Designing for your future self

A collaborative talk by user experience specialists

Meet us

Raina Brody
Senior Researcher

Shelley Thomas
Senior Researcher

Julie Kennedy
Head of UX

Lucy Scott
Senior Researcher

newexperience
smart research for a connected world

Mail Newspapers

What we'll cover

- Meet us
- Meet our users
- Why design for them
- What's different

Break - 20 mins

- How to design better
- Looking to the future
- Discussion

Here’s what the older user of today looks like

Let’s not forget the millions of other older users

- **Limited incomes**
- **Housebound**
- **Restricted mobility**
- **Limited access to technology**

The ‘older population’ is something we’ll ALL be part of

“There was no respect for youth when I was young, and now that I’m old,

There is no respect for age – ***I missed it coming and going****”*

J.B. Priestley

- **Life expectancy and healthy life expectancy increasing**

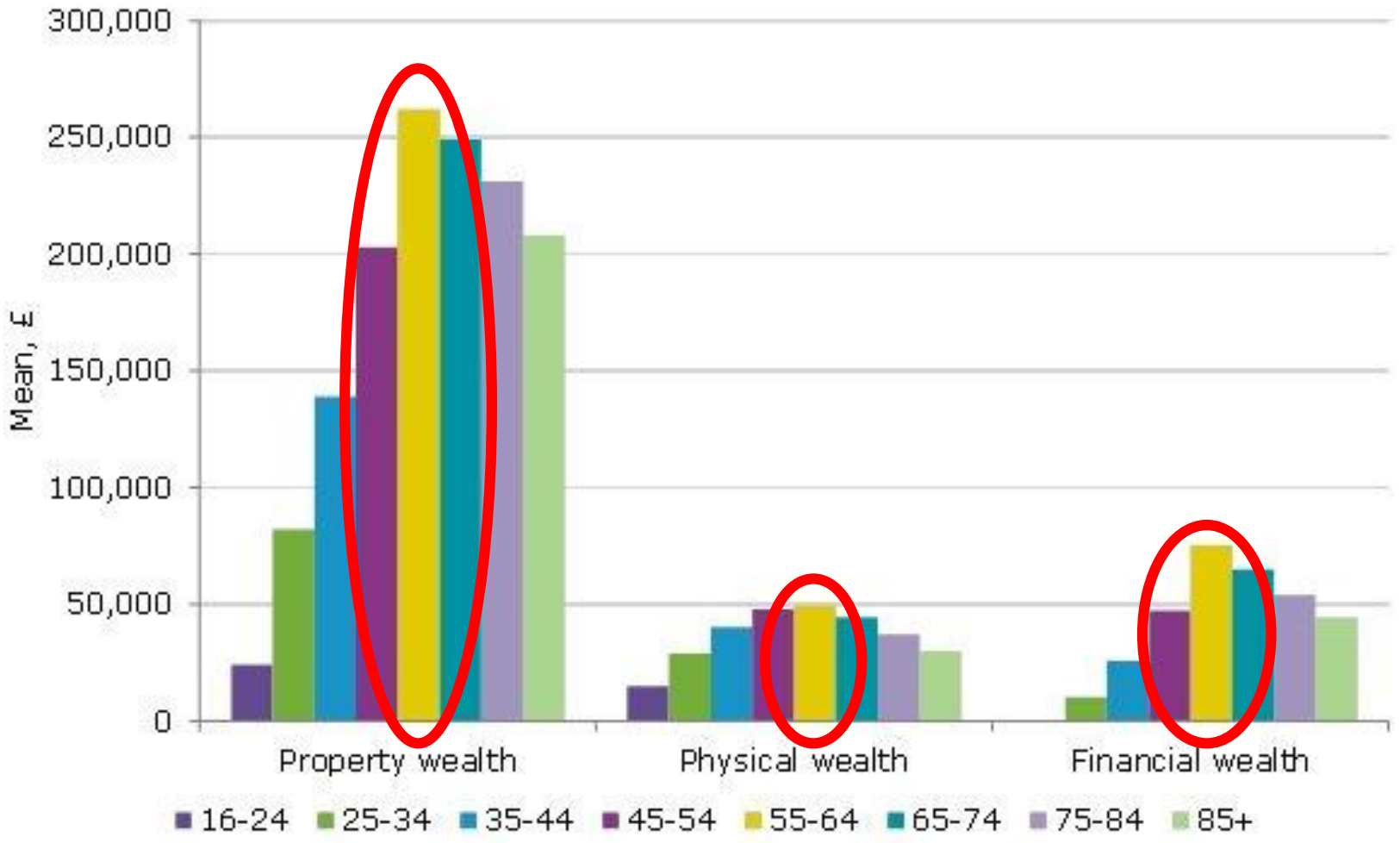
  Over the next 20 years the number of 60’s+ will increase by 40%

