

# Scotland's Healthy Ageing Innovation Cluster

Wednesday May 3rd 2023 1000-1200



Digital Health & Care  
Innovation Centre



Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean



Scottish Enterprise



# ON AIR

## Attendees please note

1. We are **recording this event** and it will be hosted on our HAIC webpage resources so it can be watched on demand
2. If you **do not** wish to appear on the recording, you should turn off your camera and microphone for the duration of the event
3. As a courtesy to our speakers and guests, we ask all attendees to **turn off** microphones and cameras during presentations
4. Drop your **questions in the chat field** or wait until the Q and A session, where they can be answered

# Today's event

Joanne Boyle, Digital Health & Care Innovation Centre

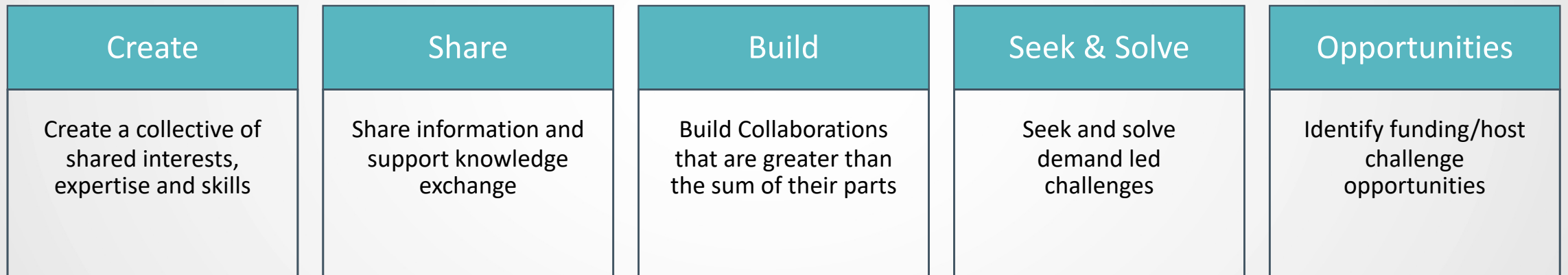
# Agenda

Time	Topic title and descriptor	Presenter(s)
1000	Welcome and introductions	Joanne Boyle
10.10 10.25	Partner Update Highland and Islands Enterprise Midlothian Frailty Project	April Conroy Chal Chute DHI CTO
10.45	Blackwood Housing: Peoplehood	Heather Duncan
11.00	COMFORT BREAK	
11.10	Community Enterprise in Scotland	James Finnie
11.25 11.40	Albyn housing Data presentation Matter of Focus Outcome Mapping	Lucy Fraser Joanne Boyle
1200	Close	

# Welcome and introductions

Joanne Boyle, Digital Health & Care Innovation Centre

# Aim: To accelerate digital innovation and Adoption in health and care



Partner update:  
Highlands and Islands  
Enterprise

April Conroy



Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean

# Highlands and Islands Enterprise: Life Sciences and Blue Economy

April Conroy – Life Sciences – Human Health  
Andrea McColl – Life Sciences – AAA, Blue Economy  
March 2023



# INVERNESS CAMPUS

Life Science Innovation Centre now open!

<https://www.invernesscampus.co.uk/business-premises-and-land/lpic/>

- Facilities for businesses to work collaboratively with academia
- Commercial space including offices and labs
- Half of the building is occupied by UHI's Institute of Health Research & Innovation



National Treatment Centre now open!

<https://www.ntchighland.org.uk/>

- Delivering state of the art Ophthalmology & Orthopaedic Healthcare
- First patients due to be treated there in April 2023

# INVERNESS CAMPUS

**Aurora House** and **Solasta House** provide high specification Life Science and Technology accommodation including serviced laboratory space



- Life Science Enterprise Area Status
- Commercial space occupied by Life Science and Technology Tenants
- NEXUS co-working space for SMEs and start-ups in Life Sciences and Tech
- Support programmes for SMEs



# HIE SUPPORT

## Business to Healthcare (B2HC)

Fully funded business support programme

Tailored action plans, advice and signposting

<https://www.hie.co.uk/b2hc>



## NEXUS

Co-working space for SMEs in Life Sciences and Technology Sector.

<https://www.hie.co.uk/support/browse-all-support-services/nexus/>

# HIE SUPPORT

## Pathfinder Accelerator

Free business support programme including coaching

Three times a year until 2024

Themed cohorts

Round tables

Alumni bulletin and events

<https://www.hie.co.uk/pathfinder>

Fully funded opportunity for entrepreneurs to accelerate their new product or business in only four months.





Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean

[april.conroy@hient.co.uk](mailto:april.conroy@hient.co.uk) – Life Sciences – Human Health

# Midlothian Frailty Project

Chaloner Chute DHI Chief Technology  
Officer



# Midlothian Frailty Pathfinder

A Collaborative Care Architecture

A pathfinder project developed by:



“The Midway” focuses on:

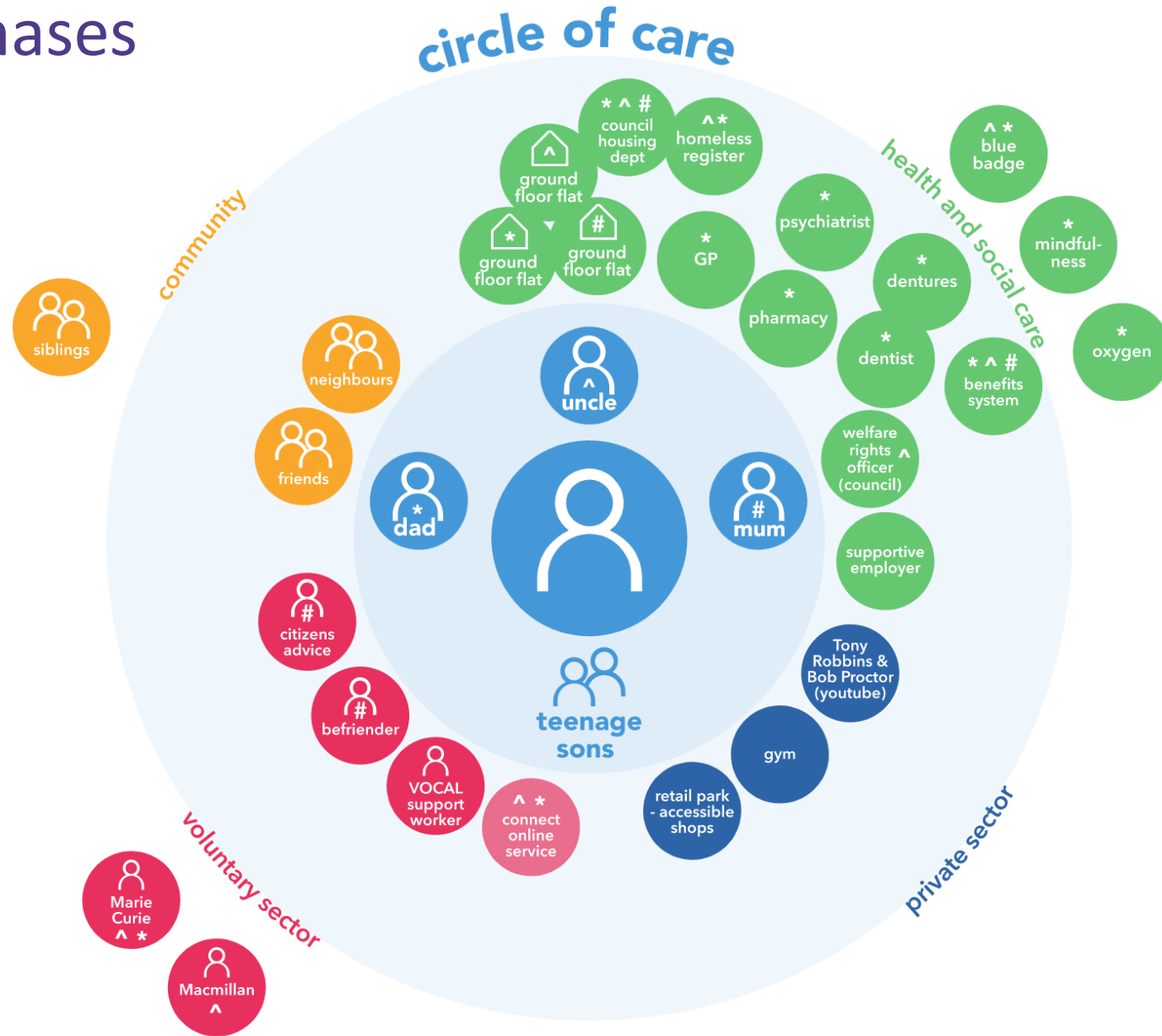
- Beliefs and Values: Our staff are facilitators not fixers. They recognise the person is an expert in their own life.
- Good Conversations: Our staff shift power to the person. They support self-management, building on coping, and hopes.
- Understanding Trauma: Our staff understand trauma. They recognise and respond to the impact of trauma.
- Addressing Inequality: Our staff recognise inequality. They address unfair disadvantaged people face.

