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CENTER FOR
THE FUTURE OF AGING

AGE-FORWARD CITIES FOR 2030

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Foreword by Paul Irving



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These activities are designed to help people build meaningful lives, in which they can experience health and well-being, pursue effective education and gainful employment, and access the resources required to create ever-expanding opportunities for themselves and their broader communities.

ABOUT THE CENTER FOR THE FUTURE OF AGING

The Milken Institute Center for the Future of Aging promotes healthy, productive, and purposeful aging. The Center focuses its efforts in three priority areas: Age-Forward 2030, the Business of Aging, and Healthy Longevity.

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FOREWORD

A massive shift is taking place in the makeup of the world population, and societies are already struggling to cope. By 2030, more people worldwide will be over the age of 60 than under 10.¹ Realizing the benefits of an older population—while addressing the difficulties and realities—will be one of the great human challenges of the 21st century.

Cities are ground zero for the demographic shift—eight in 10 US residents 65 and older already live in metropolitan areas,² underscoring the need to view population aging with the same sense of urgency as climate change, public safety, homelessness, or any major urban priority.

Healthy aging means living a long, productive, meaningful life and enjoying a high quality of life.³ Research demonstrates that older adults who adopt healthy behaviors, use preventive health services, and are involved with their family, friends, and communities are healthier and more independent.⁴

Aging in a healthy way is closely linked to older adults' physical, social, and economic environments, and where one ages is a key determinant of how long she or he will live.⁵ Many Americans expect to celebrate birthdays well into their 70s, 80s, and beyond, but not everyone is experiencing longer lifespans. A widening longevity gap across cities and regions poses troubling questions about how health, prosperity, and environment make an uneven impact across the social landscape. In fact, a difference of 20 years separates US counties with the longest and shortest typical life spans based on life expectancy at birth.⁶ Globally, a similar gulf exists between longer-living countries like Japan and India.⁷

To narrow the longevity gap and promote purposeful, productive, and healthy aging, cities can take the lead to integrate older adults into policies and planning across multiple domains.

Aging is Diversity

The shifting age demography is an unavoidable hurdle in nearly every aspect of urban life and demands new ideas—from health system pressures and an increasing need for services and supports, to the disproportionate impact of climate change on older populations and the economic impact of gentrification on neighborhood stability.

A one-size-fits-all solution is not the answer. Older adults are as equally diverse as the younger population and are a major—albeit complex—driver of economic expansion. Adults over age 60 are expected to account for about half of urban consumption growth by 2030⁸—but that figure includes those experiencing economic stress. By age 65, approximately 40 percent of middle-class Americans will fall into poverty or near poverty.⁹ For that reason, older adults are working later in life than earlier generations and seeking employment beyond traditional retirement age, but often face ageist bias and high unemployment rates in the fastest-growing US cities.¹⁰

Finding solutions to the urban challenges of an aging population is a complex issue, particularly because older adults can span from healthy, active, highly-productive members of communities to needing assistance with daily living, being homebound, or living with life-limiting illnesses like dementia.

Slow to Respond

The enormous challenges and opportunities of population aging require leaders to recognize positive aging as an overall community benefit. Mayors of US cities rarely mention older adults in their policy pronouncements and priorities. Speaking frequently about economic growth and development, they overlook the interconnection between their aging communities and their cities' economic health and sustainability.¹¹ They often fail to harness compelling opportunities at the intersection of aging, urbanization, and inclusiveness.¹²

While many cities are making notable strides (this report highlights efforts worth emulating), the stakes are high and the overall response to the demographic shift is just beginning. The Milken Institute Center for the Future of Aging challenges cities and their leaders to move aging to the top of their policy agendas.

Forward to a New Decade

In 2012, 2014, and 2017, the Center for the Future of Aging published the "[Best Cities for Successful Aging](#)" report, which uses metro-level metrics to assess and rank US cities' progress toward positive environments for older adults.¹³

The objective is to spur virtuous competition among cities to improve conditions for aging Americans and elevate this crucial societal priority. The "Best Cities" publications have drawn substantial attention in academic, policy, and media circles and have led to a number of local and regional policy initiatives.

In 2014, the Center launched the [Mayor's Pledge](#), encouraging civic leaders to commit to purposeful, healthy aging. Two hundred eighteen mayors from every US state are pledge signatories.¹⁴

While the Center for the Future of Aging is proud of its work, much more can be done. Society must push harder to encourage action and see faster change. Building on "Best Cities," the [World Health Organization's Global Network of Age-Friendly Cities and Communities](#), and the [AARP Network of Age-Friendly States and Communities](#), the Center presents an ambitious vision for a better future of aging: "Age-Forward 2030."

Why 2030? The next decade will not only see an extraordinary demographic change, but also unprecedented advances in technologies and medicine, and cultural and societal shifts that would have been unimaginable to generations past.

By 2030, about three out of every five people across the globe will live in cities, and older adults will generate over half of all urban consumption growth in developed countries. Artificial intelligence, robotics, and automation will displace millions of workers at a time when an increasing number of older adults need and want to remain in

jobs longer. Caregiving needs and a shortage of direct care workers will challenge communities across the world. Climate change will elevate the risks of natural disasters that disproportionately threaten older populations.

The United Nations 2030 Agenda for Sustainable Development seeks to define new goals for people, the planet, and prosperity, and the World Health Organization (WHO) declared this the "Decade of Healthy Ageing."

Against this backdrop, Age-Forward 2030 challenges cities and communities to prepare for a new era of economic growth, inclusion, and resiliency. It seeks to meet city leaders where they are today and implores them to focus on the realities of tomorrow. It is a call to action to create a better future for all residents, investing in solutions that deploy the human and social capital of older adults as community assets, change agents, and co-creators.

Our goals? We seek to highlight new ideas and best practices and to galvanize conversation and action to promote shared prosperity. We want to be a resource to those building cities and communities that are vibrant, inclusive places to live for all ages. We hope that Age-Forward 2030 will inspire action and change.

—PAUL IRVING

*Chairman,
Milken Institute Center
for the Future of Aging*

INTRODUCTION

How We Grow, How We Build, How We Care

Age-Forward 2030 was developed with the guidance of nearly 150 subject matter experts on aging, public health, urban planning, and related issues. This Age-Forward 2030 report focuses on three priority areas for city and community commitment and action:

- **Age-Forward Economic Development: How We Grow**
Economic development strategies can keep older adults engaged and help underserved communities flourish. Plans should include age-friendly commercial districts and housing, accessibility, and relevant services, along with job creation and workforce opportunities for older workers, support for older entrepreneurs, and investment in industries that serve older adults.
- **Age-Inclusive 21st Century City Design: How We Build**
By focusing on the built environment where people live, work, play, and pray, age-inclusive cities boost well-being across the life-course through features such as neighborhood design and amenities that encourage walkability, intergenerational public spaces, comprehensive transportation networks, street and home safety, affordable and accessible housing, and flexibility for multigenerational housing and accessory dwelling units.
- **Resilient Networks for Healthy Aging: How We Care**
Interconnected and cross-sector collaboration that fosters healthy aging can enable older residents to withstand physical and economic shocks and unanticipated events, and stay connected to and engaged in their communities. As populations age, incentives must align to create person-centered, integrated care for older adults, especially for those who are marginalized and have complex needs.

The Age-Forward 2030 report proposes 18 recommendations for city and community leadership. These recommendations are categorized under three principal themes, indicated by the icons below.



Including and prioritizing age-diversity in local equity and inclusion planning to improve the physical, financial, and civic health of urban communities for older adults



Leveraging data and technology to better understand the needs and desires of aging populations and to enable connection to improve health and productivity



Engaging public-private partnerships to integrate population aging into strategies for economic growth and resiliency

Delphi Survey Methodology

Our Age-Forward 2030 experts provided input and ideas through the Delphi survey method. This three-round exercise maps future trends by systematically combining opinions and educated guesses from a diverse group of influencers from government, academia, nonprofit organizations, and the private sector.

The first Delphi survey round included a web-based survey that asked our survey participants to rate the likelihood of trends in their areas of expertise. While these trends are uncertain, our objective is to ascertain whether a particular trend appears to be more or less likely and whether there is agreement or disagreement in the expert community. Participants were also asked to rank particular policy priorities concerning their importance for aging populations, again seeking to learn if there is expert agreement on these priorities or whether a topic is subject to debate.

The experts received 12 questions (rankings and likelihood projections) and one open-ended short-answer question: “What are the most critical policy interventions that city leaders should prioritize between now and 2030 to better prepare for the future of aging?”

Figure 2 represents the breakdown of the experts’ responses to our open-ended question. Solutions identified by participants were coded across several categories in accordance with the experts’ priorities.

The chapters that follow integrate the survey results and expert insights and reference the approaches some cities are taking to address the realities of changing urban demography. The Center for the Future of Aging looks forward to furthering ideas, collaborations, and actions to improve lives in the critically important decade to come.

FIGURE 1

Profile of Participants: 146 participants completed the survey from the following sectors:

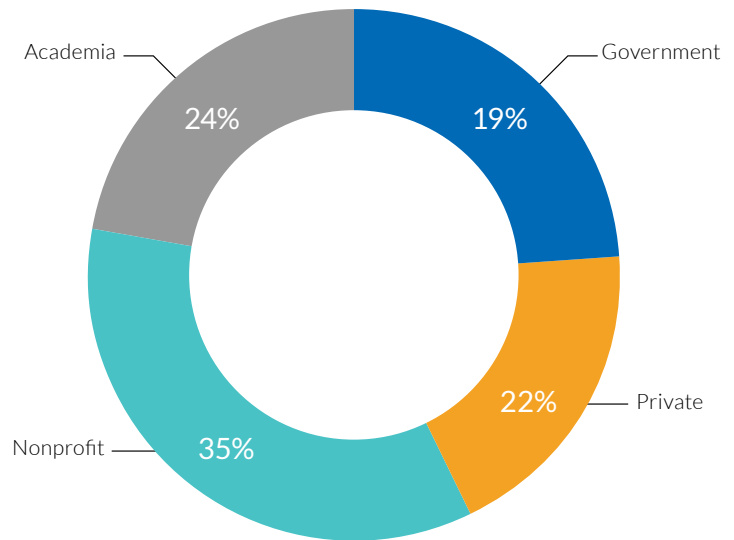
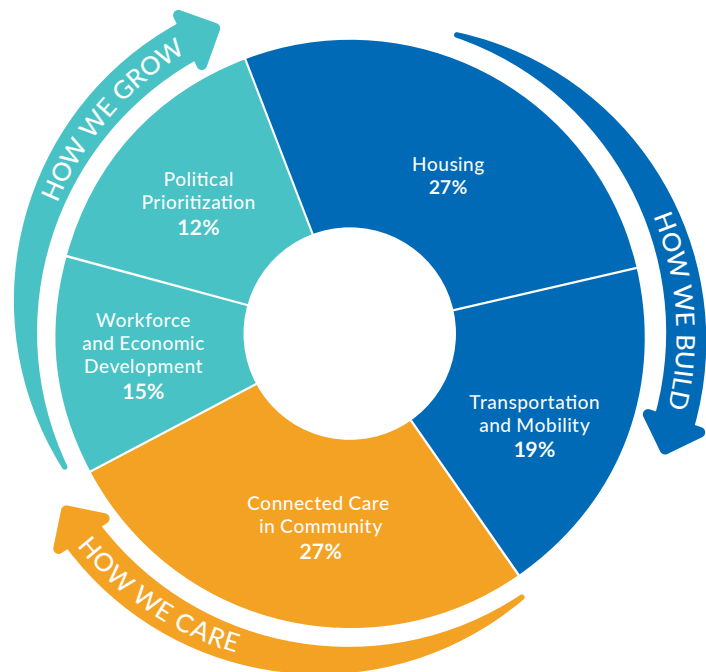


FIGURE 2

Experts Identify Policy Priorities for 2030



CHAPTER 1. Age-Forward Economic Development: How We Grow

FORECASTING 2030

OPPORTUNITY:

The 60+ population will generate [over half](#) of all urban consumption growth in developed countries between 2015 and 2030.¹⁵ By 2050, the global population over age 60 will have doubled.¹⁶

CHALLENGE:

Between 75 million and 375 million people may need to switch occupational categories by 2030, according to [McKinsey's rapid automation adoption scenarios](#). However, more than half of workers over 50 will lose long-time jobs before they are ready to retire,¹⁷ and they are much more likely to wrestle with prolonged joblessness than younger counterparts.¹⁸ By 2030, the US will also need an estimated 3.4 million direct care workers to provide long-term services and supports, a 1.1 million increase over the 2.3 million in these jobs in 2015.¹⁹

GOAL:

Focus on urban economic growth planning that helps underserved communities flourish by creating jobs, developing the workforce for older workers, supporting older entrepreneurs, and prioritizing industries that serve older adults.

Integrating Older Adults into Urban Economies

Mayor Steve Benjamin of **Columbia, SC**, calls older residents his city's "perennials." Stable and skilled, they are the demographic "opening the most businesses and funneling the most money into our nation's economy," he said in his 2019 State of the City address.

His comments highlight older adults as a natural resource whose experience and knowledge power thriving cities. "Conversations on livability don't just affect how well a city is prepared for an aging population; they discuss how a city can attract the experienced class as well," said Benjamin.²⁰ Cities must highlight and incorporate these tandem priorities into a comprehensive strategy for a sustainable urban future.

Although often overlooked in 21st century culture, the growing cadre of older adults is vital to the urban economies where they have invested their lives and labor. When cities prioritize their participation, older residents become resources for civic, business, and educational life. Their consumption—be it for grandchildren, pets, or a wide range of products and services—fills tax and retail coffers. Their support of symphonies, galleries, and theater enhances lives for all. These "perennials" heighten economic vitality:

- **As drivers of consumption growth:** People over 60 are expected to generate annual consumer spending of \$15 trillion globally by 2020.²¹
- **As service-job creators:** Aging is a job-creating juggernaut, with home health aides and personal care aides, the third and fourth fastest-growing occupations in the US, projected to grow 41 percent between 2016 and 2026.²²
- **As market shapers:** The older population's size drives market innovation in housing, health, technology, and other sectors.
- **As employees:** Workforces depend on older workers, yet nearly two-thirds of US workers say they have seen or personally faced discrimination based on age.²³
- **As a human capital resource:** Civic engagement and volunteerism are built on the backs of older adults. Nearly a quarter of people 55 and older volunteer in their communities, service valued by the Corporation for National and Community Service at \$77 billion a year.²⁴
- **As family caregivers:** More than half of unpaid US family caregivers are over age 50.²⁵ Unpaid caregivers' work nationwide is valued at nearly \$500 billion a year,²⁶ while older adults also are the job-creating engine for the ranks of paid caregivers.
- **As support for working parents:** More than 2.5 million grandparents take care of grandchildren who live with them—in many cases making it possible for parents to work.²⁷

A parallel reality, however, cannot be ignored: Age inevitably creates challenges and infirmities. Needs for accessible housing and transportation, and health and home care change and grow with age. Statistics project a dramatic rise in the need for caregivers and services as the baby boomer generation ages.

The Age-Forward Cities perspective recognizes these two faces of aging and prioritizes economic opportunities that will build sustainable urban futures. This vision fosters intergenerational engagement and opportunities for older residents to enhance the coming decades through productivity, engagement,

and purpose. It promotes age integration across urban domains, a priority that has never been more relevant as cities address changing demographics, economic volatility, environmental pressures, and new social dynamics.

The JPMorgan Chase Institute analyzed shares of consumer spending in 15 major US metro areas in 2016 by consumers age 65 and older. The table below lists the rankings by metro area, emphasizing the importance of the shifting demographic landscape that “makes it even more important to understand seniors’ contributions to the health of local economies.”²⁸

Advancing Economic Opportunities for Successful Aging

Awareness Deficit: Old Thinking

Cities increasingly emphasize equity and inclusion in their economic growth planning, but age is rarely part of that paradigm. More than a mantra for urban policymakers, reducing barriers to economic and social inclusion is healthy for local economies. Including older people not only adds to economic strength but also provides benefits not targeted through other inclusivity steps (such as mentorship and training of younger workers) and has broad consumer impacts.

That message has not yet penetrated for most city leaders. The National League of Cities reports that, in 2018, for the fifth year since it began analyzing US mayoral speeches, older adults received short shrift. Mayors often mention economic development as a priority—in 58 percent of mayoral addresses. However, they mention demographics in 12 percent of speeches, and of those 12 percent, older adults are a subtopic only 16 percent of the time.²⁹

This lapse misses the opportunities inherent in economic development goals that incorporate older adults. John Feather, chief executive of Grantmakers In Aging, posits a revealing hypothetical: “Imagine you’re the mayor of a small town (or a city). The economy is slow, and you need to do something to improve the quality of life in your town. Luckily, you have an opportunity to bring in 1,000 new residents. You can choose 1,000 40-year-olds, or 1,000 60-year-olds. Who will do more for

TABLE 1

Which metro area has the largest share of spending by consumers 65 and older?

RANK	METRO AREA	SHARE OF SPENDING
1	SAN FRANCISCO-OAKLAND-HAYWARD, CA	23.8%
2	PHOENIX-MESA-SCOTTSDALE, AZ	22.7%
3	SEATTLE-TACOMA-BELLEVUE, WA	21.8%
4	MIAMI-FORT LAUDERDALE-WEST PALM BEACH, FL	21.5%
5	DETROIT-WARREN-DEARBORN, MI	19.7%
6	SAN DIEGO-CARLSBAD, CA	19.6%
7	PORTLAND-VANCOUVER-HILLSBORO, OR-WA	18.8%
-	FIFTEEN CITY AVERAGE	18.2%
8	NEW YORK-NEWARK-JERSEY CITY, NY-NJ-PA	17.7%
9	CHICAGO-NAPERVILLE-ELGIN, IL-IN-WI	16.9%
10	DENVER-AURORA-LAKEWOOD, CO	16.6%
11	COLUMBUS, OH	16.0%
12	LOS ANGELES-LONG BEACH-ANAHEIM, CA	15.3%
13	HOUSTON-THE WOODLANDS-SUGAR LAND, TX	14.2%
14	ATLANTA-SANDY SPRINGS-ROSWELL, GA	14.0%
15	DALLAS-FORT WORTH-ARLINGTON, TX	13.9%

Source: JPMorgan Chase Institute.

your economy? Ninety-nine mayors out of 100 would say the 40-year-olds. Unfortunately for them (and their towns' economies), it's the wrong answer."

Why don't mayors have the right answer? For the same reason that they do not tend to list aging among their policy priorities. The issue is not that they disregard older residents or their votes. But they are subject to pervasive societal misperceptions that older people are a financial burden, are in decline, and have little to offer to build a robust economy and community. Mounting evidence challenges these hardwired stereotypes. Americans over age 50 account for \$7.6 trillion in direct spending and related economic activity, a figure surpassing the GDP of every nation except the US and China. By 2032, the so-called Longevity Economy is projected to reach over \$13.5 trillion (52 percent of the US GDP).³⁰

Age-Forward policies make economic sense. A healthy and engaged older population reduces dependency and service costs. Older adults' work and community participation support economic vitality. And aging adults who feel purposeful (for example, through volunteerism) experience a heightened sense of well-being and lower levels of physical and mental decline.^{31, 32}

Taking on the Age-Segregation Default

These realities call for a vision for 21st century economic development that upends the devaluation of older residents while enhancing overall urban prosperity. To realize the benefits of engagement by older adults, cities can promote intergenerational sites, work policies, and environments that negate age segregation. In the process, old and young adults may find enlightening common ground. Both millennials and baby boomers cited affordable housing, high-speed internet access, and safe streets in their top three concerns, for example, when surveyed by the American Planning Association about metropolitan living priorities.³⁴ And strong majorities endorsed spending on priorities like schools and transportation as economic growth strategies, over investing in recruiting companies to their cities. These shared interests can promote cross-generational understanding and chip away at misperceptions.

On the Edge: Inequality Among Older Urbanites

The road to urban economic vibrancy faces an especially troubling trend in poverty amongst the elderly. According to the University of

Massachusetts Boston's Elder Economic Security Index for 2016, half of Americans 65 and older who are living alone "lack the financial resources required to pay for basic needs."³⁵ Nationwide, the number of age 65+ homeless will nearly triple from 2017 to 2030, to more than 100,000, according to projections by university researchers in Boston, New York, and Los Angeles.³⁶ The resulting surge in health care and shelter costs is anticipated to reach as much as \$5 billion a year.³⁷

Even short of homelessness, economic security for too many aging adults is precarious. By age 65, some four in 10 middle-class Americans will fall into poverty or near-poverty, the Schwartz Center for Economic Policy Analysis at the New School projects.³⁸ Worldwide, a \$70 trillion deficit exists between retirement savings and need during retirement years, according to World Economic Forum estimates; by 2050 that gap will grow to \$400 trillion.³⁹ Among nations of the Organization for Economic Cooperation and Development (OECD), some of the most dramatic income inequality is in the older adult populations.⁴⁰

More than 10 million people over 50 in the US are in poverty, and more than 37 million close to the edge, just one life event (a job interruption, natural disaster, or family health crisis) away from slipping into it, AARP research finds.⁴¹ Thanks in large measure to Social Security benefits (and 1970s changes to the program), the nation has made greater strides in reducing elder poverty than poverty across the entire population. As calculated by the [US Census Bureau](#), the overall poverty rate fell only modestly between 1964 and 2012, from 19 percent to 15 percent, with a rise in



We are going to have to be more and more creative about how we address and come up with solutions that help us keep our very valuable employees in the workplace. We need to make sure that policies that are being put in place—whether it's at a local community meeting or a state office or at the federal level—that these policies that are being created are ageless, that they are making sure that they're not being detrimental to either the young or the old."

—JO ANN JENKINS

CEO, AARP, at AARP's 2019 "Disrupt Aging: The Future of Work for All Generations" conference in Washington

the percentage of poor adults under 64. Among those 65+, the poverty rate dropped from 28.5 percent in 1966 to just 9.1 percent by 2012.

Nonetheless, disturbing local patterns remain. In Philadelphia, where the citywide 26 percent poverty rate is highest among the 10 largest US cities, the years 2013 to 2017 saw the number of poor adults age 60+ jump three percentage points, to 23 percent, according to the nonprofit [Philadelphia Corp. for Aging](#). But the poorest—living far below the federal poverty level, in “deep poverty”—increased from 6 percent of the older population to 10 percent.⁴²

The coming years will only increase economic stress for aging cohorts, their savings eroded by the recession, housing costs, and disappearance of traditional employee pensions. Rising income inequality among younger adults worldwide predicts a growing gap for future retirees—worrisome news for the United States, where economic inequality among retirees is already higher than in all OECD countries except Chile and Mexico.⁴³

As ground zero for demographic change, cities need policy agendas to address inequality early and across the lifespan. Effective strategies for aging societies call for collaborative action to incorporate age-forward economic policies across city agencies, education, social services, and the private sector.

RECOMMENDATION #1



Encourage planners and local policymakers to apply tools such as the [Elder Economic Security Index](#) to identify areas where older adults in (or at risk of) poverty are concentrated and inform policy interventions that improve access and affordability.

Age-Forward Development as Sustainable Development

How can cities include older adults in their plans for economic sustainability? Solutions are not one-size-fits all. Aside from differences in geography, economies, and size, urban areas fall into three main types, as identified by the OECD:⁴⁴

- **Aging cities with slow growth:** The older population, a large percentage of residents, will continue to grow, then peak and decline. Facing numerous social and economic challenges and opportunities, these cities must consider which demographic structures to anticipate before and after the peak.
- **Young cities that are rapidly aging:** The younger population is still the majority as the older generation grows. Here, the demographic change raises issues of intergenerational balance and equity. Younger people could be an asset in overcoming challenges ahead.

- **Young cities that are aging slowly:** These cities need to include preparation for aging in their long-term priorities. They must build public awareness about aging and can learn from the experience of cities with the other two characteristics.

A 2016 Milken Institute report [analyzed](#) cities’ dominant economic characteristics and categorized their economies: knowledge-based, manufacturing and resource-based, service-based, or economies in transition.⁴⁵ Each city’s strengths and economic qualities can serve as a pathway for the inclusion of older people.

Florida’s capital city of Tallahassee, for example, has not been growing as fast as the rest of the state. It is campaigning to attract retirees as an economic benefit, with their greater reliance on health and hospital services offset by their lower costs for public education, prisons, and peak-hour roadways.⁴⁶ Tallahassee launched a citywide social media campaign to promote its new senior center and used targeted marketing aimed at Tallahassee residents whose parents live outside the city to “showcase the advantages of having your parents live there, such as free babysitting,” explains Amanda Hadley of the public relations agency BowStern, who manages the campaign.⁴⁷

Harnessing Data to Demonstrate Age-Forward Productivity

What is “Old”? What We Measure Matters

The prevalent measure of population aging, the “old-age dependency ratio,” has a

fundamental weakness. It compares numbers of people 65 or older to the “working age” population—age 20 to 64. It assumes that a 65th birthday triggers dependency—a blunt instrument and an outdated misperception.

