

Transcending Place and Transforming Aging through Online and Offline Experiences

The Internet provides a vast market for services geared toward aging in place and, used in combination, many fulfill the six dimensions of wellness required to thrive.

A growing body of evidence shows that today's elders and baby boomers are flocking to the Internet more than ever. Older adults are among the fastest growing group of new Internet users (Godfrey et al., 2013). This story understandably grabs the media spotlight. A widely quoted statistic from the Pew Internet & American Life Project is that for the first time, 53 percent of Americans ages 65 and older are online. Once online, most make Internet use a regular part of their lives (Zickuhr and Madden, 2012).

A recent AARP report showed that 80 percent of older adults surveyed agreed that going online was helpful in allowing families to stay connected and communicate (AARP Research, 2012). This is important given that, according to the Pew Research Center, 47 percent of adults in America say that at some point in their lives, they are likely to be responsible for caring for an aging parent or another older adult family member (Fox, Duggan, and Purcell, 2013).

Even Google is exploring how baby boomers and elders behave online. Google researchers found that the Internet is the top source for gathering information on topics of interest, outpacing TV and print media by a substantial

margin. This study also reported that baby boomers and elders spend more time in an average week online than they do watching TV (Google.com, 2013).

The aging-in-place technology marketplace today represents, conservatively, \$2 billion.

These trends make economic sense. Long-time industry analyst Laurie Orlov pegs the aging-in-place technology marketplace as representing a conservative \$2 billion today. Between now and 2020, Orlov predicts this market will grow to at least \$20 billion (Orlov, 2013). Not surprisingly, figuring out how to capitalize on and advance this growing yet challenging marketplace involves a growing number of innovation networks, business accelerators, grant opportunities, and academic and corporate research efforts.

Expanding and Empowering Community

The Internet has significantly expanded the meaning of community for older adults. Once tied to physical locations, communities created

Transforming Aging through Innovations in Technology and Business

Increasingly, there are more and more products marketed to transform the aging experience with novel opportunities for personalized, digitally supported connected living. Examples of collaborative innovation networks and business accelerators that inspire entrepreneurs include the following:

Innovation networks	Aging2.0 (www.aging2.com)
	Age Tech West (www.agetechwest.com)
	Center for Technology & Aging (www.techandaging.org)
	Front Porch Center for Innovation & Wellbeing (www.fpciw.org)
	Georgia Tech Aware Home (http://awarehome.imtc.gatech.edu/)
	Healthy Aging and Independent Living Lab (www.mayo.edu/center-for-innovation/connect/healthy-aging-and-independent-living-lab)
	Innovate LTC (www.innovateltc.com)
	LeadingAge's Center for Aging Services Technologies (www.agingtech.org)
	MIT AgeLab (http://agelab.mit.edu/)
	Oregon Center for Technology & Aging (www.orcatech.org)
	Quality of Life Technology Center (www.cmu.edu/qolt/)
	University of Virginia Institute on Aging (www.virginia.edu/aginginstitute/)
Business accelerators	AgePower (www.agepower.org)
	Aging2.0 (www.aging2.com)
	InnovateLTC (www.innovateltc.com)
	Link-age Ventures (www.linkageconnect.com)
	Prebacked (www.prebacked.com)
	Rock Health (www.rockhealth.com)
	StartUp Health (www.startuphealth.com)
Tigerlabs Health (www.tigerlabs.co)	

through online experiences transcend space, time, language, and financial, physical, and other traditional barriers. Online communities are defined more as a diverse group of people linked by social ties who share common perspectives and engage in joint action (MacQueen et al., 2001), regardless of physical setting.

Online and offline communities that attract older adults both focus on enhancing successful aging by engaging elders in any or all of the six dimensions of wellness: physical, social, intellectual, emotional, spiritual, and vocational (Edelman et al., 2013). Bridging the online and offline communities of older adults into a cohesive, personalized web of engagement, well-being,

and social support represents a profound opportunity for fostering successful aging.

Six Dimensions of Wellness

Exciting new models based on integrating online and offline community experiences for older adults are emerging. Discussion of the six dimensions of wellness helps to illustrate their growing impact.

