



Who Should Read This Report?

Technology platform providers

Telecommunication carriers

Investors and entrepreneurs interested in the 65+ market

Businesses seeking to cater to an aging demographic

Service providers with an interest in serving older adults

Media organizations that cover age-related issues

Social service agencies and not-for-profits focused on seniors

Government agencies and policy makers

Geriatric care managers

Caregivers, seniors, and family members

“I’m happy with my computer, doing e-mail, Facebook, and Google. Too late in life to go any further.” (Age 85+)



EXECUTIVE SUMMARY

Every year finds new reports published by research organizations based on demographic segmentation. But these survey reports, from organizations like Nielsen, AARP and Pew Research, generally do limited sampling beyond age 65. Or they combine what may be up to three or more decades of responders into a single segment. But we know that 65-year-olds and 85-year-olds have very different perspectives. So stakeholders interested in the technology profile of the older decades have little research to use to understand the needs of this population, whether they own technology products or whether they see their usefulness.

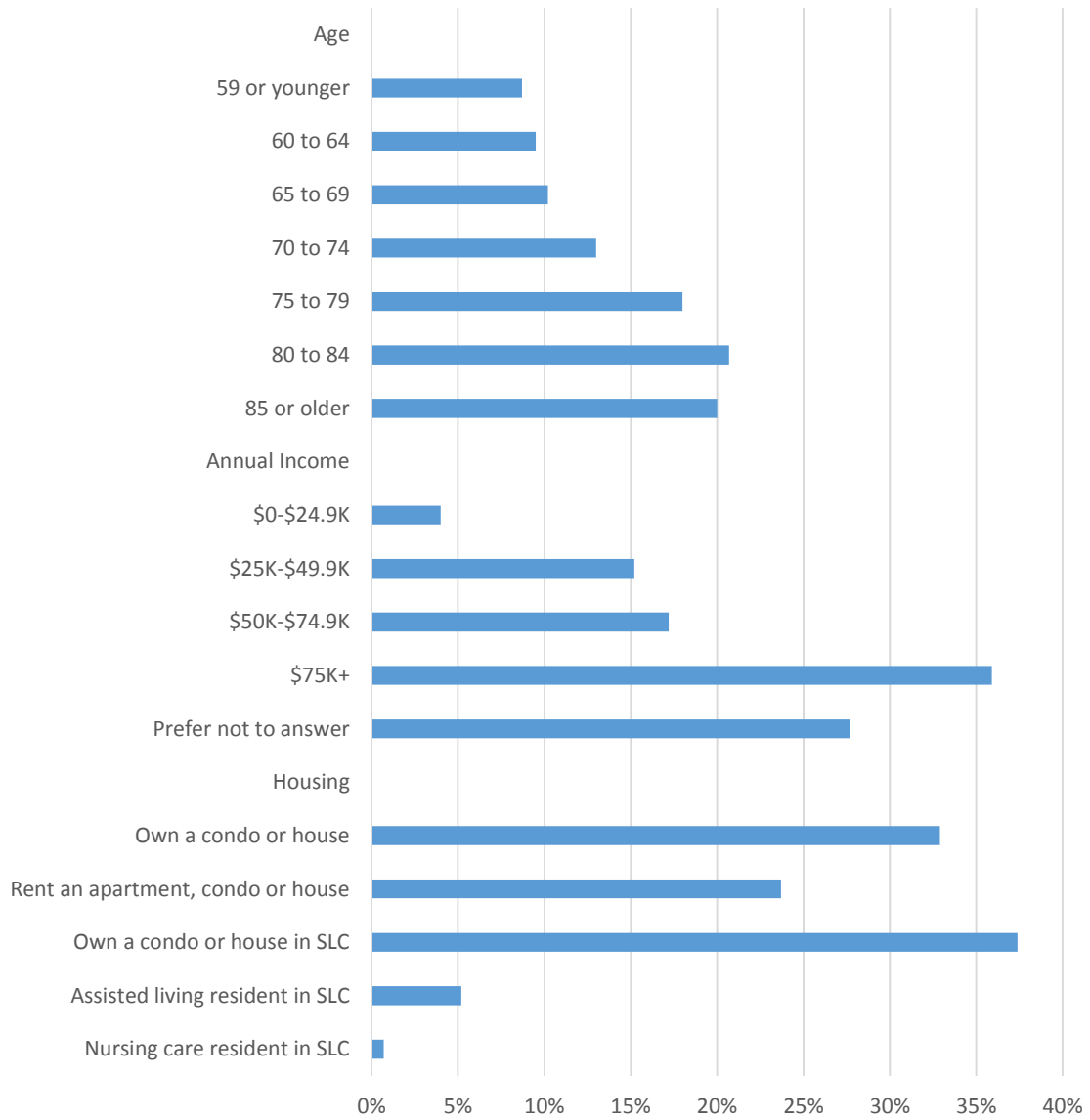
Executive leadership of Link·age in Mason, Ohio, saw the need to survey the older age demographic in late Fall 2011. In 2012, another survey about the use of PERS devices was fielded to the same population, this time including online responders, that is reflected in **Appendix I**. And now in 2016, 401 older adults, in their 50's up to age 85+, completed an online survey about their ownership, usage, and interest in technology. Stakeholder organizations of Link·age were the resource for reaching the participants in all three surveys.

The 2016 Link·age Technology Survey provides guidance to vendors and stakeholders about where seniors are today in terms of their varied utilization of technologies, their interest in having technologies they don't currently own, and what they expect to pay for them. Comments included in this document were free-form entries provided by the responders. Their complete comments were also used to generate the word cloud presented on the cover of the document.

