

# **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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# Why Social Isolation/ Loneliness is a Public Health issue?



- Over 9M adults in UK always or often lonely (Coop/RedCross)
- 2/5<sup>th</sup> (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 within 15 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

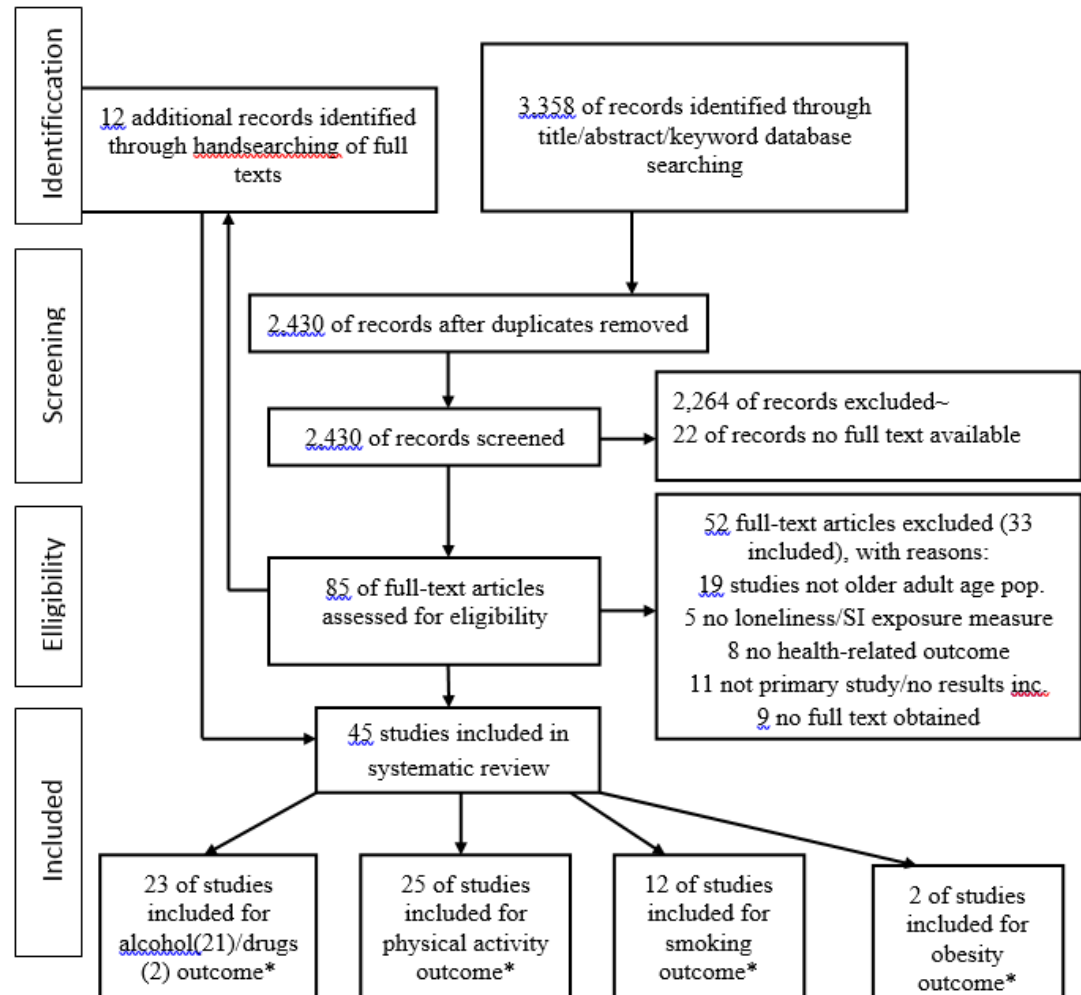
# SI/Loneliness & Health Related Behaviours: Systematic review

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

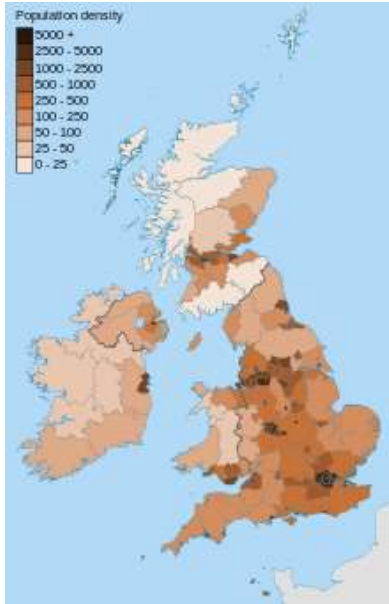
Health related behaviour	No. Studies with Positive associations	No.Studies with no significant association	No. Studies with Negative associations
Alcohol	2	4	1
Drugs	-	-	-
Physical Activity	9	2	-
Smoking	6	1	-
Obesity	1	-	-

