The American generation known as the Baby Boomers entered what many consider older adulthood 2 decades ago. Born between 1946 and 1964, by the year 2000 the oldest of the Boomers were well into their 50s. Just as in their earlier life stages as children, employees, parents, and consumers, there was a public focus on anticipating this cohort’s next move. With overwhelming numbers, buying power, and attitude, what would they want, need, and demand in older age?

Many observers forecasted that the aging of America’s seemingly forever young generation would result in metaphorical socioeconomic storms, tsunamis, and quakes. Despite these countless dour forecasts, optimistic tones also emerged. Technological advance had been the hallmark of this generation’s experience and coming of age. From innovations in household appliances, color television, the space program, music on the go, personal computing, and telecommunications to the Internet boom that was happening just as they entered their later stages of midlife, technology had always been a mainstay of their lives: why not in older age?

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Over the last 20 years, there has been significant progress in developing technology to improve the lives of older people and those who care for them. The development and application of technology to improve the quality of life of older adults has evolved in waves, each with a different emphasis. No wave totally recedes, but priorities, as well as the roles of government, business, and the research community, continue to evolve.
might address the safety and medical needs of older people and those who care for them (Intel, 2010). “Smart: technology was applied to older age, producing a wide range of experimental and prototypical smart homes that could monitor an older resident’s behavior and well-being; smart devices to ensure medication adherence; smart shopping carts to guide healthy food choices; and the birth of a generation of smart wearables. Generally, researchers, industry, and government continued to define the intersection of aging and technology as an opportunity to better monitor and manage the physical health and safety of older adults. Private investment sought to develop products that were responsive to health insurance payers: for example, Medicare and Medicaid, as well as private health insurers.

Wave 3: Aging as Economy

Technology and aging is now in a third phase. While the previous waves of emphasis have not waned, aging is now seen as an opportunity to respond to the wants, as well as needs, of older adults. This author (in 2017) and others have defined the older adult market as an entire “longevity economy,” with buying power in the trillions of dollars (AARP, 2019; Coughlin, 2017). Older adults and their family caregivers are now viewed as a consumer market with wants, not just needs and problems to be solved. Rather, many researchers and organizations view aging as a global opportunity to be realized and, as such, are increasingly integrating older consumers into technology and services development. Aging and technology has garnered an entirely new set of names used by both researchers and private sector investors: agetech, gerontech, eldertech, silvertech, agingtech, and so forth. Government funding remains primarily focused on aging as a health and disability challenge, although some funding is now available in areas such as transportation. While still evolving, the private sector is placing unprecedented focus and investment in aging as an emerging market and potential source of regional development. Businesses such as Amazon, Bank of America, Best Buy, CVS Health, The Hartford, Transamerica, and Walmart have all invested in serving older consumers and family caregivers alike. Networks, such as Aging 2.0, along with venture capital, are seeding and cultivating countless start-ups and incubators. From Boston to Louisville to Silicon Valley, business leaders, governors, and city mayors are competing to transform aging from a policy problem into a driver of regional economic development. And recently, even entire investment funds leveraging the demographic trade winds have emerged.

Perhaps the most dramatic development in this third wave has been how, during the COVID-19 pandemic, technology has become the new toilet paper. Research conducted by the Massachusetts Institute of Technology AgeLab indicates that while consumers rushed to stores to buy necessities in anticipation of the pandemic, they also scooped up technology: not simply the niceties, such as streaming to ride out quarantine, but as a necessity. Technologies that ensured communication, safety, and security became new preparedness priorities (Massachusetts Institute of Technology AgeLab, 2020).

Technology has become the new toilet paper.

Significant progress has been made in exploiting the power of technology to improve the lives of older people over the past 2 decades. While aging and technology has greatly expanded beyond mere ergonomics research questions and gained the attention and investment of the private sector, there is much more to be done. Stakeholders in aging and technology, specifically the federal government, major corporations, and research funders, must now introduce a fourth wave of technology and aging: policy to ensure equity and inclusion. Science fiction writer and cyberpunk icon William Gibson observed “that the future is already here, it’s just not evenly distributed yet” (Gibson, 2012). Technologies and tech-enabled services are rapidly developing and offer the potential for people to live longer, better. However, making aging better for everyone must be not only an avenue for profit, but a fundamental policy objective.