- **Value of grey £**

  Spending power of over 65’s (2010) = £76 billion

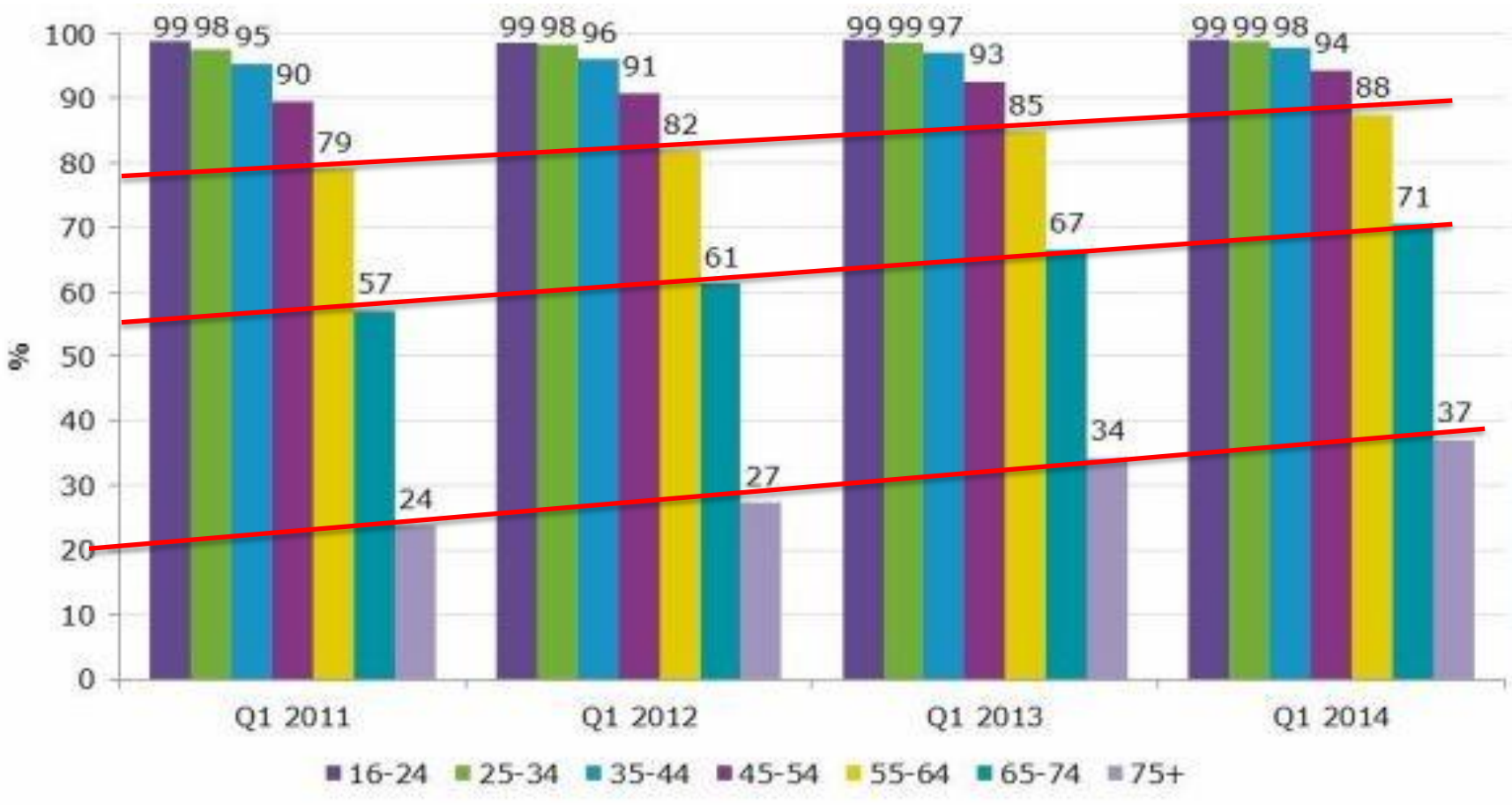
  By 2030 this will grow to £127 billion = growth of 68%

So what does their current wealth look like?



From Mintel 2014

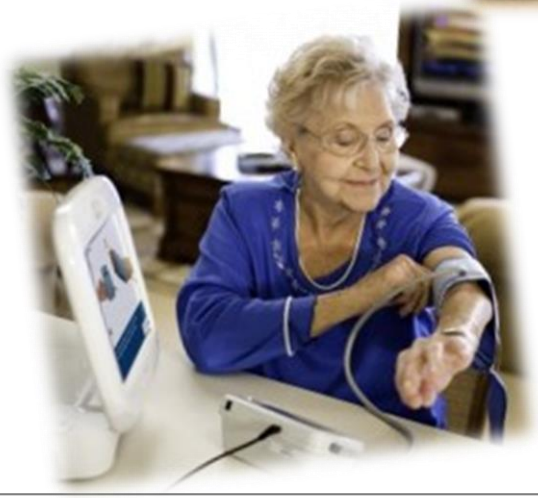
And what does their exposure to the internet look like?