Labor market numbers provide more relevant estimates of “dependency” by enabling comparison of the number of adults not working and not seeking jobs with those employed or seeking work, without the assumption that a specific cut-off age is the end of a “working” life.⁴⁸ Importantly for city projections about future productivity, the 65+ group has been growing as a percentage of the overall working-age population—from 19 percent in 2015 to a projected 29 percent in 2060, approaching the share of younger age segments.⁴⁹ Today, more than 20 percent of adults over age 65 are either working or looking for work, a near doubling since 1985.⁵⁰

A data perspective providing even more insight as to how people actually live and work in the 21st century is embedded in the concept of “age inflation,” coined in 2008 by the National Bureau of Economic Research.⁵¹ This term defines people not by chronological age (i.e., years lived) but in terms how many additional years they are expected to live, a meaningful distinction when considering that people at 75 today have the same remaining life expectancy as 65-year-olds in the past.⁵² Essentially, age inflation assumes that a particular age has a different “value” associated with it over time, given ongoing and expected longevity gains, which the traditional dependency ratio does not capture.

Applying an age-inflation approach

could result in sweeping societal and policy changes. Just one example—a subject of current political conversation—is that people are barred from contributing to some retirement savings plans beyond age 70½. But with longer life expectancy and delayed retirements, they may want to contribute longer. Currently, Americans born between 1943 and 1954 are entitled to full Social Security at age 66, with benefits increasing 8 percent annually to age 70 if application for payment is delayed. However, after age 70, those increases stop, even if a beneficiary continues to delay drawing benefits.⁵³ The age-inflation perspective could alter many policies involving services, employment, and more.

RECOMMENDATION #2



Measure productivity comprehensively in the more realistic context of the projected extended working lives of older adults.

Labor Realities: The Truth About Older Workers

Although many aging workers want or need to remain in the workforce—in one study, half of US baby boomers said they would continue working even if they won the lottery⁵⁴—they have the highest rates of unemployment in the nation’s fastest-growing cities. In 2014, when metropolitan average unemployment was at 4 percent, the Department of Labor reported that 5.6 percent of

workers age 55 to 64 were unable to find jobs in the 10 cities with the highest gross metropolitan product.⁵⁵

More than half of workers over 50 lose their jobs before they are ready to leave—they are laid off at least once during the remainder of their paid employment years or are effectively pushed out, analysis by the Urban Institute and ProPublica found.⁵⁶ After that happens, nine in 10 never reach their pre-layoff salaries when they find new work—reduced earnings thus becoming a way of life for which they have never planned.⁵⁷ Out of work, older adults are much more likely to wrestle with prolonged joblessness than younger workers are, according to the Bureau of Labor Statistics. On average, a 54-year-old job hunter will be unemployed for nearly a year.⁵⁸

Pernicious ageism continues to play an exclusionary role; older workers’ strengths are often overlooked. Experienced adults are relegated to roles beneath the abilities they have honed through years in the workplace—and in life.

Despite their significant labor-force participation, the boomer generation’s size means retirements also are contributing to a lower overall labor-force participation rate, a slide that is projected to continue at least until 2026.⁵⁹ Some industries already feel the pinch. In both developing and developed nations, fewer than four in 10 corporate executives surveyed expressed confidence they would have the talent needed for their strategic goals a few years out.⁶⁰ The outflow of older workers, the Baxter Consulting Group predicts, could create a “potentially crippling talent crisis,” considering that working adults over 65 number nearly 9 million people, double the number of teens who work.⁶¹

A global survey of companies by Deloitte indicates the extent of the untapped opportunity: Only 18 percent of respondents said that age is viewed as an advantage in their organizations.⁶² Some leading companies, on the other hand, are starting to look at this talent pool as a competitive asset, with more than eight in 10 US employers saying workers 50 and older are a valuable resource for training and mentoring and an important institutional knowledge source.⁶³ In the UK, employers are encouraged by the government to recruit, retrain, and keep older workers.⁶⁴

Still, a significant proportion of workers approaching traditional retirement age look forward to retirement—72 percent of US workers overall, including 81 percent of baby boomers.⁶⁵ And more workers, particularly in lower-wage professions, are not afforded the same opportunity to continue working as those with higher educational attainment, suffering from more work-related health conditions as a result of physically demanding jobs.⁶⁶ Equally important to recognize is the importance of other unpaid work and volunteerism, which imparts significant value to urban economies.

Instead of retirement-age mandates and uninformed attitudes that diminish older workers, James Anderson of Bloomberg Philanthropies suggested a new approach when he spoke at the 2018 Milken Institute Global Conference: “We often talk about the productivity drain; what if we flipped that on its head and think of it as a productivity opportunity? Cities can be the ultimate platform. The vulnerability mindset is important and making sure the safety net is there, but an asset-based mindset is a very different way to approach this population, and I think that’s the future.”

Care Workers: A Local Workforce Development Opportunity

The aging population doesn’t just provide workers, it also creates jobs. Today’s fastest-growing occupations include personal care and home-health aides, jobs that are poorly

paid and disproportionately filled by immigrants. (Immigrants account for about a quarter of the home health-care workforce, a number that could change depending on US immigration policies).⁶⁷

Aging adults may need assistance with daily living tasks to fulfill their desire to remain in their own homes. It is estimated that 52 percent of Americans turning 65 today will one day need a high level of help with basic daily activities, like walking, eating, and bathing.⁶⁸ Experts have warned for decades that demand for caregivers is outstripping the workforce. From 2016 to 2026, employment of home health and personal care aides will increase 41 percent, far outpacing the average of all occupations.⁶⁹ Who will fill these roles?

US cities with the most rapid growth for in-home senior care jobs are **Providence, RI; Rochester, NY; Portland, OR; Minneapolis, MN; and Raleigh, NC**, according to Care.com.⁷⁰

Age-Forward Economic Roadmaps

FROM THE EXPERTS

Investing in an Age-Diverse Local Workforce

“Rank the following workforce investment strategies according to their relative importance for workers 65 and older: Providing more opportunities for flexible work arrangements; broadening access to employment programs targeted at low-income and minority populations; responding to advancements in technology, for example through skills training; and supporting and scaling pathways through apprenticeships and vocational programs.”

Asked about the best way to shape employment opportunities for older people, half of the 150 experts in the Center for the Future of Aging survey cited **flexible work arrangements**. Just over one-third ranked skills training as second most important; 28 percent cited broader access to employment programs as second.

Central to workforce efforts is the need to eradicate ageism that maligns older workers as less capable. Enforcement of age-discrimination rules must be prioritized, the surveyed experts emphasized, to level the playing field for employment and to access training and promotion opportunities.



Never before have we had to re-educate and retrain so much of the middle-aged and older workforce. In order to achieve a sustainable, globally competitive economy that provides good jobs and wages for Americans, business, labor, local government leaders, education leaders, and citizens must mobilize to drive the solutions forward.”

—ART BILGER

Founder and CEO, WorkingNation, in an interview with the Milken Institute

A level playing field transcends ageism alone. Socioeconomic status also figures heavily into job opportunity, research shows, and older residents of wealthy areas are the most likely to be working. US Census figures make the point: In Beverly Hills, 30 percent of age 65+ adults are employed, compared to fewer than 10 percent in lower-income areas like East Los Angeles.⁷¹

An analysis by the Associated Press-NORC Center for Public Affairs Research also found that Americans age 65 and older are most likely to stay in the workforce in big cities, especially in the Northeast and around Washington, DC, where jobs in academia, government, finance, and law are plentiful. Their participation is greater in cities where they are more highly educated, better compensated, and less reliant on labor-intensive blue-collar work, analysts say. The fact that educated adults are healthier than less educated counterparts also may factor into their longer working lives.⁷²

Work opportunities are especially meaningful for some low-income older workers who have been denied the federal earned-income tax credit since Congress increased the age for full-benefits Social Security eligibility. The tax credit's eligibility cut-off at age 65 arguably made sense when it was established in 1993: People could collect their full Social Security benefits at 65 and transition from the tax credit program to full Social Security. With the higher eligibility age, workers over 65 are denied those extra dollars while waiting to become eligible for full benefits.⁷³

California stepped up with its own California Earned Income Tax Credit extending to workers over age 65 and launched a campaign to make workers

aware of the credit, which could mean as much as \$3,000 for some filers.⁷⁴ **San Francisco**, in particular, has led the way in incorporating an older worker strategy in its workforce development priorities through the city's Work Matters Senior and Disability Employment Initiative, championed by Board of Supervisors President Norman Yee. Cities and regional employers can learn from San Francisco's example by investing in and tracking age diversity and creating campaigns around the future of work that emphasize the importance of age diversity in the workplace.

RECOMMENDATION #3



Develop a shared platform for cities and regional employers to track age diversity within the local workforce and create campaigns around the future of work that emphasize the importance of age diversity in the workplace.

Flexibility at Work: Strategic Workplaces Benefit All Ages

To retain older workers and gain the benefits of their continued employment, flexible schedules rank highly as a strategy. Some older adults may not want as many hours on the clock, but many are not eager to retire fully. About half of "retirees" follow non-traditional paths: They seek temporary or part-time work instead of full exits, and a majority of baby boomers say they plan to work past age 65 or not retire at all.⁷⁵ For employers, flexibility provides the benefits of experienced workers' expertise and mentoring capabilities.

Cities are getting involved:

- The [Berkeley Family Friendly and Environment Friendly Workplace Ordinance](#) of 2017 gives employees the right to request part-time, flexible, or predictable working hours, or flex arrangements such as telecommuting. Employers must provide a business reason to deny the requests.⁷⁶
- **New York City's** "Fair Work Week" bills of 2017 provide fast-food and retail workers more schedule predictability and stability and a path to full-time hours.⁷⁷
- In a novel initiative launched in 2018, **Tulsa's** "[Tulsa Remote](#)" initiative is luring full-time remote workers to the city with an offer of free shared office space, a subsidized furnished apartment, and \$10,000 cash to relocate and work in Tulsa for at least one year.⁷⁸

To be sure, flexible arrangements have cross-generational appeal, especially to parents of young children and employees who shoulder family caregiving duties.

RECOMMENDATION #4



Create and expand local workforce development programs that provide training updates and new skills for older workers and expand volunteer programs that connect multiple generations.

Clustering Around the Business of Aging

Urban innovation districts are also emerging as an environment to develop entrepreneurial, investment, and employment opportunities. These working and living areas have leading-edge anchor institutions connecting with startups, business incubators, and accelerators. Typically designed near transit and technically wired with mixed-use housing, office, and retail space, they encourage creative synergy and trust through personal and professional networks.⁷⁹ **Fort Worth, TX**, tapped its Near Southside neighborhood for designation as a medical innovation district, with the potential for thousands of medical and technology-related jobs, as part of an economic development plan in an area that already houses health and hospital facilities.⁸⁰

In **Edmonton**, Canada, Health City serves a similar role. The city-funded economic development initiative seeks to support innovations to enhance local health, with the possibility of scaling them for global export. In one collaboration of physicians, local companies, and the pharmaceutical company Boehringer Ingelheim, Health City announced an artificial intelligence project to examine data predicting patient frailty and its impact on chronic diseases such as heart disease and diabetes.⁸¹

To address older adults' needs, Stephen Johnson, co-founder of Aging 2.0, urges cities and tech startups to collaborate on "aging innovation ecosystems." "Tech startups are already making progress introducing new services for older adults in cities, such as transportation, food delivery, social inclusion, and care coordination," he states.⁸²

A deliberately created ecosystem can provide structured support for innovators. "An aging innovation ecosystem brings together all the necessary players to make change happen in aging and senior care—the startups, industry, investors, older adults, governments, and academia—with the tools and ability to make change happen and get things done at scale," Johnson says.

Often typecast as domains of the young, innovation districts are equally a fit for older adults: They appreciate the proximity of work and home; they contribute to local consumer spending, housing revenue, and business investment; and local businesses and startups have access to their expertise, mentorship, and entrepreneurial endeavors.

To avoid increased economic stratification, however, these districts need to incorporate age-friendly features like home and building accessibility; intergenerational engagement opportunities such as mentorship programs and technology education; and pitch sessions and networking events designed to encourage older entrepreneurs.⁸³

RECOMMENDATION #5



Integrate older adults into the planning and development of innovation districts and incentivize the development of startups and commercial enterprises focused on age-friendly products and services in underserved neighborhoods.

Preparing an Age-Forward Home and Health-Care Workforce

FROM THE EXPERTS

Preparing an Age-Forward Home and Health-Care Workforce

"By 2030, the US will need an estimated 3.4 million direct care workers to provide long-term services and supports, a 1.1 million increase over the 2.3 million who filled these jobs in 2015. What is the likelihood that this demand will be met by 2030?"

Our 150 experts were dubious that the booming home-health and home-care field would find workers to fill the coming need. **Less than a third** believe the demand will be met by 2030.

Particularly worrisome is the deterrent of low pay. The median annual wage for home-care aides was just over \$23,000 in 2017, the lowest of all occupations the government categorizes.⁸⁴ Often it's the poor taking care of the poor. One in five home-care workers lives in poverty, compared to 7 percent of all US workers.⁸⁵

That outlook should set off alarms. Low pay is a problem in both rural areas and expensive urban settings. Officials in Montana and Oregon blamed low wages for contributing to a shortage of home aides who assist with daily living tasks. Workers could earn more in fast-food restaurants, the US Government Accountability Office noted in a 2018 report on Medicaid-supported, home-care programs.⁸⁶ Minimum-wage increases could make a significant difference for low-paid caregivers.

To build the caregiving workforce, professionalizing and supporting the field will be increasingly important, including through community college certification programs. One support model, championed by Jobs with

Justice, is universal family care, which involves an insurance fund to help in family caregiving, with people sharing in the risks and drawing on the benefits when they need them. It would provide portable insurance that workers could hold across different jobs, with flexible use including caring for an aging parent, providing financial support to hire a care worker, or paying for maternity leave and childcare needs. The fund would “support a living wage and access to benefits for care workers in addition to training and career mobility, offering a path to the middle class.”⁸⁷

States have begun to take the lead. **Hawaii’s** Kapuna Caregivers Program helps family caregivers maintain their jobs outside the home by providing subsidies for adult day care, home aides, transportation, and meal services.⁸⁸

In April 2019, **Washington** became the first state to approve publicly funded long-term care through its [Long-Term Care Trust Act](#), providing lifetime benefits of up to \$36,000 to help families pay for in-home care, assisted living, or a nursing home. The same year, SEIU 775, which represents 45,000 long-term care workers in **Washington** and **Montana**, negotiated [a home care worker retirement benefit](#), the first of its kind in the nation.

RECOMMENDATION #6



Strengthen workforce development pipelines to meet the demand for more health and long-term services and supports workers.

Promoting Pathways for Public-Private Partnerships

FROM THE EXPERTS

Multi-Sector Strategies for Age-Forward Economic Development

“Which economic development strategy is most critical to address the challenges of population aging in cities? Rank the following options: Expanding age-friendly commercial districts and housing developments for older residents; developing products and services to respond to the needs and wants of older adults; stimulating local job creation in industries that serve older adults; implementing workforce development programs for older adults.”

When the Center for the Future of Aging asked experts this question, **44 percent** ranked “expanding age-friendly commercial districts and housing developments” as most important. They split across the other categories for the second most important (28 percent for products and services, 25 percent for workforce development, and 22 percent for job creation).

Each of these economic development categories contains opportunities to address the financial inequality afflicting older populations. Underinvestment in neighborhoods where urban expenses tip more people to the financial edge—especially those on fixed incomes—feeds a trajectory of decline. Reversing this spiral calls for broad policy reforms, from job creation to investment incentives.

Leveraging Development for Affordable Mixed-Use Living

Housing for older adults will become more common in mixed-use development projects, predicts Shankh Mitra, chief investment officer of Welltower, a prominent senior-asset owner that is redeveloping a former shopping center in **Charlotte, NC**, to include ambulatory care and multifamily housing, adjacent to an acute care facility.⁸⁹

Luxury housing is an appealing entry point for some developers. The Brightview West End senior living community, part of Rockville Town Square in **Rockville, MD**, includes a “club level” top floor with penthouse units, a concierge for transportation arrangements, and other amenities.⁹⁰ The Heartis Buckhead project in **Atlanta** promises amenity-rich “resort-style” living, with independent living, assisted living, and memory care apartments in a luxury tower. An adjacent medical office building is being renovated as part of the project.⁹¹

Affordability challenges find other approaches. In **Chicago**, Evergreen Real Estate combines a first-floor, technology-focused public library and media center below three floors of affordable and subsidized rentals for low-income older adults.⁹²

To motivate developers, government tax credits and incentives can be important tools. Developers can take advantage of the Opportunity Zone tax break, a federal program that uses deferred capital gains taxes as an incentive to invest in low-income communities. To direct projects for older-adult housing and other community needs to specific areas, urban officials can offer flexibility with zoning and permit processes, and reduce or eliminate fees.^{93, 94}

Collaborating with Main Street and Competing on Innovation

Age-Forward cities enjoy supportive relationships with their business communities and help companies, both large and small, flourish. Municipal pursuit of business best practices can enable economic opportunity, given the financial power of older adults, while supporting and valuing all age groups.

Using the city hall bully pulpit to celebrate forward-acting companies as civic examples is one way to motivate participation. Many cities promote guidelines from the World Health Organization's and AARP's age-friendly community networks—encouraging Main Street to prepare for population aging and consider the environmental, economic, and social factors that influence older adults' well-being. Others, like **London** Mayor Sadiq Khan, foster virtuous competition to raise awareness and seek solutions. Khan challenged startups and medium-sized businesses to come up with innovative solutions to big issues like inequality, elder health, and isolation. Finalists were promised London Economic Action Partnership business support, with grants for further development going to three winners.⁹⁵

Miami's public-private Age-Friendly Initiative went to the Little Havana neighborhood to foster business practices attuned to the large population of older adults. The Age-Friendly Business District initiative, in a walkable half-mile around the Vista Alegre Retirement Home, provides education, resources, and tools to help companies recognize and serve older patrons and retain older employees.⁹⁶

New York's State Department of Health sponsors the Aging Innovation

Challenge, a crowdsourcing competition for college students, to encourage innovations that assist older adults and their caregivers with daily living activities.

RECOMMENDATION #7



Create a national cities competition for aging innovation that includes key economic development stakeholders including chambers of commerce, regional employers, offices of economic development, technology companies, and startups.

Conclusion

The opportunity presented by population aging heralds great economic promise for urban communities that are proactive and alert to the aspirations, abilities, and needs of older adults in the 21st century.

“Age-forward economic development must keep up on the changing needs of aging populations,” said Dionne Beaux of Main Street America. Her sentiment is echoed from abroad. In the city of **Kilkenny**, Ireland, Chamber of Commerce President Marion Acreman reminded her city that becoming an Age-Forward local economy “isn't just the right thing to do—it's also good for business.”⁹⁷



ECONOMIC PROFILE

Knowledge-based economy

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#11), High Marks: Employment (#6), Transportation (#1), and Housing (#26); Mayor's Pledge Signatory

DEMOGRAPHY

By 2040, the number of New York City residents over age 60 will be 1.86 million, a 48.5 percent increase from 2000, comprising more than one in five New Yorkers.

2018 Age-Friendly Action Plan priority areas include the creation of an Age-Friendly Professions Working group encouraging private-sector organizations to "address the needs and preferences of older patients, clients, and customers with a current focus on primary care, pharmacy and banking."⁹⁸

Brimming with action and multicultural flavor from Broadway to Wall Street, the Big Apple has an image that may read young. But a robust transportation network—ranked No. 1 in our "Best Cities for Successful Aging" index—along with plenty of work opportunities for older adults and world-class medical offerings make this a fitting locale for aging: New York City is home to an over-65 population that's been growing at more than triple the rate of its younger population.

However, close to one in five New Yorkers age 65+ lives below the federal poverty line, and the Mayor's Office for Economic Opportunity classifies a third of this age group as poor or near-poor. Poverty among this group has increased even as it slipped among older residents statewide.



BUILDING A SPACE FOR OLDER ENTREPRENEURS RECOMMENDATIONS #2 AND #5

Entrepreneurship is growing among older New Yorkers, including in the city's large immigrant population. Nearly 210,000 self-employed residents are 50 and older, up 19 percent since 2005. In every borough, the 50+ workforce is increasing at a faster pace than the 50+ population. Along with evidence of a significant increase in entrepreneurial activity among lower- and moderate-income older adults, an analysis from The Center for an Urban Future finds that self-employment rates are high among older residents of the city's predominantly immigrant communities.⁹⁹

However, older entrepreneurs face particular hurdles, including access to capital, technology barriers, and lack of contact with like-minded aspirants. While the city has numerous initiatives to support entrepreneurship, scant help targets the needs of mature entrepreneurs, such as getting up to speed on social media and tech tools. The issue is being raised by the city's own comptroller, Scott Stringer, who underscores that city agencies "have not clearly articulated how they plan to respond to the changing demographics ... on a neighborhood-by-neighborhood basis ... The City now has a chance to put forward a comprehensive blueprint that invests in seniors as a way of building stronger neighborhoods and a healthier city overall."¹⁰⁰

The table below features 10 NYC neighborhoods with the highest rates of self-employed adults ages 50 and older, a helpful tool for local planners and employers to channel local talent within an integrated entrepreneurial ecosystem.

TABLE 2

10 NYC Neighborhoods with the Highest Rate of Self-Employed Adults Age 50+

NEIGHBORHOOD	SELF-EMPLOYED, 2016	TOTAL 50+ WORKFORCE	SELF-EMPLOYMENT RATE
GREENWICH VILLAGE / FINANCIAL DISTRICT (MANHATTAN)	10,258	25,433	40%
UPPER WEST SIDE (MANHATTAN)	17,094	44,095	39%
STUYVESANT TOWN / TURTLE BAY (MANHATTAN)	7,779	23,880	33%
CHELSEA / CLINTON / MIDTOWN (MANHATTAN)	7,748	24,495	32%
UPPER EAST SIDE (MANHATTAN)	14,621	45,177	32%
BROOKLYN HEIGHTS / FORT GREENE (BROOKLYN)	4,174	16,797	25%
BOROUGH PARK (BROOKLYN)	3,739	16,385	23%
MORNINGSIDE HEIGHTS / HAMILTON HEIGHTS (MANHATTAN)	3,386	14,935	23%
ROCKAWAYS (QUEENS)	3,515	15,538	23%
CENTRAL HARLEM (MANHATTAN)	3,658	16,368	22%

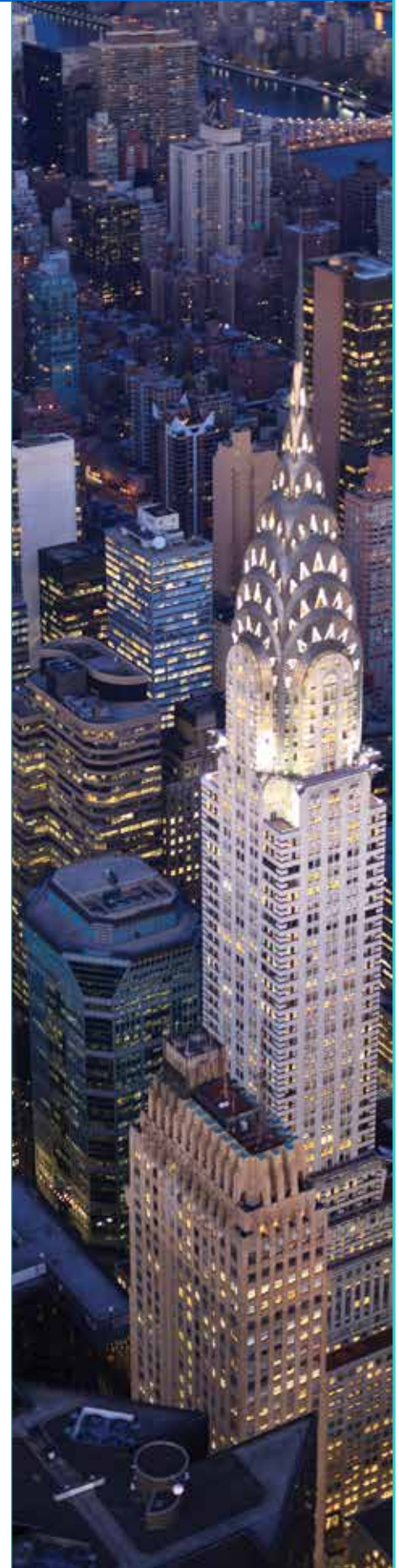
Source: Center for an Urban Future analysis of self-employment data from the US Census, American Community Survey, 2005 and 2016. Tabulated using IPUMS.



