Smartline: A new vision for health and housing

Wednesday 16 November, St Austell Conference Centre & Online

WELCOME
Welcome & Introduction

Belinda Broughton, Smartline Project Manager, University of Exeter
House Keeping

St Austell Conference Centre

Please:
➢ Sign in, if you have not already done so
➢ Sign a photography consent form, if you have not already done so
➢ Consider venue COVID guidelines when moving around and use antibacterial hand-gel where provided
➢ Raise your hand to put questions to Q&A session moderator

If the fire alarm sounds, this is not a drill, make your way out of the building to the muster point in the front car park.

Toilets can be found on each floor.

Online
To submit a question online visit www.slido.com
Enter the code 1300740

This meeting will be recorded

WIFI CODE
Network: SAPC_Guest
Password: Austell1981
Event Programme

**Morning Session:**
- 9:30 Registration
- 10:00 Welcome & Introduction
- 10:05 The Story of Smartline
- 10:15 Technology in Housing Keynote, George Grant
- 10:40 Session 1 Sensing the Home
- 11:20 Break
- 11:50 Session 2 Enterprise & Community Engagement
- 12:30 Lunch

**Afternoon Session:**
- 13:30 Digital Inclusion Keynote, Helen Milner OBE
- 14:00 Session 3 Digital Inclusion
- 14:45 Q&A Panel Discussion
- 15:15 Closing Remarks
- 15:30 Event closes
Event Engagement

• Vimeo for online delegates.
• Online questions on Slido

• WIFI Network: SAPC_Guest
  Password: Austell1981

• Via twitter #wearesmartline
What to expect today

• Keynote speakers: George Grant & Helen Milner providing context and vision.

• Diverse and wide ranging presentations and discussions.

By the end,
• Informed, engaged, challenged and motivated
Why are we here?

People with higher socio-economic position in society have a greater array of life chances and more opportunities to lead a flourishing life. They also have better health.

(Marmot 2010)

Poor housing conditions continue to harm health in England and widen health inequalities.

(Marmot 2020)
Why is this important

• Poorest communities have 20 years less ‘good life expectancy’ than richest (ONS).

• Poor housing conditions have a detrimental impact on health, costing the NHS at least £600 million per year. (Parliamentary Office Science and Technology)

• In UK, 10 mill people digitally excluded, 1in3 are social housing tenants (Lloyds Bank, HACT)
Have things changed?

- English Housing Survey (2020-21):
  - 4 million homes failed to meet the Decent Homes Standard
  - Well-being levels have declined and loneliness increased
  - 839,000 homes report problems with damp
Smartline

• Smartline Partnership working together since 2017

• Funded by ERDF and Cornwall Council

• Role of digital technology in maintaining healthy homes and connected communities to support and improve health and wellbeing of individuals and families.
Keynote

George Grant
CEO, Broadcaster, Publisher and Founder
Housing Technology
1 MILLION+ PROPERTIES

ANNUAL TURNOVER APPROX £7 BILLION

85+ HOUSING PROVIDERS

2 MILLION+ TENANTS

100+ RESPONDENTS
What do you need to be thinking about?
What do you need to be thinking about?

DATA MANAGEMENT
25%

DIGITAL TRANSFORMATION
17%

DECARBONISATION & NET ZERO
10% CO₂

BUSINESS IMPROVEMENT, TENANT SERVICES & ASSET MANAGEMENT
How are you going to do it?
How are you going to do it?

+ BUY THE RIGHT INGREDIENTS...

...SECURITY, AUTOMATION & APIs
& A SPRINKLING OF HMS/FMS, SELF-SERVICE & COLLABORATION
Which tech should you be looking at?
Which tech should you be looking at?

- Steady state
- Solid growth
- Emerging markets
It’s all in the data...
It’s all in the data...

96% Culture & Behaviour

94% No Integration & Duplicated Data

78% Regulatory Compliance

92% Spreadsheets & Siloes

86% Data Hoarding

94% Maintenance
Joining everything together
(no more spaghetti...)

The E-State of Housing | Market Intelligence | November 2022 | housing-technology.com
Joining everything together
(no more spaghetti...)

92% SILOED APPS
90% LACK OF APIs
89% LEGACY SYSTEMS
88% DATA FORMATS
82% IN-HOUSE EXPERTISE
74% BUDGET
Are you doing as you’re told?
Are you doing as you’re told?

- Reporting: 81%
- Finance & Budgets: 73%
- Cultural & Behaviour: 87%
- Situational Awareness: 69%
- Data Management: 92%
- In-House Resources: 88%
How will your tech be delivered?
How will your tech be delivered?

- All cloud, no on-prem
What’s your piggy bank looking like?
What’s your piggy bank looking like?