# Objectives

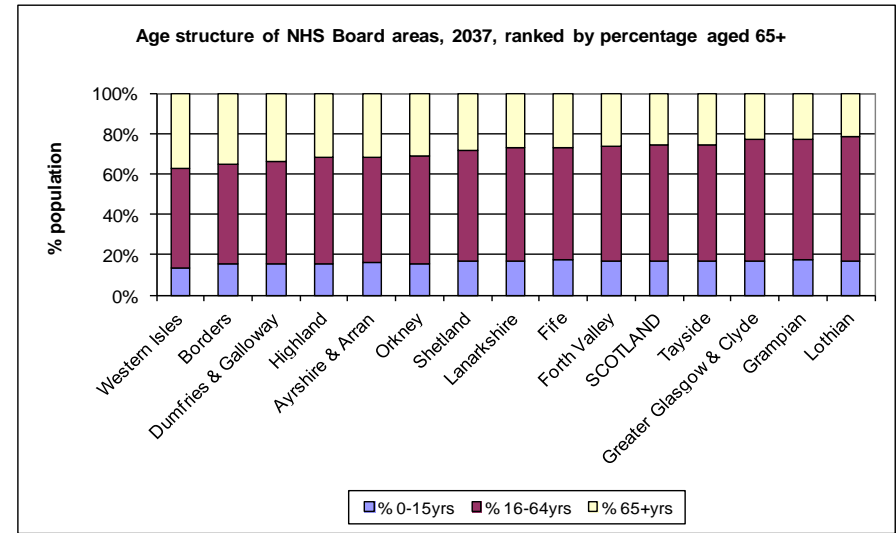
- 1. To consider particular challenges for SI/Loneliness for remote/rural communities**
- 2. To test digital approaches in overcoming Remote/Rural challenges in rural areas of Scotland**
- 3. To build an evidence base on role of technology in socially connecting people in Scotland (qualitative and quantitative)**

# Objective 1. SI/Loneliness Challenges in Western Isles

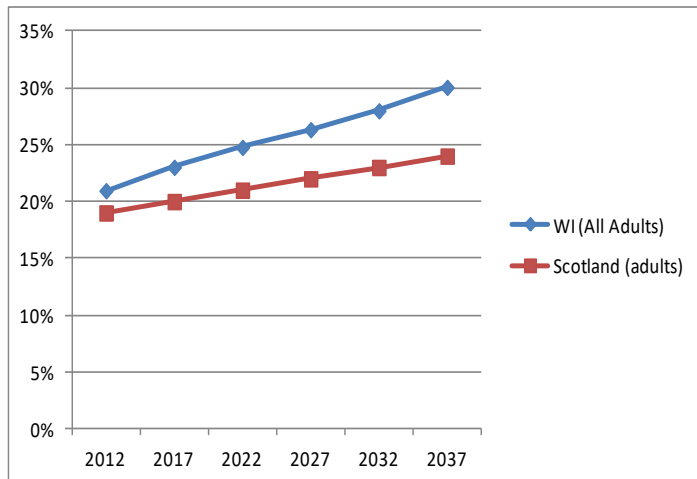
## a) Geographic: remote/rural



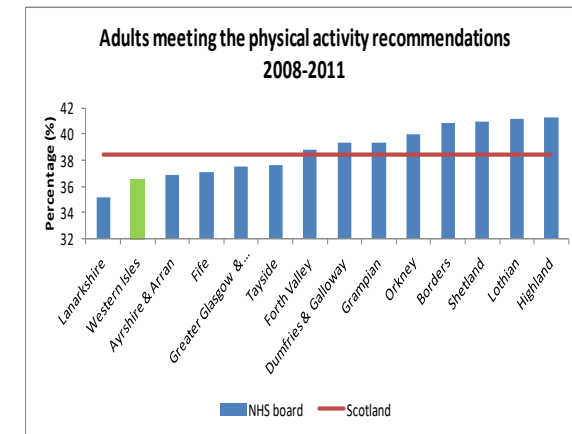
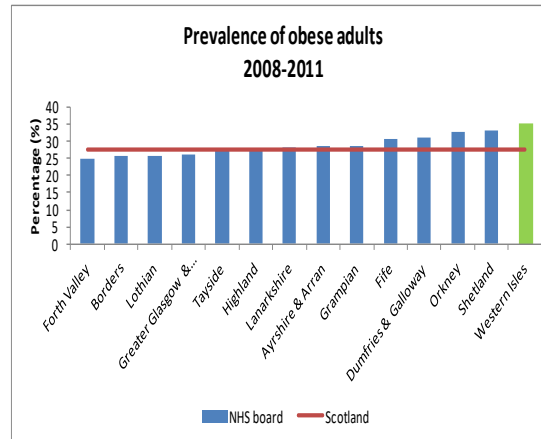
## b) Demographic: ageing population