From Mintel - Percentage of adults who have ever accessed the internet, by age, Q1 2011 – Q1 2014
Base: Q1 2011 - 49,847 adults aged 16+, Q1 2012 - 50,277 adults aged 16+, Q1 2013 - 50,617 adults aged 16+, Q1 2014 - 51,039 adults aged 16+

Some facts about the older user and technology?

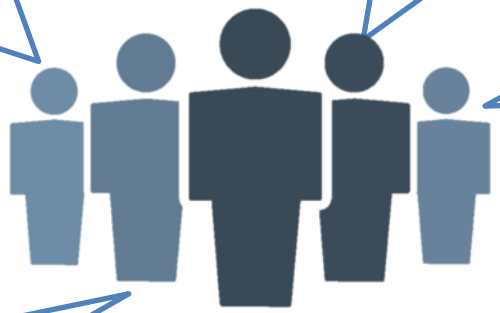
- Number of older adults using tablets to access the internet has trebled for 65-74yrs from 5% in 2012 to 17% now
- Those aged 65-74 are more likely to use a smartphone now with 20% more compared to 12% in 2012
- Key areas of interest are travel, news, watching TV playing games and health
- Some older people that would benefit from online services do not have access or support



Working with clients, how often have you heard the following?

"We assume only younger tech-savvy people will want to use this"

"We don't know any older users who'd want to participate in our studies"



"We don't want to see anybody over 65 in this sample"

"The problem of older users will go away in the next 10 years..."

We don't have the time, money, or expertise to set up and maintain a website that is tailored to the needs of older people

This results in a vicious cycle of exclusion

Why design for this group? A worst case scenario…

"They say adapt or die. At my age, I feel I can't adapt, because the new age is not an age that I grew up to understand."
Anne - 89

Retired British art teacher ends life at Dignitas 'because she couldn't adapt to modern world'

The 89-year-old said she had grown weary of 'swimming against the current' in a world of computers, TV and fast food

AM WITHNALL | Sunday 06 April 2014

SHARE TWEET SHARE REDDIT SHARE

An 89-year-old British woman has killed herself at the Dignitas assisted suicide clinic in Switzerland, in part because she had become fed up with the modern world of emails, TVs, computers and supermarket ready meals.

Speaking in an interview before her death and asking only to be identified as Anne, the former art teacher and Royal Nav... engineer said she had had enough of "swimm... current" of the world.

In her applic...

HEALTH

newexperience
smart research for a connected world

A more typical example of exclusion: ePassport control

Elderly users feel excluded:

- Humiliated and distressed
- Alienated
- Bad service design

So what happens as we age?

Memory and information processing

Hearing

Behaviour and habits

Vision

Physical speed

Hand movement and other physical limitations

How do changes affect memory and processing ability?

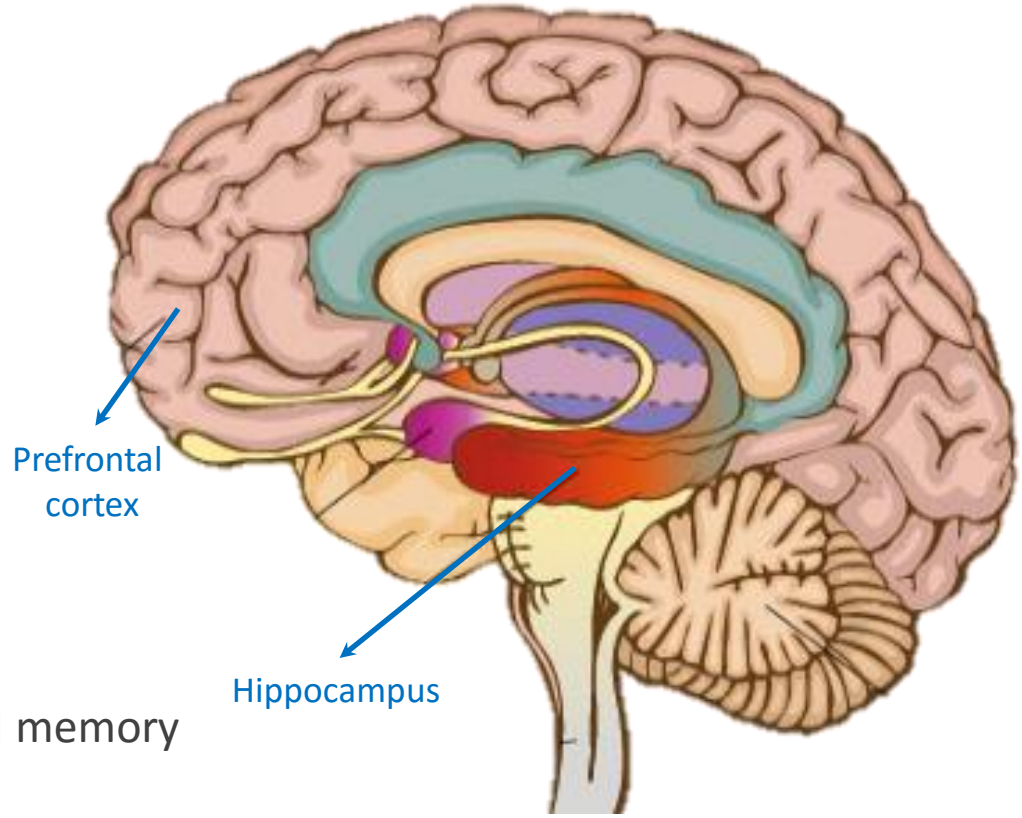
Memory and information processing

Memories are harder to make and recall as we age

- Forgetfulness is common amongst older adults
- Longer to learn and recall information