- **Budgets are rising**
- **Most spending is up 25 per cent**
- **One in ten with 50 per cent rises**
- **Minority face decreases**
Let’s talk about the worldwide housing crisis
Let’s talk about the worldwide housing crisis

Melting pot of bus/tech talents and the homes of the future
Join us at the nexus of politics, finance, technology & culture

1.5 BILLION PEOPLE WITH NO HOME (UN)
3 BILLION HOMELESS BY 2050 (UN)
300,000 HOMELESS IN UK (SHELTER)
4 MILLION UK SOCIAL HOUSING TENANTS
Housing Technology by numbers
Thank you
Session 1: Sensing the Home

The role and value of remote environment monitoring technology to create healthy homes and improve health & wellbeing

Chaired by Joy Ashman Housing Strategy, Partnerships & Engagement Officer, Cornwall Council

with Dr Tamaryn Menneer, Dr Tim Walker, Dr Richard Woods, Research Fellows, University of Exeter and Anthony Ball, Public Health Practitioner Wider Determinants & Fuel Poverty, Cornwall Council
Session Overview: Sensing the Home

1. Participants and sensor network
2. Improving homes and health with sensor systems
3. Sensor data research
4. Smartline sensor dataset
- 300 participants from social housing
- Installed sensors in all homes and completed surveys with participants
Survey data

- 95% white
- Two thirds female
- Average age 56
- One fifth no Internet
- 19.5 hours per day at home
Sensor data
- Temperature
- Humidity
- VOCs, PM2.5
- External
- Utilities
The indoor environment

- 80% of our time indoors
- Public health problems
- Home monitoring
Improving homes and health with sensor systems

Are they acceptable?
Are they effective?

Dr Tim Walker
TEST PROPERTY

TEMPERATURE

Front Room

Last reading: 21.2 °C
Yesterday: 21.5 °C (Wed 08-06-2022)
This week: 21.5 °C (From Mon 06-06-2022)
This month: 21.6 °C (June)
This year: 21.9 °C (2022)

Current status: Comfort Zone
This is in the ideal temperature range.

Bedroom

Last reading: 21.6 °C
Yesterday: 21.9 °C (Wed 08-06-2022)
This week: 22.0 °C (From Mon 06-06-2022)
This month: 22.3 °C (June)
This year: 22.1 °C (2022)

Current status: Comfort Zone
This is in the ideal temperature range.
Co-Creation
Real-Life Setting
Multi-Stakeholder Participation
Multi-Method Approaches
User Engagement

LIVING LAB
Occupant Dashboard (intuitive):

- Traffic light colour-coding to communicate risk;
- Explanations;
- Tips and advice;
- Timescales for plots.

**High (between 1000 and 10000 ppb)**
Some types of VOC can cause health problems at high levels. Try opening a window to ventilate your home or using less cleaning products and cosmetic sprays.

**Very High (over 10000 ppb)**
Very high levels of VOCs for prolonged periods of time can have serious effects on health. Try opening windows to ventilate your home and using less cleaning/cosmetic and DIY products that contribute to air pollution.

---

**Potentially harmful gases in the air (Volatile Organic Compounds - VOCs)**

- Last reading: 61.0 ppb

**Introduction to VOCs in the Home**

VOCs are gases emitted by a wide variety of things commonly found in the home. Paints and varnishes, cleaning products, furnishings and cosmetics can all contribute to the level of VOCs. As such, concentrations of many VOCs can be up to ten times higher indoors than outdoors.

Some VOCs can cause lung irritation, especially in children. They can also make respiratory allergy symptoms worse, such as asthma. Common short-
Coastline Dashboard (risk focused):

- ‘birds-eye’ view of all properties;
- Colour coded;
- Sortable;
- Detailed views.
Value and Challenges of Co-design

**Value:**
- Practical wisdom on what is sensible to pursue, rather than technologically possible;
- Increase system usefulness though tailoring to user needs;
- Fun.

**Challenges:**
- Recruiting a diverse user testing group;
- Requires a team with diverse skills;
- Implementation of all the new ideas.
Research Questions

Was the system acceptable?

Was the system used?

Was the system useful?
Acceptability

Attitudes:
• Ability of sensors to reveal behaviours and lifestyle choices;
  = Fear of privacy intrusion and data misuse.

Other acceptability factors:
• Perceived usefulness;
• Technical support;
• Ease of use;
• Cost.
Was the system acceptable?

Positive attitudes:
• General concern for privacy and data use;
• Trusting relationship with Coastline;
• Coastline perceived as having credible intentions for data use.

“Welcome to share my data with Coastline, I have been a long standing tenant and they have been good to me”

(Martha, 62)

Perceived as useful:
• Improve design and management of future social housing;
• Although, no health related expectations.

“Looking after you, not at you”
Project tag line
Was the system used?

**Occupant Use:**
- High intention to use initially;
- Low long term actual use;
- Few changes to how occupants manage their home occurred as a result of using dashboard.