## c) Social: Living Alone



## d) Lifestyle risk



# Objective 2: Digital approaches to Social Support – Western Isles



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



# Remoage: Connecting Uists Service-Digital Elements

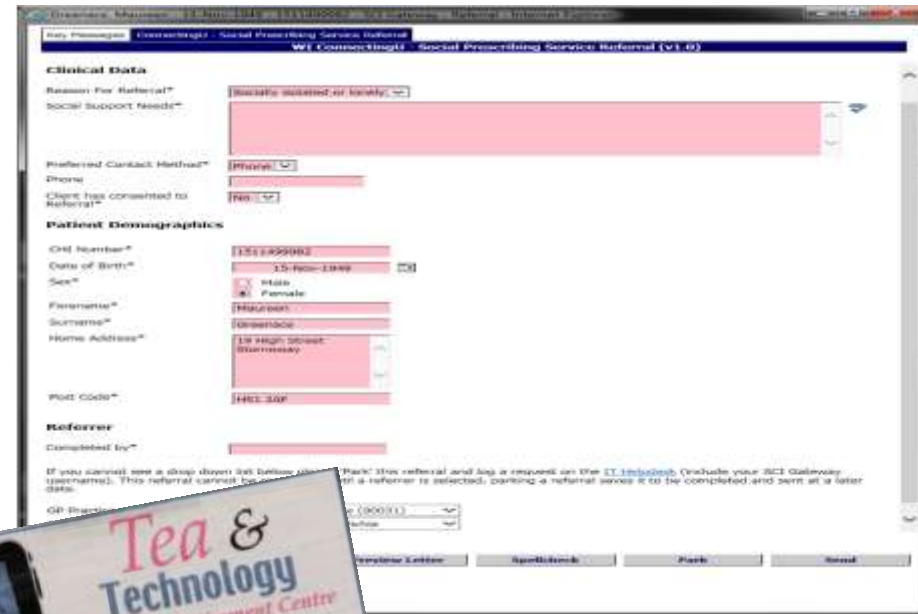
## ConnectingUists

Social prescribing scheme



Are you over 65 and live in North Uist, Benbecula and South Uist?

Do you sometimes feel lonely in your daily life or have difficulties keeping in touch with others?



**Clinical Data**

Reason For Referral\* [Socially isolated or lonely...]

Social Support Needs\* [Redacted]

Preferred Contact Method\* [Phone...]

Phone [Redacted]

Client has consented to Referral\* [Yes...]

**Patient Demographics**

CHI Number\* [123 456789]

Date of Birth\* [15/06/1940]

Sex\* [Male]

Forename\* [John]

Surname\* [Dunn]

Home Address\* [10 High Street, Stornoway]

Post Code\* [LE41 3AP]

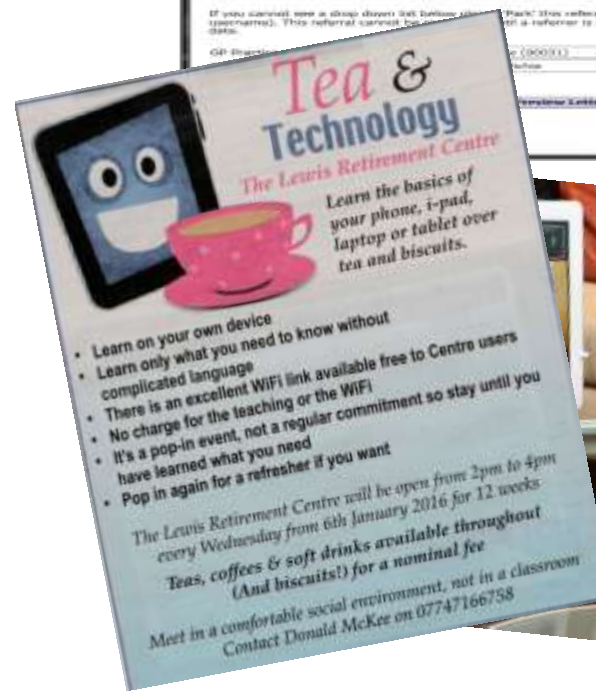
**Referrer**

Completed by\* [Redacted]

If you cannot see a drop down list below, click on the 'Refresh' button. This referral and log is required on the IT Helpdesk. (Include your SCI Gateway username). This referral cannot be completed until a referrer is selected, putting a referral across it to be completed and sent at a later date.

GP Practice [Redacted]

Buttons: Referrer List, Refresh, Back, Send



**Tea & Technology**  
The Lewis Retirement Centre

Learn the basics of your phone, i-pad, laptop or tablet over tea and biscuits.

