



TECH IN CHINA:
ACTIVATING THE ELDERLY

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Collective Responsibility
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INTRODUCTION

Over the last few decades China has emerged as one of the world's largest economies. Millions of individuals have experienced great increases in wealth and a subsequent rise in their standard of living. A natural phenomenon that occurs as countries develop is the growth of the aging population and by 2030 the Chinese elderly (65+ years old) are projected to account for 23% of China's population (UN, 2010 via BBC, 2012). Many of these future elderly are the current middle-aged population, and will be armed with increased spending power and demands for higher-quality lifestyles.

Technology plays an ever-greater role in the lives of the Chinese populace. While the uptake may be more challenging for seniors, well-designed technological services can meet the needs of the elderly like never before. The increased purchasing power of the elderly population further enhances these unprecedented opportunities for public and private actors to meet their demands.

In recent years, the mobilization of technology has ushered in a new era in which smartphones are the key platforms for producer and consumer engagement. As a result, this report uses smartphones as a tangible example to explore the broader

dynamics of technological adoption and usage by the elderly.

Through surveys and interviews with Chinese seniors (60+ years old) regarding smartphone ownership and usage, we provide foundational insights into their current relationship with technology to ultimately spark and inform innovation. We then present a transferable model that is fundamental to identification and explanation of why gaps in elderly adoption of technological innovation arise in both present and future markets.

CURRENT STATUS

After surveying the current landscape of communication technology, smartphones are and will be the dominant player in the market. In fact, the traditional “elderly cell phone”, which offered basic calling and texting features designed for increased elderly usability, has lost traction and are being phased out by smartphone competition.

We also explored the influences that contributed to the elderly's learning and acquisition of technology, elucidating Chinese elderly's reasons for or against smartphone ownership and usage (as seen on page 5). Interestingly, for a large number of seniors, family plays an enormous role in enabling elderly to use technology, facilitating ownership and learning.

The table below details the four main technologies that Chinese elderly currently use as part of their daily lives:



LANDLINE

Elderly-Friendly Characteristics

- Adjustable volume for ring (loud)
- Bright screens with a Chinese display
- Large, visible numbers/letters/characters
- Affordable
- Elderly prioritize basic functionality over “bells and whistles”

Available Options

- Philips Cord168
- Panasonic Pair



COMPUTER

Elderly-Friendly Characteristics

- Big screens (15" or more)
- Affordable
- In-store assistance to set-up and go over all basic software and functions
- Elderly prioritize basic functionality over “bells and whistles”

Available Options

- 15" Dell Inspiron i5



CELLPHONE

Elderly-Friendly Characteristics

- Big keys/font and simple large-print screen
- Adjustable, loud volumes
- Strong vibration
- Easy-to-navigate preset functions

Available Options

- vkworld VK Z2 Senior Phone
- Concox GS503



SMARTPHONE

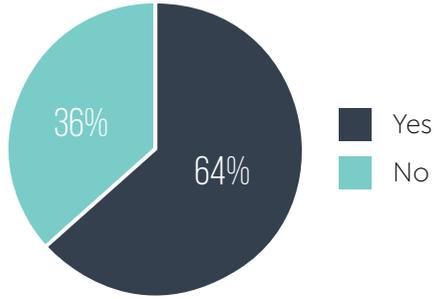
Elderly-Friendly Characteristics

- Android apps for elderly-friendly interfaces
- Separate basic functions from advanced
- Big digital keys
- In-store assistance to set-up and go over all basic software and functions