**Coastline Use:**
- Regular and successful use;
- Identifying high risk homes and intervening;
- System most useful in the winter.
<table>
<thead>
<tr>
<th>Occupant</th>
<th>What did the sensor dashboard indicate?</th>
<th>Issues identified on home visit</th>
<th>What action was taken?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1. Family</td>
<td>High humidity (65-80%) downstairs.</td>
<td>Humid property with mould; Large fish tank in the living room, open vivarium in the hallway.</td>
<td>Advice and guidance on ventilation; Replaced fans; Installed Positive Input Ventilation (PIV) system.</td>
</tr>
<tr>
<td>Example 2. Family</td>
<td>Drop in temperature.</td>
<td>Fuel poverty; Caused by a change in circumstances leading to loss of income and benefits.</td>
<td>Emergency Hardship Fund (Coastline); Covid Winter Grant (Council), heated throw and energy vouchers; Support from a local energy charity: Top up vouchers; • Change in energy supplier; • Warm Home Discount payment. EPC rated high, but Coastline surveyor found loft installation removed (by previous occupant). Cause of high costs.</td>
</tr>
</tbody>
</table>
Is the system useful for improving health?

- Identify and prioritise at risk and vulnerable occupants;
- Enable early intervention to support occupant health and wellbeing;
- Reduce stress among Coastline staff;

However, some risks and limitations:
- Responsibility to act;
- Resources and capacity to act.
Is the system useful for improving homes?

• Clearly and pro-actively identify building maintenance issues;

• Reduce long term costs through proactive repairs and efficient planning of maintenance work;

• Insight to inform Carbon Net Zero strategy, and live data to evaluate progress.
Conclusions

• System useful for identifying risk, but need to be matched with human capacity for intervention and social support;

• Research and innovation not possible without community participation and co-design;

• Housing Associations are uniquely placed as intermediaries to improve health and wellbeing among populations which face social and health inequities.

“What you might at first see as a technical problem is actually a social problem”

Coastline Support Team member
Sensor data research findings

Dr. Tamaryn Menneer
The indoor environment:
www.smartline.org.uk/research-hub

- PM2.5 increases with smoking but not vaping.
- Asthma
  - Mould / odour.
  - VOCs in household cleaning products.
- Fuel poverty and health.

(Sharpe, Johnes, Walsh, Menneer, Moses, Paterson, Tu, Morrissey, Taylor)
COVID-19: Advice versus Instruction

- Recommendations / advice
- Enforced lockdowns
- Behaviour change?

(Menneer, Qi, Taylor, Paterson, Tu, Elliott, Morrissey, Mueller)
Electricity: Daily profile

[Graph showing daily electricity consumption profile with time on the x-axis and kWh on the y-axis, comparing 2019 and 2020 with arrows indicating a decrease in consumption.]
Water: Daily profile
Modelling mould

![Graph showing relative humidity and temperature over time](image)
Model output
Evaluating the model outputs

Model outputs

Survey responses

Does your home have visible mould patches?
44% “Yes”

Has your home suffered from a mouldy/musty odour in last 12 months?
18% “Yes”

(Menneer, Mueller, Sharpe, Townley) 67
Smartline Sensor Dataset

Quantity and Quality
- Unique in space and time
  • Existing Outputs
  • Future Legacy

Dr Richard Woods
Quantity and Quality

• Up to **300 Homes**…
• …**up to 7 sensors** each…
• …**recording 15 parameters**…
• …**every 3 to 30 minutes**…
• …**since 2017**
Unique in Space and Time

- Cornish Climate: High Humidity and Rainfall
- A range of participants
- Several types of properties
- Local climate extremes
- Cost-of-living crisis

- Global pandemic

Cornwall map with a range of participants. A teapot with strawberries, a map of Cornwall, and a newspaper article about climate change and global pandemic.
Existing Outputs

- Real-time benefits to participants
- Diverse published research outputs...
- ...using data from sensors, participant surveys, and project partners
Future Legacy

- Diverse metrics support retrospective exploration

- **Big** dataset can reveal subtle trends, beyond seasonal patterns
- Mostly **open access**, with more metadata by request

- Relevant to myriad research topics
  - Health and Wellbeing
  - Fuel poverty
  - Energy efficiency
  - Environmental Monitoring Technology
  - Etc…

- Massive **effort** to curate the data offers savings to researchers!
Morning Break

Served in the Cedar Suite, 1st Floor

Next session will start at 11.50am
Supporting digital innovation across Cornwall and the Isles of Scilly

Emma Seymour – Knowledge Exchange Officer
Smartline Enterprise Support

• Exploring how technology can be used to improve people’s health and wellbeing
• De-risking the RD&I process
Supporting digital innovation

Smartline has worked with businesses across Cornwall’s arts, entertainment, recreation, education, health, communication, technology and manufacturing sectors.

Over 360 businesses have engaged with Smartline through our events and networking.

135 local businesses have received direct financial or research support.

Smartline is providing £600,000 of grants... and over 3000 hours of research support to local businesses.

Enabling...

70 local businesses to introduce new innovative ways of working within their business.

39 new products and services to be brought to life to improve people’s health and wellbeing.
About the South West AHSN

Our focus -
Transforming lives though innovation in health and care

We work with partners across the health and care system to identify and spread innovation, build capability and support evaluation and learning

Our region

The South West peninsula stretches from the Isles of Scilly to Somerset, with around 600 miles of coastline.