We are in a new world of growing longevity. For those living to age 65, average life expectancy for women is now 88.8 and for men, 86.6 – one-fourth of those will live past the age of 90. This is an era in which men and women aged 85+ represent the fastest growing demographic. As in 2011, retailers, service providers, and product manufacturers don't understand enough about how our increasingly older adult society thinks and wants to interact with technology, as evidenced by the slow growth of smartphone usage among the oldest. The Link·age Technology Survey expands the research library of resources that underpin decision-making by organizations serving our aging society.



The Link·age Survey 2016 Responders [n=401]





Within the past few years, remarkable changes in technology have permeated society, driven by smaller, cheaper core technologies, slick designs, and must-have information, reinforcing the importance of the following:

The Internet is a path to connections and engagement. Adequate access to online information is a basic prerequisite to keeping up with change. The federal government has encouraged individuals to apply for Social Security and Medicare benefits online; and numerous coupons and discounts are only available online. The Internet provides the ability to connect with family members, find new friends, locate a health care provider, learn about a new medical discovery, and buy lower-cost goods and services online.

Within the older age cohorts, access and interest is still limited but growing. Pew Research studies reinforce the digital dividing line for Internet access (regardless of device), finding that 50% of the 75+ population indicated that they go online. This represents a remarkable change over the past fifteen years, when 93% of those aged 75+ were not online in 2000.

Why not a greater percentage online? The digital divide among older seniors is not surprising, given the complex process and cost to obtain: First, a senior must obtain both an Internet service plan (average price \$60/month) and a relatively current device: a PC, tablet or smartphone fast enough to use with today’s graphics-rich websites. It must be customized for the user’s individual needs. Training in device use and ongoing support helps newcomers. A few senior-specialty vendors simplify complexity with senior-focused products or services, but most technology innovation is designed by the young for the young.

Age 75+ non-Internet use since 2000

Year	Percent	Base Count
2015	50%	757
2014	57%	624
2013	60%	1392
2012	62%	2315
2011	65%	804
2010	71%	1873
2009	71%	1033
2008	74%	1762
2007	77%	1304
2006	78%	1739
2005	82%	1450
2004	88%	1127
2003	88%	1157
2002	89%	1482
2001	93%	1370
2000	93%	2771

Figure 2

Source: Pew Research as of April, 2015



KEY FINDINGS

Link-age responders recognize technology benefits, but note issues.

In addition to their greater tech adoption than those surveyed in 2011, the 401 individual Link-age responders in 2016, which included 35 responders under the age of 60, had concerns about technology’s rapid pace of change, the baffling variety of device user interfaces, and worries about privacy. Younger responders, as well as older, offered skeptical observations:

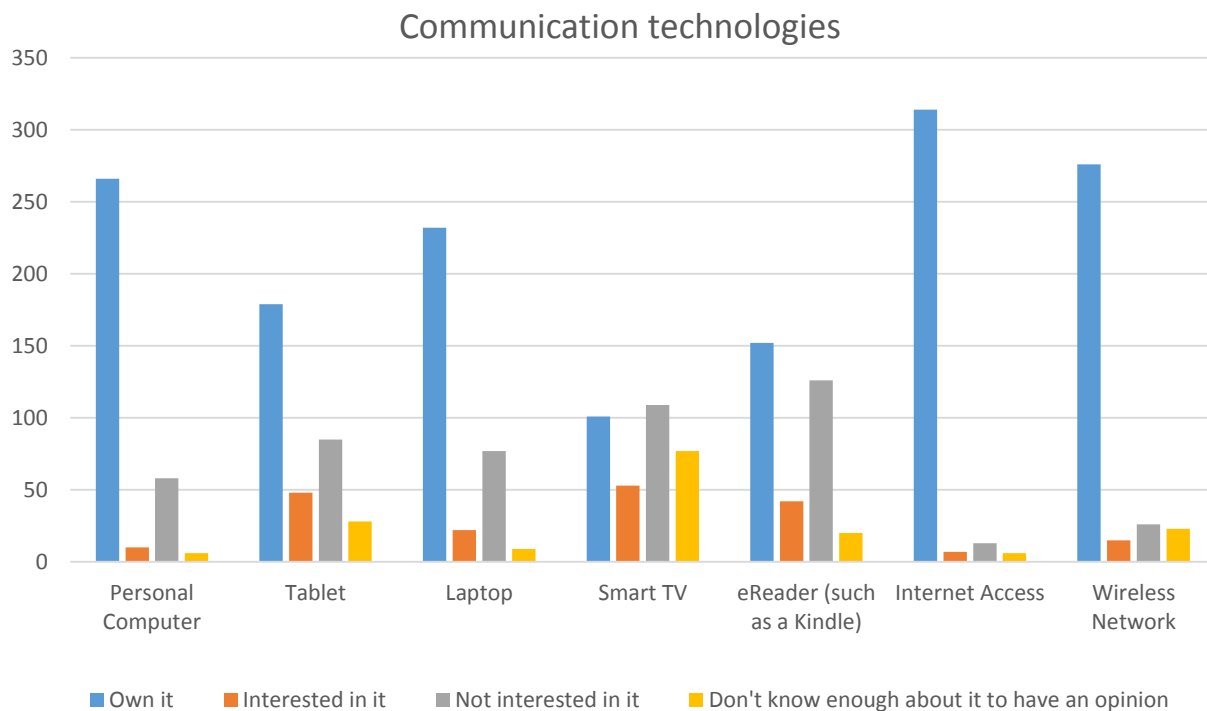


Figure 3

“Standardize, standardize, standardize.” (Age 70-74)

“Big brother is coming.” (Age 60-64)

“Technology is good and frightening to me.” (Age 65-69)

“Many programs assume that I know what to do if my laptop brings me to a dead end when I am trying to access something new. I am quite old and new technological gadgets seem to be programmed by young people who grew up with computers and, consequently, assume that the user will know what to do when in a confusing situation. My friends often mention how frustrating this is.” (Age 85+)



The oldest responders are unimpressed with smartphones. For cellphone versus smartphone, as age rises, ownership of smartphones drops. Those who commented voiced both hope and annoyance, and not just with their own devices – but the inattention of others using smartphones. Examination of the data showed that there are no statistically significant differences in smartphone ownership among any of the first 5 age bands (<60 through 75 to 79). For further details see **Appendix II**.

