

Scotland's Healthy Ageing Innovation Cluster

Wednesday 07 December 2022, 1000-1200



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

- **Welcome and introductions** – Joanne Boyle, Head of Engagement, DHI
- **Designed for Ageing Update** – Julia Glenn UKRI Design Innovation Lead
- **ALISS and Tactuum – Designed For Ageing Scottish finalists** :The journey so far
Chris Mackie Alliance and Mark Buchen Tactuum
- **Smplicare Designed For Ageing Scottish finalists**: The journey so far
Adrian Smales
- **DHI Business Innovation Manager** – Abigail Lyons
- **Final comments** – Joanne Boyle, Head of Engagement, DHI
- **Event close**

Welcome and introductions

Joanne Boyle, Digital Health & Care Innovation Centre



UK Research
and Innovation

Designed for Ageing Competition

September 2021

Healthy Ageing Challenge

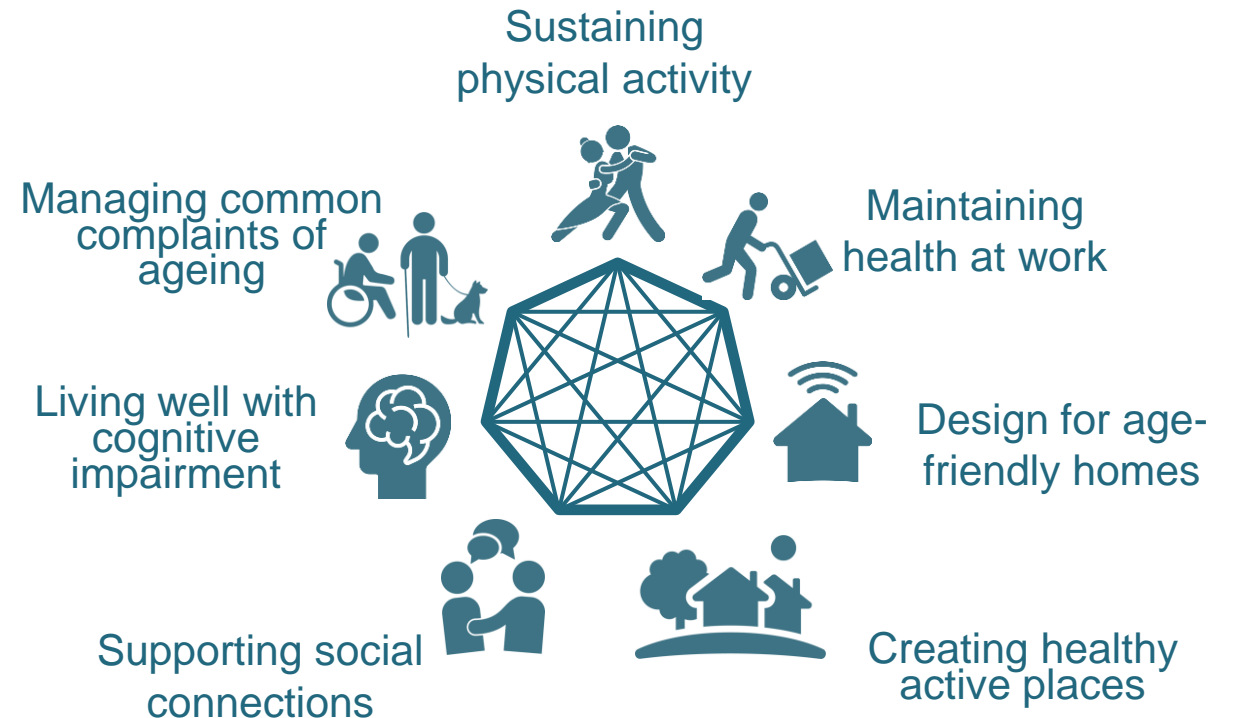


Healthy Ageing Challenge

Vision

To enable **businesses, including social enterprises**, to develop and deliver services and products which support people **as they age** and the innovative business models that enable them to be **adopted at scale**.

This will allow people to remain active, productive, independent and socially connected across generations for as long as possible



- £98M investment in research and innovation
- Broad scope – with 7 themes
- 5-year programme with an emphasis on scalability and sustainability, launched in 2019



UK Research
and Innovation

The Designed for Ageing Competition

Presents an opportunity to:

- Receive up to £2m in grant funding to advance your business
- Fund eligible project costs* for up to two years
- Leverage the competition's unique design stage gate to make your organization more sustainable longer-term, and more likely to capture viable market share

Healthy Ageing Challenge



Designed for Ageing - Competition Profile

						
<p>Launch Sept 2021</p> <p>Pre-competition workshop 01 Jul 21</p>	<p>£14.4m</p> <p>Fund Available</p>	<p>Project duration</p> <p>2 Year with design stage gate</p>	<p>Project Start</p> <p>April 2022</p>	<p>Total Project Eligible Costs:</p> <p>£500K - £2m</p>	<p>Research stage - Industrial research</p> <p>Planned R&D to gain new knowledge and skills for service/process/product development leading to an improvement in existing service/products</p>	<p>Grant funding for eligible project costs of:</p> <ul style="list-style-type: none"> • up to 70% if you are a micro or small organisation • up to 60% if you are a medium-sized organisation • up to 50% if you are a large organisation

Proposed Competition Profile Cont.