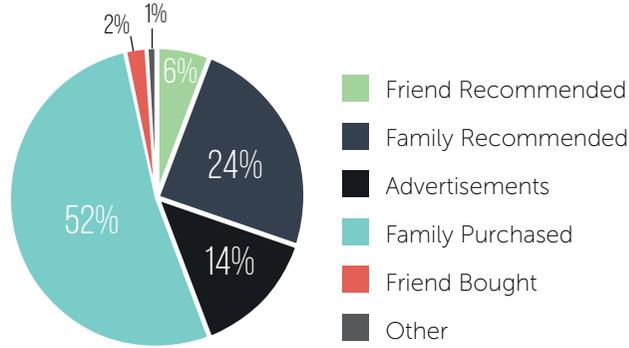
Available Options

- Lenovo Zuk Z1
- Huawei

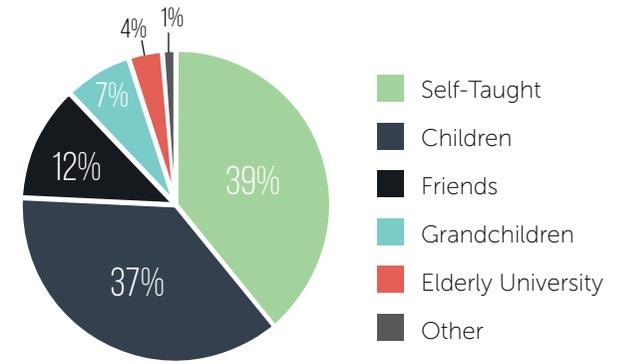
SMARTPHONE OWNERSHIP



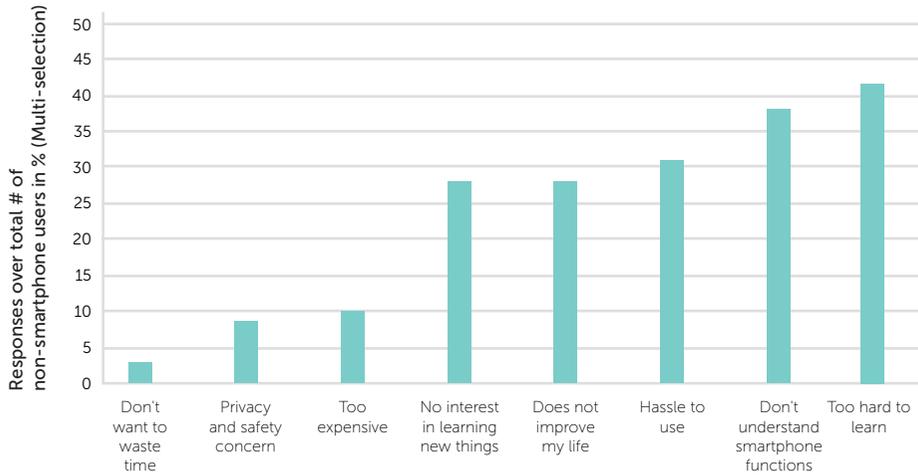
ACQUISITION METHOD



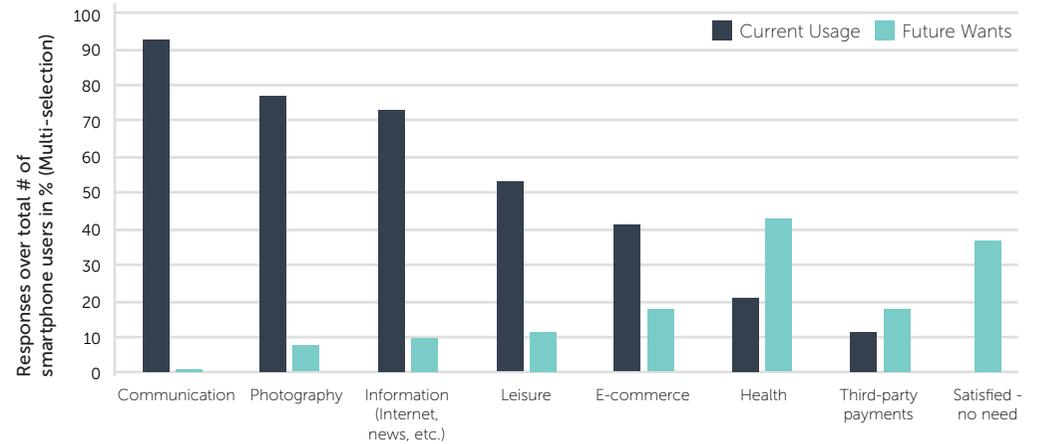
LEARNING METHOD



NO SMARTPHONE: WHY DON'T YOU HAVE A SMARTPHONE?



WITH SMARTPHONE: CURRENT USAGE VS. FUTURE WANTS



* All data obtained from CR Surveys; sample size = 135

ELDERLY ADOPTION & USAGE CURVE

From our surveys and interviews, we identified three distinct groups within the elderly population, divided by their technological engagement, to form the usage curve.

The Dormant do not own a smartphone or tablet (i.e. iPad), with little to no interest/ability to acquire technology or use new functions.

The Transitioning own a smartphone or tablet and use its basic functions such as communication via phone, text messaging, and WeChat. Capable of learning new technological features under the right conditions (see the section, "Wheel of Activation"), a portion of the transitioning elderly may even use their camera for photography and photo sharing.