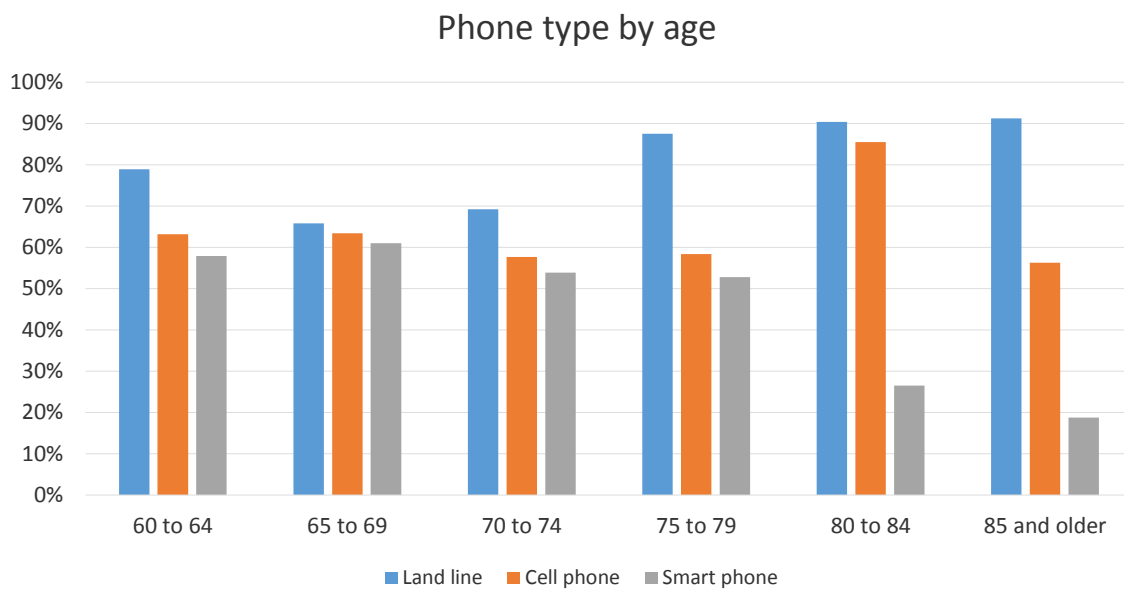


Figure 4

“People who constantly swipe their smart phones are going to develop arthritis in their thumbs from overuse, much younger than necessary, because the thumb is the first joint to be damaged.” (Age 80-84)

“It’s the future...I have not wanted to be left behind.” (Age 85+)

“Facebook, Twitter and Instagram are having negative effects on civility and accountability.” (Age 85+)

“I am learning technology as I need it according to the devices I buy, which is sometimes daunting. Previously when you bought a device, instructions came with it. Now you have to buy instructions, i.e. Microsoft for Dummies.” (Age 75-79)