SUSTAINABLE PLANNING FOR 2025:
Enhanced Training for Older Workers and Innovative
Recruitment of Long-Term Care Workers
RECOMMENDATIONS #4 AND #6

New York City's forward-looking "Plan 2025: Aging Services in an Era of Rapid Population Growth," builds on its storehouse of age-friendly employment, transportation, and mental health programs and services such as home health care where Medicaid is not provided:

- Respite services for caregivers are expanding; the city fielded nearly 10,000 inquiries on caregiver issues in 2017, many resulting in referrals to support groups and assistance such as transportation services.
- The Department for the Aging (DFTA) is developing plans to provide forums with labor experts to discuss ways to increase employment opportunities for older people, the results of which "will inform efforts to expand upon the successful DFTA-funded Senior Employment Services and ReServist programs."¹⁰¹
- In 2018, the New York State Department of Health launched a \$245 million Workforce Innovation Program, which funds training to prepare the workforce to meet the needs of an evolving long-term care system through a two-year Workforce Investment Program. Eleven workforce training centers designated as Workforce Investment Organizations provide a range of recruitment, retraining, and retention initiatives for long-term care staff, particularly direct care workers."¹⁰²



LOUISVILLE: AN AGING-CARE HUB

ECONOMIC PROFILE

Service-based economy, “Rejuvenated region”

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#79), High Marks: Health (#29) and Living Arrangements (#30)

DEMOGRAPHY

Fifteen percent of residents are over age 60, a figure expected to rise by as much as 40 percent by 2050.

2018 Age-Friendly Action Plan emphasizes the importance of “21,000 professionals who actively support healthy aging in our community, home to the nation’s largest collection of headquarters in rehabilitation, assisted living, [and] nursing home and home health administration.”¹⁰³

A crossroads of Midwestern and Southern influences with a tinge of Rust Belt, Louisville has morphed from a tobacco and smokestack stronghold on the Ohio River into a hub of medical, research, and service employers—UPS foremost among them. Attracting residents for more than its prized bourbon and Kentucky Derby, Louisville has a thriving health-care industry and proudly advertises its laser focus on aging and wellness. It boasts more aging-care company headquarters, including Humana and Kindred, than any US city.



SEEDING A ROBUST AGING INNOVATION ECOSYSTEM RECOMMENDATION #5

Louisville’s nursing home, assisted living, and home health community is a strong revenue producer. Along with research and companies catering to the aging demographic, this industry underpins what Mayor Greg Fischer, in a 2012 commentary, calls “a key area of economic growth for the city and the nation at large.” The mayor predicts “exceptional growth” in lifelong care and wellness businesses and prioritizes innovative aging solutions in Louisville’s economic portfolio. The Louisville Forward economic development plan aims to integrate business, workforce, design, and real estate in a strategy for jobs and quality of place—and includes a team to support companies in the aging and care sphere.

Louisville’s anchor institutions have helped seed growth for the sector, with more than 40 health-services firms traced directly to the Humana and Kindred taproots.

“Best Cities for Successful Aging” highlights living options in this rejuvenated city with relatively low-cost housing and health amenities. Among companies responding to older-adult housing preferences, Masonic Homes has expanded beyond its nursing homes to operate continuing-care communities with options for independent living, assisted living, and skilled nursing. Nazareth Home’s two Louisville complexes feature person-centered care in a historic neighborhood setting.

Louisville does not do as well on “Best Cities” wellness indicators like smoking, obesity, physical activity, and air quality. Pedestrian deaths are above the national average, and the city’s strategic plan for aging finds age-friendly spaces insufficient such as safe, accessible parks and sidewalks.

Louisville’s age-friendly strategy prioritizes improved walkability; expanded pedestrian, bike, and transit networks; and exercise and social activities. Among other Age-Forward goals:

- Increasing home maintenance resources to help older adults remain in their homes
- Fostering intergenerational communication
- Training public employees in age-friendly practices
- Engaging volunteers and community organizations for more exercise and health programs (such as healthy food resources and opioid education)

In a public-private endeavor, Louisville established the country’s first accelerator for innovation in aging care and lifelong wellness, with \$5 million to support early-stage growth.

Support of entrepreneurial activity for the aging and wellness sector includes projects like the nonprofit Thrive Center, which has featured dozens of aging and wellness-focused startups seeking corporate partnerships and connections, and the Innovators Alliance formed by nonprofit senior-living

organizations to partner with young companies on emerging solutions.

ECONOMIC PROFILE

Service-based economy, “Rejuvenated region”

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#26), High Marks: Health (#12), Employment (#22), Community Engagement (#24), and Housing (#26)

DEMOGRAPHY

Older adult population in greater Kansas area is expected to double, growing by 233,000 between 2010 and 2030, and the older adult workforce will nearly double.¹⁰⁴

2015 KC Communities for All Ages Plan is an age-friendly collaborative of the Mid-America Regional Council, supported by the Pfizer Foundation and in partnership with Grantmakers In Aging. The plan emphasizes civic participation and employment of older adults, highlighting the goal of “providing opportunities for all residents to be involved and keep all residents informed of city affairs and of employment and volunteer opportunities.”¹⁰⁵

The older adult population in the cross-state metropolis of Kansas City is growing more rapidly than any age group in this Missouri River city. Between 2010 and 2030, the population age 65 and older is expected to double to nearly 500,000, or one in five city residents, accounting for more than half of the city’s growth.

Older residents’ numbers and spending power fuel a growing segment of the region’s economy. Their share of the workforce nearly doubled between 1995 and 2013, from 2.4 percent to 4.6 percent, an economic analysis shows. The concentration of the older workforce spans several sectors including agriculture, real estate, education, and other services.¹⁰⁶

Kansas City receives strong health-care marks in the “Best Cities for Successful Aging” index, which notes its relative affordability and availability of hospitals with geriatric and rehab services.



MEASURING THE CONTRIBUTIONS OF OLDER ADULTS
RECOMMENDATION #2

Despite the fact that older adults move into Kansas City, the area is losing many younger baby boomers and those nearing retirement age. Those outward-bound residents could benefit the city’s economic development if they were persuaded to stay through offerings like age-friendly homes and public spaces, and improved transportation and health-service options, according to a [report](#) by the Mid-America Regional Council, a multi-jurisdictional organization.

The council’s analysis found that retaining an additional 600 adults age 65 and older for a decade would produce 2,600 more area jobs in the health-care, retail, and construction sectors. The resulting increase in jobs and population would boost annual incomes by nearly \$500 million, the modeling projected.



SUPPORT FOR MULTIGENERATIONAL ECONOMIC DEVELOPMENT
RECOMMENDATIONS #4 AND #5

The nonprofit iWerx business center, with offices and co-working spaces to grow businesses and serve the needs of independent workers, provides a business development center to make connections and stimulate personal and professional growth.

The consulting company Encorps45 provides professional development and learning opportunities with an emphasis on diverse, multigenerational economies: “We provide resources to entrepreneurs by building business ecosystems filled with partnerships among civic leaders, municipal decision-makers, government, education, economic development councils and local businesses.”¹⁰⁷

CHAPTER 2. Age-Inclusive 21st Century Design: How We Build

FORECASTING 2030

OPPORTUNITY:

There is an urgent need for affordable, accessible, and innovative housing:

- » The number of middle-income adults age 75 and older will double by 2029, and 60 percent will have mobility limitations. More than half will lack sufficient financial resources to pay for senior housing and care, such as assisted living and independent living communities.¹⁰⁸
- » The number of renters over age 65 will double between 2010 and 2030.¹⁰⁹
- » Between 2010 and 2030, 74 percent of new housing demand is projected to be for small homes on smaller lots than were the norm in the previous two decades.¹¹⁰

CHALLENGE:

The mobility landscape is changing rapidly:

- » By 2035, the number of households where someone age 65 or older has a mobility disability will reach nearly 17.1 million.¹¹¹
- » Regulatory approvals of driverless vehicles in the decade ahead could make possible on-demand, autonomous electric-car driving for the vast majority of US passenger miles.¹¹²

GOAL:

Livable cities for all ages that are designed for walkability, safety, and accessibility, and a diversity of affordable transportation and housing options to meet all mobility and multigenerational needs.

Understanding the Socioeconomic Drivers of Longevity Disparities

Cities can design environments that narrow longevity gaps while improving life for all residents. Neighborhood design, while not a panacea for all ills, holds power to support sustainability and resilience. Block by block, cities can transform lives by fostering new routes to well-being.



Designing for older adults is designing for the canary in the coal mine. They experience the stresses of the environment more acutely than many other groups.”

—LINDA FRIED

Dean of the Columbia Mailman School of Public Health¹¹³

The structure and design of neighborhoods themselves, as many urban planners are recognizing, hold solutions for improved community well-being. Older adults’ wellness and function, as described by the Healthy Aging Research Network of the Centers for Disease Control and Prevention, flourish in physical environments that support “attitudes and behaviors known to promote health and well-being, and by the effective use of health services and community programs to prevent or minimize the impact of acute and chronic disease on function.”

For cities to take the lead is a natural fit. Cities are home to what urban planners call NORCs, or naturally occurring retirement communities: neighborhoods whose longtime residents have aged along with the infrastructure around them. Additionally, more than half a billion people over age 65 live in cities around the world, and by the middle of this century, the number will be over 1 billion.¹¹⁴

The demographics are more nuanced in US metro areas. The number of 65-and-older residents in dense urban neighborhoods grew by nearly 800,000 between 2000 and 2016. But the share of all older adults living in those neighborhoods actually fell, Harvard researchers found, while less dense metropolitan areas (city suburbs) saw their share of older residents rising. That trend is cause for concern because services and supports tend to be more sparse in less dense neighborhoods. In 95 of the nation’s 100 largest metropolitan regions, the share of older residents declined over this 16-year period.¹¹⁵

Population aging will be among the most significant social transformations of the 21st century, and cities will need to be nimble in addressing an older population that is vast, not just in number but also in age range, and diverse in all the ways that younger adults are—in interests, needs, motivations, and physical and cognitive abilities. Simply stated, aging is a universal human process, but it is not individually uniform.

Understanding the Socioeconomic Imprint

Socioeconomics—a critically important determinant for successful aging—are knit into neighborhood features that are strongly linked to physical and cognitive health. Older adults are particularly affected by neighborhood stressors, which are cumulative over a lifetime.¹¹⁶

Urban design can address these stressors, in part, by targeting social determinants that create inequity in outcomes.

Social determinants are the “conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks.”¹¹⁷ Examples include safe and affordable housing, public safety, and the availability of healthy foods.

Neighborhood improvements can be pivotal to improvements in health. Longitudinal research confirms that fears of crime, traffic, and neighborhood decay have negative effects on human health. Older residents of chronically disadvantaged neighborhoods are far less healthy than occupants on the wealthier side of town, including in mental health, a review by researchers John Beard (former head of the WHO’s Healthy Aging initiative) and Charles Petitot found.¹¹⁸

Even a lack of greenery (i.e., trees, landscaping, and parks) can undermine a sense of well-being. Crime- and traffic-plagued streets are less likely to invite healthy outdoor pursuits at any age, and concern for neighborhood safety

is high on both baby boomers’ and millennials’ list of priorities for metro areas, a 2014 survey by the American Planning Association found.¹¹⁹ In addition, neighborhood disadvantage may promote social disorder, find Beard and Petitot, which can thwart the development of the social networks that help buffer the impact of daily stressors.¹²⁰

Gentrifying urban areas—where affordability has slipped dramatically—contributes to these issues; older residents often are priced out of neighborhoods, and an uptick in need for support services follows. New York residents displaced by gentrification, for instance, were in the emergency room and hospitalized more often for mental health issues than those who were able to remain in their neighborhoods, one study found.¹²¹

Gentrification and renovation can also spur positive impacts for residents who manage to remain in place while new investment improves conditions around them. When remodeling infrastructure, city leaders must be deliberate in

ensuring that these renovations account for diverse lifestyles, cultural norms, and abilities.

An Age-Forward Design Roadmap

How can design foster, not deter, neighborhood well-being and safety? What innovations can cities employ to support positive aging and wellness in an urban environment?

Specific steps are part of a livability profile that is beginning to emerge in many cities. Measures are connected in a strategic web of urban age-friendliness: policies for mixed-use development and diversity of housing; public transit; access to health, commercial, and recreational facilities; safe, walkable streets with well-regulated traffic; good lighting and signage; and accessibility features. This holistic approach to neighborhood design aligns with principles of the [New Urbanism](#) movement, as well as the [Complete Streets](#) and [Vision Zero](#) agendas that are gaining traction in policy discussions nationwide as mayors and their cities look for 21st century livability solutions.



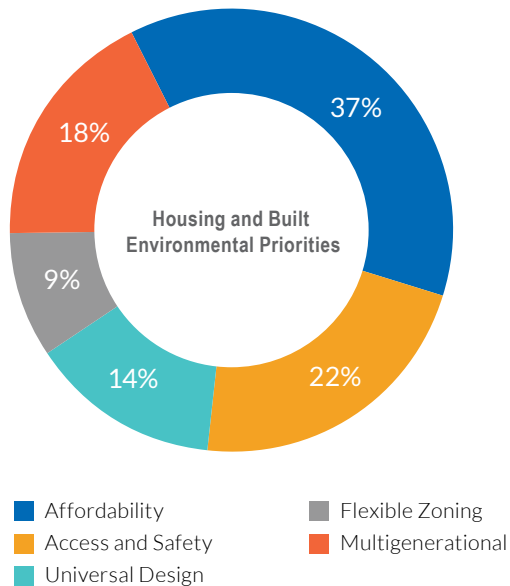
Sustainable Development and the Primacy of Affordable Housing

“What are the most critical policy interventions that city leaders should prioritize between now and 2030 to better prepare for the future of aging?”

When our Center for the Future of Aging network of 150 policy experts answered this question, the number one response was unambiguous: Housing that is safe and affordable is the top aging-related priority for local leaders to address.

We also asked our experts to rank specific United Nations sustainable development goals according to their relative impact on the health of aging populations. Again, housing was overwhelmingly cited, with **79 percent** of the experts naming it the most significant goal in supporting the health of older adults. Regarding concerns about housing, four in 10 of the experts cited affordability as the most important issue. They also underscored the need for home features that enable pro-social connectivity and safety, as well as zoning flexibility to allow varied housing options.

That these features come to the fore is unsurprising at a time when the gulf between the haves and the have-nots is widening, and most people are entering retirement years with insufficient savings.¹²² Almost a quarter of US adults have no retirement savings.¹²³ In 2016, the median homeowner aged 50 to 64 had a net worth of \$292,000—nearly 60 times that of renters of the same age.¹²⁴



Source: Milken Institute, 2019.

In addition, older adults are experiencing economic inequality along with the population at large. Rising urban housing costs are a particular challenge. In 2018, housing costs, based on average rent prices across the country, rose 3.5 percent. That increase surpasses the rise in medical care costs, which saw a 2.3 percent increase over the same period. Renters and those in disadvantaged neighborhoods face high prices with fewer options to make ends meet. They are a market for affordable and accessible rental units and condominiums—housing that is in short supply.

Homeownership has become unattainable for countless urbanites struggling to make ends meet, with economic inequality deepening as home prices rise faster than wages in 80 percent of US markets.¹²⁵ A majority of rental households, meanwhile, are “rent-burdened” in three-quarters of US cities that have more than 100,000 residents—meaning that more than 30 percent of their income goes to rent, US Census data from 2010-2012 indicate.¹²⁶

In this environment, cities face the challenge of making room for residents at all income levels and with an assortment of needs. Like younger adults, older people do not want uniform living situations. The manicured, self-contained retirement community, which generally segregates residents from other age groups, is not for everyone. A mix of more traditional retirement communities, along with apartments, single-family homes, and shared living arrangements can be more apt to meet their varied desires. Through zoning policies and regulations, cities can facilitate the mix, although affordability and market forces remain a deeper, more complex policy challenge.

TOOL

[Interactive Map](#) on Cost Burdened Households Rising with Age in US Metros, Harvard Center for Joint Housing Studies

Demand for housing to accommodate middle-income baby boomers, defined by one study as 75- to 84-year-olds with incomes of \$25,001 to \$75,025, or those 85 or older with incomes of \$24,450 to \$90,320, will be especially pressing in the coming years. This population is poised to nearly double in size, to 14.4 million by 2029, growing at more than eight times the rate of the low-income cohort.¹²⁷ Meeting the housing needs of the middle class is fundamental to preventing them from slipping into heightened economic stress.

To encourage construction and operation of housing for this market, regulators should develop innovative financial solutions and deploy pension funds, which manage the retirement savings of many in the middle class and are one of the largest sources of middle-market capital.¹²⁸

Accommodating Multigenerational and Nontraditional Living Environments

Many older adults face barriers, both financial and discriminatory, to affordable rental housing. A study from the Equal Rights Center revealed that 48 percent of LGBTQ older adults “have faced at least one form of rental housing discrimination.”¹²⁹ Those concerns have led some cities, including **New York, Chicago, Philadelphia, Los Angeles, and San Francisco**, to build affordable housing complexes targeted to LGBTQ residents, facilitated by a combination of nonprofits, developers, and government subsidies to provide an accepting and supportive environment as residents age.¹³⁰ In the face of shrinking availability and rising cost, alternative housing models for unrelated adults are emerging both organically and by design, their benefits felt both financially and socially:

- Cohousing, in which people own their homes and an interest in common areas such as outdoor, kitchen, living, and dining space where they can share meals and social interaction. Nationwide, 168 established cohousing communities exist—14 of them focused on older adults—according to the Cohousing Association of the US.¹³¹

- Student matches, a way for older homeowners to rent spare rooms to students, especially through companies that screen both parties. Apps and databases ranging from **Boston**-based Nesterly’s¹³² to city programs in **Toronto**¹³³ and the Portuguese university town of **Porto**,¹³⁴ help match house-hunting students with older residents. In **Brussels**, the popularity of intergenerational sharing arrangements has spurred public housing policies to support the creation of 350 new intergenerational homes.¹³⁵
- Home sharing, for older adults looking to save money and share household duties. In **Los Angeles**, the nonprofit [Affordable Living for the Aging](#)’s program connects older adults with compatible housemates who can pay rent and/or help with chores and upkeep. **New York** Foundation for Senior Citizens has a Home Sharing Program with a database to match people over 60 with housemates or student renters.¹³⁶

Shared housing meets overlapping urban needs and social concerns. It addresses housing affordability, helps reduce traffic by enabling more residents to live near schools and jobs, and offers opportunities for social connection and mitigating loneliness.

Meeting Multigenerational Housing Demand: Recognizing Growing Ethnic Diversity

Twin trends—the urban affordability crunch and growing numbers of ethnic minority families—point to the relevance of multigenerational housing and the need for reformation of city policies. In 2016, a record 20 percent of the US lived with

multiple generations in one household, according to the Pew Research Center. The trend has grown, with nearly 10 percent of children in the US living with parents and grandparents in 2016, compared with less than 6 percent a decade earlier.¹³⁷

Asian and Hispanic populations, growing more rapidly than the white populace, are more likely to live in multigenerational family households.¹³⁸ Multigenerational households tend to prefer public transportation options and living close to shops and restaurants.¹³⁹

Yet many cities curtail multifamily structures with setback rules and controls on accessory dwelling units, or ADUs, so-called granny units or in-law suites. Economic repercussions of such regulatory constraints are costly: In high-productivity cities, they cost the United States an expanded workforce that would increase US GDP by 9.5 percent, University of California, Berkeley and University of Chicago researchers calculated.¹⁴⁰ The appeal of multifamily housing is especially relevant where urban housing stock sags under the pressure of bustling job markets that draw new house hunters, driving up prices.

Some cities and states have responded by easing rules that limit ADUs.

In California, where the massive housing crunch is projected to leave the nation’s most populous state short more than 3.5 million units by 2025, the McKinsey Global Institute estimates that as many as 790,000 of these units could be created by easing ADU restrictions.¹⁴¹

In 2018, the mayor of notoriously pricey, housing-strapped **San Francisco** ordered accelerated processing for ADU permits to clear a backlog of 900 applications that

languished in a bureaucratic tangle. Within six months, the city said it had permitted more ADUs—most of them rent-controlled—than in the previous three years combined.¹⁴²

Minneapolis, responding to community demand, changed its zoning in 2014 to allow ADUs citywide on properties with one- or two-family homes, after previously limiting the structures to a small portion of one community.¹⁴³ The city recently eliminated exclusive single home districts as part of its [Minneapolis 2040](#) plan. Alaskan cities are also making major strides to incentivize ADU construction. Since 2015, the city of **Juneau** has handed out \$6,000 grants to homeowners who want to build backyard cottages or ADUs. In **Kodiak**, a small island community including an expanding Coast Guard base, officials created a special zoning district in 2018 for smaller lots in hopes of encouraging smaller-scale development.¹⁴⁴

TOOL

[CityHealth](#), a joint initiative of the de Beaumont Foundation and Kaiser Permanente, “offers the 2018 updated assessment of how our nation’s 40 largest cities fare when it comes to policies that can make real, lasting impacts in people’s everyday quality of life,” and includes an assessment of inclusionary zoning city laws.

FOUR MOVEMENTS FOR LIVABLE CITIES

- ▶ **Universal design:** Accessibility for everyone, regardless of disability, includes features such as no-step entry; bedroom, bathroom, and kitchen on ground level; wide doorways and hallways; variable counter heights; and lever-style handles.
- ▶ **New urbanism:** Principles that promote quality of life through features including walkability; an interconnected street grid; mixed-use and diversity; sustainability; density of buildings, mixed housing, and shops; and traditional neighborhood structure.
- ▶ **Complete streets:** The entire right of way is designed to enable safety for all users—pedestrians, bicyclists, motorists and transit riders—making it easy to cross streets, walk to shops, bicycle to work, and allow buses to run on time.
- ▶ **Vision Zero:** This strategy seeks to eliminate all traffic fatalities and severe injuries, while increasing safe, equitable mobility through road design, speed, behaviors, technology, and policies.

RECOMMENDATION #8



Expand incentives for affordable older-adult living arrangements, emphasizing the need for varied middle-income housing solutions; remove regulatory disincentives that curtail cohousing arrangements for unrelated adults; and accelerate permit process for accessory dwelling units.

Designing For Accessibility

In the 100 largest US metropolitan areas, nearly one in four residents are over age 65 or living with a disability. Housing characteristics are not keeping up. For US homes overall, just 3.5 percent include the basic access features for people with limited mobility: no-step entrances, single-floor living, and extra-wide doors and hallways, so-called visitability features.¹⁴⁵ Visitability is a measure of ease of access for people with functional limitations and/or disabilities. The approach known as universal design adds to visitability with features like lever-style door handles and faucets, accessible electrical controls, varied countertop heights, and curbless showers with handheld, adjustable showerheads.

The way people live and age in the 21st century opens the door to strategies for new kinds of housing and mixed development. Businesses

and homes geared to accessibility, engagement, and mobility are increasingly important for the diverse range of older adults who seek a variety of independent living arrangements. In one category alone, the number of households that include a person over 80 is set to more than double between 2016 and 2037, Harvard’s Joint Center for Housing Studies reports. The traditional senior residence model is being reinvented to meet different preferences and needs.

Incorporating housing for older adults in mixed-use developments can check a number of boxes for aging residents, from the “live-above-the-store” convenience of apartments, retail, offices, and recreation in one complex to specialty housing, like the mixed-income, loft-style NoHo Senior Arts Colony in **North Hollywood, CA**. Residents can take free arts, dance, and theater classes, and have access to studio space and a ground-floor theater.

“Americans are aging in traditional homes, neighborhoods, and communities that were designed for yesterday’s demographic realities, not those of today or the future,” said Henry Cisneros, the former US secretary of Housing and Urban Development and former mayor of San Antonio, TX. “We can change our communities so that people living very long lives can live well.”¹⁴⁶

RECOMMENDATION #9



Identify and leverage private investments and incentives to build mixed-use, affordable housing and commercial developments to house and serve older communities.

FROM THE EXPERTS

From the Experts: Accessibility in Housing Developments

“How likely is it that at least 10 percent of US rental units will fulfill all five universal design requirements (no-step entry, single-floor living, lever-style door handles, accessible electrical controls, and extra-wide doors and hallways) by 2030?”

