores. Housing for low-income can also be transformed by 3D printing.

- 3D printing can help alleviate poverty in several ways, including housing, argues Ashley Morefield in Borgen Magazine. Engineering constructed 10 single story homes in 24 hours at a cost of $5,000 each; transport vehicles, starting with mountain bikes have been 3D printed. A Harvard Business Review argued that “with five years (of 2015), one can expect to see fully automated, large-quantity manufacturing systems that are extremely economical” Morefield, A. (2016, October 14). Borgen Magazine, Five Ways 3D Printing Can Help Alleviate Poverty. Retrieved from http://www.borgenmagazine.com/3d-printing-alleviate-poverty/.

Communities can become empowered through low cost 3D printing, and as 3D printers are more affordable they can be shared and accessed in libraries, community centers or the equivalent of Kinkos stores. Housing for low income populations can also be transformed by 3D printing.

- 3D printing of homes and multi-unit buildings has already begun. For example, San Francisco based company Apis Cor built an entire small 400 square foot home through 3D printing in 24 hours. However, workers completed touches such as painting and some manual installation. Moon, M. (2017). A San Francisco startup 3D printed a whole house in 24 hours. Retrieved from https://www.engadget.com/2017/03/07/apis-cor-3d-printed-house.

- 3D printed homes are also being manufactured at an economical price. Texas based company ICON in cooperation with New Story created a 650-square foot 3D printed home that costs $10,000; took 24 hours to complete; and meets the building codes of the City of Austin where it was built. New Story intends to build these in developing countries for a cost of $4,000. Resinger, D. (2018, March 12). This Company will 3D Print a House for $10,000. Retrieved from http://fortune.com/2018/03/12/sxsw-2018-3d-print-home-icon/.

Food Abundance

Food insecurity and inability to access healthy foods are common problems for many low-income communities across the nation. This may be challenged further with environmental and economic changes; however, there are technologies that may empower communities to increase self and shared sufficiency and produce nutritious, affordable food.

While conventional agriculture is being challenged by climate change – particularly drought, higher temperatures – but also floods and fires, in-community and in-home food production is growing, both conventional gardening and more high-tech options, such as hydroponics and aeroponics. In addition, 3D printing and cultured meat could change food patterns.

- Advances in food production include aeroponics and hydroponics (growing plants in an air, mist or water environment) to produce nutritious food in large amounts quickly and sustainably. This can be done in urban environments using vertical farms and other techniques. Vertical farming, which grows food usually with hydroponic or aeroponics methods in stacked layers, offers a more sustainable year-round crop production with high yields and climate resiliency. There are employment opportunities including with engineers and workers in maintenance. Then, as automation increases, new jobs will include system analysis and software development positions.
• David Rosenberg, CEO of AeroFarms (see more: http://aerofarms.com/) is quoted as explaining vertical farming can grow produce in around half the length of time observed in a field, using 95% less water, around 50% less fertilizer, and no herbicides, fungicides, or pesticides.


Another area of food abundance is cultured meat, which is progressing in taste and affordability and may become a major sustainable and accessible source of producing protein.

• When lab grown burgers first emerged, they were extremely expensive – and not particularly tasty. In 2013, Mosa Meat produced a cell-cultured beef burger which took months to produce and would have cost $1.2 million per pound to sell. But, in four years, the price has fallen dramatically. In four years, the price of lab-grown “meat” has fallen by 99% and there’s still a long way to go.


• Mosa Meat can currently produce meat that costs $27 to $45 per pound, and they will enter the market with a premium priced product in five years (thus, around 2021) and that in another five years (around 2026) the prices will be competitive to what people currently pay for beef. The lower competitive price, combined with a convincingly real taste and sensation, and environmental and animal rights motivations, may allow for widespread production and consumption of cultured meat.


Some advocates of cultured meat argue for it as a way to get beyond animal agriculture and its harmful impacts on the environment – contributing to as much as 19% of greenhouse gases. And some are calling it the “clean meat” industry.

• The cattle and beef industry is objecting to the terms cultured meat or clean meat and pressing for regulation to prevent the use of the term “meat”. They succeeded in having the state of Missouri where a bill passed with bi-partisan support that says that only products that are derived from harvested production livestock or poultry (which died by slaughter) can be called meat. From Haridy, R. (2018, May 20). Lab-grown meat not meat according to state of Missouri. New Atlas. Retrieved from https://newatlas.com/lab-grown-meat-classification-bill-missouri/54687/.

