Socially Connecting People in Rural Communities: harnessing technology and building an evidence base

- experiences in Western Isles, Shetland and across Scotland

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NHS Eileanan Siar Western Isles

Why Social Isolation/ Loneliness is a Public Health issue?

- Over 9M adults in UK always or often lonely (Coop/RedCross)
- 2/5th (3.9M) older people say TV is their main company (Age UK, 2014)
- 1.5 times more likely early death compared to 1.18 times if obese
- 1.8 times more likely to visit GP
- 1.6 times more likely to visit A&E
- 1.3 times more likely to have emergency admission
- 3.5 times more likely to enter residential care

Evidence: Loneliness/SI: Health Impacts

Mental Health:

- 3.4 times more likely to have depression
- 1.9 times more likely to develop dementia within15 years
- Double risk of alzheimer's disease
- Also anxiety, schizophrenia & suicide links
- **Physical Health:**
- 2-3 times more likely to be physically inactive

  = 7% > risk diabetes

  = 8% > risk stroke

  =14% > risk CHD (via raised bp /cholesterol levels; lower survival)
- Disability (physical functioning eg. daily living tasks)
- Cancer survival

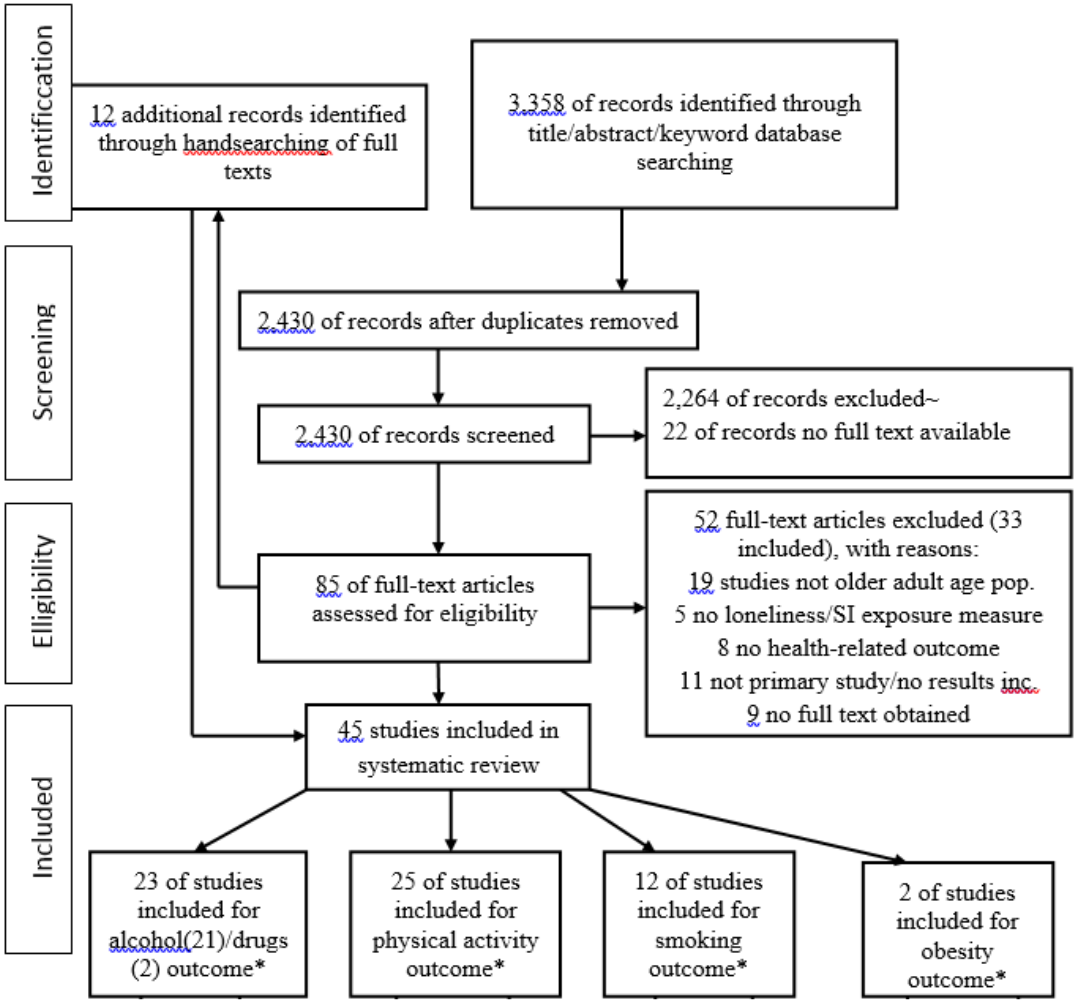
SI/Loneliness & Health Related Behaviours: Systematic review

Databases reviewed:

MEDLINE, EMBASE, PSYCINFO, CINAHL, SocIndex, SCOPUS AND WEB OF SCIENCE databases.

79 analyses across 46 studies identified and quality assessed using NOS-Ottawa Scale for observational studies. Meta-analysis being investigated and Causation score devised based on Bradford-Hill criteria.