Infinitely varied, the region comprises rural and isolated communities on its moors and islands, along with significant urban populations in Plymouth and Exeter. It contrasts extremely prosperous coastal locations with some of the most deprived areas in Europe. A relatively stable core population is supplemented with a significant influx of seasonal workers and tourists that create additional challenges for healthcare services and opportunities for developing health-care technologies.
We work with partners across the health and care system to spread innovative practice, build capability and evaluate & learn.

Somerset
- NHS Somerset Clinical Commissioning Group / Somerset ICS
- Somerset NHS Foundation Trust
- Somerset County Council
- Rutherford Somerset Diagnostic Centre
- The Community Council for Somerset

Regional/ national partners:
- University of Exeter
- University of Plymouth
- South Western Ambulance Service NHS Foundation Trust
- NHS England & NHS Improvement South West
- National Institute for Health Research Applied Research Collaboration (NIHR ARC) South West Peninsula
- National Institute for Health Research Clinical Research Network (NIHR CRN) South West Peninsula
- Resonance
- NHS Horizons
- Billions Institute

Devon
- NHS Devon Clinical Commissioning Group / Devon ICS
- Devon Partnership NHS Trust
- Livewell Southwest
- Northern Devon Healthcare NHS Trust
- Royal Devon & Exeter NHS Foundation Trust
- Torbay and South Devon NHS Foundation Trust
- University Hospitals Plymouth NHS Trust
- Devon County Council
- Torbay Council
- Plymouth Council
- Plymouth Health Innovation Alliance
- Torbay Community Development Trust
- One Northern Devon

Cornwall and Isles of Scilly
- Cornwall and Isles of Scilly ICS / NHS Kernow Clinical Commissioning Group
- Cornwall Partnership NHS Foundation Trust
- Royal Cornwall Hospitals NHS Trust
- Cornwall Council
- Volunteer Cornwall
- Smartline
- EPIC - eHealth Productivity and Innovation in Cornwall
How we work

**Spreading Innovative Practice**
We spread proven innovative practice across the health and care system by building networks, sharing knowledge, strengthening collaboration and providing practical support to our partners.

**Building Capability**
We help our partners build the culture and capabilities vital to the development, adoption and spread of innovative practice across the regional health and care system.

**Evaluation & Learning**
We support our partners to evaluate impact and apply learning to improve the delivery of health and care services. We share knowledge and provide rapid, actionable insights to inform improvements and spread innovative practice.
Our Innovation Exchange

Our Innovation Exchange is designed to help innovators implement solutions to meet the challenges faced by the health and care system in South West England.

We are an innovation broker. We help innovators understand the needs of our local health and care system and support them to build partnerships to improve patient care and generate economic growth in our region. We also provide signposting for early-stage innovators who have an idea that might require time and resource to reach the market.

Our Innovation Exchange platform, Pathfinder, is a starting point for any innovator looking to take their innovation to the next stage of development.

Please visit the Innovation Exchange website for more information.
Working with our partners to build a pipeline of innovation focused on the needs of our local systems

- We are working with local research and innovation partners and the AHSN Network to build an innovation pipeline targeted towards the needs of our local systems.
- We apply our three core capabilities to help our local systems identify relevant innovations, evaluate and validate the impact of innovation in a real world context and spread high-value innovation.
Smartline Success Stories

• Julian Bose, Director, Inspire Cornwall CIC
  • The DadPad gives new dads the skills and confidence to give the best care to their newborn and the best support to their partner
  • Supporting family resilience and mental health by enabling the development of the DadPad App and digitally engaging supplementary products
Smartline Success Stories

• Nikki Veale, Helen Tite, Pat Taylor, iCareiMove

• To address and focus on our ageing society, in work, in life and in health, iCareiMove build successful on-line and live wellbeing communities with the vision to embed wellness into businesses with people at the heart of everything they do

• Supporting iCareiMove to successfully launch a new digital social impact reporting process, enabling them to report on the social value and social return on investment of their programmes
Building Stronger, more connected communities

with Karen Spooner Smartline, Community Development Manager, Volunteer Cornwall
Where did we start?

We know that Cornwall faces a high percentage of Social and Digital exclusion.

- Poor mental and physical health outcomes
- Increased loneliness and isolation
- Less access to education and work
- Increased risk of falling into poverty
- Financial exclusion

Taken from Cornwall’s Digital Inclusion Strategy 2019-2023
**Guided Conversation**

**About:** A person centred and community focused conversation tool.

**Outcomes:** Tool has enabled Smartline to link participants with local community organisations to improve wellbeing.
A sense of community

Salt dough classes → Well women's group → Online soap carving → Exercise classes → Coffee mornings
A sense of community
Learning and successes

Inspired people to develop their own skills and work towards new career goals.

Community work as a gateway to engagement in research.

Given skills and confidence to use internet technology.

Opportunity to solve personal challenges through the use of the guided conversation.

Connected people online, enabling the development of new friendships that have gone on to meet face to face.

Sustainability of projects – Community champions.
Acceptability of digital technologies for health and wellbeing

The use of online forums to increase social connection during Covid pandemic

The use of telephone training during covid to improve IT skills

Partaking on our Seasonal Wellbeing surveys to support or data collection and analysis
Impact

"This garden has meant that we are able to talk to our neighbours more and enjoy the space that we live in. I have met new people because of this".