“Person-Centred Data Sharing” focuses on trust, empowerment, integrated care, and sustainability.

- Design with people as team members and assets who can co-manage care and the data that supports care.
- More structured data created at the point of care and kept independent from products and services.
- Make the person, not organisations, the point of integration.
- Default to dynamic consent to share personal data.



# Previous Phases



# Previous Phases



## How might we support people...

1...to have good conversations that are asset-based, empowering and enabling

2...to support connection and meaningful activity within the community

3...to see all the people involved in supporting the person living with frailty

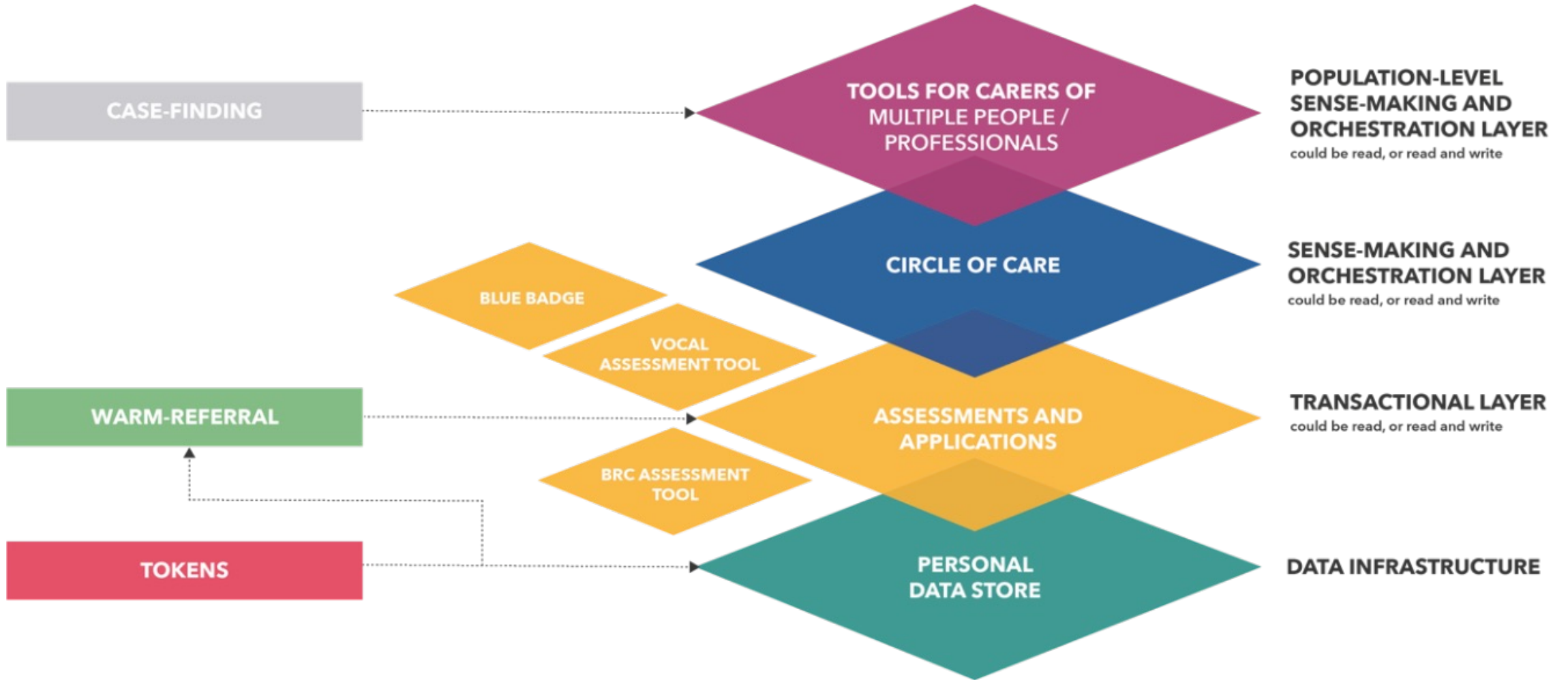
4...to collaborate with (other) professionals

5...to share information and communicate across the system

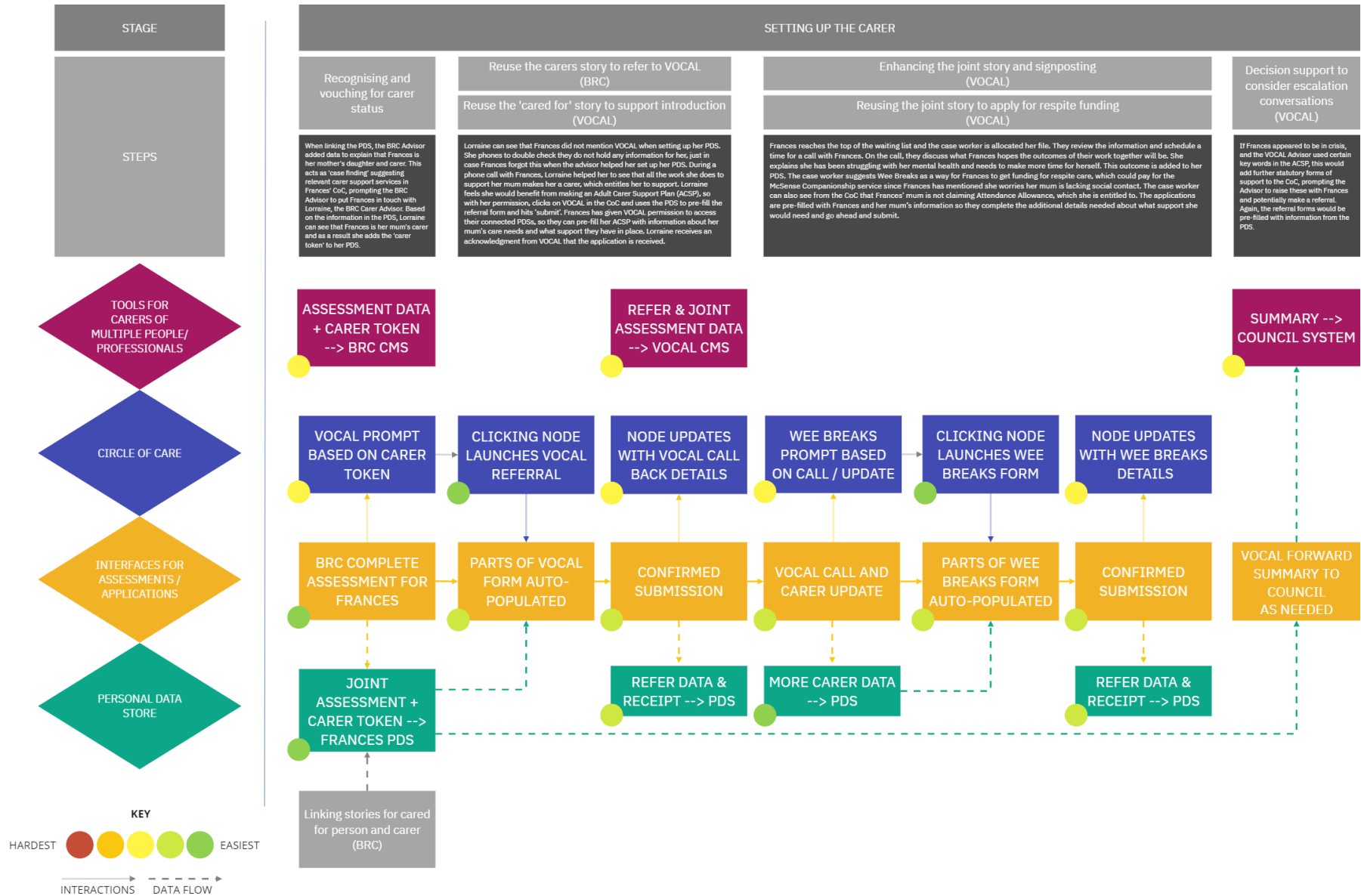
6...to access up to date info about what support is available, wait times, eligibility and how to access support

