



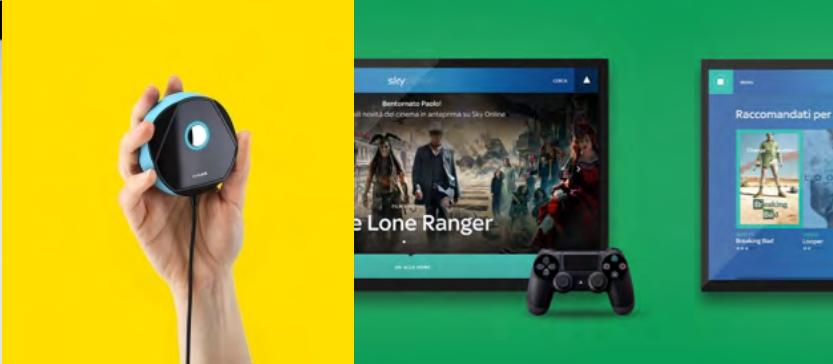
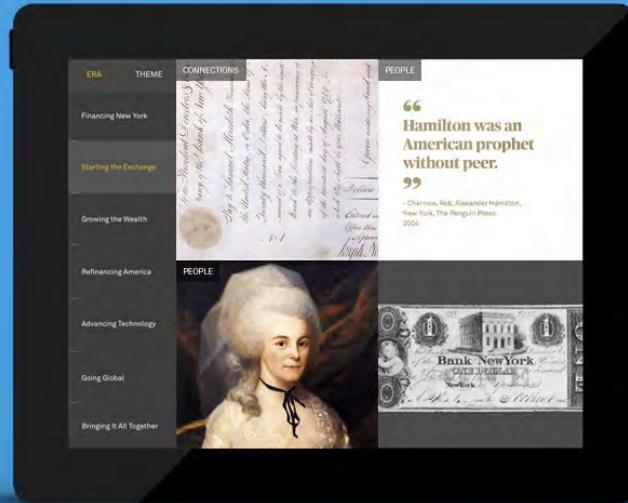
AGING BY DESIGN  
SINGAPORE

A FROG SALON · MARCH 2015



# FROG IS A GLOBAL PRODUCT STRATEGY AND DESIGN FIRM





# REACH

We are more than 600 strategists, researchers, designers, and technologists who partner with clients across industries and geographies.

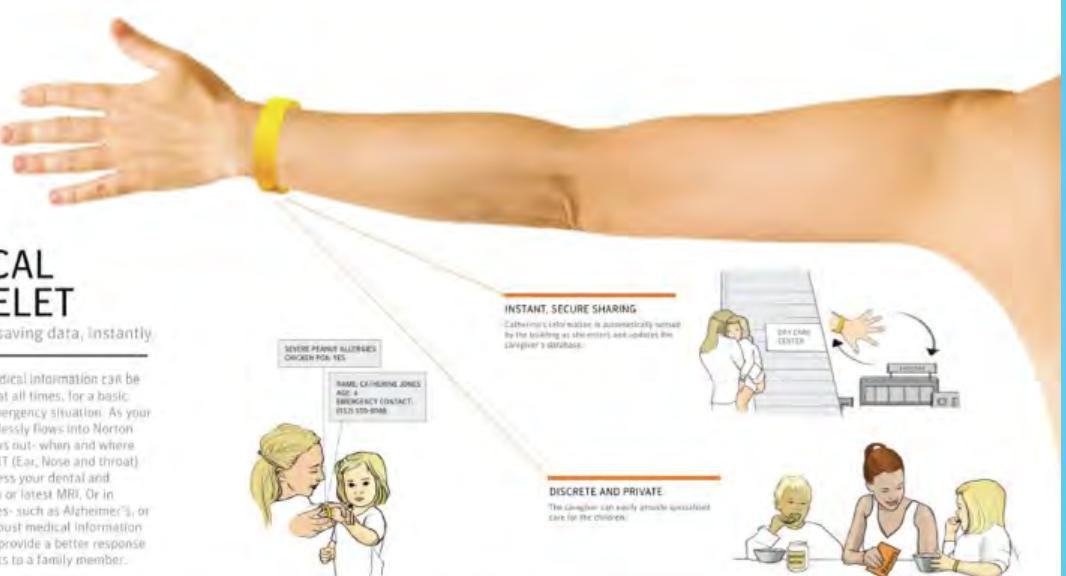




# UNDERSTAND PEOPLE WITH IMMERSIVE RESEARCH METHODOLOGIES

Design research is rooted in understanding human motivation. Our methods provide inspiration and information to envision product and market opportunities. We interview, observe and carefully document attitudes and behaviors in the context in which the design solution will be used.

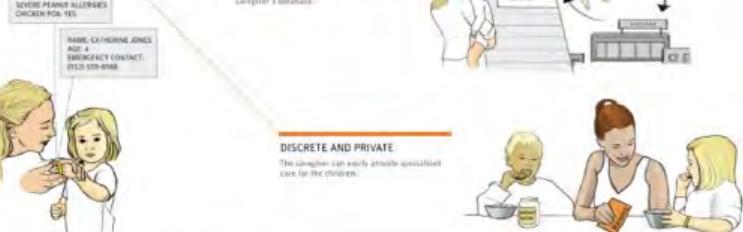




## MEDICAL BRACELET

Access to life-saving data, instantly.

Your complete medical information can be accessible to you at all times, for a basic check-up or an emergency situation. As your information seamlessly flows into Norton Health, it also flows out - when and where you need it. An ENT (Ear, Nose and Throat) physician can access your dental and optometry records or latest MRI. Or in special needs cases - such as Alzheimer's, or Epilepsy - more robust medical information on a bracelet can provide a better response or immediate alerts to a family member.



# INTEGRATE BUSINESS PERSPECTIVE INTO DESIGN

We help clients grow their business by developing strategies, analyzing the market context, competitive and comparative landscape and evaluate business implication of innovative product and service portfolios and services.

Common Key Events	Unique Key Events	Team A	Team B	Team C	Team D
1 Tech		DC	M	DC	M
2		DC	M	M	MN
3		M	0	DC	DC
4		M	0	M	DC
5 New		M	0	M	DC
6		M	0	M	DC
7		M	0	M	DC
8 70%	US workers use mobile devices to do their job	M	0	M	DC
9 Mic	Mobile technology has become an operating	M	0	M	DC
10 Virtu	virtual reality is changing the way we live	M	0	M	DC
11 80	80% of US adults have a smartphone	M	0	M	DC
12		M	0	M	DC
13 New, Inte de		M	0	M	DC
14		M	0	M	DC
15		M	0	M	DC
16		M	0	M	DC
17		M	0	M	DC
18 Sym Re	Symantec and Norton will merge	M	0	M	DC
19 Chan	Cloud computing is changing the way we work	M	0	M	DC
20 Thiev	Cloud computing is changing the way we work	M	0	M	DC
21 Mi	Cloud computing is changing the way we work	M	0	M	DC
22 Chan	Cloud computing is changing the way we work	M	0	M	DC
23		M	0	M	DC
24		M	0	M	DC
25		M	0	M	DC
26		M	0	M	DC
27		M	0	M	DC

Source: Gartner, 2014  
age highlights increasing consumer dependence on technology.  
70% of workers feel that there is no  
balance between work and life.  
60% of US adults live with 2+ screens,  
which allows them to music and video  
content to their cars.

# TRUSTED LIFE SERVICES: BUSINESS IMPERATIVES

PEOPLE  
ARE MORE  
DIVERSE  
THAN  
COMPUTERS

THE WHOLE  
IS GREATER  
THAN THE  
SUM OF ITS  
PARTS

FROM  
ONE  
PRODUCT  
TO MANY

In order to provide life services, Norton must move beyond the benefit of their own products. Life Services will, nonetheless, have a variety of areas with diverse needs & more robust segmentation is required. In the future, customer service will be provided to patients in a service layer in the north. Trusted Life Services model will be evaluated.

Customers will have rely on many to the north. Trusted Life Services will, nonetheless, have a variety of areas with diverse needs & more robust segmentation is required. In the future, customer service will be provided to patients in a service layer in the north. Trusted Life Services model will be evaluated. Not only is it L&G, but their interaction customer loyalty and customer lifetime value. Norton will continue the journey to the cloud to maintain its highly repeatable revenue.

Trusted Life Services will consist of a suite of products and services appealing to different consumers in different life stages. While most products are built for the elderly, Trusted Life Services are about resilience and confidence. They help seniors transition away from the traditional model of care to a new digital one. Trusted Life Services are about resilience and confidence. They help seniors transition away from the traditional model of care to a new digital one.

