



Fintech Over 50

Designing for Low- to Moderate-Income
Older Adults

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EXECUTIVE SUMMARY

Life after 50 no longer mirrors the retirement dream of past generations.

This is particularly true for people with low to moderate incomes who face a range of financial health challenges, such as increasing medical costs, unmanageable debt, and inadequate savings. Of the 56 million low- to moderate-income (LMI) adults 50 and older living in the U.S., only 17% are Financially Healthy.¹ This signals a key opportunity for financial services innovators to step in and join them as partners on their journey toward financial health.

¹ “Redesigning the Financial Roadmap for the LMI 50+ Segment: New Challenges and Opportunities,” Financial Health Network, February 2019.

Financial technology (fintech) offers a variety of benefits, ranging from the ease of person-to-person payments to safeguarding against forgotten bills, and can support older adults in tackling the financial challenges they face.

Despite the fact that adoption of technologies such as smartphones, tablets, and the internet is widespread among adults 50 and older, fintech adoption is lagging behind.

Through qualitative, human-centered research, we sought to better understand the range of attitudes, uses, and barriers that influence older adults' adoption of fintech products and services, and illuminate ways that innovators can bridge this gap.



In this report, we outline opportunity areas for fintech adoption among low- to moderate-income older adults and provide design recommendations that harness those opportunities. Our recommendations are directly informed by consumers' attitudes and experiences – both positive and negative – toward technology. The barriers that we learned about present several opportunities to develop fintech solutions that support financial health for older adults.

Overcoming Technology Adoption Barriers

BARRIER

Older adults seek to be confident users of technology on their own terms. Adults over 50 feel that fintech isn't made for them.

Although fraud and data security are concerns for low- to moderate-income older adults, a more significant barrier is that fintech products don't align with their desire for granular control over their finances.

Older adults have internalized negative stereotypes about their tech savviness that don't always align with the reality of their tech usage.

Older adults can see digital connectedness as working against their desire for social connection.

OPPORTUNITY

Empower Users

to overcome a lack of autonomy.

Put Users in Control

to mitigate their concerns and bolster their interest in using fintech.

Eliminate Stigmas

to show older low- to moderate-income adults that they are valued users.

Foster Connections

between older adults using technology to establish fintech as a digital source of support for financial health.



13 STRATEGIES

for Designing a Fintech Product for Low- to Moderate-Income Older Adults

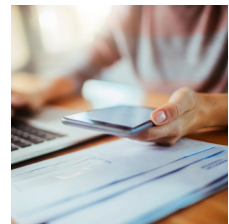
Harnessing the insights gleaned from these key opportunity areas, we present 13 action-oriented design recommendations for fintech innovators, organized by the phases of the user journey: discovery, onboarding, navigation, and use.

Discovery

- 1 Make good use of existing trusted channels to facilitate product discovery that fosters feelings of confidence, trust, and inclusion.
- 2 Ensure marketing and messaging assets display relatable diversity.
- 3 Communicate transparently to minimize concerns about risk and longevity.
- 4 Ease access to product reviews and ratings in places that are easy to find.

Onboarding

- 5 Treat personal information and security with care to demonstrate customer value early.
- 6 Offer customization options early in the user experience journey.
- 7 Integrate human touch points early in the user journey.



Navigation



- 8 Design intuitive interfaces and confirm wayfinding processes.
- 9 Offer easy-to-access navigation tutorials.

Use

- 10 Give users the control to pause, cancel, or turn off automated processes that move their money.
- 11 Provide clear confirmations of financial transactions that are accessible across digital and analog platforms.
- 12 Use a positive tone that celebrates the accomplishments of older users.
- 13 Ensure financial and account information can be easily accessed.

INTRODUCTION

Low- to moderate-income adults 50 and older face significant financial health challenges when navigating their everyday lives and planning for the future.

In Redesigning the Financial Roadmap for the LMI 50+ Segment (funded by the AARP Foundation), we report that half (51%) of the individuals in this segment have less than the equivalent of three months of expenses in savings, and over one-third (36%) report that their debt has either delayed their retirement or prevented them from saving for retirement.² Data from the U.S. Financial Health Pulse, the Financial Health Network's nationally representative survey of financial health in America, reveals that lower-income older adults also grapple with inadequate protection from medical shocks. Family obligations also require difficult tradeoffs, and lower-income older adults are often unable to fully retire as a result of their financial challenges. In the face of these significant financial challenges, we find that only 17% of this segment are Financially Healthy, while 57% are Financially Coping, and 26% are Financially Vulnerable.³

² "Redesigning the Financial Roadmap for the LMI 50+ Segment: New Challenges and Opportunities," Financial Health Network, February 2019.

³ Ibid. In contrast, on a national level, 28% were Financially Healthy, 55% were Financially Coping, and 17% were Financially Vulnerable.

In this report, we seek to bridge the gap between older consumers and the technology innovators that can build solutions to address their financial health needs.

Fintech solutions, which range from smartphone apps developed by small startups to online financial management platforms offered by the larger incumbent financial services companies, can help people achieve financial health across four key components of financial health: Spend, Save, Borrow, and Plan. Fintech can support older adults in building a liquid savings reserve, generating predictable lifetime income, and managing cash flow and debt.⁴ It also provides convenience by putting account information and services at users' fingertips, and it enables security features that protect people's accounts, such as real-time fraud alerts.



Figure 1: Eight Indicators of Financial Health

Financial health comes about when your daily financial systems allow you to be resilient and pursue opportunities over time. **Individuals are Financially Healthy if they...**



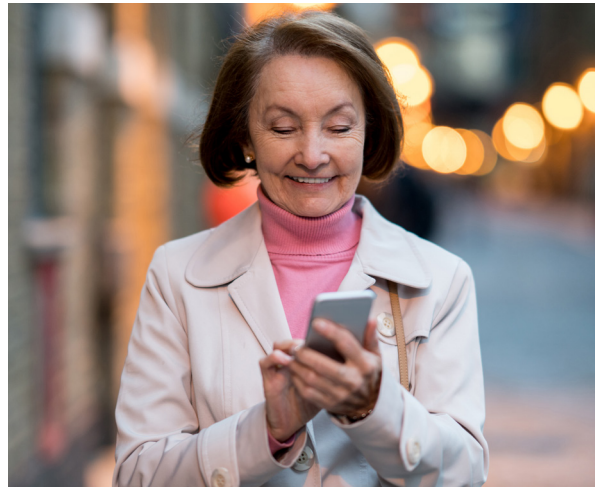
Measuring Financial Health

The Financial Health Network identifies tiers of financial health through a series of survey questions that align with the Financial Health Network's eight indicators of financial health. A respondent who answers all eight questions receives one aggregate FinHealth Score® that ranges in value from 0 to 100. Individuals with a score under 40 are categorized as Vulnerable, individuals with a score between 40 and 79 are categorized as Coping, and individuals with a score of 80 or above are categorized as Healthy. View the full survey questions and detailed methodology at finhealthnetwork.org/score/.

⁴ "See the Financial Health Network report, "Preparing for Tomorrow by Fixing Today: Helping Low- and Moderate-Income Americans Thrive in Retirement" (August 2018) for examples of fintech solutions that address various components of financial health for older adults.

Unfortunately, many existing solutions are designed for younger users and don't address the needs of users over 50 properly.⁵

We see this shortcoming in the low rates of digital financial management among older adults. Despite using their devices on a daily basis, nearly two-thirds of smartphone users over 50 reported in 2019 that they had not used their device for banking or financial transactions in the previous three months.⁶ Although innovators have made significant strides toward incorporating the usability needs of older adults into their products (such as offering options to increase text size), including them as valued users goes beyond usability considerations.



The lack of focus on older adults persists in the fintech community, despite the significant market opportunity for this segment. Low- to moderate-income adults 50 and older comprise more than 56 million people in the U.S., most of whom are active users of smartphones and other technology that offers access to fintech solutions.⁷ Stereotypes about limited technology usage for older adults are outdated and don't reflect the reality of their access and usage today.

56 MILLION

The number of low- to moderate-income adults age 50 and over

⁵ “Preparing for Tomorrow by Fixing Today: Helping Low- and Moderate-Income Americans Thrive in Retirement,” Financial Health Network, August 2018.

⁶ “2020 Tech and the 50+ Survey,” AARP Research, December 2019. The survey found that 94% of smartphone owners 50 and older used their device daily.

⁷ Author’s calculation of the low- to moderate-income 50+ population: U.S. Financial Health Pulse Survey (2019) and U.S. Census Bureau CPS Annual Social and Economic (March) Supplement (2018).

Currently, 77% of adults 50 and older have a smartphone, a number that has increased steadily over time (see Figure 2).⁸ Smartphone ownership is as high as 86% for adults in their 50s, and only slightly lower (81%) for those in their 60s (see Figure 3).

Although lower-income older adults face greater barriers to access than their wealthier counterparts, their technology use will only climb higher as adoption rates increase and the next generation ages into the 50+ segment.