7...to make referrals and applications and follow up on progress

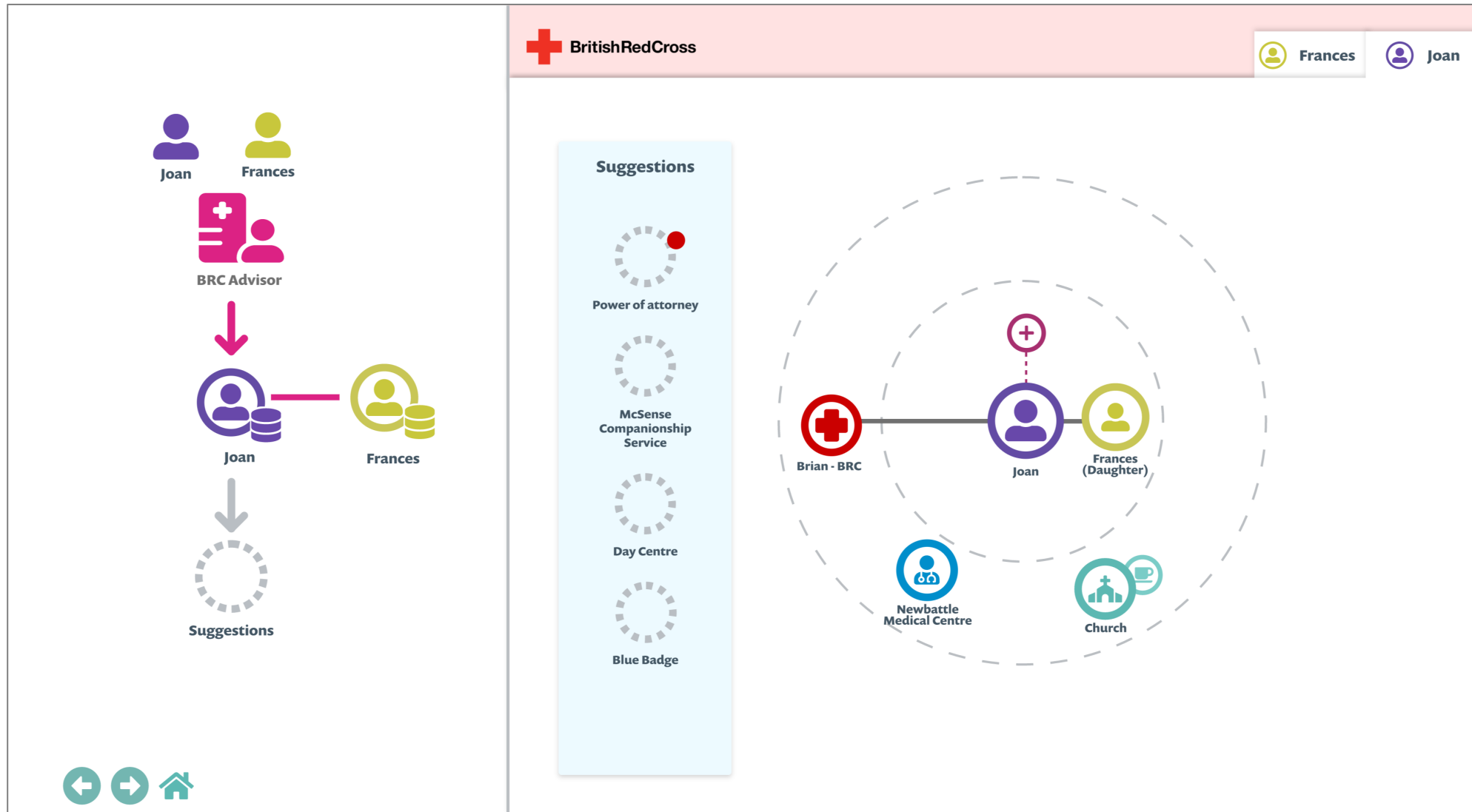
# Collaborative Care Architecture



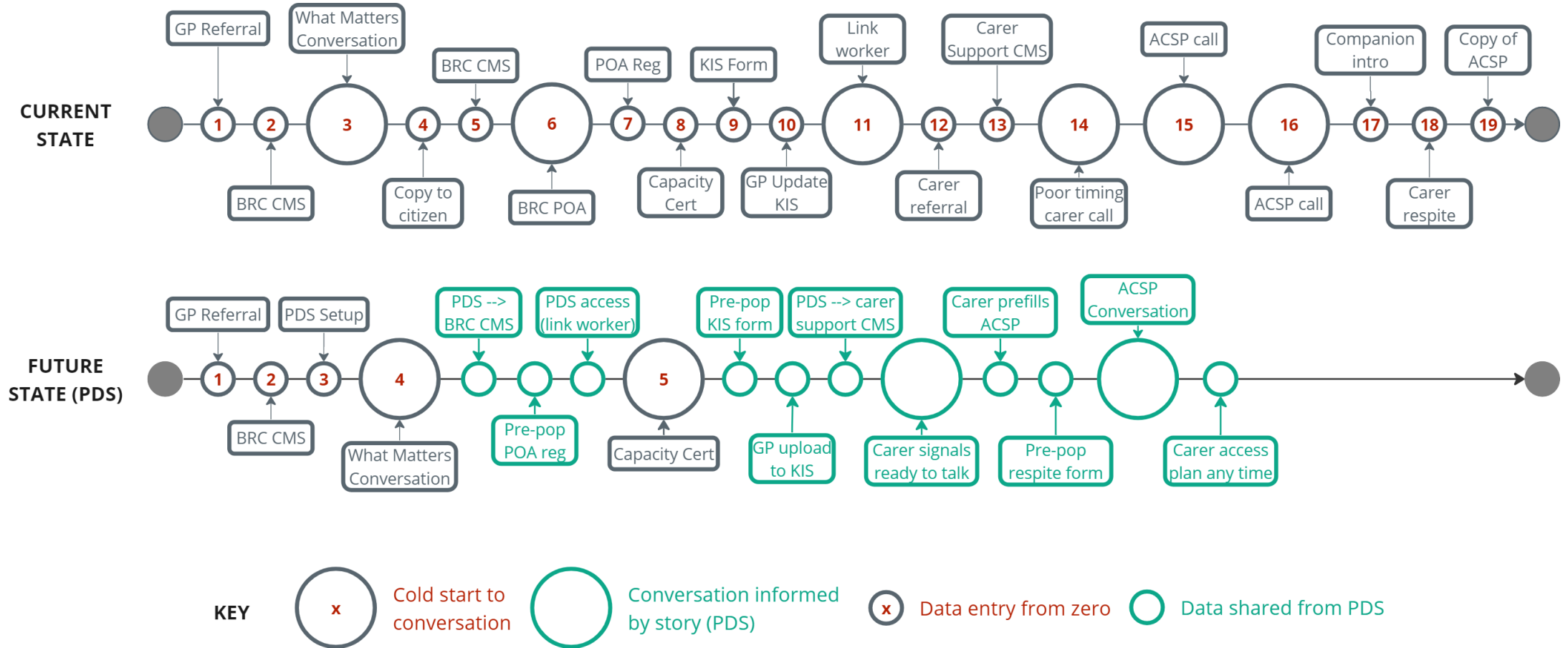
# Future State Blueprint



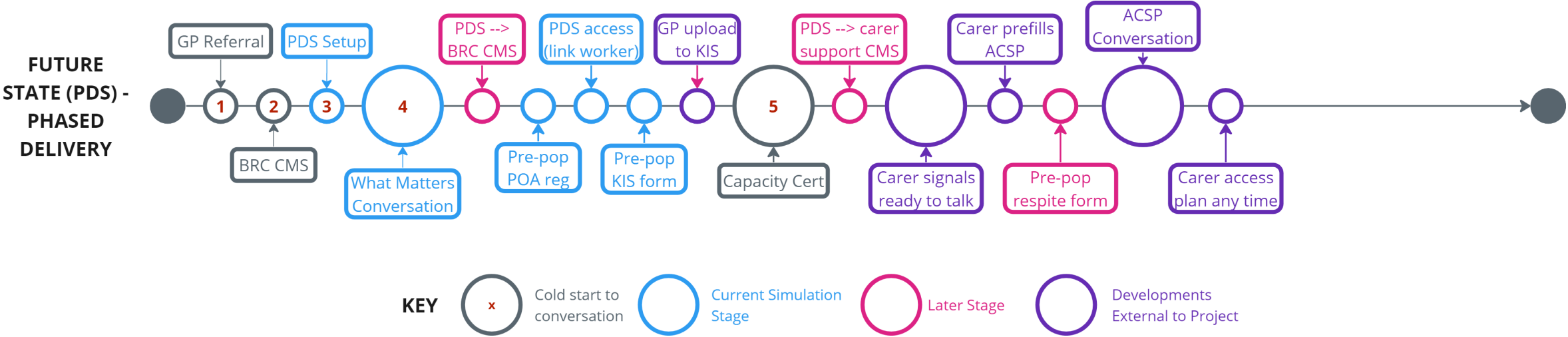
# Prototype: Circle of Care



# Current and Future Data Journeys



# Staged Future State Development



# Next Phase



- BRC conversation tool
- BRC CMS Integration
- Vocal CMS Integration
- Development Roadmap
- Lay Summary
- Lessons Learned





## Digital Health & Care Innovation Centre



Join our Network:  
[www.dhi-scotland.com/join-our-network](http://www.dhi-scotland.com/join-our-network)

# Blackwood Housing Association: Peoplehood

Heather Duncan Director of Finance and Strategic  
Partnerships

# Peoplehood

Happier, healthier neighbourhoods

Powered by Blackwood  
homes | care | support

# About Blackwood

- **Founded in 1972 by Dr Margaret Blackwood MBE, a campaigner for the rights and independence of disabled people.**
- **Pioneers of accessible home design**
- **Over 100 housing developments across mainland Scotland – 1500+ properties**
- **Deliver 10,000+ hours care each week**
- **3 care homes**
- **24/7 Responder Service using CleverCogs**
- **The Blackwood House**



**Blackwood**  
homes | care | support

# How did we get here?

- This three year project is supported with funding from Innovate UK and is part of Trailblazer Healthy Ageing
- Our overall goal = 5 more healthy, productive years
- We want to tackle inequalities between the most and least deprived citizens in our areas
- Stage 1 – readiness phase – complete
- Stage 2 – our funding bid was successful and we're in the final year



**INDUSTRIAL  
STRATEGY**



**Innovate  
UK**

Powered by **Blackwood**  
homes | care | support

# Healthy Ageing Themes

- Within these 3 areas, we are covering 5 key healthy ageing themes



# Design for Age-friendly Homes

**D1.1 Construction of 66 new homes**

**D1.2 Blackwood Design Guide**

**D1.3 Retrofit existing neighbourhood homes**



# Supporting Social Connections

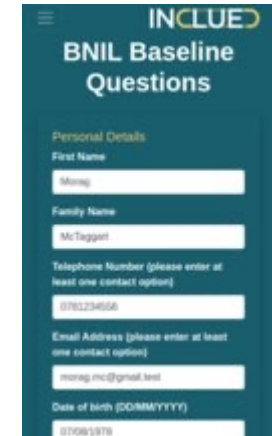
**D2.1 Develop My Life App**

**D2.2 Value Exchange**

**D2.3 Personal Data Store**

**D2.4 Neighbourhood Connectivity & Digital Inclusion**

**D2.5 Volunteering & Social Programme**



The image shows a mobile application interface for 'INCLUE BNIL Baseline Questions'. The form is titled 'Personal Details' and contains several input fields: 'First Name' (with the value 'Sheng'), 'Family Name' (with the value 'McTaggart'), 'Telephone Number (please enter at least one contact option)' (with the value '078123456'), 'Email Address (please enter at least one contact option)' (with the value 'sheng.mc@gmail.com'), and 'Date of birth (DDMMYYYY)' (with the value '01/06/1978').