Declines with age:

- Hippocampus and Prefrontal Cortex
- Hormones and proteins that repair brain cells
- Blood flow to the brain
- Neurotransmitters vital to learning and memory
- Efficiency of absorbing brain-enhancing nutrients



Changes in memory make noticeable changes in behaviour

Because older brains have:

- Slower processing speeds
- Reduced processing resources
- Diminished filtering

Older users are often:

- Slower and more methodical
- More likely to read all information
- Susceptible to issues of cognitive load
- Need more help learning new skills
- Reluctant to try new things
- More likely to use search engines to save time
- Twice as likely to give up on a task
- Assign blame to themselves

How do changes affect sight and vision?

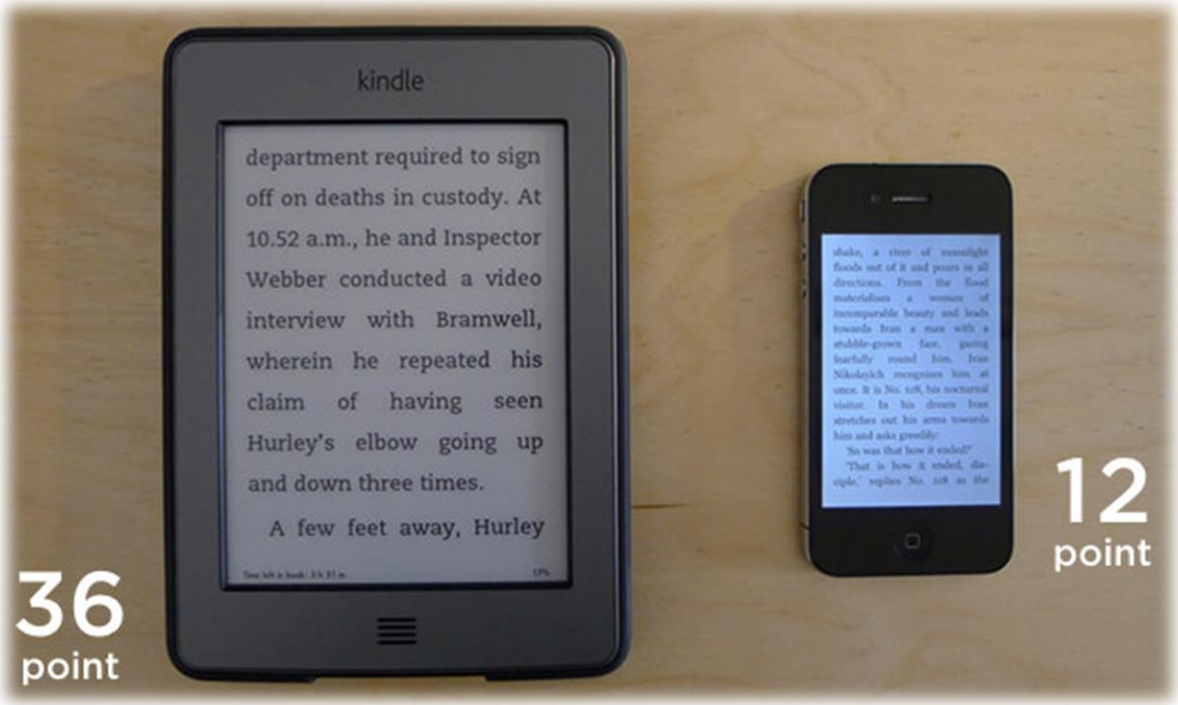
Changes in vision accelerate with age

What happens:

- More difficult to see objects clearly
- Over 85, one in 20 are legally blind
- Presbyopia – long-sightedness caused by lens hardening
- Pupil shrinkage - require more light
- Loss of peripheral vision - decreased by 25% by 80 years
- Contrast sensitivity diminishes from 40 years - reduced by 83% by 80 years
- Half of all over 65 years have cataracts