The Active are the earliest adapters and most integrated elderly users of technology, both out of interest and utility. The Active elderly will use their phones for a whole gamut of functions, including leisure and shopping.

In essence, the Active seamlessly utilize smartphones for daily life. However, technological innovations will only be adopted by the "super-active" elderly, as the Active elderly are still overall slower than younger generations to adopt new innovations. Unlike the Dormant and the Transitioning, the Active elderly embrace whatever technology is available. While generally satisfied with the features and functions already on hand, the Active are willing to adopt technology and innovation for similar reasons as the general public. At the same time, they perceive existing technology to be far beyond their expectations. When asked if he had further desires for their smartphones and tablets, one stated:

"I don't really think about new innovations. I just follow the younger generation. They can do the innovation, and I'll do the using. I know that technology will continue to develop and more and more new functions will be available."

"I don't use a cell phone anymore because I can't really hear it ring. I don't want to be missing calls all the time, so I just don't use it at all."



MRS. WANG
PHYSICALLY-HINDERED
INDIVIDUAL

A 71-year-old retired manufacturing worker, Mrs. Wang is financially independent with enough money to get by on her own but lives together with her daughter. With physical ailments, such as poor eye sight and hearing issues, she is landline-dependent and prefers to stay at home most days. Furthermore, she often feels discouraged by how easily she forgets new things right after she just learned them.

"I am old & don't want to learn complex things. I like to just relax. My kids all use technology & phones but ... I don't need them. I have everything I need."



MR. ZHU
SATISFIED WITH STATUS QUO
COMMUNITY CENTER REGULAR

Mr. Zhu is a carefree 86-year-old grandpa who enjoys passing time in his community center playing cards with friends. A retired accountant who has settled into a financially independent lifestyle, he avoids learning new things and has no interest in deviating from current daily routine.

CALL
NO SMARTPHONE USAGE

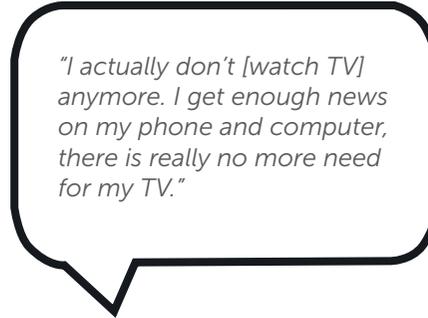
DORMANT



"I use my smartphone to communicate, but I don't buy stuff on it. I have no idea how. But, I have seen other family members use other functions so I know they exist."

MRS. QIU
SCHOLARLY PARK-GOER

Mrs. Qiu is 70 years old and has lately moved permanently from Beijing to Shanghai to live with her kids. Recently, they gifted her a smartphone and taught her the basics, mainly how to chat with her friends in Beijing. She feels there's a lot of functions out there to learn on her own. Curious and inquisitive, she's doing so at her own pace and as she sees fit.



"I actually don't [watch TV] anymore. I get enough news on my phone and computer, there is really no more need for my TV."



MR. WANG
IT-INFLUENCED
INTELLECTUAL

For 70-year-old Mr. Wang, cost is never an issue when it comes to technology. Heavily influenced by his son who works for an IT company, his willingness to learn allows him to read news, play chess, and learn English on his smartphone.



"A smartphone is very convenient and easy to learn! I do so many things on it. I just play around on my phone and then learn by trial. I'm not afraid to break it like some other people."



MRS. CHEN
WELL-OFF
PROFESSIONAL

Regarded affectionately by her friends as "Teacher," Mrs. Chen is a 61-year-old smartphone superstar. She is highly educated and receives a sizable pension stemming from her former job at a big department store. She uses numerous functions on her phone, ranging from checking stocks to shopping online. In fact, her favorite activity is to take and edit "selfies" on her smartphone.

PHOTO-TAKING TEXT MESSAGE INTERNET

TRANSITIONING

LEISURE
E-COMMERCE
PHOTO-EDITING
HEALTH/FITNESS
LOCATION SERVICES
THIRD PARTY PAYMENT

ACTIVE

BARRIERS TO OWNERSHIP

"I don't trust them... I don't know much about [smartphones] honestly."

-Female, 70

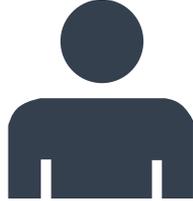


NAIVETY

The lack of information about functions of technology or misinformation about technology

"I don't need a smartphone. I don't know what I would want to use it for. I have a landline at home."