There are issues of nutrients, micronutrients, and other issues to be dealt with, but if Thomas Frey’s forecast above is correct, cultured meat and alternatives could be a major food by the late 2020s.

More Abundance

For a more extensive look at abundance, some entrepreneurs project that technology will advance incredibly rapidly in the upcoming two decades and enable the basic needs of water, food, energy, health and education to be met for every person on the planet.

And nanotechnology expert K. Eric Drexler, argues that in the 2030s the full flowering of nanotechnology will allow us to do nano-manufacturing of most of our needs at relatively low costs – hence the title of his book: Radical Abundance. For example:
- Molecular biology and chemistry will enable many of the items we use daily to be built with atomic precision.
- Transportation, construction, manufacturing, water and food production will become easier to do and so more accessible and beneficial to more people globally.


### Universal or Guaranteed Basic Income

The Guaranteed Basic Income (GBI), also called the Universal Basic Income, the Negative Income Tax, the Citizen’s Income, and the Basic Income Guarantee has been proposed by conservatives and liberals in the U.S. for decades. Richard Nixon proposed the Negative Income Tax.

- Basic income experiments have occurred, and are currently occurring, across the world. In Canada and Namibia, both of their GBI experiments saw a reduction in poverty and other positive impacts. A program in Canada yielded higher rates of remaining in school, lower rates of hospitalization, and hardly a change in work rates. The amount of money recipients received was determined by need. See Surowiecki, J. (2016). Money For All. The New Yorker. Retrieved from [https://www.newyorker.com/magazine/2016/06/20/why-dont-we-have-universal-basic-income](https://www.newyorker.com/magazine/2016/06/20/why-dont-we-have-universal-basic-income) and Lum, Z. (2014). A Canadian City Once Eliminated Poverty And Nearly Everyone Forgot. The Huffington Post. Retrieved from [https://www.huffingtonpost.ca/2014/12/23/mincome-in-dauphin-manitoba_n_6335682.html](https://www.huffingtonpost.ca/2014/12/23/mincome-in-dauphin-manitoba_n_6335682.html).

While experiments are occurring around the world, basic income is gaining attention and policy action in the United States.

- Y Combinator, the private investment company that launched Airbnb, did a small pilot test giving a handful of people in Oakland, California between $1,000 and $2,000. A larger study with 3,000 people in two states is being planned. Weller, C. (2017, September 21). One of the biggest VCs in Silicon Valley is launching an experiment that will give 3,000 people free money until 2022. Business Insider. Retrieved from [http://www.businessinsider.com/y-combinator-basic-income-test-2017-9](http://www.businessinsider.com/y-combinator-basic-income-test-2017-9).
In an effort to boost the economy and support families in poverty, Stockton, California is piloting a basic income program, and will provide participants $500 each month. The Stockton experiment aims to collect data on how the unconditional money can impact the economic, health and wellbeing aspects of low-income families.


**Financing a Basic Income**

There are a range of levels at which the GBI has been proposed, e.g. $10,000 yearly income plus $3,000 for health insurance (Charles Murray); up to $32,000 yearly in Switzerland. The level used in Scenario 3 is the $12,000 yearly for adult citizens and $4,000 per child proposed by Andrew Stern.


That is $12,000 and $4,000 in 2015 dollars; in Scenario 3 we assume that these figures would be adjusted for inflation, and so would be higher when they begin in the 2020s, and they would grow with inflation after they are established.

Stern argues that the costs of a GBI would be roughly $3 trillion yearly. An income of $12,000 for every adult, would cost between $1.75-$2.5 trillion in federal funds each year. The $4,000 for each person under 18 would add another $296 billion. Stern’s book proposed several ways to pay for the UBI. Below is a list of options for funding GBI from Stern and other proponents:

- Ending all or many of the current 126 welfare programs, which cost $700 billion in government and $300 billion state government
  - Eliminating food stamps (save $76 billion), housing assistance ($49 bil.), and EITC ($82 bil.)
  - Adjusting long term retirement policy for future generations, but not changing Social Security for those who have already been contributing to the system
  - Creating a new and more cost effect non-employer-based healthcare system

- Some redirection of government spending and taxation
  - Raise revenue by eliminating all or some of the federal governments $1.2 trillion in tax expenditures; do away with reductions such as investment expenses, preferential treatment of capital gains, foreign taxes, charitable contributions, mortgage interest, and accelerated depreciation.
  - Look at trimming expenditure on the federal budget, such as reducing military budget (current $600 million), farm subsidies ($20 billion), or subsidies to oil and gas companies ($30+ billion)

