

MISSISSIPPI HUMAN PROGRESS AND HUMAN SERVICES 2035 SCENARIOS



INTRODUCTION	2
SCENARIO 1: MISSISSIPPI RISING	4
SCENARIO 2: WE FALL DOWN, BUT WE GET UP AGAIN	11
SCENARIO 3: OPPORTUNITY FOR ALL	18
SCENARIO 4: GENEROUS, EMPATHIC, AND HELPFUL	26

Introduction

What will human progress, human need and human services be in Mississippi in 2035? What implications does it have for today's strategies for public and private human service providers and community partners? The Mississippi Human Progress and Human Services 2035 Scenarios offer a tool for the Mississippi human services community to explore these questions in their own state or community and 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 December 14, 2017, where participants will consider how successful their current directions and strategies will be in each scenario, what adjustments are needed and develop recommendations focused on the near term and the long-term future.

These Mississippi 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 is also developing a set of national human service scenarios. The national scenarios and these Mississippi 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

IAF partnered with the Mississippi Department of Social Services and community partners to develop the scenarios using the “Aspirational Futures” approach (see **Figure 1** below) which IAF has evolved over the last three decades. This technique develops forecasts and scenarios in three zones:

- A “zone of conventional expectation” reflecting the extrapolation of known trends, the expectable future (scenario 1);
- A “zone of growing desperation” which presents a set of plausible challenges that an organization or field may face, a challenging future (scenario 2); and
- A “zone of high aspiration” in which a critical mass of stakeholders pursues visionary strategies and achieves surprising success (scenarios 3 and 4).

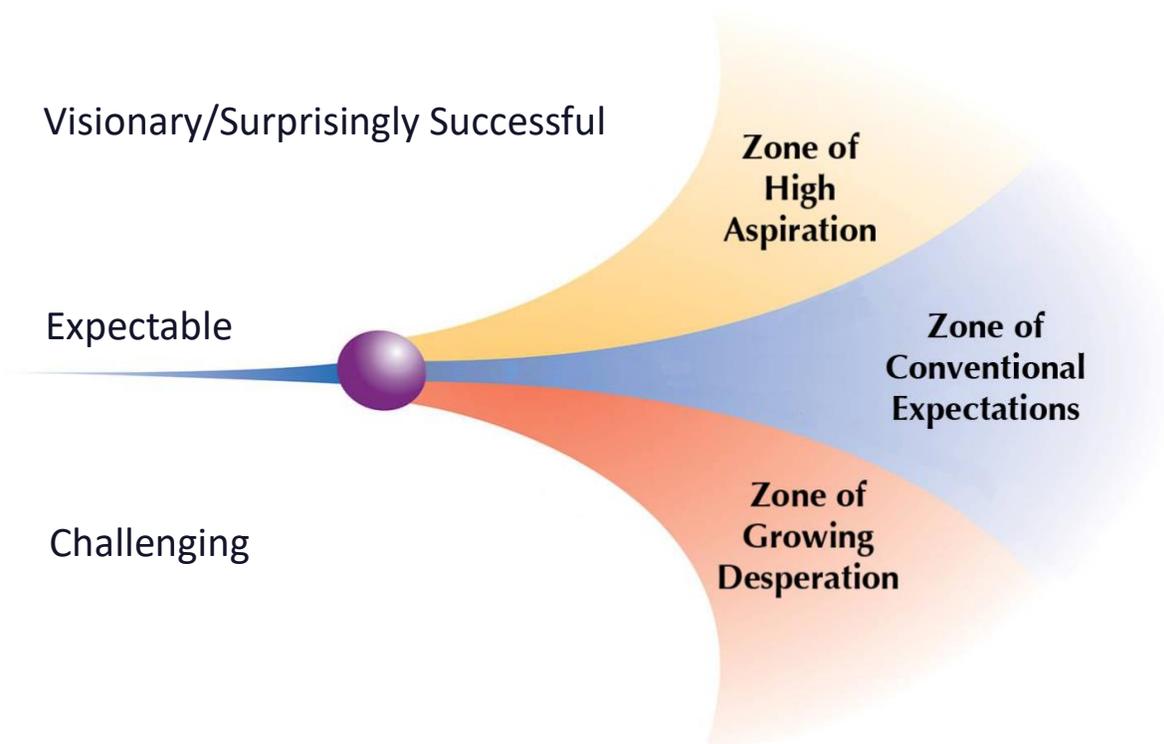


Figure 1: IAF’s “Aspirational Futures” Technique

The Mississippi Human Progress and Human Services 2035 scenarios presented on the following pages were developed based on a review of human services programs and activities, plans and documents, and interviews with human service providers and partners. We explored “driving forces” and preliminary forecasts for the state, its economy, employment, the environment, technology, as well as trends within specific areas of human services (aging, behavioral health, children youth and family, disability, housing and income supports). During three days of forecasting sessions on August 29, 30 and 31st more than 35 human services leaders gathered to review and refine the preliminary forecasts and

develop the distinct scenarios presented below. The scenarios presented below will be used at the December 14th Scenario Workshop.

The first scenario is “expectable” or “most likely” given current trends. The second is challenging and considers some key things that “could go wrong” (including another great recession, flooding, funding cuts). The third and fourth are visionary. The third explores human progress in attitudes, technology, and policy – particularly a Universal basic income. The fourth explores surprisingly successful attitudes, policies, patterns of work and pay, and technology. As you read these consider how likely each is. And consider how preferable each is – which would you want to take place?

Scenario 1: Mississippi Rising

The population of Mississippi declined slowly in the 2020s, with slight increase in metropolitan areas, while the “micropolitan” areas around small towns were flat in population change, the rural areas lost population. The state older population increased dramatically.

Employment evolved in the 2020s and many positions in sectors with high employment (retail trade, health care) saw automation of some of their work - leading to a net loss of 7% of jobs by 2025ⁱ and significantly more by 2030. As employment evolved, the percentage of workers with “jobs” was overtaken by the percent of “gig” workers, many of whom did not have benefits such as health care. For workers in formal jobs, the federal minimum wage did slowly increase. Though the state suffered from low pay levels, particularly in education and health care, that remained below neighboring states. Many unemployed could not leave Mississippi in search of other economic opportunities. Poverty in the state grew in the 2020s.

Technology continued evolving. By 2017 nearly 60% of Mississippians used the internet and more than 40% used Facebook.¹ In the 2020s the penetration of the internet became nearly complete. And smart phone use grew in most communities. Smart phones took on more functions, mostly through apps on the phone. For some people their smart phone morphed into wearable or implantable devices. Intelligent agents in education, medical care, and behavioral health became increasingly more effective, while public reception of intelligent agents evolved to be more favorable. Virtual reality became common in the 2020s. Still, human interactions and services remained important.

Changing weather patterns brought about harmful change to the state. This included heavy downpours and flooding, sea level rise, reduced agricultural yields, increases in heat stroke and other heat-related illnesses, along with more vector borne illnesses. The growing elderly population was at greater risk during periods of extreme weather. Coastal populations were vulnerable to hurricanes. Some towns and metropolitan areas experienced flooding.

¹ <http://www.internetworldstats.com/unitedstates.htm#MS>

Demand for human services was influenced by population changes, economic shifts, and poverty levels. While some counties saw a decrease in poverty in the 2020s, in the least well-off counties poverty increased.

The 2017-2021 Federal administration brought cuts in several human service programs and the elimination of others. Non-profit organizations that delivered human services were impacted by periods of reduced funds. Some were forced out of business. There were funding rebounds in the 2020s for most programs.

Despite challenges, human services overall became more integrated, collaborative, efficient and productive. Mississippi continued as a leader in implementing two and multi-generational approaches to human services. The work was reflective of aspects of the Human Service Value Curve (HSVC)ⁱⁱ, a framework developed by American Public Human Services Association (APHSA) to guide human services through enhanced quality and movement from a regulative business model to a generative one.

Many human service jobs were automated or done by expert systemsⁱⁱⁱ.

Some human service funding moved towards a “pay for success” model, accelerated by public-private partnerships. Data integration and cross-agency partnerships became more common, but with challenges along the way. HIPAA regulations were adjusted to enable sharing health care data. Human services were able to use data securely to stabilize a family before a particularly harmful situation occurred. Data availability changed as public officials and political climates changed across the decades. Data hacking and theft remained a threat, and actions were repeatedly taken to avoid this.

Aging Services 1

Aging services across Mississippi were affected by the aging boom, changing technology and cuts and rebounds in government spending. The number of 65+ seniors grew from 433,000 in 2015 to 634,000 in 2030.

Major disabling diseases grew with them, particularly diabetes and Alzheimer’s. By 2030, more than 164,200 seniors in Mississippi have diabetes – both diagnosed and undiagnosed². Elder abuse grew, with more elders experiencing financial abuse. Alzheimer’s impacts 1 in 10 adults over the age of 65³. By 2030, over 63,410 in the state had Alzheimer’s. This overwhelmed the medical and long term care infrastructure of the state. More families provided care, with the attendant financial, physical and emotional strains. In some counties respite care was more available. And community health workers

² Institute for Alternative Futures, Mississippi Diabetes Data & Forecasts, <http://www.altfutures.org/pubs/diabetes2030/MISSISSIPPIDataSheet.pdf>

³ Alzheimer’s Association, 2016 Alzheimer’s Disease Facts and Figures, <http://www.alz.org/facts/>

were deployed in many communities. Some CHWs were employees of health or long term care providers, others were community members volunteering.