About your phones

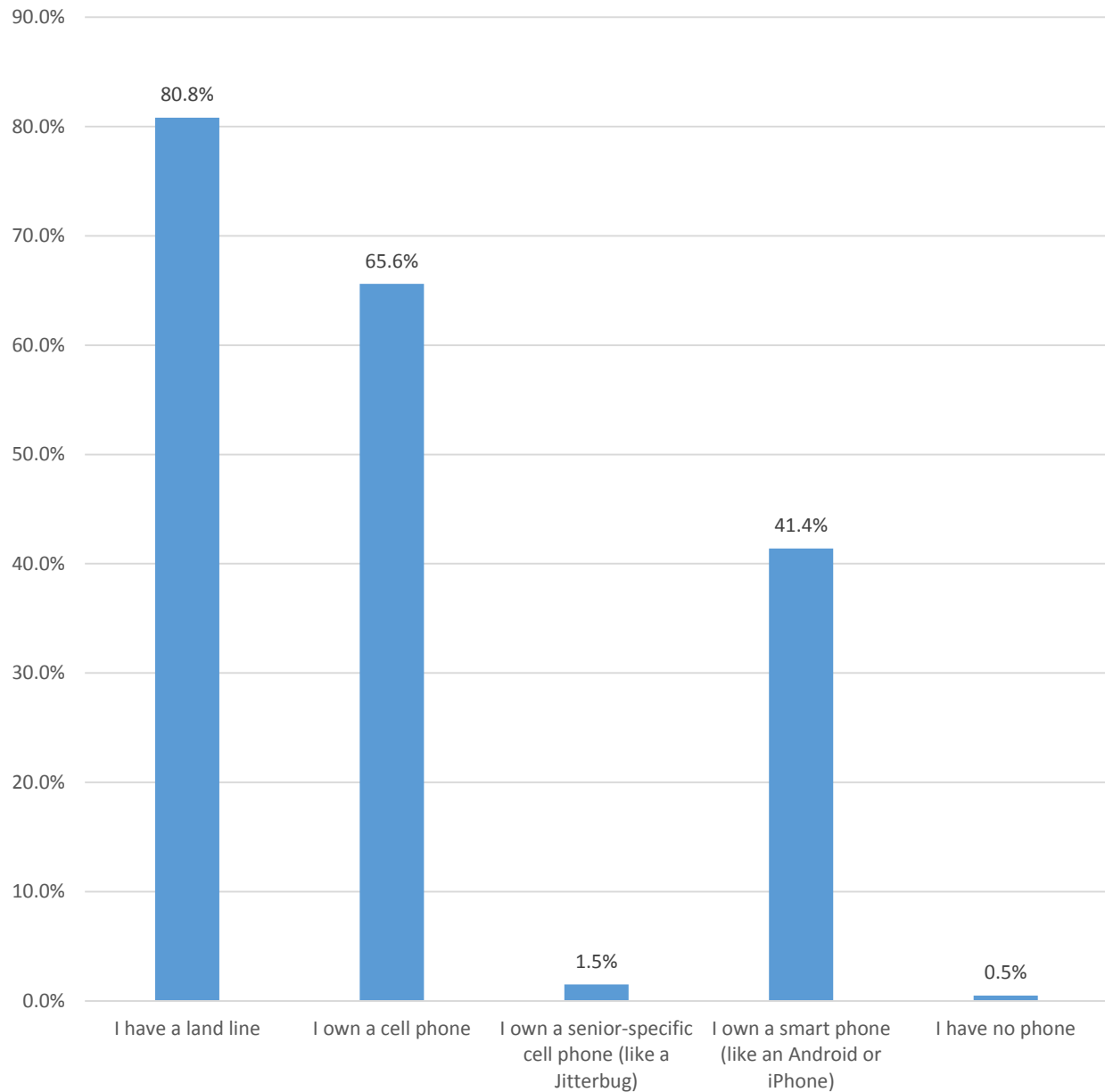


Figure 5

Landline ownership also does not depend on income level. Most responders have landlines and cell phones, with just over 40% owning a smartphone. There was no correlation between income and the retention of a land-line.



“Love to get rid the landline.” (Age 70-74).

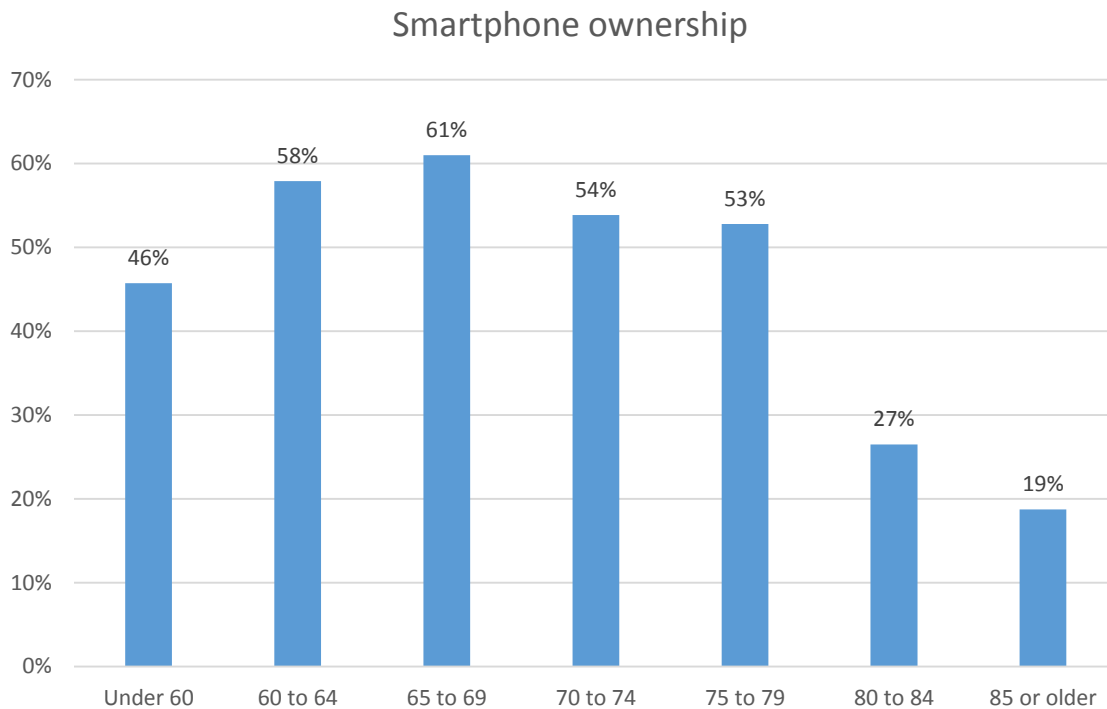


Figure 6

“Life is NOT a constant emergency. With navigation systems, no one has any idea where they are in relation to the world.” (Age 80-84)

“Our smart phones (she has Galaxy, I have iPhone) give us a great deal of capacity. We're impressed how much can be done out of one hand-held device.” (Age 75-79)

“In spite of all of the advances and advantages out there, it is virtually ruining our youths' manners. They always have their noses deep in their "smartphones.” (Age 80 - 84)