-Male, 82

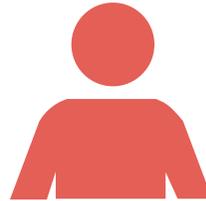


APATHY

No interest in technology because it is perceived to add no value or utility to daily life

"While I can afford a smartphone... I don't want to buy one because I heard they break easily."

-Female, 63



MISTRUST

The lack of trust in the quality of technology; fear of misusing or breaking technology

"Smartphones are not necessary for me. The convenience does not outweigh the cost."

-Male, 80

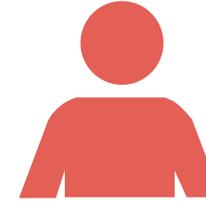


COST

The financial burden of technology acquisition and usage outweighs perceived benefits, especially for low-income groups

"I just don't like doing things that are complex or are a hassle. I like things that are simple."

-Female, 71



INCONVENIENCE

The perceived difficulty and hassle of learning, adopting, and adapting to using technology

"I know I can learn it but I don't want to spend my entire day hooked to my phone. I'm happy just reading in the park."

-Male, 63



CONTENTMENT

The resistance to change stemming from satisfaction with current routine; a "don't fix what's not broken" attitude

For future technology keen to mobilize the Dormant elderly population and increase technology ownership, it is important to keep these six reasons in mind. However, it will be difficult to push a majority of the Dormant to technology unless all these six barriers are overcome and it is absolutely imperative for a Dormant's life to adopt it.