Some communities integrated their senior centers into other community sites and services, including libraries, schools and churches, changing the name as they broadened their audience and range of services. Churches played an especially important role in serving seniors and the family members caring for seniors.

Medicare saw reductions in payment levels followed by rebounds in the 2020s, along with better integration with nursing care and assisted living. Telehealth, personal biomonitors, smart home sensors, and integration of this data, enabled predictive analytics that spotted declines earlier. There were some medical advances that slowed disease progress and disability; however, these were often not accessible to low income or otherwise isolated seniors. Self-driving vehicle fleets in the 2020s, whether operated by Uber and its competitors or by local transit systems helped to alleviate some isolation of seniors across the state.

In addition to increased and different senior centers, housing for seniors took on new forms, including:

- Naturally Occurring Retirement Communities or NORCS (for those who could afford them)
- Zoning and regulations changed in some communities to allow accessory dwelling units (ADU) added to a home or built in the yard; and to allow increased density in single family homes
- Increased multigenerational homes, particularly during periods of economic hardships.

Some new nursing homes were able to clear the states difficult CON progress, but the demand, even with the low Medicaid payment levels, always exceeded the supply.

Behavioral Health Services 1

The need for behavioral health services in the state increased due to the stress and trauma of economic downturns, social and economic exclusion, the impacts of extreme weather events, increased opioid and other substance abuse, neighborhood and domestic violence, and particularly adverse childhood experiences (ACEs). Research on ACEs formed a base for teachers, school counselors, and in-school clinics to be trained to identify behavioral risks and needs. However, funding constraints often meant the needs were not addressed.

Mississippi Medicaid and the State's Department of Mental Health (DMH) remained the largest public providers of behavioral health services to individuals with mental illness, substance abuse and/or developmental disabilities. Cuts in Medicaid as part of health reform in the late 2010s led to major cuts to Mississippi Medicaid in the ensuing years. This limited the number of people in the state who received Medicaid as well as reducing the payment levels of Medicaid providers. These cuts were

somewhat reversed in the mid-2020s. Mississippi Medicaid rates remained very low and it was difficult to attract providers to come to the state, which affected access to care.

Mobile Crisis Response Teams proved crucial to reducing jailing and institutional care, but were subject to reductions and rebounds in funding which hindered Mississippi's ability to fully move away from an institutional care model. Reaching rural areas, particularly the Delta, remained a challenge. The internet and cell phone coverage did come to all areas of the state by the mid 2020s, but in some areas people could not afford the services or distrusted them. Virtual service ultimately did connect most patients with care from their homes. And most people receiving behavioral health care for mild conditions (not severe mental illness) did use "virtual counselors", often from their Medicaid funded provider. Use of these "virtual counselors" displaced some human therapists during the 2020s. Remaining therapists provided human touch and oversight use of apps.

Children, Youth and Family Services 1

The demand for child and family services was shaped by substance use and abuse, economic recessions, environmental disasters, and job loss to automation. Funding for these services dropped during the late 2010s and in the 2020s during periods of economic decline. The delivery of these services changed due to greater integration of data and communication across public and private service providers, and between health and social service sectors. Mississippi funded child welfare services at about equal parts from federal and state and local funds⁴. During periods of federal spending cuts for child welfare programs, state and local funding was unable to fill the gap.

Cycles of poverty, substance abuse and other factors led to continued child abuse and neglect. Despite positive impacts driven by two generation approaches, racial disparities for child poverty persisted throughout the 2020s.

Delivery of child and family services evolved. Two generation strategies were common in the 2020s which linked the parents and/or grandparents, where relevant, in identifying needs and setting priorities (e.g. job training, housing assistance, behavioral health aimed at the parent). Mississippi was a leader in two generational strategies, linking services for children and adults to serve the family altogether. Mississippi's gen+ approach focused on education, economic support, social capital education and health and well-being, pursuing partnerships with many agencies.

Federal and Mississippi medical privacy regulations were amended and allowed, with appropriate privacy, security and discrimination protections, sharing of health care and other data among local partners (human services, schools, police, health care). For example, truancy information often allowed human services to anticipate issues in the family that could be dealt with.

⁴ CWLA, Mississippi's Children 2017: Mississippi's Children at a Glance, <http://www.cwla.org/wp-content/uploads/2017/03/MISSISSIPPI.pdf>

During periods of decreased funding for government child care services, small and local child care services expanded across the state. While these proved generally helpful, the quality of care was not strongly regulated. Additionally, in the 2020s there was federal tax reform to incentivize child care. In the 2020s, child care quality increased and technology made it more effective. Child care, Head Start and Pre-K providers were better trained and many states had monitoring and regulation that improved their quality. Interactive learning technology, using affective computing, tablet apps (like ABC Mouse), and personalized learning activities, stimulated engagement and chart the child's development.

Disability Services 1

Funding for disabilities services varied with the fiscal health of the national and state economies. There were specific reductions in federal Social Security Disability Insurance (SSDI) payment levels, and tougher eligibility standards for SSDI. Disability services grew more focused, benefit levels were reduced, eligibility requirements stiffened, and increased barriers to access in the late 2010s and restrictions continued into the 2020s

Yet the need for disability services increased, influenced by the growth of diabetes. By 2030, there were over 69,000 with diabetes related disabilities— including visual impairment, renal failure and amputation⁵. Over 21,000 of these are seniors. There were ongoing racial and income disparities in the rates of these conditions. Some disabilities were due to accidents.

For those with intellectual or developmental disability (IDD), Mississippi Medicaid had greater need than slots available for service. Mississippi continued its two waivers: for independent living and for those with a traumatic brain injury. The waiting list for these services remained long. while the number receiving services slowly declined until the mid-2020s when some of the spending cuts were reversed.

There were remarkable medical and technological advances affecting disabilities. These advances included:

- 3D printing of home equipment and even smart prosthetics
- Sophisticated home monitoring and wearable devices
- Self-driving cars
- Friendly intelligent agents that act as helper, guide, counselor, therapist, translator, speech and hearing aide.

But many of these advances were costly and only covered by the best health insurance policies. Medicaid and Medicare covered some advances but not others, based largely on their costs.

Schools made efforts to be more inclusive of students with disabilities. Through partnerships between state agencies and advocacy groups, Mississippi disability services continued to employ more school

⁵ Institute for Alternative Futures, Mississippi Diabetes Data and Forecasts, <http://www.altfutures.org/pubs/diabetes2030/MISSISSIPPIDataSheet.pdf>

aides across the state. WIOA included school partnerships and transition coordinators, helping prepare young people with disabilities to enter the workforce. However, disparities persisted across schools across the state.

Human service agencies accelerated the automation of as much disability services as possible.

Housing Services 1

Housing assistance had been declining nationally from the mid-1990s to 2015. The conservative administration of 2017-2021, more hostile Congresses, and economic downturns led to further declines in housing assistance levels. There were some rebounds in the late 2020s and the 2030s, but during most years in most communities, housing services, like most other human services, had to determine who got what services, with often a large share of the needy or eligible group not getting any of the services.

Homelessness in the state increased. Coastal counties with military bases had more homeless veterans. The racial disparity of homeless persisted, with the majority being African American. Families doubled or tripled up in homes where they could.

The minimum wage slowly increased, which helped some afford housing with more security.

Throughout the 2020s communities around Mississippi used several approaches to increase the stock of low and very low-income housingⁱⁱ, including: raising the number of unrelated people who could live in a home, allowing secondary dwelling units to be built onto an existing home or in its yard and allowing group homes for elderly or special needs individuals. However, much existing and new low-income housing was not integrated with the rest of the community. Some communities did move increase their mixed income neighborhoods, driven by the growing homelessness. Some areas followed the example of Tupelo and organized a task force around homelessness. Yet even in the successful communities, the increased housing stock could not keep up with the demand as more families lost income as unemployment grew.

Emergency shelter related to severe weather, continued to be needed. As with Hurricane Isaac in 2012, churches stepped up to provide temporary shelter. Hurricane damage increased in the 2020s, even as Community Development Block Grants and other funding which had historically helped communities to rebuild- was reduced.

Income Support Services 1

Income supports were reduced during the Trump administration and somewhat rebounded in the 2020s.

The EITC remained popular and many in the state received it – in fact in 2015 Mississippi residents received an average EITC refund of \$2,875, the highest in the nation. Payment levels rose with inflation

TANF caseloads had been decreasing in the 2010s, and this continued as the program experienced federal budget cuts in the late 2010s. In the 2020s funding and payment levels rebounded and were adjusted for inflation. Fewer human service workers were needed as applications and determination of eligibility were automated.