- Learn on your own device
- Learn only what you need to know without complicated language
- There is an excellent WiFi link available free to Centre users
- No charge for the teaching or the WiFi
- It's a pop-in event, not a regular commitment so stay until you have learned what you need
- Pop in again for a refresher if you want

The Lewis Retirement Centre will be open from 2pm to 4pm every Wednesday from 6th January 2016 for 12 weeks. Teas, coffees & soft drinks available throughout (And biscuits!) for a nominal fee

Meet in a comfortable social environment, not in a classroom  
Contact Donald McKee on 07747166758



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

# Remoage Centre for Independent Living



<https://vimeo.com/167817734>

# Remoage Intergenerational Project



lochdar Primary  
School



Sacred Heart Care  
Home



## 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



- 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



EUROPEAN UNION  
Investing in your future  
European Regional Development Fund

## 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



# Experiences in Shetland



The image shows a YouTube video player interface. The main video area displays a cloudy sky over a coastal landscape. The text 'Remo Age Remote support of aged People' is centered on the screen. In the bottom right corner, there is a video thumbnail featuring Alan Murdoch, a man with white hair, standing in front of a stone building. The video player includes a 'RemoAge' logo in the top left, 'Share' and 'Info' icons in the top right, and a 'MORE VIDEOS' button in the bottom left. Logos for the Northern Periphery and Arctic Programme and the European Union are also visible in the bottom left corner.

RemoAge

Remo Age  
Remote support of aged People

Alan Murdoch  
General Practice Nurse Manager  
NHS Shetland Demerita Assessment Service  
Lewick, Shetland

MORE VIDEOS

Northern Periphery and Arctic Programme  
2014-2020

EUROPEAN UNION  
Investing in your future  
European Regional Development Fund

[https://youtu.be/8vh1\\_q\\_KqmM](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/>



# 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

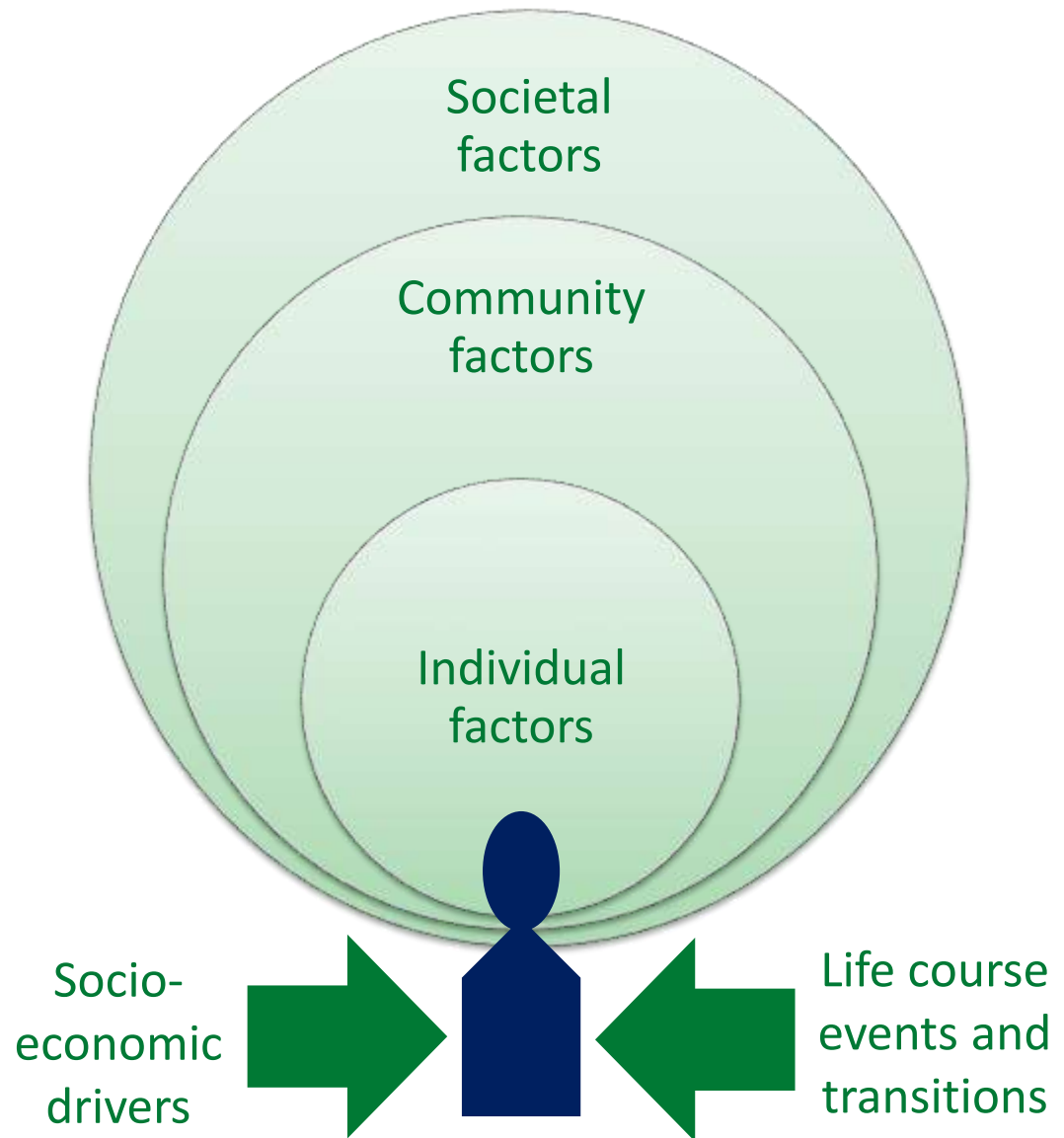
**Loneliness** is a **subjective** feeling experienced when there is a **difference between** the social relationships we would like to have and those we have.