Social dimension

Examples of the pervasive power of online social networks in the lives of older adults are everywhere. From Skype and FaceTime to Facebook and Google+, to online sites devoted to senior

dating like OurTime (www.ourtime.com), the numbers of older adults using these networks are rapidly increasing, as are the reported benefits. One example of a more specialized and compelling community experience is Readeo (www.readeo.com). Offering a social networking twist on an intergenerational favorite, Readeo.com combines award-winning children’s books with high-quality video chat to create a shared reading experience called BookChat, where adults read to kids.

Vocational dimension

Researchers have found that 43 percent of workers plan to continue working after age 65 (Vernon, 2013). Developed to address the unique challenges associated with working in later years, Encore.org (www.encore.org) is dedicated to making it easier for millions of people to pursue encore careers in the second half of life—jobs combining personal meaning, continued income, and social impact. Encore.org provides tools, resources, connections, education, listings, and more.

GoodGym pairs members who run with isolated older adults—the elder becomes the runner’s coach.

For those whose vocational calling is more philanthropic, a growing number of online communities focus on volunteering for older adults, such as Senior.net’s Grand Mentor Program, Grandparents.com’s Grand Corps Volunteer Group, and AARP’s Volunteer Program.

One innovative online community program takes volunteering and older adult engagement to a new level. The U.K.’s GoodGym (www.goodgym.org) encourages runners to get fit by doing good. Volunteers who enjoy running combine regular exercise with helping their communities through group projects and one-off missions, such as making important deliveries for older people, changing light bulbs for people

who can’t get to them, or providing help with minor emergencies. GoodGym also pairs members with isolated older adults. The elder becomes the runner’s coach, providing motivation to run and sharing wisdom.

Emotional dimension

Offering ways for discovering new possibilities and navigating “what’s next,” AARP’s www.LifeReimagined.org is a series of online and offline experiences that guide people through life transitions by helping them discover new possibilities and connect with a community of people pursuing similar passions and goals. This highly personalized approach incorporates multimedia tools, resources, and programs designed to help people understand where they are in their journey to achieve their goals and dreams, to reflect, and to make decisions in planning next steps. It also includes a Sounding Board—a private social network for people to surround themselves with trusted friends and allies (AARP Press Center, 2013).

Spiritual dimension

Faith communities increasingly are developing online presences to extend their reach and create access to their rich resources, ranging from live video and streaming events, to podcasts, e-newsletters, and message boards. One example of this emerging phenomenon can be found at www.spiritualityandaging.org. Based on both online and offline engagements, as well as an online learning community, this unique community focuses on spirituality as an essential piece of every person’s aging process.

Intellectual dimension

Internet communities offer tremendous opportunities for advancing lifelong learning with other students of all ages. From complete online education opportunities—such as the Khan Academy (www.khanacademy.org), Open Culture (www.openculture.com), Curious (www.curious.com), and highly focused virtual experiences on

specific topics—there is much in which older adults can immerse themselves. One captivating example is a virtual online Monet exhibit (www.monet2010.com/en) offered through the Museum of Online Museums (www.coudal.com/moom). Add to this the proliferation of e-readers, virtual special interest groups, and online movies, television shows, music, and streaming events, to name just a few, and the possibilities for intellectual engagement and stimulation in community with others are endless.

Physical dimension

Communities supporting the physical dimensions of aging also have a growing online presence. Tailored to meet the unique needs of older adults, the opportunities range from instructional videos, online coaches and forums, and fitness classes via webcam to physical activity tracking and remote health monitoring and management through tele-care. One example is SilverSneakers (www.silversneakers.com), which offers elders secure website access in order to assess health; develop action plans and track physical activities; request advice from experts in nutrition, fitness, and stress management; and participate in discussion groups.

Game Changers

Three trends stand out as catalysts for the evolution of connected living for older adults: a new type of at-home services, time-banking solutions, and services that tap the culture of fun. These low-cost or free direct-to-consumer models represent a disruptive approach to the current ecosystem of senior services for aging in community. Not unlike the impact Amazon and Netflix had on brick-and-mortar book and video stores, these new approaches will continue to impact and shape the aging services marketplace.

At-home services

The emerging category of technology-enabled at-home services creates affordable, accessible, and flexible approaches for extending commu-

nity and expertise to help elders thrive in the place they want to call home.

