Aging Well Working Session Series: Next Generation Tech

Summary Report

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GLOBAL SOCIAL ENTERPRISE INITIATIVE

GEORGETOWN UNIVERSITY McDonough SCHOOL of BUSINESS

PHILIPS

Executive Summary

More Americans are choosing to stay in their own homes as they age. While technology use can serve as a solution to make this desire a reality, barriers to the adoption of available technologies persist. However, if technology-based solutions and policies are developed starting with the needs and desires of Americans as they age, there is an opportunity for a change in technology adoption rates, which could help Americans live more fulfilling lives in the setting of their choice.

The "Aging Well Working Session Series: Next Generation Tech" held in September 2013 was the first of three expert roundtables hosted by the Global Social Enterprise Initiative (GSEI) at Georgetown's McDonough School of Business and Philips. The series aims to remove barriers that prevent people from aging in the setting that they most prefer. This session introduced research that identified the key barriers America's aging population faces in terms of technology adoption, and participants were asked to address what steps need to be taken to remove them.

Meeting participants included leaders from industry, nonprofits, government and media. The diverse group brought expertise across various fields including health care, technology, aging, product innovation, policy and more. (**Appendix A**.)

Based on research and a new study by Philips and GSEI, the group discussed six barriers to implementation:

- **Access and adoption**: The majority of Americans have access to broadband Internet, but it is not available universally. Furthermore, many consumers, service providers, health care professionals and caregivers may not have necessary training for, or are slow to use, technology solutions that are currently available.
- **Cost**: Products, including devices, software and services that accompany them, can be costly.
- **Privacy concerns**: Many product and service offerings raise concerns around personal privacy.
- **Complexity of use**: Consumers are resistant to use products that seem complicated or require many updates or back-end interactions.
- **Interconnectivity and coordination**: As technology continues to evolve quickly, new products and services are not properly integrating with one another. In health care, especially, this prevents opportunities for a meaningful patient-care system.
- **Policy**: Reimbursement policies and regulations remain unchanged, while health care systems are primarily "offline" with little standardization for electronic medical records.

In addition to the barriers identified through the research, participants proposed three more: 1) Value – Consumers may not see the value proposition of new technology; 2) Resistance – Changing habits and learning to use new technology may not be attractive to consumers, and; 3) Pace of change – Keeping up with changes in technology (new versions, software, etc.) may be too much work for many consumers.

Over the course of the small group discussions, some common themes emerged across many of the groups:

72% Boomers and Gen Xers want to age in their own home

68% think their parents want to remain at home

35% wish their parents would move to assisted living

3% would themselves move to assisted living

(Source: GSEI and Philips Next Generation Tech Study)

First response from industry – While barriers, such as privacy concerns and the need to better align public policy with the rapid pace of technology advancement emerged, even policymakers and nonprofit representatives in the roundtable felt that some natural first steps – segmentation, marketing, development – may need to come from the industry and corporate sectors.

Respond to habits – Technologies are easier to adopt when they fit into existing routine or everyday habits. Minimal user interaction is often required to facilitate adoption.

Incentivizing intergenerational training – There is a strong benefit to younger generations assisting the older generations in learning and adopting new technologies. While this is happening informally already, there could be true benefit to incentivizing the types of activities to broaden use.

Developing a business case – If there is no understanding of the market gap and market potential, then it will be difficult to engage the business community in building solutions.

Better segmentation – The unique characteristics of consumers age 65 and over need to be better understood. This includes understanding if and how these consumers differ from the general market, and understanding that different segments exist within the 65+ market.

Strengthened value proposition – Industry needs to find ways to demonstrate relevance to aging Americans to better connect to the things that matter to them most.

Next Generation Tech working session members were selected to participate not only for their expertise, but also for their role as leaders, decision makers and influencers. Each has within his/her purview the ability to take one action to help remove an identified barrier. Several attendees made meaningful commitments to start working on the immediate removal of the barrier. Ideas ranged from creating a consumer experience center to testing, validating and showcasing innovative technologies in the 50+ space; to developing a model that better integrates technology into the lives of Alzheimer's patients.

OVERVIEW

Today, there are well over 100 million Americans will be age 50 or over. With the rapid development of technology available, this population has access to new advancements that can monitor and support various aspects of their lives. However, 95% of Americans still feel that technology could be better developed to help people age in their own homes or communities.