Our network of experts was not especially hopeful when asked this question. They predicted a **24 percent** chance that one in 10 rentals by 2030 would meet universal design criteria—which only one in 100 meets today—despite the fact that 17 million older adults have a mobility disability, impeding functions like walking, climbing stairs, and getting in and out of bed.¹⁴⁷

Exempt from the federal Americans with Disabilities Act (ADA), most older housing stock fails on these measures—shortcomings that can force people to move to assisted living communities or nursing homes prematurely. The ADA was not intended to apply to individually owned or leased housing in the private sector, including single-family homes, condominiums, or apartments.¹⁴⁸ The Fair Housing Act established ADA standards for most public and private multifamily housing built after 1991 but still does not cover single-family homes and small apartments. A 2015 analysis conducted by the US Department of Housing and Urban Development (HUD) found that units occupied by a black or Asian householder are less likely to be accessible than those occupied by a white householder. Similarly, foreign-born householders are less likely to occupy accessible units than native-born.¹⁴⁹

Federal requirements for accessibility extend to public buildings and those receiving federal funds, but not to single-family homes—which are more than 70 percent of the nation’s housing stock—nor to duplexes or townhouse buildings without an elevator.¹⁵⁰ Some states and cities are stepping into the gap, including by helping residents shoulder the costs of modifications like building ramps or lowering shelves. Tax credits or grants, deferred loan programs, and construction permit fee waivers are part of the incentive mix.

- In **Bolingbrook, IL**, city leaders enacted a visitability ordinance in 2003, requiring no-step entrances, wide hallways and doors, and ground-floor bathrooms. The local homebuilders’ association supported it after analysis

by developers found that it would have minimal financial repercussions on their projects and that homes meeting the code sold well.¹⁵¹

- **Sarasota, FL**’s Board of County Commissioners adopted a [Universal Design and Visitability](#) program for residential housing units.¹⁵²
- In **Sonoma County, CA**, the wildfire rampage that destroyed thousands of homes gave advocates a window to raise awareness about visitability in the rebuilding process. The county Board of Supervisors listened and passed a 2018 resolution to encourage home construction that meets voluntary visitability standards.¹⁵³

Smaller, tactical adjustments can also be meaningful to incentivize accessibility. Grantmakers In Aging (GIA), in collaboration with the WHO, analyzed senior housing innovation case studies from around the world with its [Innovation@Home](#) initiative. What was surprising, their teams noted, was that the selection committee chose to award projects that are more prosaic. An example is the fee abatement for older people in **Marin County, CA**, who are doing small-scale home repair to make their home safer as they age. “Innovation does not have to be flashy; many of the best ideas are out there already but need help to be scaled,” said John Feather, chief executive officer of GIA, in an interview with the Milken Institute.

RECOMMENDATION #10



Incentivize visitability features in homes, set universal design goals for new public buildings, and expand programs to help residents install accessibility features.

Realizing Age Diversity in Public Spaces, Transit Systems, and Innovation Districts

City streets provide an obvious Age-Forward starting point, with multipurpose benefits. Good design promotes overall livability by encouraging people to engage in their communities and social networks. Green spaces and parklets make healthful outdoor pursuits appealing, as do park and street benches and landscaping that offer resting spots. Building orientation that allows sunshine to reach pedestrian areas makes streets more inviting. Pedestrian-focused gathering spaces, non-slip pavement, wide sidewalks, and sidewalk cafes help older people engage and keep moving.

Creating Civic Spaces for Multiple Needs of All Ages

Public spaces are a planning feature often overlooked and ripe for smart design. Designing public sites and spaces—parks, transportation hubs, public and commercial plazas, or joint locales for programs serving old and young—serves the community by providing beautification opportunities and encouraging healthy lifestyles, and offers intergenerational meeting grounds. They can promote social connections that reduce the isolation and loneliness often experienced by older adults.

Designing public spaces and shared sites for programs serving old and young is “an ideal blueprint for attacking age segregation and supporting all generations in families,” states Donna Butts, executive director of Generations United. “Connecting with younger generations promotes a sense of purpose, which has been shown to increase longevity and health. Meanwhile, children and youth grow up with an older adult presence in their lives—which leads to improved academic performance and long-term prospects, and a stronger society for all,” Butts writes in an *American Society on Aging* article with Eisner Foundation CEO Trent Stamp.¹⁵⁴



We increasingly live in segregated ways with people who are at the same life stage. The problem is that’s a heck of a challenge to the development of empathy. The notion that we’re going to isolate older adults diminishes the richness of community and diminishes our ability to empathize and see ourselves as part of a community that includes who today may be strangers to us. The power of the public space can bring us together again, but we need to also think about civic spaces as longevity assets.”

—CAROL COLETTA
*President and CEO, Memphis River Parks Partnership,
at the 2019 Milken Institute Global Conference*

The American public is not only receptive to intergenerational sites, but 89 percent also say they are a good use of resources, a poll from the Eisner Foundation and Generations United found.¹⁵⁵

Where development is dense and crowded with high-rises, some cities are requiring that public spaces—whether on rooftop gardens, interior courtyards, or sliver parks—be included as a condition of new development.

RECOMMENDATION #11



Expand public initiatives that prioritize investment in the civic commons to facilitate intentional intergenerational interaction and engagement.

Designing Complete Streets for Walkability and Convenience

Cities can add street design elements to improve walkability, a high priority for older adults. Walkability is generally defined as a system that integrates the density of housing and intersections and multi-use destinations. It complements the Complete Streets policy agenda that is generating excitement in cities grappling with crowding and safety issues. Complete Streets planners and engineers design rights of way to enable safe access for users of all ages, abilities, and transportation modes.¹⁵⁶

Short distances to affordable transit to access jobs and other opportunities are an important design consideration for older adults.

When public transit is coupled with reduced incentives for cars—narrowed streets and more bike and walking pathways, for example—the result is healthier environments that can reduce respiratory illness, pollution impacts, and traffic stress.¹⁵⁷

Concerns about street safety, however, deter walkability and its healthful benefits. The New Urbanism movement’s research finds that traffic-calming bumps and narrower streets reduce traffic and speed, and that short blocks and dense street grids encourage walking and use of alternative transportation.¹⁵⁸

From Honolulu to Washington, DC, cities are becoming more proactive on street safety. They are cracking down on speeding and installing protected bike and scooter lanes, long sought by cyclists, with buffered striping and plastic posts as separators from traffic lanes. Traffic signals with audible cues and “walk” signals give pedestrians a head start over same-direction traffic. Mayors across the country have embraced the Complete Streets design parameters for safety and committed their cities to end pedestrian traffic deaths through road design and safe-speed measures, the goal of the Vision Zero network.

Complete Streets projects offer long-term economic gain for budget-conscious cities. Data suggest that economic gains like increased employment and higher property values follow Complete Streets projects. As for savings, Smart Growth America found that the safer conditions under 37 Complete Streets projects avoided \$18.1 million in collision and injury costs over one year.¹⁵⁹

RECOMMENDATION #12



Promote Complete Streets and Vision Zero metrics that harness city data to better identify vulnerable older adults, improving neighborhood safety for all ages.

Fostering Equitable Transit-Oriented Development and Comprehensive Mobility Solutions

Moving beyond the mere presence of bus or subway systems, transit-oriented development (TOD) is a way to enhance livability and create economically vibrant neighborhoods. The concept is to orient housing and commercial development within a walkable half-mile of quality public transportation, reducing traffic and pollution. TOD emphasizes connections to health services and work and social opportunities—a gateway to purpose for older adults when options even as basic as visiting a library on a bus stop are unlocked.

The Northern Virginia Transportation Commission found that increased transportation options in walkable, mixed-use neighborhoods boosted mobility for local residents 75 and older. They took 20 percent more trips per week than their suburban Northern Virginia counterparts, and more of those trips were on foot.¹⁶⁰

The cross-pollination required for TOD involves an interplay of planning, budgets, and construction, often as part of redevelopment projects—all amid pressure to

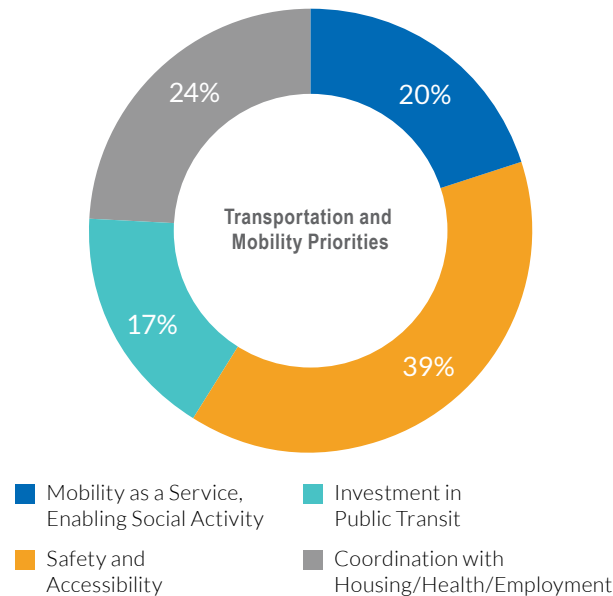
keep neighborhoods affordable. Forty-one states provide TOD support through taxes; public-private partnership arrangements; state grants; tax credits or exemptions; and other financial incentives, an AARP Public Policy Report found in 2017.¹⁶¹

As for the payoff, **Atlanta’s** BeltLine is instructive. Conceived in 1999, the BeltLine has evolved into a TOD network of neighborhoods linked by parks, trails, and transit along a 22-mile historic rail corridor circling downtown. Its economic impact is calculated at more than \$3 billion in private development, which is seven times greater than the total public/private investment of \$450 million through the end of 2015.¹⁶² Tax revenue from the increased property values along the rail line secures bond funding for more BeltLine investments.¹⁶³ The BeltLine demonstrates how an impactful project grew from collaborative TOD thinking to transform how and where people live.

The Future of Age-Forward Mobility

“What are the most critical policy interventions that city leaders should prioritize between now and 2030 to better prepare for the future of aging?”

When we asked our Center for the Future of Aging network of 150 policy experts this question, the third-highest priority identified was to provide more affordable, integrated transportation options before 2030.



Source: Milken Institute, 2019.

Non-drivers face isolation and declining quality of life if they have no transportation options. Older adults who stop driving are three times less likely to visit friends and family, and almost three times less likely to participate in social outings.¹⁶⁴

Transit systems must account for a range of passenger needs and abilities. Reliability, frequency, and accessibility are pivotal, along with personalized van or pick-up systems for the mobility impaired. Well-located transit stops with good lighting and seating also make a difference.

Ridership data indicate that public transit is a winner with older adults. Between 2001 and 2009, its use among Americans age 65 and older grew by 40 percent, making transit a crucial element in the age-friendly toolbox.¹⁶⁵ Its importance assumes greater significance in light of the link between mobility and physical and emotional health. As older people give up driving due to physical challenges, their loss of mobility is not simply about convenience or even necessity. A national survey of adults 50 and older found they perceived driving as a key to personal independence and freedom.¹⁶⁶

The new frontier of driverless vehicles opens more mobility prospects for the future. Yet older passengers' needs don't end with just a ride.



Major disruptions currently occurring in the transportation sector allow for hope that we can harness emerging technology to modernize transportation services and deliver higher quality service to older adults and people with disabilities.”

—JANA LYNOTT

Senior Strategic Policy Advisor, AARP Public Policy Institute, in an interview with the Milken Institute

Older people have been slower to adopt ride-hailing services, such as Uber and Lyft. In a 2018 study of older adults, 74 percent of the sample reported no knowledge of these services, and only 3.3 percent reported that they used ride sharing for their transportation needs.¹⁶⁷

Taking advantage of the opportunity to personalize transit, the Southern California city of **Monrovia** partners with Lyft to provide subsidized rides for as little as 50 cents and up to \$3.50 to transport passengers around the city. Dial-A-Ride services are available to passengers with disabilities.¹⁶⁸ A program in **Columbia, SC**, designed for people living in “food desert” neighborhoods provides \$5 credits from the COMET bus system for people to take Uber rides to local grocery stores.¹⁶⁹

The Senior Farmers Market Nutrition Program, led by the **Mississippi** Department of Agriculture and Commerce along with other state partners, is a unique program designed to provide more access to good nutrition for low-income older adults above the age of 60 in certain areas of Mississippi and to promote the purchase of Mississippi-grown fruits and vegetables.¹⁷⁰

The concept of Universal Mobility as a Service, as described by AARP Public Policy Institute, calls for incorporating the needs of all users—across income, geographic, disability, and age groups—through transportation systems that include:

- Integration of specialized transportation and universal design principles
- Shared transit in place of solo driving
- Seamless payment systems and traveler information for a variety of transportation

- Fixed-route and demand-responsive public transportation, taxis, commercial ride-share, carpooling, bike-sharing, and volunteer transportation.¹⁷¹

[Deloitte 2019 City Mobility Index](#) “takes a holistic view of the city’s entire mobility landscape, and it is informed by our clear image of how the future of mobility could unfold in urban areas.”

RECOMMENDATION #13



Revise local transit-oriented development guidelines to include special attention to the mobility needs of older adults and people with disabilities; additionally, expand regional transit planning to reduce systemic inefficiencies and promote Universal Mobility.

Conclusion

From street safety to housing options to intergenerational engagement, neighborhood design has the power to enrich individual well-being and community resilience. Across the US and the world, this message is catching on as cities incorporate livability concerns into their planning and join the World Health Organization’s Global Network for Age-Friendly Cities and Communities.

Nevertheless, the momentum—like most efforts to upend convention—is far from universal. Inertia finds many cities still distracted by development that promises short-

term financial and political gain while overlooking the longer-term benefits of forward-thinking approaches to zoning, services, transportation, environment, and street design. Neighborhoods cannot thrive with systems and design methods created for earlier eras that no longer suit the populations of the 21st century.

Short-sighted decisions that deepen inequity and leave residents without shelter, mobility, or purpose are neither healthy nor sustainable for the future of cities. The factors that make a city livable are not driven by near-term gratification. They are the building blocks of sustainability, the tools for creating cities that will support and enrich residents through the ages.

Age-Forward Cities Making a Difference

Age-Forward BoomTowns

The Gensler Research Institute, the research arm of one of the world’s largest architecture firms, is pursuing ways that architects and developers can work together to create age-friendly urban livability. Gensler experts have developed a model called BoomTown as an alternative to self-contained retirement communities, which, although sometimes incorporating desirable amenities, typically leave residents segregated from other age groups.

Based on evidence that emotional wellness suffers and costs are borne by family members and society at large when older people are isolated, the Gensler Research Institute set out to reset the default that prevents older adults from living fully engaged lives.

Unlike conventions relegating older adults to the sidelines, the BoomTown model emphasizes well-connected spaces that foster intergenerational relationships. Its planning integrates senior living into neighborhoods and, through mixed-use design, mobile technology, and walkable amenities, it seeks to reinforce shared interests. BoomTown principles include:

- Communities located close to commercial, medical, and recreational facilities, with multiple-use spaces, and design features for safe, comfortable homes for all residents
- Use of mobile devices for on-demand services, including assistive services and telemedicine
- An intersection between physical and social space, with opportunities for informal interaction, and communities oriented around commonalities that transcend generations, allowing older adults to be proactive about their health and find inclusion and ownership in the community¹⁷²

The Gensler Research team has created visualizations of neighborhoods that are undergoing age-friendly transitions across the nation. The visualizations for two neighborhoods in **Washington, DC** and **Los Angeles**, included in this report, depict the powerful changes that can occur through livability design frameworks, providing a dramatic look at how design can improve lives.

DESIGNING INTERGENERATIONAL COMMUNITIES

To foster age-inclusive development in Ivy City, Washington, DC, the Milken Institute Center for the Future of Aging and Gensler teams reimagined spaces and programs to better meet residential, health-care, and educational needs.



Credit: The Gensler Research Institute

1 Consolidate industrial and municipal facilities to create hubs for (a) health care, (b) creative work environments, (c) centralized public space, (d) mixed-use residential, and (e) education.

2 Soften and buffer major adjacent highways and railyard with green space.

3 Revitalize existing residential areas with green pocket parks.

4 Build a rooftop community garden to create spaces for shared affinities across generations.

5 Strengthen local transportation networks for greater access to hospitals, universities, and local recreation.

6 Provide a centralized, easily-accessible health and wellness center to promote healthy living.

7 Expand and revitalize the historic Crummel School to foster civic and social engagement.

8 Create commercial space for co-working, maker spaces, and continued learning.

9 Devote ample public space for community programming with outdoor exercise equipment for all ages.

10 Provide affordable residential options that embrace inclusivity and diversity.

11 Integrate residential housing with retail shops, services, and entertainment venues.

ECONOMIC PROFILE

Diverse service-based economy

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#19), High Marks for Employment (#1), Transportation and Convenience (#8), and Wellness (#19)

DEMOGRAPHY

In the decade before 2018, the number of Washingtonians over the age of 60 grew by nearly 15,000 to 117,223.173

2018 Age-Friendly DC Strategic Plan lists improvements to the Built Environment as its first pillar of action items, bolstered by the development of Sustainable DC, the city's planning effort to make DC "the most sustainable city in the nation."¹⁷⁴

The nation's capital, home to a diverse and cosmopolitan mix, is a hub of job opportunity, led by the federal government and its many related sectors. The city incorporates numerous livability amenities, and officials boast that virtually all residents are within a 10-minute walk of a park.

Older residents are avid volunteers and well represented in the workforce, but more than half of adults age 65 and older live alone.¹⁷⁵ While the city is highly rated for transportation and wellness, 13.4 percent of DC's age 65-plus adults live in poverty, compared to 9.2 percent nationally. Excluding Social Security, fewer than half of residents age 65 and older have retirement income.¹⁷⁶

Against these challenges, Washington is busy in the age-friendly sphere. Named by the World Health Organization as an age-friendly leader, it hosts more "villages" per square mile than any state, following the concept pioneered in **Boston's** Beacon Hill

neighborhood. Villages are service and support networks in which residents typically pay an annual fee for access to services like transportation, yard work, or bookkeeping provided by volunteer and paid residents, organizations, and approved contractors.

Villages thrive on "feelings of purpose and the goodwill that's created by doing good for other people," said Gail Kohn, Washington's age-friendly coordinator, in an interview with the Milken Institute.



INVESTING IN AFFORDABLE MIXED-USE NEIGHBORHOODS AND INTERGENERATIONAL ENGAGEMENT
RECOMMENDATIONS #8 AND #11

Washington's age-friendly initiatives include:

- The Safe-at-Home program grants for home adaptations such as ramps and handrails for qualifying older adults and those living with disabilities
- Zoning revisions that allow ADUs, or granny units, in low-density residential zones
- Construction of more than 500 units of below-market-rate housing for older residents, including units reserved for those raising grandchildren in the transit-centric Mount Vernon neighborhood¹⁷⁷
- Allocation of \$28 million for 50 new supportive housing units for older women¹⁷⁸
- Commitment of \$11.4 million for a new senior site focused on holistic health and nutrition
- The Transport DC Program's curb-to-curb taxi service for residents who have disabilities¹⁷⁹

Ivy City Blossoms

Washington's Ivy City neighborhood sits astride the busy New York Avenue corridor, a major entry route to the capital, alongside a historic rail yard. A once thriving industrial hub, Ivy City boasted warehouses and manufacturing that reached a heyday in the 1950s but faded as many large-scale enterprises moved to the suburbs. Today, the area's population of more than 24,000 has a high level of poverty.

Ivy City is revitalizing as demand for affordable housing spills out from the Washington core. New development, however, pushes up housing costs, including for industrial sites that had stabilized nearby affordability and provided jobs.¹⁸⁰ Industrial buildings are under market pressure to convert to other uses, and many need modernization to accommodate new industries.

Washington planners are working to diversify the economy and create new businesses while bolstering existing companies, providing well-paid jobs, and improving environmental stewardship and connectivity options.¹⁸¹ Development priorities include landscaping, walkable streets, and emphasis on community amenities.

DESIGNING INTERGENERATIONAL COMMUNITIES



Credit: The Gensler Research Institute



ECONOMIC PROFILE

Diverse service-based economy

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#56), High Marks for General Livability (#7), Transportation and Convenience (#13), and Wellness (#21)

DEMOGRAPHY

Population over 65 is projected to nearly double to 18 percent, from 1.1 million to 2.1 million between 2010 and 2030

2018 Age-Friendly Action Plan

recommendations include identifying cross-agency strategies to “expand inclusion of the older adult population as part of the County and City’s Homeless Initiatives, including through implementation of the ordinance authorizing Accessory Dwelling Units and by (examining) new and innovative strategies such as co-op housing, co-housing, or other multi-generational living arrangements to help reduce housing costs, and mitigate social isolation.”¹⁸²

In Los Angeles, the teams created a proposal to completely reform how MacArthur Park serves its community. By re-allocating space—creating space for a playground, outdoor classroom, fitness center, and other community-focused amenities—the teams proposed a hub that leverages the area’s most valuable assets—the reasons why people come to MacArthur Park to begin with.

1 Encourage safe and calm traffic patterns using audible signals and clear pavement transitions for pedestrians.

2 Integrate and coordinate surrounding residential, business, and health-care networks for people of all ages throughout their lifetime.

3 Support existing local vendors through designated structures and lighting to create a haven for intergenerational engagement.

4 Provide ample space for the community-conscious programming of events and festivals to minimize isolation and foster social connections.

5 Establish a sense of place through design elements that celebrate the history and culture of the existing neighborhood.

6 Leverage existing transportation infrastructure to access services and area amenities.

The nation's second-most populous city is pursuing age-friendly initiatives in anticipation of an over-65 population that will double by 2030. Far more complex than its entertainment industry profile, this hub of international business and immigration is known for its overall livability, economic vitality, transportation and convenience, and wellness. Its substantial ethnic minority populations now account for 57 percent of the total older population, with 90 languages spoken.

A city of great health and wealth disparities, job creation, and tourism, Los Angeles is an expensive place to live, with California's highest percentage of low-income families. While homelessness among the general population dipped slightly in 2018, homelessness among residents 62 and older shot up 22 percent.

Despite the density of retail and service amenities, impediments to walking include traffic safety concerns, crime, broken sidewalks, unclean streets, lack of benches, and transit shortcomings such as long bus waits.



Taking a regional perspective, the city and county's Purposeful Aging Los Angeles Initiative created an age-friendly plan across a range of domains, such as:

- Transportation officials are working to make the City Rides program more affordable and accessible and considering older-adult taxi subsidies for longer trips.
- [On the Move Riders Clubs](#) throughout Los Angeles County help older people with the ins and outs of public transit.
- Emergency management officials are reviewing neighborhoods where clusters of older adults live to improve emergency preparedness outreach.
- Mayor Eric Garcetti has put the city on track to pursue [Vision Zero](#) goals of safe streets, revitalizing public transit, and improving sidewalks.
- The city is mapping locations of older residents in need of housing, employment, and wellness services to inform age-friendly projects.
- Planning to improve park accessibility and amenities is underway to build a sense of community and encourage older adults' participation in recreation and wellness programs.

MacArthur Park

MacArthur Park is home to one of the city's largest immigrant and increasingly older resident populations. An early 20th century neighborhood of elegant homes, it has a history of demographic shifts and has cycled through neglect, decline, and gang and drug affliction.

With its signature lake bisected by storied Wilshire Boulevard, MacArthur Park is a slice of the 118,000-population Westlake neighborhood of Los Angeles, a transitioning community with stylish lofts and restaurants, and newcomers including young professionals and Asian residents amid the longtime Latino populace. The emerging changes have attracted a hotel and performing arts center with a 41-story apartment tower that will rise to meet the gaze of downtown's skyscrapers a few miles away.¹⁸³

Renewal projects over the last decade have resulted in new sports fields and children's playgrounds, outdoor concerts, and a crackdown on crime. With gentrification has come questions about the future of neighborhood character and the lives of long-time residents.

The area has 26 senior living sites. Affordability has eroded under pressure for updates and commercial conversions, said Rigo Saborio, CEO of St. Barnabas Senior Services. The area relies heavily on St. Barnabas and other nonprofits for programs and services for older residents.

Aside from housing insecurity, older people are stressed by crime, trash-burdened streets, and parking shortages. "Seniors don't feel at ease being out after dark, and then, of course, they're worried about transportation to get them back home," Saborio said in an interview with the Milken Institute.

City officials cite rental costs, walkability, medical services, and nutrition as priorities for MacArthur Park's older residents. They have negotiated rents in senior apartment buildings and repaired buckled sidewalks and entry points to MacArthur Park to improve accessibility.

The area has little affordable, high-speed internet access, which poses a problem for many older residents, said Saborio, who listed other areas ripe for investment as new housing stock and retrofitting of tired buildings that house mature adults.

CHICAGO: REINVENTING THE WEST LOOP



ECONOMIC PROFILE

Service-based economy

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#48), High Marks for Transportation and Convenience (#6) and Health Care (#37)

DEMOGRAPHY

10.3 percent of Chicagoans are 65 or over. Illinois' 65 and older population is projected to grow 18 percent by 2030¹⁸⁴

2015 Age-Friendly Plan prioritizes safety improvements for lower-income older adults aging in high-rise buildings by creating an innovative Vertical Independent Collaborative (VIC) pilot program, now with 21 operational sites.¹⁸⁵

From its birth as a fur-trading outpost and later a steel powerhouse, then home to global financial exchanges, Chicago has evolved to become one of the nation's most important cities—a lively, service-based economy known for its workaday transit system. Beneath its impressive skyline with more than 3,000 high-rises, it also is known as one of the nation's most walkable cities.