# Sustaining Physical Activity

**D3.1 Provision of Outdoor Exercise Equipment**

**D3.2 Co-design and deliver neighbourhood physical activity programmes and competitions**



# Creating Healthy & Active Places

**D4.1 Provision of Low Carbon EV**

**D4.2 Provision of**

**Equipment/Service libraries**

**D4.3 Environmental**

**Improvements**



# Managing the Common Complaints of Ageing

**D5.1 Lifestyle Alert System**

**D5.2 Responder Service**



# SG/Digital Health and Care connections

1. People are able to look after and improve their own health and wellbeing and live in good health for longer.
2. People, including those with disabilities or long term conditions, or who are frail, are able to live, as far as reasonably practicable, independently and at home or in a homely setting in their community.
3. People who provide unpaid care are supported to look after their own health and wellbeing, including to reduce any negative impact of their caring role on their own health and well-being.
4. Resources are used effectively and efficiently in the provision of health and social care services.

# Project Partners



# Heather Duncan

Email: [heatherduncan@blackwoodgroup.org.uk](mailto:heatherduncan@blackwoodgroup.org.uk)

# James Finnie CEIS



# Healthy Ageing Innovation Cluster

CEIS

3<sup>rd</sup> May 2023





# Community Enterprise in Scotland (CEIS)



Main office: Govan, Glasgow

- Established April 1984
- 65 staff
- 7 office bases in Glasgow, Ayrshire and Dumfries and Galloway
- 2022 Turnover: £5.1m



# Community Enterprise in Scotland (CEIS)

- UK's largest and most experienced social enterprise support agency
- Our mission is to tackle inequality, strengthen communities and improve the performance and impact of businesses which contribute to our society
- Core to our success and reputation is our work with partners across the world to share and develop new approaches and systems that support social enterprise development



# CEIS



# Sector Growth

## Active Social Enterprises

As of 1 April 2021, there were **6,047** active social enterprises in Scotland. This represents a **16%** increase between 2015 and 2021.