Scope:

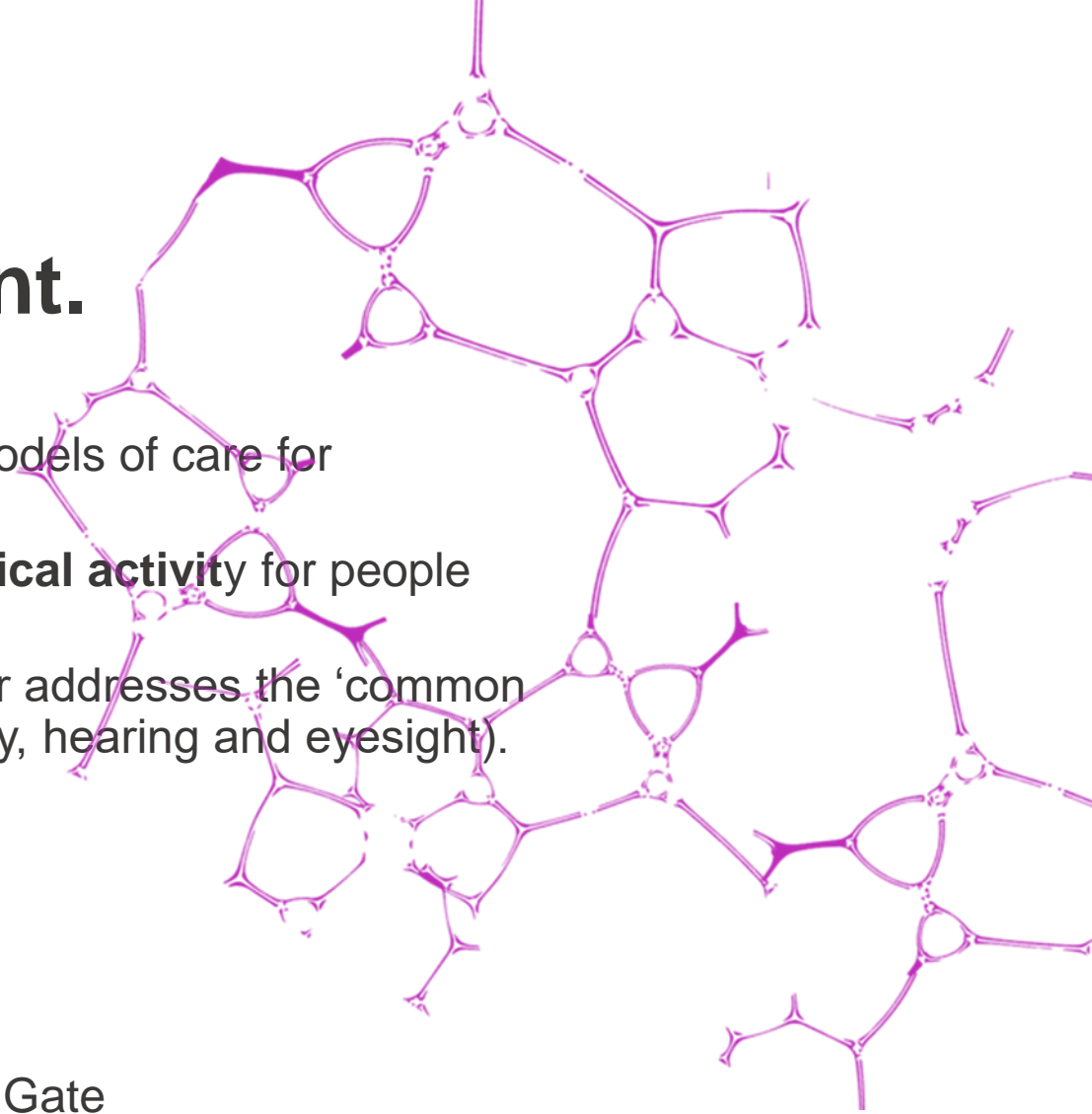
- Service-led innovation that enables **self-care** and new models of care for independent living.
- Service-led innovation that encourages **sustaining physical activity** for people aged 50+, including for instance, active travel.
- Service-led innovation that improves mental health and/or addresses the 'common complaints' of ageing (such as incontinence, pain, mobility, hearing and eyesight).