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

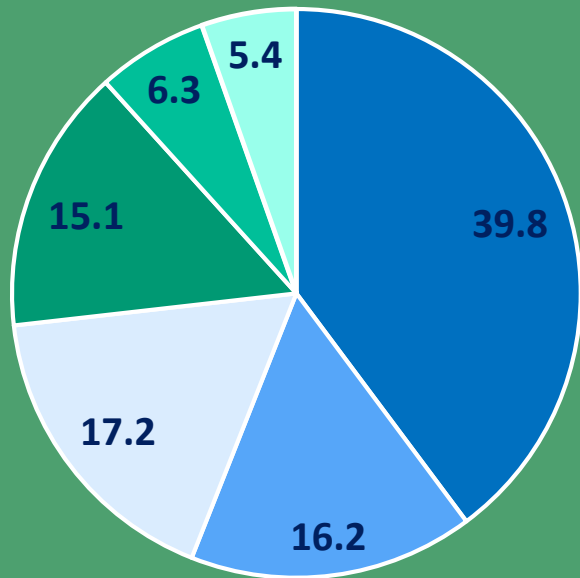
Scoping of research, policy and evaluation literature to elucidate the current state of play

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

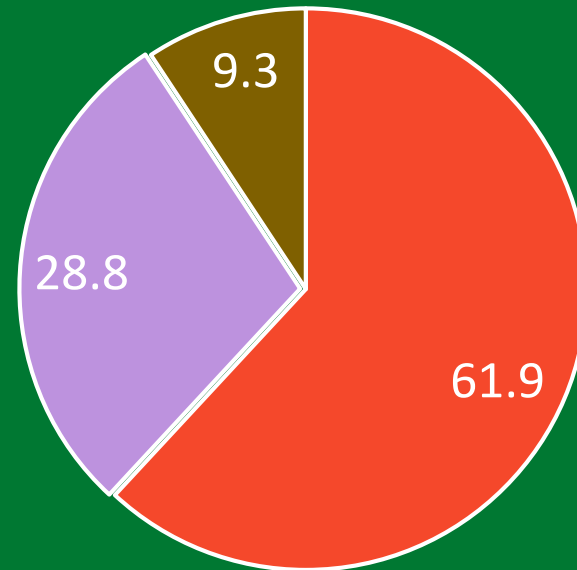
Four focus groups with stakeholders from across Scotland providing technology enabled support