Chicago, however, struggles with striking poverty among older adults, particularly on the South Side where elder poverty is twice the national average. Among the nation's most medically underserved areas, with elevated rates of diabetes and chronic illness, it suffers a severe shortage of geriatricians, with statewide numbers well under half the recommended American Geriatrics Society's ratio.



MAXIMIZING ACCESSIBLE PUBLIC SPACES AND INNOVATIVE AGE-FORWARD COMMUNITY RECOMMENDATIONS #10 AND #13

Chicago developed its age-friendly plan in 2015 and lists a number of priorities and steps.¹⁸⁶

- The Public Building Commission uses universal design for new facilities, going beyond Americans with Disabilities Act requirements to address all levels of disability.
- By mayoral directive, all Chicago Transit Authority rail stations are to be 100 percent accessible to people living with disabilities by 2038.
- Age-Friendly Village Interdependent Collaboratives—a fee-free version of the Village concept—uses senior volunteers to provide social interaction and identify home and community service needs for older residents.
- Vertical Interdependent Villages are established in some of the apartment buildings that tower above Chicago streets, helping dementia sufferers age in their apartments; building managers and staff have access to training developed by the city and the University of Illinois at Chicago.
- Belmont Village Lincoln Park, much-needed assisted-living housing, was constructed as part of a larger mixed-use redevelopment plan after years of planning.

- The city's Small Accessible Repairs for Seniors program provides safety and accessibility improvements—like ramps, grab bars, and smoke detectors—that help lower-income adults age 60 and over remain in their homes.

Joyce Gallagher, Chicago's executive director of senior services, said in a Milken Institute survey that priorities for 2030 include identifying isolated older adults and providing them services, and strengthening and connecting the Village network to share best practices and maintain connections with vulnerable older adults.

West Loop

Chicago has specific planning guidelines for West Loop, the traditional meat-packing and industrial center just west of the downtown Loop. The neighborhood has evolved to include lofts, restaurants, boutique hotels, and an elevated "L" train stop that connects the area more conveniently to other areas of the city. In elevating West Loop as an employment, transportation, and residential center, city guidelines aim to retain West Loop's urban character and scale as one of the city's most desirable places to live, work, and visit.

City guidelines for West Loop include several age-friendly goals:

- Development that maximizes sunlight for streets, parks, and public spaces and preserves walkability
- Tall buildings with public space at street level and maximized solar access and daylight on streets
- Specific sites that improve important thoroughfares while orienting buildings to cast their shadows toward expressways, widen sidewalks and create larger public spaces, and encourage retail outlets around parks and public spaces
- Improving vacant lots, minimizing environmental impacts, emphasizing pedestrian and bike safety, encouraging public gardens and landscape, and installing high-quality lighting¹⁸⁷

CHAPTER 3: Resilient Networks for Healthy Aging: How We Care

FORECASTING 2030

OPPORTUNITY:

The potential of technology to impact lives across diverse communities is dramatically changing the provision of care in cities.

- » The virtual care marketplace is expected to surpass \$13 billion by the end of 2026, as health-care companies increase software-driven automation of services in pharmacies, hospitals, and other community settings.¹⁸⁸
- » According to McKinsey Global Institute projections, if cities deploy smart city applications to their full capacity, they have the potential to reduce disability-adjusted life years—the primary metric used by the WHO to convey the global disease burden—by 8 to 15 percent.¹⁸⁹

CHALLENGE:

Isolation among US older adults is growing. Between 2015 and 2035, the number over age 75 who live alone will nearly double, from 6.9 million to 13.4 million, the majority of them women.¹⁹⁰ In the coming years, seven out of 10 adults age 65+ will need long-term services and supports, and more than half will experience a high level of need, defined as assistance with two or more activities of daily living for at least 90 days or severe cognitive impairment.¹⁹¹

GOAL:

Resilient local communities that foster healthy aging through the integration of health and social services and the use of technology to improve quality of life and safety for older adults.

The term “resilience” may call to mind cities’ defenses against natural disasters, terrorism, and climate change—the realm of disaster and emergency preparedness. But it also encompasses the preparation and perseverance needed to safeguard well-being in the routines of daily urban life.

“Resilient cities promote sustainable development, well-being, and inclusive growth,”¹⁹² according to the Organization for Economic Cooperation and Development. A resilient city is one in which governments and economic structures foster the population’s ability to meet short- and long-term stresses, including those related to critical health and social services. Systems attuned to the unique needs of older adults—especially those who are isolated or who have complex needs—are central to this mission.

The US Departments of Homeland Security and Health and Human Services advocate for a Community Health Resilience agenda, which it defines as “the ability of a community to use its assets to strengthen public health and healthcare systems and to improve the community’s physical, behavioral, and social health to withstand, adapt to, and recover from adversity.”¹⁹³ This strength-based approach can deliver more collaborative, efficient networks—across services, sectors, and community-based interventions—to enable better, healthy aging.

Strengthening Social Connections for Stronger Communities

Resiliency is reflected in the daily functioning of communities as well as in their longer-term actions to protect against social and economic weakness. Access to health care, supportive services, and safe housing, bolstered by social ties and tech-enabled connectivity, all combine to enhance older adults’ resiliency in the face of unanticipated events.

Research has shown that a lack of social connection can lead to health problems and reduce resiliency. Twenty-two percent of older adults report that they lack companionship some of the time, and 19 percent report feeling isolated some of the time.¹⁹⁴

Stanford Center on Longevity found that 55- to 64-year-olds are less socially engaged than their predecessors were 20 years ago in terms of marriage, family ties, and interaction with neighbors and friends.^{195, 196}

The implications for health are profound. Older adults who are socially isolated or lonely have significantly increased risks of depression, Alzheimer’s disease, and stroke, as well as premature death.^{197, 198}

“A resilient community requires strong connections at all levels: between neighbors, between neighborhoods and community organizations, and between local government and non-governmental groups,”¹⁹⁹ a 2018 report by the RAND Corporation concluded.

Social cohesion is paramount for underserved populations. Many LGBTQ older adults, for example, are estranged from family and lack social supports, deficits that worry three-quarters of LGBTQ adults, according to a national AARP survey in 2018.²⁰⁰ By 2030, the LGBTQ population over 50 is expected to reach an estimated 7 million in the US, and, according to the advocacy group SAGE, well over half will need elder care and services. LGBTQ adults are more than twice as likely as heterosexuals to be single and live alone, SAGE reports, and they face discrimination and disrespect in treatment settings as well as in housing. More than a third worry they'll have to hide their identity to find suitable housing as they age.²⁰¹

Health-care pioneers such as CareMore, an integrated health plan and care delivery system for Medicare and Medicare patients, have implemented community programs to address social isolation, which is often a symptom of living with chronic illness. At CareMore, patients determined to be at risk for social isolation can receive home visits from social workers who encourage them to participate in free social activities such as Zumba classes and group lunches.²⁰² CareMore reports it has reduced hospital admissions by 21 percent after launching its “Togetherness Program.”²⁰³ Among its benefits, outreach coordinators make weekly phone calls to patients to encourage preventive care, and through regular check-ins, seek to reduce loneliness and its negative health effects—even making sure older patients are not alone on holidays.

Integrated Focus on Economic and Health Inequality

Urban resiliency relies on collaboration to connect social, health, and cultural services. New payment models and a focus on social determinants of health have caused most hospital-based systems and health plans to offer services in the communities where people live, rather than in hospitals and doctor’s offices. Communities across the nation are forming new coalitions (public-private partnerships, nonprofit and commercial projects, or coordination among universities, cities, and the private sector) to narrow economic and health inequality. These efforts can provide all residents, including the most vulnerable, a chance to age with purpose and health.

At the state level, performance on LTSS is tracked by the AARP [Long-Term Services and Supports State Scorecard](#). Using state data and analysis, it measures and highlights state performance in this crucial area.²⁰⁶ The LTSS Scorecard also showcases promising state and community-based practices such as mobility managers, community living for veterans, and strategies to reduce the risk of long-term nursing home care after hospitalization.²⁰⁷

These best practices highlight the importance of forging partnerships across different sectors in the community, including through an initiative at the intersection of planning and public health that is geared to population-level change. Rooted in the idea that the built environment impacts all aspects of



We are exquisitely unprepared for that [oldest] age demographic pushing through. We need to lean in much harder if we want to help seniors thrive at home as long as possible. The opportunities for person-centered care to reduce costs and improve outcomes for people with complex medical conditions have never been greater.”

—BRUCE CHERNOF
*President and CEO, The SCAN Foundation*²⁰⁴

Resiliency for people with long-term illness, disabilities, or frailty is closely linked to the quality of their services and supports: a broad range of day-to-day help, whether personal care like bathing and dressing, complex care such as IVs and wound care, or help with housekeeping, transportation, bill-paying, and meals, among other supportive services.²⁰⁵ These long-term services and supports (LTSS) are provided in homes, health facilities, or other settings, and include support for unpaid caregivers.

health, the health-equity-focused Plan4Health initiative—created by the American Planning Association and the American Public Health Association—promotes strategies focused on nutrition and physical activity. It emphasizes working in coalitions—which may include nonprofits, schools, recreation departments, planners, health professionals, and more—to ignite policy and environmental changes.²⁰⁸ Cities aligned with the initiative employ health considerations

across decision-making sectors. They are pursuing projects such as bike- and pedestrian-friendly streets, farm-fresh produce brought to neighborhoods, and school gardens.²⁰⁹

Integrated Health and Long-Term Services and Supports

The social determinants of health are a growing focus for insurers and governments alike. Social determinants, including health behaviors and social and economic factors, account for 80 percent of health outcomes in a population, compared with 20 percent attributed to clinical care.²¹⁰

To address these determinants, the health-care industry has been moving more services out of clinical settings and into the communities where people live. Research [confirms](#) that integrating medical and social services improves health and lowers costs. For example, [community-based organizations](#) and social workers can identify and address risk factors such as poor self-care skills, environmental hazards, mental-health challenges, or difficulty with medication management before a doctor has to intervene.

Health insurer Humana is targeting social determinants with its Bold Goal Initiative, focused on food insecurity, loneliness, and social isolation “because of their direct impact on healthy days and clinical outcomes,” the company states.²¹¹ Among its many initiatives—including a predictive model allowing care managers and clinicians to identify patients at risk of loneliness and isolation—Humana has partnered with Feeding America on a physicians’ food insecurity tool kit in view of older adults’ unique challenges such as having to choose

between buying food or medicine.²¹²

The economic benefit of locally based services is well established:

- Ninety-two percent of home-delivered meal recipients say the meal programs allow them to remain in their homes in lieu of considering more costly assisted living, according to the federal Administration for Community Living.²¹³
- In several studies, meal programs were found to improve [health](#) and reduce nursing home placement.²¹⁴
- Humana’s data revealed that community-level changes improved older adults’ conditions including diabetes, heart disease, respiratory problems, and poor mental health.²¹⁵

Building on the idea that the benefits of nutritious foods save on health-care costs, especially in emergency room utilization, Meals on Wheels America has sought to integrate its services with traditional health-care delivery and reach more homebound residents. To explore a new funding mechanism using a Pay for Success outcomes-based financing model, the organization partnered with Quantified Ventures and Johns Hopkins Bayview Medical Center in **Baltimore**, to offer home-delivered meals in conjunction with its other supportive services for enrollees.²¹⁶

Meal delivery volunteers are often the only people that older adults may see on any day, and as such, can report changes in health status to health-care providers. Meals on Wheels America is collaborating on a nationwide project with the Gary and Mary West Health Institute and researchers from Brown University’s Center for Gerontology and

Healthcare Research to investigate how health and safety screenings can be integrated into meal delivery services for homebound older adults. The pilots are taking place across six cities: **Cambridge, OH; San Diego, CA; Fort Worth, TX; Raleigh, NC; Sheboygan, WI; and Westwood, NJ.** The program, called More Than a Meal Phase 3, aims to standardize reporting mechanisms and improve communication with health-care providers to prevent an adverse health event. The assessment will help identify health, safety, and social needs such as loneliness, depression, or fall risk. By providing volunteers with simple screening tools and user-friendly technology, the study is designed to improve care coordination and prevention efforts.²¹⁷

Research also indicates that counties in which Area Agencies on Aging (AAAs) partnered with a range of organizations in health care and other sectors saw significantly lower hospital readmission rates than counties where AAAs partnered with fewer types of organizations.²¹⁸

Other community-based programs concentrate on providing preventive services in places that are convenient or frequently visited. One model based at the [University of Maryland](#) offers preventive services at barbershops and beauty salons. Instead of having to deal with the health-care system, neighborhood residents can get their blood pressure or glucose levels checked while getting their hair cut.

Drug and grocery stores are also setting up mini-clinics so consumers can get a flu shot or a blood test while shopping. For example, Humana and Walgreens have joined forces to create “care centers” oriented to

older adults and offer primary-care services and representatives to answer Medicare questions.²¹⁹

The new company model created by the merger of [CVS Health and Aetna](#) is poised to make such conveniences commonplace, using the drug stores that dot US cities for a major delivery disruption. With stores located in virtually every neighborhood in the US, CVS Health President and CEO Larry Merlo predicted the combined effort would “transform the consumer health experience and build healthier communities through a new innovative health care model that is local, easier to use, less expensive, and puts consumers at the center of their care.”²²⁰

RECOMMENDATION #14



Bolster the capacity of trusted, community-based organizations through economic and human resources so they can effectively partner with the health systems and plans seeking to engage in their communities.

Age-Friendly Health Systems for Age-Forward Cities

A growing movement involves health systems that participate in an age-friendly agenda aimed at optimizing value for patients, families, caregivers, health-care providers, and the overall system. An initiative of the John A. Hartford Foundation and partner organizations,²²¹ it calls for the care of every older adult to be guided by

evidence-based practices known as the 4Ms Framework:

- **What Matters:** Care aligned with each older adult’s health goals and care preferences
- **Medication:** Use of age-friendly medications that do not interfere with goals and preferences, mobility, or mentation
- **Mentation:** Prevention, treatment, and management of dementia, depression, and delirium
- **Mobility:** Ensuring that older adults move safely every day to maintain function and do what matters

bolster resilient aging: collaboration between public health departments and the AARP Network of Age-Friendly States and Communities. Public health agencies in communities throughout the US are responsible “for protecting, assessing, and assuring individual, community, and environmental health.”²²³ The public health system focuses on prevention through population-based health promotion—public services and interventions that protect entire populations from illness, disease, and injury. The AARP Network of Age-Friendly States and Communities, the US affiliate of the World Health Organization’s



The Age-Friendly Health Systems initiative has become a movement to transform care for all of us as we age.”

—TERRY FULMER

President, The John A. Hartford Foundation, in an interview with the Milken Institute

At least 325 teams from 126 health systems in 37 states are testing this Age-Friendly Health Systems framework in hospital and ambulatory settings and sharing data.²²²

While cities and counties have traditionally not been the primary driver in health-care financing and delivery, several factors (e.g., polarization at the federal level and more emphasis on public health) have led to the rediscovery of the importance of local governments in health care. Whether the issue is Medicaid, hazardous wastes, homelessness, or lead paint poisoning, more attention is focusing on what state and local governments can do to promote health.

This increased attention has spurred connections that could

Age-Friendly Cities and Communities, “helps cities prepare for rapid population aging and the parallel trend of urbanization.”²²⁴

While public health has a proud history of helping to extend human longevity, it has not been a prominent participant in healthy aging collaborations. “Landmark programs including Medicare, Medicaid, and the Older Americans Act, did not explicitly call for a role for public health organizations,” the John A. Hartford Foundation states.^{225, 226}

Age-friendly cities and communities bring together local leaders with community-based organizations such as Area Agencies on Aging to promote planning for livable communities for all ages—“communities that are good places to grow up and good places grow old.”²²⁷

Bringing these two influential community partners together to address fundamental health issues for older citizens could provide a powerful combination to affect change. The National Prevention Council makes the case for collaboration in preventive services like screenings, behavioral health, and counseling.²²⁸ Public health has been a key partner, for example, with Vote & Vax, providing Election-Day flu vaccines at US polling places—a notable service since up to nine in 10 flu-related deaths occur among people age 65 or older.^{229, 230} A pilot program in **Tampa, FL**, creates a testing ground for efforts to scale the partnership of public health agencies and age-friendly communities on a national level.

RECOMMENDATION #15



Scale and pilot more Age-Friendly Health Systems in cities across the US and create meaningful alignment between local public health departments, local Age-Friendly Coordinators, Area Agencies on Aging, and other community-based organizations serving older adults.

Ride-Hailing for Health: On-Demand Transportation as a Means to Better Health

Ride-hailing giants Uber and Lyft have recently found themselves front and center in the business of healthy aging. Transportation is the third-most frequently identified reason for missed doctor's appointments among older adults, according to

the American Hospital Association. According to the Transit Cooperative Research Center, the market opportunity created as a result of this lapse in access is estimated to be worth over \$3 billion.

Both ride-hailing companies have seized this opportunity by developing pilots with cities to provide subsidized rides to low-income older adults to remove barriers to health-care access. Lyft's [Grocery Access Program](#) began with a successful pilot in **Washington, DC**, last year, providing thousands of affordable rides to grocery stores for low-income families and older adults living in food deserts, and has since expanded to **Atlanta** with plans to launch in more than a dozen US cities this year.

A 2016 [JAMA](#) study showed that as a result of Lyft's partnership with Anthem subsidiary CareMore, the health plan reduced transportation costs by about 30 percent per ride, or \$10 per patient per ride, while increasing patient satisfaction by 80 percent. As a result of the pilot in **Southern California**, CareMore embarked upon a larger scale pilot throughout all of its Medicare Advantage markets serving 75,000 members in California, Nevada, Arizona, and Virginia. The result? Within three months, on-time performance and patient satisfaction improved, wait times decreased, and it cost 39 percent

less than non-Lyft curb-to-curb rides.²³¹

Many older adults have begun to use on-delivery, app-directed services. An [MIT AgeLab Study](#) found that for aging adults wishing to remain in their own homes, using these app-directed services for help with activities of daily living such as household errands, transportation, and meal delivery cost less than the average monthly cost of assisted living, even as the need for services increases with diminishing physical capability.²³³

Housing for Health: Insurers on the Ground Floor

Housing, which is crucial to well-being and resiliency, is one of the best-researched social determinants of health.²³⁴ Selected housing interventions for low-income and underserved older adults have proved successful in improving outcomes and lowering health-care costs.

Building on these findings, health-care payers have begun to improve housing stability for at-risk groups. For example, UnitedHealthcare has invested in dozens of affordable-housing communities nationwide, committing more than \$400 million through local partners from 2011 to 2019. The investment produced more than 4,500 new homes for individuals and families in need, the company says, furthering its stated goal to improve health in underserved communities.²³⁵



As studies reveal that senior loneliness can increase a person's risk of mortality—more than air pollution, obesity, and excessive alcohol use—it is more important than ever that we come together to exchange ideas and discuss solutions.”

—**SACHIN JAIN**
President and CEO, CareMore & Aspire Health²³²

UnitedHealthcare cites data showing dramatic drops in emergency room admissions where homeless people entered stable housing. “Access to safe and affordable housing is one of the greatest obstacles to better health, making it a social determinant that affects people’s well-being and quality of life,” UnitedHealthcare CEO Steve Nelson stated.²³⁶

In **East Oakland, CA**, tenants faced the prospect of steep rent hikes as their building was listed for sale in the housing-shortage-plagued San Francisco Bay Area. The integrated health system Kaiser Permanente put up the money to help a nonprofit purchase the building and keep it affordable.^{237, 238} The organization says affordable housing is a lynchpin in its impact investment efforts to “advance economic, social, and environmental conditions for health.”²³⁹ In addition to supporting housing development, Kaiser Permanente is looking to scale efforts to address homelessness through a new partnership with [Community Solutions](#) aimed at accelerating efforts to end chronic homelessness in 15 communities. As part of Kaiser Permanente’s broader strategy, and in collaboration

with Bay Area Community Services (BACS), Kaiser Permanente announced in 2019 a first-of-its-kind community partnership that will house 515 adults ages 50 and older in Oakland who were identified by BACS as being “particularly vulnerable,” chronically homeless and living with at least one chronic condition. “In turn, BACS will provide comprehensive outreach, housing coordination, landlord development, housing locator, and tenancy-sustaining services over the long term.”²⁴⁰

RECOMMENDATION #16



Pilot test and evaluate innovative financing models to improve the coordination of housing stability and health services for high-risk older adults.

Digital Networks, Connectivity, and Resiliency for All

Preparing for the Worst: Disaster Planning

Although older adults suffer disproportionately when disaster hits, public health leaders cite emergency preparedness gaps in national policy and legal frameworks that are supposed to protect them.

FROM THE EXPERTS

Experts’ Insights: On Disaster Planning

“In a survey of adults 50 and older, one-third of respondents (34.3 percent) reported that they participated in an educational disaster preparation program in their community. How likely is it that at least 65 percent will do so by 2030?”

The fierce storms and wildfires that are becoming more problematic with global warming have put a sharper focus on preparedness measures to keep the population safe.²⁴² However, our experts did not hold high hopes for comprehensive disaster education programs. Overall, the experts said there is a **45 percent** likelihood that two-thirds of the age 50+ population will participate in any such program by 2030.

Three-quarters of those who lost their lives during Hurricane Katrina in 2005 were older than 60. The majority of fatalities during Northern California’s 2017 wildfires were adults over 65.^{243, 244} Older people are more likely to be vulnerable to unexpected events and catastrophes due to mobility and transportation challenges, age-related issues like hearing and vision impairment, and isolation that hinders their awareness of threats. Research has found after disasters that older people have a greater risk of health problems and emergency room visits and that communities need to dedicate more



Housing and health are totally connected ... What we know from the data is people who are homeless have a life expectancy that’s 27 years less than those who are housed. As a health organization, we have to be looking at housing and homelessness as a key indicator for health.”

—**BECHARA CHOUCAIR**
*Senior Vice President and Chief Community Health Officer,
Kaiser Foundation Health Plan, Inc. and Hospitals*²⁴¹

resources and planning to ensure they have access to medical facilities, medications, and safe housing in post-disaster situations.²⁴⁵

Most policies guiding US disaster preparedness, response, and recovery do not address older adults specifically.²⁴⁶ Cities' roles then become even more crucial in building awareness and employing life-saving technology to ensure that older people are not left behind when floods, wildfires, earthquakes, hurricanes, or human-caused emergencies cause havoc.

There is work to be done to transform city networks, as revealed in the 2018 RAND Corporation survey of public health department officials, coordinators of age-friendly communities (government-community group partnerships), and executive directors of senior villages.²⁴⁷ Their assessments include:

- Most age-friendly communities and villages do not place a high priority on promoting disaster preparedness. Public health agencies typically have disaster preparedness and resilience activities but not necessarily tailored to older adults.
- Determining where the ultimate responsibility lies can leave older adults without a clear sense of who they can depend on in emergencies. Agencies often take the view that another agency is the lead for older adult-focused services and it is not part of their own mission.
- Where cities keep registries of residents who have functional disabilities, stakeholders cite difficulties in getting people signed up and maintaining them in a way that would be useful during an emergency.

A 2012 survey found that 15 percent of US adults age 50 or older would be unable to evacuate their homes without assistance, underscoring the need for preparedness and cross-sector planning to protect them.²⁴⁸ Ensuring that residents have communication tools is essential.

City inventories of residents who rely on electricity-dependent medical equipment can be important tools for assigning early-evacuation or back-up electricity priorities during power outages. Following Hurricane Katrina, the US Department of Health and Human Services created the emPOWER map, "enabling hospitals, first responders, electric companies, and community members to identify Medicare beneficiaries with electricity-dependent equipment."²⁴⁹ Hurricane Katrina also accelerated efforts to digitize all health records when it battered **New Orleans** with floods that ruined paper medical records.

Climate change affects everyone, and compelling research shows the heightened risk to older people—especially those 85 and older and in physical decline due to mobility challenges and restricted access to resources such as transportation and air conditioning in extreme weather events. According to the Environmental Protection Agency, 20 percent of older adults live in an area hit by a hurricane or tropical storm within the last 10 years. Adapting cities to the impacts of climate change involves focusing on the most vulnerable residents as well as protecting infrastructure and ecosystems. Adaptation measures vary depending on geography. Local governments in southern Louisiana are pooling hazard reduction funds to address increased flooding from heavy rainfall. Northeastern

cities and states are investing in water, energy, and transportation infrastructure that is more resilient. **Carmel, IN**, initiated a monthly household fee to bolster the stormwater system against more frequent heavy downpours. **Scottsdale, AZ**, hosted a cool roof workshop series in 2015, promoting roofs that improve energy efficiency and reflect away sunlight and heat that cause heat islands. **New York City** also included cool roofs in its \$106 million Cool Neighborhoods NYC program, launched in 2017 with measures from tree plantings to climate risk training for home health aides.