Figure 2: Smartphone Ownership for Adults Age 50 and Older

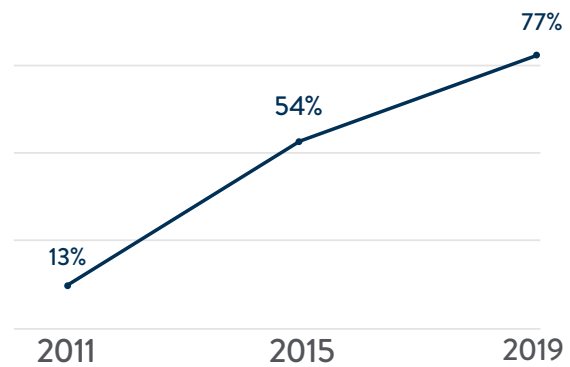


Figure 3: Smartphone Adoption by Age



Older adults who own smartphones are active users of these devices: 94% of smartphone owners age 50 and older are daily users.

94%

The share of smartphone owners age 50 and older that use their device every day

⁸ "2020 Tech and the 50+ Survey," AARP Research, December 2019.

⁹ Ibid.

Despite high levels of adoption for technology such as smartphones among older adults, their usage of financial technology tools remains low.

To illuminate what is driving this gap between access and adoption of fintech, the Financial Health Network launched design research sponsored by AARP Foundation in collaboration with Chase. We worked with Dalberg Design, a design and innovation firm that uses human-centered and participatory research methods, to engage low- to moderate-income individuals age 50 and older in both urban and rural areas. Over 90 individuals in this segment participated in individual interviews or small group sessions (*see Appendices A and B for more details about the research methods and participants*). We provide verbatim quotations from the research participants to illustrate their perspectives throughout this report.

Through this qualitative research, we sought to uncover participants' attitudes and preferences for using technology to manage their finances, and to test prototypes of fintech product features that respond to and mitigate the barriers identified. In the sections that follow, we share opportunities for innovators to break down the barriers to technology adoption that older adults face through the informed design and delivery of financial health products.

Section 1 describes four key opportunities for fintech companies to overcome the barriers we identified when designing for this segment. In Section 2, we provide design recommendations for fintech innovators seeking to create more inclusive and relevant products. These recommendations span the user journey, from discovery of the fintech tool and onboarding to navigation and ongoing usage.

We call on innovators to seize the opportunity to build the next generation of financial health technology by anticipating and incorporating the needs and preferences of lower-income older adults.



SECTION 1

Opportunities to Overcome Fintech Adoption Barriers

In this section, we share what we learned from participants about the reasons they may be hesitant to adopt technology to meet their financial needs. Each of these barriers creates an opportunity for fintech innovators to shift away from the status quo and expand their user base by delivering more value for older adults. We identify four key opportunities for designing financial health technology products for older adults that can overcome these barriers:



Empower Users

to overcome the barrier of older users **lacking autonomy**. Older adults seek to be confident users of technology on their own terms.

Put Users in Control

to overcome the barrier of older users **fearing risk from fintech**. When people feel in control of their personal information and their money, this mitigates their concerns and bolsters their interest in using fintech solutions.

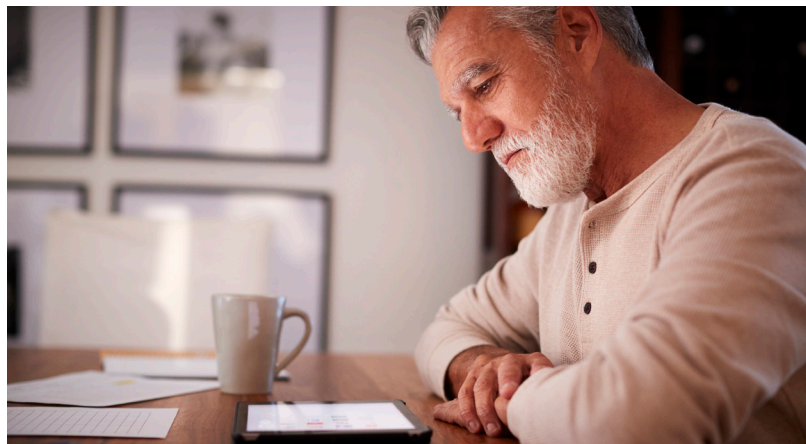
Eliminate Stigmas

to overcome the barrier of older users feeling **tech-challenged**. Although lower-income older adults don't identify themselves as technologically savvy, many are.

Foster Connections

to overcome the barrier of older users being **digitally disconnected**. Older adults highly value their intergenerational relationships with friends, family, and community members. Build on these social connections to establish fintech as a digital source of support for financial health.

These opportunities draw on what we learned in our research about participants' attitudes and preferences for using technology for financial management. Some participants found fintech daunting, preferring their existing analog (non-digital) systems; others were highly tech-savvy and embraced new opportunities to explore. In many cases, participants thought about fintech in the context of account monitoring services (such as alerts and online banking) and payments to billers and family members. Only a small number had tried (or were aware of) more holistic digital financial management tools or more targeted offerings that could help them manage their most common financial challenges, such as insufficient short-term savings, unmanageable debt, inadequate protection from medical shocks, inability to retire fully, and family obligations.



WARY OF THE 'TECH' IN FINTECH

For some of the participants in our research, attitudes toward technology broadly inhibited their exploration of fintech solutions. Several opportunities therefore reflect participants' experiences with technology in general, to provide context for financial health innovators seeking to understand and design better solutions for this segment.

EMPOWER USERS

“I WANT TO FEEL
EMPOWERED, THAT
I CAN MAKE SOUND
DECISIONS.”

Older adults want to feel capable and confident when using technology to manage their finances. Yet, many participants in our research reported feeling as if technology is being forced upon them, without the support to learn in a way that builds the independence and proficiency that they desire. Participants noted this lack of empowerment in many of their experiences with technology, not solely those related to finance. This makes empowerment critical for overcoming older users’ barriers to using fintech.

Many of the participants in our research described experiences in which younger family members encouraged them to try out devices or applications that were new to them (*see Foster Connections*). At times, this encouragement felt like unwanted pressure. Older users were skeptical that their younger family members’ recommendations came from an understanding of their needs and preferences. Instead, these participants believed that their younger family members wanted to encourage technology for its own sake.

“MY KIDS WANT ME TO USE THE TECH
BECAUSE THEY LIKE TECH. BUT THAT
DOESN’T MEAN THAT I WOULD.”



INDEPENDENT EXPLORATION

To reclaim a sense of autonomy, one participant described how she distanced her exploration of technology when she felt her daughter pushing it upon her. This participant outwardly rejected her daughter’s suggestion to download an app on her smartphone – and then later chose to research and explore it on her own.

Older individuals are broadly concerned that technology use will increasingly become not a choice, but a requirement for everyday tasks – including financial management. Several participants pointed out financial institutions’ campaigns to encourage paperless banking as an example of how they anticipate choice disappearing. For some participants, this evolution motivates them to engage with technology on their own terms “before it’s forced on me.” Other participants resisted the loss of autonomy these experiences represented and developed a defensive posture toward technology.



**“SOONER OR LATER,
THEY’RE GOING
TO STOP MAILING
THINGS OUT.
I WANT TO BE ‘WITH
IT’ BEFORE IT’S
FORCED ON ME.”**

Fintech companies that empower older users can start to break down these barriers. For example, an unfamiliar device or system paired with a person willing to provide support can be a learning opportunity that builds skills for these users. One participant felt more comfortable with a tablet computer after a receptionist at a medical office demonstrated how to use it to sign in for an appointment. These opportunities are particularly important, since three out of four adults 65 and older say they need someone to show them how to use new electronic devices.¹⁰

Insufficient support undermines a sense of competence and control for some older users, not only in an onboarding experience, but also after they have started using a new technology. Some of the participants in our research ran into challenges navigating within an application, losing their way after an inadvertent click or unexpected transition to an unfamiliar page. Participants would sometimes respond by abandoning their task, closing an application, or turning off a device so that they could find their way back to familiar territory. Participants craved opportunities to learn about how to use an application successfully, and lamented losing access to tutorials and other guidance that they saw the first time they launched an application, but couldn’t manage to find again.

Changes brought about by software updates were also cited by participants as disruptive to their ongoing technology use. After learning an interface that then changes after a software update, older users can have the sense of losing their hard-won proficiency. This sense of proficiency can be fragile for these users, who are conscious of negative stereotypes and assumptions about their capabilities (*see Eliminate Stigmas*).

For several participants, voice recognition technology created an opportunity to engage independently with technology. Smartphone features such as voice-to-text typing helped those who struggled to see or type on a small screen, and voice assistants or smart speakers allowed them to engage confidently with technology by communicating in a natural, human way. Fintech innovators will set themselves apart by providing the support that older users seek to learn and navigate technology, which is fundamentally rooted in a drive for autonomy.

¹⁰ Anderson, Monica and Perrin, Andrew, “Tech Adoption Climbs Among Older Adults,” Pew Research Center, May 2017.

PUT USERS IN CONTROL

**“THAT’S WHAT
I DON’T LIKE ABOUT
TECHNOLOGY:
IT MAKES ME FEEL
VULNERABLE.”**

While fintech features such as automation and seamless connections across accounts provide meaningful benefits to many consumers, these features can be less desirable for lower-income older adults, who can perceive them as risky. Their concerns about risk included data security and fraud, as well as the risk of losing money by incorrectly navigating a new financial management tool or forgetting about automated payments. People in this segment prefer to feel fully in control over their money and personal information, and will be most drawn to fintech companies that put them in the driver’s seat.