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

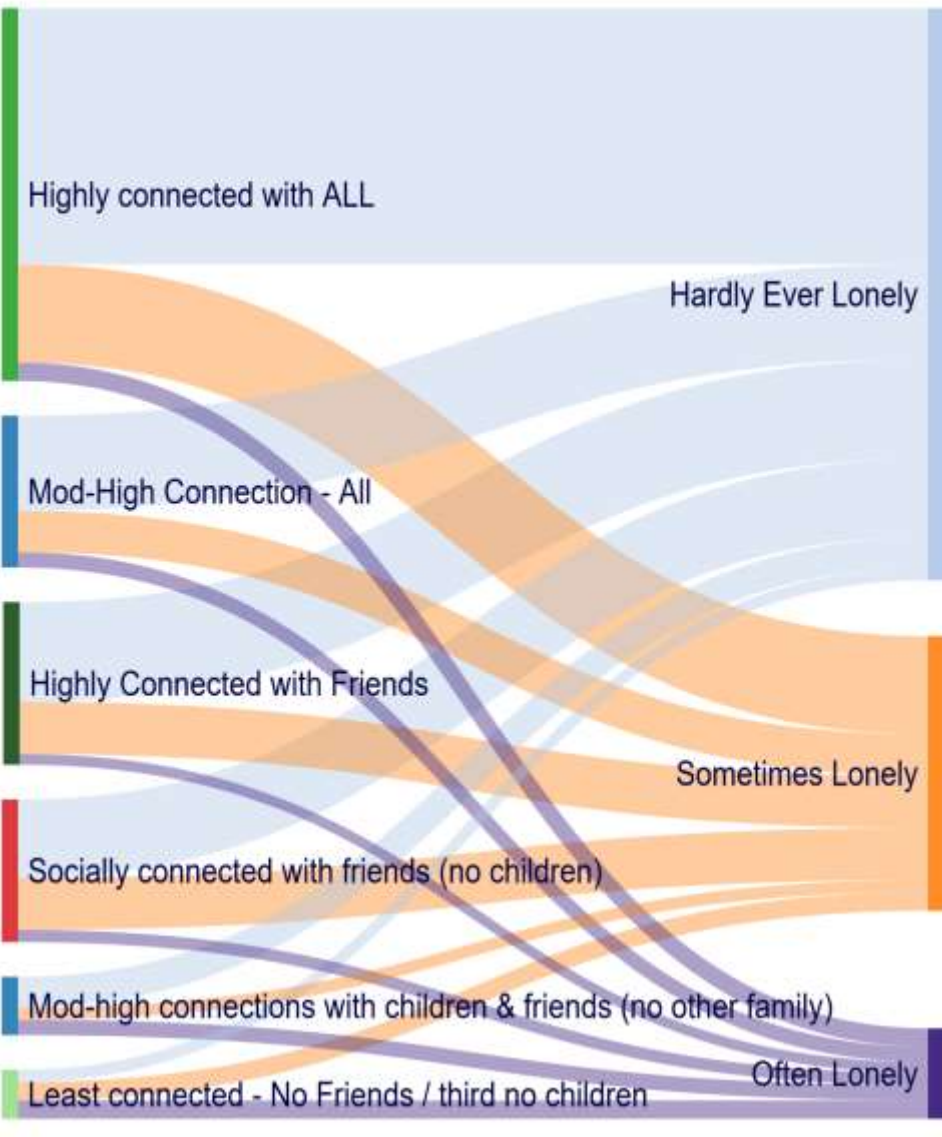
# Use of Technology

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

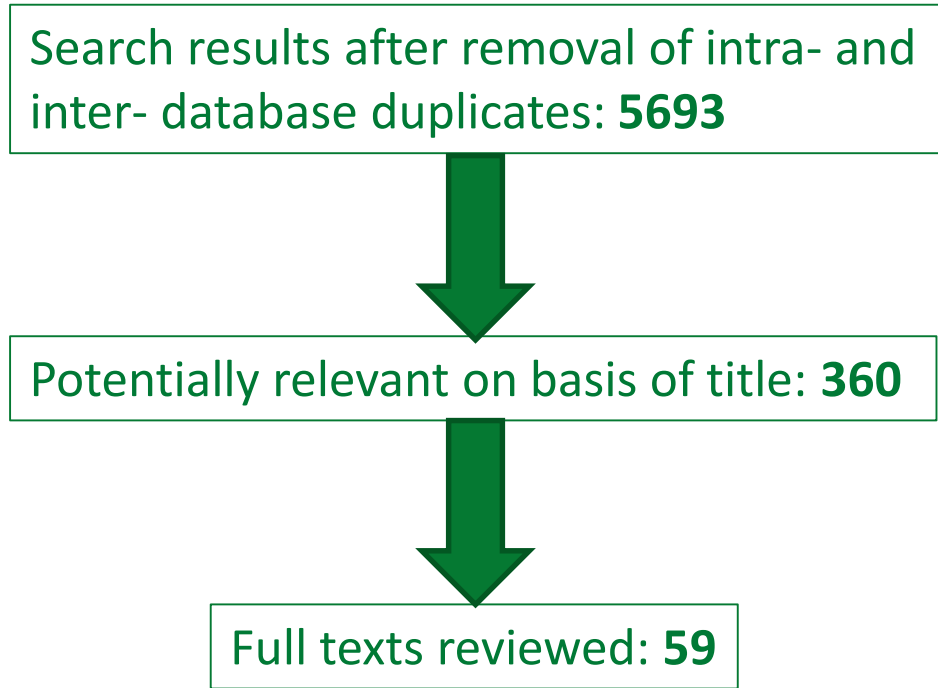


Image: <https://redislabs.com/blog/use-redis-content-filtering/>



# 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

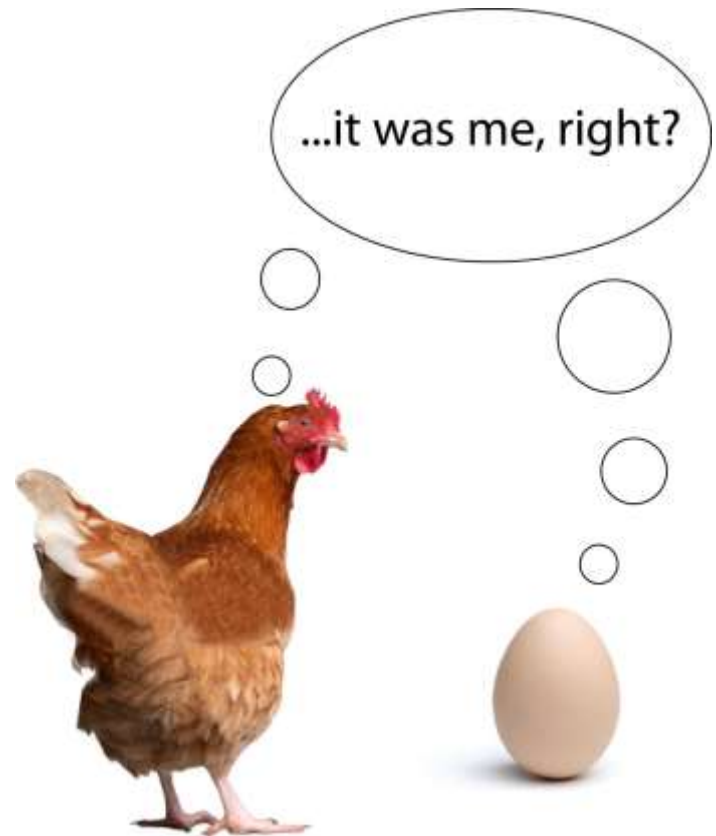


Image: <https://signlanguageco.com/the-chicken-and-the-egg-and-the-interpreter/>

Co-creation workshop: Feedback on guidelines

### Get SMART

Wondering how to stay safe online? Follow our SMART rules – top tips for using the internet safely and positively

**3**

**S** SAFE: Keep your personal information safe. When slating your full name, password or home address. Remember images and videos you share too. Keep them safe to

**A** ALERT: Be alert to what you see online. Don't click on links or open something you don't know where they may lead to or the person if you are unsure of who the person is or what they are saying.

**T** TELL: Tell a trusted adult if something or someone ever makes you feel upset, worried or confused. This could be if you or someone you know is being bullied online. There are lots of people who will be able to help you like your teachers, parents, carers or contact Childline – 0800 11 11 or [www.childline.org.uk](http://www.childline.org.uk)

**BE SMART WITH A HEART:** Remember to always be smart with a heart by being kind and making the internet a better place by helping your friends if they are in trouble. It happens online.

**Handwritten notes:**

- "MEET" SOUNDS MORE LIKE AN INSTALLATION THAN A WARNING. OTHERWISE CLEAR & CONCISE
- Good. Repetitive advice. Tell an adult. CLEAR. Simple. Tell young people.
- Check layout & language. Could be more visually appealing.
- THIS IS SIMPLE & STRAIGHT FORWARD. READ LIKE + APPROPRIATE
- CLEAR

### Top Ten Tips for Online Safety

**1**

**Keep your computer's software updated.** Set up your computer to automatically install security updates. If you need help, request a friend's assistance.

**Use antivirus.** Some scammers take advantage of security issues in your computer to steal information or make applications that help protect your computer from this type of malware.

**Back-up files on your computer or tablet.** Both personal computers and tablets can be set up to save back-up copies of your important files.

**Do not share private information on social media.** While you might want to share your upcoming vacation plans with your friends and family on Facebook, you might also be able to see that post as well. Be cautious and ask a friend or family member to help you configure your privacy settings on your social media account so that strangers (friends of friends) aren't able to see messages about you, your friends and family.

**Be cautious about installing software on your computer or tablet.** To install malicious software or spyware, there are still many ways that scammers can trick you into installing software on your computer or tablet, and not sharing that information with them.

**Be true, it likely is.** If you see a message that says you've won a prize, that someone wants to take advantage of you, or that someone is recommending a product, be cautious. If they recommend a scammer, they likely created it.