The technology that is now available could enable seniors to age well, but devices, software applications and infrastructure are not well integrated. Fundamental technology needs, such as broadband Internet coverage, are not universal. Meanwhile, consumers, service providers, health care professionals and caregivers are untrained and slow to use available technology solutions. Additionally, product development is still a bit of the "wild west," and products can be complicated, costly and are not interoperable; and these offerings also continue to raise concerns around personal privacy. Reimbursement policies and the regulatory environments likewise remain unchanged, and, with the health care system still primarily "offline," there are few standards in place for digital medical records.

The *Aging Well: Next Generation Tech* study conducted in August 2013 by GSEI and Philips set the stage for an expert roundtable around the topic of using technology to assist with aging well. Findings from the survey of Gen X, Younger baby boomers and Leading Edge baby boomers showed that in almost equal numbers, these generations use all types of technology, and they recognize how it can be valuable to live independently as they get older. However, when it comes to the parents of these respondents, the story seems to be different. Gen X and baby boomers reported that their own parents are less inclined to adopt new technologies.

OUTCOMES AND RECOMMENDATIONS

Drawing from the list of barriers the research and the group outlined, participants chose five that they considered to be the most pressing to tackle: value, policy, interconnectivity and coordination, complexity of use, and access and adoption. Working in breakout groups, attendees defined what they felt would lead to an improved future state, the actions required to get there, and specified who would need to act.

Complexity of Use

Current Situation

Part of the complexity issue is in the mindset of the aging consumer and the reluctance to try new technology, especially if they do not know what to expect. Natural aging factors, including diminished eyesight, hearing and dexterity may also create resistance to trying complex technology and tools. Too often products are designed for more nimble hands and sharper eyes and ears. Additionally, there is such a wide variety of choice in the marketplace, and it is difficult to determine if and what product or device would best meet one's needs.

If the experience with new technologies is plagued with product glitches or "bugs", it may turn off consumers and make the hurdle higher for new trial products. Too much complexity takes the joy out of using technology.

Glitches or
"Bugs"
in new technologies are a key barrier says one-third of Boomers and Gen X.
(Source: GSEI and Philips Next Generation Tech Study)

On the industry side, a lack of appropriate customer service and user-friendly design may also turn off consumers. Aging consumers tend to interact over the phone, going through "phone tree hell" before reaching a person who may not know enough or be sensitive about working with older consumers. Designs often are not user-friendly, with too many buttons or screens that are not intuitive to navigate. The language and taxonomy used in customer support and design is complicated not only for multi-lingual consumers but also for aging consumers who are not digital natives. These consumers can walk away feeling unintelligent for not understanding the technological terms that were used.

Improved Future

With this barrier eliminated, the future could include:

- More **passive interfaces** that intuitively help consumers live their best lives, eliminating the need to understand how to activate technology features.
- It is a given that technology will continue to rapidly advance, but in some cases **slowing the pace of change and adoption** for the mature segment could be a competitive advantage.
- **Customer service tailored** specifically for aging consumers, using trained peers who have the context and can demonstrate the benefits of and teach how to use new technologies.
- **Sophisticated navigation** and queries that help consumers access "smart" applications. These apps ask a series of simple questions and then navigate the consumer to specific solutions or options, with the goal of narrowing down and simplifying a huge amount of data and resources.

- Creation of **universal design standards** across all design and development organizations, including font size, colors, button shapes and sizes and symbols.
- **Intergenerational mentoring** where younger generations are trained and earn community service credit for teaching basic protocols for tech use to older relatives or neighbors.

Actions and Leaders

Recommended Action	Who Must Act
Segmentation research to better to understand the aging consumer, especially for use in customer service. Create an information concierge model by looking companies that have developed robust, sophisticated call centers.	Philips, Microsoft, other tech companies and start ups
Develop a curriculum that teaches aging adults how to use technology and helps them keep up with the pace of change.	AARP and others
Convene a coalition of all the major aging groups to collect insights and gain buy-in on development of universal design standards and curriculum needs.	AARP, HHS Office of the National Coordinator for Health Information Technology (ONC), companies, National Coalition of Black Aged (NCBA) and others
Define standards – Create a government mandate in standardizing the design and delivery of products and services enabled through the government's central role in the Medicare and Medicaid marketplace.	ONC and areas within government (CMS) who have vested interest in supporting aging well initiatives
Develop design competition for companies/design schools to develop the universal design standards for older adults.	Design centers and companies such as Frog Design, IDEO, Parsons and Rhode Island School of Design
Target companies with growing number of aging consumers/large retiree populations. Meet with companies with large retired employee populations to work with these employees to understand needs related to universal design and curriculum development.	State and local governments, as well as companies like IBM.