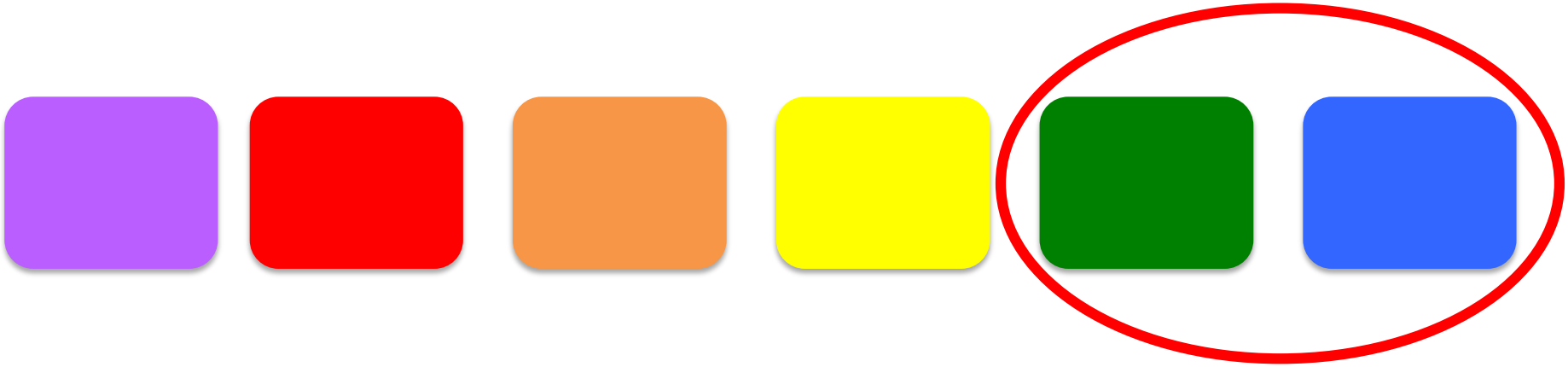
How macular degeneration effects vision over time

Changeable font sizes are critical for ease of use



Colour blindness increases with age

Which of these colours are typically more difficult for older users to accurately distinguish?



So what happens as we age?

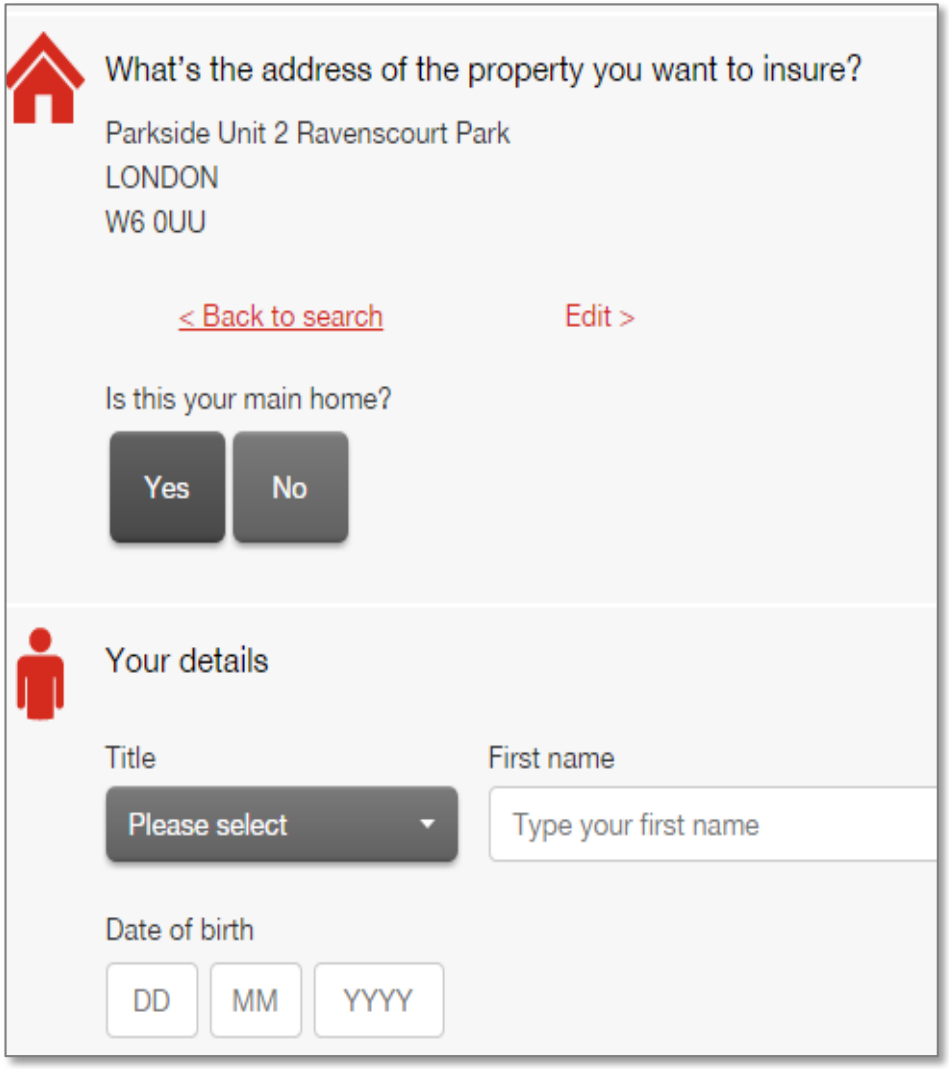
Physical speed

Older users do things more slowly and deliberately

Research on a new Home quote process showed older users had difficulty clicking simple buttons; they didn't click fast enough to be recognised

Older users often take longer to do things:

- Timeouts
- Session lengths
- Other time-based assumptions



So what happens as we age?