Older adults have deeply internalized warnings about financial fraud and security. They are a frequent target for fraudsters: the Consumer Financial Protection Bureau estimates that more than 3.5 million adults 60 and older were victims of financial fraud in 2017.¹¹ Several participants had gone through the experience of fraudsters compromising their accounts, and were on high alert to mitigate similar risks. They shared tips and guidelines they had learned for keeping their money safe, focusing on actions that people should (or should not) take to protect their money, while tools such as fraud alerts were less salient.

**“THIS INFO HERE YOU DON’T GIVE TO ANYBODY,
BECAUSE IF YOU DO... IT’S ON YOU.”**



¹¹ “Suspicious Activity Reports on Elder Financial Exploitation: Issues and Trends,” Consumer Financial Protection Bureau: Office of Financial Protection for Older Americans, February 2019.

Experiences with fintech that conflict with familiar guidelines (such as applications that ask for personal or account information early in an onboarding process) invoked security concerns for many participants and made them less likely to continue using a product. The participants were more amenable to and trusting of fintech tools that wouldn't require such information to access the product's full functionality.

Other participants saw fintech as a valuable solution for meeting their security goals. For example, several participants held accounts with fintech companies providing digital wallets, and frequently used these accounts to make and receive person-to-person payments. These participants appreciated the accounts for the sense of security they provided by creating an additional layer around their bank account.

Concerns about the risks of fintech extend beyond security and fraud to encompass broader fears about losing control of one's money or the ability to manage finances. The Financial Health Network has found that nearly three-quarters of low- to moderate-income adults 50 and over are Financially Vulnerable or Coping, and half struggle to build a buffer of short-term savings to weather unexpected expenses.¹² In the face of these challenges, older adults with constrained incomes prioritize certainty over convenience. Many participants in our research managed their financial challenges by using detailed systems for tracking their income and expenses, often drawing upon in-person bill payments and paper receipts that provided an indisputable record.

Participants had a range of reactions to the prospect of replacing (or supplementing) those analog systems with digital ones. Many participants feared inadvertently losing access to their information because of changing passwords or interfaces. Some participants were wary of automated bill pay or account transfers, which raised fears for lower-income older adults who wanted the ability to monitor and control the flow of money in and out of their accounts closely. For many of them, taking financial decisions out of their hands put them at risk of paying additional fees.

**“I DON'T REMEMBER
PASSWORDS,
AND IF I WRITE
IT SOMEWHERE,
I DON'T REMEMBER
WHERE.”**



Others found automatic bill payments to be valuable for their financial management. These participants found automatic bill pay gave them peace of mind that they wouldn't forget to pay bills, and appreciated the text and email confirmations from online banking services that assured them they had successfully completed a task.

Fintech companies should leverage automation carefully, using it to provide valued services, such as confirmations, seamlessly while being cautious about automation that takes financial control out of the hands of people with low or fixed incomes.

¹² “Redesigning the Financial Roadmap for the LMI 50+ Segment: New Challenges and Opportunities,” Financial Health Network, February 2019.

ELIMINATE STIGMAS

“THE OLDER YOU GET,
THE MORE YOU
HAVE TO PROVE.”

Adults ages 50 and older are adopting and using technology at an increasing rate every year. As of 2019, older adults are adopting wearables, home assistants/smart speakers, and smart home technology at nearly the same rate as adults ages 18-49.¹³ Despite the fact that older adults are catching up to younger, more tech-savvy generations with regard to technology use, the stereotype of the tech-illiterate senior persists. Many participants seem to have internalized this stigma of technological ineptitude and largely identify themselves as “bad at technology,” despite using technologies (such as smartphones, tablets, home assistants, and e-readers) throughout their daily lives.

Older adults feel excluded from the digital world, which can prevent them from being outwardly confident with technology. In 2016, one in three people ages 65 and over reported they were not at all, or only a little, confident when using computers, smartphones, or other electronics to carry out online tasks.¹⁴ This may point to a lack of positive reinforcement for this segment of tech users, causing them to question their digital abilities. Participants expressed a desire for accessible products and services designed with them in mind, which points to an opportunity to design products and services that cater to the specific needs of older adults, as well as boost confidence they'll be able to learn how to use them properly.



¹³ “2020 Tech and the 50+ Survey,” AARP Research, December 2019. Tablet adoption rates are reported at 49% for ages 18-49 and 52% for 50 and older, wearable technology adoption rate is 20% for ages 18-49 and 17% for those 50 and older, and smart home technology adoption rates are 19% for ages 18-49 and 17% for 50 and older.

¹⁴ Anderson, Monica and Perrin, Andrew, “Tech Adoption Climbs Among Older Adults,” Pew Research Center, May 2017.



**“I DON’T KNOW IF I’M USING THE COMPUTER CORRECTLY...
IT ONLY DO WHAT YOU ASK IT TO DO.”**

Perhaps surprisingly, many participants expressed an aversion to fintech products specifically targeted toward older users. Instead, they desire a mass-market product that meets their specific needs, without marginalizing them for their age or demographic. In other words, they seek fintech products that will make them feel included, financially competent, and tech-savvy. Participants often cited customization as a positive use case: By creating a small “win” that gives users a sense of autonomy and pride, personalization (of background design, dashboard content, etc.) signals that older users can make a product work for them.

Apart from the stereotype of being technologically backwards, many low- to moderate-income older adults also feel stigmatized for their financial challenges, and conflate these challenges (e.g., a lack of savings or burdensome debt) with personal failure or financial incompetence. For many participants, this prevents them from exploring or engaging with fintech products for fear that these products aren’t meant for “people like them.” This is particularly pronounced for lower-income participants. Accustomed to relying on alternative financial services, these individuals may assume that fintech products won’t apply to their needs or their level of financial literacy. Notably, the barrier here is not the anticipated costs of fintech products and services, but rather a lack of confidence that the technologies are relevant to their needs and skill levels. Fintech innovators stand to disrupt these stigmas by emboldening older users to embrace their tech-savvy – and their financial challenges – by fostering confidence, trust, and inclusion.

FOSTER CONNECTIONS

“AM I ALLOWED
TO TALK TO A
HUMAN BEING?”

Social connectedness is highly valued among older adults, and has long been linked to improved mental and physical health outcomes.¹⁵ This desire for social connection can be both a driver of and a barrier to technology adoption for this segment. Social networks often act as a key discovery channel for new digital products and services, while at the same time, a desire to stay social can inhibit departures from in-person brick-and-mortar experiences. Therefore, many users over 50 treat technology as a double-edged sword.

On one hand, many participants happily use technology for social purposes, such as social media, phone calls, texting, and social gaming. An AARP study found that 91% of adults 50 and older with smart devices reported using technology to stay connected to friends and family.¹⁶ On the other hand, some participants view mobile technology as inherently antisocial and limit their use accordingly.

Lower-income older adults often create financial connections with their social and familial communities. Among participants, resource sharing (such as covering others' utility bills, gifting big-ticket items such as smartphones or even cars, or picking up groceries) between family members and close acquaintances was common, often despite having low or fixed incomes.

Many participants reported first discovering fintech products through word of mouth and contact with friends and family members; in fact, several participants adopted digital money transfer platforms to send money or gift cards to family members in other states.

For fintech innovators, these interactions can be strong enablers of technology adoption, as these users are motivated to stay connected with their friends and family members, and support them in times of need. Learning about technology through family also provides the opportunity to get one-on-one assistance from someone who understands how it works and can answer questions. This learning opportunity can backfire, however, when younger family members are unable to teach older users at a slow enough pace or end up doing it for them (*see: Empower Users*).

**“THE ALEXA CAME
IN THE MAIL,
BUT MY SON SAID,
‘DON’T TOUCH IT
‘TIL I GET THERE.’”**



¹⁵ Alden, Sharon, “Socially Active Older Adults Have Slower Rates of Health Declines,” Center for Advancing Health, December 2011.

¹⁶ “2020 Tech and the 50+ Survey,” AARP Research, December 2019.

Others learned about tech and financial literacy by attending classes at community centers or church groups, signaling a desire and willingness to learn technology in a positive, collaborative environment. Similarly, some participants reported learning about fintech platforms on the internet, reading user reviews or watching tutorials made by people who are relatable to them. This supports previous survey research showing that 63% of U.S. adults ages 50 and older report using Facebook on a regular basis, followed by 33% who use YouTube.¹⁷ These browsing environments (ranging from social media to public library bulletin boards) allow older adults to explore and learn at their own pace and of their own accord.

While many adults over 50 value how certain digital environments foster social connections, some draw a line when it comes to adopting digital financial services. Participants often cited their preferences for brick-and-mortar financial experiences, both for the face time with tellers and customer service agents and for the social routine of it. Not all older adults feel inconvenienced making in-person bill payments each month, especially when the alternative is navigating an unfamiliar digital system. Trusted institutions can also facilitate fintech adoption by providing valued in-person support, however.

One participant, particularly wary of online payments, shared her plan to try out a digital tithes app promoted by her church. During services, designated congregants would be available to walk her through the process on church-owned tablets, and then she could opt to process the donation payments herself on her own mobile device.

“SPEAKING TO SOMEONE IN PERSON GIVES YOU MORE CONFIDENCE.”