TOOL

[Adaptation Clearinghouse](#), developed by Georgetown University's Climate Center, is an interactive website that provides a series of maps depicting the vulnerability to heat of each county in the US as a result of climate change. Vulnerability is measured across four domains—heat and humidity, social vulnerability, medical access, and physical environment.

RECOMMENDATION #17



Engage older adults in emergency preparedness and deploy tech-based solutions to reduce loss of life.

On Resiliency and the Digital Divide

“Twenty-seven percent of US adults 65 and older with household incomes below \$30,000 have high-speed internet at home. How likely is it that at least 75 percent will have high-speed internet at home by 2030?”

The Center for the Future of Aging surveyed nearly 150 experts with this question for a reality check on the state of technology adoption among older adults, given the critical role of digital connectivity in 21st century communication. Overall, the experts projected a **57 percent** chance that three-quarters of these low-income older adults would be living with high-speed computing in their homes by 2030.

Tech adoption has seen a sharp rise among older adults in recent years—but with a widening digital divide driven by education and income. Among those over age 65 with incomes of \$75,000 or more, 87 percent have access to high-speed internet at home, compared with 27 percent of those with incomes under \$30,000, according to the Pew Research Institute. Older-adult college graduates are nearly three times as likely to have home broadband as those with a high school education or less.²⁵⁰

As the age of the Pew Research survey respondent increases, the likelihood of internet use drops. While 82 percent of those ages 65 to 69 report internet use, that figure drops by nearly half, to 42 percent, among those 80 and older.²⁵¹ This digital divide calls for collaborative resiliency solutions in the demographic most likely to encounter communication difficulties in an emergency. Still, older adults generally express optimistic views

when it comes to the potential life-enhancing benefits of technology use. Fifty-eight percent of older adults feel that technology has had a mostly positive impact on society, while the vast majority say that access to high-speed internet at home is essential or important. And 67 percent say they go online with regularity.

Technology access and digital literacy are part of the formula for a resilient population. The uptake of solutions is far from robust, but cities across the world are working to bridge the digital divide.

In **Barcelona**, where about a quarter of older adults live alone and report spending their days without meaningful human interaction, the city has experimented with giving older residents access to tablets and internet connections, with a communication app designed to encourage building interactive friend and family networks to decrease their loneliness.^{252, 253}

Washington, DC's new [Senior Tech](#) program helps older residents with technology, including internet safety workshops, lessons on smartphone and social media usage, and free tech support. The program has a mobile tech lab and uses libraries, senior centers, and other locales. More than 100 older adults participated in the program in its first three months, the city said.²⁵⁴

The free program [Senior Planet](#), run by New York-based nonprofit Older Adults Technology Services, operates in five states and six locations. Most recently, the program added a center in **San Antonio** in October 2018 with the help of a million-dollar Humana Foundation grant, teaching technology classes of varying levels in both English and Spanish.

Harnessing data through mapping and other data-intensive techniques informs urban preparedness. An algorithmic method called Age Spot developed in Austria, for example, offers the prospect of long-term planning and targeting of services, block by block, to older adults. The geospatial mapping predicts the number of people age 65 and older living in 50-square-meter locations at any time over the next 20 years, with implications for city decisions on zoning, infrastructure, and social service budgets.^{255, 256}

“Smart-city technologies will deliver new tools, but we need to start planning them now,” stated futurist James Canton from the Institute for Global Futures at a 2018 SXSW Cities Summit panel. “[Sensemaking](#) processes can identify people that are at risk, particularly older adults, and can inform how we build out not just our immediate living environment but broader questions around optimizing collective use, such as integrating artificial intelligence, big data transportation networks, and cloud-based platforms.”

SMART CITIES FOR ALL

How can technology—which is integrated into virtually every part of 21st century life—enhance cities' Age-Forward activities? Applications, databases, and smartphones hold solutions for urban challenges and everyday convenience. The era of the smart city is beginning to take shape through data management solutions that are ready for public investment and poised to deliver improved quality of life for all residents.

Experts' Insights – Smart Cities for an Aging Population

The Center for the Future of Aging surveyed nearly 150 experts about smart cities:

"The US Conference of Mayors highlights six domains of smart cities. Please rank the domains according to their importance in serving older adults: health care, including telehealth and remote patient monitoring; mobility and transportation, including smart parking and intelligent transportation systems; safety and security, including real-time response procedures and emergency response systems; physical infrastructure, including smart street lighting and smart buildings; governance, including consolidated services platforms and mobile reporting apps; and energy and resource efficiency, including smart grid and environmental sensors."

The experts prioritized health care and mobility over the other measures, with energy and governance at the bottom of the rankings, and safety, as well as physical infrastructure, landing in the middle. **Health care** was cited as the top priority by more than half of all experts (58 percent) and at least a top-two priority by 75 percent of respondents.

"Although they are only one part of the full tool kit for making a city great, digital solutions are the most powerful and cost-effective additions to that tool kit in many years," the McKinsey Global Institute's 2018 report, "Smart Cities: Digital Solutions for a More Livable Future," asserts. "These tools can save lives, prevent crime, and reduce the disease burden. They can save time, reduce waste, and even help boost social connectedness. When cities function more efficiently, they also become more productive places to do business."

The implications are enticing: cities already use apps to reduce fatalities by 8 to 10 percent and speed up emergency response by 20 to 35 percent, according to McKinsey.²⁵⁷ By 2025, cities that deploy [smart city applications](#) have the potential to reduce the average commute by 15 to 20 percent, lower the disease burden by as much as 15 percent, and cut greenhouse gas emissions by 10 to 15 percent.²⁵⁸

At the street level, apps help residents track health activities such as exercise and diet, check up on homebound friends and relatives remotely, access vital alerts about fires, floods, outages, and other emergencies, and reduce isolation through online social networks.

Though older and poorer demographic groups are the most underserved by smart-city benefits,²⁵⁹ more than 90 percent of experts agree or strongly agree that smart cities initiatives that improve information and technology accessibility would help people with disabilities and older adults to be more included in their communities.²⁶⁰ As a promising start, the global initiative, "Smart Cities for All," a partnership between G3ict and World Enabled, recently named **Chicago** as the first city for a digital inclusion pilot project with the support of Microsoft called [Smart City Digital Inclusion Maturity Model](#), an assessment tool.

According to our experts, the two most relevant smart city applications for older adults are those related to health care and mobility solutions. Here are several ways in which smart city technologies have been deployed to address the needs of older adults:

Connected Healthcare

- In **Houston**, AT&T's Foundry for Connected Health, in partnership with the Texas Medical Center's campus, is a hub for entrepreneurs innovating for the clinical care environment—helping caregivers and patients bridge the gap between a clinical setting and the home.²⁶¹
- In **Chicago**, Rush University Medical Center and the Rush System for Health will become the first US hospital to use next-generation 5G broadband and plans to expand access to patients in rural areas, those requiring remote monitoring, and seniors who want to age safely at home.²⁶²

Smart Mobility

- In **Seattle**, the OpenSidewalks Project has launched AccessMap, a trip planning tool that supports those with limited mobility by providing trip planning support on pedestrian ways by gathering and maintaining open data about sidewalks, curb ramps, construction information, and other data that map the specific challenges of navigating city walkways.
- The Montachusett Regional Transit Authority is one of six Regional Transit Authorities contracted with **Massachusetts'** Executive Office of Health and Human Services as a transportation broker to manage human service transportation services. Its web-based brokerage model has been key in its ability to handle approximately 11,000 daily Medicaid trips, and an



open-data-exchange platform allows approximately 160 registered providers to bid on non-emergency medical transportation trips, review competing bids, and counter-bids.²⁶³

RECOMMENDATION #18



Create cross-sector programs to bridge the digital literacy gap for lower-income older adults and invest in the development of open data tools to help older adults navigate tech-based challenges.

Conclusion

From the digital divide to social determinants and disaster planning, cities are just beginning to realize what's possible in gaining the benefits of an engaged older population. The landscape already holds resources—human, organizational, and technological—that can transform models for urban resiliency. However, lack of awareness and connectivity among agencies, organizations, and consumers, deters the flourishing of networks and outcomes. Through cross-sector efforts and integrating systems for communication, efficiency, and impact, cities can realize Age-Forward solutions that will strengthen security, independence, and well-being for current and coming generations.

PITTSBURGH: STEEL TOWN THAT'S BOUNCING BACK

ECONOMIC PROFILE

Service-based economy, "Rejuvenated region"

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall #44; High Marks for Community Engagement (15), Education (20), and Transportation/Convenience (15)

DEMOGRAPHY

Adults 65 and older account for nearly 18 percent of the greater Pittsburgh region's population

Age-Friendly Greater Pittsburgh Action Plan 2017-2020 emphasizes new options and opportunities for all ages and abilities, intergenerational relationships to counter social isolation and loneliness, and technology and ideas enabling people to age in community.

Growing from a frontier village into a center of steel, Pittsburgh has weathered hard times to attract new investment and become a burgeoning tech hub.²⁶⁴ This bustling Appalachian city at the headwaters of the Ohio River gets strong marks in the "Best Cities for Successful Aging" rankings for transportation and convenience, as well as its educational opportunities, reversing a trend that saw its university graduates exiting Pittsburgh for jobs elsewhere.



FOSTERING CONNECTIVITY AND SOCIAL SOLIDARITY RECOMMENDATIONS #14 AND #17

Pittsburgh's age-friendly efforts focus on access and connection, including improving new options in neighborhoods and health systems for all ages, creating intergenerational spaces to combat social isolation and loneliness, and championing technology to help older people remain in their communities.

The city's age-friendly plan includes efforts to:²⁶⁵

- Expand transportation options and address complaints that older adults' ride requests often go unanswered, including through an online concierge tool to find transportation that meets riders' needs
- Expand existing tech training programs, such as AgeWell's Tablet Café and partnerships with tech companies, for increased volunteer opportunities and connection across generations
- Develop a disaster preparedness plan targeting areas with large populations of older adults and persons with disabilities

Pittsburgh emphasizes a community-wide focus on age-inclusivity. For example, a program by the Pittsburgh Cultural Trust had older adults collaborate on arts projects with children from a childcare center. And the Jewish Healthcare Foundation operates a well-attended Virtual Senior Academy, helping people with mobility problems reduce their isolation by joining live online classes, clubs, and other activities.²⁶⁶

As Laura Poskin, project manager for Age-Friendly Greater Pittsburgh, asks, "Why is our world around us not built for everyone to participate in it? ... That's a social justice issue."²⁶⁷

ECONOMIC PROFILE

Knowledge-based economy, “Innovation hub”

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall (#12), High Marks for Wellness (#4), Employment (#8), and Health Care (#18)

DEMOGRAPHY

Adults 65 and older account for more than 11 percent of Denver’s population, a number that will increase to nearly 20 percent by 2050.²⁶⁸ By 2030 one in four Denver residents will be over 60 years of age.²⁶⁹

Age-Friendly Action Plan: “Age Matters in Denver: Needs, Assets and Recommendations,” 2018

Rocky Mountain-high and known for its outdoor lifestyle and dramatic vistas, Denver anticipates its older population will nearly double by mid-century when nearly one in five residents will be over age 65. The city has a strong wellness culture and is rated No. 8 nationally for job opportunities by the “Best Cities for Successful Aging” index. Its older population is driving a growing emphasis on health service occupations.²⁷⁰

However, 38 percent of households are adults living alone, which doesn’t help housing costs that are starting to match Denver’s mile-high geography. Two-thirds of adults age 65 and older feel there are no affordable housing options for them. Fixed incomes fall short of what they need for local costs of living, with up to half of baby boomers reliant solely on Social Security income. Denver has seen an increase in older-adult homelessness; an estimated one in five homeless residents is age 55 or older.²⁷¹



DEPLOYING RESOURCES MORE EFFICIENTLY TO OPTIMIZE HEALTHY AGING RECOMMENDATION #14

Denver has a plan to optimize the vitality of its older residents—in keeping with efforts to enhance its livability for all ages—which includes coordinating long-term services and supports. The Denver Regional Council of Governments received \$4.5 million from the Centers for Medicare and Medicaid Services in 2017 to implement the Accountable Health Communities (AHC) model by integrating clinical and community service providers as a way to improve health outcomes and decrease costs. The AHC will work with Medicare and Medicaid beneficiaries in Denver, Arapahoe, Adams, Douglas, Jefferson, and Broomfield counties.

Denver’s numerous age-friendly goals include:

- Addressing inflexible and inefficient public transportation, fixing poor sidewalk conditions, and meeting Vision Zero goals of zero traffic deaths and serious injuries by 2030. The Denver Regional Mobility and Access Council developed a comprehensive Getting There Guide focused on transportation options for people with mobility challenges
- Connecting older adults to various services via a new mobile resource center called [DenverConnect](#)
- Expanding emergency preparedness to focus on older adults
- Targeting elder abuse and training responders, caregivers, and providers to recognize and respond to it

TAMPA: ACTIVATING AN AGE-FRIENDLY HEALTH SYSTEM

ECONOMIC PROFILE

Service-based economy, “Rejuvenated region”

BEST CITIES FOR SUCCESSFUL AGING RANKINGS

Overall #84; High Marks for General Livability (#20) and Financial Security (#25)

DEMOGRAPHY

Tampa Bay’s 65 and older population, currently 18.5 percent of its overall population, makes this metro the oldest among 53 major cities in the US

Age-Friendly Action Plan: Pinella County (including Tampa) has applied to become an Age-Friendly community and is in the process of collecting results from a Community Assessment survey.

In 2017, Trust for America’s Health held a summit in Tampa, funded by The John A. Hartford Foundation, called A Public Health Framework to Support the Improvement of the Health and Well-Being of Older Adults. The goal was “to develop a public health framework to support the improvement of the health and well-being of older adults, focusing on areas where public health can support, complement, and enhance aging services.”²⁷²



DRIVING HOME AGENCY COORDINATION AND SOCIAL SOLIDARITY RECOMMENDATIONS #14 AND #16

In partnership with the Florida Department of Health, this two-year effort will lead to the nation’s first Age-Friendly Public Health System. According to University of South Florida gerontologist Kathy Black, the partnership has already led half of the state’s public health departments to assess aging priorities in data collection. Many have included age across metrics such as vaccinations and data points that were previously not known—such as percentages of older adults living alone—as isolation becomes a more prominent public health issue.

Miami-based “Grandkids on-demand” startup Papa, which pairs young adults with older adults to help with household tasks, has struck a partnership with Humana. As part of the partnership, Humana is testing Papa’s services in a pilot program in Tampa. Through the pilot, 150 of Humana’s Medicare Advantage members will receive access to Papa’s services in hopes of alleviating loneliness, minimizing isolation, and achieving positive health outcomes.

A 2018 study by the [Corporation for National and Community Service \(CNCS\)](#) analyzed the program [Senior Corps](#), a national service program for those ages 55 and older and found that, after two years of service, 22 percent of volunteers reported improved health and 78 percent reported fewer symptoms of depression.²⁷³ In Tampa alone, there are more than 300 Senior Corps volunteers at 96 locations. Their contribution has an estimated worth of \$2.4 billion.²⁷⁴

Endnotes

1. "World Population Ageing 2015," *United Nations Department of Economic and Social Affairs: Population Division*, (2015): 3, https://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf.
2. Carrie A. Werner, "The Older Population: 2010 Census Briefs," *United States Census Bureau*, (November 2011): 11, <https://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>.
3. Centers for Disease Control and Prevention, *Healthy Aging—At A Glance 2011*, (2011), <https://stacks.cdc.gov/view/cdc/22022>.
4. L.A. Anderson et al., "Aging in the United States: Opportunities and Challenges for Public Health," *American Journal of Public Health*, vol. 102, no. 3 (2012): 393.
5. John R. Beard and Charles Petitot, "Ageing and Urbanization: Can Cities be Designed to Foster Active Ageing?" *Public Health Reviews*, vol. 32 (2010): 427–50, <https://publichealthreviews.biomedcentral.com/track/pdf/10.1007/BF03391610>.
6. Laura Dwyer-Lindgren, Amelia Bertozzi-Villa, and Rebecca W. Stubbs, "Inequalities in Life Expectancy Among US Counties, 1980 to 2014: Temporal Trends and Key Drivers," *JAMA Intern Med.*, vol. 177, no. 7 (2017): 1003-1011, doi:10.1001/jamainternmed.2017.0918.
7. "Life Expectancy at Birth, Total (Years)," *The World Bank Data*, accessed August 2, 2019, <https://data.worldbank.org/indicator/sp.dyn.le00.in>.
8. Richard Dobbs et al., "Urban World: The Global Consumers to Watch, Executive Summary," *McKinsey Global Institute*, (April 2016), https://www.mckinsey.com/global-themes/urbanization/urban-world-the-global-consumers-to-watch/~/_media/57c6ad7f7f1b44a6bd2e24f0777b4cd6.ashx.
9. Teresa Ghilarducci, Michael Papadopoulos, and Anthony Webb, "Policy Note: Downward Mobility in Retirement: 8.5 Million Middle-Class Workers Will Be Poor Retirees," *The New School Schwartz Center for Economic Policy Analysis*, February 18, 2019, https://www.economicpolicyresearch.org/images/docs/research/retirement_security/Downward_Mobility_in_Retirement_P_N.pdf.
10. "Fastest Growing Cities Have Higher than Average Unemployment for Older Workers," *New School Schwartz Center for Economic Policy Analysis*, November 5, 2015, <https://www.economicpolicyresearch.org/jobs-report/october-unemployment-report-for-workers-over-55-22>.
11. Anita Yadavalli, Christiana K. McFarland, and Brooks Rainwater, "State of the Cities, 2018," *National League of Cities*, (2018), <https://www.nlc.org/sites/default/files/2018-05/NLC%20State%20of%20the%20Cities%202018%20FINAL%20WEB.pdf>.
12. "The Longevity Economy Generating Economic Growth and New Opportunities for Business," *Oxford Economics and AARP*, (2013), <https://www.aarp.org/content/dam/aarp/home-and-family/personal-technology/2013-10/Longevity-Economy-Generating-New-Growth-AARP.pdf>.
13. Sindhu Kubendran, Liana Soll, and Paul Irving, "Best Cities for Successful Aging 2017," *Milken Institute*, (2017), <https://www.milkeninstitute.org/reports/best-cities-successful-aging-2017>.
14. "The Mayor's Pledge," *Best Cities for Successful Aging*, accessed August 2, 2019, <http://successfulaging.milkeninstitute.org/mayors-pledge/>.
15. Richard Dobbs et al., "Urban World: The Global Consumers to Watch, Executive Summary," *McKinsey Global Institute*, (April 2016), https://www.mckinsey.com/global-themes/urbanization/urban-world-the-global-consumers-to-watch/~/_media/57c6ad7f7f1b44a6bd2e24f0777b4cd6.ashx.
16. "Aging and the Lifecourse," *World Health Organization*, accessed July 10, 2019, <https://www.who.int/ageing/sdgs/en/>.
17. Peter Gosselin, "If You're Over 50, Chances Are the Decision to Leave a Job Won't be Yours," *ProPublica*, December 28, 2018, <https://www.propublica.org/article/older-workers-united-states-pushed-out-of-work-forced-retirement>.
18. Edith S. Baker, "Is There Age Discrimination in Hiring?" *Bureau of Labor Statistics*, (April 2017), <https://www.bls.gov/opub/mlr/2017/beyond-bls/is-there-age-discrimination-in-hiring.htm>.
19. "Long-Term Services and Supports: Direct Care Worker Demand Projections, 2015-2030," *US Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis*, <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/hrsa-ltts-direct-care-worker-report.pdf>.
20. "Columbia Mayor Benjamin Delivers the 2019 State of the City Address," *WLTX*, January 29, 2019, <https://www.wltx.com/article/news/local/columbia-mayor-benjamin-delivers-the-2019-state-of-the-city-address/101-ca502ced-77f6-4bb3-9024-9219e0f85749>.
21. P. Sarbjit Nahal and Beijia Ma, "The Silver Dollar—Longevity Revolution Primer," *Bank of America Merrill Lynch*, June 6, 2014.
22. "Occupational Outlook Handbook," *Bureau of Labor Statistics*, accessed July 10, 2019, <https://www.bls.gov/ooh/mobile/fastest-growing.htm>
23. Ibid.
24. "Value of Senior Volunteers to US Economy Estimated at \$77 Billion," *Corporation for National and Community Service*, May 16, 2016, <https://www.nationalservice.gov/newsroom/press-releases/2016/value-senior-volunteers-us-economy-estimated-77-billion>.
25. "Caregiving in the US," *National Alliance for Caregiving and AARP Public Policy Institute*, (June 2015), <https://www.aarp.org/content/dam/aarp/ppi/2015/caregiving-in-the-united-states-2015-report-revised.pdf>.
26. Christina Ianzito, "Family Caregiving Worth \$470 Billion a Year, AARP Finds," *AARP Public Policy Institute*, July 16, 2015, <https://blog.aarp.org/2015/07/16/family-caregiving-worth-470-billion-a-year-aarp-finds/>.
27. Grandfamilies, "Grandfacts: State Fact Sheets for Grandfamilies, United States," accessed July 10, 2019, <http://www.grandfamilies.org/Portals/0/State%20Fact%20Sheets/Grandfamilies-Fact-Sheet-United-States.pdf>.
28. "Economic Contributions by Seniors: Where Does your City Rank?" *JPMorgan Chase & Co Institute*, January 18, 2016, <https://www.jpmorganchase.com/corporate/institute/insight-spend-by-seniors.htm>.
29. Anita Yadavalli, Christiana K. McFarland, and Brooks Rainwater, "State of the Cities, 2018," *National League of Cities*, (2018),

<https://www.nlc.org/sites/default/files/2018-05/NLC%20State%20of%20the%20Cities%202018%20FINAL%20WEB.pdf>.