The Ryan Budget proposals passed along with other cuts in 2017 and 2018. This hurt SNAP and other nutrition programs, such as school meals. And cuts to programs like WIC decreased the number of places, mostly child care centers, where low income children received daily meals. Higher barriers to qualifying further limited the number of kids getting food. SNAP was further cut and adopted stricter limitations.

The downturn in SNAP funding was reversed in the mid 2020s and applying for SNAP was made much easier and quicker. Better information systems linked individuals and their data with other government programs. SNAP's Employment and Training programs worked effectively with other employment programs; benefits continued to require proof of actively looking for work. Employment training targeted jobs that would not be automated and for which the person had the relevant capacities continued. The WIOA plan worked to locate where each job was and match employees with a job in their area of the state, but transportation to work remained a problem.

Access to work from rural areas remained an issue. There were some infrastructure and highway improvements for rural areas, and deployment of self-driving cars as private "Uber" services, or as part of local transit systems helped relieve rural isolation, as did virtual work and training.

The Low Income Home Energy Assistance Program (LIHEAP) continued, but funding for the program was slightly reduced during the late 2010s. Funds for the program rebounded in the 2020s and shifted towards solar and other renewable energies as low-cost options for low-income households.

Child support programs were less vulnerable to cuts across periods of political changes, as it continued its bipartisan support. Child support was impacted as other income support programs mandated that participants who qualified comply with the child support agency, and not doing so would mean loss of benefits. This had occurred with SNAP and expanded to other programs.

Scenario 2: We Fall Down, But We Get Up Again

The years leading up to the 2030s were filled with challenges. The state economy grew slowly with dips during periodic recessions. The big one, the Great Recession of 2023, was particularly challenging to employment, tax receipts, and human service spending. The digitization of life continued with the movement from the internet, social media and smart phones to virtual reality, artificial intelligence and cognitive computing. This improved many aspects of life and learning. But it also led to significant job loss to automation. And the state's rural areas remained unconnected to the internet and many of these advances.

Education across the state became more effective in its success in graduation, job preparations, and college readiness. The continued low pay for teachers in the state led many to look elsewhere and made it harder to recruit new teachers.

Changing weather patterns and climate impacted Mississippi in several ways including: warmer temperatures, more severe floods, droughts and fires, stronger storms, changes in agricultural patterns and threats to human health⁶. Major hurricanes, both the fast-moving intense storms, and the slower moving ones leaving much rain and flooding came in the 2020s, causing great damage. Impervious surfaces, infrastructure, and other man-made alterations made impacts of storms worse in some parts of the state. In the heavily forested counties along the coast (Hancock, Harrison and Jackson), and elsewhere in the state, severe heat and drought brought devastating fires in the 2020s. Sea level rise, prompted by losses in polar ice, flooded parts of Jackson, Harrison and Hancock counties. Access to fresh water was more limited and some climate migration resulted.

During the 2017-2021 Administration services were cut or stayed flat as demand grew. There was a rebound in many Federal programs in the early 2020s only to run into the Great Recession of 2023 where there were again major cuts. Emergency services from HUD, FEMA, TANF, and SNAP were sometimes available when needed, but at other times in the 2020s those funds were depleted or not available.

The Federal government did promote more block granting of its programs. This allowed some government flexibility to find community based solutions. This greater flexibility was beneficial even as overall payment levels for many programs were reduced.

Work in some settings, both jobs and "gig work" (share cropping was an early version of "gig work"), became more hazardous and often underpaid.

The cuts to human services seemed like hurricanes to many communities. The need for most types of human services grew while resources were being reduced. Governmental cuts sometimes meant that communities turned to local non-profits, foundations and churches, but these organizations were often struggling as well. The culture in Mississippi had always relied on community help and community

⁶ United States Environmental Protection Agency, What Climate Change Means for Mississippi, August 2016, <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-ms.pdf>

organizations, and this carried across the state during challenging times; through community organizations themselves.

All providers did more with less and automated and consolidated when possible. Overall, about 15% of human service jobs were lost to automation and cognitive computing in the 2020s.

Aging Services 2

Aging services were cut repeatedly during the two decades leading to 2035 even as need for them increased.

During times of economic challenge, elder abuse grew, with many experiencing emotional, physical, or financial abuse or neglect. Increased elder abuse was also related to the spread of opioid abuse across the state.

Many senior and adult day care centers had to be closed across the state, when federal funds were not available and the state could not continue the services. In responses, there was a greater reliance on informal services; however, these services were not regulated by the state.

With governmental cuts, non-profit providers lost income or were driven out of business. Services and providers restructured to keep programs close to the community; this involved partnership, mergers, collaborative efforts, and some regionalization of services. However, as many nonprofit projects had been funded through federal grants, and these became less available, nonprofits were impacted.

Faith based organizations particularly stepped up and mobilized to serve the state during hard times. Human services and churches partnered more deeply to provide respite care, help during natural disasters and provide meals and housing. Churches also aided child protective services in various ways from prevention to adoption. Technology connected churches and human services needs. Churches built their capacity, including utilizing skilled retirees of the community and congregation to provide certain skills.

Diabetes and Alzheimer's in seniors across the country worsened. Alzheimer's impacted between 10-12% adults over the age of 65. By 2030 in Mississippi there were over 64,000 in the state who had Alzheimer's. Diabetes increased. By 2030, more than 164,200 seniors in Mississippi had diabetes – both diagnosed and undiagnosed⁷.

During the 2020s and 2030s, there were great medical and technological advances, such as high tech and high touch home care, including increasingly effective robot caregivers and cures for Alzheimer's and diabetes. However, these were expensive and not covered by Medicare or Medicaid. Some more affordable technologies were available in rural areas of the state, but then the next step for care was

⁷ Institute for Alternative Futures, Mississippi Diabetes Data & Forecasts, <http://www.altfutures.org/pubs/diabetes2030/MISSISSIPPIDataSheet.pdf>

inaccessible. For example, some seniors had a wearable tool to monitor their vitals but when they needed additional care from a professional, that was inaccessible.

The ratio of family and kin to elder changed from around 7 to 1 in 2010 to around 5 to 1 in 2030. The 2023 economic downturn disrupted families as some family members moved away for employment. When family members did fill the role of caregivers, there were often difficult emotional, financial, and physical impacts. Aging service agencies encouraged more family and community care. This worked in some communities, but left low income and minority elders disproportionately without adequate care.

Behavioral Health Services 2

Behavioral health services decreased dramatically due to budget cuts. Health care reform slowed the integration of behavioral health with health care. Poverty grew, along with increases in domestic and community violence, teen pregnancy, housing and food insecurity, and chronic disease. Drug abuse, including opioids, continued its increase with growing harm to communities. IDD's increased due to lack of prenatal care and more babies born to drug addicted parents. Funding for substance abuse treatment became scarcer during the 2020s.

Health care reform left more uninsured and there were cuts in Medicaid enrollees and service levels. Higher payment rates exacerbated the decline in benefits, but the largest problem was increased demand despite reduced federal funds. The 20% Mississippi state share Medicaid was a huge burden on the state. When the Feds reduced payments, the state could not raise their payments to fill the gap.

Behavioral health expert systems – “virtual counselors,” delivered via smart phones, did become very effective by the mid- 2020s but they are only available to the affluent or those with expensive health insurance and some managed care plans (not including Mississippi’s Medicaid or its managed care plans).

Prisons remained leading sites for providing behavioral health services, with wide variations across facilities in the quality and effectiveness of the behavioral health provided. In the years from 2017-2021, the return of a “get tough” stance in criminal justice led to increased arrests and convictions. Black and Hispanic populations were most affected because their arrest rates remained higher and their sentences longer than for the White population. Increased poverty contributed to higher crime rates, and continued high incarceration rates. The state’s Second Chance Reentry Program, after successfully lowering recidivism in Hinds County, by addressing untreated co-occurring substance use and mental health disorders in offenders under community supervision, was terminated during one set of cuts and the Federal Government never provided the expected expansion of funds.

In the 2020s, human services did use predictive analytics to help behavioral health providers triage the population when budget cuts meant people must be cut from programs. These cuts took a toll on providers as well as their clientele.

Children, Youth and Family Services 2

The need for child and family services grew for most of the two decades to 2035. Increased poverty correlated with greater child abuse and neglect, domestic abuse, addiction, teen pregnancy, housing insecurity, food insecurity and depression. For kids these led to more adverse childhood experiences (ACEs) – which would negatively affect their gene expression for years to come.

Need for foster care grew but fewer families came forward to take foster kids. And cuts led to loss of staff in government and private agencies.

Due to difficulty meeting the demand, the Mississippi foster care was taken over by a court appointed receiver in the 2020s, with the state required to pay more to achieve adequate child protective services, further straining the State's budget.

Opioid and heroin addiction, already major problems in Mississippi, 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 communities disconnected youths, those who were not in school or working, increased. As more young people were not completing school or trade training, there were economic ramifications statewide. Low income people were increasingly less qualified for the technical jobs which remained.

Other programs that experienced cuts, or elimination, included: child care subsidies, programs to provide school clothing, transportation assistance, home repairs funding, and job training. During difficult times, some churches across the state organizations and mobilized, coordinating services with community service nonprofits. For example, if a prospective foster care parent needed help with home repair to gain approval, the church would often assist in meeting the needs. Churches facilitated providing resources such as clothing and food to families in need.