Unlike their app-store-browsing grandchildren, low- to moderate-income adults 50 and older generally don't rely on technology as their principal form of social connection. Many older users place value and trust in their local community groups, church congregations, veterans' associations, and friend circles. Even tech-averse participants expressed more of a willingness to adopt products vouched for by these trusted networks. Other participants reported relying on the online community in a similar fashion, adopting new fintech products only after verifying that they were endorsed online by multiple trustworthy users. This emphasis on community creates a key opportunity for fintech innovators: Users in this segment look to their peer networks and trusted social channels as key modes of discovery, learning, and adoption.

DESIRING HUMAN TOUCHPOINTS

Several participants expressed frustration with automated customer service phone lines and email communication, lamenting the difficulty in getting a “human” on the line. Adults over 50 want to be seen and heard by those around them, and to feel confident that their financial transactions are carried out successfully and transparently. Conversely, purely digital environments tend to foster feelings of vulnerability and doubt, particularly when dealing with financial data.

¹⁷ “2020 Tech and the 50+ Survey,” AARP Research, December 2019.

SECTION 2

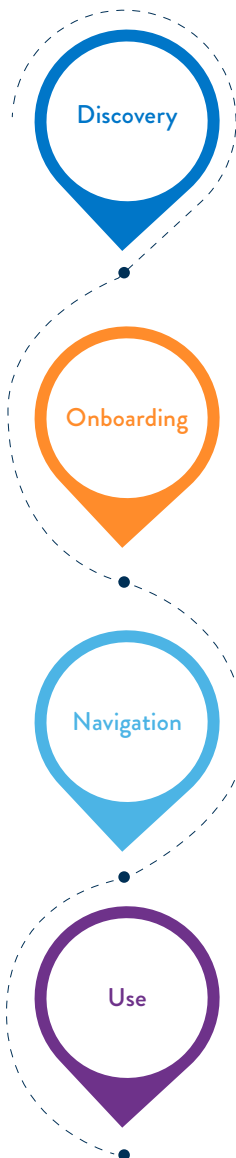
Fintech Design Recommendations

Through prototyping sessions with low- and moderate-income people ages 50 and over, we gathered and tested approaches to designing fintech products that help users overcome the barriers they identified and leverage the opportunities described above. We've distilled these ideas into the following 13 design recommendations, organized by the phases of the user journey. These design recommendations provide concrete steps for innovators to Empower Users, Put Users in Control, Eliminate Stigmas, and Foster Connections.



The design recommendations are deliberately product-agnostic. They can apply to any fintech provider that seeks to improve the financial health of lower-income older adults, whether they are designing a product to tackle a specific component of financial health (Spend, Save, Borrow, or Plan), or a holistic financial management platform. The recommendations respond directly to the challenges and opportunities uncovered in our in-depth interviews. Because the segment of low- to moderate-income people age 50 and older is large and diverse, including a wide range of needs and preferences, we also highlight areas of particular importance for certain subgroups, such as those living with disabilities or residing in rural areas.

The Technology Adoption Journey

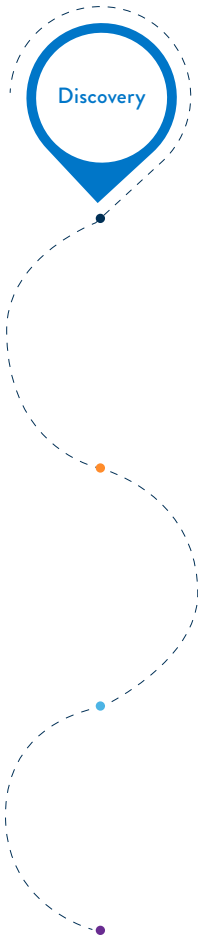


In this phase, older users first learn about a fintech product that addresses their financial health needs. Low- to moderate-income adults 50 and older are careful and deliberate in the product choices they make when it comes to technology in general, and fintech specifically. This cautious approach stems from a wide range of perceptions about the security, learnability, and suitability of technology to meet their needs. The Discovery phase is critical for setting the stage for a positive, long-term user experience.

After users in this segment have discovered, researched, and decided to explore a product or service, the Onboarding period is crucial to establishing prolonged use. Onboarding should lay a strong foundation and build user confidence and trust, while also fortifying the value proposition.

In the Navigation phase, users are learning their way around the platform. Building proficiency at this phase is critical to support older users and grow their confidence. Effective learning support is necessary to retain users.

As older adults continue to use fintech products to improve their financial health, they can encounter barriers that lead them to abandon the product. Here, we offer suggestions on how to design ongoing interactions with these users to create positive and enduring relationships.



1 Leverage Trusted Channels

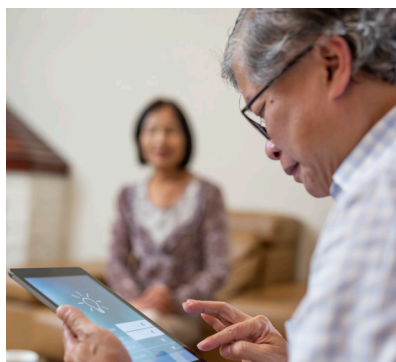
Make good use of trusted channels to facilitate product discovery that fosters feelings of confidence, trust, and inclusion.

Eliminate Stigmas

Foster Connections

One of the key barriers to fintech adoption among older adults is the belief that tech products aren't intended for them. This belief stems from a deep-seated feeling of being excluded from the digital financial world because of age, education level, financial illiteracy, or lack of tech-savviness. We know that many older users discover new tech products via family, coworkers, and, perhaps most importantly, their peer networks. Users in this segment are more receptive to trying new products and services when recommended through trusted channels. In addition, previous research by the Financial Health Network shows that many low- to moderate-income older adults work well past retirement age out of necessity.¹⁸ Many participants expressed a desire to have had support earlier in their careers to save more and plan for a successful (and timely) retirement.

¹⁸ "Redesigning the Financial Roadmap for the LMI 50+ Segment: New Challenges and Opportunities," Financial Health Network, February 2019. 29% of respondents reported working while their household was receiving Social Security.



Leverage older adult tech ‘superusers’ that regularly use your product to become product ambassadors and help recruit within their networks.

- Consider a referral rewards program or other incentives to encourage users to become ambassadors. Peer referrals signal that the product or service is trustworthy and can bring value to their lives.
- Superusers are additionally valuable in this phase of the journey, as they are likely to provide personalized support during the onboarding stage. Superusers will likely be highly engaged online (such as on product review sites or engaging with your brand on social media) and with the product itself. Seek them out here.

DESIGNING FOR DIVERSITY: RURAL USERS

Unlike their urban counterparts, older adults living in rural areas are more likely to identify local public institutions such as radio stations, TV channels, and public libraries as safe channels to access information about new products, services, and programs from the comfort of their homes. When trying to reach rural users, leverage these touchpoints to advertise and to teach them how to use your products or services.

Discovery

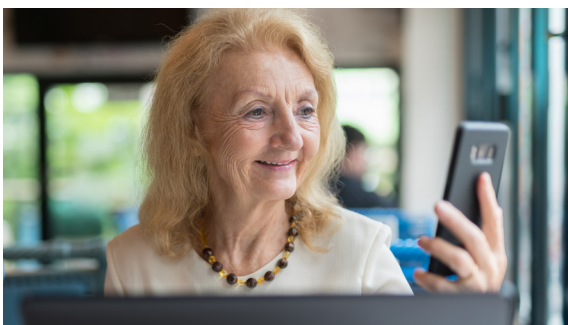
Make use of familiar, trusted brands to gain confidence and recognition.

Adults in this segment are more likely to consider new products if they are tied to institutions that serve them well, especially brands with extensive face-to-face customer contact.

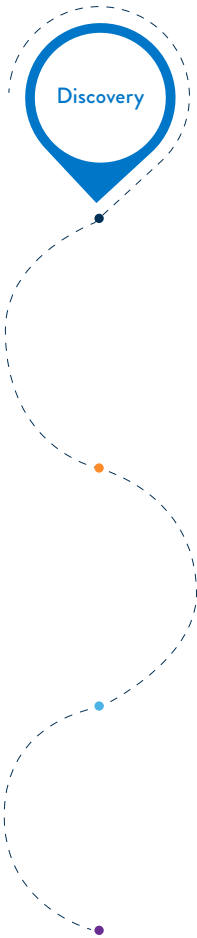
- If the product/service is tied to a bank, emphasize this connection. Traditional banking institutions have already gained a degree of trust among this consumer group, particularly when weighing fraud and security concerns.
- Define who is behind your product/service. This is especially important for standalone fintech products that aren't connected to a formal financial institution.

Capitalize on the workplace as an acquisition channel.

- Partner with employers to help provide the older adults in their workforce with information about fintech products and financial health. Older adults in this segment are likely to seriously consider fintech products/services offered by their employers as a benefit or resource, especially those that have clear, long-term value propositions.



**“THE DEMOS I’VE BEEN WATCHING
LATELY HAVE BEEN ON RETIREMENT.
I WATCH THEM AT WORK ON
THE EMPLOYEE BENEFITS SYSTEM.
I’VE LEARNED A LOT.”**



2 Use Inclusive Messaging

Ensure marketing and messaging assets display relatable diversity.