Hand movement and other physical limitations

Elderly users often experience difficulties with their hands

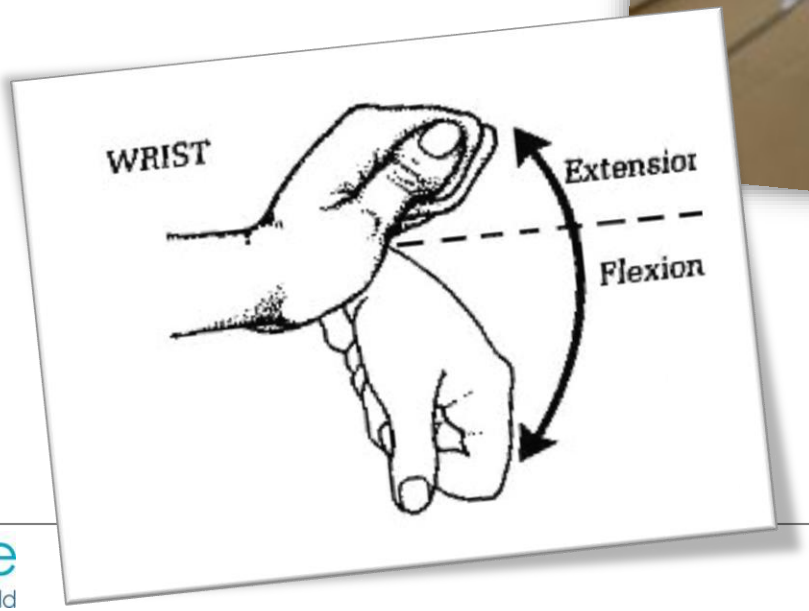
- Arthritis is a common disability in the 55+ age group
- Joints: causes painful degeneration
- Mobility: severely restricted
- Dexterity: limiting, operating controls and switches, gripping objects such as door knobs and using tools
- Small objects: poor ability to handle very small objects: mouse, phones, hearing aids
- Slower task times

Arthritis

Just observing older users can inspire simple design changes

Studies in ironing:

- Physical limitations affecting range of motion, fine motor control or increased fatigue in everyday tasks
- Older users sometimes needed to sit down due to fatigue, yet ironing boards aren't designed for seated use
- The horizontal position of the hot plate also requires repeated extension of the wrist when in use – not good for arthritis



Older and younger people gesture differently...

Research: new touch screen UI

- Huge gesture-based age divide
  - Younger users: no problem
  - Older users: nearly impossible

- Physical movement changes with age

- Extreme programming and older / younger friendship pairs to see differences

"It's like a doorbell, you assume you have to press it long and hard to get someone to hear you"

Designers make assumptions about elderly users

Designers don't always design with specific scenarios in mind:

Trials with elderly users of mobility scooters on board London buses:

- Showed limited judgement, slow reactions, limited mobility (neck, upper body)
- Struggled to use multiple skills at the same time, that we take for granted
- Risking themselves and others
- Scooter is a lifeline

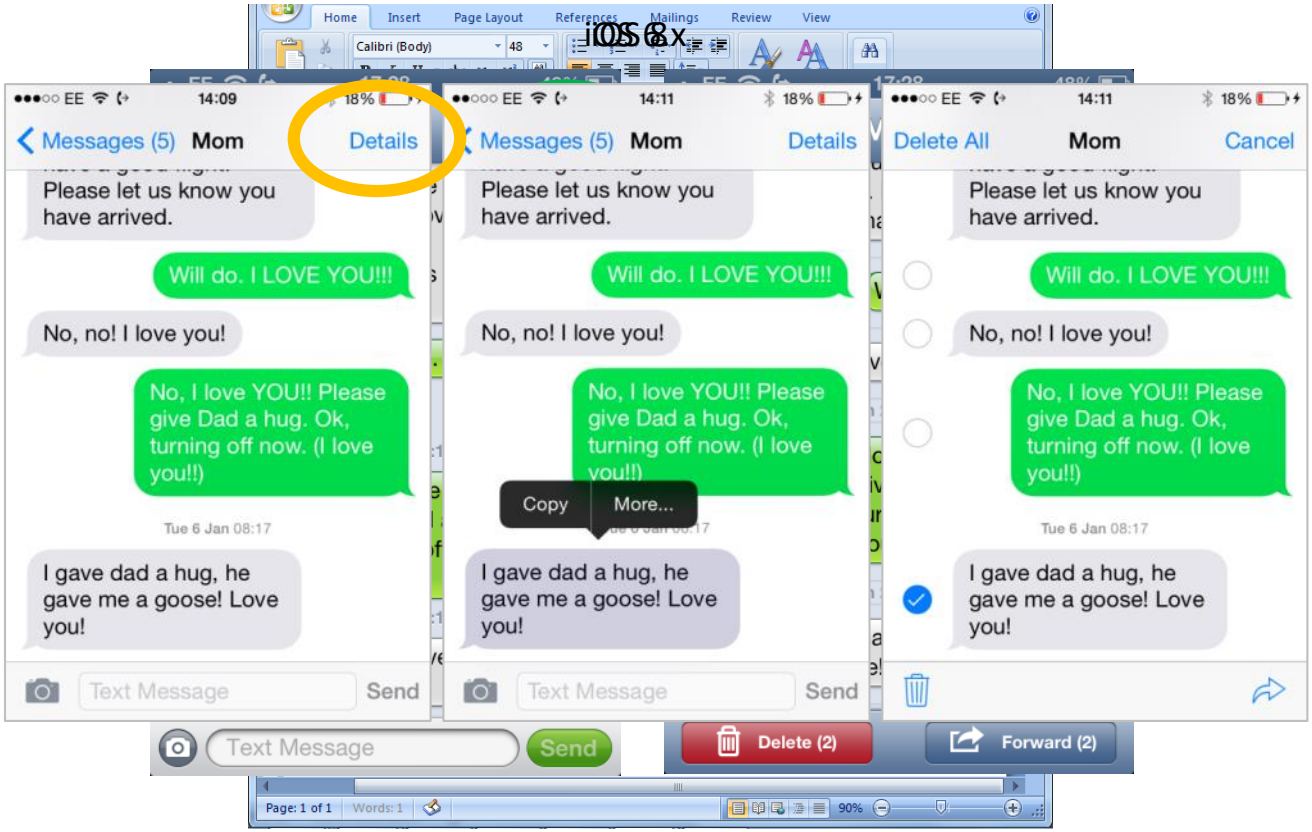
So what changes as we age?