Human service providers automated much of their work and used the integrated information system 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. But there were times when the information systems were not updated or reliable. Human service providers encouraged family self-sufficiency through home and community food production; trading time and services; and effective use of 3D printing.

Disability Services 2

The number of people in the state with disabilities grew due to many factors. Increased unemployment and poverty, recurring environmental challenges, the increase in diabetes fueled by ongoing obesity⁸ (69,000 people in the state in 2030 had complications of diabetes such as renal failure, vision impairment, and limb amputation, many of which were disabling)⁹, and the increase in Alzheimer's. For most of these

Black and Hispanics populations were disproportionately impacted¹⁰. Some workplace accidents and diseases increased in the 2020s after deregulation. Decreased access to health care often exacerbated the growth of disabilities or their severity.

Developmental disabilities grew in the 2020s, fueled by parental drug abuse, lack of prenatal care and spread of diseases. Accident-caused disabilities, such as from outdoor sports and hunting, continued to grow and decreased access to health care led many in accidents to services provided by governmental agencies. Deregulation of industry led to increased contamination of water and soil in some communities, which led to some increased disease and disability.

During the 2017-2021 Administration Medicaid disability payments were reduced and eligibility significantly tightened.

There were technological and medical advances (e.g. self-driving cars, 3-D printed prosthetics and orthotics, home robots, neuro-enhancements and direct brain control of limbs). But many of these were not covered by Medicare or Medicaid and were too costly for most people to afford. Though there were some advances that were low cost or covered by insurance and widely available by the mid 2020s: some virtual assistant technology, vision and hearing enhancement, in some communities low cost access to self-driving cars, and personal biomonitoring linked to health care providers and the person's "smart home" programs.

Housing Services 2

Housing assistance had been declining nationally from the mid-1990s to 2015. The conservative administration of 2017-2021, more hostile Congresses, and economic downturns led to further declines in housing assistance levels. There were some rebounds in the late 2020s and 2030s, but during most

⁸ State of Obesity: Policies for a Healthier America 2015 cited in Mississippi State Department of Health, Obesity Action Plan 2016, http://msdh.ms.gov/msdhsite/_static/resources/6164.pdf

⁹ Institute for Alternative Futures, Mississippi Diabetes Data and Forecasts, <http://www.altfutures.org/pubs/diabetes2030/MISSISSIPPIDataSheet.pdf>

¹⁰ NPR, Stress and Poverty May Explain High Rates of Dementia in African-Americans, <http://www.npr.org/sections/health-shots/2017/07/16/536935957/stress-and-poverty-may-explain-high-rates-of-dementia-in-african-americans>

years in most communities, housing services, like most other human services, had to determine who got what services, with often a large share of the needy or eligible group not getting any of the services.

Loss of a job was a frequent cause for loss of housing. This accelerated with the ongoing job loss to automation and during the Great Recession of 2023. Other contributing factors to housing instability such as domestic violence and disabilities were increasing as well. More people lost their homes while human services had little to offer in response. Homeless populations soared while spending on them dropped. Crime and incarceration rates increased across the state. Those who were released from prison often became homeless or were soon re-incarcerated.

During the 2020s, churches in many areas of the state repeatedly stepped in to provide temporary shelter, food, and other services. But the churches' contribution levels had fallen, so their ability to help was constrained.

Around the state multigenerational housing - more family members and generations living under one roof grew in the 2020s – often not by choice.

Laws and regulations were changed in many communities to allow more unrelated individuals to share housing units and to permit secondary dwelling structures in yards or attached to existing homes. In many neighborhoods, existing residents were hostile to those who were changing the demographics of the neighborhood.

Utility assistance and eviction prevention services were kept very busy. But in many communities these human service workers had already been laid off before the funding for these services were cut.

Income Support Services 2

TANF, and all other cash assistance programs, experienced greater cuts and limitations- and some were fully eliminated. These cuts worsened during the 2020s as the job categories TANF recipients could seek were narrowed, further limiting the ability of TANF recipients to find employment. 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. Increased home and community gardening grew, as did the underground economy, with both legal and illegal efforts.

More people required emergency assistance, medical assistance, and temporary disability assistance but there were fewer financial resources and medical services available.

The EITC payment levels had been slightly reduced during 2017-2021, but grew slightly above inflation through the 2020s. 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 payments.

Food costs continued to increase, yet wages and family incomes declined, and the SNAP program suffered significant cuts. Food insecurity worsened as a problem across the state while more stores

closed and the cost of buying fresh produce increased during times of economic and environmental shocks. This in turn stimulated home and community food growing. Human services and agricultural extension services educated Mississippians about these self-sufficiency skills and their requirements/regulation in towns and cities.

Switching SNAP into a block grant further reduced its economic and nutritional impact, disproportionately harming low income populations. While there were periods of supportive Administrations and SNAP-friendlier Congresses which reversed, or slowed SNAP's decline, it continued until the late 2020s. Then, despite overt need, the SNAP program ended all together.

Other nutritional support programs that faced periodic cuts despite increased need across the state included: the Expanded Food and Nutrition Education Program (EFNEP), WIC, Mississippi Food Network (MFN), and Feeding America.

Some child care, including most of the programs of the Division of Early Childhood Care and Development (DECCD), was funded through federal funding streams and as these were cut, the state was unable to make up for the loss. However, some home care increased as there was greater unemployment and more parents at home with their children.

Scenario 3: Opportunity for All

During the 2017-2020 Administration, the U.S. economy did well but job losses to automation continued. Minimum wage increases were stalled or abandoned and human services, particularly income supports, were made more difficult to obtain and the length of time they could be received was reduced. Families in and near poverty lost income support and services and did more home and community food production wherever they could. Neighbors had always helped each other, but they became more systematic in trading services; these self-sufficiency efforts were enhanced by technology that lowered the cost of living.

Simultaneously, there had been a growing shift in attitudes and values toward fairness, equity, and inclusion. This shift in values and attitudes nationally, and in Mississippi, accelerated as inequities grew in the 2010s. Dialogues about fairness and equity became more impactful, affecting many sectors: policing and public safety, economic policies, taxation, education, housing, human services and health care. Across the state, churches played an important role in accelerating equity. Across political parties and socioeconomic classes, voters mobilized to support change. Nationally policy changes were put in place in taxation, universal access to health care (Medicare for All), public safety, education, and the environment. Given the rising structural unemployment, including the loss of many middle-income and high-income jobs to automation, a Universal Basic Income (UBI)ⁱⁱⁱ for all citizens was put in place in the 2020s.

In addition to policy transformations, there were technology changes that lowered the cost of living. Low cost solar energy production and storage was put in place. Food production was enhanced in urban agriculture, community gardening and in-home food production. Aeroponics and other technology supported vegetable growing. Cultured meat and protein joined 3D printed food, increasing access to sustainable protein sources. Beyond food, 3D printing, or distributed manufacturing, allowed families to manufacture many of their needs. This 3D printing might be done in-home, or at the library or neighborhood center, or a local shop. High speed internet was available throughout the state by the mid-2020s. Self-driving vehicles were put to use by local transit systems and Uber-like services, reducing costs and lessening rural isolation. Together, these advances supported self-sufficiency and were often looked at as “abundance advances.”^{iv} Mississippians, particularly low income families, took advantage of these to increase their family and community self-sufficiency.

Human Services and human progress were redefined and transformed through a national and local focus on equity. The UBI and its payments of \$12,000 yearly to each adult and \$4,000 for each child largely eliminated cash transfer programs, such as EITC, SNAP, TANF, and others, but positively impacted most communities as families gain stability and some independence.

Human services and the community generally, ensured that citizens living on the UBI were making meaningful contribution to their communities. This took many forms, from raising kids, child or elder care, growing food, volunteering, sharing knowledge and tools. This enhanced communities and local economies, as well as combating mental and physical ailments that result from not having paid work. Participation in the informal economy increased.

While reduced, problems such as child abuse, physical and mental disabilities, and homelessness persisted. Human services addressed these more effectively, automating some of its work. Human progress extended beyond survival, and focuses on how people can physically and emotionally thrive.

Human services provided training on the wealth management and financial capabilities, including managing UBI payments, and the optimal use of “abundance advances,” and to have each family member pursue their contributions to the community.

Internally, human services used predictive analytics to anticipate a family’s needs, optimize services and foster the most effective community partnerships. And the increased use of block grants, as well as greater flexibility in using funds across programs, allowed human services to optimize the services most likely to achieve the outcomes sought. 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 Mississippi 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 universal basic income “topped up” those 65+ whose Social Security income was less than \$12,000 annually (and all amounts were adjusted annually for inflation). Basic income led to a cultural reevaluation of contribution and meaning. Elders continued working or volunteering.

Aging services diversified. Formal, informal, and virtual senior centers all grew, while many ceased to be “seniors only” centers. Most communities increased their senior activities and integrated senior services into libraries, schools, churches, cafes, and other settings. Libraries repurposed as they saw a benefit with and for senior activity. Community centers and schools integrated seniors more, and more elders felt welcomed in these settings.