"This project has allowed me to learn new skills to find out about my local area and to also support my volunteer role at our local museum. I will definitely be coming to Kresen Kernow more often"
“Thank you Karen and Smartline for doing this for us. I honestly do not know how I would have coped over the last few years without your support and the opportunities that you have given to me. It has honestly made such a difference to me”.

“I enjoyed learning how to use my phone to take good pictures. I liked learning how to use the apps to help me edit my pictures and I was proud to have my pictures displayed at Heartlands when we had our exhibition”.
What next?
LUNCH

Served in the Cedar Suite, 1st Floor

Afternoon session will start at 1.30pm
Digital Inclusion
Keynote Session

Helen Milner OBE, Group Chief Executive, Good Things Foundation
Fixing the Digital Divide - for Good

Helen Milner
Group CEO
@helenmilner

4 million+ people supported globally since 2010
Good Things Foundation is the UK’s leading digital inclusion charity.

We want to Fix The Digital Divide – for Good.

Working with our strategic partners, by the end of 2025, we aim to:

Engage 1 million people across the UK to benefit from digital inclusion.

Grow the UK Digital Inclusion Network to over 5,000 organisations giving everyone the chance to benefit from the digital world.

#FixTheDigitalDivide
We lead the way and innovate

<table>
<thead>
<tr>
<th>Research-led and evidence based</th>
<th>Creating partnerships with a shared goal</th>
<th>Building platforms for learning and measuring impact</th>
<th>Combining strengths for social impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producing respected Digital Nation report yearly</td>
<td>Creating the Data Poverty Lab with Nominet</td>
<td>Establishing the leading platform for place-based digital skills development</td>
<td>Partnering with Reconome to develop the National Device Bank, providing refurbished devices at scale</td>
</tr>
<tr>
<td>Developing a <em>Blueprint for a 100% Digitally Included UK</em> to spur Government action</td>
<td>Leading the National Databank, uniting industry and the third sector</td>
<td>Fostering and supporting a network of thousands of community network partners</td>
<td></td>
</tr>
<tr>
<td>Partnering with leading academics to develop a Minimum Digital Living Standard</td>
<td>Establishing a subsidiary charity in Australia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
People are digitally excluded because:

They lack:
- Motivation to use the internet
- Confidence with digital technology
- Digital Skills to carry out basic tasks

And/or, they cannot afford:
- Device for personal internet use
- Sufficient connectivity data

On very low incomes - even £10-£15/month social tariffs are a struggle

Lack of access due to connectivity - usually issue of quality not exclusion
The size of the problem

Although 1.5 million more people went online during the Covid-19 pandemic, in some groups digital engagement actually declined; and the number of people without the most basic digital skills is not improving.

- Nearly 1 in 5 adults lack the most basic digital skills needed for everyday life.
- 2 million households struggle with affordability of internet access.
WHY PEOPLE ARE NOT ONLINE

36% It's too expensive
46% It's too complicated
37% I don't have the right equipment
42% Not interested I see no need

Good Things Foundation
Digital Nation UK 2021
This report, launched by Good Things Foundation, sets out the economic impact of digital skills and inclusion in the UK. The report finds that investment of £1.4 billion could reap economic benefits of £13.7 billion for UK plc. This is £9.48 return for every £1 invested.
I'm healthier
49% say digital helps manage and improve their physical and mental health.

I'm happier
85% connect better with friends and family.

I get better value
The most digitally engaged pay £228 less on their bills per year than the least engaged.

I'm better off
Manual workers with high or very high digital engagement earn £421 more per month than less digitally engaged peers.

The UK gets good value
It’s estimated the UK benefits by almost £15 for every £1 invested in helping people acquire basic digital skills.

Digital Nation UK 2021
From 2014-2021, **1.5 million** people were supported to learn Essential Digital Skills through the Future Digital Inclusion programme. 77% faced social exclusion in different forms. After gaining digital motivation, confidence and skills:
John’s story

When profoundly Deaf Bridport resident John Phillips, whose only method of communication is sign language, received a free smartphone, he had no idea just how much it would transform his life.

“The phone has been an absolute life saver; it’s opened up a whole new world to me.

“The best part has been contacting my friends again via WhatsApp because I had no contact with them for so long. We send each other videos and messages and it’s been wonderful.”
Our track record

Good Things Foundation has over 10 years of experience in working with partners across the globe and helping people to benefit from the digital world.

- We've reached over 4 million people worldwide (2010 - 2022)
- We supported over 22,000 people with free devices, internet data and support (2020-22)
- We have secured 500,000 mobile data SIMs for the National Databank (2021 - 2023)

Our work drives positive outcomes for people:

- 83% feel more confident about using online tools to manage their health
- 33% made fewer visits to their GP
- 80% go onto employment related activities and 20% get a job
- 77% use online government services
- 52% feel less lonely

#FixTheDigitalDivide
To fix the Digital Divide change is urgently needed.