Eskaton's Live Well at Home network (www.livewellathome.com) is an engaging membership program enabling active elders to expand their social network, personal knowledge, physical wellness, and overall quality of life. Currently available near Sacramento, California, the program connects members to a wide range of entertaining events, informative classes, preferred service providers and discounts, all for an annual fee. Additional features include telephone reassurance (Eskaton Telephone Reassurance; <http://goo.gl/ThiFff>), technology support, care advisors, and a blend of online and offline experiences.

Mather LifeWays' MOREways (www.moreways.org) is a unique virtual community designed to offer more opportunities, resources, and experiences to help older adults remain connected to their neighborhood and to the people in it. With both online and in-person components, MOREways combines online information resources, live streaming events, games, and virtual hangouts for special interest groups with in-person outings and events. Additionally, MOREways provides an online portal that facilitates connections with local businesses, including daily deals, and which also allows members to rate the businesses and share experiences. All of this is available to members at no cost.

Time banking

Three trailblazing approaches for time banking address core challenges facing older adults, and expand the possibilities for aging successfully in community.

LinkAges' Bay Area Time Bank (<http://timebank.linkages.org/>) is a community-based service exchange network where members provide neighborly services to one another in exchange for time. Facilitating both online and offline interactions, Time Bank members, including older adults and family caregivers, can

address personal needs through exchanges with other members that focus on their interests and skills and explore new possibilities for meaningful engagement in their communities. Free to new members through January 2014, annual membership is \$25.

A similar example is the Visiting Nurse Service of New York (VNSNY) Community Connections TimeBank (www.vnsny.org/timebank). With more than 1,700 members, VNSNY TimeBankers range from ages 7 to 98. Participation is free and open to all, and the

initiative is part of the VNSNY Community Benefit Program. More than 125 community organizations and 250 local, regional, and online businesses partner to offer discounts and other benefits to members.

Independent Transportation Network (*iTNAmerica*; www.itnamerica.org) affiliates across the country provide elder transportation and allow volunteer drivers to store transportation credits for future transportation needs. Members may donate cars for tax credits, or trade them for rides through the CarTrade program,

Community Connections TimeBank Research Study Results

A 2009 research study to gauge the impact of the TimeBank approach on its older adult members identified a range of positive outcomes for members, shown as follows:

- 100 percent of members reported they have benefited from becoming a TimeBank member.
- Those with the lowest self-reported annual income (less than \$9,800) and those who took the survey in Spanish reported the highest level of positive impact from TimeBank membership.
- 98 percent reported they are able to use their skills to help others through TimeBank.
- 48 percent reported improvements in self-rated physical health.
- 72 percent reported improvements in self-rated mental health.
- 67 percent reported increased access to health and other community services.
- 93 percent saw TimeBank as a place to obtain information about services in the community.
- 92 percent reported that since joining TimeBank, it is easier for them to ask for help.
- 51 percent of all members surveyed reported that they saved money through TimeBank.
- 73 percent of those with an annual income of less than \$9,800 reported that membership in TimeBank helped them save money.
- 90 percent reported that the number of friends they have increased since joining TimeBank.
- 71 percent reported that they have contact with their new friends at least once a week (42 percent reported contact a few times per week).
- 79 percent reported that TimeBank membership gives them support they need to be able to stay in their homes and community as they get older.
- 73 percent reported an increase in trust of people from other backgrounds, cultures, or age groups.
- 85 percent reported an increase in sense of belonging to their community.
- 93 percent reported they have made friends with, or exchanged with, members of different ages, backgrounds, or cultures.
- 82 percent reported that the quality of their life increased since joining TimeBank.

Source: Visiting Nurse Service of New York, VNSNY Center for Home Care Policy & Research, 2009.

and volunteer drivers may also donate mileage credits to friends, loved ones, or low-income seniors through the Road Scholarship Program.

Fun online

Researcher Galit Nimrod, Ph.D., has championed studies that delve into the nature of elders' online communities. In 2011, Nimrod focused specifically on the role of fun in these online communities. Previous research had already found that "fun online" is the most dominant content in senior online communities (Nimrod, 2010). This newer work found that a fun online culture seemed to offer participants many desired benefits, including meaningful play and opportunities to practice and demonstrate their abilities. In addition, humor in the communities, as well as a chance to interact with others, provides important means for coping with aging. Participating in that fun culture enables older adults to remain socially and mentally active and to express their strengths and enduring interests (Nimrod, 2011).