Senior group living and co-housing grew steadily through the 2020s, Federal funds for increased public housing and Section 8 vouchers increased. And counties and cities throughout the state adjusted zoning and regulations to encouraged Accessory Dwelling Units (ADUs) and allow more density in neighborhoods. All homes are “smart homes” for seniors. Smart home features play many roles- a friend, bookkeeper, secretary and counselor. Many smart homes advise and help manage in-home food and energy production.

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 (many are wheel-chair friendly) became ubiquitous and inexpensive, either as Uber-like services or shared ownership by senior co-op groups or provided by local transit systems.

Universal health care was put in place in the 2020s, with Medicare for All, enhancing services while controlling costs. Much elder health care was done remotely or in VR, but when face-to-face doctor visits were needed, most often the transportation cost for low income seniors was covered by the local government or the health care provider. Health care evolved, improved in quality, and focused on extending healthy years.

By the mid-2020s treatment advances could prevent or slow the progression of Diabetes, Alzheimer's, and many cancers. Medicare for All, negotiated on prices for these advances and ensured that they are accessible to all. More people were providing elder care because their basic income needs were met by the UBI payments.

While the UBI displaced some nutrition programs, some elder food programs remained. For some these deliveries in the 2020s, were made by small drone-copters. Nutrition programs 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). They often used locally produced food.

Elder abuse and neglect declined, though some remained and the UBI payments provided additional targets for financial abuse.

Behavioral Health Services 3

Many behavioral health problems were prevented in the 2020s by economic and social changes. This included greater family stability and less isolation and segregation. In parallel with the self-sufficiency gains and social value shifts seeking behavioral health was destigmatized. Virtual counselors and AI therapists helped normalize receiving treatment. Universal access to health care that integrated behavioral health care led to greater availability. Mississippi increased the convenience of physical spaces – these become 'one stop shops' for primary care, behavioral health care, pharmacy, etc. And virtual care included virtual behavioral health counselor.

Behavioral care was influenced by advances in understanding the impact of genetics, environmental factors, and ACEs. Predictive analytics aided early intervention. Prescriptions were more targeted and effective. For some behavioral health conditions, 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" - accessible through Medicare for All.

Most formerly institutionalized care services have moved patients into the community, delivering care through a variety of providers. As a result, the state department of mental health did less direct service and more oversight. However, the patients with the most severe needs did remain in state operated institutional settings. The state served largely as an overseer of other service providers among communities. In the late 2010s, there were 91 DMS certified providers in the state; this greatly increased in the 2020s. And the state Department of Mental Health continued its leadership for those

most in need of behavioral health services by providing Mobile Crisis Response Teams (that deliver solution-focus and recovery-oriented behavioral health assessments and stabilization of crisis in the location where the individual is experiencing the crisis).

In the 2020s, community mental health centers became more virtual, and the physical centers served largely as an outpatient treatment for behavioral health or substance abuse.

Homes for adults with behavioral health issues evolved with special smart home technology geared to residents' needs. Residents do home food production, other self-sufficiency tool, and use virtual reality. Some called these Freedom Homes. Health care and human service agencies supported social enterprises that developed and managed these homes.

The behavioral health workforce evolved. As behavioral health morbidity was significantly reduced, demand for care dropped. Virtual counselors displaced some human therapists, though those with severe mental illness had human providers. Some human workers oversee the automated systems.

Children, Youth and Family Services 3

This Universal Basic Income, although relatively low, was consistent and led to greater family stability, a reduction in family violence and child abuse, and further lowered teen pregnancy rates while further increasing high school graduation rates.

Mississippi's gen + programing was successful in promoting education, economic support, social capital, education and health across generations of families. Financial capabilities were enhanced to help families use their income most effectively and understand the wrap-around services they need. Self-sufficiency practices and abundance advances helped strengthen families and communities and lower the cost of living.

There were side effects of the UBI. These included upward pressure on salary and wages for the lowest paid workers in all sectors. Most low-income Mississippians did not stop working for pay, but many did. Some of these folks needed reminders of the obligation (that accompanies the UBI) to contribute to the community. And for those who remained addicted to various drugs, the UBI provided a more stable source of money for buying their drugs.

The need for child and family services persisted, though at reduced levels. This allowed resources- both human and financial- to be delivered in a more tailored, case specific ways. The predictive power that artificial intelligence programs provide human service workers, also enables far more effective case management and early interventions. This helped keep more children in their homes. Cases were addressed in a way that works with a customized plan, specific to children and family members.

Child abuse and neglect came into sharper focus, aided by the data sharing among schools, health care and human services, as well as predictive analytics. 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. Some children with greater needs had greater financial resources added to their basic income payments. But, overall the need for foster care by 2035 was reduced greatly because families and communities grew stronger.

The child care subsidy was discontinued after the universal basic income was fully implemented, except in instances of guardian or child disability which require special or more extensive care. More parents and communities had informal child caring networks. Early childhood services, such as Head Start and Pre-K, were made universally available by the mid- 2020s. Head Start and Pre-K were funded through the same federal agency.

Disability Services 3

Disability, or its impacts, were reduced by the late 2020s. The slowing or reversal of chronic diseases, particularly diabetes, arthritis, and Alzheimer's; physical activity and weight loss among overweight and obese individuals; safer and healthier work places and work styles all contributed to the reduction. Developmental disabilities were reduced somewhat with reduced poverty, consistent prenatal care, and safer environments.

Disability recipients got the \$12,000 yearly UBI payments. Where their previous disability payments exceeded \$12,000 they or their caregivers also receive the amount over \$12,000.

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 improved the disparities between socioeconomic and racial groups across Mississippi, as well as Mississippi's national ranking in health outcomes.

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; reversal 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.

Efforts were made to ensure these technologies and breakthroughs were either covered by Medicare and Medicaid or were affordable, accessible, and culturally adapted for use by Mississippians.

Mental and developmental disability screening takes place with pediatric primary care exams and in schools, increasing the number of people who sought and received care.

Human service agencies integrated data to understand the degrees of disability, the genetic proclivity, or environmental promoters of disability among family members 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 continued to allow more effective priority setting for what services to provide. Virtual care as well as facilities for disability services spread to rural areas of the state.

Education became more inclusive of those with disabilities. By the mid-2020s the factors associated with autism were better understood, which allowed prevention, better medical treatment and inclusive education approaches.

Homes for adults with disabilities evolved with smart home technology. Universal design was adopted, allowing greater mobility and ultimately saving costs. Many group living situations had an overseer that helped make the advances shared and beneficial, while connecting residents with the community. There was real and virtual networking across communities to make these programs successful.

Housing Services 3

UBI funds enabled many families to pay their rent consistently, particularly in Mississippi as rents continued to be relatively low. UBI payments did lead to a migration to lower cost areas outside of more expensive city centers and suburbs, including to rural communities where families could also produce more food and be more self- and community reliant. And programs were established to enable low income families to buy homes. This included a program to match savings for a down payment; revising credit scoring to recognize the UBI, and not penalize gig work and or job changes.

From 2021 onward, rebounding from the previous cuts, federal housing funding increased in response to growing need and lack of housing accessibility across communities, in spite of the benefits of UBI payments. More public housing was built and more vouchers funded in the states. In addition, more density in many Mississippi neighborhoods was allowed, with efforts to increase mixed income neighborhoods. Accessory dwelling units were permitted in many communities. The rise in a sense of equity and inclusion made residents more ready and willing to share their neighborhood with others.

3D printing of home components, and in some cases, whole homes or apartment buildings lowered construction costs. And for low income renters, as low cost solar and other energy production and storage became accessible, incentives and regulations were put in place requiring landlords to install them on their buildings and pass the savings on to renters.

LIHEAP and weatherization Federal funding continued, though funding for the program was slightly reduced during the late 2010s. Funds for the program rebounded in the 2020s and shifted towards solar and other renewable energies as low-cost options for low-income households.

Households became more generative as they produce and co-produce some of their needs. This included solar and wind energy production and storage, low-tech and high-tech community food production (community gardening, home aeroponics, cultured meat and 3D printed foods). Agricultural extension services, working alongside human service workers tapped into the agricultural history and culture of food across Mississippi, encouraging and training families and communities as well as integrating new technologies and foods.

Emergency housing services used predictive modeling and advanced analytics to anticipate emergency housing needs.

Chronic homelessness was reduced with the stability of universal basic income payments. But crisis related homelessness (due to environmental emergencies, violence, or behavioral health) persisted. The integration of behavioral health into health care along with universal access did help further reduce homelessness among those whose behavioral health issues were being treated.

Income Support Services 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 UBI. EITC, TANF, SNAP and associated programs were largely eliminated once the UBI was fully in place. To avoid people having more children to receive more payments, after a certain number of children no additional universal basic income payments would be made.

Child support guidelines were restructured after universal basic income was introduced. The \$4,000 yearly payments for each child were split according to custody arrangements. The federal guidelines of the basic income provided some operational rules, and Mississippi's state court system and legislature were very important in outlining the nuances of the program.

Some programs such as emergency and medical assistance and additional resources for the persons with disabilities were continued.