PRISMA Flowchart



SI/Loneliness & Health Related Behaviours: Systematic review

Results summary: Social Isolation exposure

Health related behaviour	No.Studies with Positive associations	No.Studies with no significant association	No. Studies with negative associations
Alcohol	8	6	1
Drugs	1	1	-
Physical Activity	11	6	-
Smoking	6	1	-
Obesity	1	-	-

Results summary: Loneliness exposure

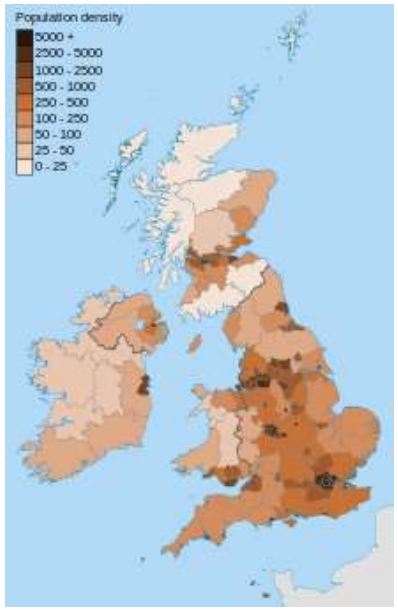
Health related behaviour	No. Studies with Positive associations	No.Studies with no significant association	No. Studies with Negative associations
Alcohol	2	4	1
Drugs	-	-	-
Physical Activity	9	2	-
Smoking	6	1	-
Obesity	1	-	-

Objectives

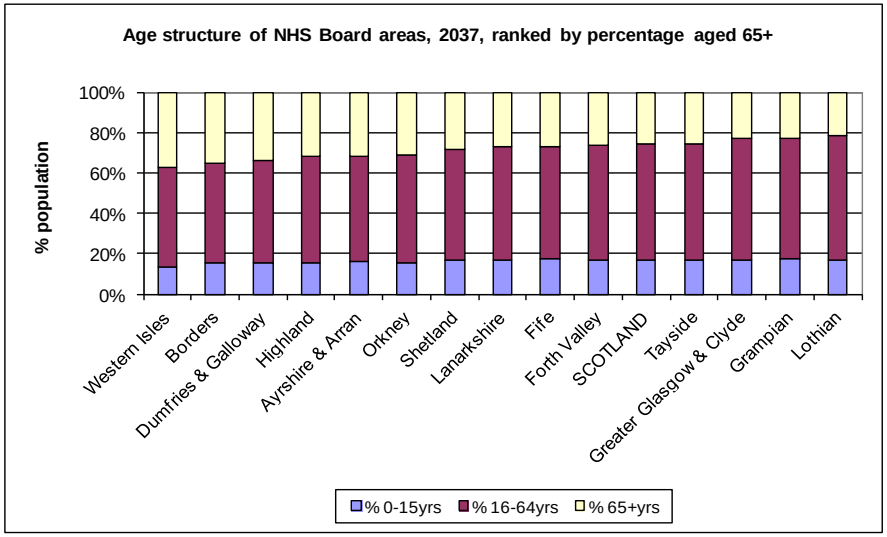
1. To consider particular challenges for SI/Loneliness for remote/rural communities
2. To test digital approaches in overcoming Remote/Rural challenges in rural areas of Scotland
3. To build an evidence base on role of technology in socially connecting people in Scotland (qualitative and quantitative)