Applicant Profile:

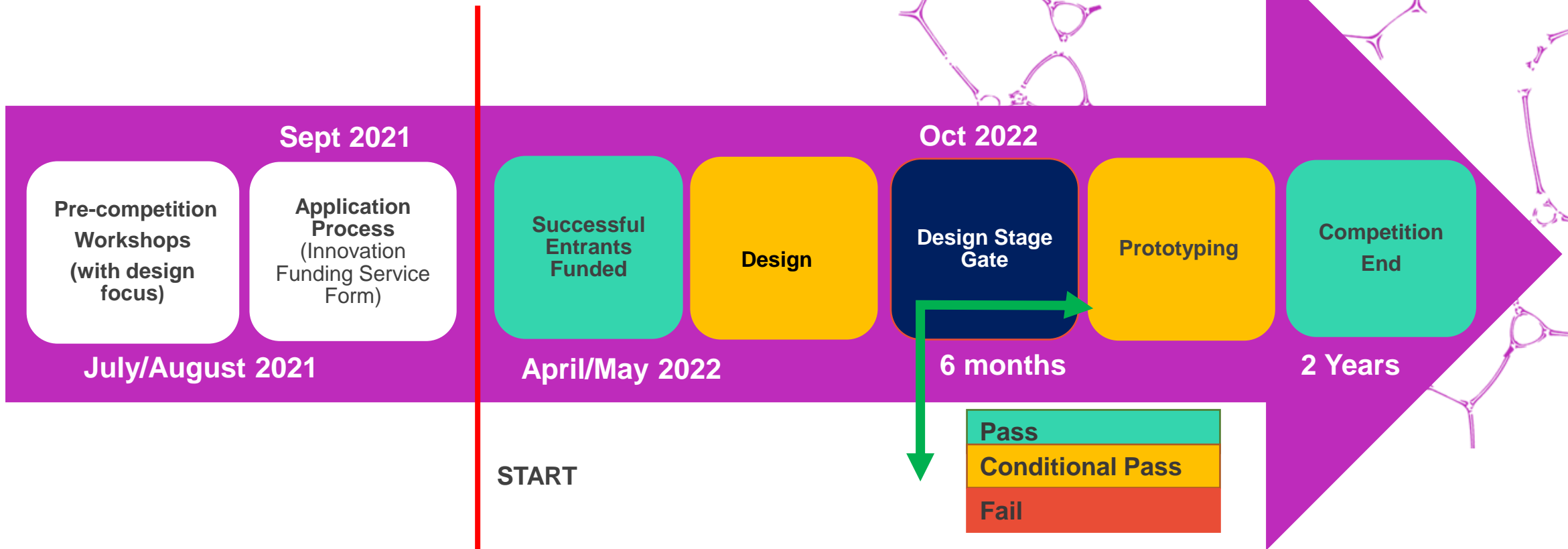
- Business-led
- Service innovation
- Solutions must address inequalities in healthy ageing
- Able to be shaped for market readiness by Design Stage Gate

Bid Assessment: Written and Interview

Healthy Ageing Challenge



Design Focus Through Competition Lifecycle



Designed for Ageing Update

Julia Glenn UKRI Design Lead Healthy Ageing



<https://vimeo.com/778137053>

Designed for Ageing Finalists

Mark Buchner & Chris Mackie



Democratising Access to Community Services (DACs) via ALISS

Mark Buchner, Tactuum Ltd

Chris Mackie, the Health and Social
Care Alliance Scotland

DACS Partners

- Tactuum Ltd
- The Health and Social Care Alliance Scotland (the ALLIANCE)
- Elemental Ltd
- TL Tech Ltd





ALLIANCE
HEALTH AND SOCIAL CARE
ALLIANCE SCOTLAND
people at the centre

The ALLIANCE - People at the Centre

- Scotland's national third sector intermediary
- >3000 members, including individuals and third sector organisations
- DACS incorporates:
 - Service Designer – design the users' end-to-end journey within ALISS
 - User Researcher – get a deep understanding of the people who use ALISS

ALISS - A Local Information System for Scotland

- A democratic, co-produced, crowd-sourced information resource on Scotland's health and wellbeing community assets.
- Utilises open source, open data, and open referral principles