Wave 3. Equity & Inclusion

To address the fourth wave of technology and aging, government should serve as an agenda-setter, making issues of equity and inclusion part of a broader national agenda for businesses, nonprofits, and researchers alike. Government may also play a more traditional role as regulator, ensuring that policies are enforced to achieve public good. And in some instances, government will even be a buyer of technology and technology-enabled services to guarantee a technology social safety net for all while addressing market failure. Below are five dimensions of technology and aging equity and inclusion that should be addressed by the next administration, although it is not an exhaustive list by any means.

Make Broadband Like Water

Access to broadband is critical to accessing the full potential of technology in an aging society. Broadband is the new water. We cannot imagine a home without water or electricity, nor should we accept a home without broadband. Recent experience with COVID-19 demonstrates that Internet connectivity is crucial to health, employment, education, and social welfare. Many rural areas, particularly those regions where native peoples live, lack access to broadband (Pew Research Center, 2018). Moreover, even those rural areas that claim access
to broadband share a problem with many lower-income urban areas: insufficient speed (Sequist, 2020). Most businesses and nonprofits and many government agencies now take for granted that consumers and citizens have full access to high-speed broadband, making it essential for full technological inclusion. In some regions, government may have to subsidize access or require broadband providers to ensure high-speed access as the cost of accessing larger, more lucrative markets.

Establish a Smart Buyer

Technology and tech-enabled services are emerging rapidly. While some of these innovations are from established global brands, many of them are from unknown start-up companies. Despite the explosion of innovation, there has not been an equal growth in information available to consumers. Currently, there is market failure for technology and aging products and services. The consumer does not have a smart buyer or advisor to turn to. If a device does not qualify as a health device, there is no “seal of approval” attesting to its performance, which may be relied upon by the most frail among us. There is no central location to learn what is possible and available, let alone what to purchase. Moreover, even if there were such a place, there is no trusted validation of the various applications that may be available or the interoperability of such a system with existing devices that may already be in the home. The federal government should consider incentivizing industry and researchers to establish a public-private partnership to maintain an inventory of available systems and services, to test and validate performance, and ultimately to serve as a podium to advocate for technology and aging that includes health applications but extends well into all domains of life.

Ensure Affordability

Perhaps the most obvious barrier to technology and aging equity and inclusion is affordability. While all products and services eventually become more affordable as they are adopted by consumers in large numbers, all levels of government should endeavor to leverage their mass procurement power to lower costs and improve access to technology. For example, housing authorities might consider purchasing and installing technologies into affordable public housing and community developments. Massive procurement by public agencies would not only enable access to technology for lower-income groups, but would accelerate market forces to ensure more affordable products for all.

Establish Safeguards

Technology offers great potential to improve the lives of older adults. It also exposes older users and their families to significant threats. From false claims of device and service capabilities to hacking and fraud, older people, as well as their caregivers, must be provided with effective technical protections, as well as stringent criminal penalties for those that would prey on the most vulnerable.

Government will have multiple roles in shaping the future of technology and aging. At any given time, policymakers may choose to have government steer, lead, or partner. Policy-makers may find that government’s role be best for steering private-sector attention and investment into those domains that are in greater need of innovation, but are not necessarily of immediate business interest (e.g., caregiving). Or government may serve as the buyer of technologies, to ensure access to technology by communities of color, those with lower incomes, and/or older people disadvantaged by geography. Ultimately, because the challenges and opportunities of technology and aging are far greater than any one industry, public agency, or nonprofit can muster, government action may serve to catalyze partnerships to foster technological equity and inclusion. Regardless of the role taken, the near-term priority for all stakeholders should be to ensure that the vast benefits that technology can offer are accessible, affordable, and acceptable to all.
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