Security and safety are increasingly related to health services with particular focus on elderly care and infections as well as other factors power and availability. In addition, Trusted Life Services are about resilience and confidence. They help seniors transition away from the traditional model of care to a new digital one.

11

## From Plastic to Pixels

The cloud as the center of the universe

How realistic is Endstate B in your view? Please rate the Endstate based on your judgement of how likely this will become reality.

Highly likely  
to happen

Likelihood of Endstate B  
becoming a reality:

1 2 3 4 5

Does Endstate B offer attractive and interesting opportunities for Symantec/Norton? Please rate the Endstate based on your opinion of how attractive the opportunities for Symantec/Norton will be if this Endstate comes to pass.

Highly attractive  
opportunities

Attractiveness of  
opportunities in Endstate B:

1 2 3 4 5

Highly unlikely  
to happen

Little to no  
opportunities

Telepresence Devices are hot, 60% of households now have some telepresence capabilities

Studies show that 60% of US households have made a telepresence call in the last week; 6 Devices selling like hotcakes for telepresence. Gartner reports that these video conference

+/- 2014



## COLLABORATE TO BUILD CAPACITY FOR SUSTAINABLE INNOVATION

We bring our clients, end-users, and outside experts in a cross-disciplinary design journey to understand needs, generate ideas, share perspectives, and shape new opportunities.



# OUR WORK





# WELCH ALLYN CONNEX MONITOR

The Connex Vital Signs Monitor (CVSM) is a portable monitoring device that reduces errors in patient information capture by offering all monitoring functions in a single system and communicating wirelessly to an electronic medical record.



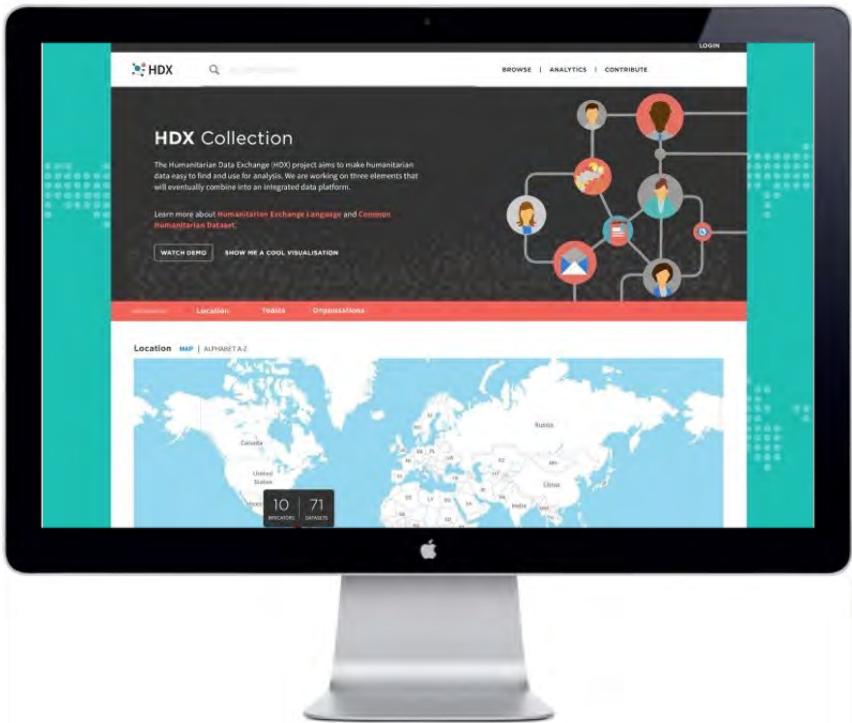


# HONEYWELL

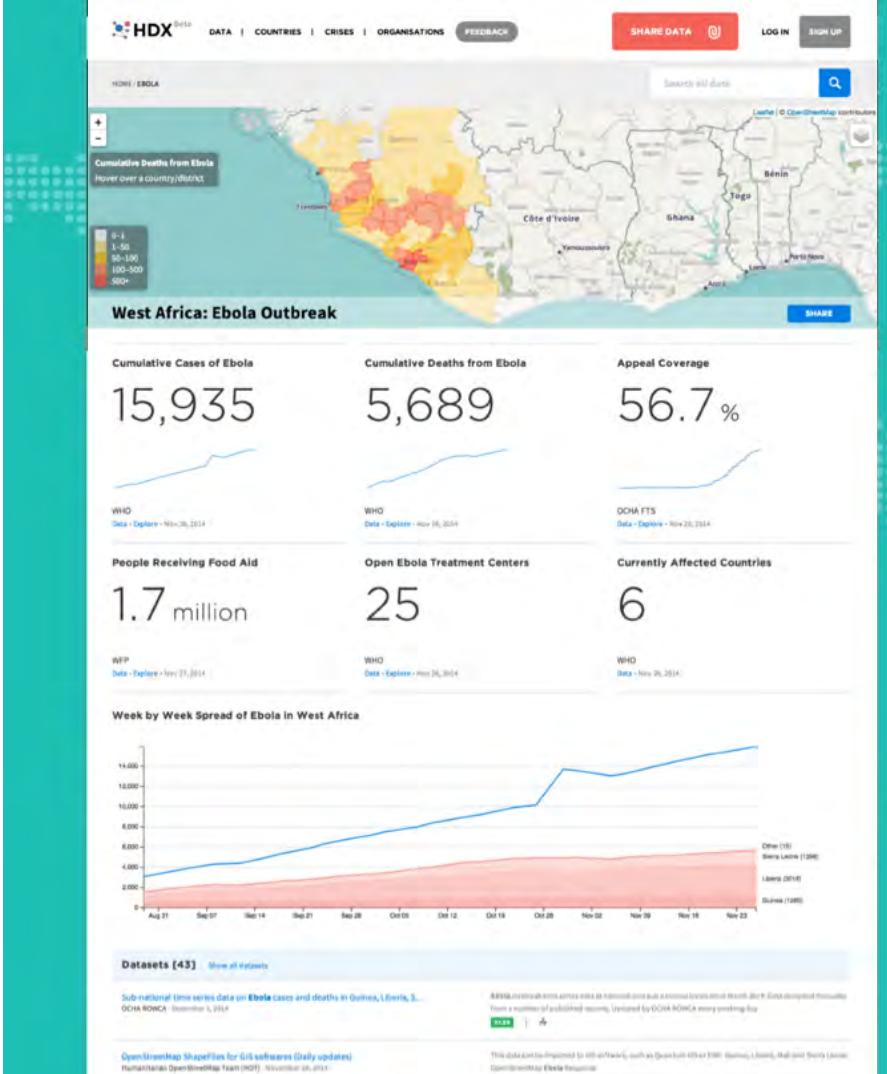
Honeywell asked frog to help create a vision for its connected home platform across its thermostat and security business units. frog's consumer insights and product concepts led to a user-centered home solution, Honeywell Lyric.

CONCEPT





# UNITED NATIONS OCHA



The United Nations Office of partnered with frog to design and create a Humanitarian Data Exchange (HDX) platform to help humanitarians use data to act fast and effectively.