Cowbird, a storytelling website, beautifully demonstrates the fun phenomenon in action and the engagement it generates (<http://cowbird.com/tag/aging/>). The premise of this online experience is that by building simple and beautiful storytelling tools, and offering them free to anyone who wishes to use them, we find connections between the life of the storyteller and the lives of others, forming a vast, interconnected ecosystem.

Not Yet at the Tipping Point

While these trends, statistics, and emerging solutions represent substantial progress, this market is still immature and faces numerous barriers that must be removed before solutions are widely available, commonly adopted, and affordable for older adults and their loved ones. The marketplace remains fragmented. Consumers are overwhelmed and frustrated by the challenges of identifying proven and trusted solutions, as well as sorting through and validating the growing list of options.

A great example of the sheer volume and diversity of ideas and opportunities related to connected living for older adults is highlighted by this past summer's Innovation Challenge from IDEO and the Mayo Innovation Center. Together, they used an open innovation design challenge to explore and develop a wide range of ideas focused on creating the future of healthy aging (OpenIDEO, 2013). Starting with more than 300 new ideas to help people thrive as they age, folks from around the world explored opportunities and designed 134 concepts, later shortlisted to twenty ideas from which the six winners were selected. The sheer diversity of approaches proposed through this creative exercise provides a deeper sense of how vast is this sea of opportunity.

But other key issues must be addressed before this marketplace can take off.

The digital divide

According to an AARP Public Policy Institute report, in 2012 fewer than four in ten people ages 65 and older had high-speed Internet access in their homes. Among minorities access dips much lower, to 18 percent of African Americans ages 60 and older, and 20 percent of Latinos in the same cohort (Baker, 2013).

Additional adoption barriers reinforce the digital divide. High or unpredictable broadband costs present a particular burden for older adults, many of whom live on fixed incomes and do not have the resources or flexibility to withstand significant changes in their expenses (Baker, 2013). While 65 percent of adults older than age 65 own a cell phone; smartphone ownership among older adults is quite low. Only one in ten adults ages 65 and older say they have one of these feature-rich phones (Zickuhr and Madden, 2012). After age 75, Internet and broadband use drops significantly. As of April 2012, Internet adoption among this group has only reached 34 percent, while home broadband use has inched up to 21 percent (Zickuhr and Madden, 2012).

In addition, consistent with demographic changes in the U.S. population, the older population is becoming more ethnically diverse. Currently about 84 percent of people ages 65 and older are non-Hispanic white; this proportion is expected to drop to about 74 percent in 2030 and 64 percent by 2050. The greatest growth will be seen among Hispanics, followed by non-Hispanic blacks (Czaja, 2007). The implications of this from a technology adoption perspective are overlooked in technology design today, particularly in terms of supporting multi-lingual, culturally sensitive communities.

“Ageless” design

In addition to issues of digital access, solutions must embrace the concept of “ageless design for all” in product design. In terms of addressing the needs of older adults, designers must refine the user interface to accommodate special-use cases relative to aging (e.g., related to vision, hearing, cognition, and mobility) but without creating a stigmatized solution that screams “just for older adults.”


Ninety-three percent of TimeBank members say they have made friends with members of different ages, backgrounds, or cultures.

A related design opportunity is to dig deeper into the needs and preferences of sub-segments of older adults and move away from designs for one homogenous group of older adults; such a group doesn't exist (Nimrod, 2013). Two other

key design concepts that must also be better addressed are the immense need for highly personalized user experiences, as well as thoughtfully conceived approaches to analyzing the immense amount of longitudinal data associated with the lifespans of older adults.

Looking Ahead

One of the most hotly debated questions about the Internet is whether it is the great equalizer. While a strong case can be made that until all the issues of the digital divide are resolved (not just for older adults, but in rural and economically challenged areas, developing countries, and under-represented populations), the Internet cannot achieve this status. Even so, the Internet is already changing the game, empowering consumers, creating choice, and transforming community. This has powerful implications for older adults and the opportunity to create unprecedented choices to help individuals live their best lives. Consumers seek affordable, personalized, and digitally supported aging in community, both online and offline, and providers must deliver it.

For more than a decade, Intel's Eric Dishman has been challenging us with the idea that when it comes to transforming the aging experience, “our biggest problem is an imagination problem, not a technology problem” (Beck, 2004). More imagination is still needed. Let's get busy. The race is on. 

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