Objective 1. SI/Loneliness Challenges in Western Isles

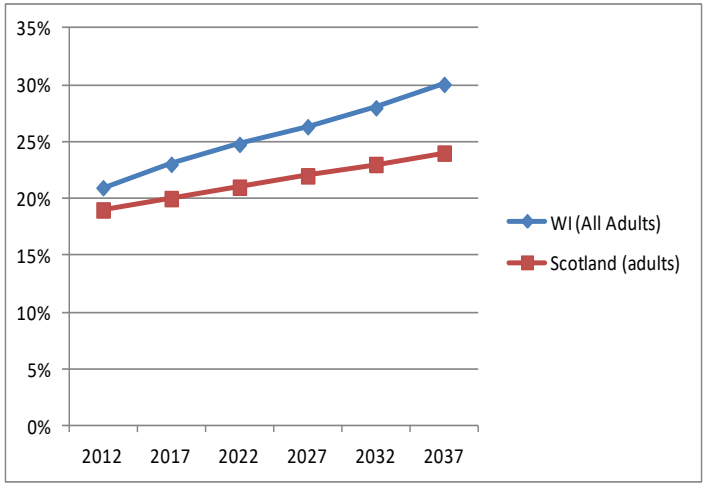
a) Geographic: remote/rural



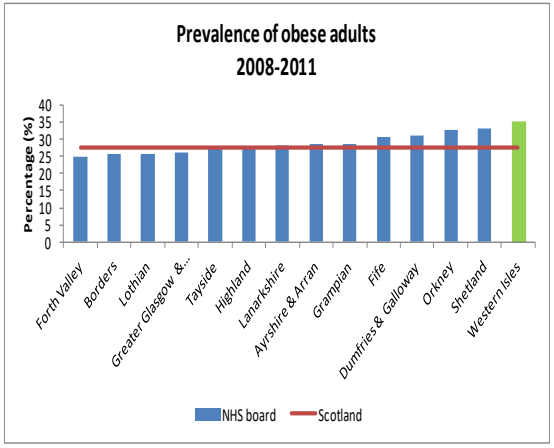
b) Demographic: ageing population

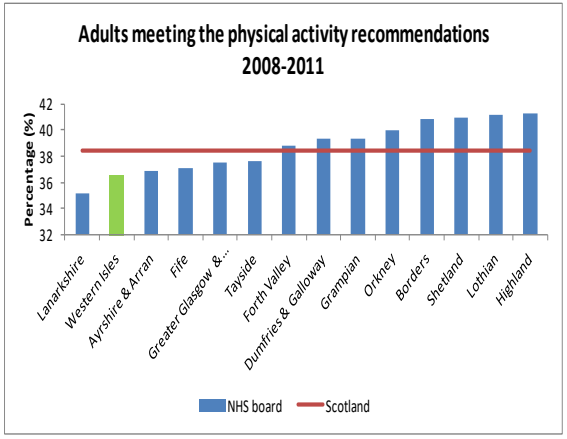


c) Social: Living Alone



d) Lifestyle risk





Objective 2:
Digital approaches to Social Support – Western Isles

REMODEM

RemoAge
REMOTE SUPPORT OF AGED PEOPLE

i2i
iSolutions to isolation

ChatPal – Conversational Interfaces for Mental Health and Wellbeing in remote areas

Remoage:ConnectingUists Service- Digital Elements

- Electronic Referrals
- Tech training/support
- Digital prescription/ access

[ConnectingUists]

RemoAge
REMOTE SUPPORT OF AGED PEOPLE

Northern Periphery and Arctic Programme 2014-2020

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Remoage Centre for Independent Living

https://vimeo.com/167817734

RemoAge
REMOTE SUPPORT OF AGED PEOPLE

Remoage Intergenerational Project

Iochdar Primary School

Sacred Heart Care Home

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1) Community Navigator Service:

2500 Well Being plan

2) Digital services:

a)Home Health Monitoring (Florence):

LTC management –e.g. MyDiabetesMyWay support. BP Monitors
Keeping in Touch - Social Support
Medicines reminders

bi)Video Enabled Care/Support (VEC):

Primary Care VEC – VC units in satellite GP Surgeries
Keeping in Touch VC – social support
Attend Anywhere sessions to Community Groups

c)Digital H&WB apps

Community Digital Hub
Apps on prescription – sleep/CBT/Exercise

Interreg
EUROPEAN UNION
Northern Ireland - Ireland - Scotland
European Regional Development Fund

i2i
iSolutions to isolation

Interreg
North-West Europe

1)To develop and pilot an integrated Rural i2i Hub for remotely gathering and monitoring social factors in a NWE ‘Big Data’ Platform by means of remote sensor technology.

2)To co-design and test with stakeholders digital iSolutions to socially support older people in rural settings based on data from the Social i2iHub which will reduce the level of social isolation in rural communities.

3)To harness SME/Social enterprises to exploit the i2iHub to test digital social support solutions across identified themes for rural isolated elderly. This will include dissemination of results via Social Innovation cluster linking rural care ecosystems across NWE.

ChatPal

Northern Periphery and Arctic Programme 2014-2020

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Objectives:

1. **To understand the mental health and digital mental health requirements of older and younger citizens in rural and sparsely populated NPA regions**

2. **To co-create and pilot a multilingual chatbot service that is effective for providing a blended digital mental health service supporting project workers and skills coaches across different NPA regions and age groups**

3. **To inform, and to increase awareness and attitudes of mental health and healthcare professionals regarding the use of digital health tools and particularly chatbots to augment and improve mental health service provision**

UNIVERSITY OF EASTERN FINLAND

REGION NORRBOTTEN

NORRBOTTENS KOMMUNER

LULEÅ TEKNISKA UNIVERSITET

Ulster University

action mental health

NHS Eileanan Siar Western Isles

CIT CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

RemoAge
REMOTE SUPPORT OF AGED PEOPLE

Northern Periphery and Arctic Programme
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Experiences in Shetland

https://youtu.be/8vh1_q_KqmM

T&SCon

The potential of technology to promote social connectedness for adults living in Scotland

Louise McCabe, Alison Dawson, Elaine Douglas, Mike Wilson and Alison Bowes

Image: https://www.ohhowcivilized.com/how-to-eat-a-scone-properly/

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Digital Health & Care Scotland