- Increased revenue from new sources
  - Consider a value added tax (VAT) of 5 to 10% on the consumption of goods and services, with all revenue funding basic income
  - Implement a Financial Transaction Tax (FTT) (also known as the “Robin Hood Tax” and “Tobin Tax”) a tax on financial transactions, such as a federal tax on stock sales
  - Wealth tax, a levy on the total value of personal assets, including housing and real estate, cash, bank deposits, money funds, stocks, etc.
  - Carbon Tax, which at a rate of $15/ton of CO2 would bring $80 billion in annual revenue, or about $250 per U.S. resident
  - A “common goods tax” such as the one placed on oil to fund the Alaska Permanent Fund

**Affordable housing options**

Housing remains a major human need. Housing insecurity brings a series of other needs. Communities around the country are and will use a variety of approaches to increase the stock of low and very low income housing, including:

- Rezoning to allow secondary living units on the property of single family homes and encouraging building on empty space in the yards around homes;
• Allowing a higher number of unrelated individuals to live in the same house;
• Encouraging sustainable, energy efficient, low cost construction of new units;
• Fostering neighborhood parking and driving regulations to dampen traffic from increased residents;
• Taxing unoccupied homes;
• Prohibiting or taxing AirBnb and related uses of rental properties or taxing that use to provide a fund to make other properties available;
• Require or incentivize landlords to accept housing vouchers;
• In addition to federally funded vouchers create state or locally funded vouchers;
  - This serves to help alleviate concentrations of poverty by giving voucher holders more options of where to live.
• Tax construction profits to add to the funds for low income housing development;
• When low cost solar and other sustainable energy production and storage becomes available, require or incentivize landlords to install this and pass the savings on to renters;
  - Or enable, through loans from utilities or others, to install this equipment; paying the loans off with the energy savings.
• Adjust regulation to support fast construction of safe, sustainable and energy efficient new developments that include very low-income housing;
• Support and encourage alternative construction, including 3D printing of housing components and repurposed materials, using modular and “tiny homes”;
  - use of local 3D printing of home parts with quick on-site assembly will be available in many communities in the 2020s\(^1\)
• Use various combinations of these approaches to deconcentrate poverty.

**The Human Services Value Curve**

In developing these scenarios, we looked for human service visions, or descriptions of their preferred future states. One leading contender for the preferred future for the field is the Human Services Value Curve. Developed by Harvard’s Technology and Entrepreneurship Center’s Leadership for a Networked World With American Public Human Services Association (APHSA). They argue that at the desired progression in value can best be described from the point of view of the consumer in this way:

- At the regulative level, consumers receive a specific product or service that is timely, accurate, efficient and easy to understand.
- At the collaborative level, consumers “walk through a single door” and have access to a complete array of products and services that are available “on the shelf.”
- At the integrative level, products and services are combined into packages, and designed and customized with input from the consumer themselves, delivered in the most convenient ways, with the objective of best meeting the consumer’s true needs and driving positive outcomes.
- At the generative level, those providing products and services are joining forces to make the consumer’s overall environment better for them, resulting in value that is broader and more systemic than an individual or family might receive.
A group of local human service agency leaders within APHSA developed the “local vision” for the human services value curve in terms of what it would include, namely these core components:

- A resolute focus on a person-centered approach to casework and service delivery
- Testing and implementation of innovative evidence-based practices
- Partnering with other organizations and systems across sectors
- An integrated infrastructure, with information technology systems that enable and produce cross-system data; led first by the integrated health and human services information system.
- A workforce of “skilled tradespeople” able to build community well-being—with the competencies to deliver evidence-based practices
- Effective and efficient internal change management processes that enable leaders to continuously improve their organizations
- Accountability processes that clarify outcome measures and quantify impacts, including reduced health care costs, improved health, and greater self-sufficiency.

And these principles guiding human services:

- Solid prevention- and strengths-based orientation
- Two-generation and multi-generation approaches
- Holistic, person-centered, and customized service planning
- Both pre-trauma and trauma-informed strategies
- Sustained attention on fatherhood engagement
- Commitment to defining and tracking of a set of common indicators across all well-being and health domains.

See: A NEW PATHWAY TOWARD PROSPERITY AND WELL-BEING, A Concept Paper by the National Council of Local Human Service Administrators, May 16, 2016