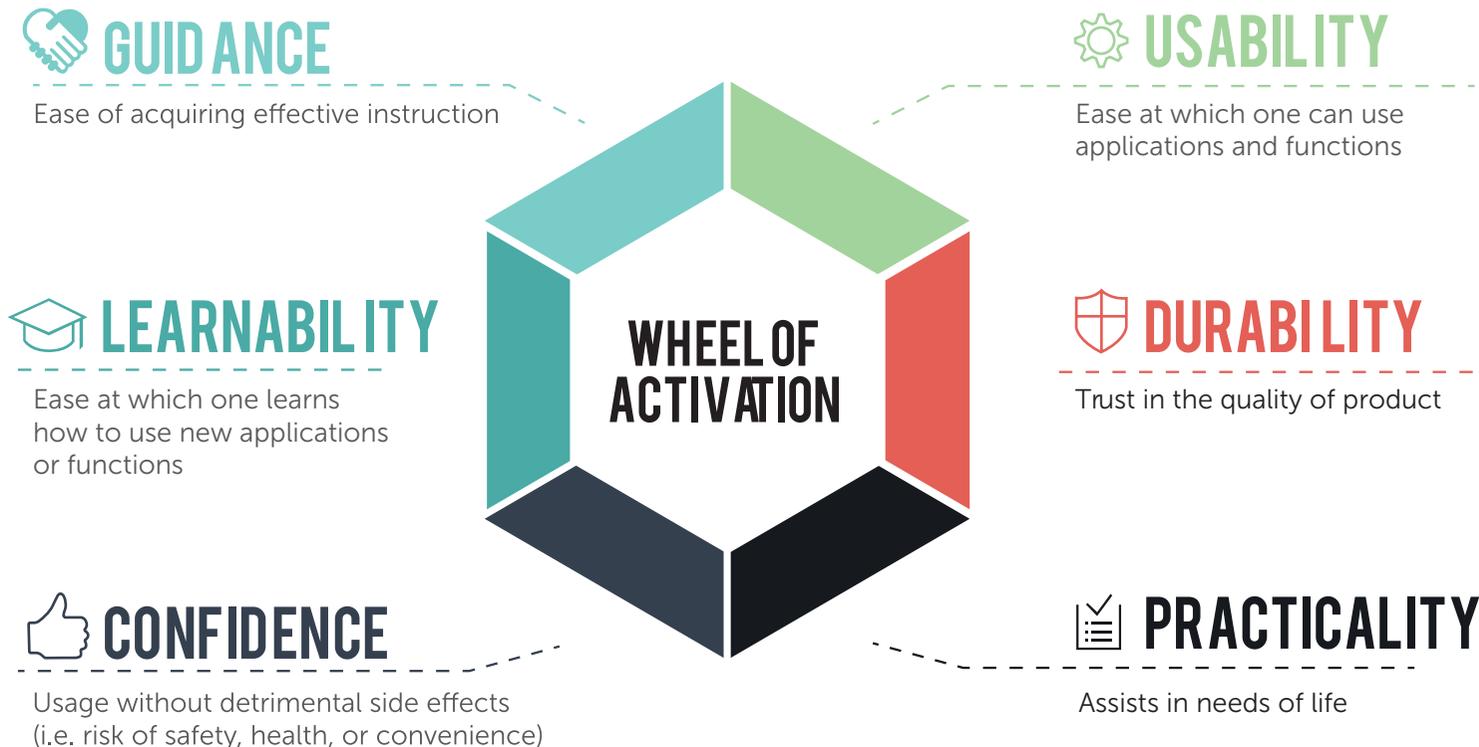
WHEEL OF ACTIVATION

A majority of current Chinese elderly are in the Transitioning phase. They are acquainted with basic technological usage, such as using their smartphones to communicate.

Although this group is often able to acquire new technological devices and learn new functions, it will not do so unprompted. They also do not utilise high level active functions such as e-commerce or health information.

While the sheer size of the Transitioning population points to a gap in the currently available options in technology, it also illustrates the tremendous opportunity for bridging that gap.

As such, we have focused on the Transitioning, and identified six main needs that must be accounted for in order to activate these individuals to Active ones.



USABILITY

Operations must be intuitive and convenient. In fact, many elderly avoid using technology not because they find the functions useless, but because utility is overshadowed by the difficulty of use, such as the hassle or complexity of executing a task through an app.

Dormant

"My daughter has bought me a cell phone before. But, I never needed it or used it. I'm used to using a landline, that's all I need. With just that, I can talk to my friends and family back in Jiangxi."

– Female, 71

Active

"I use my phone to take lots of photos, play games, use WeChat, watch the news, shop on TaoBao, and all other kinds of things. One of my favorite apps is a photo-editing app. I use those apps every day."

– Female, 62

DURABILITY

Most Chinese senior shoppers are not keen to engage in a pattern of constant consumption. While it may be normal for Westerners to upgrade to new smartphones every year, the Chinese elderly are averse because they see the switch as a defect in quality rather than an opportunity to use the newest features.

Dormant

"My phone breaks too easily. I replace it every few months...I've had phones for a long time, but see, my current one is only 2 months old."

– Male, 75

Active

"I've been using it for over a year. It's very slow now because I've downloaded too many things on it. But I don't mind since I switch phones after a year or two anyways because of all the technology updates."

– Female, 61

PRACTICALITY

For Chinese elderly, products must offer a obvious tangible benefit or a solution to an immediate issue, including allowing them to communicate with loved ones abroad or simply making preexisting tasks much more convenient and accessible.

Dormant

"Everything I use has a purpose. I am busy right now, so there is no time to waste. Maybe when I have nothing to do when I'm older, I will start using my phone for leisurely functions."

– Male, 64

Active

"I don't even get that many phone calls anymore. Most of my communication is through WeChat."

– Female, 61

"I can't leave it (smartphone) anymore... I do everything on it."

– Male, 62

CONFIDENCE

Worried about their personal safety and security, the elderly in China shop with more cautious and defensive mindsets than their Western peers. We also found that financially secure elderly will still only purchase products if they trust it's quality, safety, and security and feel confident about their ability to use it correctly.

Dormant

"I don't use the paying bills functions because I'm afraid of being scammed."

- Female, 70

Active

"I use my phone to connect to a camera in my house, so I can see exactly what's going on... I felt insecure about the house when I left, but my kids assured me that surveillance will be trustworthy."

- Male, 64

LEARNABILITY

Many elderly do not attempt to learn because of the significant transition period to learn new technology. Often, due to poor memory or unfamiliarity, seniors require a lot more practice & repetition for independent usage than youth. In fact, many are afraid of failing and appearing silly. Thus, firms need to convince elderly that products are intuitive and easy to learn.

Dormant

"In my life, I try to learn as much as I can, but I like to keep my expectations realistic... I don't use WeChat because I don't understand how to use it. It's more convenient to use the landline. It's too complicated to use a smartphone."

- Male, 85

Active

"I would try to play with the phone and self-learn, I see everyone on the subway playing with it."

- Male, 70

GUIDANCE

Chinese elderly are often introduced and taught to use technology by family or friends, many owning passed-down phones. However, other Chinese seniors may not have friends & family who have time, patience, ability, or access to guide and assist them. It may be helpful if products offered access to training demos or by partnering with elderly universities.