Tablet ownership

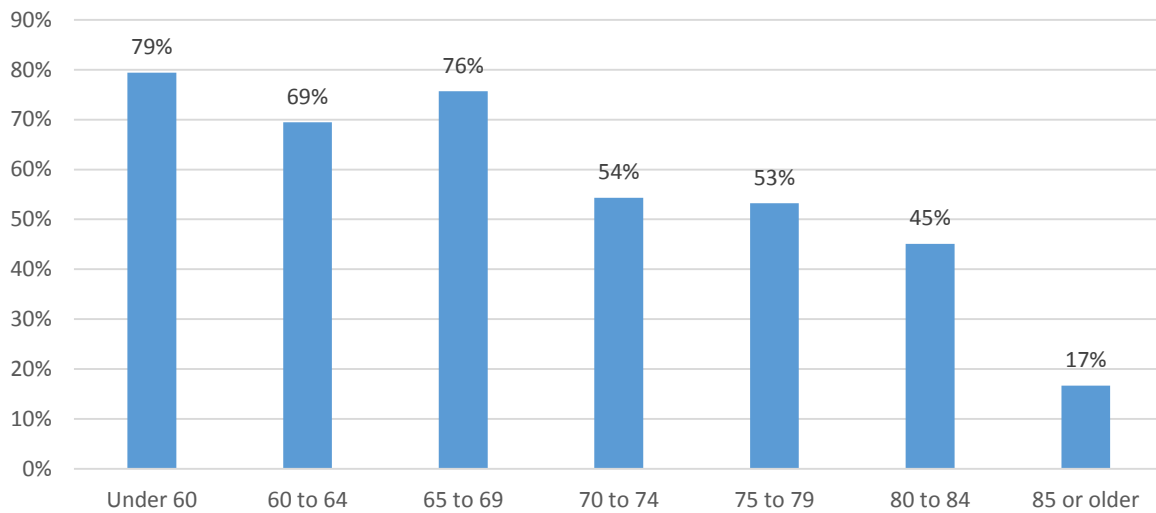


Figure 7

Internet access

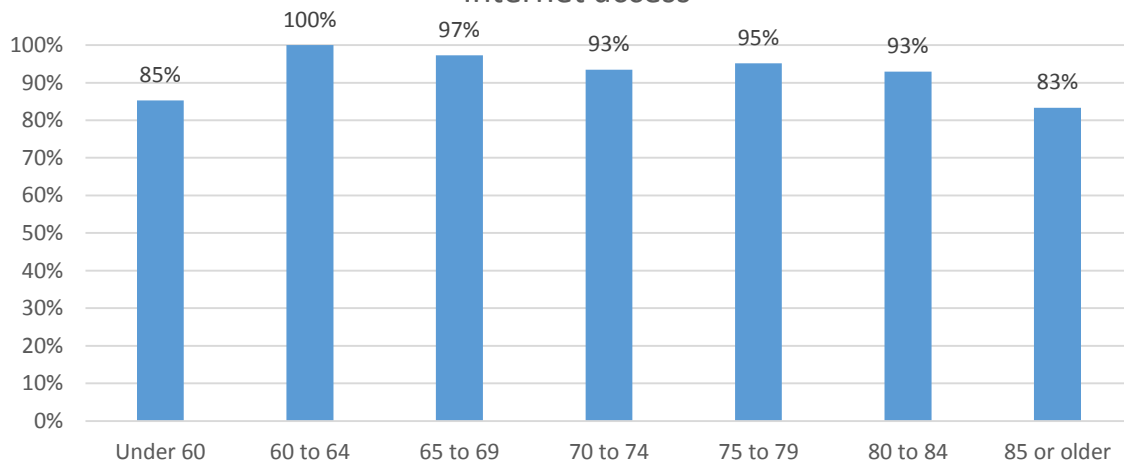


Figure 8

Most have Internet access, tablets not so much. In 2011, only 33% reported having Internet access – but in 2016, all but those aged 85+ are online. Tablet ownership drops off at age 70 and in this survey, at least, has yet to catch the eye of the 85+.

“Love it! I have 2 iPads, an iPhone, a MBP [Mac Book Pro] laptop, and two iMacs! And an iWatch. They are all wonderful when they work. I try to stay up-to-date.” (Age 75-79)

“You asked nothing about internet phones, which is what we have in lieu of a land line. We also have gigabyte internet service. We have an HD antenna and stream Netflix and Amazon Prime on our Smart TV. Your questions seem to assume a rather low level of tech awareness.” (Age 70-74)



Television service by age

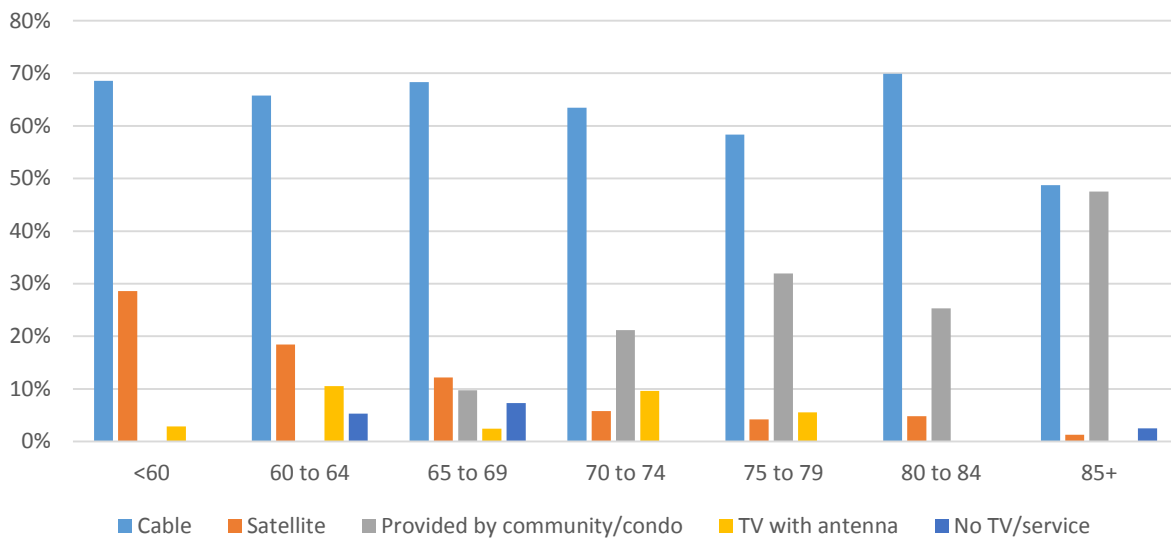


Figure 9

For those with cable television, 36% own a house, another 37% own a condo or a home in a senior living community. Seventy-six percent of people with satellite own a condo or a house, but only 6% of those with a condo or a house reside in a senior living community. Of those with cable television, 82% also have a landline. For those with satellite TV, only 67% have a landline. Younger individuals (60-69) are more likely to have satellite, with the percentage dwindling to 2-4% at 70.

“One key salient feature of internet vs cable is that I am in full control of what I watch. I am on the national do not call list by choice, and report violators.” (Age 70-74)



Family member/friend can pay for communication technologies?