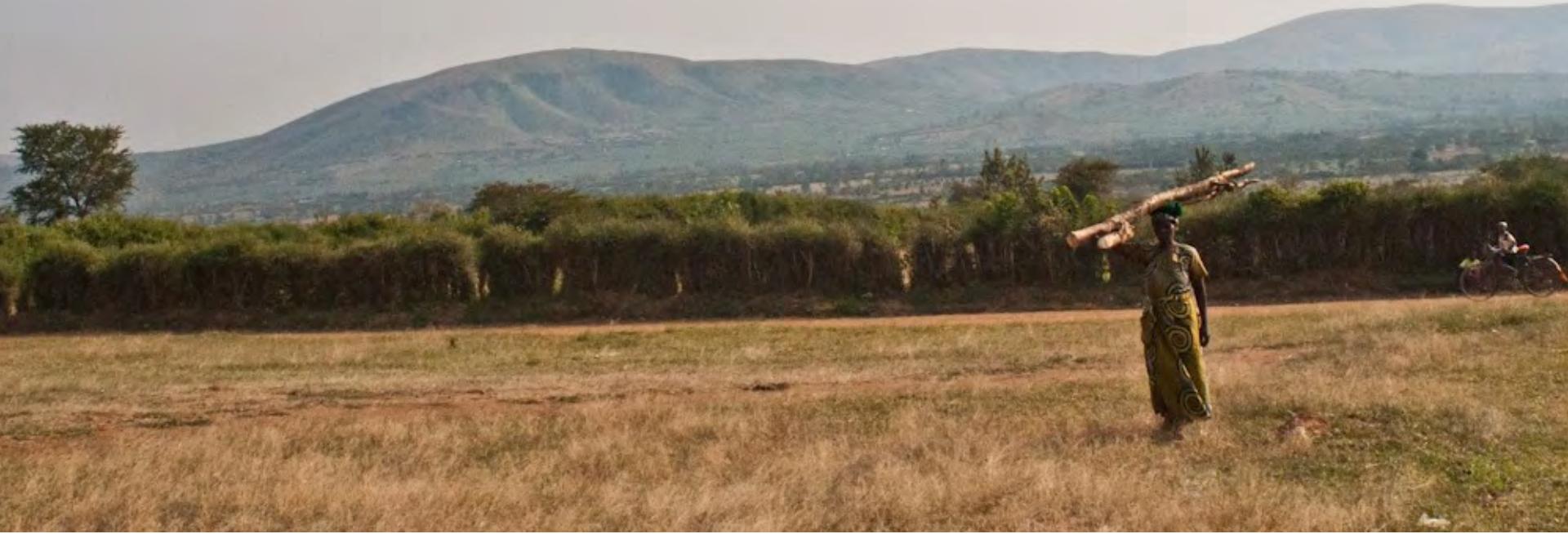
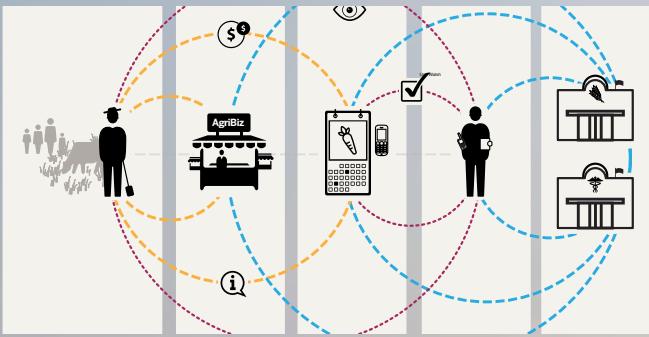




## NEW MATTER

frog partnered with incubator Idealab and the founders of New Matter to co-develop the company's experience strategy and design – from branding and identity system to the design of a consumer 3D printer, marketplace, and application.





## GSMA M-AGRI

GSMA and frog are currently partnering together to design mobile solutions for ~500 million small holder farmers across the world.





# NYC BEACON PAYPHONE

frog reimagined the payphone to better connect New Yorkers with the city's essential services.



# AGING BY DESIGN IN SINGAPORE



# **Seniors will soon outnumber any other demographic bracket.**

Today, about 11% of the Singaporean population are 65 years or older. In comparison, the share of up to 15 year-olds is 16.4%.

**~430,000**

**Singaporean population above 65 today**



**900,000**

**Singaporean population above 65 in 2030**



# **The cost of care, traditionally a model for the world, is rising fast.**

If national health-care expenditure is \$7.5 billion today, what will it need to be by 2030 with more than double the number of seniors?

**\$4 billion**  
**FY2011**



**\$7.5 billion**  
**FY2014**





## OUR SPEAKER



**LINDSEY MOSBY**  
**EXECUTIVE STRATEGY DIRECTOR**

Lindsey Mosby is Executive Strategy Director of the Healthcare Practice at frog. Four years a frog, Lindsey has been working in Healthcare for more than 10 years, partnering with organizations like Philips Healthcare, Merck, Roche, Medtronic, UNICEF, Kaiser Permanente, AARP and many others on their strategic planning, experience strategy, and product and portfolio innovation.

Experienced in the methods and practices of major medical players and young, entrepreneurial healthcare start-ups alike, Lindsey collaborates with such groups through highly complex initiatives, employing design strategy, research and business rigor to the ideation and creation of new healthcare products and services.

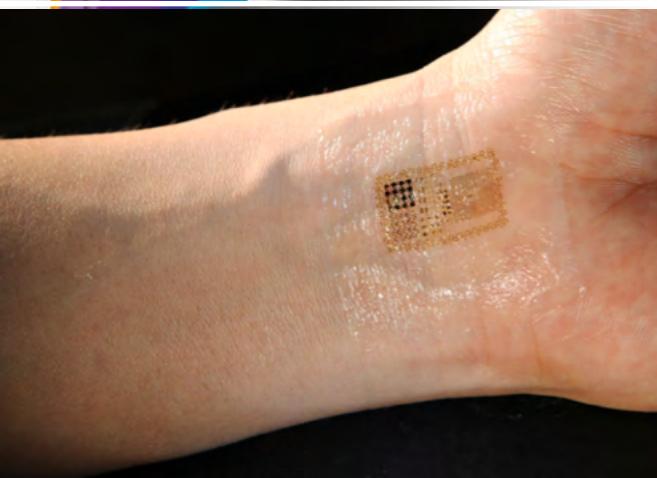
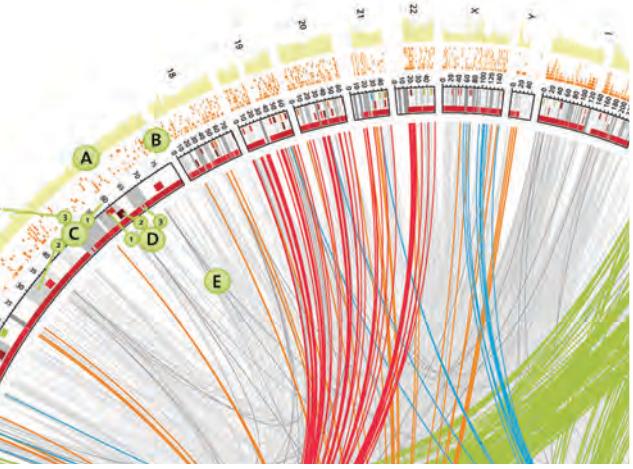




# AGING BY DESIGN UNITED STATES

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# THE WORLD OF CARE IS CHANGING...