Interconnectivity and Coordination

Current Situation

Coordination in health care is hard to define because there are many contributing factors. There is a lack of reimbursement policies, standards and consideration for how data is disseminated and used. Standards vary widely or, in some categories, are nonexistent. The process for how data flows into action is not coordinated. As a result, product development is siloed for those aging in their homes and communities.

Additionally, companies and product developers are focusing too much on illness instead of looking at health and well-being holistically. Therefore, the business or delivery models for most stakeholders are based around illnesses rather than an interconnected, coordinated effort to improve overall wellness.

95% of Boomers and Gen Xers think today's technology could be better developed to help people age in their homes and communities.

(Source: GSEI and Philips Next Generation Tech Study)

Improved Future

With this barrier removed, a better outlook for integrated and coordinated care could include:

- A **systems approach** to technology and data use in managing our health and wellness, including a population health analysis.
- A **consumer-centric** and holistic approach to product development.
- **Universally accessible data** and research with appropriate privacy and protections.
- Improved patient **outcomes**.

Actions and Leaders

Recommended Action	Who Must Act
Promote "meaningful use" of electronic health records for patients at the consumer level.	ONC, Caregiver groups
Change incentives so that others are willing to pay for this type of interconnectivity.	Organizations like Leading Age, AHA and AMGA, as well as larger provider systems (i.e.: Kaiser Permanente)
Show ROI to businesses and facilitate health economic research to make the business case to the Capability Maturity Model Integration Institute to document benefits and accelerate adoption.	Organizations such as the California Healthcare Foundation, Robert Wood Johnson Foundation, Commonwealth Fund,

	Wellness foundations, public health and prevention institutes, Philips
Develop common standards for technology design for the aging demographic.	Organizations like Continua Alliance, American Telemedicine Association, Veterans Affairs, ONC
Break down the regulatory barriers so that health care providers and professionals can work across state lines.	Regulatory leaders like the Center for Connected Healthcare Policy and American Telemedicine Association
Coordinate population health, "big data" and analytics.	Academia, public health institutes, consulting firms

Access and Adoption

Current Situation

Access and Adoption is not only about whether or not someone has physical access to a specific technology, i.e. broadband, but also about whether or not someone has willingly adopted the technology.

The majority of cell phone owners have smartphones. However, **those aged 55+ use smartphones the least** (38% age 55-64, 18% age 65+). (Source: Pew)

Right now, older adults are not adopting technology as quickly as other consumers due to privacy concerns, online safety and complexities like password management that make adopting new technology unappealing. From the industry perspective, technology created for the older demographic tends to target the caregiver rather than the consumer. Therefore, the value proposition for these new technologies needs to be strengthened.

Improved Future

Ideally, key elements for an improved future could include:

- Technology created not only for fun but also for **safety, ease-of-mind and health**.
- **Consumer insights** into how using technology benefits people as they get older and what would motivate them to incorporate new technology into their lives.
- **Intergenerational teaching** to enable older people to embrace technologies.

- One hundred percent nationwide **broadband coverage** and rural infrastructure expanded.

Actions and Leaders

Recommended Action	Who Must Act
Identify what non-adopters value and increase awareness of their value proposition.	Marketing departments in companies, Mobomo, Under Armour, start ups, app developers,
Facilitate learning between the younger and older generations. The younger generation not only can help the older generation set up technology but they can also show older relatives its value.	Caregiver organizations, AARP, Health Affairs
Encourage healthcare teams to "prescribe" types of technology and apps.	Georgetown Medical School and other training programs
Incorporate solutions into more common, "everyday" technology and then find ways to transition consumers to the next level.	Philips, Intel, Under Armour, other tech companies
Talk to congressional groups providing health IT to show the value proposition.	National Alliance for Caregiving, Project GOAL, Organizations like the Patient Centered Outcomes Research Group Institute
Define the level of literacy needed for specific products and solutions.	Technology development companies, Philips

Value

Current Situation

Consumers may not recognize the value that different types of technologies may provide. Therefore consumers, especially the older demographic, may have little interest in incorporating some technologies into their lives.

Baby boomers and Gen Xers
track their health indicators
Nearly half **"in their heads"**,
34% **on paper**
21% use **technology**
(Source: Fox and Duggan)

The value proposition for using technology while aging is complex and multi-dimensional. Industry needs to learn more about how consumers are making value decisions, how they use and understand technology, what they see as the trade-offs and who their influencers are. Providers and companies may not have or use insufficient data on this demographic, and consumers will not move to the trial

phase of testing new technologies without good reason.