### GROWTH IN THE NUMBER OF ACTIVE SOCIAL ENTERPRISES

2015: **5,199**

2017: **5,600**

2019: **6,025**

2021: **6,047**

Source: Analysis of data on all identified social enterprises, 2015, 2017, 2019 and 2021



# Reported Beneficiaries

## TARGETED BENEFICIARIES<sup>87</sup>

Beneficiary Groups	% of Respondents
People experiencing socio-economic disadvantage	55%
Young people	52%
Older people	42%
People with mental illness or mental health problems	39%
Individuals with a learning disability	36%
Individuals with a physical disability or long-term condition	35%
People from rural and island communities	33%
Women and girls	29%
Long-term unemployed	27%

Beneficiary Groups	% of Respondents
Carers	22%
Alcohol or drug addiction/dependency	19%
People from a minority ethnic background	18%
Refugees and asylum seekers	14%
Homeless / coming out of homelessness	12%
People with convictions	12%
People identifying as LGBTIQ+	11%
Veterans / ex-military	8%
Victims of crime	6%

Source: Social Enterprise Census Survey 2021



# Business Support - Just Enterprise

- Scottish Government programme that provides fully-funded business support to the enterprising third sector across 32 LAs.
- Delivered across Scotland by a partnership of third sector organisations, operating under the Just Enterprise brand.
- Support includes: start-up support & funding, business planning, strategic planning, leadership training, income generation, procurement, social investment, ...
- Apply online at: <https://justenterprise.org/>

**just enterprise**

# Business Support - Higher Education Spin-Outs

## Social Enterprise Runway for Higher Education Spin-outs



### Enquiry Management & 1-2-1 Business Support

- CEIS / Challenges Group / Just Enterprise / Commercial Champions



### Grant Funding for Business Start up & Growth

- Firstport Social Entrepreneurs Fund £5-25k / Challenges Group SEEIP £30k



### Social Finance

- Firstport Boost It & Catalyst £30-50k / Firstport Launch Me Investment Readiness Support / Challenges Group SEEIP £90K / SIS £10K-£1.3M



### Legal Support

- MacRoberts LLP: Social Enterprise legal structures & company formation / IP audits & advice / contracts



### Incubation & Internationalisation

- Challenges Group: Office space, corporate services, management  
- In-country market analysis, support and market development



Contact:

---

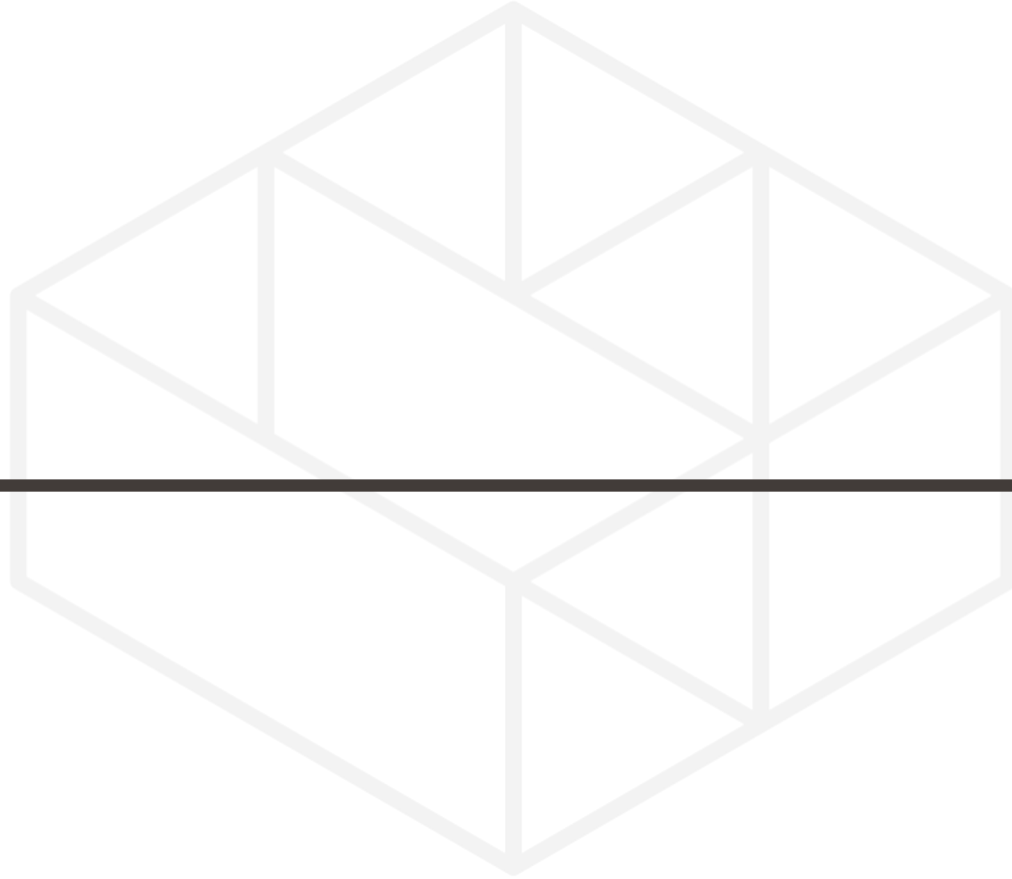
[James.finnie@ceis.org.uk](mailto:James.finnie@ceis.org.uk)

0141 425 2912





# Backup



# Governance, Leadership & Fair Working Practice

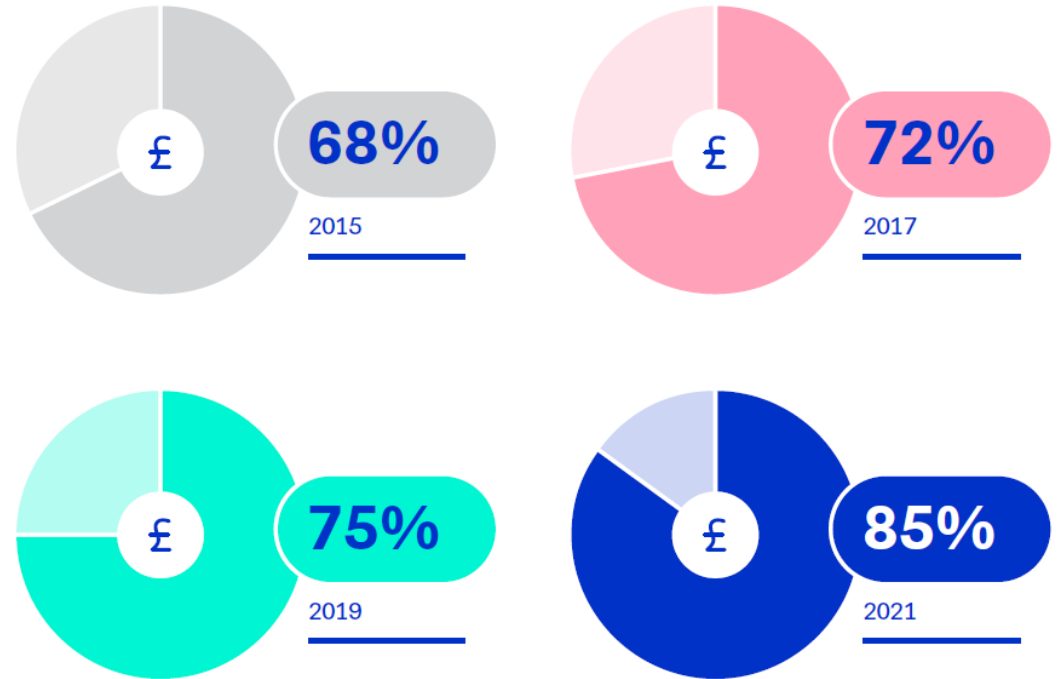
## PROFILE OF SALARIED SOCIAL ENTERPRISE LEADERS<sup>21</sup>

Group	% of the Most Senior Employees from Group	18+ population <sup>22</sup>
Women	71%	51%
Non-binary	1%	not available
Black and Minority Ethnic	5%	5%
Under 30 Years Old	4%	18%
Disability or Long-term Condition	21%	26%
LGBTIQ+	6%	3%

Source: Social Enterprise Census Survey 2021

Social enterprises also tend to have very flat pay structures. The 2021 survey findings indicate an average wage differential of **2.3:1** between the highest and lowest paid employee<sup>27</sup>, compared to a consistent wage differential of **2.5:1** reported in 2015, 2017 and 2019. The latest figures also show that **97%** do not exceed a ratio of **5:1**, consistent with the principles of fairness and equity set out in the Voluntary Code of Practice for Social Enterprise in Scotland<sup>28</sup>.