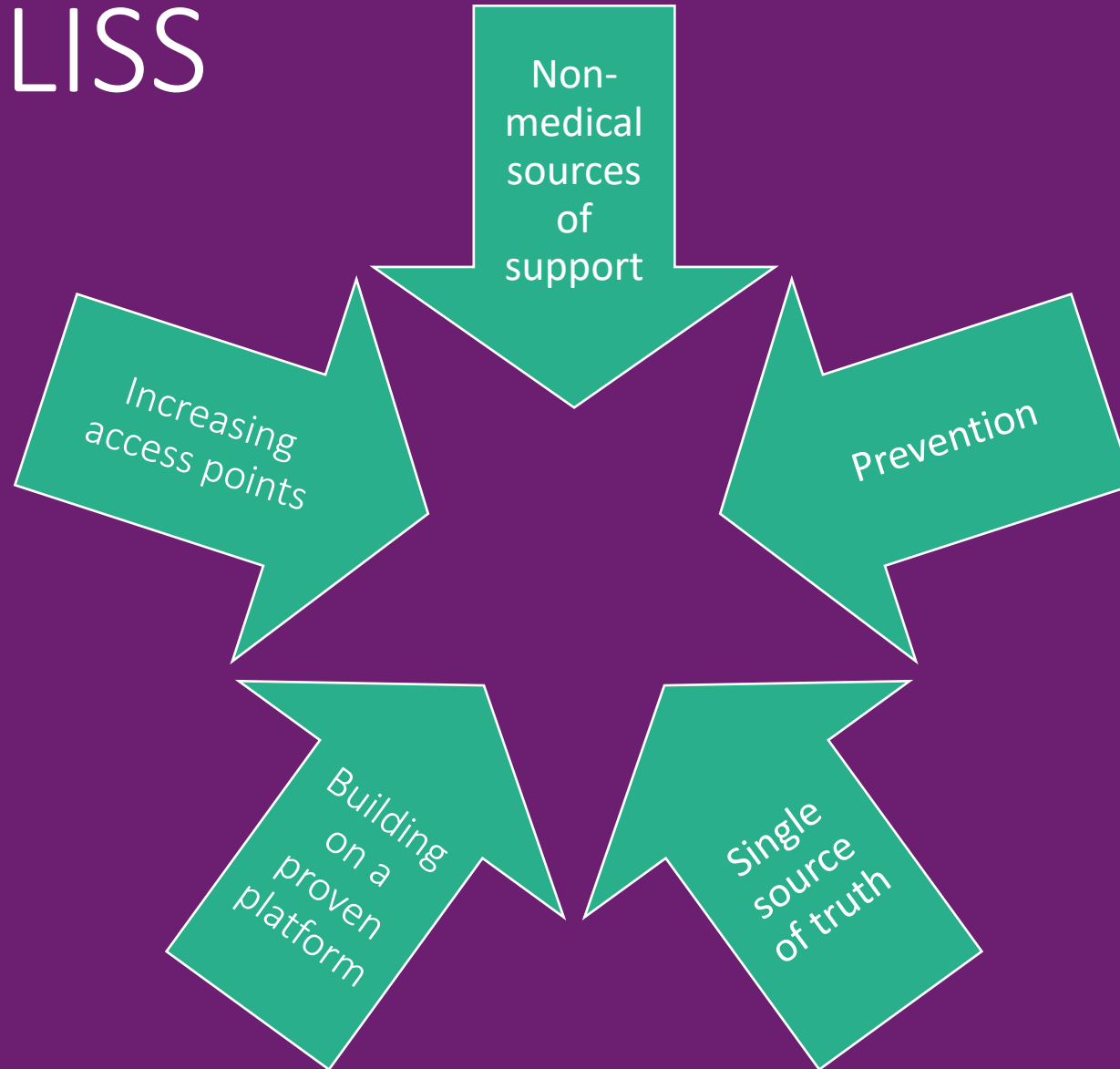


DACS and
ALISS –
Approach to
innovation

"More than a directory" ...

- Enhanced functionality of ALISS
- Intelligent (AI and/or ML driven) aggregation of information into ALISS
- Personalisation of user experience
- Integration with social prescribing
- Reaching people using voice activation

DACS & ALISS



DACS and "Designed for Ageing"

- Vision and fit with the challenge
- Forming the partnership
- Application and interview process
- Project initiation and early work
- Commercialisation



Democratising Access to Community Services (DACs) via ALISS

Mark Buchner:

mbuchner@tactuum.com

Chris Mackie:

chris.mackie@alliance-scotland.org.uk

Designed for Ageing Finalists

Dr Adrian Smales Smplicare

Smplicare

Healthy Aging Innovation Cluster Event



Dr. Adrian Smales
Chief Information Officer
asmles@smplicare.com
[@asmales](https://twitter.com/asmales)

Purpose

We help people **live**
at home
as long as possible



Problem

Our **first mission** is to prevent 10,000 falls per year by 2028

Why falls:

People are afraid of them: 50% of the population over 65 has a fear of falling

Because odds are they will fall: 30% of the population over 65 is at risk of falling

Falls accelerate frailty and cost healthcare systems a lot:



UK

£4bn



EU

€25bn



US

\$49bn

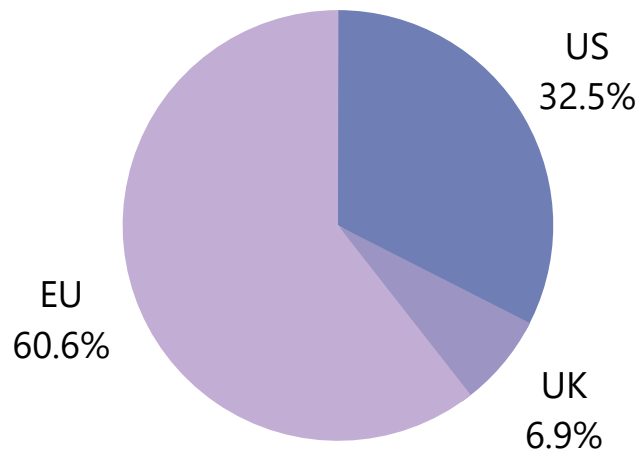
Cost of falls for healthcare systems

Target Market

Total Addressable Market (TAM)

161.3 m*

Population >65



Serviceable Available Market (SAM)

48 m

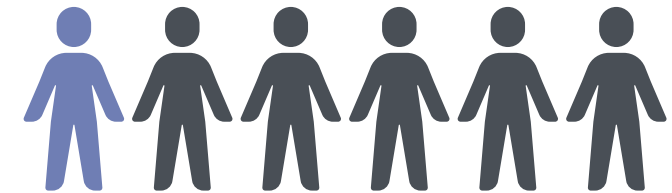
30% Use Wearables



Smplicare Target

8 m

15% by 2030



* Excludes those living in care homes

Source: 2021 AARP Tech Report; The Longevity Economy by AARP, 2020; NIH, 2011

Solution - Smplicare

A digital platform that helps people proactively manage health and wellbeing by turning data into insights and connecting them with content and support

What? - Data: We help customers collect data to understand where to focus. Some is self-reported and some comes from wearables and other digital health devices

Why? - Information: We visualize the data in an accessible, informative dashboard that intelligently highlights new insights and linkages. We also produce and signpost content that promotes health literacy

How? - Support: We use ML/AI to proactively alert to the risk of falls and eventually other adverse health outcomes. We connect customers with local practitioners and digital content. We use advanced behavioral science to help them set, track and achieve goals

Community: We build community on the platform and also allow you to build your care team so families to participate, because ageing well takes a village,

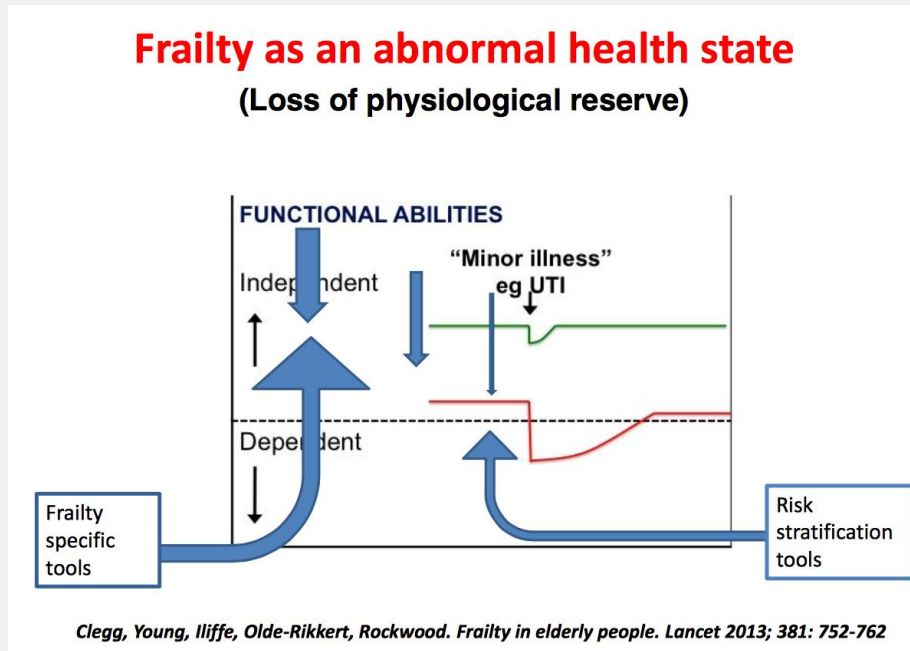
Competitive Advantages

- **Early Mover:** For holistic healthy ageing (frailty - resilience) and fall prevention platforms
- **Research based:** Everything we do is based on leading clinical research
- **Accessible:** We're democratizing the research we use
- **Device Agnostic:** Multiple data feeds in one place while promoting customer choice
- **IP:** Medical device certified algorithms, data processing trade secrets
- **Brand:** Simple and Fun, Compassionate and Authentic - with content curated from regular people and health professionals
- **Personalized:** Adapt the solution to your situation, your goals, and even your budget
- **Validated:** We validate everything to do to the highest standard