AND IT CAN'T  
COME SOON ENOUGH





# SAVVY HEALTHCARE LEADERS UNDERSTAND THAT EXPERIENCE IS KEY



# AGING IN AMERICA





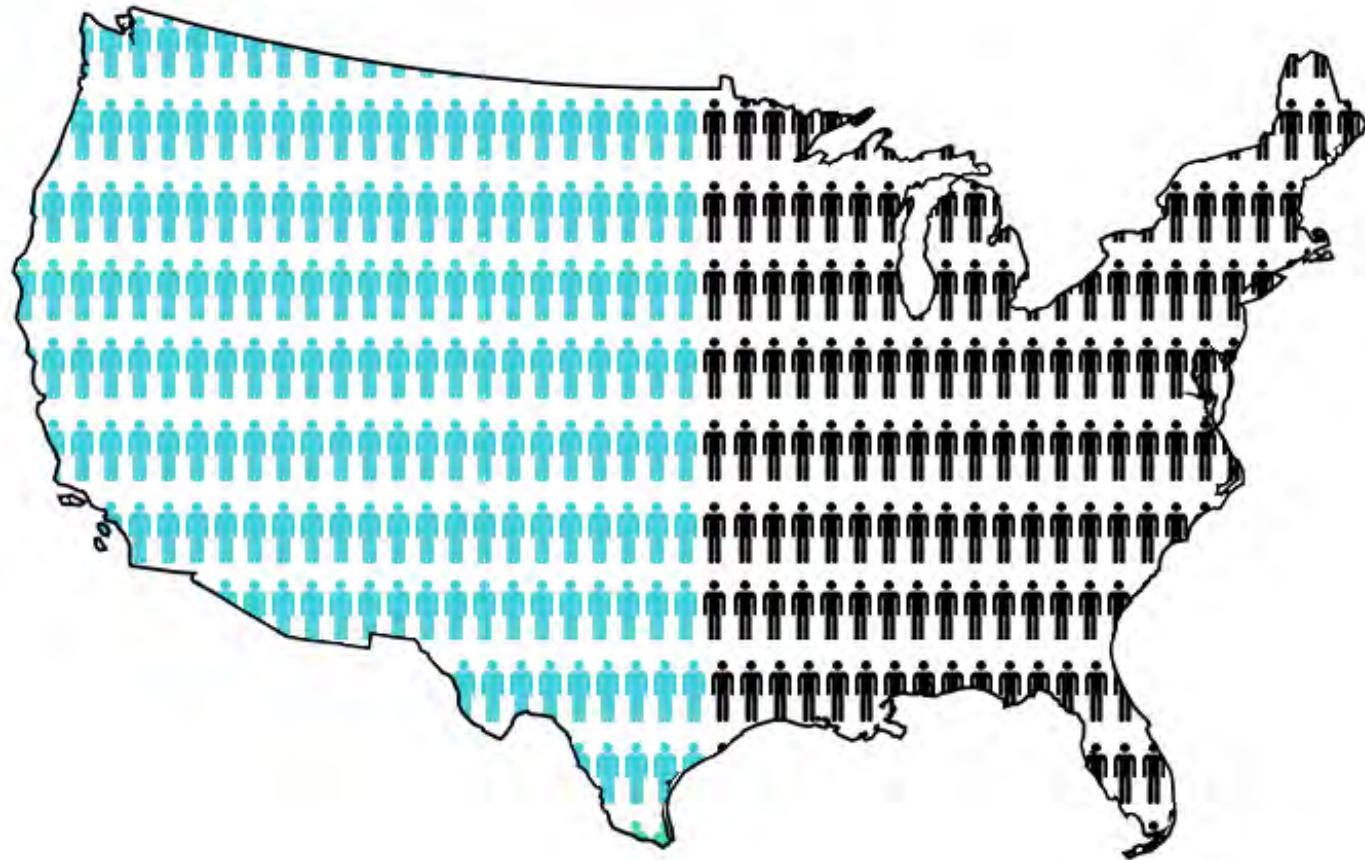
**NOT YOUR EXPECTED ELDERLY**





**2015 = 100M 50+ AMERICANS**





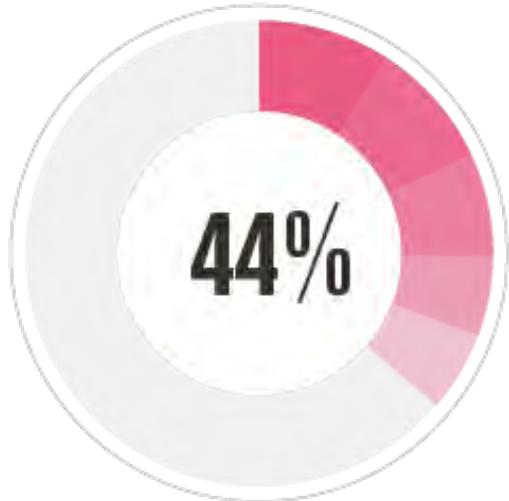
**2030 = 130M 50+ AMERICANS**



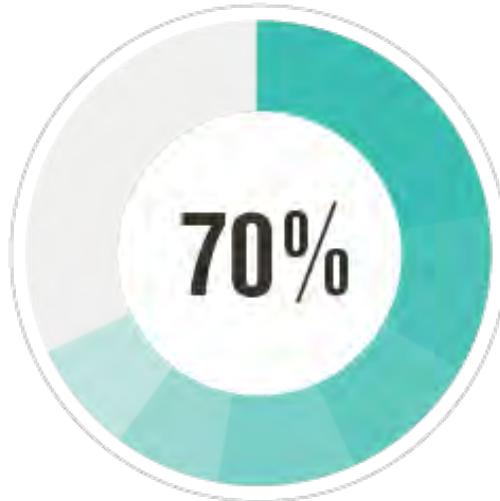
**TV DINNERS &  
MOON LANDINGS.  
CIVIL RIGHTS &  
WOODSTOCK. THE  
POST- WAR PRIVILEGED.**

**THE ORIGINAL  
INNOVATION  
GENERATION.**

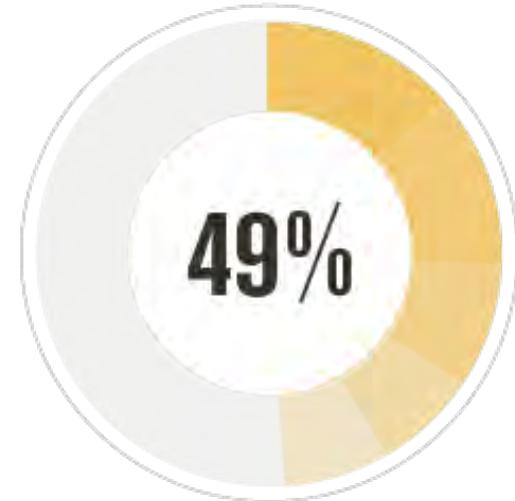




POPULATION



DISPOSABLE INCOME



SPENDING ON CONSUMER GOODS

# BOOMERS ARE BUYERS





**53% of Boomers  
are on Facebook**



A close-up photograph of a man with a full, grey beard and glasses, wearing a dark hoodie. He is looking down at a blue smartphone he is holding in his hands. In the background, there is a colorful, patchwork-style wall and another person sitting at a table. The lighting is warm.

**41% of Apple  
customers are Boomers**



A group of senior citizens are playing basketball in an indoor gymnasium. In the foreground, two men are in focus. One man, wearing a white t-shirt under a black tank top with "COLBURN" and the number "5" on it, is leaning forward with his arms outstretched, attempting to steal the ball from another player. The other man, seen from behind, wears a yellow t-shirt with "BOONE" and the number "33" on it, along with "75+" indicating he is in the 75+ age group. He is holding a red basketball. In the background, several other players are visible, some wearing jerseys with numbers like "1" and "42".

**45% of people aged  
65-74 engage in regular  
physical activity**





**Their kids are caught  
in the middle**



**OVER 90% OF THOSE  
AGE 65 AND UP WANT  
TO STAY IN THEIR  
HOME FOR AS LONG  
AS POSSIBLE.**





NURSING HOMES ARE  
CONSIDERED WORSE THAN DYING



# WHAT RESEARCH SHOWED US





**SOPHIA** has taken care of her husband, Salvadore, for the past 23 years of their 50 year marriage. In 1990, a diabetic episode resulting in a fall completely turned their world upside down. Once the provider for the family, Salvadore now struggles. Even as he retreats, Sophia continues to lead an active and engaged life. Sophia's days are difficult – she must balance her own vitality against the exhausting task of caring for Salvadore's failing health and optimism. Even so, she remains positive; "Friction is fun," she says.





Once the breadwinner for his family, **SALVATORE** now works to make himself participate in the life he used to love. Tremendously dependent on Sophia to care for him, Salvatore is often frustrated and depressed with his inability to take care of himself. The good days are precious to both of them as they reclaim bits of their earlier years - cooking, eating, talking and enjoying small, daily routines. The bad days find Salvatore depressed and argumentative, in both physical and emotional pain.





In her late 80s, **BLANCHE** recently lost her husband of over 50 years, but through her faith, creativity, and zest for life, she's persevered. She plays piano, writes poetry on a typewriter, teaches bible study classes, and collects stuffed animals (she has hundreds). Once a week she drives her car to church, calling it "my day out". She gets about 5 hours of sleep a night because of the pain in her hip. To manage, she's customized two reclining chairs in different rooms and a daybed set up in her kitchen so she can catch her shows on the TV that sits on a countertop.





As the eldest daughter, **VIRGINIA** is the point person for her aging mother's care options. As her caregiver, Virginia concentrated on supporting and loving her mother after her father's death, protecting her from unnecessary arguments and pitfalls as her Alzheimer's became more advanced. Virginia makes the best of her mother's nursing home experience by duplicating precious family jewelry, giving her plenty of books and activities, and bending the truth when it is easier to appease her Mom's increasing confusion and demands.





As the only child, **JAMES** always anticipated being the primary caregiver for his parents. What he hadn't anticipated was how completely and totally his life would be changed as he assumed full care of his mother after his father passed away. No longer able to afford to live on her own, James brought his mother home to live with him. While he would never change this decision, he's very aware of how much of his own life he's had to put on the back burner. Now he wonders, who will take care of him?