## % OF SOCIAL ENTERPRISES PAYING THE REAL LIVING WAGE FOR SCOTLAND<sup>29</sup>



Source: Social Enterprise Census Survey 2015, 2017, 2019 and 2021

Albyn

Lucy Fraser Head of Innovation



Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd



# Housing-Led Innovation

May 2023



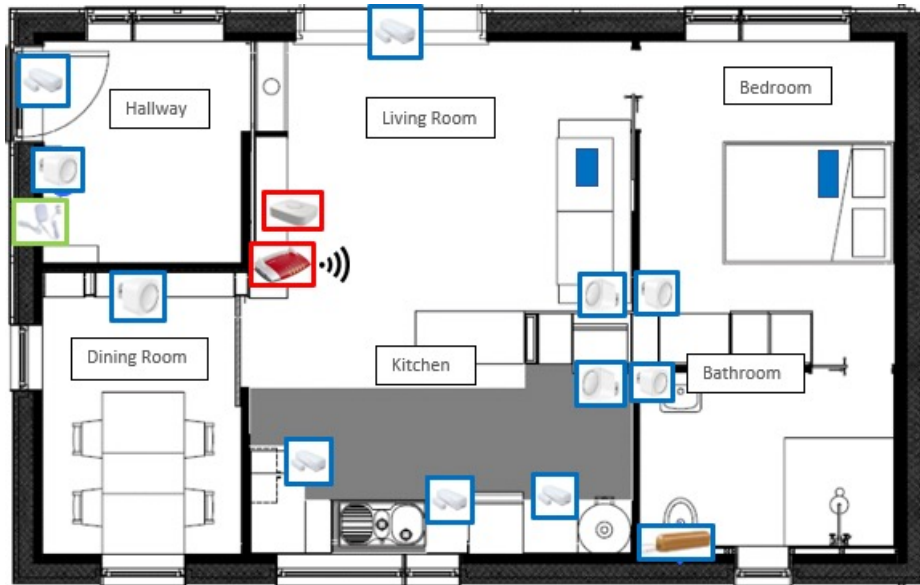
**Lucy Fraser**

Head of Innovation

The Albyn Group

# What we're doing

Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd



Secure Data Storage



Research: Falls Prediction Algorithm  
Identify changes in activity that increase fall risk months/years in advance



Residents & Trusted Persons  
e.g. relatives, carers, neighbours



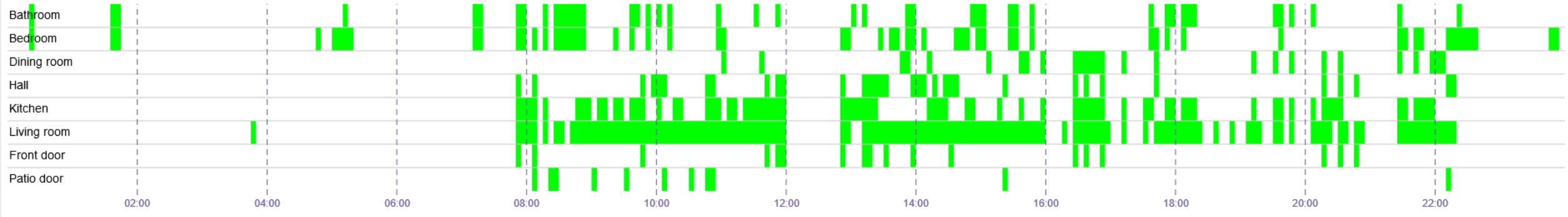
NHS Receivers  
e.g. GPs, emergency services, telecare responders

# Example activity data from sensors

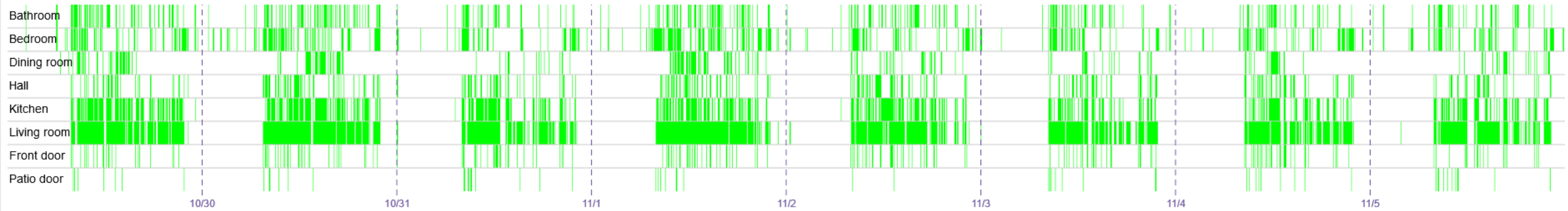
Today



Yesterday



Last 7 Days





# User Interface



Login > Residents - desktop

Albyn Housing Monica Robertson [Logout](#)

### Residents

Locations (2) Residents (4)

Open all menu options Close all menu options

Location name - Residents (3)

**Resident 1**

**Movement**

Earliest 11am - 11.05am **5min** Bedroom

Latest 6.30pm - 6.35pm **5min** Kitchen

**External doors**

Last opened 7.30pm **5min** Hallway

Current status **Closed** Hallway

**Closed** Patio

**Temperature**

Lowest 8am - 1pm **17°C** Hallway

Highest 10am - 3.35pm **23°C** Living room

**Resident 2**

**Movement**

Earliest 11am - 11.05am **5min** Bedroom

Latest 6.30pm - 6.35pm **5min** Kitchen

**External doors**

Last opened 7.30pm **5min** Hallway

Current status **Closed** Hallway

**Closed** Patio

**Temperature**

Lowest 8am - 1pm **17°C** Hallway

Highest 10am - 3.35pm **23°C** Living room

**Resident 3**

**Movement**

Earliest 11am - 11.05am **5min** Bedroom

Latest 6.30pm - 6.35pm **5min** Kitchen

**External doors**

Last opened 7.30pm **5min** Hallway

Current status **Closed** Hallway

**Closed** Patio

**Temperature**

Lowest 8am - 1pm **17°C** Hallway

Highest 10am - 3.35pm **23°C** Living room

Albyn Housing User Profile Menu

### Movement overview

Location name Resident 1 Mobile View

Open all Close all

**Today**

Time between 12am and 12pm / Date 22 Nov 2023

- Earliest 11am - 11.05am **5min** Bedroom
- Latest 6.30pm - 6.35pm **5min** Kitchen
- Longest 1.50pm - 3.05pm **1h 15min** Kitchen