1. The current pace of progress will not fix the digital divide.
2. What works is a tailored and trusted approach to supporting our most vulnerable.
3. The UK needs a strong social infrastructure for digital inclusion.

Good Things Foundation
The pandemic has made a difference:

2020 2021

48% → 32% of those offline say ‘nothing’ would encourage them to get online

5% → 35% of people say ‘local support’ would be the easiest way to learn new digital skills

Source: Consumer Digital Index, Lloyds Banking Group, 2021
WHY PEOPLE ARE NOT ONLINE

- 36% It's too expensive
- 46% It's too complicated
- 37% I don't have the right equipment
- 42% Not interested I see no need

Good Things Foundation

Digital Nation UK 2021
The pandemic: our pivot to a new offer for excluded people

Good Things Foundation
Delivering our mission to Fix the Digital Divide - for Good

The National Digital Inclusion Network
The National Databank
The National Device Bank

We are establishing a strong, scaled social infrastructure for digital inclusion - UK-wide and sustainable

#FixTheDigitalDivide
Find your nearest databank

If you need more help staying connected, Good Things Foundation’s growing network of databank partners can provide support. Enter your postcode to find your nearest databank.

PL25 4FD
Digital is now a wider determinant of health

- Jobs
- Education
- Social connection
- Participation
- Health care housing
- Money benefits
- Bills

Good Things Foundation
COVID-19 has changed the dial on digital and its role in health and care settings meaning the lessons learned and shared in this report could not be more timely.

21,178
people supported, including 824 people in co-design, and 1,350 digital champions

166,162
people made aware of digital health through Good Things’ network of community partners

53,173
people improved their digital health literacy through ‘Learn My Way’

Digital Lifeline
Supporting digital inclusion of people with learning disabilities

- 5,500 people supported in under 4 months
- 2,354 pieces of adaptive kit for additional needs
- 146 community partners across England
- 5,500 Lenovo M10 tablets - gifted not loaned
- 24GB of data - with some top-ups provided
- Some support to use it and make it accessible

The digital divide for people with learning disabilities
- 15% of disabled people have never been online (vs. 3% of non-disabled people)
- 35% of people with learning or memory disabilities do not have the Essential Digital Skills for Life (vs. 21% of total UK population)
91% of people reported experiencing at least one benefit from Digital Lifeline

<table>
<thead>
<tr>
<th>After 3–4 weeks:⁴</th>
<th>After 4–7 months⁵ people said they:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 68% agreed ‘I feel more confident’</td>
<td>🔷 Had improved their digital skills</td>
</tr>
<tr>
<td>+ 64% agreed ‘my digital skills have improved’</td>
<td>🌍 Were more motivated to get online</td>
</tr>
<tr>
<td>+ 57% agreed ‘I feel more connected’</td>
<td>☕ Were feeling less lonely and isolated</td>
</tr>
<tr>
<td>+ 52% agreed ‘I feel less lonely’</td>
<td>💖 Had improved health and wellbeing</td>
</tr>
<tr>
<td>+ 32% agreed ‘my online safety skills have improved’</td>
<td>✊ Felt more independent</td>
</tr>
<tr>
<td></td>
<td>🏡 Were better able to participate in their community</td>
</tr>
</tbody>
</table>

“It’s been brilliant. It’s opened up a lot of opportunities.”
“It makes me feel more confident.”
“The responsibility makes me feel like I can prove that I can look after other things.”
“It’s connected me to the outside world and made me feel less isolated.”
“It makes me feel happy, it keeps me from getting bored. It relaxes me. It helps me calm down if I’m upset.”
And (almost) finally, some hints and tips

- **Embed into what you’re already planning, embed in your priorities**
  - You need a plan, you need to prioritise, you need a budget ... but embed as much as possible to ensure it’s sustainable and not just a project

- **Never reinvent the wheel**
  - There’s no need for another basic digital skills platform
    - Eg Learn My Way, Digital Unite, Barclays Digital Wings, Lloyds Academy, Idea, BT Skills for Tomorrow, et al
  - The Databank and Device Bank exist – scaled and scaling up. Use them if needed
  - There’s lots of research evidence and heatmaps available
    - Digital Nation, “Digital Inclusion Risk Index (DERI)”
  - There will be local community organisations near you who are already supporting digitally excluded people – seek them out, through the Online Centres Network or local links

- **Work in partnership**
  - Either to build on what’s available (as above ++)
  - And/Or, co-design, co-develop, and deliver together

- **Be ambitious, but get going**
  - The need for action is now
And finally ....
Together, we can fix the digital divide - for Good

@helenmilner @goodthingsfdn
helen@goodthingsfoundation.org
Digital Inclusion: readiness, barriers, adoption and assumptions

Buckingham S, Poole R, Walker T, Elliott L, Menneer T, Tu G, Bland E, Morrissey K
Background/context

Access:
• Varying access, lower amongst more vulnerable.

Support:
• High demand for basic training: turning on devices, setting up email accounts, sending emails, understanding internet safety etc.

Acceptability and usability:
• Very low uptake and usage of Smartline tablets – why?