# MEET PEOPLE WHERE THEY ARE





# LISTEN TO THEIR STORIES



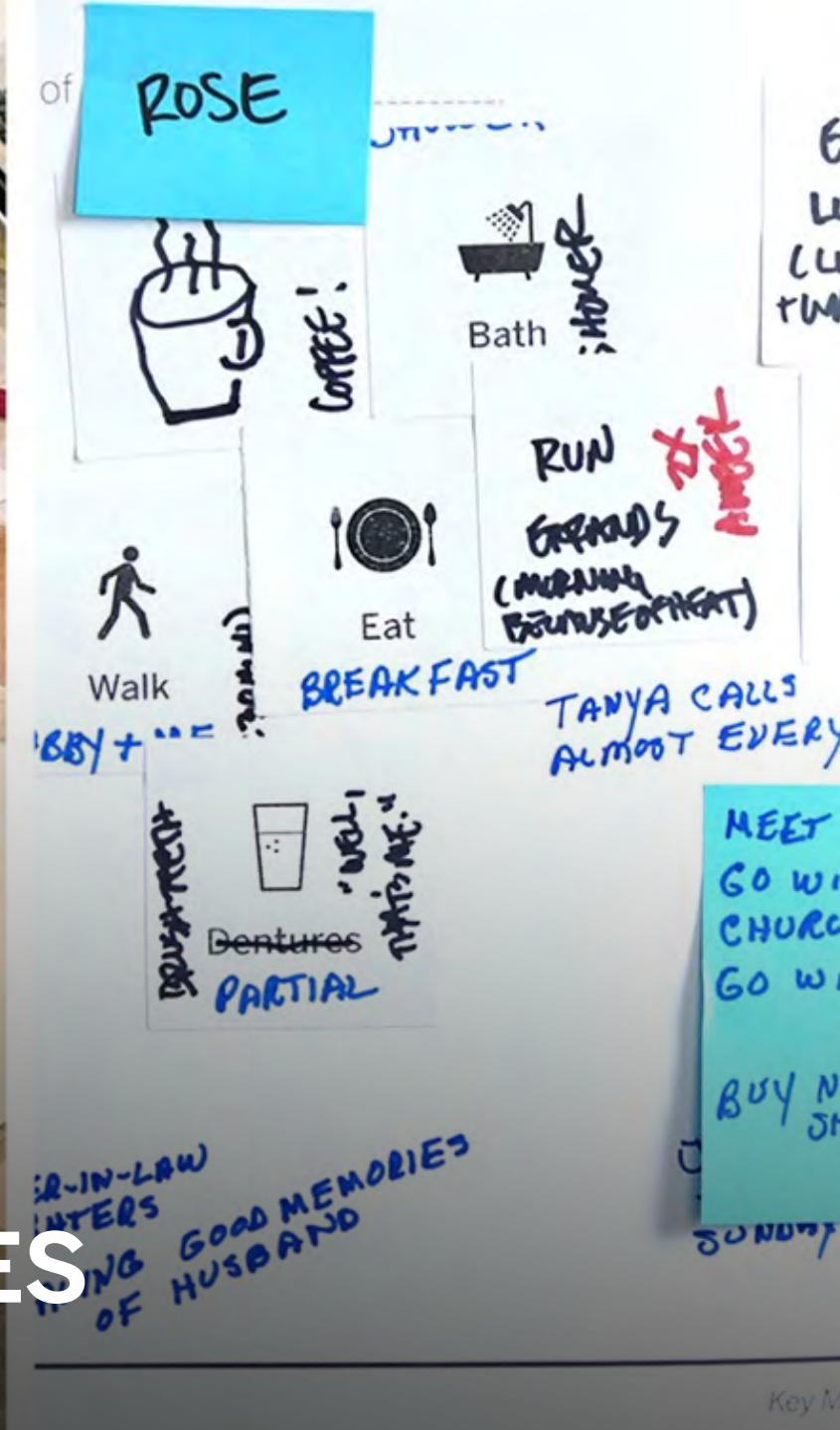


**TRY TO EMPATHIZE**





# EXPLORE THEIR LIVES



Key M

**WHAT SENIORS  
WANT IS CONTROL  
OVER THEMSELVES,  
THEIR SURROUNDINGS  
AND THEIR LIFE  
DECISIONS**



# KEY OBSERVATIONS

1. People want to focus on what they CAN do, not what they CANNOT do.
2. Healthy aging is inextricably linked to social participation.
3. Home, as a lived-in space, is fundamental to the experience of aging.
4. The common perception that seniors are afraid of technology should be viewed with skepticism.



# CORE NEEDS

Four needs emerged across the different seniors we interviewed and provided a foundation for building models to think through the problem (such as archetypes and a journey map) and generate product and service concepts.

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# Senior archetypes (US study)

## THE INDEPENDENT



High functioning and able to stay at home alone.

## THE TRANSITIONER



Mid functioning and recently moved to a senior community.

## THE STRUGGLER



Low functioning and in need of assistance with daily tasks.



# Senior archetypes (with a Chinese spin)

China research highlighted that besides their physical condition, a senior's level of emotional dependency is a significant determinant of the care they will need.

← LEVEL OF EMOTIONAL DEPENDENCY →



**THE AUTONOMOUS**

The autonomous show most awareness and respect of caregivers' needs. They maintain their own network of personal relationships to keep busy and entertained.

*"I don't want to move in with my children because my life is here. I am free to do whatever I want."*



**THE RESPONSIBLE**

The Responsible enjoy to do their own things. They make reasonable requests but expect caregivers to respond right away whenever they need anything.

*"The only help I need from my son is to bring my medicine from hospital to me every week."*



**THE DEPENDENT**

The Dependent are often sensitive and insecure. They tend to be self-absorbed and get upset easily when they don't receive enough attention from caregivers.

*"Why haven't my son and daughter called me today?"*



# Caregiver archetypes (US study)

## THE CAREGIVER



Point person for the family.  
Could be a senior or a member  
of the Sandwich Generation.

## HOME HEALTH PROFESSIONAL

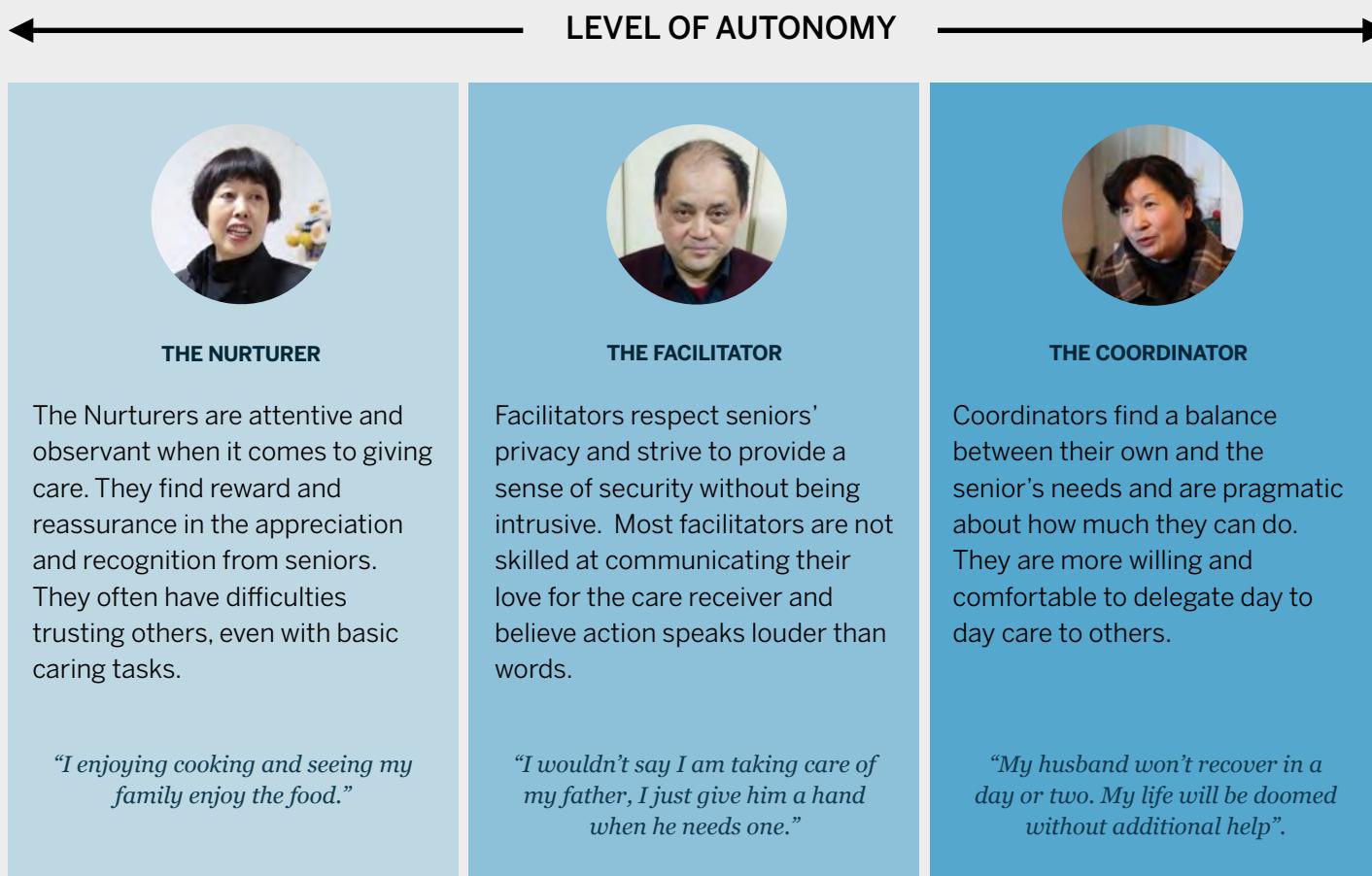


Has the clinical know-how and  
is a bridge to the larger healthcare  
system.