Eliminate Stigmas

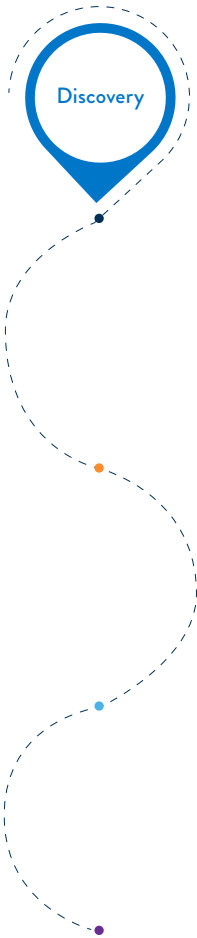
Older adults are often stigmatized for their age. They seek inclusive products and services that are designed with them in mind, without making them feel old, vulnerable, or underrepresented.



**“DYNAMIC SPEAKERS
AND DIFFERENT LOOKING
PEOPLE, PEOPLE LIKE ME....
THAT IS A MUST.”**

Use marketing that **showcases different ethnicities and backgrounds, and that frames aging in a positive light**. Be wary of singling out low- to moderate-income older adults for their age, disability status, or financial situation.

- Emphasize that your product is customizable for a wide range of needs, preferences, and use cases.
- Use inclusive language to avoid implicit bias. For example, use people’s preferred terminology when possible (some may prefer “older adult” to “senior”) and avoid labeling by leading with the person first (“people with diabetes” instead of “diabetics”).



3 Set Your Product Apart

Communicate transparently to minimize concerns about risk and longevity.

Put Users in Control

To older adults, “digital” feels ephemeral and fast-changing, and the risks of the internet (online scams, fraudulent websites, and viruses) are well-known. When considering their financial management, the ever-expanding world of tech and the internet seems risky and unstable. Having fallen victim to bait-and-switch tactics in the past, some older users trust only those products and services that are transparent and upfront regarding security, costs, and fees.

Emphasize your fintech product or service as long-term by focusing on conveying product consistency and reliability.

- Include messaging that communicates your loyalty and value to long-term users.
- Be careful not to promise a “quick fix.” Instead, frame users as valued partners.

Be transparent: Discuss important topics early and often in the user journey.

Important topics include the value proposition (what a user will get out of the product or service), security controls, data privacy, and cost.

- Position your cost structure upfront. Older adults with lower incomes are particularly sensitive to hidden costs and fees.
- Be wary of how you communicate “free trial” models. Older adults often connect free trials with concerns regarding forgetfulness and cost. Make free trials transparent and predictable in terms of time and cost.
- Don’t expect to be taken at your word; reinforce messaging with external resources and support from trusted intermediaries. Provide options for connecting with customer service agents to address questions or concerns and provide additional information.

Discovery

4 Harness the Power of Online Communities

Provide easy access to product reviews and ratings.

Eliminate Stigmas

Foster Connections

When it comes to adopting new digital products or services, older adults do their research. Many turn to online search engines, public company reviews and ratings (e.g., Better Business Bureau), social media, and video hosting platforms to validate a product's relevance to their needs and to establish trust.

Position information about your product on review sites and social media, not just on your brand's website.

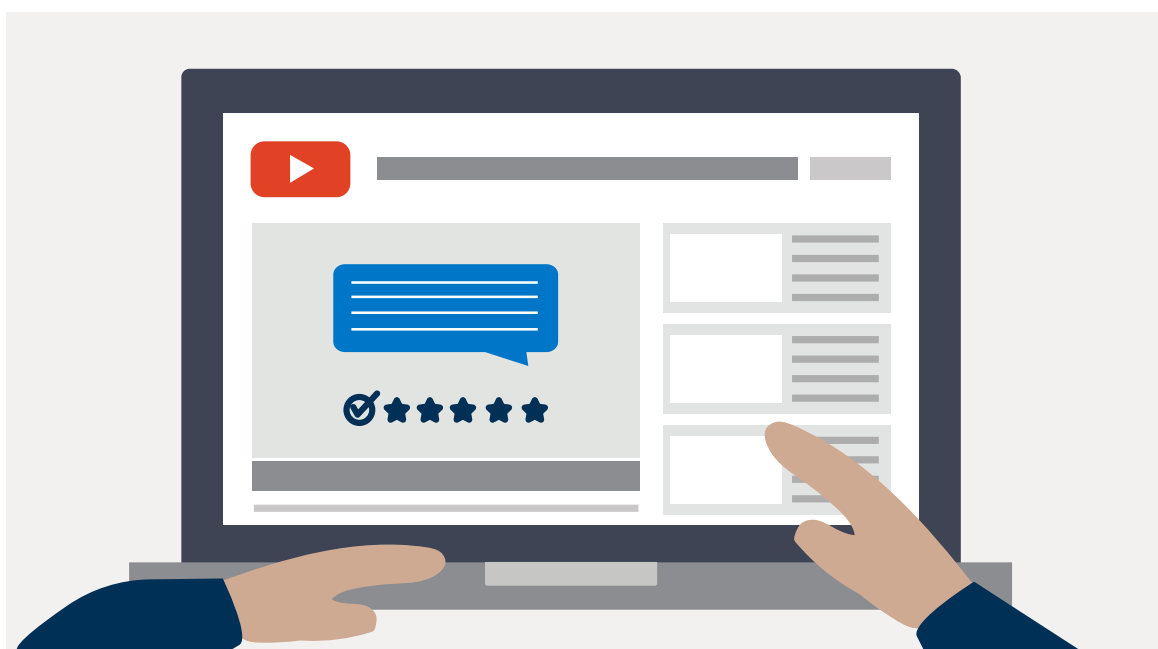


Illustration developed by Dalberg Design

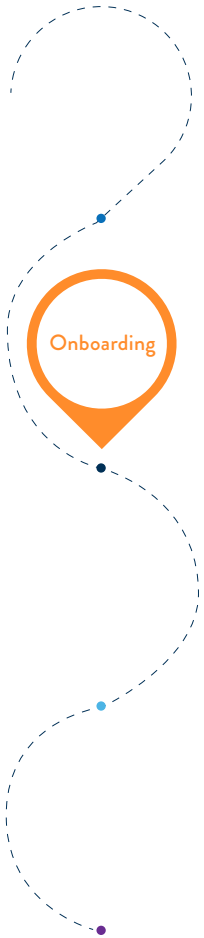
Incentivize or encourage reviews by older users to ensure their viewpoints are well-represented.

Allow pre-adoption exploration of features by offering product demos and functional mockups online where people can browse them.

- While many older consumers distrust free trials, they value the opportunity to explore product features before subscribing or downloading.



“[I] WANT VIDEOS BY PEOPLE WHO LOOK LIKE ME, SOUND LIKE ME, GO SLOW, ARE NON-TECHNICAL, REGULAR PEOPLE.”



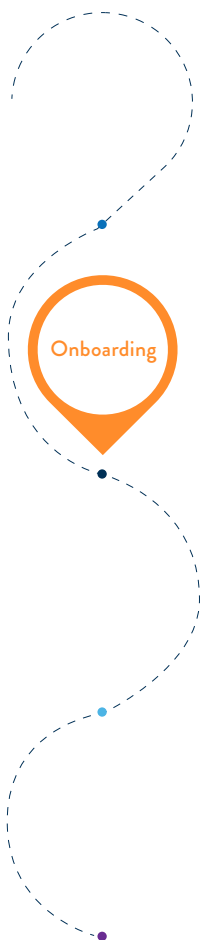
5 Treat Personal Information with Care

Treat personal information and security with care to demonstrate immediate customer value.

Put Users in Control



Fraud and security concerns are top of mind for many older adults. We recommend sharing information concerning fraud protection and data security during the Discovery phase of the user journey (see: *Recommendation 4: Harness the Power of Online Communities*); however, it's not enough to stop there.



SET UP YOUR ACCOUNT

Email Address

Name

Password

Social Security Number (SSN)

Address

City

Zip Code

Social Security Number

We use your SSN to to run a credit check and track your lifetime earnings.

We will keep this information confidential. It will NOT be shared with or sold to any third party companies.

Illustration developed by Dalberg Design

Reinforce your commitment to preventing fraud and protecting data during the Onboarding phase with clear, in-the-moment explanations.

- Asking for users to enter their personal information? Explain why you need it, how it will be used, and how it is protected.

Show users that you treat personal information and security with care.

During onboarding, **start with low-risk first steps** to avoid user drop-off.

- For example, give users access to a calculator or goal-setting tool on the home page, demonstrating value before asking users to link accounts or set up auto-payment.
- Older users may need to start with something relatively small and consistent to grow trust and confidence.

DESIGNING FOR DIVERSITY: MARGINALIZED COMMUNITIES

Older adults who identify with historically marginalized communities, such as people of color, documented and undocumented immigrants, and religious minorities, often feel apprehensive when financial companies ask for personal information (e.g., zip code, Social Security number). These types of information have been used in the past to limit their access to or overcharge for financial products and services. To help assuage these fears, make sure to explain clearly to your users why and how their data will be used. Facilitating access to human touchpoints – such as customer service phone lines or live chat – can help resolve users' questions and concerns (see: *Put Users in Control*).