Improved Future

With this barrier out of the way, key elements of an improved future state could include:

- **Consumer-centric design for** products, services and interfaces based on better research and understanding of target population segments.
- More **personal control**.
- More **guidance and human connections**. Knowledge of who the influencers are and how to get them to provide trusted guidance to those aging in their homes and communities.
- Technology as an **equalizer**.
- **Increasing the value proposition** as health care providers learn more about the target audience's wants and needs.

Actions and Leaders

Recommended Action	Who Must Act
User consultation – Involve more consumers in the design process. Consider the perspectives and differences between developers and users.	Technology and healthcare companies and developers (Philips, GE, entrepreneurs)
Identify "trusted advisors" to help consumers navigate the technology they might most benefit from – Advisors other than physicians, nurses and care providers, as they may be too busy and overwhelmed to handle this role.	Surgeon General, schools, communities, churches, AARP
Create certifications and standards for products and/or designers.	Industry, ONC

Policy

Current Situation

Given the fast pace of change in the technology sector, policy – recognition of need, policy generation and implementation – inherently lags behind. Policy not only involves legislation, but also includes the regulatory bodies. Regulations are often standardized and this can impede innovation in specified areas. They can also add costs to an already overwhelmed system.

Furthermore, policymakers often have priorities that differ from the priorities of the

Independence and access to quality health care

important or extremely important to 90% of Gen X and baby boomers

(Source: GSEI and Philips Next Generation Tech Study)

health and technology sectors. Clear communication and understanding between them lacks and presents difficulties. As a result, the consumer can be lost in the process.

In general, there is too little focus on aging in the home and community, thus no one is taking the lead in completing a compelling framework. Consumers, industry and providers need to come together in a way that educates and promotes a framework with the current leadership.

Improved Future

With this barrier eliminated, the future could include:

- **Reimbursement** policies that take into account patient needs.
- An informed **policy framework** that is constantly re-evaluated.
- **Information sharing** among stakeholders from all sectors to share timely information and best practices that can then be used to inform policy.
- **Streamlined policy development** that reduces time lags.
- Transparency and **clearer communication** by government agencies and trusted consumer groups that help educate consumers and service providers on policy.

Actions and Leaders

Recommended Action	Who Must Act
Advocate to Members of Congress.	National Caucus and Center on Black Aged, AARP and all organizations in the room.
Create meaningful public outreach.	ONC
Facilitate more research on value decision-making.	Georgetown
Create more educational programs to spur innovation.	InnovateLTC

COMMITTING TO ACT

Participant Pledges

Demonstrating their understanding of technology's potential as a solution to help older Americans live their best lives with independence, and with a strong interest in acting on the outlined recommendations, several roundtable participants made commitments to take a lead or collaborate with others on some of the outlined recommendations.

Highlights include:

Combine the expertise of the Project to Get Older Adults onLine (Project GOAL) and Mobomo, a mobile app developer, to put together a tech showcase to help organizations and nonprofits in the aging space learn more about mobile applications. - Debra Berlyn, Project GOAL and Barg Upender, Mobomo

Create a model to better incorporate technology into the lives of patients with Alzheimer's Disease and their loved ones who serve as caregivers – based on the Alzheimer's experience, create a model that could be used by other age-related chronic conditions and disease-based organizations. - Drew Holzapfel, High Lantern Group

Develop ways to make physicians more sympathetic to the needs of older people as part of their medical school training. - Salim Shah, Georgetown University Medical Center

Begin to develop a set of industry design standards. - Lygeia Ricciardi, US Department of Health and Human Services Office of the National Coordinator for Health Information Technology (ONC)

Develop the Thrive Lab, a consumer experience center to test, validate and showcase innovative technologies in the 50+ space. Create an Immersion Academy for emerging companies to access their primary and secondary markets. - Alicia Heazlitt, InnovateLTC

Leverage AARP's influence with technology business partners and vendors that play major roles in this space to help develop programs and train consumers. - Terry Bradwell, AARP

Philips must examine how technology can be used to better enable the care coordination at home. Philips' continues to refine the solutions portfolio for the transition from hospital-to-home. We can take a more holistic approach to a patient's well-being when transitioning back home, including using technology

not only for coordinating care with their primary care physician (PCP), but also for areas like nutrition and safety. - Greg Sebasky, Philips

Partner with AARP and others to create a technology glossary or translation tool to help older Americans better understand the terminology. - Ladan Manteghi, GSEI

Aging Well Series and Roadmap

In Spring 2014, GSEI and Philips will follow up with the session participants on these pledges and commitments to report on progress toward these goals and assess additional steps needed to move forward.