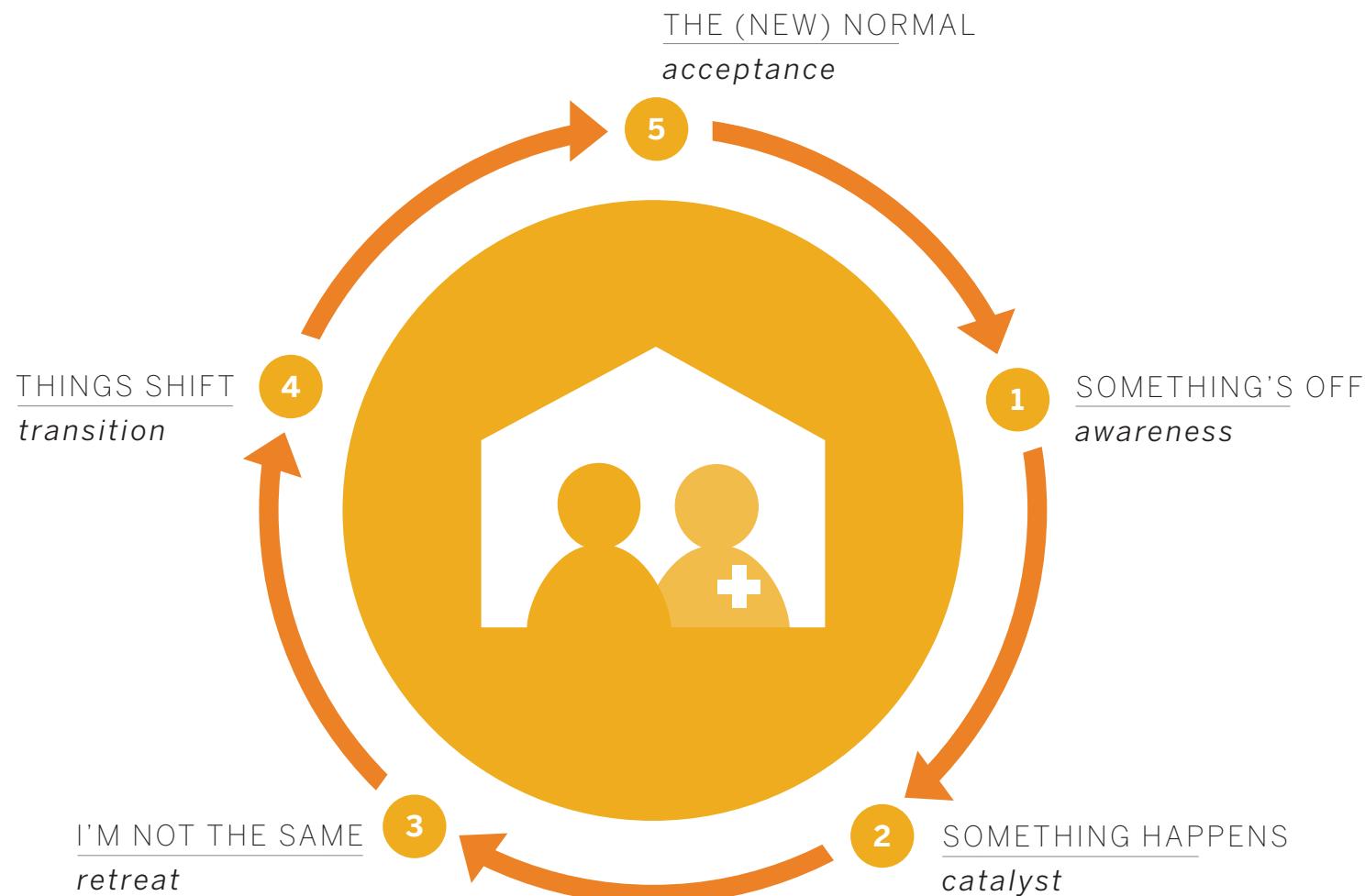


# Caregiver archetypes (with a Chinese spin)

We also found 3 different caregiver archetypes, each displaying different behaviors and attitudes towards caring for their senior.

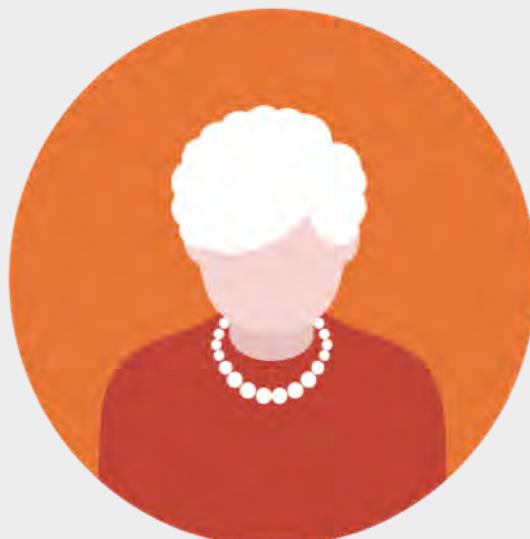


# THE EMOTIONAL JOURNEY OF AGING

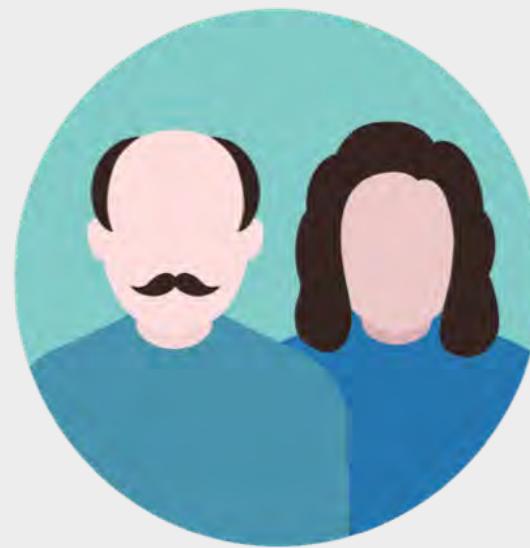


# We expected something like this ...

Governed by the traditional concept of “養兒防老“ (the purpose of raising children is to prepare myself for ageing) seniors expect their children to be their primary caregiver supporting all their needs.