With UBI payment came the requirement that all recipients would contribute to society- whether by paid work, volunteering, or caring for family elders or children.

While the UBI displaced SNAP payments, in addition to using the UBI funds for food, food insecurity in Mississippi was further reduced by self-production of food in homes and in communities utilizing both traditional and technology assisted growing. These include hydroponics, aeroponics, and urban and vertical agriculture, 3D printed foods, cultured meat and other advances. Community food production

efforts lead to the emergence of community leaders that help build well-being and enhance the community's food supply and income.

Child care payments were reduced because of the UBI. Some low-income parents stopped working and developed cooperative day care. These informal providers were trained to make this shared care optimal 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.

Scenario 4: Generous, Empathic, and Helpful

The 2020s saw accelerated change in attitudes, economics, and policies. There was no federal effort to raise the minimum wage nationally, even though many cities and states were on track to reach \$15 an hour. Millions of jobs were lost to automation by 2020. Tax reform benefited the wealthy. Wages grew little, while many of those still getting paid work were being shifted jobs to piece work or consulting on the “gig economy” (with no employee benefits). The Affordable Care Act was reformed and millions lost access to health insurance, and the cost of insurance for those who maintained coverage kept rising.

These changes heightened a deeper value shift in the U.S. that had been growing in the 2010s, toward more empathy, equity, inclusion and sustainability. This was visible in all generations, but particularly by millennials as they were entering leadership positions. Mississippi’s historical values of generosity, empathy and helpfulness between neighbors broadened to focus on equity and inclusion, overcoming historic socioeconomic and racial inequities and segregation.

Across the country voters changed who they elected and in turn policies were transformed in the 2020s. There was significant policy change in taxation, education, public safety and justice, the environment (including combating climate change and reducing emissions), immigration, health care, human services and a national minimum wage. Health care moved to a single payer model – “Medicare for All”. The national minimum wage grew to be a living wage in the 2020s. And pay protections for gig workers were put in place. Those who had paid work were getting more, but unemployment grew. For those with little or no income, income support programs grew and it was recognized that they would not be “temporary”.

Low income families and communities also worked to enhance their self-sufficiency, aided by the right kinds of technology and community integration. Technology advanced to support equity and sustainability in energy, food, local manufacturing, and low-income housing. This included highly productive in-home and in-community food growing, local manufacturing (3D printing) of many home goods and electronics, and low-cost energy. Local materials were fed into 3D printers to produce the components for rapid construction of quality, lower cost homes. Low cost solar and other renewal energy as well as in-home and in-community energy storage was widely installed in Mississippi communities. These were effectively “abundance advances,” that lowered the cost of living. Policies promoted the spread and use of these; for example, providing incentives to landlords to install and use low cost energy and share the savings with their tenants. Human service workers supported low income families in the effective use of these advances, although Mississippi had an agricultural and home growing history that reinforced this trend. And in some areas the state had a lead: Mississippi universities were pioneers in areas of large scale hydroponics and they supported these developments in communities.

Human services shifted towards a wellness model, addressing the physical, mental, and emotional well-being of individuals and families. Human services became more integrated, automated, efficient and effective. And it added new functions, like helping individuals and families to identify and pursue their

meaning and contribution through volunteering, caring for children or elders, and other activities; to use “abundance advances” effectively; and to increase their financial capabilities.

Human service programs were coordinated across Federal, State and City/County levels, with accelerated eligibility determination and enrollment, data integrated across agencies and sites (e.g. school, work, medical care; and across state and federal programs) 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.

Navigators help clients find what they need in very timely ways. Many of these navigators were virtual, though there were always qualified human workers available as well. Integrated service teams formed around clients and included the client, their family and friends.

Many human service tasks were automated. Human service workers specialize in providing human touch when needed and in doing quality assurance for the automated services. For employment training and services, human service providers worked with local employers to forecast job automation so they could match clients with jobs that won't disappear because of automation.

Aging Services 4

Aging services accelerated its movement towards more integrated, customized, and generative services. Data integrated across various aging and other human services to address housing, nutrition, health care, and overall well-being.

Fostering senior activity and nutrition was a major focus for most communities. Formal, informal, and virtual senior centers all grew - integrating senior services into libraries, schools, churches and other settings and engaging multiple generations. Seniors shared and traded services, time and goods. This included assisted living services, in-home care services, light house cleaning; as well as seniors providing baby-sitting, tutoring or mentoring kids, and other services.

Senior group living and co-housing grew steadily, as did “smart homes”. Smart home features play many roles- a friend, bookkeeper, secretary and counselor. Many smart homes supported in-home and community food and energy production.

The successor devices to smart phones in the 2020s had very effective and affective personal guides and counselors and linked with home applications. Smart hearing aids and language translating tools translate across languages but also enhanced the volume and clarity of words, schedule appointments and communicate with doctors’ offices and arrange transportation.

Universal design became widespread in the 2020s; all new developments, multi-unit housing, and many individual homes, were wheelchair accessible and community facilities are designed to be accessible for all. Transportation to and from senior activities was made easier as self-driving car services became ubiquitous and inexpensive.

Health care evolved, improving in quality and its success in extending healthy years. Treatments that slow the progression of diabetes and Alzheimer's were discovered and were by Medicare for All. Much elder health care is delivered remotely or in virtual space. Prevention, senior activity and healthier living, enhanced personal contribution and meaning, and medical advances led to healthier elders who delayed the frailty and disability of their final years.

Meals on Wheels was cut during between 2017 and 2021 but rebounded in the 2020s. These programs 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 health care data) and used locally produced food.

Employment services for the elderly focused on training, often virtual, for jobs not likely to be automated.

Elder abuse and neglect declined, though some remained, with the enhanced income support payments providing additional targets for financial abuse. Aging protective services used predictive analytics and integrated data (from health care, police, schools, other human services) to anticipate potential abuse and neglect.

Behavioral Health Services 4

Behavioral health issues and care evolved through the 2020s. The societal value shifts toward inclusion and equity touched many low income and marginalized communities – removing some of social isolation they felt.

Mississippi continued and expanded efforts towards ensuring all members of the community had a “meaningful day”. This proved particularly helpful for those living with a behavioral health disorder. Meaning took on different forms – employment, volunteering, learning, etc.

It became more acceptable and common to seek and receive behavioral care. Health care providers gave behavioral care parity with physical medicine and in the 2020s ultimately universal access to health care was put in place. Technology significantly accelerated behavioral care; effective virtual counselor software developed and used by leading health care providers proved to be very successful in the 2020s. Medical records evolved to include each person's genomic information. Epigenetic research used large knowledge bases to identify associations between genes and the environment and behavior. This enhanced behavioral care protocols. Better understanding helped prescribers have much more accuracy with prescribing appropriate behavioral health medication. And for some behavioral health conditions affected by single genes, effective genetic interventions were proven successful.

It was shown that optimizing key environmental factors, such as pre-natal nutrition, early life stress (avoiding Adverse Childhood Experiences) and optimal exercise patterns in children could enhance health and affect all stages of life. With privacy and discrimination protections in place, human service providers used predictive analytics to both identify people at risk and to triage their efforts.

Community mental health centers virtualized and the physical centers served largely as an outpatient treatment for behavioral health or substance abuse. Overall, there was a reduction in the need for state service delivery sites.

Special homes for adults with behavioral health issues evolved with special 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.

Some severe mental illness and intellectual and developmental disability remained, though it was reduced. The State Department of Mental Health continued to provide services for those whose need exceeded the health care system's level of care. DMS continued their efforts to assess, treat and keep those with severe need in their community settings; optimizing wraparound services; and supportive housing using appropriate advanced technology in the homes.

Children, Youth and Family Services 4

The state's Gen+ approach proved successful and expanded. Workforce development and education were key components. The state, and in particular the Delta, was reinvigorated with a revamped Workforce Innovation Opportunity Act. Employment training was optimally matched to client's skills, knowledge and capacities. Agencies also worked with local companies to forecast which jobs would be around, grow, or be lost to automation. Employment training and retraining were enhanced with virtual reality training and integrated with high schools and community colleges.

Specific sectors of growth were identified regionally across the state, and the population was trained accordingly. Programs like Teach for America expanded and more quality teachers were brought into, or remained in the state. Businesses were attracted to the flat and relatively inexpensive land of the Delta. The minimum wage increase to a living wage enabled workers to remain in the state or attracted others to come to Mississippi.

For child and family services data was integrated across many agencies. During home visits, human service workers could access the history of the family's enrollment in services and check if they should be receiving other services. Data sharing systems had effective firewalls, secure encryption and built in privacy and discrimination protections that respected families.

The Gen+ strategies focused on preventative measures and addressing root causes of child and family crises, such as substance abuse. Data enabled predictive analytics to identify at-risk children and intervene early, helping to keep more children in their homes. Each case was addressed with a customized plan, specific to children and family members. Health care and human services developed meaningful partnerships with schools, public safety, and employers. These strategies proved impactful across the state in addressing poverty and racial injustices.

As child abuse and neglect was reduced, the need for foster care was reduced. There were more resources helping children stay in-home or with family members in healthy environments. Families were more willing and able to take foster kids into their homes.