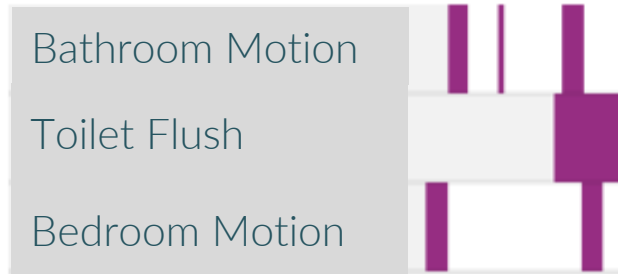
**Movement per room**



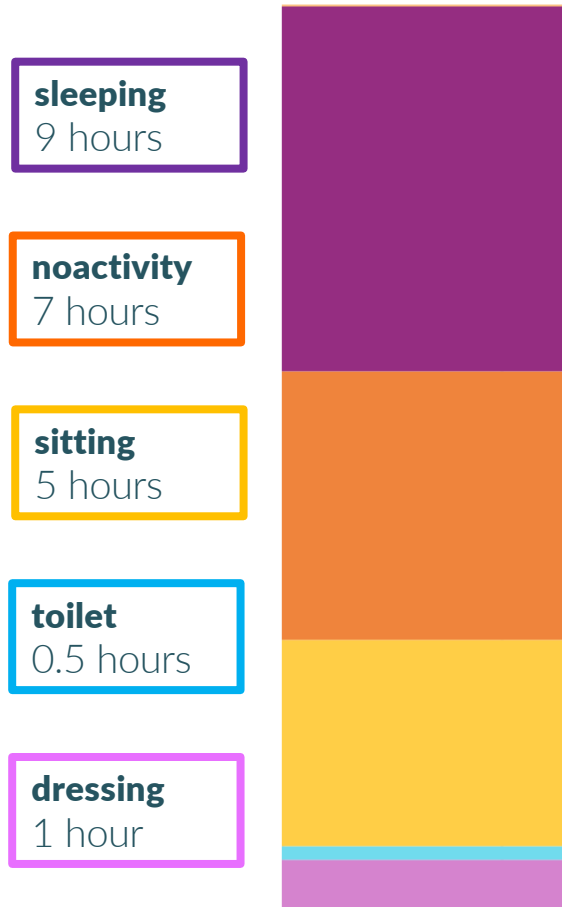


# FITsense System Knowledge from Sensor Data

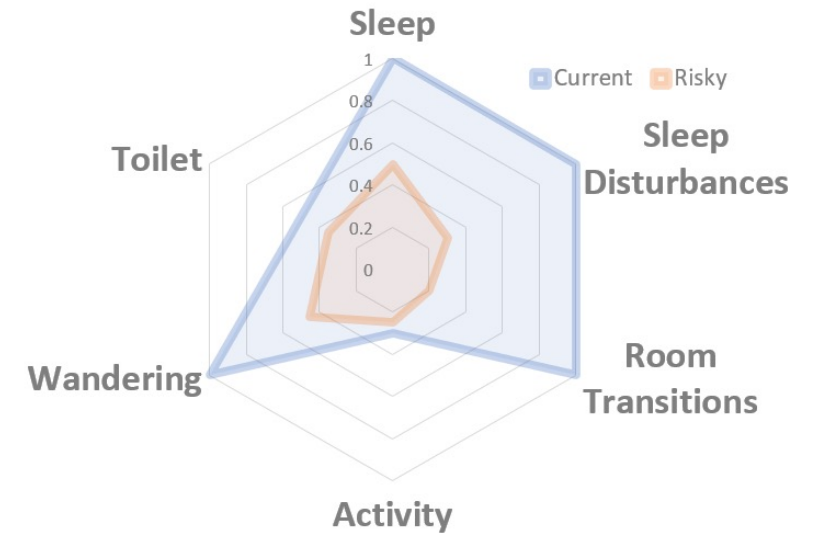
## Sensor Events



## Activity Recognition



## Personal Profiles

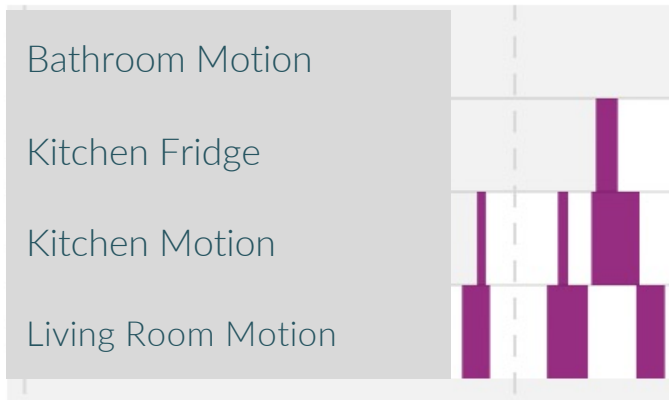






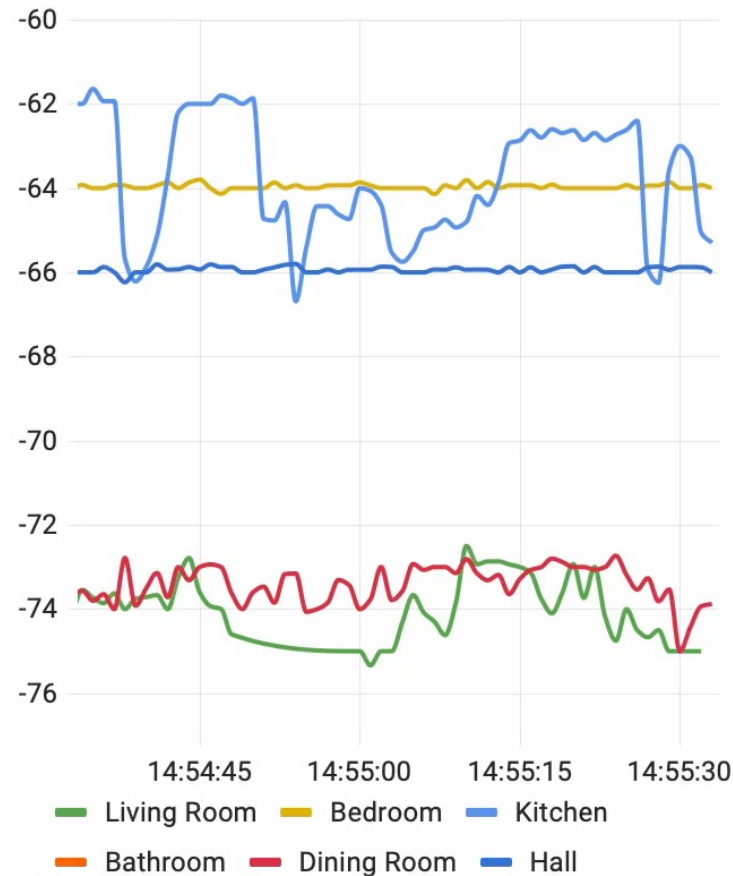
# Invisible Sensors Increasing Sensing Fidelity