ELDERLY

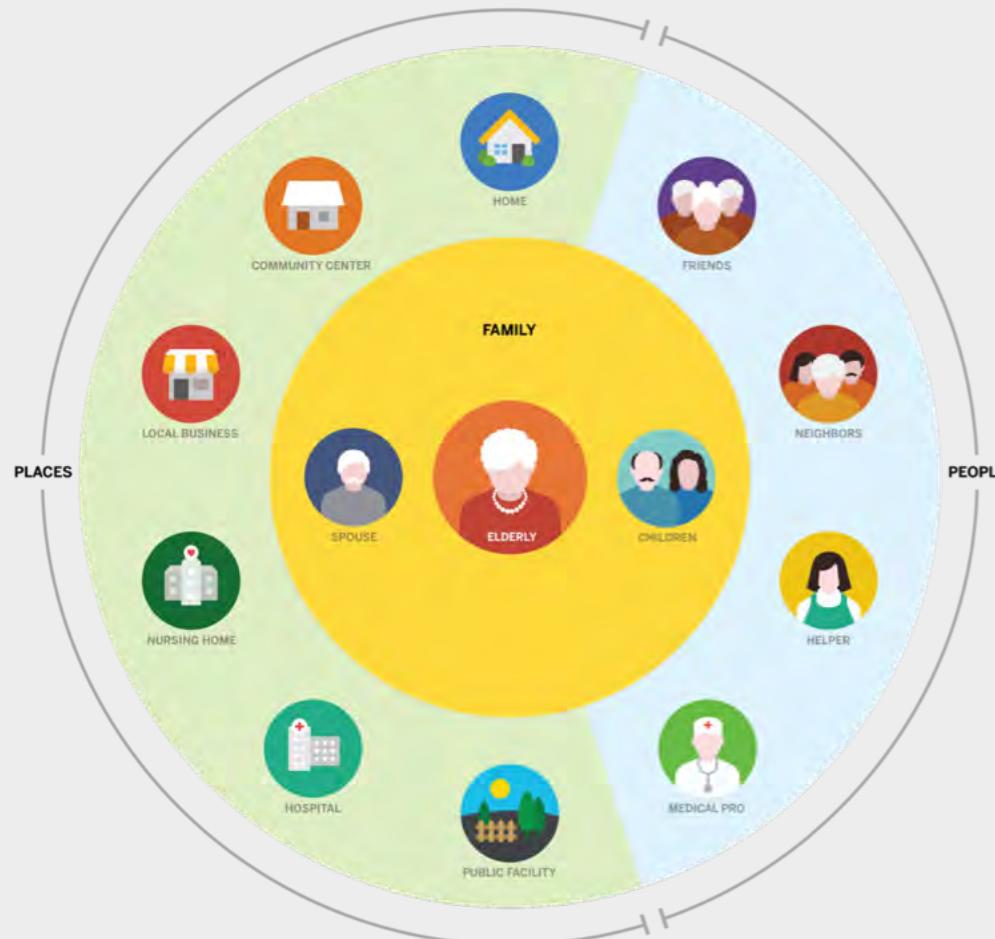


CHILDREN



# ... but it's more like this.

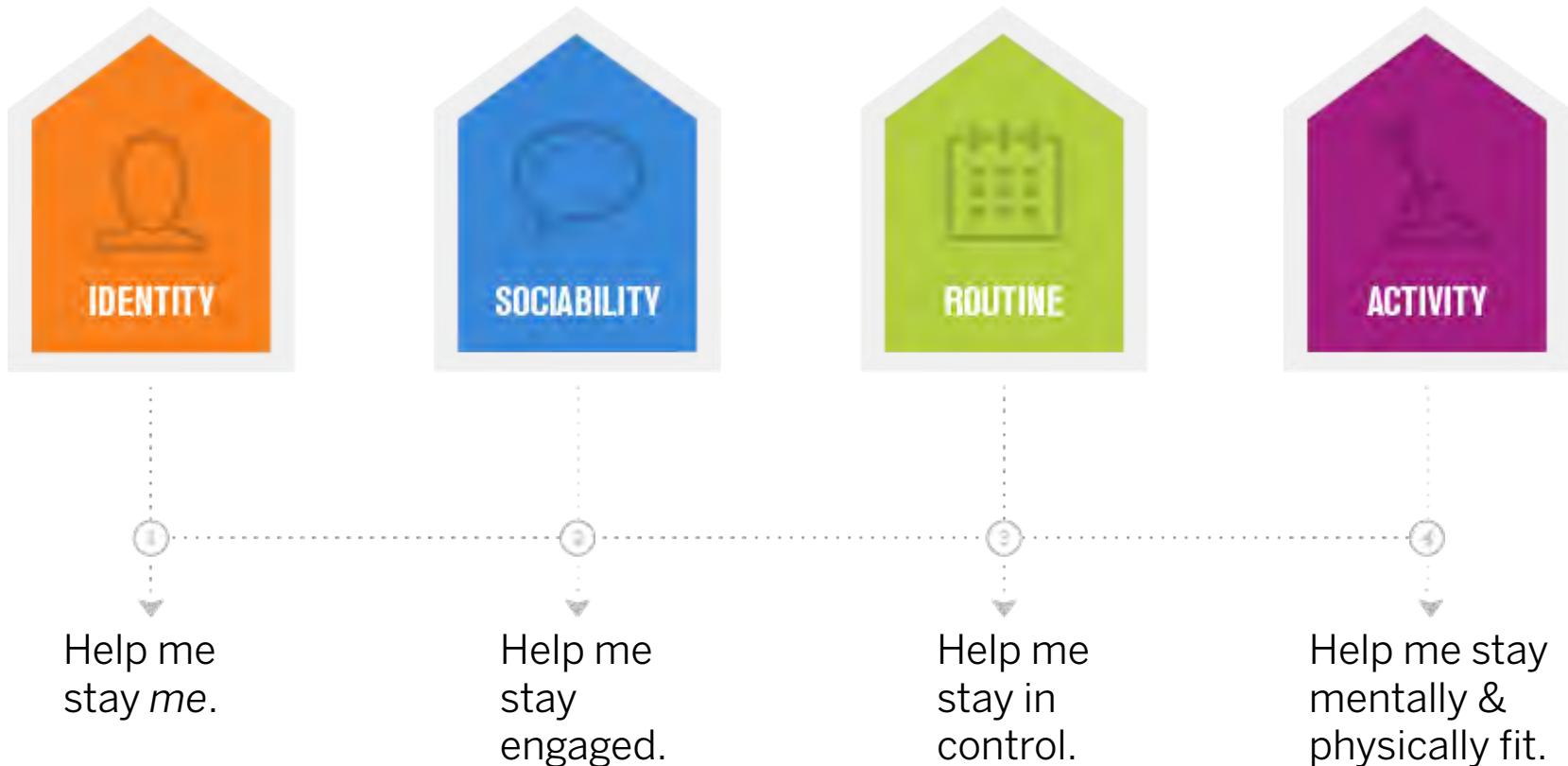
Upon closer look we uncovered that in many cases, it can be a much wider circle of care and influence that is projected on daily life — from housekeeping, errands to money matters and other, more sensitive, decisions. But when it comes to the big problems, family members are the first people seniors reach to for support.



# A FEW FROG CONCEPTS

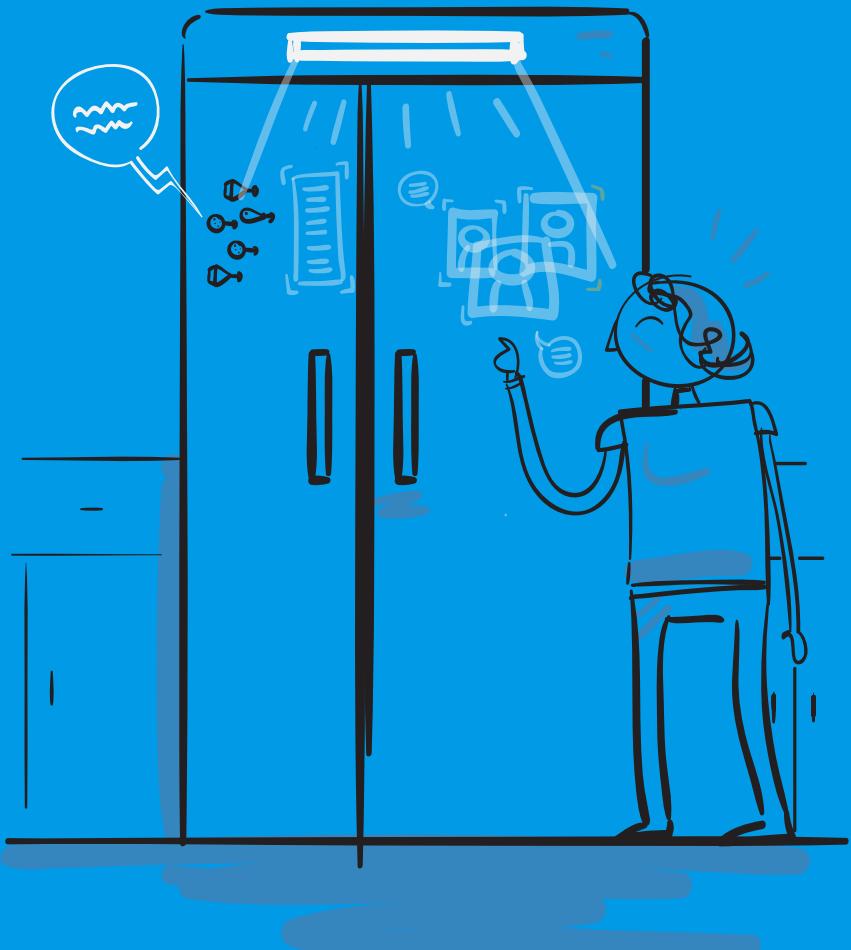


# FIRST, REMEMBER THE CORE NEEDS



# FRIDGE APPS

A simple and fun way for seniors to stay in touch with friends and family, keep track of appointments, manage their diet and keep track of to-do's — all from the “center of the home.”