BE THE DIFFERENCE

Social Isolation and loneliness

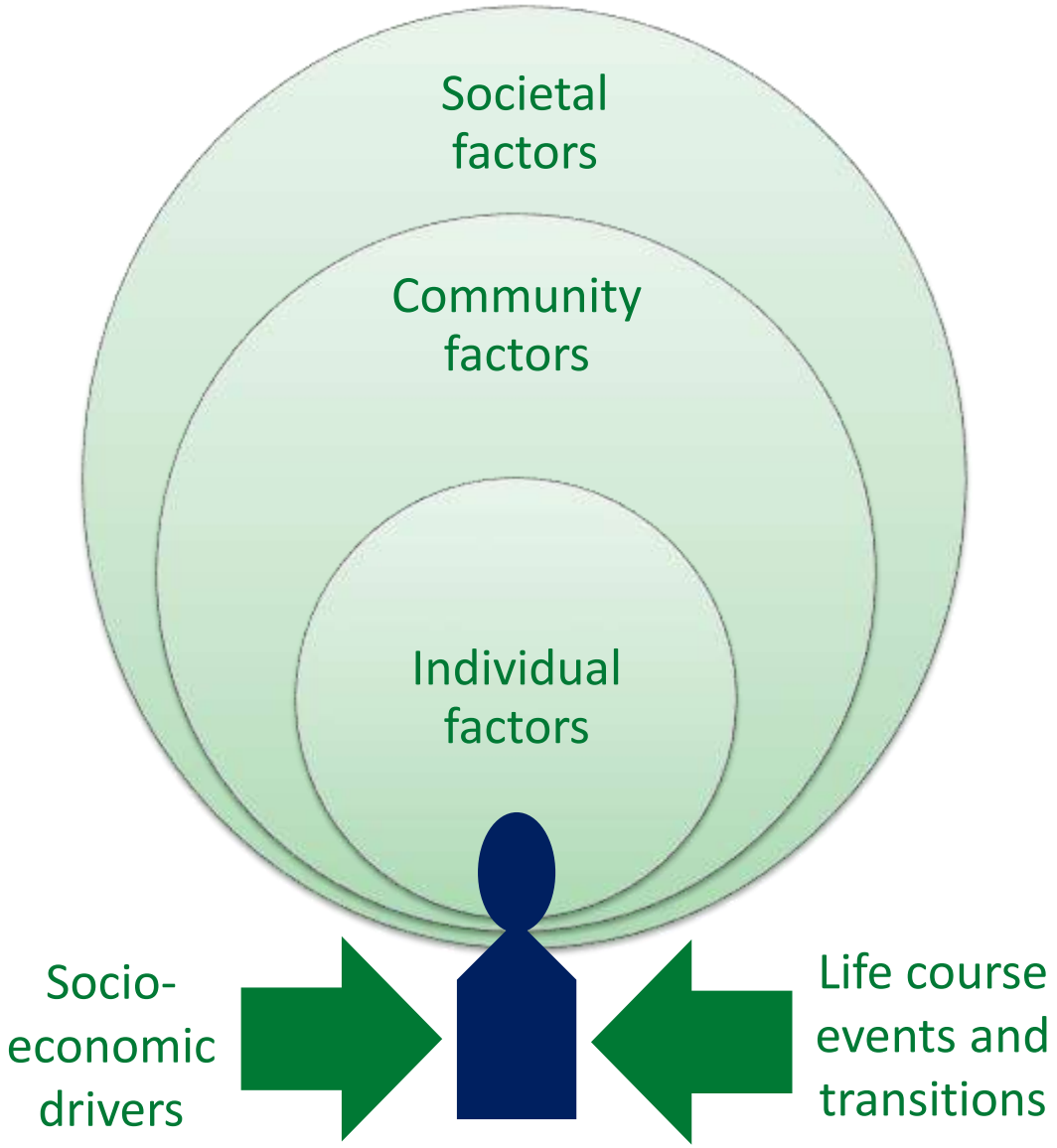
Social isolation refers to when an individual has an **objective lack** of social relationships (in terms of **quality and/or quantity**) at individual group, community and societal levels

Loneliness is a **subjective** feeling experienced when there is a **difference between** the social relationships we would like to have and those we have.

Source: Scottish Government (2018) A Connected Scotland
https://www.gov.scot/publications/connected-scotland-strategy-tackling-social-isolation-loneliness-building-stronger-social-connections/

Factors influencing social connectedness

- Individual, community and societal levels
- Complex interactions between levels and factors
- Not all factors open to change



What we did

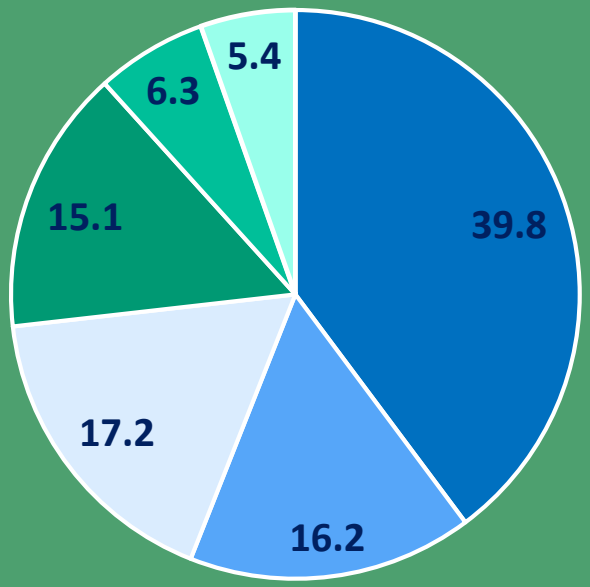
Scoping of research, policy and evaluation literature to elucidate the current state of play

Secondary analysis of HAGIS dataset to understand the scope and patterns of social isolation in Scotland