Behaviour and habits

Designs need better cues for feature discovery by older users

Older users do not easily discover features that are not marked (or hinted at):

- Have less working knowledge of trends and what is possible in tech
- Need to prompt discovery of off-screen features and functions



Youth based assumptions... your day isn't like everyone else's

'Design' features which benefit working-age people are problematic for retirees

- Weekdays vs. Weekends programme unnecessary - no predictability around the 'working week'
- Don't let implicit design functions imply 'older people, this is not for you'

"There is no sense in having a weekend setting – for me every day is the same"

Heavens!

That's a lot of stuff…

Come back in 20 minutes to find out what you can do about it

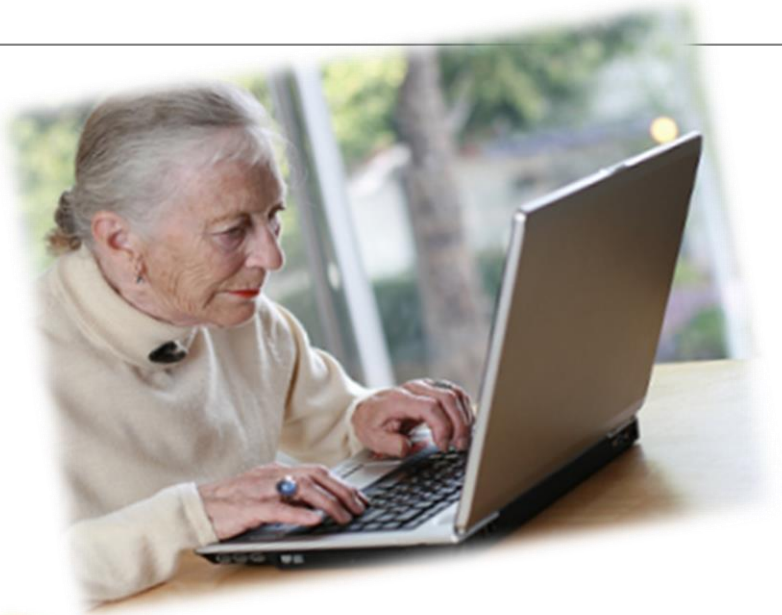
Making it better

A lot of people in the tech industry talk about
"changing the world" *and* ***"making people's lives better."***

- Bad design excludes sections of the older population from the benefits of technology.
- If you're a designer, developer, user researcher - you can help change that…
- Following some simple principles, you can create more inclusive products that work better for everyone, especially the people who need them the most.

Start with product strategy

- Make the argument for inclusion:
  - Lots of them, growing population
  - Available cash
  - Loyal once hooked
- Get product teams exposed to older users during design and development
- Understand needs of older user groups (and how they differ from younger)
- Use easy ethnographic and guerrilla tactics
- Include a +70 sample in research
- Older/younger friendship pairs in research to highlight differences



When running usability research with older users

Preparation

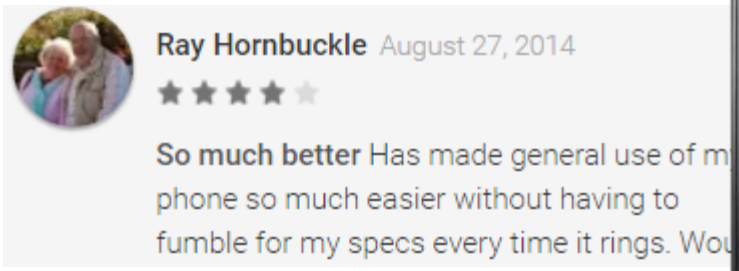
- Avoid anxiety
- Replicate home environment
- Provide pen and paper to make notes
- Make participants feel comfortable
- Stress that you are not testing them
- Clear up-front information