Overarching objective:
• Understand and improve digital inclusion in Smartline participants
Study 1: Acceptability of digital technologies for health and wellbeing

• What are people’s levels of experience and skills with digital technology?

• What factors influence technology use (barriers and facilitators)?

• How willing are people to try new technologies?

• What are the preferred types of technology, including perceived usefulness and ease of use?
Methods

• Three focus groups in Camborne, Pool and Redruth (n = 19)

• Telephone interviews (n = 4)

• Purposive, maximal variation sample
Methods

• Discussions using a theory-based topic guide (e.g. Technology Acceptance Model, Davis 1989)

• Self-rated digital skills (UK Government Digital Inclusion Scale)

• Preference ranking of technologies

• Thematic analysis and descriptive statistics
Technologies

a) Wearable activity monitor (e.g. Fitbit®)

b) Social messaging or networking (e.g. WhatsApp or Facebook group)

c) Smartphone app (e.g. walking or home-based exercises)

d) Social online gaming (e.g. poker, Scrabble, puzzles)

e) Video conferencing

f) Virtual assistant (e.g. Amazon Alexa)

g) Soundscapes

h) Electronic books and audio books (e.g. BorrowBox)
Participants

**Age**

- 30-40: 2
- 41-50: 1
- 51-60: 3
- 61-70: 6
- 71-80: 7

**Employment Status**
- Student: 1
- Employed: 4
- Retired: 12
- Long-term sick or disabled: 6
- Government sponsored training scheme: 2
- Missing Data: 2

**Education**
- Secondary education (11-16 years of age): 10
- Secondary/further education (16-18 years of age): 1
- Undergraduate university education: 4
- Missing Data: 2
Findings

UK Gov Digital Inclusion Scale (part of the Cabinet Office Digital Inclusion Strategy)

Range of (self-rated) skills of focus group and interview participants

Average: 7

1 Never have, never will
2 Was online, but no longer
3 Willing and unable
4 Reluctantly online
5 Learning the ropes
6 Task specific
7 Basic digital skills
8 Confident
9 Expert

A typical quote from the **willing and unable** group is “I want to learn but I don’t want to make a fool of myself.”

A typical quote from **Confident or Expert** users is “It’s convenient to do ANYTHING on the web – look up information, be entertained, go shopping and communicate with people.”
• Generally positive attitudes towards technology

“... potential benefits for people with physical or mental health problems, but are we creating technology for bettering society or for technology’s sake?”

• Willing to learn to use new technologies and improve skills

“If it would do what it said on the tin, I would have a crack”

• Lack of awareness of available technologies

“[There are] so many products and versions of the same thing out there, I would not know which one would help me”
Factors influencing technology use

**FUNCTIONAL**
- Access / availability
- Cost
- Digital skills

**PHYSICAL / HEALTH**
- Fitness
- Mobility
- Poor memory
- Sensory impairments

**PSYCHOLOGICAL AND ATTITUDBINAL**
- Knowledge and awareness
- Motivation
- Confidence / fear of getting it wrong
- Attitudinal (e.g. perception technology is for younger people)

**TECHNOLOGY-ASSOCIATED**
- Usability
- Complexity
- Usefulness

**PRIVACY, SAFETY AND SECURITY**
Preferred types of technology

1. Wearable activity monitor (e.g. Fitbit®)
   Help achieve goals set by doctor, easy to use, very interested in heart rate and sleep monitoring functions.

2. Virtual assistant (e.g. Amazon Alexa)
   Easy to use, seen as “useful for just about anything”, and “good for entertainment and information finding”. Particularly beneficial for people with health problems or limited mobility.

3. Social messaging or networking (social messaging preferred)
   Connect with people with shared interests, perceived need for training in using different features.
Emerging themes – what did we learn?

• Need and desire to improve awareness and skills: **GETTING ONLINE STAYING CONNECTED**

• Technologies should be easy to use and have a clear purpose for improving health and wellbeing: **USABILITY AND USEFULNESS**

• Technology should not replace human contact: **NEED FOR HUMAN INTERACTION**

• Individual needs and preferences: **TAILORED INTERVENTIONS AND CHOICE**
The feasibility and acceptability of digital technology for health and wellbeing in social housing residents in Cornwall: A qualitative scoping study

Sarah Ann Buckingham\textsuperscript{1}, Tim Walker\textsuperscript{2}, Karyn Morrissey\textsuperscript{3} and on behalf of the Smartline project team

Abstract

Objective: The aim of this study was to explore the feasibility and acceptability of digital technology for improving health and wellbeing in social housing residents living in a deprived area in Cornwall, England.

Methods: Qualitative scoping study with focus groups and telephone interviews (23 participants in total). Focus groups and interviews were audio-recorded, transcribed verbatim and analysed thematically.