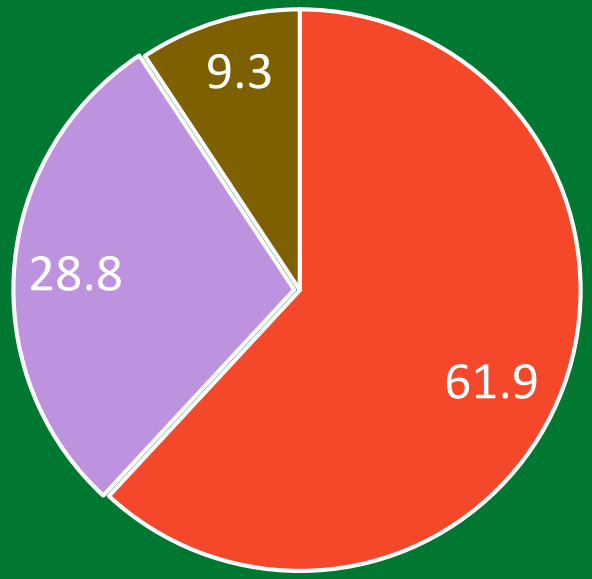
Four focus groups with stakeholders from across Scotland providing technology enabled support

Co-creation workshops with service providers and clients to develop **toolkit** for services using technology to address social isolation.

Social Isolation and loneliness



- High - All
- High - Children
- High - Friends
- High - Friends & Family (No Children)
- Mod-high- Children & Friends
- Mod - Children (No Friends & 33% No Children)



- Hardly Ever Lonely
- Sometimes Lonely
- Often Lonely

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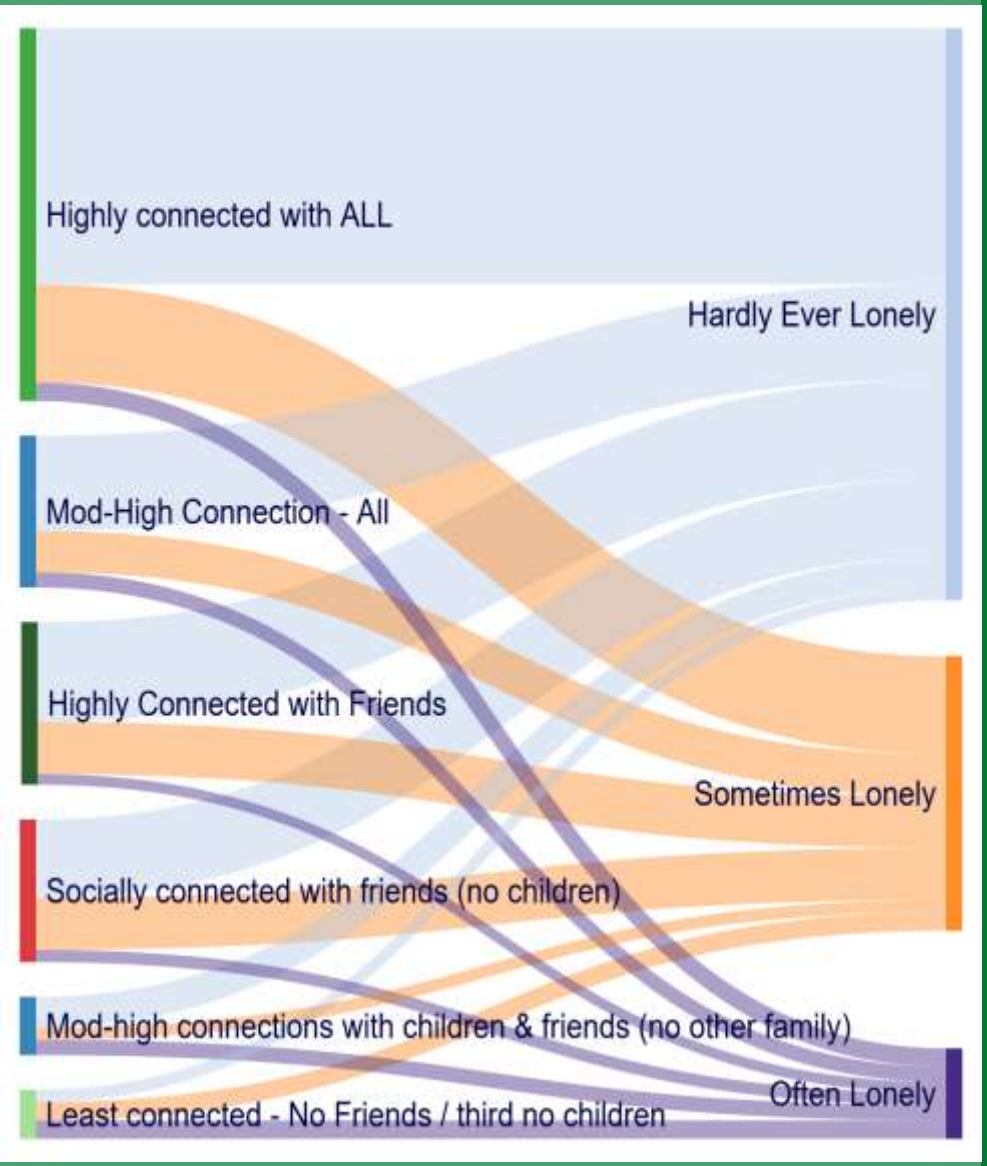
BE THE DIFFERENCE