GSEI and Philips will also host two additional sessions as part of the Aging Well Working Session Series. The second will engage a group of experts to discuss housing and infrastructure needs, and the third will focus on caregiving.

As a culmination of all three sessions and findings, GSEI and Philips – with the initial and ongoing input from all participants – will create a roadmap navigating the route to aging well at home and in the communities where we thrive.

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Authors: Ladan Manteghi and Kate Stanley, Global Social Enterprise Initiative at Georgetown's McDonough School of Business

Contributors: Bobby Brandt, Melanie Horsford, Beth Moore, Eunese Shaw, Sandra Timmerman and Diane Ty

Acknowledgements: Lea Armstrong, Leonard Marcus, William D. Novelli, Laurie Orlov and Mark Stephenson

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APPENDIX A: PARTICIPANT LIST

Evan Barba, Assistant Professor, Georgetown's Communication, Culture and Technology Program

Debra Berlyn, Executive Director, The Project to Get Older Adults Online

Jason Berns, Director of Innovation, Under Armour

Alice Borrelli, Director of Global Healthcare Policy, Intel Corporation

Terry Bradwell, Executive Vice President and Chief Information Officer, AARP

Richard Brennan, Executive Director, Home Care Technology Association of America

Jon Broyles, Executive Director, Coalition to Transform Advance Care

Orla Burke, Senior Vice President and Partner, FleishmanHillard

Susan Coleman, Clinical Faculty Member, Georgetown University School of Nursing and Health Studies

Shawn DuBravac, Chief Economist and Director of Research, Consumer Electronics Association

Mark Emery, Innovation Program Director, Philips Healthcare

Rod Falcon, Program Director, Health Horizons

Patricia Ford-Roegner, Industry Consultant

Elizabeth Grossman, Technology Policy Strategist, Microsoft

Alicia Heazlitt, Director, InnovateLTC

Drew Holzapfel, Managing Director, High Lantern Group

Melanie Horsford, MBA Candidate, Georgetown's McDonough School of Business

Sean Hughes, Chief Design Officer Healthcare, Philips Design

Koen Joosse, Director of Professional and Public Affairs, Philips

Tony Lee, Senior Manager for Federal Government Relations, Philips Home Healthcare Solutions

David Lindeman, Director, Center for Aging and Technology

Robert Love, Editor-in-chief, AARP

Ladan Manteghi, Executive Director, Global Social Enterprise Initiative at Georgetown's McDonough School of Business

Leonard Marcus, Co-Director, National Preparedness Leadership Initiative

Louis McKinney, Senior Vice President and Regional Manager, PNC Bank

Beth Moore, MBA Candidate, Georgetown's McDonough School of Business

Bill Novelli, Professor of the Practice, Georgetown's McDonough School of Business, and Founder, Global Social Enterprise Initiative

Laurie Orlov, Founder, Aging in Place Technology Watch

Song Pak, General Counsel, Revolution Growth, and Senior Vice President of Operations, Revolution LLC

Lygeia Ricciardi, Director of the Office of Consumer eHealth, HHS Office of the National Coordinator for Health IT

Mary Rubino, Health Policy Editor, *Health Affairs*

Greg Sebasky, Chairman, Philips North America, and Executive Vice President of Business Transformation, Philips Healthcare

Salim Shah, Chief Scientist, Georgetown Medical Center

Mark Stephenson, Head of Integrated Brand and Communication, Philips North America

Jeffery Sturchio, Senior Partner, Rabin Martin

Michael Sturmer, Senior Director for Consumer Health Engagement, CIGNA

Crystal Swann, Director of Health Programs and Assistant Executive Director for Children, Health and Human Services, U.S. Conference of Mayors

Sandra Timmermann, Special Advisor, Global Social Enterprise Initiative at Georgetown's McDonough School of Business

Diane Ty, Project Director, Global Social Enterprise Initiative at Georgetown's McDonough School of Business

Barg Upender, Founder, Mobomo

Marc Warshawsky, Senior Vice President, Digital Products Executive, Bank of America

Daniel Wilson, Director of Policy and Program Development, National Caucus and Center on Black Aged