Dormant

"It's hard for me to learn because I forget so easily, so my kids give up trying to teach me. They try once but then they grow impatient very quickly."

- Female, 63

Active

"I have an aunt who is over 90 years old who uses WeChat. She just knows how to use the voice chat, and can speak in our group chat. Our younger family members would help her set it up."

- Female, 61

EMERGING OPPORTUNITIES

In light of the projection that China's market for goods and services for elderly is going to reach \$17 trillion in 2050, 1/3 of China's economy (Bloomberg, 2014), we identified three areas of innovation potential for future elderly-focused technology, accompanied by possible future technological opportunities.

While we present areas for potential product innovation, it is important for firms to understand the unique processes underlying elderly learning and acquisition, which is often directly facilitated by family and friends. Innovators should also look towards integrating new technology with already established platforms, such as WeChat, which are currently trending towards significant elderly population penetration.

Although we offer suggestions, further research and investigations into these fields could reveal more insights to developing valuable solutions for seniors' needs. Furthermore, when looking to address these opportunities outlined, it is key to bear in mind the areas outlined in the Wheel of Activation.

In 2010, less than 10% of Chinese elderly's 10 trillion RMB market demand was met ...

- Organisation for Economic Cooperation and Development (OECD)

■ FAMILY INTEGRATION

"My children live in New Zealand, but I see them every day through FaceTime."

—Female, 65

Current Situation: Cross generational care is common within Chinese culture. The elderly play a large role in supporting their children's families, through coordinating schedules, tasks, and groceries. However, much of these are still largely done via notes and phone calls which may be streamlined through technological disruption.

For those families with an inactive senior or one requiring care, family members often desire to be a constant presence, spending significant time monitoring activities. Given the inability to be physically present, technology can provide assurances to all family members.

Opportunities & Insights: Moving beyond simple communication between family members, as the elderly become more comfortable navigating e-commerce APPs, trusting payment platforms, and integrating calendars and to-do lists, the ability of families to truly incorporate technology into their daily lives will grow.

At the same time, for those elderly who are inactive, or perhaps homebound, through the increased adoption of technology, family members will be able to better monitor their parents daily health and communicate with doctors and caregivers to ensure quality of care.

■ EDUCATION

“There’s an old Chinese saying, live until you are old and learn until you are old. I want to keep learning, it also keeps dementia away.”

–Male, 70

Current Situation: A major challenge the elderly face in retirement is the continuation of their personal development. With approximately 50,000 elderly universities supported in China, significant investments into elderly education services & specialized classes have sought to improve seniors’ overall quality of life (FT, 2014).

However, despite investments in these institutions and widespread youth-based e-learning focused on “test prep”, little focus has been placed on senior online learning platforms.

Opportunities & Insights: As the number of elderly and their comfort level with technology grows, e-learning will be an area of significant opportunity.

A key distinction between elderly learning and those of working age is the focus on leisure or social community over skill acquisition. Platforms will need to adapt to this elderly mindset, create mediums and teaching methods to more effectively engage the senior population, as well as find ways to involve community-integrating and collaborative e-learning platforms.

■ HEALTH

“My health is my top priority, before anything else; I can’t do anything if I’m not healthy.”

–Male, 72

Current Situation: In 2013, more than 100 million out of the 202 million elderly in China had at least one chronic non-communicable disease (WHO, 2015). With China’s healthcare system already over capacity, interest in mobile health & health innovation have risen drastically.

Currently focused on supporting patient scheduling, communication with doctors, and providing general health guidance, healthcare tech can go further by providing individual elderly specific solutions to bridge the supply-demand gap.

Opportunities & Insights: Whether the elderly are looking for information about preserving a standard of living against deterioration of personal health, or increased transparency of care types, the market for elderly specific technologies is set to increase.

Consumer-based technologies could provide a strong platform for preventative healthcare, from wearables that monitor vitals from afar, to the administration of pharmaceuticals. Remote communication tools between patient and healthcare professionals through integrated devices, APPs, and hardware providers will relieve hospital congestion and facilitate in-home medical care.

■ TRAVEL

“My daughter and I always buy a phone data card when we go abroad, I need to stay connected.”