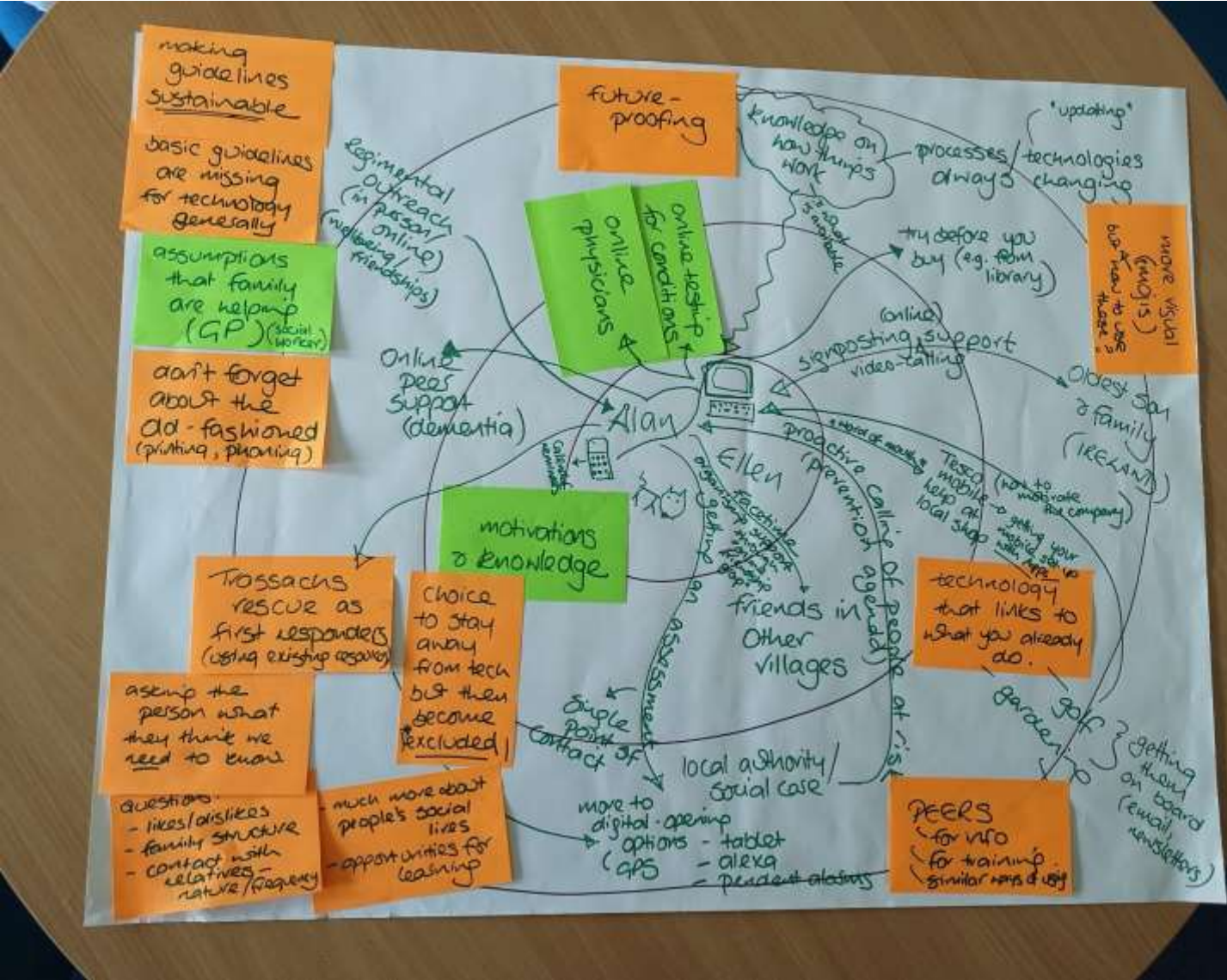
**Be cautious about sharing your location.** If you share your location with someone on social media, they can see where you are. If you share your location with a family member, they can see where you are. If you share your location with a friend, they can see where you are. If you share your location with a stranger, they can see where you are. If you share your location with a scammer, they can see where you are.

**Handwritten notes:**

- Trigger from needed. Words used that people might not understand.
- Less words / Bigger Print
- Lot to read. Good points. But still vague.
- The first is very small.
- No Jargon - fairly jargon free
- No jargon - Do you still need help? Have a question?



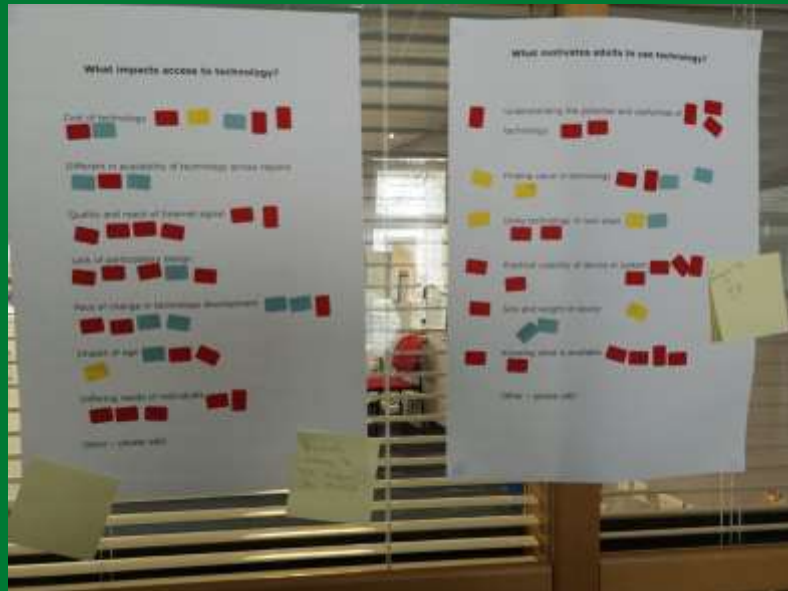
Co-production workshop – constructing a case study



# 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