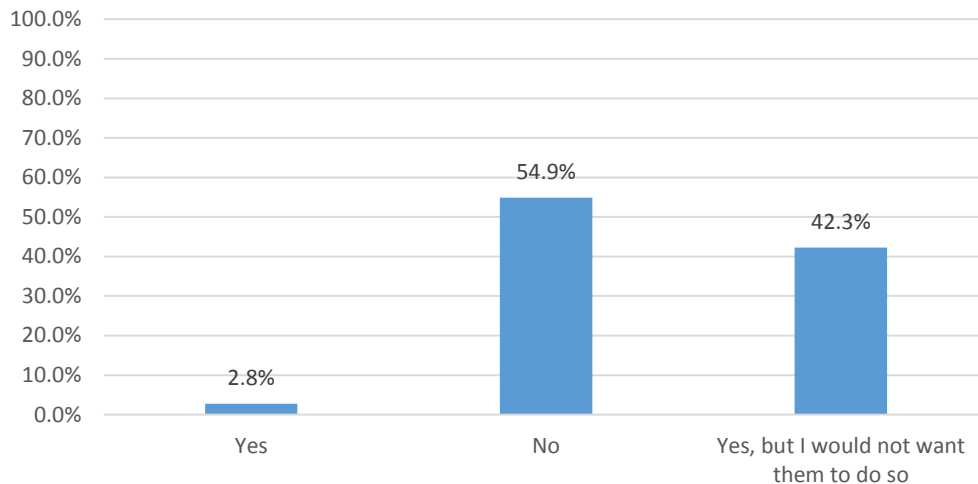


Figure 10

Benefits of communication technologies

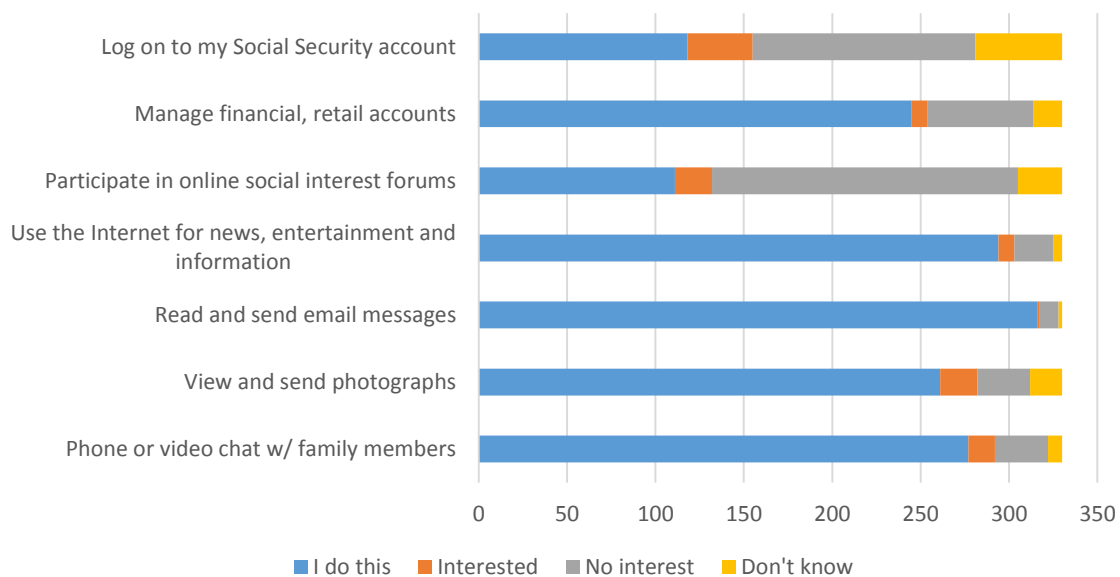


Figure 11

Older adults do not see their family members as the path to obtaining new technologies – or for that matter, asking them to use them. And as the updated version shows, health and wellness technology use by older adults has yet to happen – not surprising, because the general population is not yet fully convinced of their benefit.¹



Health and wellness

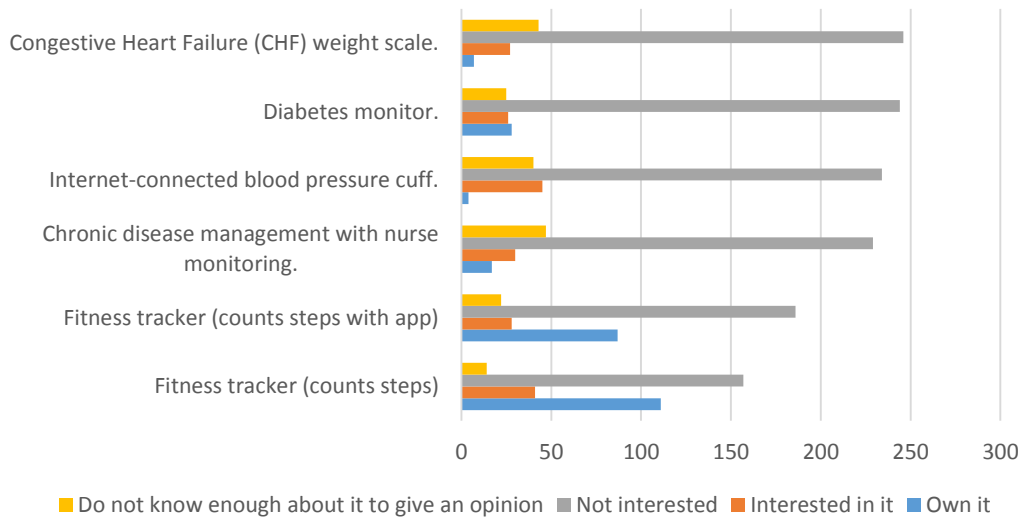


Figure 12

The survey responders indicated that they own fitness trackers, but no apps related to the trackers – however it is an indicator of interest previously noted in the 2015 AARP research, with its recommendation about making fitness trackers more usable for older adults.² And as with the 2011 survey, most responders are unwilling to pay for health and wellness technologies.³