Use of Technology

1. On average, how often do you use the internet or email?
   - Over 75% use internet regularly
   - Those highly connected with children and No Friends use the least (though not significant)
2. Where have you used the internet/email in last 3 months?
   - At home – 72%
   - At work – 19%
   - On the move – 27%
   - Library/internet café – 10% *
3. Which device did you use?
   - Desktop computer – 20% *
   - Laptop – 28%
   - Tablet – 30%
   - Smartphone – 25%
   - TV – 7%
4. What did you use internet for?
   - Email – 43% *
   - Finding information about goods/services – 41% *

* Significant variation across profiles



Relationship between Social Isolation and Loneliness

- 6 distinct profiles of social connection based upon frequency of contact with children, family, and friends
- 3 distinct profiles of loneliness: Hardly Ever, Sometimes, and Often (based on UCLA-3 short scale)
- Social Isolation and Loneliness are distinct yet inter-related concepts
- Analyses conducted for T & Scon will investigate patterns of digital technology use between profiles.

Literature review: Inclusion criteria

Relating to social isolation	Relating to population of interest	Relating to technology
(social* AND isolate*) OR (social* AND connect*) OR lonel*	adult* OR 'older' OR elder*	technolog* OR 'SMS' OR telephon* OR internet OR 'social media' OR online OR ICT OR video* OR virtual OR digital

Inclusion criteria:

- Studies published in English, on or after 1 January 2008
- Reports of primary research, case studies of interventions or services
- Intervention/service: i) for adults; ii) intended to reduce loneliness or increase social connectedness; iii) involves ICT; iv) examines outcomes related to social connectedness or its elements

Literature review: Search results

Searched: EBSCOhost; ScienceDirect: Social Services Knowledge Scotland (SSKS); Web of Science Core Collection

Search results after removal of intra- and inter- database duplicates: **5693**

Potentially relevant on basis of title: **360**

Full texts reviewed: **59**

Image: https://redislabs.com/blog/use-redis-content-filtering/

Literature review: Key findings

- Few items meet inclusion criteria
- Associations between social connectedness and use of ICTs, use of social networking sites, etc. but not as intervention for social connectedness and do not show causality

Included studies

- Most relate to older populations
- Most report development/ prototype testing/ piloting (feasibility, acceptability, usability)
- Little on scalability, practical aspects of implementation