6 Be Bespoke

Offer customization options early in the user experience journey.

Onboarding

Eliminate Stigmas

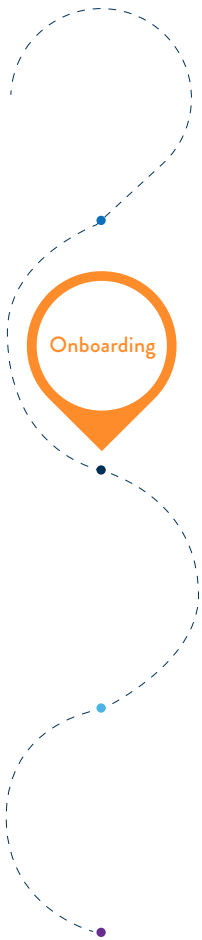
Empower Users



A bright spot in technology use among this segment is having the ability to customize even trivial elements of their devices or products. Customization – within reasonable parameters – is an empowering experience, and signals that a product or service was designed with “users like them” in mind.

Designing for Diversity: Physical Disabilities

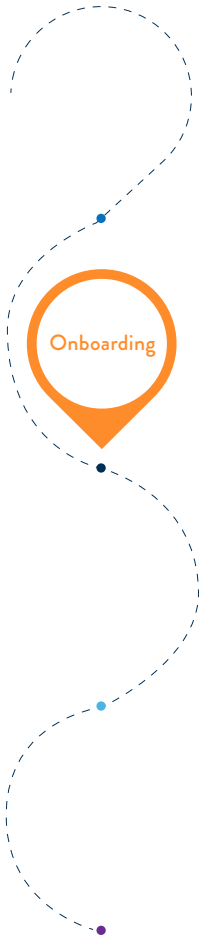
Accessible design is good design and vice versa. Older adults living with disabilities often feel that digital “accessibility modes” reinforce their feelings of being stigmatized. Often forced to rely on the help of others, these users express particular frustration when valuable customization features (font size adjustment or audio walk-throughs for visual impairment, for example) either aren’t available or are hidden deep within special menus. Provide these users with options within the universal customization menus that allow them to adjust their settings as needed. Make these menus easy to find and navigate, and use inclusive language (see: Recommendation 2: Use Inclusive Messaging).



Consumers in this segment desire customization for multiple purposes. Some users desire customization options to control accessibility features (such as font size), account options (such as account and fraud notification timing/type), or for personalization (such as welcome screen message text/style) to “style” their experience.

Offer these customization options in a centralized location to foster feelings of ownership and agency.

- Make customization menus easy to find and navigate.
- Place customization choices (to modify displays, interfaces, or communication preferences upfront. Be sure to incorporate default options and recommendations to avoid decision fatigue.
- In addition to toggling notifications on or off, offer different notification modes depending on the type of notification. For example, users may choose to receive a push notification for account reminders, but opt to receive a phone call for fraud alerts.
- Strike a balance between providing options for a range of potential customization uses and maintaining simplicity so that users are not overwhelmed



7 Lend a Helping Hand

Integrate human touch points early in the user journey.

Put Users in Control

Some older adults perceive fintech as lacking support, which can trigger concerns about what to do when something goes wrong. Whereas brick and mortar storefronts provide immediate, in-person customer assistance, users often worry that fintech won't provide that safety net.

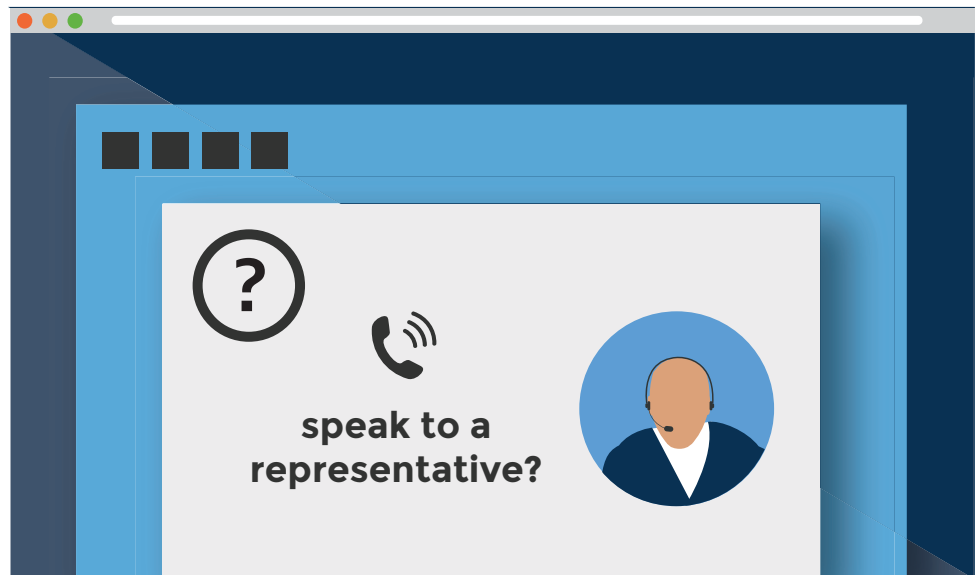


Illustration developed by Dalberg Design



Onboarding



Integrate human touchpoints early in the user journey.

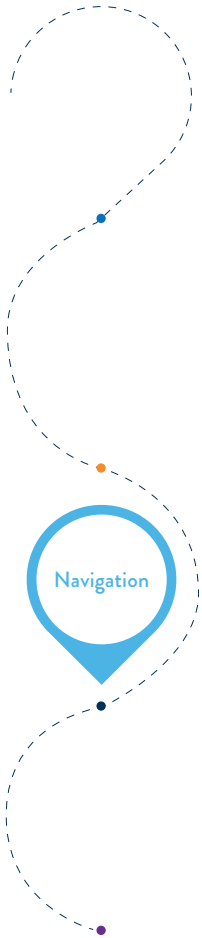
- Make onboarding support available in combination with human or human-seeming (chatbot) support agents. That way, users won't feel they have to hunt for help when questions arise.

Make online and offline support channels available so that users know they have options when seeking support, such as leveraging chatbots with fluid handover to human support agents.

- Ensure call center agents are prepared to communicate clearly and patiently with older users, who may struggle with articulating their specific navigation issues.

DESIGNING FOR DIVERSITY: COGNITIVE DISABILITIES

Older adults living with cognitive disabilities may struggle periodically with navigation issues such as forgetting passwords or completing tasks. Feeling lost can be a distressing experience for these users. Provide easy-to-access troubleshooting support for these cases. Make sure to train support system staff, like call center representatives, so that they are prepared to offer support to these customers.



8 Show the Path with Intuitive Wayfinding

Design intuitive interfaces and confirm wayfinding processes.

Empower Users

Intuitive user interfaces can make a difference throughout the user journey. In the Navigation phase, it's particularly important to avoid losing users who might abandon processes because they feel lost. Usability testing has found that older adults are more likely to blame themselves when they have trouble completing a task, so feedback and guidance is critical to maintain engagement.¹⁹ Include older adults in your product and usability testing to ensure your design works for this segment.

DESIGNING FOR DIVERSITY: COGNITIVE DISABILITIES

Some older adults live with cognitive disabilities related to aging, which makes their use of fintech even more challenging. For these users, it's all the more important to provide navigation signposts. Anticipate and support them where they may forget, get lost, or not know the way when attempting to accomplish a task. Include on-demand and in-context waypoints.

¹⁹ Pernice, Kara, Estes, Janelle, and Nielsen, Jakob, "Senior Citizens (Ages 65 and older) on the Web," Nielsen Norman Group, Second edition. Adults 65 and older blamed themselves for trouble with usability task completion 90% of the time, contrasted with 58% of the time for younger users.

²⁰ Laubheimer, Page, "Breadcrumbs: 11 Design Guidelines for Desktop and Mobile," Nielsen Norman Group, December 2018.

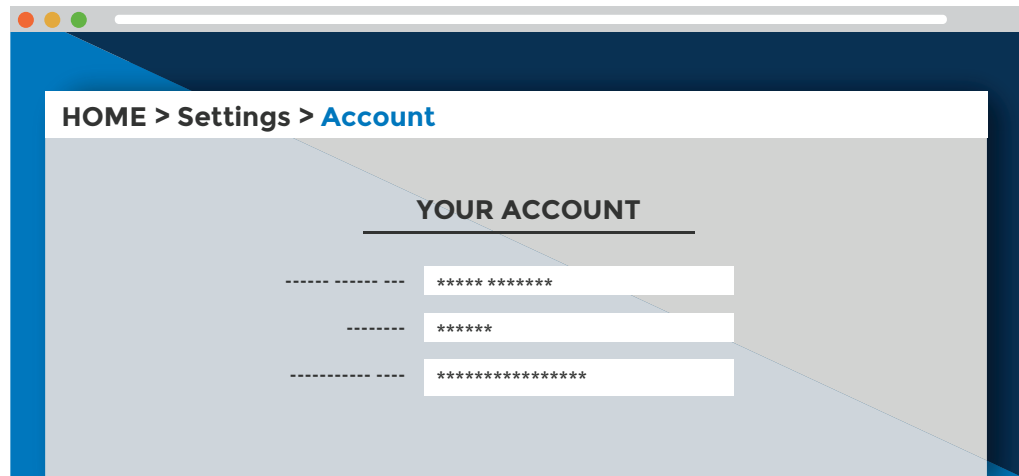
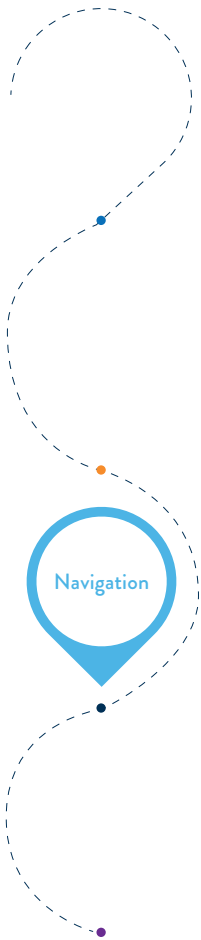


Illustration developed by Dalberg Design

Provide wayfinding breadcrumbs
(links that show how the current page fits in the interface's hierarchy) that give a clear indication of where users are.²⁰

- Display those breadcrumbs in any tutorials (see: *Recommendation 9: Teach with Tutorials*) so users know what they mean and how to leverage them.