Results: Levels of use and experience with digital technology were diverse in this group, ranging from 'willing and unable' to 'expert' on a self-perceived scale. Overall, participants had positive perceptions of technology and were keen to try new technologies. Five categories of factors influencing technology use were identified: functional, physical / health, psychological and attitudinal, technology-associated barriers, and privacy, safety and security. Preferred types of digital technology were wearable activity monitors (e.g. Fitbit\textregistered), virtual assistants (e.g. Amazon Alexa) and social messaging (e.g. WhatsApp). There was a strong consensus that technology should be easy to use and should have a clear purpose. There was a need to
Project Aim:
Help Smartline participants to get online and use digital communications technologies (e.g. video calls and online messaging) with confidence.

Design:
- Training delivered by Cornwall Council’s Digital Inclusion Team (DIT)
- Redesigned as over-the-phone training intervention due to COVID social distancing regulations;
Findings

Demand for training:

- Moderate demand, 39% (67/168) of respondents were interested in potentially undertaking the training;
- Demand highest for training on video calling, primarily Zoom, and setting up and using devices;
- Demand affected by if friends use technology and if support available from family networks.

“"I don’t know anyone who I would call. I only have my sister and she doesn’t use internet stuff””

(John, M, 55-64)

“No help necessary, grandchildren able to help”

(Rebecca, 65-74, F)
Barriers to training:

- Personal health;
- Caring for a family member;

Acceptability of the training:

- Preference for face-to-face training;
- Concerns about effectiveness of over the phone training.

“I am apprehensive about if a phone conversation would be enough to get online, would prefer one-to-one and face-to-face. I learn best by doing”

(Michael, M, 65-74)

“I am interested [in the training], but my head is just full of decisions about my wife who will is moving to a nursing home, I need to focus on what is important to me now”

(Gareth, M, 55-64)
Findings

Effectiveness of training:

• No significant changes in digital or wellbeing outcomes

• Overall, training enabled participants to achieve their personal and digital goals.

Training successes:

• Mary now uses video calls to talk to her daughters at dinnertime;

• Julia learned how to order flowers and medicine;

• Susan learned about online safety and how to record and mix music;

• Mark learned how to use WhatsApp and video call.
Emerging themes – what did we learn?

Conclusions:

• There is both need and demand for digital training among social housing populations.

• Strong evidence that with flexibility and persistence from the training providers, participants’ social and personal goals can be met.

Implications:

• Trusted local intermediaries (VCSO’s, Councils, public libraries, and Housing Associations) are important for identifying and reaching those who could benefit from digital training.
Study 3: Click and Connect
A community-based online forum to increase social connectedness among Coastline housing residents

Research questions

1. The feasibility and acceptability of the forum
2. Users’ motivations for joining and barriers and facilitators to engagement
3. The potential impact of the platform on social connectivity and mental wellbeing

Design

Co-producing an intervention logic model
Process evaluation: feasibility, acceptability and potential impact of the intervention
Methods

- Co-production of a logic model
- Virtual participant observation
- In-depth interviews with residents
- In-depth interviews with facilitators
Findings

Feasibility

• The forum had over 500 posts including uploaded photos within threads

• The most contributed to forum topics were: local history, sport and exercise, music, pets and animals, and books and reading

Acceptability

• Generally acceptable to participants

• Technical issues were a frustration and barrier to engagement
Findings

Digital literacy

• The forum itself was helpful as a safe, enclosed space for residents to practice using their digital skills

I found it – I increased my skills, I've become much more confident with my skills. And um, how can I say, it's improved my mental health. [...] I had a problem getting medication because I live alone and [...] so I went online and I found that I can now order my meds myself via a pharmacy. And that today, they’ve been ordered. I’m doing it myself. It’s made me become independent... by using the internet. I wouldn’t have done that before. – PID4, female, Resident
Findings

Potential impact

• Increased digital competence and self-efficacy
• Brought into focus the identities of residents and staff within the online community
• Helped some participants to maintain a sense of connection between the online coffee mornings and receive community updates
• Reduced sense of social isolation

  You’re keeping in touch with people from the outside world even though you’re within four walls. - PID7, male, Resident

• Lack of critical mass for sustained engagement
Emerging themes – what did we learn?

- Social and environmental contexts are important
- Context of an intervention may change over time
  - Relevant > redundant
- Real world interventions complement each other and overlap
Key messages

1. Need to improve digital competence and digital inclusion in social housing residents (and other vulnerable groups)
   - Skills; access; awareness; knowledge; attitudes; confidence; motivation

2. Technology should complement human interactions

3. Technology must be easy to use and fit-for-purpose

4. Interventions must be tailored and flexible

5. Collaboration and co-production
Response Q&A Panel Discussion

• Tracey Roose, CEO, Age UK Cornwall & Isles of Scilly (Panel Chair)
• Mark England, Head of Innovation, Maintenance and Group Procurement, Coastline Housing
• Chris Jones, CEO, HomeLINK
• Prof Karyn Morrissey, Denmark Technology University
• Helen Milner OBE, Group Chief Executive, Good Things Foundation
Closing Remarks

Assoc Prof Emma Bland, Smartline Principal Investigator, University of Exeter & Tracey Roose, CEO, Age UK Cornwall & Isles of Scilly, and Smartline Advisory Board Chair
Thank You

To find out more about Smartline, please visit our website at https://www.smartline.org.uk/
or email us at smartline@exeter.ac.uk