–Female , 68

Current Situation: In 2015, Chinese outbound tourists spent \$215 billion, which is greater than Qatar’s entire annual GDP (CNN, 2016). This number will only continue to rise as China’s population grows in affluence. With China’s aging population, more and more elderly are demonstrating interest in traveling domestically and abroad as portrayed by the significant rise in elderly-focused group tours and services.

However, presently e-booking platforms, such as C-Trip, and mobile review applications, like Mafengwo, have marketed & focused on younger travelers with minimal elderly integration.

Opportunities & Insights: With more seniors choosing to travel on their own, or in small groups, the need for improved technology platforms to support elderly-friendly travel experiences and photo-sharing applications, opens the door for further adoption and use of technology.

Also, as more elderly self-plan & coordinate trips, cloud-based itinerary planning & booking platforms for seniors may develop. In our near future, older or disabled seniors could have connected tour experiences utilizing virtual reality technology.

CASE STUDY: WECHAT

WeChat or “Weixin” is a free horizontally integrated cross-platform messaging app developed by Tencent, one of the largest internet companies in the world. It is an example of a technological advancement that has successfully addressed the Wheel of Activation. Future technological innovations, such as new functions, features, or apps should also do the same in order to be able to maximize their engagement with the elderly population by effectively, optimally, and sufficiently addressing all or most of their needs.



806 MILLION
monthly active users

More than Tumblr, Instagram, Twitter, Skype or Sina Weibo (Tencent, 2016)



94.19%
of elderly smartphone users from CR surveys say they use WeChat



93%
of population in China's first-tier cities
(BI Intelligence, 2016)



USABILITY

- Changeable text size on articles
- Simple maneuverable interface
- Appealing customizability interface



DURABILITY

- Frequent software updates
- Usable across multiple platforms



PRACTICALITY

- Voice message
- Integrated News and articles
- QR code – scan to add new contacts



CONFIDENCE

- Online payments through money transfer
- Connected to all major banks
- Information security– “hide Moments”



LEARNABILITY

- Voice message-easier than texting
- Available in multiple languages



GUIDANCE

- Ubiquitous user base
- Open to users of all ages
- In store guidance

CONCLUSIONS

As China's "graying population" grows exponentially, the elderly population will be a major economic target for growing markets and services. While both the public and private sectors have made efforts in addressing this issue, current policies and services have been insufficient in addressing elderly demands, and many economic, social, and political challenges facing these systems still persist. Therefore, the growing power of technology will be a crucial instrument in supporting the elderly within society. Thus, it is of utmost importance to understand the underlying motivations and barriers that drive or inhibit elderly's adoption of technology.

Our model provides a solid toolkit for addressing and understanding elderly priorities in purchasing and adopting technology. The model elucidates key characteristics by distributing the elderly market into the Dormant, Transitioning, and Active categories. Since the characteristics and needs of each market category differs, firms targeting the elderly will find it necessary to address each category differently.

Six Barriers to Ownership prevent a Dormant from becoming a Transitioning user: Naivety, Apathy, Mistrust, Cost, Inconvenience, and Contentment. If technology fails to overcome even one of these barriers, a Dormant's adoption of the good or service might be completely inhibited. Understanding and effectively prevailing against the Barriers of Ownership is imperative for firms targeting the Dormant market, especially for brands seeking to increasing elderly ownership of hardware-based goods and services.

The Wheel of Activation will assist firms in fulfilling the Transitioning elderly's unmet desires, upgrading them to Active-level usage and encouraging them to pursue higher-level functions of their devices. The better a service addresses each of the facets of the Wheel of Activation, the greater the incentive for Transitioning users to engage with the platform. Utilizing the Wheel will be of particular interest to services wanting elderly to acquire and use new software. Overall, both the Barriers of Ownership and the Wheel of Activation give insights into what can "make or break" a deal for seniors in terms of technology usage and advancement.

Influenced by the values inherent in Chinese society and culture, the Barriers and the Wheel will continue to apply as the population ages. Even though future generations will most likely be smartphone-integrated, our model will remain relevant and applicable to the next technological frontier challenging elderly. This flexible and timeless model will help innovators avoid rendering a large aging population Dormant and encourage Transitioning elderly to become Active.

Presently, our model is directly relevant to the current Chinese elderly market, allowing current public and private players to better address elderly demands for improved quality of life. Thus, this model will allow for the optimal capitalization on an immense and currently underserved elderly market. The elderly challenge holds significant influence over the wellbeing of society and creates open-opportunity for technology to step in and alleviate the burden.

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