Use signals that build confidence with encouraging language.

- Confirmation screens, pop-ups, and alerts can reassure users that they're heading in the right direction as they navigate through the interface and complete tasks. Test these communications with older adults to ensure they are not disruptive.

- Regular updates should accompany any longer processes so that users know they're still on track.
- Use a status bar for a series of sequential steps so that users can visualize their progress.

Create buttons related to navigation.

“Back” and “cancel” buttons can provide an option for a user to quickly get back on track if they inadvertently click something or get lost within an interface.

- Showing a clear path to get back encourages the user to continue, rather than giving up and abandoning the program.

DESIGNING FOR DIVERSITY: VISUAL IMPAIRMENT

Screen reader technology improves accessibility for people with visual impairments. Integrate any communications about wayfinding with screen reader technology to ensure your interface's usability.

²⁰ Laubheimer, Page, “Breadcrumbs: 11 Design Guidelines for Desktop and Mobile,” Nielsen Norman Group, December 2018.

9 Teach with Tutorials

Offer easy-to-access navigation tutorials.

Empower Users

Many technological devices, software, and applications offer tutorials to help users navigate the interface and learn about features. Tutorials match older adults' desires to learn and build their proficiency with technology. Too often these tutorials don't cover the full range of content that they need however, or they disappear after the first engagement.

"I WISH IT WOULD BE EASIER TO VIEW THAT TUTORIAL AGAIN."

Provide a complete suite of learning materials that covers the topics that a new user would need to know. For lower-income older users, this will include:

- **A key for icons in the interface.**
While older adults may not be familiar with common icons, they can quickly learn from materials that make the meaning clear.
- **The structure of the interface.**
Clarity about how the different pieces connect will help users know where they are on a page and how to navigate to where they want to go.
- **Navigation elements.**
Call out the buttons, links, menus, and other elements that users need to navigate the interface. Make it a point to highlight how to undo an action or go back to a previous page, where older users with limited technology experience sometimes find themselves stranded and uncertain how to proceed.

Create learning materials in the **mode most appropriate to the content.**

- Older adults are open to multiple ways of consuming content, including reading written instructions and watching videos. As always, pay attention to font size and plain language with written instructions.

Make tutorials and other learning materials easy to find again.

- Include tips in the tutorial about how to retrieve the information if they need it again.

Ease the landing for software updates by providing tutorials introducing any new interface elements or processes.

- Software updates can bring users back to the navigation stage and reinforce the fears of lower-income older adults that fintech is not going to be dependable and stable over the long term. When software updates are necessary, tutorials can show users the path to rebuild their proficiency.

10 De-Risk Automated Transfers

Give users the control to pause, cancel, or turn off automated processes that move their money.

Put Users in Control

Older users want control over their engagement with technology. This desire is heightened for any tasks related to money, as too many older users with low to moderate incomes have been through negative experiences with unexpected fees or fraud.

Allow users to easily hit “pause” on any automatic or recurring actions with their money, such as auto-payment of bills or auto-contributions to savings.

- While background automation can provide valuable simplification or personalization, lower-income older adults are wary of processes that take away their ability to control the timing or amount of financial transfers. Low-income older adults will be more comfortable using technology for financial management if they’re confident they can make a change easily and successfully when they want to.

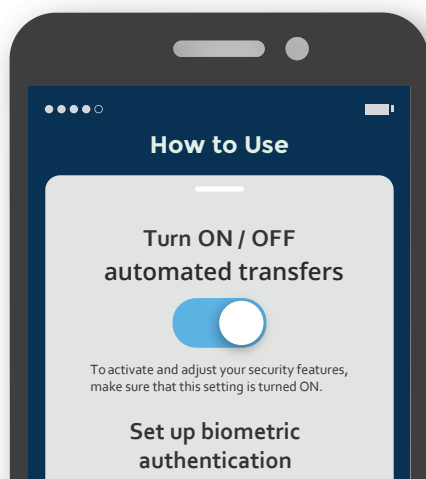


Illustration developed by Dalberg Design



11 Confirm, and Confirm Again

Provide clear confirmations of financial transactions that are accessible across digital and analog platforms.

Empower Users

Put Users in Control

When it comes to managing their finances, older adults with constrained incomes want to know when loops are closed as well as opened. Confirmations boost trust and increase confidence, which is key to engagement with fintech.

"I WANT TO FEEL REASSURED WHEN SOMETHING SEEMS NOT TO BE WORKING... I NEED TO TRUST IN THE PROCESS."

Double-check that a user wants to take action [in advance of finalizing a transaction](#). This will provide them with a sense of control over their money. It can also increase confidence by assuring the user they won't make inadvertent changes.

[Confirm each subsequent step](#) of a transaction, including initiation and completion.

In the case of a payment, provide a confirmation when the payment is received as well as sent.

- Set clear expectations as to how long a step or process might take.
Sending a payment? After confirming a transaction has been successfully initiated, inform the user of the processing time and how long they might wait to see a confirmation of receipt.

Create a seamless way for users to [print confirmations](#) and any other important information, such as a dashboard view.

- Many older adults prefer to view or store certain information on paper; printing information allows fintechs to integrate with their existing financial management systems.

12 Be a Cheerleader

Use a positive tone that celebrates the accomplishments of older users.

Empower Users



Fintech providers need to navigate their interactions with users with sensitivity when dealing with the personal and potentially stressful topic of money. Low- to moderate-income older adults may not be responsive when they are focused on managing a financial shock. Encouraging interactions are the best way to keep these users coming back.

Celebrate the successes of your users. Given the importance of autonomy in their interactions with technology, older adults in this segment prefer to minimize commanding language or any tone that suggests they are not taking the correct action.

Seize positive opportunities to **invite users to re-engage** after a period of inactivity, such as when they may be receiving a tax refund.

Incorporate interface animation design from gaming that recognizes and rewards users for their actions and use, creating a positive and motivating experience.

Many people in this segment use their technology devices for gaming and find the interfaces enjoyable.

13 Provide a Plan B

Ensure users can access financial and account information easily.

Put Users in Control

Older adults can be wary of engaging with fintech because they risk losing access to their information if they forget a password. This can be a barrier to adoption, as well as a cause for abandonment after a period of use.

Guide users through password setup, offering options that don't rely on memory.

- These could include prompts to develop a passphrase, or to enable biometric authentication.

Be cautious about password reset options that rely solely on email.

- Although many adults over 50 regularly use email, others do not and may have trouble accessing their accounts.

Give clear options for authorizing designated secondary user(s) on an account. Provide control to the primary user to specify the level of access for secondary users and tools for monitoring that access.

- Many older adults with low to moderate incomes are either providing financial support to family members, receiving support from others, or have arranged for others to help manage their finances as they age. Accommodating these relationships is inclusive of their needs and can help to reassure users that they have a safety net for accessing their important financial records.

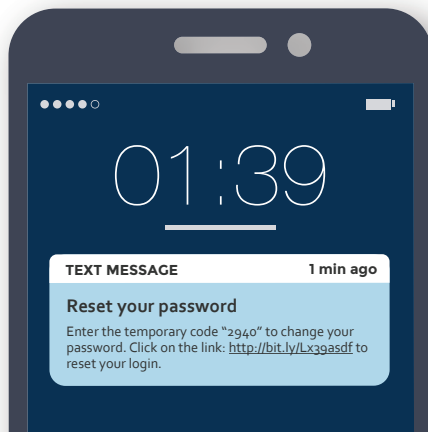


Illustration developed by Dalberg Design

DESIGNING FOR DIVERSITY: COGNITIVE DISABILITIES

Older adults who are living with cognitive impairments may have a designated caretaker helping to manage their finances. For this group of users, providing options for an authorized user is a necessary step for them to successfully access the financial health tools that fintech provides.

Conclusion

Innovation in the fintech space has already made promising strides toward improving the financial lives of people across the U.S. Despite steadily increasing technology use, older adults may not be connecting with current fintech solutions as readily as younger generations. In part, this may be because not enough innovators are designing for this segment – leaving behind a large, diverse, and growing number of potential customers. We found that consumers in this segment associate technology with their sense of identity, autonomy, safety, and social connection. Fintech companies can cater to the unique challenges of low- to moderate-income older adults more successfully if they empower users, put users in control, eliminate stigmas, and foster social connection.