## Signal Strength



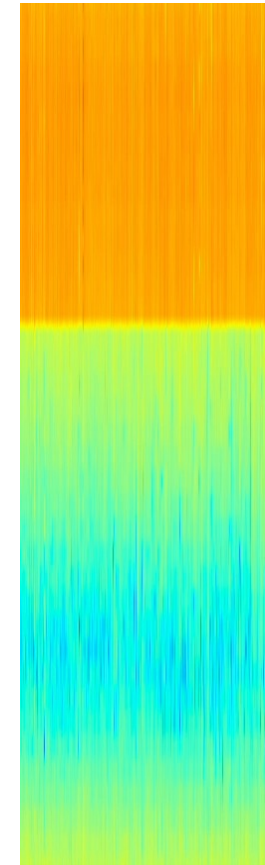
5 minutes

## Infrared Motion



1 minute

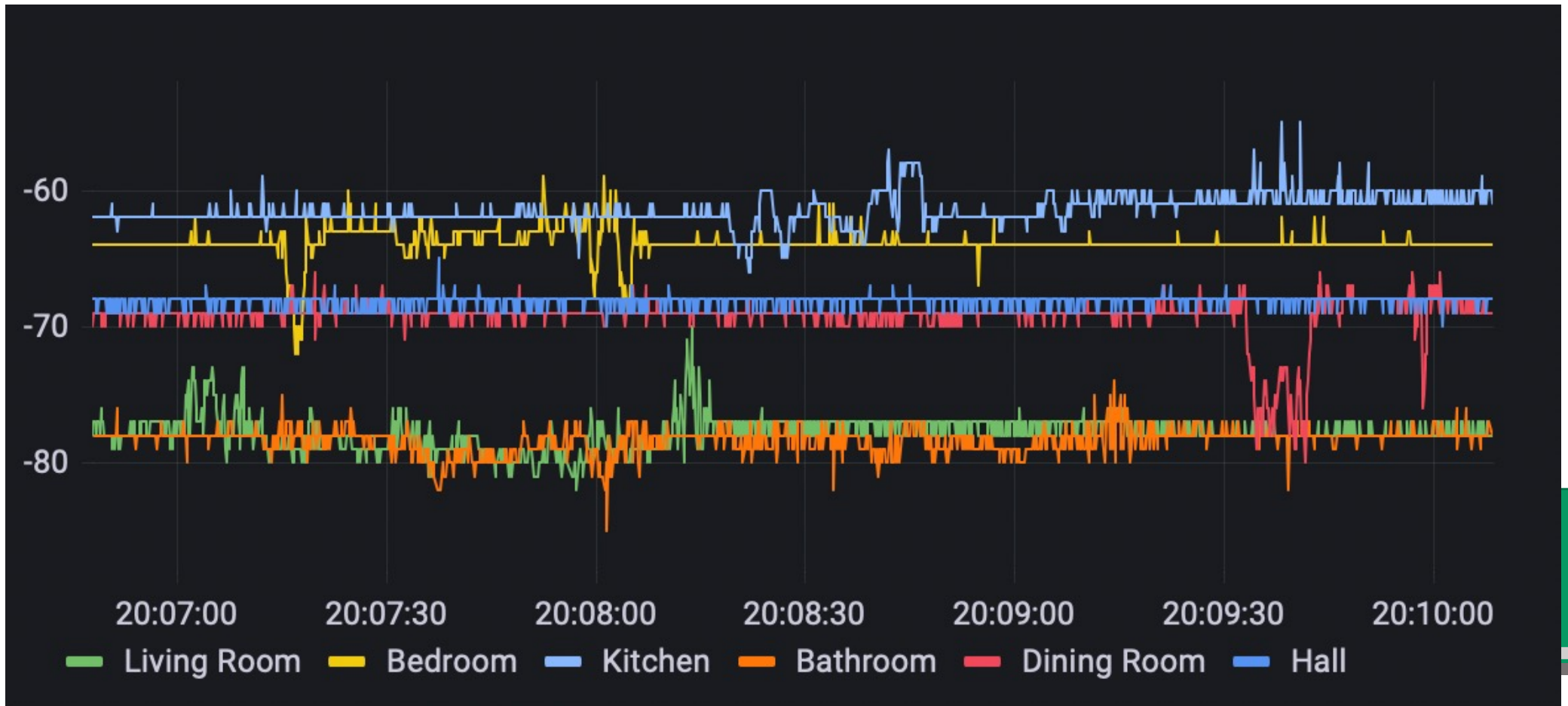
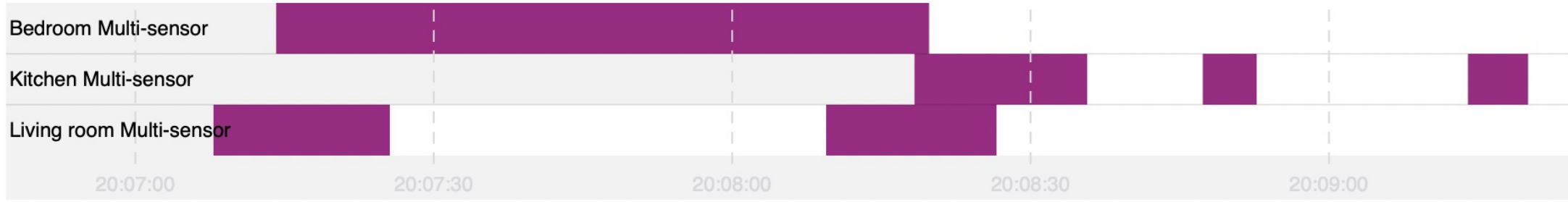
## One CSI sensor



1 second



Event State Chart (House 5)





# Who Are We Housing

- Frail Elderly
  - Identified by Carers
  - Identified by GP's
- People with Life Limiting Disease
- Young people Leaving Care
- People Leaving Prison
- Homeless
- Mental Health
- Drug and Alcohol Dependency

Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd






# Public Sector Highland

Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd



- Highland Council Housing
  - Highland Council Benefits
  - Highland Council Social Work - Care
  - Highland Council Social Work – Criminal Justice
  - Highland Council Data and IT
  - NHS Highland – GP
  - NHS Highland – Social Care
  - Scottish Prison Service
- 



# Research - General

Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd



City-Region Deal  
Cùmhnant Baile-Roinne



- Robert Gordon University
    - Knowledge Transfer Partnership – Innovate UK
  - Glasgow University
    - School of Engineering
    - School of Bio-engineering
    - Computer Science/NHS West of Scotland
    - Levelling-Up
  - Napier University – Criminal Justice
  - Edinburgh University – Artificial Intelligence
  - Stirling University – IoT Legal Framework
- 



# Collaboration & Contributors so far....

# Potential ...

Inverness & Highland  
Inbhir Nis & A' Ghàidhealtachd



EUROPE & SCOTLAND  
European Social Fund  
Investing in a Smart, Sustainable and Inclusive Future



THE UNIVERSITY of EDINBURGH



# Discussion

# Final comments

Joanne Boyle, Digital Health & Care Innovation Centre



# Final comments

- Thank you to all our speakers today
- So much information - all recorded and presentations will be made available for further reference on our website

[Healthy Ageing Innovation Cluster \(HAIC\) | Digital Health & Care Innovation Centre \(dhi-scotland.com\)](https://dhi-scotland.com)

- Feedback vital to develop future sessions

# Funding Opportunities

- All our current funding opportunities are available on the HAIC webpage: <https://www.dhi-scotland.com/innovation/innovation-clusters/healthy-ageing/>

# Next HAIC event

- [Healthy Ageing Innovation Cluster \(HAIC\) | Digital Health & Care Innovation Centre \(dhi-scotland.com\)](https://dhi-scotland.com)

# Take our post event survey

- Scan the QR code →

Or

- Enter:

[https://www.surveymonkey.co.uk/r/Post HAIC Event Survey](https://www.surveymonkey.co.uk/r/Post_HAIC_Event_Survey)



# Join our digital health and care network

- Scan the QR code →

Or

- Enter:

[www.dhi-scotland.com/join-our-network](http://www.dhi-scotland.com/join-our-network)



# Visit our HAIC webpage

- Scan the QR code →

Or

- Enter:

[www.dhi-scotland.com/innovation/innovation-clusters/healthy-ageing/](http://www.dhi-scotland.com/innovation/innovation-clusters/healthy-ageing/)



# Join our private LinkedIn HAIC Group

- Scan the QR code →

Or

- Enter:

[www.linkedin.com/groups/12496744/](https://www.linkedin.com/groups/12496744/)