The child care subsidy funding was reduced during the late 2010s, with some cities and states stepping up to fill some of the reductions. In the 2020s, funding returned so that early childhood services, such as Head Start and Pre-K, were made universally available. The impact of these programs on child development and preparation for school was enhanced by better teacher/child care provider training and widespread use of effective learning technology, such as tablet-based learning programs.

Disability Services 4

Disability, or its impacts were reduced, driven by: reductions in drug use, consistent pre-natal care; better genetic screening; slowing or reversal of chronic diseases, particularly diabetes, arthritis and Alzheimer's; and safer and healthier work places and work styles. Yet disabilities and disparities in disability levels along racial, ethnic and income lines persisted, even as awareness of these disparities furthered efforts to reduce them.

Health and human services 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 which increased the number of people who sought and received care. Physical and mental services were customized for each person with a disability, and they were better guided through a continuum of care providers, including public agencies and non-profits.

Data integration helped care givers understand genetic proclivity or environmental promoters of disability among family members and could do predictive analytics to optimize the services they provided. 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. Target areas, or identifying areas of greatest needs and placing resources in these areas, was driven by data analytics.

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

- Self-driving cars enhancing 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, reversal of diabetes and Alzheimer's and vision and hearing restoration was available for many.

- As the medical advances were proven effective and safe, and their initial costs dropped, they were covered by Medicare for All and Medicaid.
- Diseases such as sickle cell disease, fragile X disease, retinitis pigmentosa, and others which are due to an abnormal gene, became treatable or preventable. There was also progress in treating conditions caused by gene duplication, such as Down Syndrome. Treatment for additional genetic diseases such as schizophrenia, type 1 diabetes, and other chronic diseases evolved (likewise for cancer care).

Human service agencies provided some services directly and helped families chose among providers or vendors.

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 use the home management functions, do home food production, and use virtual reality to network, learn and get some of their health care. Health care and human service agencies help support the social enterprises that develop and manage these homes, providing property management, cleaning, home health care aides (equipped with language translation and speech augmentation earpieces), and other services needed.

Housing Supports 4

Mississippi was intentional about encouraging home ownership, particularly as there was greater income stability between the living wage, pay protection for gig workers, and higher income support payments for those without paid work. Efforts included programs to match savings for mortgages; lower cost home construction, including 3D printing of components, tiny homes, and accessory dwelling units. Home ownership was a symbol of pride and self-reliance across the state. These efforts achieved greater equity in home ownership in the state by the 2030s.

There were several different approaches to allowing small housing units to be built on large pieces of land. There were some tax incentives to allow landowners to build and allow people to live on their property. Families that had long owned land were encouraged not to sell their properties, but to share their land with others. This sometimes involved those living on the land to contribute through food growing or other efforts.

Housing and home ownership efforts varied across regions of Mississippi. For example, in the coastal areas there were increased efforts to rehabilitate homeless veterans and create shared living spaces.

Churches shifted some of their missionary and charitable efforts away from foreign countries and focused on Mississippi and local needs. They took on more emergency and ongoing support efforts. Churches fostered equity and inclusion, including support mixed income neighborhoods; and interfaith efforts.

Local regulations changed to allow more secondary dwelling units built onto homes or in yards; and to allow more unrelated individuals in housing. Housing and housing services personnel worked with other

agencies and the community to get existing, better-off, residents to welcome the new arrivals. While there were objections in some communities, the increased commitment to inclusion and equity led most neighbors to support this greater density in the neighborhood.

State and local governments provided incentives and regulations to have landlords or utility companies install low cost energy production and storage and pass the savings on to renters.

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 a self-sufficiency matrix to assess needs and identify best, case-specific plans of action for each person/family.

Homelessness was reduced because of more consistent work with higher minimum wages, better income support for those not employed, higher income support payments, 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.

Income Supports 4

After reductions during the 2017 -2021 Administration, Federal funding for income supports rose and allowed states greater flexibility and ability to coordinate across programs. Mississippi continued to use Self Sufficiency Matrix tools to access need. In the 2020s work requirements for accessing income supports were reduced and broader education or training as well as volunteer efforts were allowed.

In the 2020s the EITC was affected by the rising minimum wage and cost inflation which disproportionately affected 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.

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 credit.

SNAP and other nutrition programs rebounded in the 2020s; expanding their incentives to buy fruits and vegetables, particularly from local sources. Community food production increased and food insecurity decreased.

TANF payment levels expanded, as did the length of time they could be received. "Temporary" was removed from the program's name as it became Aid to Needy Families (ANF).

Training continued to focus on jobs that were not likely to be automated and jobs that had been created as technology advanced. Job training was customized across the various regions of the state. Training

also focused on how to increase family self-sufficiency by making effective use of the various abundance advances. Mississippi continued to use the CSGB Roma Self Sufficiency Matrix to assess needs of the individual and their family.

The Mississippi Division of Early Childhood Care and Development (DECCD) provided subsidized child care assistance to eligible, low-income parents to enable them to become and remain employed, and to empower parents to select quality child care that meets the needs of their family. The federal funding for this increased in the 2020s. Technology aided child care providers to optimize their learning programs for each child. The increased participation in the gig economy influenced child care as the largest support no longer came from the employer/employee relationship. The hours when parents needed child care also became more flexible as fewer parents worked 9 to 5 hours. Child care providers stepped up and provided care in more flexible hours.

End Notes

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 it has been happening and it will eliminate more jobs through the 2020s. As in past disruptions of this type, new jobs will be created. Some of these are identified in the sources below. And there will be teaming of AI and human workers (in 2017 the best chess competitors are teams of humans, without grand master chess champions and multiple computers, no supercomputer is often used for IBM's Watson. Yet the new jobs are likely to be far fewer than the jobs lost. For these human services scenarios, we have developed estimates across the scenarios, based on the references below. We have worked with human service experts to apply and check forecast for specific human service jobs as well. Here are highlights of the forecasts which indicate the range from which we developed the forecasts we are using in our scenarios.

- Within five years, robots and so-called intelligent agents will eliminate many positions in customer service, trucking and taxi services, amounting to 6% of jobs, according to a Forrester report. "By 2021, a disruptive tidal wave will begin," said Brian Hopkins, VP at Forrester, in the report. "Solutions powered by AI/cognitive technology will displace jobs, with the biggest impact felt in transportation, logistics, customer service, and consumer services." <http://www.cnbc.com/2016/09/12/ai-will-eliminate-six-percent-of-jobs-in-five-years-says-report.html>
- 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 16% of U.S. jobs, while the equivalent of 9% jobs (8.9 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: Forrester forecasts 8.9 million new jobs in the US by 2025.

<https://www.fastcoexist.com/3050428/robots-will-take-your-job-but-first-theyll-be-your-annoying-co-worker>

- 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 in the report “A Future that Works: Automation, Employment, and Productivity; Harnessing Automation for a future that works” <http://www.mckinsey.com/global-themes/digital-disruption/harnessing-automation-for-a-future-that-works>.
- An OECD policy brief “Automation and Independent Work in a Digital Age” forecasts that an average of 9% of jobs are at high risk for automation; these are jobs for which 70% of the tasks could be automated. <http://www.oecd.org/employment/Policy%20brief%20-%20Automation%20and%20Independent%20Work%20in%20a%20Digital%20Economy.pdf>.
- 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: transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%). For countries overall, the jobs at high risk of automation by the early 2030s are U.S. (38%), Germany (35%), UK (30%) and Japan (21%). PWC, Will robots steal our jobs? The potential impact of automation on the UK and other major economies, PWC UK Economic Outlook, March 2017, pg 30, <https://qz.com/941163/pwc-study-automation-risk-is-higher-for-american-jobs-than-for-workers-in-germany-the-uk-and-japan/>
- Oxford University researchers Frey and Osborne project about 47% of total U.S. employment is at risk for automation in the report “The Future of Employment: How Susceptible are Jobs to Computerization?” http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

New Jobs Created

- There will be new jobs created. The Forrester study cited above, and others, identify some of these: Forrester forecasts in the report “The Future of White-Collar Work: Sharing Your Cubicle With Robots” states that 9% of overall jobs (8.9 million) will be created.
- The cognitive era will create new jobs, such as robot monitoring professionals, data scientists, automation specialists, and content curators: Forrester forecasts 8.9 million new jobs in the U.S. by 2025. Forrester forecasts Artificial intelligence (AI) will be a \$47 billion industry by 2020. The top ten AI technologies are: 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.
- Gartner forecasts that by 2020, 20% of businesses will have workers that monitor and guide neural networks. (See “The Disruptive Power of Artificial Intelligence” <http://www.gartner.com/smarterwithgartner/the-disruptive-power-of-artificial-intelligence/>)
- IBM CEO asserts that ultimately AI will create jobs- including programmers, developers, and jobs that manage the relationship between AI and humans (See “IBM CEO says AI and automation will create jobs” <http://www.businessinsider.com/ibm-ceo-says-ai-and-automation-will-create-jobs-2017-1>)
- Forrester Research, a marketing research company, projects that 15 million new jobs will be created in the U.S. over the next decade, resulting from automation and artificial intelligence. The report explains that most new jobs will be in the fields of software, engineering, design, maintenance, support and training. Newly specialized lawyers will be needed to regulate the interaction between humans and robots, and new human resources positions in guiding staff as robots enter the workplace (See “This is how many U.S.

jobs robots will create over the next 10 years”, Jacob Passy for Marketwatch.com, <http://www.marketwatch.com/story/this-is-how-many-us-jobs-robots-and-automation-will-create-over-the-next-10-years-2017-04-04>

- Other future jobs include avatar designers, synthetic acting casting agents, roboticists, fluid interface engineers and programmable surface designers.

ii Developing low and very-low income 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 2020sⁱⁱ
- Use various combinations of these approaches to deconcentrate poverty.

iii The Universal Basic Income

The Universal Basic Income, also called the Guaranteed Annual 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. Conservative Charles Murray supports basic income to help keep the United States competitive during labor market transformation to robotics and

replace the current welfare program (see Murray, "A Guaranteed Income For Every American," <https://www.wsj.com/articles/a-guaranteed-income-for-every-american-1464969586>).