30. "The Longevity Economy: Generating Economic Growth and New Opportunities for Business," *Oxford Economics and AARP*, (2013), <https://www.aarp.org/content/dam/aarp/home-and-family/personal-technology/2013-10/Longevity-Economy-Generating-New-Growth-AARP.pdf>.
31. Crystal N. Reisig and Bronwyn S. Fees, "Older Adults' Perceptions of Well-Being After Intergenerational Experiences With Youth," *Journal of Intergenerational Relationships*, no. 4 (2006).
32. Dawn C. Carr, Linda P. Fried, and John Rowe, "Productivity and Engagement in an Aging America: The Role of Volunteerism," Columbia University Academic Commons, *Daedalus*, no. 144 (2015).
33. Kenneth Terrell, "Shaping the Future of Work to Fit All Ages," AARP, June 7, 2019, <https://www.aarp.org/work/working-at-50-plus/info-2019/future-of-work-forum.html>.
34. "Investing in Place: Two Generations' View on the Future of Communities," *American Planning Association*, accessed July 10, 2019, <https://www.planning.org/policy/polls/investing/>.
35. Jan E. Mutchler, Yang Li, and Ping Xu, "Living Below the Line: Economic Insecurity and Older Americans Insecurity in the States 2016," *Umass Boston Center for Social and Demographic Research on Aging Publications*, (September 2016), <https://scholarworks.umb.edu/demographyofaging/13/>.
36. Dennis Fulhane et al., "The Emerging Crisis of Aged Homelessness: Could Housing Solutions Be Funded by Avoidance of Excess Shelter, Hospital, and Nursing Home Costs?" *Actionable Intelligence for Social Policy*, (January 2019): 3.
37. Dennis Fulhane et al., "The Emerging Crisis of Aged Homelessness: Could Housing Solutions Be Funded by Avoidance of Excess Shelter, Hospital, and Nursing Home Costs?" *Actionable Intelligence for Social Policy*, (January 2019): 6.
38. "Fastest Growing Cities Have Higher than Average Unemployment for Older Workers," *New School Schwartz Center for Economic Policy Analysis*, November 5, 2015, <https://www.economicpolicyresearch.org/jobs-report/october-unemployment-report-for-workers-over-55-22>.
39. Dimple Agarwal et al., "The Longevity Dividend: Work in an Era of 100-year Lives: 2018 Global Human Capital Trends," *Deloitte Insights*, March 28, 2018, <https://www2.deloitte.com/insights/us/en/focus/human-capital-trends/2018/advantages-implications-of-aging-workforce.html#endnote-20>.
40. "Preventing Ageing Unequally," *OECD Publishing*, (2017), <http://www.oecd.org/health/preventing-ageing-unequally-9789264279087-en.htm>.
41. Randy Lilleston, "AARP Foundation Fights Senior Poverty," AARP, May 14, 2018, <https://www.aarp.org/politics-society/advocacy/info-2018/aarp-foundation-senior-poverty.html>.
42. Alfred Lubrano, "Poverty Among Older Philadelphians on the Rise," *The Philadelphia Inquirer*, December 12, 2018, <https://www.inquirer.com/news/older-philadelphians-poverty-social-security-food-stamps-seniors-20181212.html>.
43. OECD, "Preventing Ageing Unequally: How Does the United States Compare?," (2017), <https://www.oecd.org/unitedstates/PAU2017-USA-En.pdf>.
44. "Ageing in Cities Policy Highlights," OECD, (2015), <http://dx.doi.org/10.1787/9789264231160-en>.
45. Michael C. Y. Lin, Minoli Ratnatunga, and Perry Wong, "Regional Performance Over Time: Thriving and Reviving Amid Economic Challenges," *Milken Institute*, <https://assets1b.milkeninstitute.org/assets/Publication/ResearchReport/PDF/Milken-Regional-performance-over-time-Thriving-and-Reviving-Aug-2016.pdf>.
46. Elizabeth Olson, "A Florida City Wants More Retirees, and Is Going After Them," *New York Times*, June 8, 2018, <https://www.nytimes.com/2018/06/08/business/florida-retirees.html>.
47. Ibid.
48. Johannes Koettl, "Did We Get the 'Old-Age Dependency' of Aging Countries all Wrong?" *Brookings*, May 20, 2015, <https://www.brookings.edu/blog/future-development/2015/05/20/did-we-get-the-old-age-dependency-of-aging-countries-all-wrong/>.
49. David Neumark, Ian Burn, and Patrick Button, "Age Discrimination and Hiring of Older Workers," *Federal Reserve Bank of San Francisco*, FRBSF Economic Letter, February 27, 2017.
50. "Older Americans in the Workforce," *Capital One United Income*, April 22, 2019, https://unitedincome.com/documents/papers/United_Income_Older_Americans_in_the_Workforce.pdf.
51. John B. Shoven, "Adjusting Government Policies for Age Inflation," *National Bureau of Economic Research*, (August 2008), <https://www.nber.org/papers/w14231.pdf>.
52. Warren Sanderson and Sergei Scherbov, "Is 75 the New 65? Wealthy Countries Need to Rethink What it Means to be Old," *The Conversation*, (April 12, 2019), <https://theconversation.com/is-75-the-new-65-wealthy-countries-need-to-rethink-what-it-means-to-be-old-106656>.
53. "If You Were Born Between 1943 and 1954 your Full Retirement Age is 66," *Benefits Planner: Retirement, Social Security Administration*, accessed August 20, 2019, <https://www.ssa.gov/planners/retire/1943-delay.html>.
54. "50 and Over: What's Next?," *AdAge Insights White Paper*, AARP, (April 2011).
55. "Fastest Growing Cities Have Higher than Average Unemployment for Older Workers," *The New School Schwartz Center for Economic Policy Analysis*, November 5, 2015, <https://www.economicpolicyresearch.org/jobs-report/october-unemployment-report-for-workers-over-55-22>.
56. Peter Gosselin, "If You're Over 50, Chances Are the Decision to Leave a Job Won't be Yours," *ProPublica*, December 28, 2018, <https://www.propublica.org/article/older-workers-united-states-pushed-out-of-work-forced-retirement>
57. Ibid.
58. Edith S. Baker, "Is there Age Discrimination in Hiring?" *Bureau of Labor Statistics*, (April 2017), <https://www.bls.gov/opub/mlr/2017/beyond-bls/is-there-age-discrimination-in-hiring.htm>.
59. "Employment Projections—2016-26," *News Release Bureau of Labor Statistics*, October 24, 2017, <https://www.bls.gov/news.release/pdf/ecopro.pdf>.
60. "Five Forces Reshaping the Global Economy: McKinsey Global Survey Results," *McKinsey Global Institute*, (May 2010),

<https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/five-forces-reshaping-the-global-economy-mckinsey-global-survey-results>.

61. "The Longevity Report, Business Insights in an Aging World: Managing the New Multigenerational Workforce," *Baxter Consulting Group*, (2017).
62. Dimple Agarwal et al., "The Longevity Dividend: Work in an Era of 100-year Lives: 2018 Global Human Capital Trends," *Deloitte Insights*, March 28, 2018, <https://www2.deloitte.com/insights/us/en/focus/human-capital-trends/2018/advantages-implications-of-aging-workforce.html#endnote-20>.
63. Ibid.
64. Ibid.
65. Catherine Collinson, "Perspectives on Retirement: Baby Boomers, Generation X, and Millennials, 17th Annual Transamerica Retirement Survey of Workers," *Transamerica Center for Retirement Studies*, (April 2019).
66. Matthew S. Rutledge, "What Explains the Widening Gap in Retirement Ages by Education?" *Center for Retirement Research at Boston College*, (May 2018), http://crr.bc.edu/wp-content/uploads/2018/05/IB_18-10.pdf.
67. Yash M. Patel et al., "Proportion of Non-US-Born and Noncitizen Health Care Professionals in the United States in 2016," *JAMA*, <https://jamanetwork.com/journals/jama/article-abstract/2717463>.
68. Melissa Favreault and Judith Dey, "Long-Term Services and Supports for Older Americans: Risks and Financing Research Brief," *US HHS- Assistant Secretary for Planning & Evaluation*, (February 2016), <https://aspe.hhs.gov/basic-report/long-term-services-and-supports-older-americans-risks-and-financing-research-brief>.
69. Bureau of Labor Statistics, "Occupational Outlook Handbook: Home Health Aides and Personal Care Aides," accessed July 10, 2019, <https://www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm>.
70. Latasha Doyle, "These Cities Are Seeing the Fastest Growth for In-Home Senior Care Jobs," *Care.com*, November 6, 2018, <https://www.care.com/c/stories/9886/cities-with-fastest-job-growth-in-home-senior-care/>.
71. David Wagner, "More Seniors In LA Are Working Into Old Age. But Not For The Reasons You Might Think," *Laist*, April 23, 2019, https://laist.com/2019/04/23/seniors_los_angeles_working_age.php.
72. Andrew Soergel, "Seniors more Likely to Work Longer in Big Metropolitan Areas," *AP News*, June 10, 2019, <https://www.apnews.com/e1883f7843cf452eb93097aae4e3e2cb>.
73. Elaine Maag, "Congress Should Make The EITC Available To Older Workers," Tax Policy Center, *Urban Institute and Brookings Institution*, January 13, 2019, <https://www.taxpolicycenter.org/taxvox/congress-should-make-eitc-available-older-workers>.
74. "Adults Age 65 and Older are Now Eligible for Cal EITC," *CalEITC4me*, accessed July 10, 2019, <https://caleitc4me.org/older-californians/>.
75. Catherine Collinson, "Perspectives on Retirement: Baby Boomers, Generation X, and Millennials, 17th Annual Transamerica Retirement Survey of Workers," *Transamerica Center for Retirement Studies*, (August 2016).
76. "Work Flexibility Policy in the United States," *1 Million for Work Flexibility*, accessed July 10, 2019, <https://www.workflexibility.org/policy/>.
77. "Mayor de Blasio, Speaker Mark-Viverito Announce That New York City Is The Largest City To End Abusive Scheduling Practices In The Fast Food And Retail Industries," *The Official Website of the City of New York*, May 30, 2017, <https://www1.nyc.gov/office-of-the-mayor/news/372-17/mayor-de-blasio-speaker-mark-viverito-that-new-york-city-the-largest-city-end#/0>.
78. Michael Overall, "Tulsa Remote: More Than 100 People Will Get Billionaire's \$10,000 Offer to Relocate this Year," *Tulsa World*, March 3, 2019, https://www.tulsaworld.com/news/local/tulsa-remote-more-than-people-will-get-billionaire-s-offer/article_782a8c6f-8cd0-5ee9-96e1-a0d8be14d30b.html.
79. Bruce Katz and Julie Wagner, "The Rise of Innovation Districts: A New Geography of Innovation in America," *Brookings*, accessed July 10, 2019, <https://www.brookings.edu/essay/rise-of-innovation-districts/>.
80. Lance Murray, "Medical Innovation District: Fort Worth Targets Near Southside for New Hub," *Dallas Innovates*, May 22, 2019, <https://dallasinnovates.com/medical-innovation-district-fort-worth-targets-near-southside-for-new-hub/>.
81. "Aging Seniors to Reap Long-Term Health Benefits from Edmonton-Based Artificial Intelligence Project," *Business Wire*, May 10, 2019, <https://www.businesswire.com/news/home/20190510005005/en/>.
82. Stephen Johnston, "Building Local Aging Innovation Ecosystems," *Stephen Johnston's Blog*, March 15, 2017, <http://sdbj.net/building-local-innovation-ecosystems/>.
83. "Cities' Innovation District Leaders Should Encourage Older Adults' Participation," *Anne T. and Robert M. Bass Initiative on Innovation and Placemaking at Brookings Institution*, March 22, 2017, https://www.brookings.edu/wp-content/uploads/2017/03/cs_20170322_beyondmillennials_pressrelease.pdf.
84. "Occupational Outlook Handbook: Home Health Aides and Personal Care Aides," *Bureau of Labor Statistics*, accessed July 10, 2019, <https://www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm>.
85. "U.S. Home Care Workers: Key Facts (2018)," *PHI National*, August 31, 2018, <https://phinational.org/resource/u-s-home-care-workers-key-facts-2018/>.
86. "Medicaid Home And Community-Based Services: Selected States' Program Structures and Challenges Providing Services," *Government Accountability Office Report to the Ranking Member, Committee on Finance, US Senate*, (August 2018), <https://www.gao.gov/assets/700/694174.pdf>.
87. "Designing Universal Family Care: State-Based Social Insurance Programs for Early Child Care and Education, Paid Family and Medical Leave, and Long-Term Services and Supports," *National Academy of Social Insurance*, (2019): 227.
88. Emily Boerger, "Q&A: Rep. Della Au Belatti on the 2019 Legislative Session," *State of Reform*, May 8, 2019, <https://stateofreform.com/news/states/hawaii/2019/05/qa-rep-della-au-belatti-on-the-2019-legislative-session/>.

89. Chuck Sudo, "4 Keys to Successful Senior Living Projects in Mixed-Use Developments," *Senior Housing News*, April 5, 2019, <https://seniorhousingnews.com/2019/04/05/4-keys-to-successful-senior-living-projects-in-mixed-use-developments/>.
90. Tim Regan, "SHAG Strikes Innovative Partnerships to Create Affordable Senior Housing," *Senior Housing News*, April 4, 2019, <https://seniorhousingnews.com/2019/04/04/shag-strikes-innovative-partnerships-to-create-affordable-senior-housing/>.
91. "News Release: NYC-based Interior Design Firm is Bringing a Fresh Look to Senior Living with Luxury Heartis Buckhead High-Rise," *Healthcare Real Estate Insights*, May 15, 2019, <http://wolfmediausa.com/2019/05/15/news-release-nyc-based-interior-design-firm-is-bringing-a-fresh-look-to-senior-living-with-luxury-heartis-buckhead-high-rise/>.
92. Rachel Koning Beals, "This is How Boomers are Reinventing Retirement Living," *MarketWatch*, May 22, 2019, <https://www.marketwatch.com/story/boomers-are-reinventing-retirement-housing-imagine-galleries-walkability-and-multi-age-communities-2019-05-22>.
93. Matt Horton, "How Federal Opportunity Zone Tax Incentive Can Help California Build an Inclusive Economy," *Cal Matters*, April 9, 2019, <https://calmatters.org/articles/commentary/opportunity-zone/>.
94. Sadeef Ali Kully, "New Federal Tax Program for Depressed Neighborhoods Stirs Hopes and Concerns," *CityLimits.org*, April 12, 2019, <https://citylimits.org/2019/04/12/opportunity-zones-impact-nyc/>.
95. "The Mayor of London's Civic Innovation Challenge," Mayor of London London Assembly, accessed July 10, 2019, <https://www.london.gov.uk/what-we-do/arts-and-culture/mayor-londons-civic-innovation-challenge>.
96. "Age-Friendly Business District," *Age Friendly Initiative Miami-Dade County*, accessed July 10, 2019, <https://agefriendlymiami.org/project/age-friendly-business-district/>.
97. "Kilkenny Retailers Can Boost Their Business by Signing up to Age Friendly Programme for Free," *KilkennyNow.ie*, January 12, 2019, <https://kilkennynow.ie/kilkenny-retailers-urged-to-become-accredited-age-friendly-businesses/>.
98. "Age-Friendly Professions," *Age-Friendly NYC*, accessed July 10, 2019, <https://nyam.org/age-friendly-nyc/our-work/current-priorities/professions/>.
99. Judith Messina, "Starting Later: Realizing the Promise of Older Entrepreneurs in New York City," *Center for an Urban Future and Capital One*, https://nycfuture.org/pdf/CUF-StartingLater_final_9-11_.pdf.
100. "Aging with Dignity: A Blueprint for Serving NYC's Growing Senior Population," *New York City Comptroller Scott M. Stringer Bureau of Policy and Research*, March 21, 2017, <https://comptroller.nyc.gov/reports/aging-with-dignity-a-blueprint-for-serving-nycs-growing-senior-population/>.
101. Donna M. Corrado, "Plan 2025: Aging Services in an Era of Rapid Population Growth," *NYC Department for the Aging*, May 2018, <https://www1.nyc.gov/assets/dfta/downloads/pdf/reports/Plan2025-092018.pdf>.
102. "Managed Long Term Care Workforce Investment Program," Redesigning the Medicaid Program, *New York State Department of Health*, accessed August 20, 2019, https://www.health.ny.gov/health_care/medicaid/redesign/2017/mltc_invest.htm.
103. "Age-Friendly Louisville Strategic Plan 2019-2021," *Age-Friendly Louisville Leadership*, (2018), <https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2018/action-plans/louisville-kentucky-action-plan-2018.pdf>.
104. "Economic Impact of an Aging Population in the Kansas City Region," *Mid-America Regional Council Research Services Department*, *KC Communities for All Ages*, (2015), <https://www.marc.org/Community/KC-Communities-for-All-Ages/PDFs/Economic-Impact-of-an-Aging-Population-DRAFT.aspx>.
105. "Become a Community for All Ages: A Checklist to Help You Become Age Friendly," *KC Communities for All Ages*, September 2014, https://www.marc.org/Community/KC-Communities-for-All-Ages/PDFs/KCCFAA_Checklist_FINAL.aspx.
106. *Mid-America Regional Council Research Services Department*, "Economic Impact of an Aging Population in the Kansas City Region," *KC Communities for All Ages*, (2015), <http://marc.org/Community/KC-Communities-for-All-Ages/PDFs/Economic-Impact-of-an-Aging-Population-DRAFT.aspx>.
107. EnCorps45, "Building Economies and Sustaining Communities Through Multigenerational Business Hubs," accessed September 16, 2019, <http://www.encorps45.com/encorps45-services/>.
108. "The Forgotten Middle: Middle Market Seniors Housing Study," *NIC*, accessed July 18, 2019, <https://www.nic.org/middlemarket>.
109. Laurie Goodman, "The Demographics of Demand," *Urban Institute*, (October 2015), <https://www.urban.org/sites/default/files/publication/72491/2000491-The-Demographics-of-Demand.pdf>.
110. Arthur C. Nelson, "Reshaping Metropolitan America: Development Trends and Opportunities to 2030," <http://terment.ru/fr2/?q=Reshaping+Metropolitan+America.+Development+Trends+and+Opportunities+to+2030+-+Arthur+C+Nelson>.
111. "Projections and Implications for Housing a Growing Population: Older Adults 2015-2035," *Joint Center for Housing Studies of Harvard University*, accessed August 1, 2019, <https://www.jchs.harvard.edu/research/projections-and-implications-housing-growing-population-older-adults-2015-2035>.
112. James Arbib and Tony Seba, "Rethinking Transportation 2020-2030: The Disruption of Transportation and the Collapse of the Internal-Combustion Vehicle and Oil Industries," *The RethinkX Project*, (May 2017), https://static1.squarespace.com/static/585c3439be65942f022bbf9b/t/591a2e4be6f2e1c13df930c5/1494888038959/RethinkX+Report_051517.pdf?pdf=RethinkingTransportation.
113. Linda Fried and Interboro Partners Interview, "Urban Age," *Harvard Design Magazine*, no. 40, <http://www.harvarddesignmagazine.org/issues/40/urban-age>.
114. Sion Eryl Jones, "Ageing and the City: Making Urban Spaces Work for Older People," *HelpAge International*, (2016), <http://www.helpage.org/download/57fb5db5e475e>.
115. "Projections and Implications for Housing a Growing Population: Older Adults 2015-2035," *Joint Center for Housing Studies of Harvard*

University, accessed August 1, 2019, <https://www.jchs.harvard.edu/research/projections-and-implications-housing-growing-population-older-adults-2015-2035>.

116. Beard and Petitot, "Ageing and Urbanization: Can Cities be Designed to Foster Active Ageing?" *Public Health Reviews*, vol. 32, no.2: 427-450, <https://publichealthreviews.biomedcentral.com/track/pdf/10.1007/BF03391610>
117. "Social Determinants of Health," 2020 Topics & Objectives, HealthyPeople.gov, accessed August 1, 2019, www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.
118. John R. Beard and Charles Petitot, "Ageing and Urbanization: Can Cities be Designed to Foster Active Ageing?" *Public Health Reviews*, no. 32 (2010): 427–50, <https://publichealthreviews.biomedcentral.com/track/pdf/10.1007/BF03391610>.
119. "Investing in Place for Economic Growth and Competitiveness, A Research Summary," *American Planning Association*, (2014), https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/policy/polls/investing/pdf/pollinvestingreport.pdf.
120. John R. Beard and Charles Petitot, "Ageing and Urbanization: Can Cities be Designed to Foster Active Ageing?" *Public Health Reviews*, no. 32 (2010): 427–50, <https://publichealthreviews.biomedcentral.com/track/pdf/10.1007/BF03391610>.
121. Lim S. et al., "Impact of Residential Displacement on Healthcare Access and Mental Health Among Original Residents of Gentrifying Neighborhoods in New York City," *PLoS ONE*, vol. 12, no. 12 (2017): e0190139, <https://doi.org/10.1371/journal.pone.0190139>.
122. Paul Irving, Arielle Burstein, and Rita Beamish, "Silver to Gold: The Business of Aging," *Milken Institute Center for the Future of Aging*, (2018): 66.
123. "Report on the Economic Well-Being of U.S. Households in 2018," *Board of Governors of the Federal Reserve System*, (May 2019), <https://www.federalreserve.gov/publications/files/2018-report-economic-well-being-us-households-201905.pdf>.
124. "Housing America's Older Adults 2018," *Joint Center for Housing Studies of Harvard University*, (2018), https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Housing_Americas_Older_Adults_2018_1.pdf.
125. Alcynna Lloyd, "Home Prices are Rising Faster Than Wages in 80% of US Markets: New ATTOM Report Shows Renting is Cheaper Option in the Majority of Metros," *HousingWire*, January 10, 2019, <https://www.housingwire.com/articles/47878-home-prices-are-rising-faster-than-wages-in-80-of-us-markets>.
126. "America's Rental Housing: Expanding Options for Diverse and Growing Demand," *Joint Study for Housing Studies of Harvard University*, (2015), https://www.jchs.harvard.edu/sites/default/files/2015_jchs_rental_report_key_facts.pdf.
127. Caroline F. Pearson et al., "The Forgotten Middle: Many Middle-Income Seniors Will Have Insufficient Resources For Housing And Health Care," *Health Affairs*, vol. 38, no. 5 (April 2019), <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2018.05233>.
128. Ibid.
129. "Opening Doors: An Investigation of Barriers to Senior Housing for Same-Sex Couples," *The Equal Rights Center*, (2014), https://equalrightscenter.org/wp-content/uploads/senior_housing_report.pdf.
130. Sally Abrahms, "An 'LGBT-Welcoming' Place to Call Home," *AARP Livable Communities*, <https://www.aarp.org/livable-communities/housing/info-2016/age-friendly-LGBT-housing.html>.
131. Kathleen Pender, "Senior Cohousing an 'Antidote to the Loneliness' That Hits People as They Age," *San Francisco Chronicle*, January 5, 2019, <https://www.sfchronicle.com/business/network/article/Senior-cohousing-an-antidote-to-the-13510258.php>.
132. Nesterly, accessed July 11, 2019, <https://www.nesterly.io/>.
133. Megan Easton, "Roomies with a Twist: U of T Researchers Help Run Home-Sharing Project That Pairs Seniors with Students," *University of Toronto News*, February 6, 2019, <https://www.utoronto.ca/news/roomies-twist-home-sharing-project-involving-u-t-researchers-pairs-seniors-students>.
134. "Innovation@Home: A Contest and a Call for Age-Friendly Housing Practices that Work," *World Health Organization, Age Friendly World*, accessed July 11, 2019, <https://extranet.who.int/agefriendlyworld/age-friendly-practices/innovation-home-afp/>.
135. Adela Suliman, "Can Bringing Young and Old Under One Roof Solve the World's Housing Crisis?" *Thomson Reuters Foundation News*, March 21, 2019, <http://news.trust.org/item/20190321185125-nni8y/>.
136. "Home Sharing," *New York Foundation for Senior Citizens*, accessed July 11, 2019, <https://www.nyfsc.org/home-sharing/>.
137. Gretchen Livingston, "At Grandmother's House We Stay: One-in-Ten Children Are Living with a Grandparent," *Pew Research Center*, September 4, 2013, https://www.pewresearch.org/wp-content/uploads/sites/3/2013/09/grandparents_report_final_2013.pdf.
138. D'Vera Cohn and Jeffrey S. Passel, "A Record 64 Million Americans Live in Multigenerational Households," *Pew Research Center*, April 5, 2018, <http://www.pewresearch.org/fact-tank/2018/04/05/a-record-64-million-americans-live-in-multigenerational-households/>.
139. Lynn M. Ross, "Residential Futures II: Thought-Provoking Ideas on What's Next for Multigenerational Housing and Intergenerational Communities," *Urban Land Institute in collaboration with ULI Terwilliger Center for Housing*, (2014), <http://uli.org/wp-content/uploads/ULI-Documents/ResidentialFuturesII.pdf>.
140. Chang-Tai Hsieh and Enrico Moretti, "Housing Constraints and Spatial Misallocation," *NBER Working Papers, National Bureau of Economic Research, Inc.*, no. 21154 (2015).
141. Allison Bisbey, "In Tight Housing Market, Lenders Get Creative to Finance Garage Apartments," *Asset Securitization Report: An American Banker Brand*, November 16, 2018, <https://asreport.americanbanker.com/news/in-tight-housing-market-lenders-get-creative-to-finance-garage-apartments>.
142. Dominic Fracasa, "More Housing on the Way: SF Meets Deadline to Clear Huge Application Backlog," *San Francisco Chronicle*, February 28, 2019, <https://www.sfchronicle.com/bayarea/article/More-housing-on-the-way-SF-meets-deadline-to-13651065.php?psid=fAXrb>.
143. "Administrative Review for an Accessory Dwelling Unit," *Community Planning and Economic Development Services Division Minneapolis*, <http://www.ci.minneapolis.mn.us/www/groups/public/@cped/documents/webcontent/wcms1p-136454.pdf>.
144. Devin Kelly, "Alaska Cities, Facing Housing Crunch, Encourage Backyard Cottages and Apartment Additions," *KTOO Public Media*, June 30, 2018, <https://www.ktoo.org/2018/06/30/alaska-cities-facing-housing-crunch-encourage-backyard-cottages-and-apartment-additions/>.