Willingness to pay for health and wellness

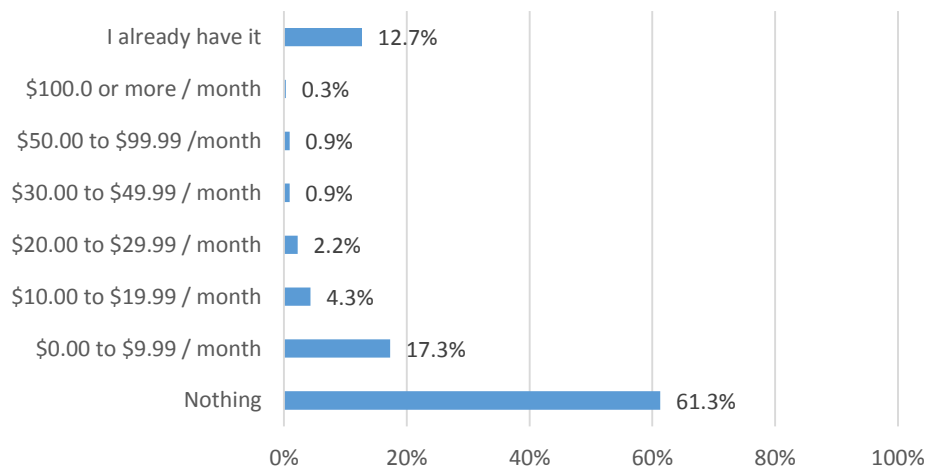


Figure 13



OPPORTUNITIES FOR STAKEHOLDERS

The survey echoes conclusions in another AARP report, Healthy@Home from 2008 that preceded the growth of free, online applications – responders are not willing to pay for health and wellness technology.⁴

Connected seniors see the benefits. For those seniors able to afford high speed connections, Internet access links them to families, enables them to learn about and find resources, take advantage of streaming services, and enables them to shop online – versus driving around -- for good deals. What should stakeholders do?

Carriers should promote senior-friendly service plans. Having a senior-friendly plan is a good start.⁵ Offering a plan to low-income seniors is progress. Promoting/marketing it, along with available (and free) training at point of purchase is better.⁶

“Technology is the primary communication we use to stay connected with out-of-state family members. It’s like living in the same town. I love knowledge websites like Google and Wikipedia. Also streaming music sites and on line purchasing sites, especially Amazon.com. They’re convenient and less expensive than retail stores for just about anything.” (Age 70-74)

New device upgrades frustrate – training/support are enablers. Some carrier and tech reseller organizations see a market for serving older populations and encouraging purchase of new smartphones – critically important because their younger market segments are saturated – and it is fast becoming a chore to get current owners to purchase costly upgrades.⁷

Publicize and deliver more training opportunities. Some organizations have long been offering free online and in-person training for older adults (for example, AARP TEK and SeniorNet).⁸ Some of these have partnerships with carriers, identified, as with OATS, on the sponsorship portion of the websites.⁹

“With so much technology there is no support. Technology changes so quickly that computers, phones, etc. become obsolete resulting in new purchases. As a senior, I don’t want to have to upgrade every two years or so. Money does become an object. I have continued to upgrade, but getting to the point, enough is enough.” (Age 65-69)

Create and market online/telephone support services. If the future is online, then service should be there as well. Assume that over time, seniors will migrate away from special purpose technology and be more likely to acquire standard devices (designed for all), customizing to their specific needs through software.¹⁰

“I would simply like my access to be trustworthy and of adequate size – so I can download and upload files that I am interested in.” (Age 70-74)



How the Survey Was Conducted

The Link-age survey population encompasses individuals residing in one of the following: low income housing, independently owned homes, continuing care retirement communities, assisted living communities, and skilled nursing centers. The survey was written in an electronic format and the link was provided to the Link-age Stakeholders (Senior Living Providers), to distribute among the older population they serve. There were 401 surveys completed and returned. A customized memo describing their purpose was prepared and communicated to each organization, emphasizing the importance and anonymity of responses. The comments you will read throughout this report are direct quotes and a sampling of more than 80 comments that were provided.

For questions regarding this survey or Link-age Stakeholders, please contact **Link-age** at 4605 Duke Drive, Suite 110, Mason, OH 45040, or see www.linkageconnect.com.

For information about **Aging in Place Technology Watch**, see www.ageinplacetech.com.