Support by liberals and conservatives offering different rationales. For example, some conservatives favor reduced government spending, eliminating duplicative programs and staff, through an effective way to reduce poverty (see The Atlantic, "The Conservative Case for a Guaranteed Basic Income"

<https://www.theatlantic.com/politics/archive/2014/08/why-arent-reformicons-pushing-a-guaranteed-basic-income/375600/>).

Basic income experiments have taken place across the world. In Canada and Namibia, both of their UBI experiments saw a reduction in poverty and other positive impacts such as increased graduation rates and decreased hospitalizations and teenage pregnancies. The Canadian province Manitoba piloted basic, minimum income- referred to as "mincome"- in the mid-1970s. Although the program was removed after a few years, it yielded positive results including higher rates of remaining in school, lower rates of hospitalization, and hardly a change in work rates (see Surowiecki, James. "Money For All". *The New Yorker*. N.p., 2016. Web. 7 July 2016). The amount of money recipients received was determined by need (see Lum, Zi-Ann. "A Canadian City Once Eliminated Poverty And Nearly Everyone Forgot". The Huffington Post. N.p., 2016)

Finland is currently piloting a basic income, which aims to cut red tape and reduce poverty and unemployment. (See, The Guardian, "Finland trials basic income for Unemployed," <https://www.theguardian.com/world/2017/jan/03/finland-trials-basic-income-for-unemployed>.)

There has been growing support in recent years as the forecasts for job loss to automation have grown. The projections for total job loss by roughly 2030 in the United States range from: 47% (Frey and Osborne), 38% (Price Waterhouse Cooper), to 9% (OECD).

While there are a range of levels that the UBI has been proposed e.g. \$10,000 income plus \$3,000 for health insurance, up to \$32,000 yearly in Switzerland; the level in this forecast \$12,000 yearly for adult citizens and \$4,000 per child is proposed by Andrew Stern (see Stern, Andy and Lee Kravitz. *Raising The Floor: How A Universal Basic Income Can Renew Our Economy And Rebuild The American Dream*. 1st ed. New York: Public Affairs, 2016. Print.)

Hawaii has become the first state to pass a bill in the houses of State Legislature towards a universal basic income (UBI) bill HRC89. Hawaii has experienced job declines in their agricultural sector and service jobs being automated. The bill sets up a working group to explore options for the state UBI, involving members from State House and Senate, director of human services, Chamber of Commerce and University of Hawaii's Economic Research Organization. This group will develop policy recommendations. (See, Vox, "Hawaii is considering creating a universal basic income", <https://www.vox.com/policy-and-politics/2017/6/15/15806870/hawaii-universal-basic-income> and Business Insider, "Hawaii just became the first US state to pass a bill supporting basic income" <http://www.businessinsider.com/hawaii-basic-income-bill-2017-6>).

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Basic Income Can Renew Our Economy And Rebuild The American Dream. 1st ed. New York: Public Affairs, 2016. Print.)

The costs of a UBI would be roughly 3 trillion yearly. Stern provides a “menu” to fund UBI (an income of \$12,000 for every adult, which would cost between \$1.75-\$2.5 trillion in federal funds each year. Add another \$296 billion when including \$4,000 for all those under 18)

- Ending all or many of the current 126 welfare programsⁱⁱⁱ, which cost \$700 billion in government and \$300 billion state government
 - Eliminating food stamps (save \$76 billion), housing assistance (\$49 billion), and EITC (\$82 billion)
- 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.
- 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 and financial transactions
- Wealth tax, a levy on the total value of personal assets, including housing and real estate, cash, bank deposits, money funds, stocks, etc.
- 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)
- 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
- Jerome Glenn shared an additional two sources for funding basic income:
 - Robot licenses and taxes
 - Universal minimum corporate tax.

Some advocates of supporting low-income populations criticize GBI/UBI as being too costly, and suggest enhancing existing approaches:

Bob Greenstein of the Center for Budget and Policy Priorities argues that: "The record of recent decades (in raising people out of poverty) ... points to an alternative course — pushing for steady incremental gains through available mechanisms, including means-tested programs, to provide as much of a floor as possible for Americans of lesser means. In 1967, the safety net lifted out of poverty only 4 percent of Americans who would otherwise be poor. Today, it lifts 42 percent of such people out of poverty, with programs like SNAP and the EITC playing crucial roles alongside Social Security. A multi-pronged strategy — working to start phasing in the Child Tax Credit with the first dollar of a parent’s earnings, substantially raising the minimum wage, extending affordable child care and rental assistance to many more families, enlarging SNAP benefits (as a Hamilton Project paper proposes), and strengthening Social Security benefits for low-income workers — would substantially strengthen the income

floors." See: Bob Greenstein, "Commentary: Universal Basic Income May Sound Attractive But, if It Occurred, Would Likelier Increase Poverty Than Reduce It", Center on Budget and Policy Priorities, September 18, 2017, <https://www.cbpp.org/poverty-and-opportunity/commentary-universal-basic-income-may-sound-attractive-but-if-it-occurred>.

Former Clinton Treasury Secretary Robert Rubin argues for enhanced federal jobs or job training programs rather than a GBI. There are high-needs areas across the state and people should be engaged in needed work such as caring for the elderly, and paid a living wage. In a NY Times article, Rubin explains "public employment should be viewed not as a social program but as a public investment with a high rate of return." He argues that basic income does not fulfill the desire people have to be productive members of workforce, in addition to being too costly. See: Rubin, R. (2017, November 8). Why the U.S. Needs a Federal Jobs Program, Not Payouts. The New York Times. Retrieved from <https://www.nytimes.com/2017/11/08/opinion/federal-jobs-program-payouts.html>.

And in California advocates argue that using the means-tested, targeted expansion of the Cal EITC would be more effective, more affordable, and more likely to be achieved. EITC has the information to determine eligibility from tax forms, and expansion would be less costly than administering a new program. Additionally, "providing income through a state tax credit would prevent the payment from being reduced by federal income tax". See: California Budget and Policy Center, California Already Has a Basic Income Policy – It's Called the EITC and It Should Be Expanded, November 1 2017. <http://calbudgetcenter.org/blog/california-already-basic-income-policy-called-eitc-expanded/>.

iv Abundance Advances

Technologies that can help families and communities meet some of their basic needs and increase self-sufficiency are arriving and will become more widely used in the 2020s. These include technologies for low cost energy and storage, food production, and 3D printing of home goods, electronics, and even homes.

Low cost solar energy production and storage is likely in the 2020s. There are many potential avenues for this. Some solar cell technologies are nantennas, kerovskite and perovskite materials that will provide highly effective solar cells. Battery storage costs are decreasing, and are projected to continue to become less expensive (see, <http://reneweconomy.com.au/tesla-already-forcing-down-battery-storage-prices-in-australia-57681/>). Other forms of sustainable energy may develop as well, e.g. small scale cell fusion that produces low cost energy from sources in water may become available (see, University of Gothenburg in Science Daily, <https://www.sciencedaily.com/releases/2015/09/150925085550.htm>).

3D printing of goods may disrupt global supply chains and allow local and customized production of goods, often using sustainable and upcycled materials. This can include for better prosthetics and implants (see, United States Food and Drug Administration *Medical Applications of 3D Printing*, <https://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/3DPrintingofMedicalDevices/ucm500539.htm>). 3D printing of homes and multiunit buildings has already begun.

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. Cultured meat is progressing in taste and affordability and

may be a sustainable and accessible source of producing protein. Impossible Foods (<https://www.impossiblefoods.com/>) is one of several companies that are producing fully plant-based meats and cheeses. Futurist Thomas Frey after reviewing these developments forecasts that “by 2025 industrial grown meats will become the world’s cheapest food stocks” <http://www.futuristspeaker.com/job-opportunities/the-coming-meat-wars-17-mind-blowing-predictions/>

See also, Peter Diamandis and Steven Kotler, *Abundance: The Future is Better Than You Think*, 2012, New York, Free Press; and K. Eric Drexler, *Radical Abundance*, 2013, New York, Public Affairs