“I LIKE TECHNOLOGY.
IT’S LIFE-SAVING.
OR LIFE-ENHANCING.
I’M NOT AFRAID OF IT.”

We provide a set of design recommendations that align with these opportunities across the user journey.

To support users who are 50 and older, innovators should incorporate interface elements that reflect these recommendations into their user testing for new and improved products.

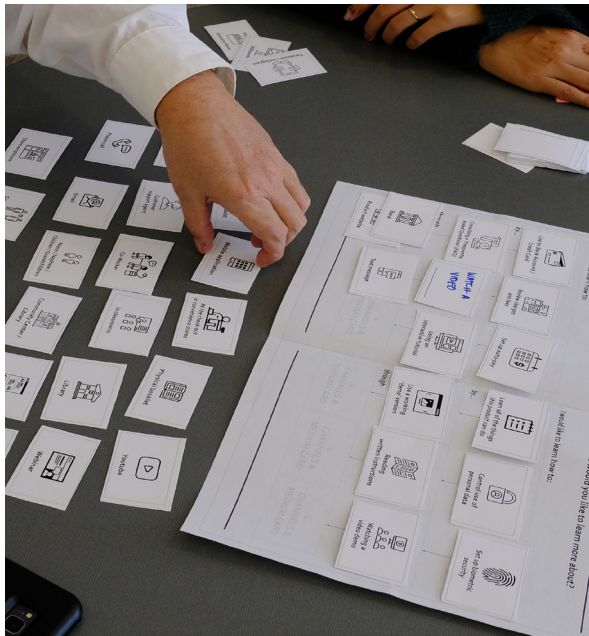
Critically, this user testing should include low- to moderate-income older adults to ensure that any gaps in understanding are not overlooked.

The U.S. Census Bureau estimates the population of adults age 65 and older will nearly double in size between 2012 and 2050.²¹ As our aging population grows and financial challenges continually evolve, so too will the need for inclusive fintech solutions. It’s more important than ever that financial health innovators actively seek to understand and design for this segment of prospective fintech users.

¹⁹ Pernice, Kara, Estes, Janelle, and Nielsen, Jakob, “Senior Citizens (Ages 65 and older) on the Web,” Nielsen Norman Group, Second edition. Adults 65 and older blamed themselves for trouble with usability task completion 90% of the time, contrasted with 58% of the time for younger users.

²⁰ Laubheimer, Page, “Breadcrumbs: 11 Design Guidelines for Desktop and Mobile,” Nielsen Norman Group, December 2018.

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Our research partner Dalberg Design – a design and innovation firm that uses human-centered and participatory research methods – recruited 92 individuals to participate in individual interviews or small group sessions in person in New York City; Omaha, Nebraska; Council Bluffs, Iowa and Memphis, Tennessee; as well as through remote online sessions from across the country. They conducted 25 individual sessions and 17 group sessions across two phases of data collection.

The human-centered design methods used for this research are highly participatory. In contrast to qualitative research using an interviewing method, the sessions engaged the participants in interactive activities, through which they shared information about their financial needs and preferences for using technology. Participants selected from sets of cards representing various technology devices, discovery channels, financial challenges, aspirations, and other topics, and arranged them on large canvases. The activities varied across sessions, which researchers facilitated by introducing the activities and engaging participants in related discussions. Researchers recorded notes of participants' reactions and ideas to synthesize into emergent themes and innovation opportunities. The findings in this report serve to highlight participants' perceptions of technology and fintech, even when these perceptions stem from misinformation or misunderstandings.

The first phase of research established a baseline understanding of common experiences with and attitudes toward using fintech to meet the financial health needs of lower-income older adults. The sessions focused on participants' financial health challenges, financial management strategies, and their engagement with and attitudes toward technology. Researchers from Dalberg Design elicited this information with several activities:

- **Vignette Snapshot: Current Digital Use**

Participants selected from cards of technology devices to pick one that they use, and from cards of use cases (such as recreating/gaming or information search) that relate to their use of the device. Researchers asked participants to describe their usage and probed on potential drivers.

- **Household Financial Mapping**

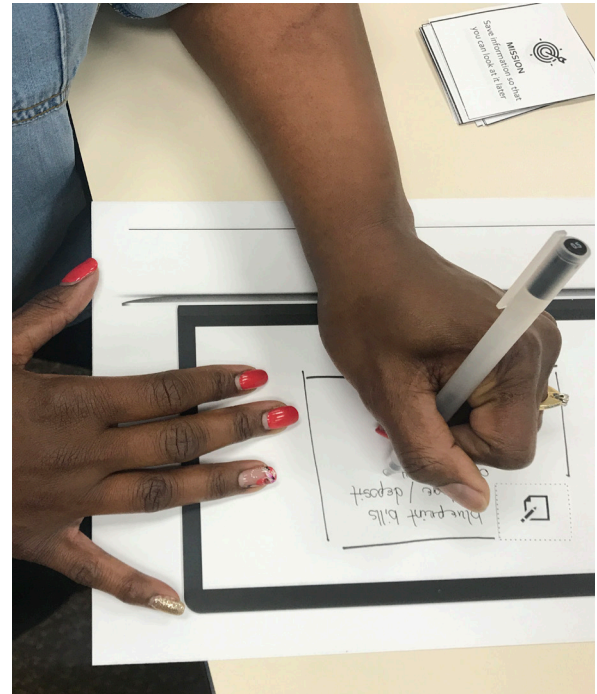
Participants identified their financial aspirations and obstacles, and mapped their sources of income, expenses, and assets on a large sheet. They gathered cards relating to the current analog and digital tools they use to manage their finances and reach their goals, discussing their preferences for tools and any gaps.

- **Bright Spots, Pain Points, and Gaps**

Participants plotted fintech products and features on a matrix, where they identified whether they used a product (yes/no) and whether they liked it (yes/no), to launch a discussion of their underlying preferences.

- **Co-Design of Financial Management Tool**

Participants identified a financial challenge for which they wanted to develop a tool, and researchers led a brainstorming process to identify what they wanted the tool to do and how they would access it.



The second phase of research leveraged the participants' needs and preferences that emerged in the first phase to develop and test rough prototypes of fintech product features. During the prototyping sessions, participants generated ideas for technology features that would make them excited to use a product and reduce their concerns. We also gathered feedback from participants on each others' ideas to see which resonated broadly across the segment. The prototype development process included the following activities:

- **Household Financial Mapping**

(See above.)

- **Discovery Visualization**

Participants identified a financial challenge to address with fintech and mapped on a canvas the process they would go through to discover the product, including the device they would use and the places and people they would learn about the product from. Participants selected from cards to share how they would want the product to make them feel to identify their priorities, and listed questions they would want to know about before using the product or service.

- **Adoption Journey Mapping**

Participants identified a milestone or life stage in which they would be open to using fintech to meet their financial health needs, and visualized the steps they would undertake to adopt the product. They selected from cards representing the devices, people, and places through which their adoption would occur.

- **User Manual Features**

Participants created a mockup of a user manual for a fintech product or service, identifying the information that would help them to get set up with a product and the features or tasks that they wanted to learn about. They selected from cards that offered options for learning modes and channels to develop their ideal teaching and support system.

- **Digital Interface Features**

Using templates that displayed various user interface features, such as icons, buttons, and slider bars, participants arranged the features that they would find helpful for accomplishing different financial management tasks.

- **Analog to Digital Process Mapping**

Participants shared their offline financial management systems, and mapped out a process through which those systems could be digitized.

- **User Journey Mapping**

Participants identified the most important user needs, activities, and feelings they anticipate at each stage of the user journey, including discovery, onboarding, learning and navigation, and routine use.

Appendix B:

Research Participants

	Memphis (n=39)	New York (n=11)	Omaha (n=27)	Remote sessions (n=15)	Total (n=92)
Gender					
Male	10	6	11	6	33
Female	29	5	16	9	59
Race					
Black	37	0	9	0	46
White	0	10	15	15	40
Hispanic	0	0	2	0	2
Multiethnic/Other ^a	2	1	1	0	4
Location Type					
Urban	26	1	26	1	54
Rural	13	10	1	14	38
Age					
50-59 years	14	3	12	2	31
60-69 years	16	8	4	6	34
70+ years	2	0	3	7	12
Age not provided	7	0	8	0	15

Appendix C:

Defining Low- to Moderate-Income

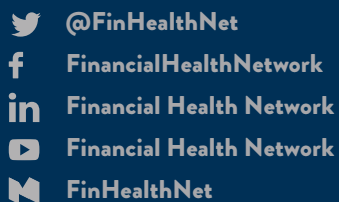
* Household size is defined as individuals physically living in the household, in addition to those receiving financial support.

Criteria Used to Define Low- to Moderate-Income	
Household Size*	250% of HHS 2019 Poverty Guideline (Rounded Down to Nearest \$1,000)
1	\$31,000
2	\$42,000
3	\$53,000
4	\$64,000
5	\$75,000
6	\$86,000
7	\$97,000
8	\$108,000
9	\$119,000
10	\$130,000
11	\$141,000
12	\$152,000
13	\$163,000
14	\$174,000



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