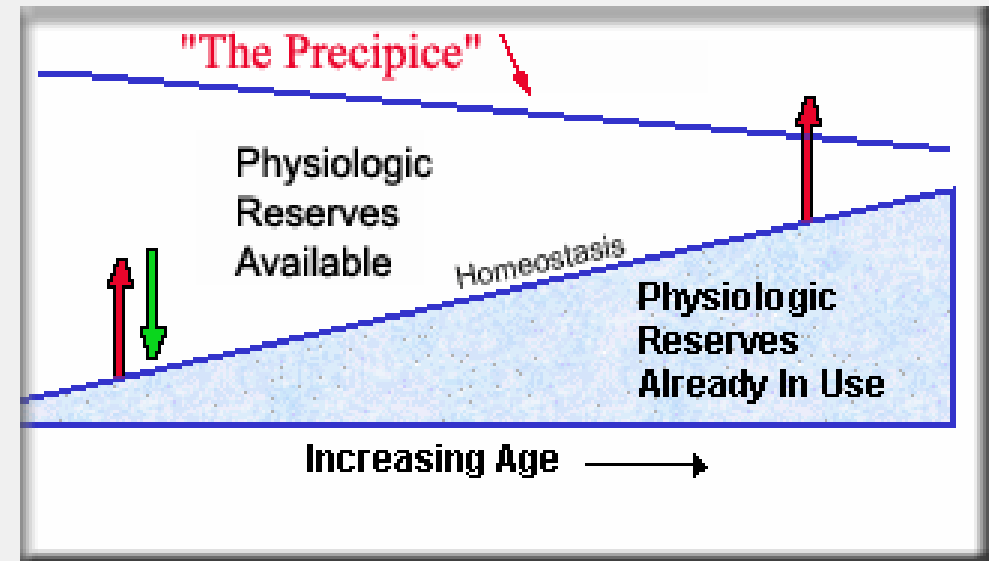
Problem – Declining Health

Homeostatic Stasis

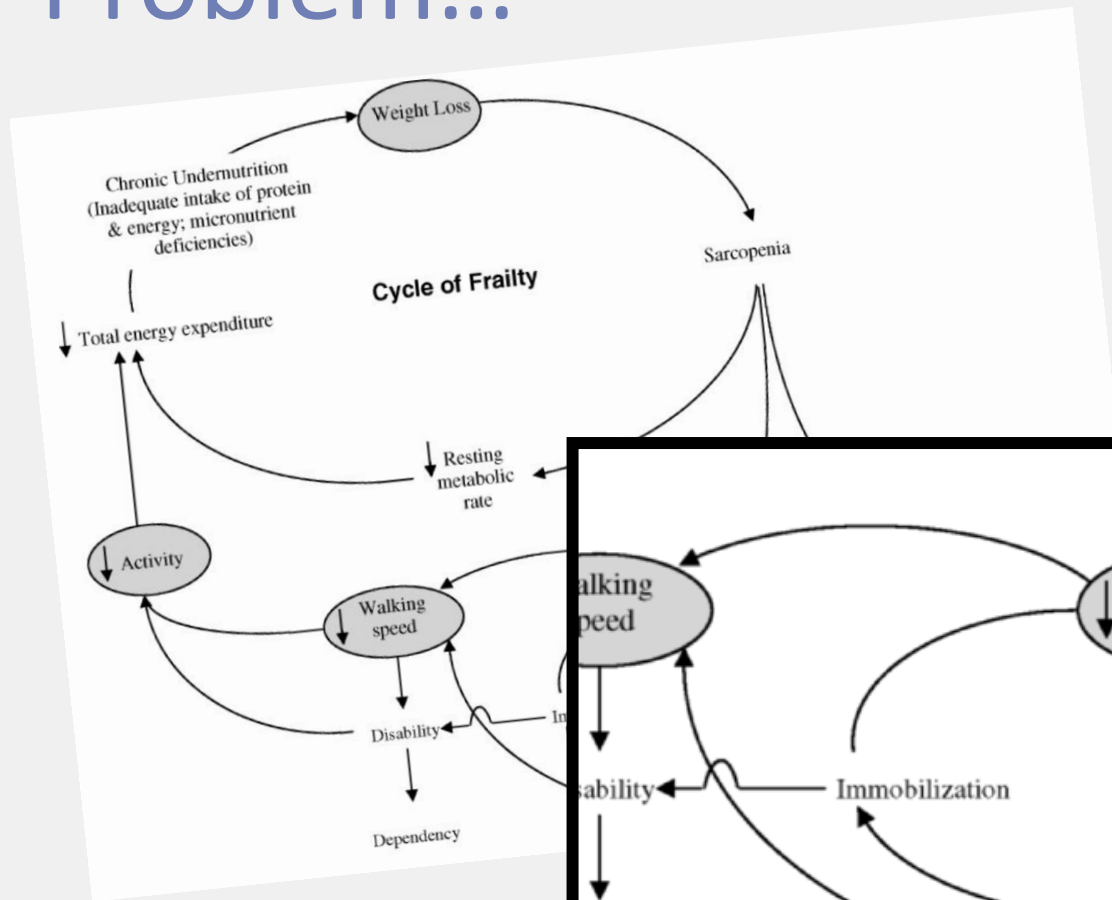
Old (simple) diagram



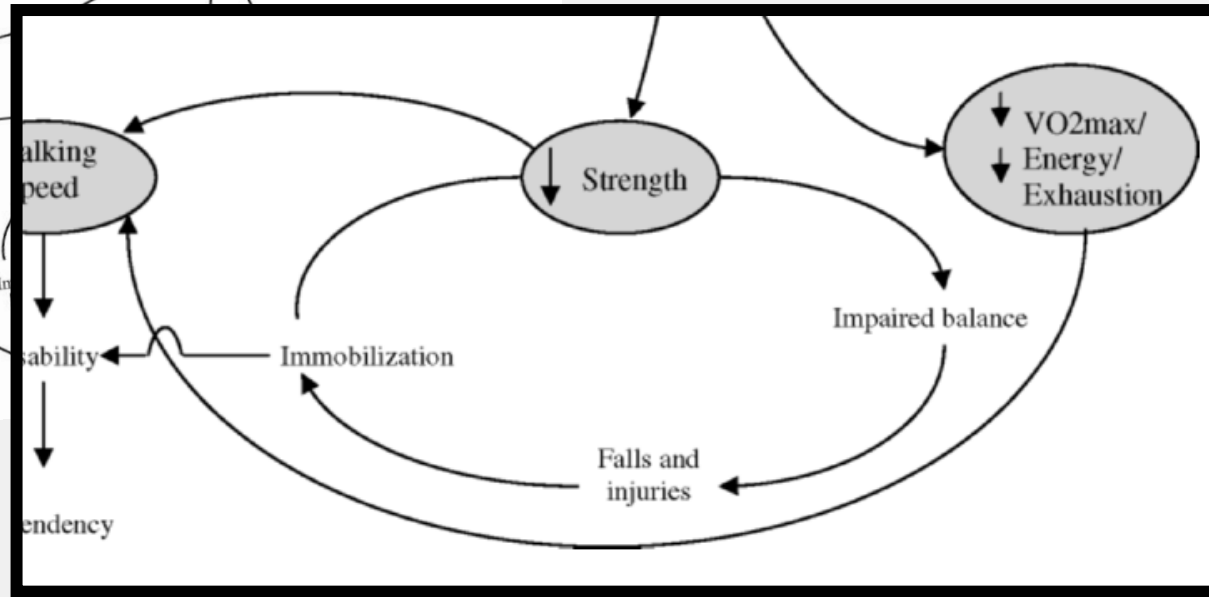
New "Dynamic" Diagram



Problem...



Our findings suggest that weakness may serve as a warning sign of increasing vulnerability in early frailty development, and weight loss and exhaustion may help to identify women most at risk for rapid adverse progression. Xue, Q.-L. (2008) et al



Adaptation of Linda Fried's Frailty Cycle.

Data gathering – Devices...



Wearable Smart watches and fitness trackers with Body Composition analysis scales. Using large and diverse participant populations/groups.



Data Analysis – Considerations

AI bias in
healthcare

The “inconvenient truth” about AI in healthcare

<https://www.nature.com/articles/s41746-019-0155-4> Published 2019

“The potential of AI is well described, however in reality health systems are faced with a choice: to significantly downgrade the enthusiasm regarding the potential of AI in everyday clinical practice, or to resolve issues of data ownership and trust and invest in the data infrastructure to realize it.”

NHS Race and Health Observatory

The accuracy of Pulse Oximeter readings from Black and minority ethnic people could be seriously misleading, particularly during the Covid-19 pandemic, and need further assessment.

<https://www.nhsrho.org/publications/pulse-oximeter-bias-highlighted-in-rapid-review/>

Data Analysis - Building Trust

Quality Standards:

- **ISO 13485**
 - **Medical Device**
- **ISO 9001**
 - **Quality standard**
- **ISO 27001**
 - **IT Security**

Medical Device Regulation (MDR):

- **AI Algorithms**
 - **Certified as Type IIa**
 - **Independently verified**
 - **Old MDD – Self Certified**
- **Must prove medical claims are substantially true (Statistically).**