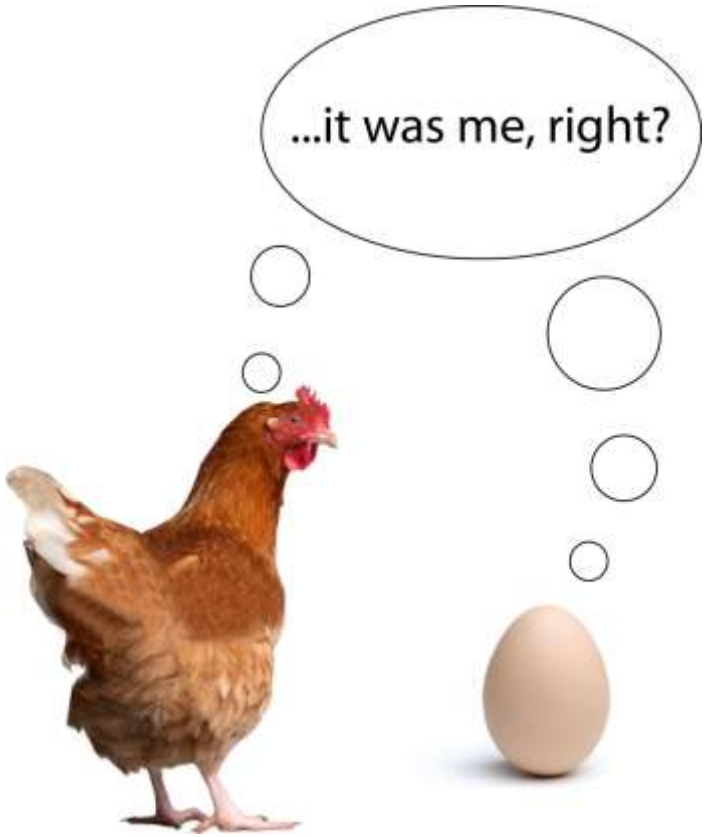


Image: https://signlanguageco.com/the-chicken-and-the-egg-and-the-interpreter/

Co-creation workshop: Feedback on guidelines

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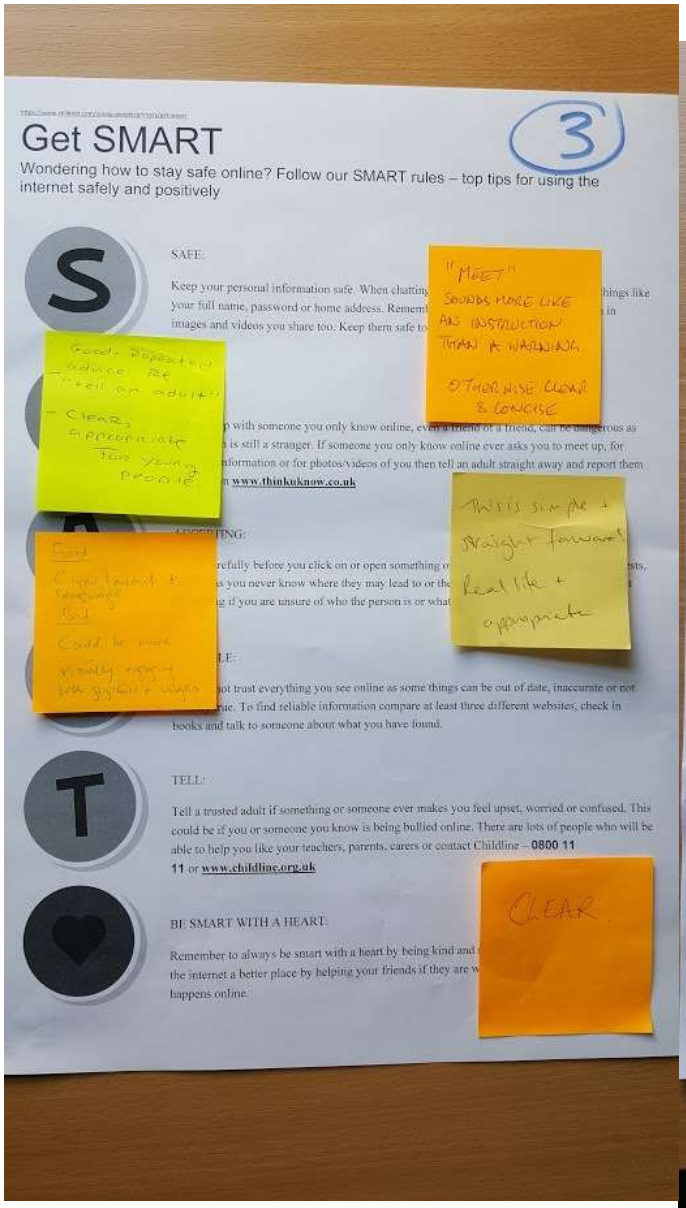
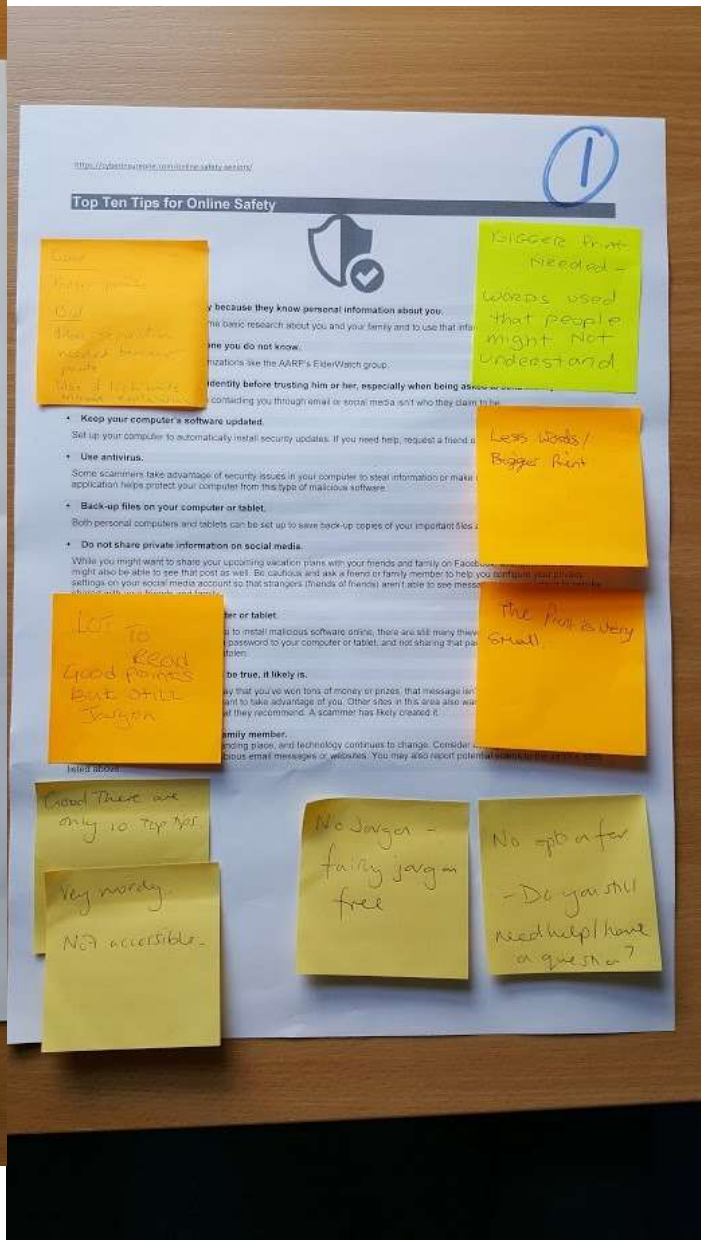
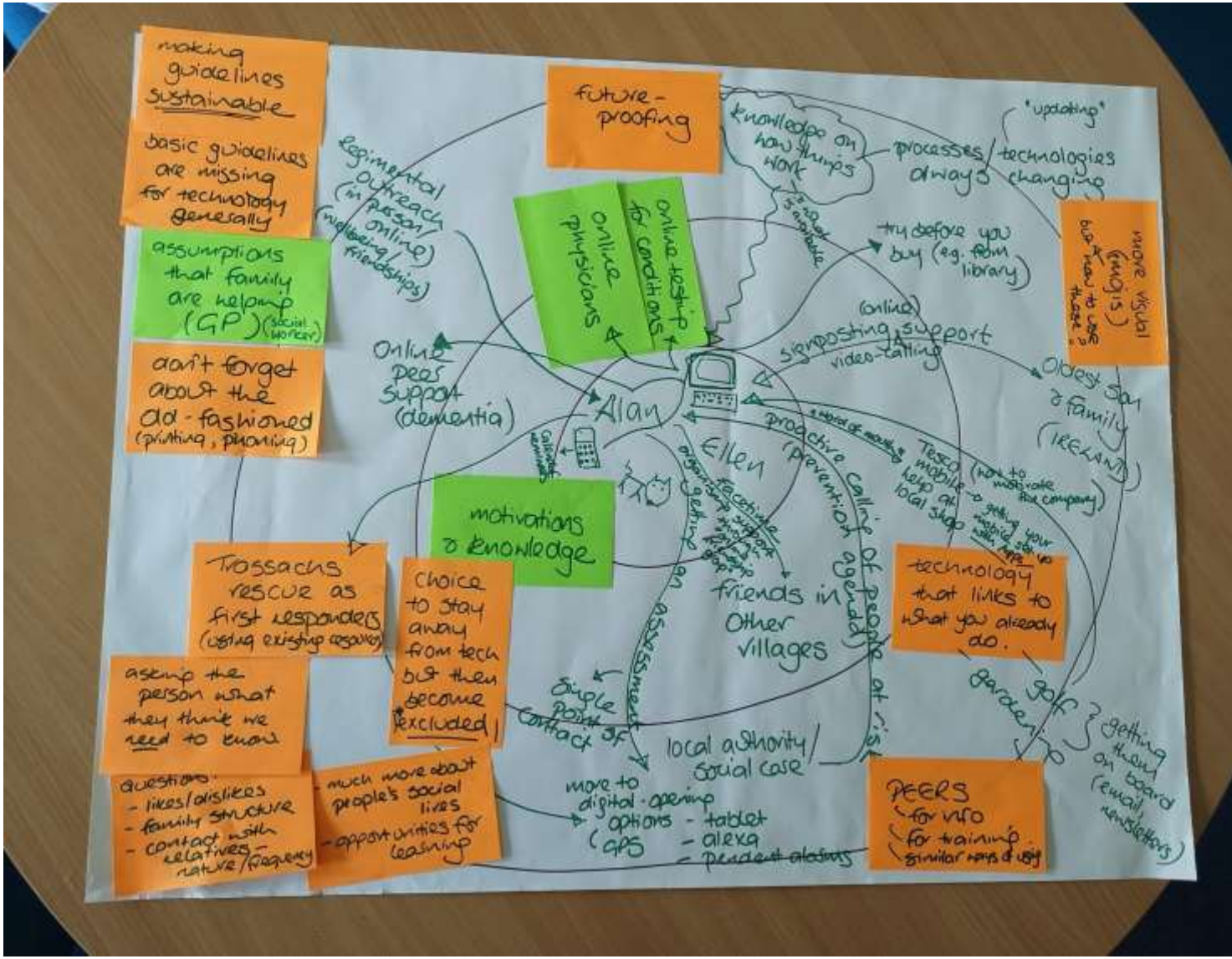