Acknowledgements

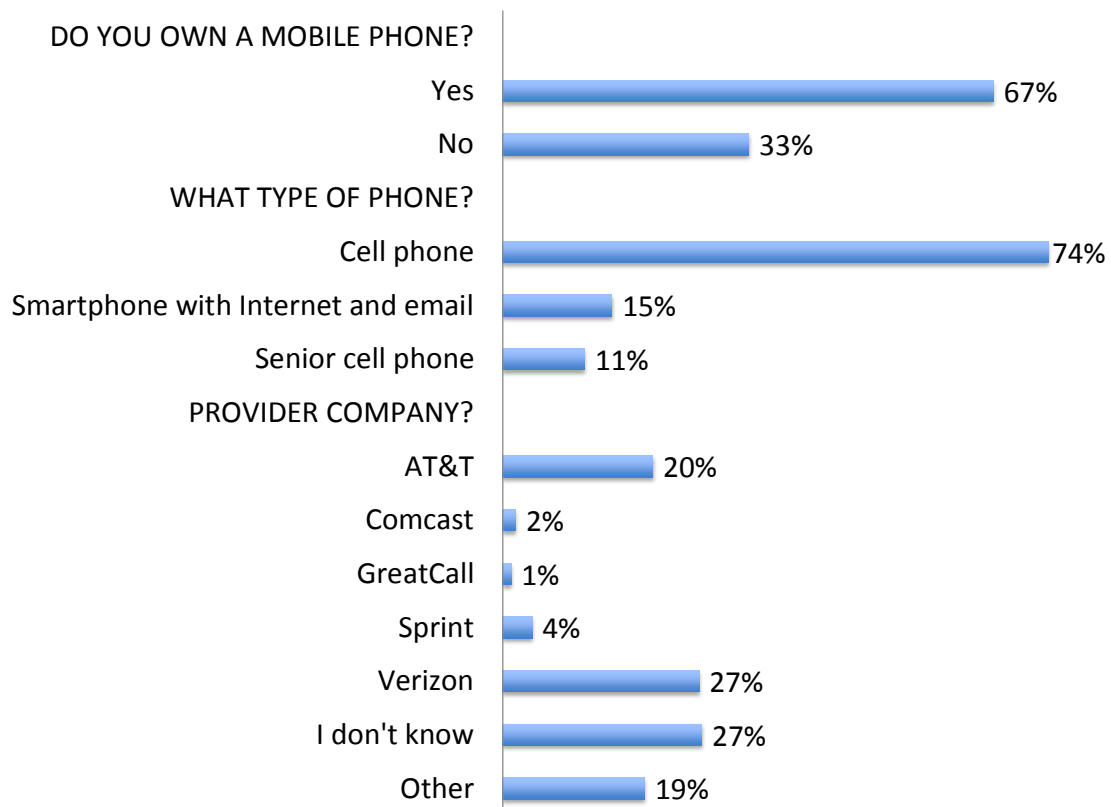
The team of Link-age and Aging in Place Technology Watch would like to thank the Stakeholder organizations of Link-age and all of the participants in the survey. Without their commitments and willingness, this report would not have been possible.





Appendix I: Link·age Survey From Next Generation Response Systems 2013

The paper survey was distributed to 3782 older adults aged 55-100+.¹¹ Another 233 (29%) completed it online. A total of 1114 individuals responding during the 4-week survey window: 76% were women, 67% were over the age of 70, 70% of the responders reported they live alone, and 57% of the responders had annual incomes under \$25,000. Those who responded via paper were more likely to live alone, have a PERS device and be older than those who responded online. Sixty percent were living in senior housing communities.

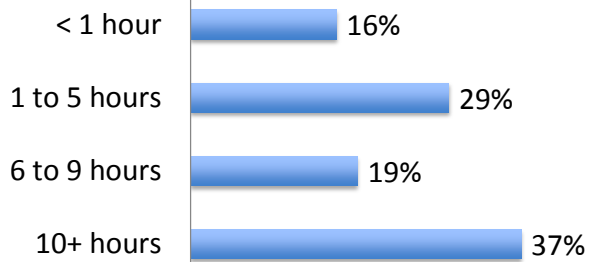




DO YOU OWN A COMPUTER?



YOUR WEEKLY USAGE?



HELPED WITH PURCHASING DECISIONS?





Appendix II:

Smartphone Ownership

Age	n	Own	% Own	<60	60:64	65:69	70:74	75:79	80:84	85+
<60	35	16	46%						27%	19%
60 to 64	38	22	58%						27%	19%
65 to 69	41	25	61%						27%	19%
70 to 74	52	28	54%						27%	19%
75 to 79	72	38	53%						27%	19%
80 to 84	83	22	27%	46%	58%	61%	54%	53%		
85+	80	15	19%	46%	58%	61%	54%	53%		
Total	401									

The table above identifies any significant differences between data values in Figure 6. In the **65 to 69 age** band row, 25 (Own = 25) of the 41 (n = 41) responders indicated smartphone ownership. Calculate $25/41 \times 100$. **% Own = 61%**. Moving to the right in the same row, there are no statistically significant **% Own** rate differences except for the oldest age bands (95% confidence level, $p = 0.05$). Blank cells indicate no statistically significant difference between the **% Own** cell.

The 80 to 84 responders indicated 27% smartphone ownership, and the 85+ group indicated 19% ownership. A **red font** indicates a lower ownership rate as compared to the **% Own column**. A **green font** indicates a greater ownership rate than the **% Own column**.

There are no statistically significant differences in smartphone ownership among any of the first 5 age bands (<60 through 75 to 79).

Finally, there is no statistically significant difference between the smartphone ownership rates in the 80 to 84 (27%) and the 85+ (19%) age groups.



References

- ¹ <http://mhealthintelligence.com/news/is-anyone-taking-mhealth-seriously>
- ² <http://www.aarp.org/content/dam/aarp/home-and-family/personal-technology/2015-07/innovation-50-project-catalyst-tracker-study-AARP.pdf>
- ³ <https://www.ageinplacetech.com/page/linkage-technology-survey-age-65-100-extending-technology-past-boomers>
- ⁴ http://www.aarp.org/relationships/caregiving/info-03-2008/healthy_home.html
- ⁵ <http://www.verizonwireless.com/mobile-living/topic-archive/tech-for-seniors/>
- ⁶ <http://corporate.comcast.com/news-information/news-feed/comcast-extends-internet-essentials-to-low-income-senior-citizens-in-san-francisco>
- ⁷ <http://techcrunch.com/2016/02/18/global-smartphone-sales-growth-slows-to-2008-levels-says-gartner/>
- ⁸ <https://www.ageinplacetech.com/blog/finding-training-seniors-new-smartphones-tablets-and-more>
- ⁹ <http://seniorplanet.org/meet-our-sponsors/>
- ¹⁰ <https://www.ageinplacetech.com/page/market-overview-technology-aging-place>
- ¹¹ <https://www.ageinplacetech.com/page/next-generation-response-systems>