In session

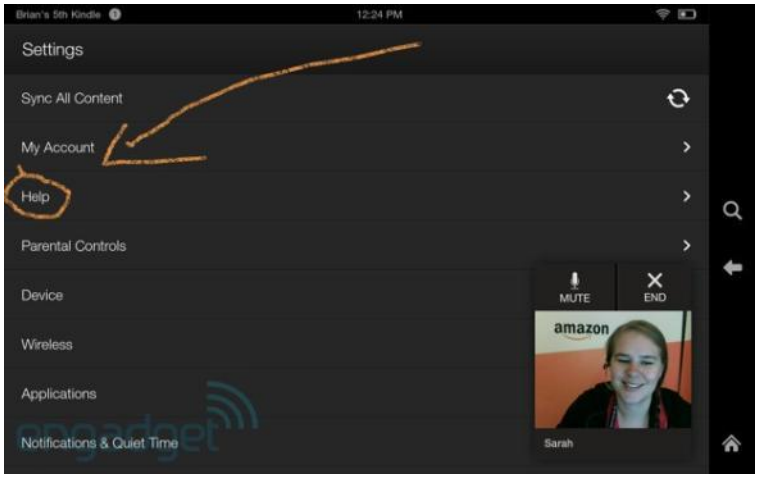
- Keep focus
- Avoid technical jargon
- Allow for extra time and let them think
- Remind them it's the system's fault; not yours

Interaction design: ways to consider older users

- Older users often take longer to do things; time-based actions or processes need adjustment
- Consider physical speed and dexterity in the design process
- Off-screen options and functionality should have an obvious visual cue
- Don’t let implicit design functions imply ‘older people, this is not for you’
- Allow for easy and obvious control of text / image size
- Design products with 3rd party helpers in mind
- Stay in one window on websites



Android:
Big Launcher



Amazon Fire: Mayday

Keep the following in the back of your mind

CHECKLIST:

Remember the basics

- Clear paragraphs, headings, links
- Maintain consistency throughout
- Provide feedback on clicked links
- Design for colour blindness
- Make obvious – click, tap
- Make scanning easier
- Provide explicit instructions e.g. ‘Read more...’
- Evoke trust
- Don’t be afraid of shadow and light sources

Technology can help older users stay independent longer

Technology is helping people who aren't able to do what they used to with things like shopping, driving and communications – **GET INSPIRED!**

Technology can help augment lost senses

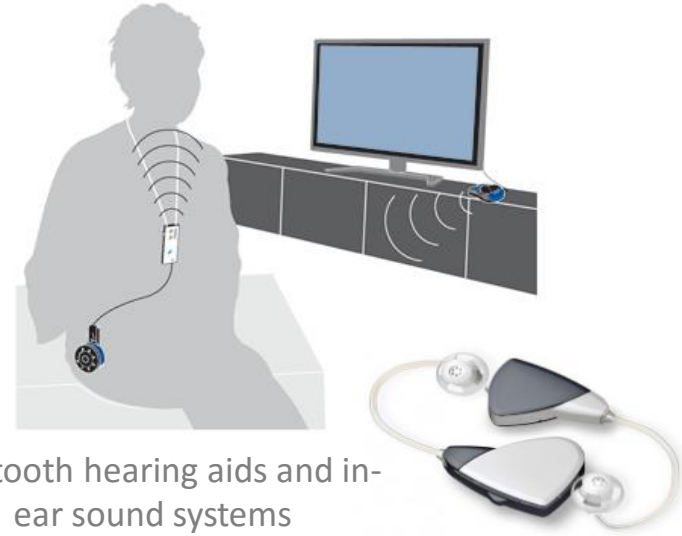
Technology to be the eyes and ears by helping older people who lose hearing or sight continue to enjoy doing things they used to

Pulse vibrating wristband, Lechal shoe for navigation

Audiobook libraries accessible anywhere

Empatica seizure predicting wristband

The Google Lens (illness treating)



Bluetooth hearing aids and in-ear sound systems

Technology can help elderly users to remain ‘medically safe’

Medication monitoring

Medminder Pill Dispenser, and Protius Biotech’s smart tablets

Medical alarms

Phillips Lifeline

Home care monitoring systems

“Your mother hasn’t moved for a while...”

CanaryCare sensor system

Technology can help make sure you‘re never ‘lost’

GPS Shoes embedded with GPS trackers help find a person with Alzheimer’s or Dementia

Technology can reduce social isolation: CNA speaking exchange

Launch video

It starts with us.

If you pay attention, others will too…

Technology can be a force for change in the way we treat older people.

Stop discounting them, and start including them.

…Your future self

Thank you