Design Stage Gate - Feedback

Application: 10022500 / 10060178		Lead: SMP LICARE LTD.		Title: Smplicare Healthy Ageing as-a-service Platform					
Feedback:									
<p>The panel believe this is a technically strong project team with a clear vision for what they want to produce. The Design Stage Gate has revealed a disconnect between the project ambition and its user base. The panel also felt that the target populations were defined very broadly, and the real value was likely to be realised through a focus on a more specific group.</p> <p>In addition to engaging end users, it would be important to develop an understanding of the needs of housing and local authority purchasers and develop a clear go to market plan that generates the evidence that they would need.</p> <p>The panel concluded that this would be a conditional pass with the requirement that by the end of March 2023 the project needs to come back with:</p> <ul style="list-style-type: none"> • The results of more extensive user engagement that evidences which of their target segments represents the minimum viable product • A revised project plan that addresses any change of scope • Segmentation for the 300 participants in the ‘live trail stage’ that focuses on a revised MVP 									
Scoring:		Total of 67.4 out of 100			67.4%			Conditional Pass	
Evidence of User Engagement		Evidence of People Centred Design		Evidence of Take Up & Acceptance Within Practice Community		Augmented Proof of Market		Updated Business and Commercialisation Plan	
13.4	out of 20	14	out of 20	12.6	out of 20	14	out of 20	13.4	out of 20

Design Stage Gate - Criterion

2.1 Evidence of User Engagement

(How have you engaged with your users and how have you recorded and applied the user feedback to better develop your service)

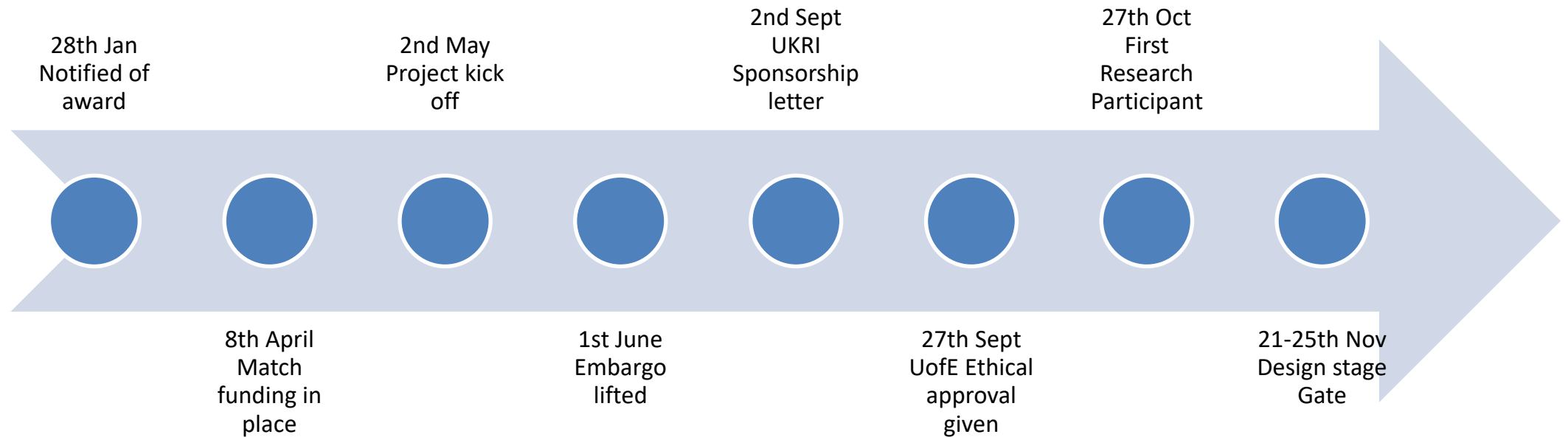
- a. Provide details of the user groups you have worked with on this project. Provide evidence of user group diversity and regularity of contact.
- b. Describe the user feedback analysis methodology you deploy on this project. How did it drive your design decision to inform your solution's functionality and attributes?

2.3 Evidence of Take Up & Acceptance Within Practice Community

(How have your users benefitted from your service implementation and adoption? Describe how this supports future demand for the service)

- a. Provide evidence that your user group have experienced some early indications of healthy ageing benefits following their use of your solutions.
- b. Provide evidence which supports the anticipated demand for your service specifically within your user group.

Healthy Aging Challenge - Milestones



Smplicare - Our Team



Adrian



Alexandra



Garrett



Dayo



Joseph



Marie



Greig



Yidian



Thank You!

Dr. Adrian Smales
Chief Information Officer



asmales@smplicare.com



www.smplicare.com



@asmales

DHI Business Innovation
Manager
Abigail Lyons

Discussion

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

Thursday 1st February 2023

- Focus: Scottish National Investment Bank, Interface and Dementia Strategy
- Currently finalising the agenda which will be added to our Eventbrite booking platform and shared with you ASAP

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

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Visit our HAIC webpage

- Scan the QR code →

Or

- Enter:

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/