Co-production workshop – constructing a case study



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Focus groups and co-creation workshops

Experiences and opinions were collected from a diverse range of service providers and adults who use technology to support social connectedness and findings were refined during the two subsequent co-creation workshops.

We found positive examples of technology supporting social connectedness both ***directly***, for example, using Skype to connect with family overseas and ***indirectly***, by technology freeing up time and energy for social activities, for example, accessing NHS support through text messaging or videoconference.

The following **recommendations** emerged for organisations and individuals thinking about using technology to support social connectedness:

PEOPLE: recognise potential users as individuals, avoiding assumptions about age, gender, disability etc, and protecting human rights.
RISK: careful consideration of risks for individuals is needed but balanced presentation of risks is important.
PARTICIPATION: get staff and potential users on board from the start involving them from the planning stages onwards.
SYSTEMS: carefully assess infrastructure as well as devices for cost, accessibility, suitability and usability.
TRAINING: users will need support and training to use new devices; peer-to-peer learning, hands-on demonstrations, and simple take-home instructions are recommended.

Toolkit for organisations and individuals using technology to promote social connectedness

Evidence Base
- Literature review
- Technology scoping
- HAGIS analysis
- Findings from focus groups and workshops

Case studies: Individual Service

‘How to’ guide for setting up a service

Who | What | Why | How