**DOCTORS  
APPOINTMENT**



**FAMILY  
PHOTOS**



**PHONE  
NUMBERS**

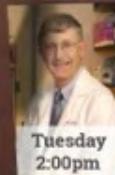


**GRANDCHILDREN'S  
ARTWORK**



MESSAGING

ToDo  
wash dishes  
buy soap



Tuesday  
2:00pm

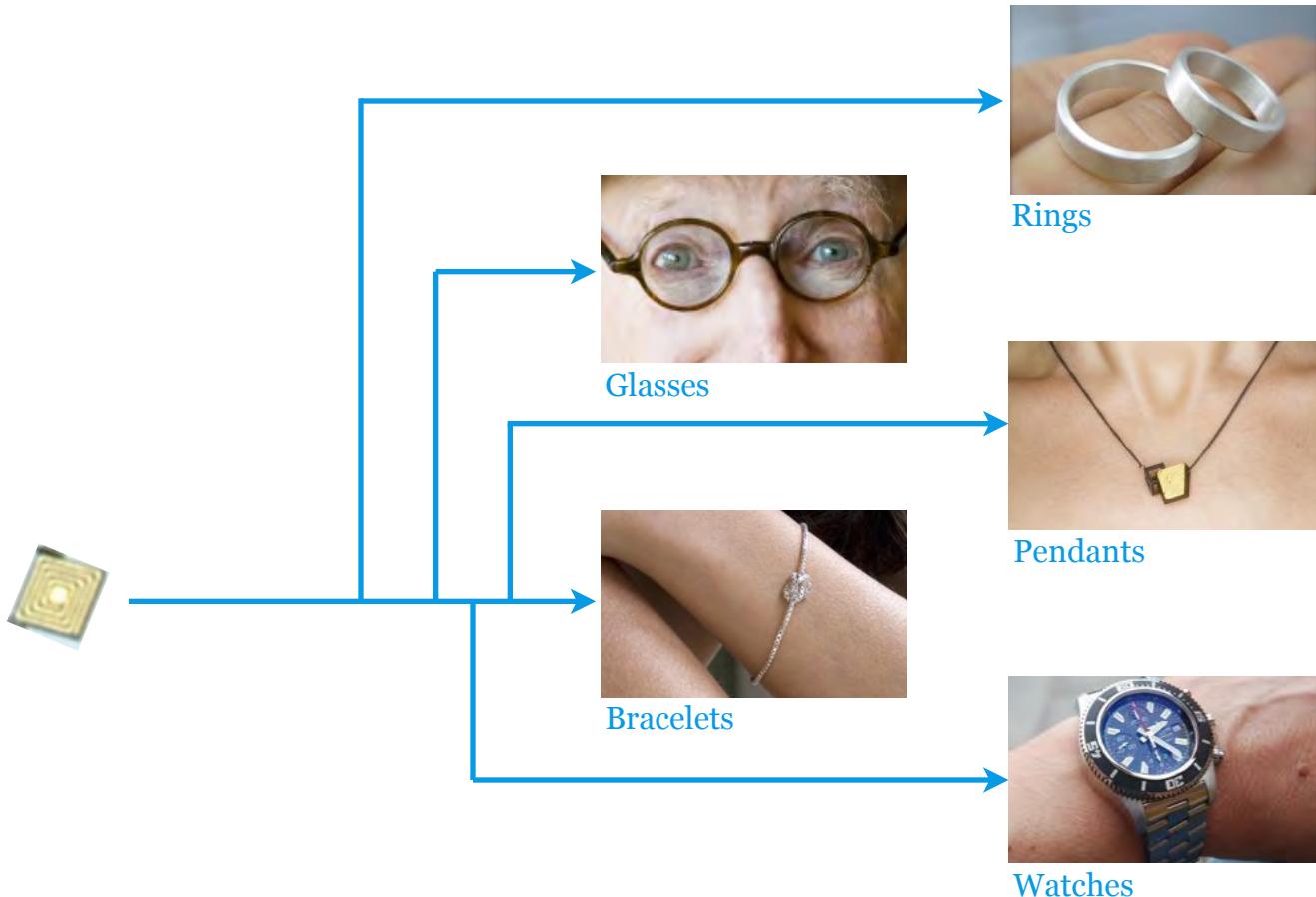


# SAGA

RFID technology securely keeps track of vital information and can be shared by permission. Allows seniors to stay in control of their health information and identity.



# ENCRYPTED RFID TECHNOLOGY



# ENCRYPTED RFID TECHNOLOGY



Vitals & Biometrics



Records & Results



Genomics



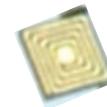
Medication



Care Providers



Cloud Storage



+



Security Gateway







# SNOOZE

Passive biometric data collected while you sleep gives valuable insight into your overall health. Temperature, heart-rate, respiratory rate and activity can all be monitored and tracked over time.





# CUE

A subtle, contextually aware, touch-enabled smart glass application that could help seniors with early stage dementia maintain higher levels of independence and social function.







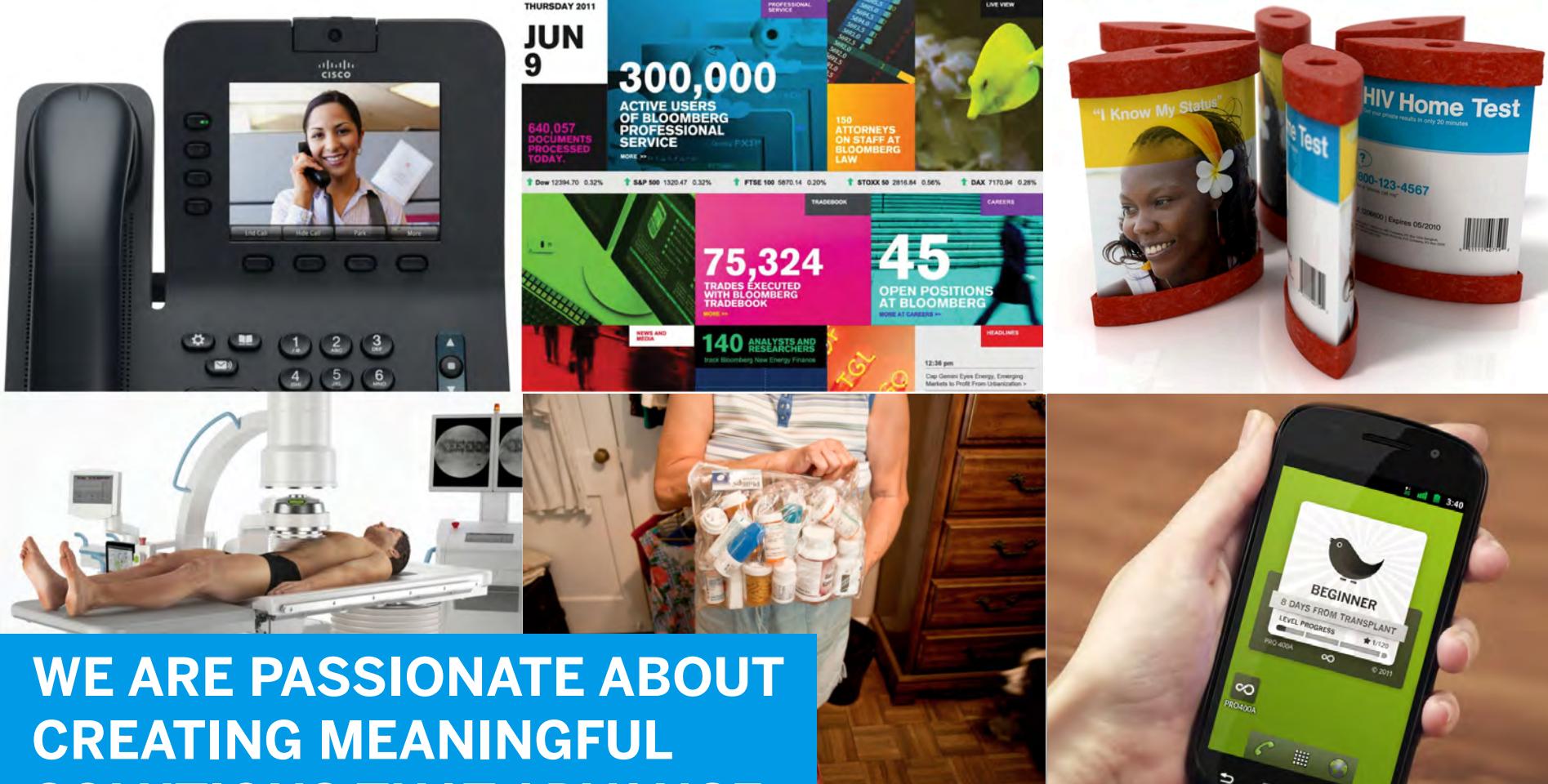
Aarika,  
your niece.

P

1







WE ARE PASSIONATE ABOUT  
CREATING MEANINGFUL  
SOLUTIONS THAT ADVANCE  
THE HUMAN EXPERIENCE.



# **THANK YOU! IT'S BEEN A PLEASURE...**

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Thanks