145. Jennifer Molinsky, "Four Challenges to Aging in Place," *Joint Study for Housing Studies of Harvard University*, January 25, 2017, <https://www.jchs.harvard.edu/blog/four-challenges-to-aging-in-place/>.
146. Cisneros, et al., "Independent for Life: Homes and Neighborhoods for an Aging America," *UT Press*, 2012.
147. "America's Rental Housing: Expanding Options for Diverse and Growing Demand," *Joint Center for Housing Studies of Harvard University*, (2015), https://www.jchs.harvard.edu/sites/default/files/2015_jchs_rental_report_key_facts.pdf.
148. "Chapter 1: Using the ADA Standards," *United States Access Board*, accessed August 1, 2019, <https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-1-using-the-ada-standards>.
149. Luke Bo'sher et al., "Accessibility of America's Housing Stock: Analysis of the 2011 American Housing Survey (AHS)," *US Department of Housing and Urban Development*, (March 2015): 28, <https://www.huduser.gov/portal/publications/mdrt/accessibility-america-housingStock.html>.
150. Shannon Guzman, Janet Viveiros, and Emily Salomon, "Expanding Implementation of Universal Design and Visitability Features in the Housing Stock," *AARP Public Policy Institute*, (July 2017), <https://www.aarp.org/content/dam/aarp/ppi/2017/06/expanding-implementation-of-universal-design-and-visitability-features-in-the-housing-stock.pdf>.
151. *Ibid.*
152. "Universal Design and Visitability," *Sarasota County Government*, accessed August 20, 2019, <https://www.scgov.net/government/sustainability/sustainability/universal-design-and-visitability>.
153. Jennie Orvino, "'Visitability' Standards for Homes Rise Amid Sonoma County Rebuild Effort," *Northbay Business Journal*, February 12, 2019, <https://www.northbaybusinessjournal.com/northbay/sonomacounty/9249963-181/housing-visitability-sonoma-construction>.
154. Donna Butts and Trent Stamp, "Older Adults Thrive in Intergenerational Shared Sites," *American Society on Aging*, <https://www.asaging.org/blog/older-adults-thrive-intergenerational-shared-sites>.
155. "All In Together: Creating Places Where Young and Old Thrive," *Generations United and The Eisner Foundation*, (2018), <https://www.gu.org/app/uploads/2018/06/SignatureReport-Eisner-All-In-Together.pdf>.
156. "What are Complete Streets?," *Smart Growth America*, accessed July 11, 2019, <https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/>.
157. *Ibid.*
158. Hamid Irvani and Venkat Roa, "Health Benefits of New Urbanism," *Public Square: A Congress for the New Urbanism Journal*, February 4, 2019, <https://www.cnu.org/publicsquare/2019/02/04/health-benefits-new-urbanism>.
159. "Safe Streets, Stronger Economies: Complete Streets Project Outcomes From Across the Country," *Smart Growth America and National Complete Streets Coalition*, (March 2015), <https://smartgrowthamerica.org/resources/evaluating-complete-streets-projects-a-guide-for-practitioners/>.
160. Jana Lynott, Mariia Zimmerman, and Patricia Happ, "Communities are Embracing Development Near Transit: A Snapshot of Transit-Oriented Development Support across the United States," *AARP Public Policy Institute*, (September 2017), <https://www.aarp.org/content/dam/aarp/ppi/2017/09/tod-full-report.pdf>.
161. *Ibid.*
162. "How the Atlanta BeltLine Is Funded," *The Atlanta BeltLine*, accessed July 11, 2019, <http://beltline.org/about/the-atlanta-beltline-project/funding/>.
163. Jana Lynott, Mariia Zimmerman, and Patricia Happ, "Communities are Embracing Development Near Transit: A Snapshot of Transit-Oriented Development Support across the United States," *AARP Public Policy Institute*, (September 2017), <https://www.aarp.org/content/dam/aarp/ppi/2017/09/tod-full-report.pdf>.
164. Teja Pristavec, "Social Participation in Later Years: The Role of Driving Mobility," *The Journals of Gerontology: Series B*, vol. 73, no. 8, (2018): 1457-1469, <https://doi.org/10.1093/geronb/gbw057>.
165. Jana Lynott, Mariia Zimmerman, and Patricia Happ, "Communities Are Embracing Development near Transit: A Snapshot of Transit-Oriented Development Support across the United States," *AARP Public Policy Institute*, (September 2017), <https://www.aarp.org/content/dam/aarp/ppi/2017/09/tod-full-report.pdf>.
166. Joseph F. Coughlin and Samantha Brady, "Planning, Designing, and Engineering Tomorrow's User-Centered, Age-Ready Transportation System," *The Bridge, National Academy of Engineering*, (Spring 2019), <https://www.nae.edu/File.aspx?id=208660>.
167. J. M. Vivoda et al., "E-Hail (Rideshare) Knowledge, Use, Reliance, And Future Expectations Among Older Adults," *Transportation Research Part F*, 2018: 426-434.
168. "GoMonrovia," *City of Monrovia California*, accessed July 11, 2019, <https://www.cityofmonrovia.org/your-government/public-works/transportation/gomonrovia>.
169. "The COMET Launches the COMET On the GO! With Uber," *Mass Transit Mag*, January 8, 2019, <https://www.masstransitmag.com/bus/press-release/21040113/central-midlands-regional-transit-authority-cmrta-the-comet-the-comet-launches-the-comet-on-the-go-with-uber>.
170. "Mississippi Farmers Market Nutrition Program," *Mississippi Department of Agriculture and Commerce*, accessed August 1, 2019, <https://www.mdac.ms.gov/agency-info/programs/mississippi-farmers-market-nutrition-program/>.
171. Jana Lynott, "Universal Mobility as a Service: A Bold Vision for Harnessing the Opportunity of Disruption," *AARP Public Policy Institute*, (September 2018), <https://www.aarp.org/content/dam/aarp/ppi/2018/08/universal-mobility-as-a-service-aarp-ppi.pdf>.
172. Laura Latham, Tama Duffy Day, and Lee Lindahl, "BoomTown: A Future of All Ages," *Gensler on Cities*, accessed July 11, 2019, <http://www.gensleron.com/cities/2017/8/17/boomtown-a-future-for-all-ages.html>.
173. "Age-Friendly DC 2023 Strategic Plan," *Age-Friendly DC, The Office of Deputy Mayor for Health & Human Services, and the Government of the District of*

Columbia,

https://agefriendly.dc.gov/sites/default/files/dc/sites/agefriendly/page_content/attachments/Age-Friendly%20DC%202023%20Strategic%20Plan%20FINAL.PDF.

174. Ibid.
175. "2019-2022 District of Columbia State Plan on Aging," *The District of Columbia Office on Aging*, https://dcoa.dc.gov/sites/default/files/dc/sites/dcoa/page_content/attachments/DCOA%20State%20Plan%20on%20Aging%202019%20to%202022_FINAL%20DRAFT_CLEAN_%205.21.2018.pdf.
176. Ellen Squires, "A Portrait of DC's older adults," DC Policy Center, June 22, 2018, <https://www.dcpolicycenter.org/publications/a-portrait-of-d-c-s-older-adults/>.
177. "Age-Friendly DC 2023 Strategic Plan," *Age-Friendly DC, The Office of Deputy Mayor for Health & Human Services, and the Government of the District of Columbia*, https://agefriendly.dc.gov/sites/default/files/dc/sites/agefriendly/page_content/attachments/Age-Friendly%20DC%202023%20Strategic%20Plan%20FINAL.PDF.
178. Ibid.
179. Ibid.
180. "Ward 5 Works: The District of Columbia Ward 5 Industrial Land Transformation Study," *Government of the District of Columbia Mayor Vincent C. Gray*, (August 2014), https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/W5_07142014_FINALfinalSmallest.pdf
181. Ibid.
182. "Purposeful Aging Los Angeles: Age-Friendly Action Plan for the Los Angeles Region 2018-2021," *The County and City of Los Angeles*, (August 2018), <https://static1.squarespace.com/static/571a85103c44d84c6d2d5002/t/5b69c01d6d2a73dcca449412/1533657149897/Age-Friendly+Action+Plan+for+the+Los+Angeles+Region+2018-2021+%28V.8%29.compressed.pdf>.
183. Ruben Vives, "As Crime and Drugs Recede, MacArthur Park is Going Upscale, and Many Residents Feel Left Behind," *Los Angeles Times*, February 25, 2018, <https://www.latimes.com/local/lanow/la-me-westlake-district-20170211-story.html>.
184. "Age-Friendly Chicago," *Chicago.gov*, accessed August 1, 2019, https://www.chicago.gov/city/en/depts/fss/supp_info/age-friendly-chicago.html.
185. Ibid.
186. Rebecca Johnson, Amy Eisenstein, and Lara Boyken, "Age-Friendly Chicago: Findings from a Community-Wide Baseline Assessment," *Submitted to City of Chicago, Department of Family and Support Services*, (2015), https://www.chicago.gov/content/dam/city/depts/fss/supp_info/AgeFriendly/FinalAgeFriendlyReport021815.pdf.
187. City of Chicago Department of Planning and Development, "West Loop Design Guidelines," *Chicago Plan Commission*, (September 2017), https://www.chicago.gov/content/dam/city/depts/dcd/temp/20171009_WestLoopDesignGuidelines_LowRes.pdf.
188. "Virtual Care Market Will Possibly Surpass US \$13 Billion by the End of 2026," *Persistence Market Research*, September 5, 2018, <https://www.globenewswire.com/news-release/2018/09/05/1565794/0/en/Virtual-Care-Market-will-possibly-surpass-US-13-billion-by-the-end-of-2026-Persistence-Market-Research.html>.
189. Jonathan Woetzel et al., "Smart Cities: Digital Solutions for a More Livable Future," *McKinsey & Company*, (June 2018), <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/smart-cities-digital-solutions-for-a-more-livable-future>.
190. "Housing America's Older Adults: Meeting the Needs of an Aging Population," *Joint Center for Housing Studies of Harvard University*, (2014), https://www.jchs.harvard.edu/sites/default/files/jchs_housing_americas_older_adults_2014_key_facts_1.pdf.
191. "A Policy Roadmap for Individuals with Complex Care Needs," *Bipartisan Policy Center*, (January 2018): 16, <https://bipartisanpolicy.org/report/a-policy-roadmap-for-individuals-with-complex-care-needs/>.
192. "Resilient Cities," *Centre for Entrepreneurship, SMEs, Regions and Cities, OECD*, accessed July 8, 2019, <https://www.oecd.org/cfe/regional-policy/resilient-cities.htm>.
193. "Community Resilience," *US Department of Health and Human Services*, accessed August 28, 2019, <https://www.phe.gov/Preparedness/planning/abc/Pages/community-resilience.aspx>.
194. Linda Waite et al., "National Social Life, Health and Aging Project (NSHAP): Wave 3, [United States], 2015-2016," *Ann Arbor, MI: Inter-university Consortium for Political and Social Research*, March 8, 2019, <https://doi.org/10.3886/ICPSR36873.v4>.
195. J. Holt-Lunstad, T. B. Smith, and J. B. Layton, "Social Relationships and Mortality Risk: A Meta-Analytic Review," *PLoS Med*, (2010), <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316>.
196. Laura Carstensen, "Troubling Signs," *The Power of Purposeful Aging, Milken Institute*, (2016): 12, <https://www.milkeninstitute.org/sites/default/files/reports-pdf/PAS-16.pdf>.
197. "Social Determinants," *Humana*, accessed July 8, 2019, <https://populationhealth.humana.com/social-determinants/>.
198. N. K. Valtorta et al., "Loneliness and Social Isolation as Risk Factors for Coronary Heart Disease and Stroke: Systematic Review and Meta-Analysis of Longitudinal Observational Studies," *Pubmed.gov*, (2016), doi: 10.1136/heartjnl-2015-308790.
199. Regina A. Shih et al., "Improving Disaster Resilience Among Older Adults: Insights from Public Health Departments and Aging-in-Place Efforts," *RAND Corporation*, (2018), https://www.rand.org/pubs/research_reports/RR2313.html.
200. "Maintaining Dignity: Understanding and Responding to the Challenges Facing Older LGBT Americans," *AARP Research*, (March 2018), https://www.aarp.org/content/dam/aarp/research/surveys_statistics/life-leisure/2018/maintaining-dignity-lgbt.doi.10.26419%252Fres.00217.001.pdf.
201. JoNel Aleccia and Melissa Bailey, "'Stonewall Generation' Confronts Old Age, Sicknes—And Discrimination," *Kaiser Health News*, May 22, 2019, <https://khn.org/news/stonewall-generation-confronts-old-age-sickness-and-discrimination/>.

202. "CareMore Health Announces New Outcomes Data from First-of-its-Kind Togetherness Program," *Business Wire*, December 18, 2018, <https://www.businesswire.com/news/home/20181218005059/en/CareMore-Health-Announces-New-Outcomes-Data-First-of-its-Kind>.
203. "Confronting the Growing Health Impact of Loneliness," *AHIP*, January 2, 2019, <https://www.ahip.org/confronting-the-growing-health-impact-of-loneliness/>.
204. Melanie Mason, "California's Senior Population is Growing Faster than Any Other Age Group. How the Next Governor Responds is Crucial," *Los Angeles Times*, October 7, 2018, <https://www.latimes.com/projects/la-pol-ca-next-california-demographics/>.
205. Matthew Hale, Sarwat Shah, and Andrew Clegg, "Frailty, Inequality, and Resilience," *Royal College of Physicians Clinical Medicine*, vol. 19, no. 3 (2019): 219–223, doi: 10.7861/clinmedicine.19-3-219.
206. "Long-Term Services & Supports State Scorecard," *LongTermScorecard*, accessed August 21, 2019, <http://www.longtermscorecard.org/>.
207. "Promising Practices," Long-Term Services & Supports State Scorecard, *LongTermScorecard*, accessed August 21, 2019, <http://www.longtermscorecard.org/promising-practices>.
208. Ellen O'Brien and Wendy Fox-Grage, "Home and Community-Based Services beyond Medicaid," *AARP Public Policy Institute: Long-Term Services & Supports State Scorecard*, February 19, 2019, <http://www.longtermscorecard.org/promising-practices/home-and-community-based-services-beyond-medicaid>.
209. Doug Birnie, James McLary, Wendy Fox-Grage, and Jana Lynott, "Mobility Managers," *AARP Public Policy Institute: Long-Term Services & Supports State Scorecard*, (June 2019), <http://www.longtermscorecard.org/~/media/mobilitymanagersdoi10264192Fppi00067001.pdf>.
210. Sanne Magnan, "Social Determinants of Health 101 for Health Care: Five Plus Five," *National Academy of Medicine*, October 9, 2017, <https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/>.
211. "The Office of the Chief Medical Officer Bold Goal: 2019 Progress Report," *Humana*, accessed on July 8, 2019, <https://populationhealth.humana.com/>.
212. "2018 Bold Goal Progress Report: Health Happens Where You Are," *Humana*, (2018), http://populationhealth.humana.com/documents/Humana_BoldGoal_2018_ProgressReport.pdf.
213. Rita Beamish, "Older Americans Act Limp Along at 50, Stressing Local and State Agencies," *Stateline*, March 4, 2015, <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/3/04/older-americans-act-limps-along-at-50-stressing-local-and-state-agencies>.
214. K. S. Thomas and V. Mor, "Providing More Home-Delivered Meals is One Way to Keep Older Adults with Low Care Needs Out of Nursing Homes," *Health Aff (Millwood)*, vol. 32, no. 10 (2013): 1796-802, doi: 10.1377/hlthaff.2013.0390.
215. "2018 Bold Goal Progress Report: Health Happens Where You Are," *Humana*, (2018), http://populationhealth.humana.com/documents/Humana_BoldGoal_2018_ProgressReport.pdf.
216. "Meals on Wheels America, Meals on Wheels of Central Maryland and Johns Hopkins Bayview Partner to Reduce Seniors' Need for High-Cost Healthcare Services," *PR Newswire*, November 16, 2016, <https://www.prnewswire.com/news-releases/meals-on-wheels-america-meals-on-wheels-of-central-maryland-and-johns-hopkins-bayview-partner-to-reduce-seniors-need-for-high-cost-healthcare-services-300363704.html>.
217. "More Than a Meal," *Meals on Wheels America*, accessed July 8, 2019, <https://www.mealsonwheelsamerica.org/learn-more/research/more-than-a-meal/medicare-claims-analyses>.
218. Amanda L. Brewster et al., "Cross-Sectoral Partnerships By Area Agencies On Aging: Associations With Health Care Use And Spending," *Health Affairs, Culture of Health, Medicare & More*, vol. 37, no.1 (January 2018), <https://doi.org/10.1377/hlthaff.2017.1346>.
219. Angelica LaVito, "Walgreens and Humana are Partnering to Create Senior Health Hubs," *CNBC*, June 19, 2018, <https://www.cnn.com/2018/06/19/walgreens-and-humana-are-partnering-to-create-senior-health-hubs.html>.
220. Nora Super, Mary Kaschak, and Elizabeth Blair, "Health Care And Community-Based Organizations Have Finally Begun Partnering To Integrate Health And Long-Term Care," *Health Affairs Blog*, February 2, 2018, <https://www.healthaffairs.org/doi/10.1377/hblog20180130.620899/full/>.
221. "Age-Friendly Health Systems," *The John A. Hartford Foundation*, accessed August 21, 2019, <https://www.johnahartford.org/age-friendly-health-systems-initiative>.
222. Ibid.
223. "The Role of Public Health in Ensuring Healthy Communities," *APHA.org*, accessed July 31, 2019, <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/30/10/48/the-role-of-public-health-in-ensuring-healthy-communities>.
224. "An Introduction About the Program: AARP Livable Communities," *AARP.org*, accessed July 31, 2019, <https://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/an-introduction.html>.
225. "Age-Friendly Health Systems: Guide to Using the 4Ms in the Care of Older Adults," *Institute for Healthcare Improvement*, (April 2019), http://www.ihl.org/Engage/Initiatives/Age-Friendly-Health-Systems/Documents/IHIAgeFriendlyHealthSystems_GuidetoUsing4MsCare.pdf.
226. "Creating an Age-Friendly Public Health System: Challenges, Opportunities, and Next Steps," *Trust for America's Health and The John A. Hartford Foundation*, (March 2018), https://johnahartford.org/images/uploads/reports/Age_Friendly_Public_Health_Convening_Report_FINAL.pdf.
227. "Livable Communities," *n4a.org*, accessed August 1, 2019, <https://www.n4a.org/livable>.
228. "Healthy Aging in Action: Advancing the National Prevention Strategy," *National Prevention, Health Promotion, and Public Health Council*, (November 2016), <https://www.hhs.gov/sites/default/files/healthy-aging-in-action-final.pdf>.
229. "People 65 Years and Older & Influenza," *CDC.gov*, accessed August 1, 2019, <https://www.cdc.gov/flu/highrisk/65over.htm>.
230. "For Election Officials," *Vote & Vax*, accessed August 1, 2019, <http://voteandvax.org/for-election-officials/>.
231. Brian Powers, Scott Rinefort, and Sachin J. Jain, "Shifting Non-Emergency Medical Transportation To Lyft Improves Patient Experience And

- Lowers Costs,” *Health Affairs Blog*, September 13, 2018, <https://www.healthaffairs.org/doi/10.1377/hblog20180907.685440/full/>.
232. “CareMore Health Announces New Outcomes Data from First-of-its-Kind Togetherness Program,” *Business Wire*, December 8, 2018, <https://www.businesswire.com/news/home/20181218005059/en/CareMore-Health-Announces-New-Outcomes-Data-First-of-its-Kind?rel=0>.
233. Julie Miller et al., “Sharing is Caring: The Potential of the Sharing Economy to Support Aging in Place,” *Gerontology & Geriatrics Education*, (2018), <https://doi.org/10.1080/02701960.2018.1428575>.
234. Lauren Taylor, “Housing And Health: An Overview Of The Literature,” *Health Affairs Health Policy Brief*, June 7, 2018, <https://www.healthaffairs.org/doi/10.1377/hpb20180313.396577/full/>.
235. “UnitedHealthcare’s Investments in Affordable Housing to Help People Achieve Better Health Surpass \$400 Million,” *United Health Group*, March 26, 2019, <https://www.unitedhealthgroup.com/newsroom/2019/2019-03-26-uhc-affordable-housing-path-metro-villas.html>.
236. Ibid.
237. Adele Peters, “This Healthcare Giant Invests Millions in Affordable Housing to Keep People Healthy,” *FastCompany*, January 15, 2019, <https://www.fastcompany.com/90291860/this-healthcare-giant-invests-millions-in-affordable-housing-to-keep-people-healthy>.
238. “Announcing \$200M Impact Investment to Address Housing Crisis,” *Kaiser Permanente*, May 18, 2018, <https://about.kaiserpermanente.org/community-health/news/kaiser-permanente-announces-200-million-impact-investment-partne>.
239. Ibid.
240. “Transforming Housing for a Growing Aging, Homeless Population,” *Kaiser Permanente*, June 6, 2019, <https://about.kaiserpermanente.org/community-health/news/transforming-housing-for-growing-aging-homeless-population>.
241. Jennifer Prillaman, “Alleviating Homelessness is a Business Imperative,” *Palladium*, August 16, 2019, <https://thepalladiumgroup.com/news/Alleviating-Homelessness-is-a-Business-Imperative>.
242. “How Can Climate Change Affect Natural Disasters?” USGS, accessed August 1, 2019, https://www.usgs.gov/faqs/how-can-climate-change-affect-natural-disasters-1?qt-news_science_products=0#qt-news_science_products.
243. Ina Jaffe, “Why Older People Didn’t Fare Well in Northern California Wildfires,” *NPR*, October 19, 2017, <https://www.npr.org/2017/10/19/558696780/why-older-people-didnt-fare-well-in-northern-california-wildfires>.
244. Clodagh Byrne and Clare Harris, “Climate Change in an Ageing World,” *HelpAge International*, (December 2015), https://reliefweb.int/sites/reliefweb.int/files/resources/COP21_HelpAge_PositionPaper_Final_0.pdf.
245. Malik S et al., “Vulnerability of Older Adults in Disasters: Emergency Department Utilization by Geriatric Patients after Hurricane Sandy,” *Disaster Med Public Health Prep*, vol. 12, no. 2 (2018): 184-193, doi: 10.1017/dmp.2017.44, <https://www.ncbi.nlm.nih.gov/pubmed/28766475>.
246. Regina A. Shih, et al., “Improving Disaster Resilience Among Older Adults: Insights from Public Health Departments and Aging-in-Place Efforts,” *RAND Corporation*, 2018, https://www.rand.org/pubs/research_reports/RR2313.html.
247. Ibid.
248. Ibid.
249. Ibid.
250. Monica Anderson and Andrew Perrin, “Tech Adoption Climbs Among Older Adults,” *Pew Research Center Internet & Technology*, May 17, 2017, <https://www.pewinternet.org/2017/05/17/technology-use-among-seniors/>.
251. Ibid.
252. Ben Schiller, “Can An iPad Heal Loneliness? Barcelona Wants Its Senior Citizens To Give It A Try,” *FastCompany*, July 2, 2015, <https://www.fastcompany.com/3047867/can-an-ipad-heal-loneliness-barcelona-wants-its-senior-citizens-to-give-it-a-try>.
253. “Social Actions Innovations Bank,” *iSocial*, accessed July 9, 2019, <https://isocial.cat/en/innovacio/vincles-bcn-service-to-strengthen-social-ties-of-the-lonesome-elderly/>.
254. “Connect.DC—Digital Inclusion Initiative,” *DC.gov*, accessed July 9, 2019, <https://www.govtech.com/civic/Whats-New-in-Civic-Tech-STiR-Now-Accepting-Applications.html>.
255. Kristofer Hamel, Katharina Fenz, and Andreas Walli, “Innovation in Geo-Spatial Demography Offer Solutions for Aging Populations,” *Brookings Institution*, March 27, 2018, <https://www.brookings.edu/blog/future-development/2018/03/27/innovations-in-geo-spatial-demography-offer-solutions-for-aging-populations/>.
256. “Space to Help Support Us as We Get Older,” *European Space Agency*, accessed August 20, 2019, <https://business.esa.int/news/space-to-help-support-us-we-get-older>.
257. Jonathan Woetzel et al., “Smart Cities: Digital Solutions for a More Livable Future,” *McKinsey & Company*, (June 2018), <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/smart-cities-digital-solutions-for-a-more-livable-future>.
258. Ibid.
259. Ibid.
260. “Home,” *Smart Cities for All*, accessed July 9, 2019, <https://smartcities4all.org/>.
261. David Korngold, Martin Lemon, and Michael Rohwer, “Smart Cities for All: A Vision for an Inclusive, Accessible Urban Future,” *BSR and AT&T*, (2017), <https://smartcities4all.org/wp-content/uploads/2017/06/Smart-Cities-for-All-A-Vision-for-an-Inclusive-Accessible-Urban-Futur...-min.pdf>.
262. Eli Richman, “Rush Medical Center Seeks to Become First US Hospital to Move to 5G,” *FierceHealthcare*, January 9, 2019, <https://www.fiercehealthcare.com/tech/rush-medical-center-enters-race-for-5g-first-u-s-hospital-to-do-so>.

ACKNOWLEDGMENTS

Our work depends on the efforts of many colleagues who share our aspirations. Special thanks to Rita Beamish for her journalist's eye and our productive writing collaboration, Marlon Graf for his research contributions, and Cara Levy for her assistance with research and planning for this report. We also appreciate our colleagues Jill Posnick, Karen Rogers, and Emily Ball for their editing and design help. To our friends in the field—John Feather, Rodney Harrell, Sarah Thomas, Gretchen Alkema, Brian Kaskie, and Kitty Hsu Dana—thank you for your insights and feedback during our review process.

To our partners—Laura Latham and colleagues from the Gensler Research Institute and Gensler's Washington, DC and Los Angeles offices—we are grateful for your creative talents and generosity of time in designing neighborhoods that exemplify Age-Forward 2030. To our partners at The SCAN Foundation, we thank you for spotlighting Age-Forward principles with this year's Innovation Award.

Thanks, as always, to the members of our Center for the Future of Aging Business Council and Academic and Policy Advisory Board. Their support, ideas, and shared commitment to a better future motivates our work in many ways.

Finally, we want to express gratitude to our Age-Forward survey participants for their predictions, insights, and

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