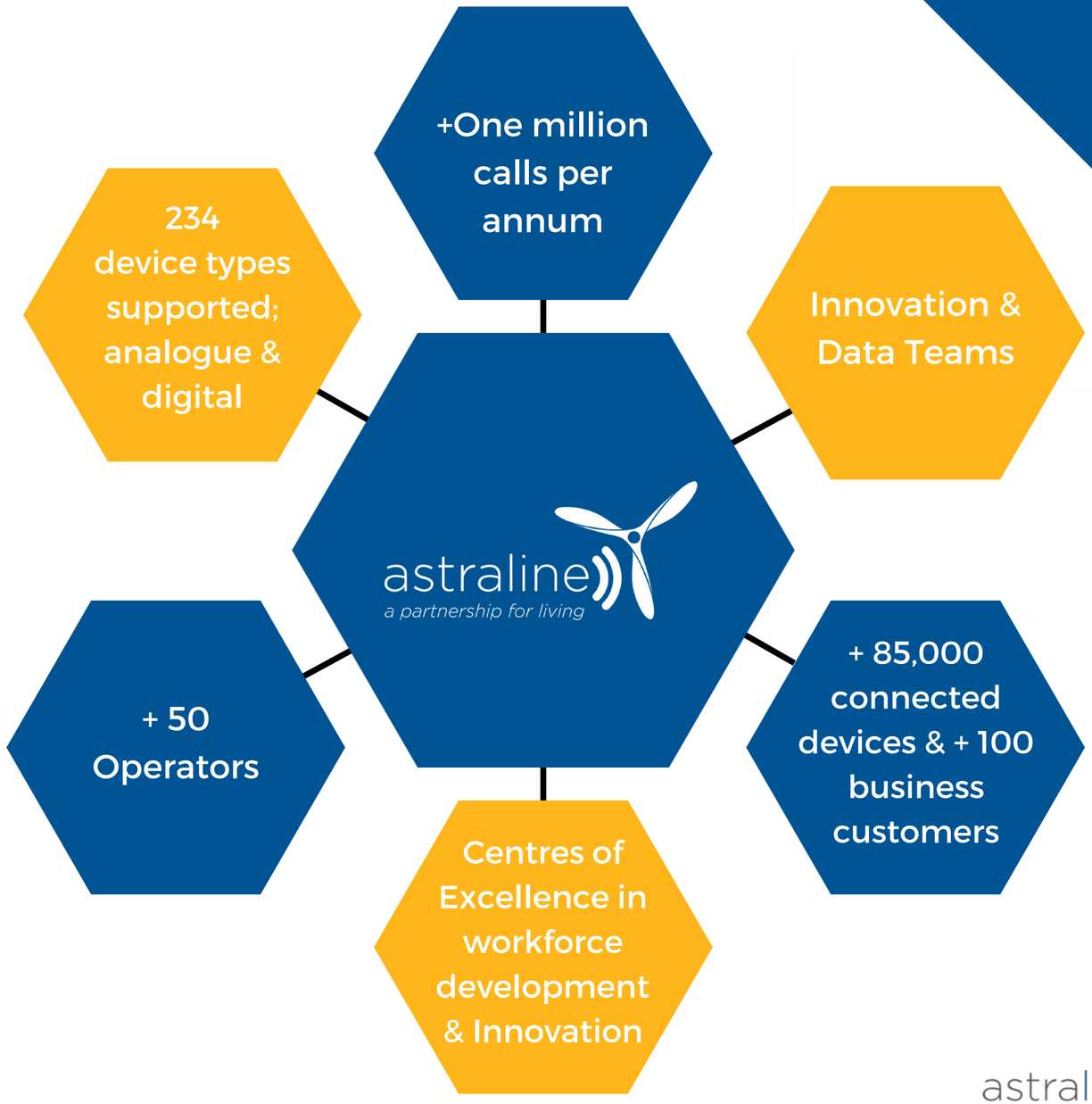
Astraline &
Johnnie Johnson Housing
Smart About Ageing

Joe McLoughlin – MD Astraline

About Astraline

We work in partnership with housing associations, healthcare professionals, local authorities and health and social care providers to deliver efficient and person-centred care for their customers. We can also deliver a strategic plan to upgrade your analogue infrastructure and work with you to provide a safe and innovative care solution for your customers.



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Astraline and Johnnie Johnson Housing (JJH) are working with a number of renowned organisations and universities to deliver trail blazing research projects.

‘Smart About Ageing’

Remarkable research for healthy ageing
THE DUNHILL MEDICAL TRUST

Department for Business, Energy & Industrial Strategy

UK Research and Innovation

The University Of Sheffield.

Emergence

<sitekit>

LIVERPOOL JOHN MOORES UNIVERSITY

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johnniejohnson HOUSING
living longer, living better

TELLAB
TECHNOLOGY-ENABLED LIVING LAB FOR AGEING BETTER

What is the project?

TELLAB is a 3-year research collaboration to provide the means to co-develop improved technology-enabled services for ageing better.

The University Of Sheffield.

1. Digital technology-enabled services could help enable older people to live independently and well for longer.
2. It could also help to address gaps in care provision for an ageing population.
3. To date uptake of Technology Enabled Care and a TEC First approach has been disappointing
   - Incomplete understanding of the needs, abilities and wants of older people resulting in poor technology development decisions.
   - Inadequate evaluation of services provides little evidence for adoption.
   - Technology developed for end users not with end users.

A living lab is an environment for product and service development that puts new technologies into real-world situations (in this case, older people's homes), allowing people to use and evaluate them over an extended period:

- Gives potential users a say in technology and service development.
- Permits a more realistic assessment of the benefits of the technology while also identifying issues that arise when put into practice.
- Valuable for technology developers, and their potential customers and service users.

Objectives

The University Of Sheffield.

Identify the (current and future) care, housing and support needs and aspirations of older adults from diverse backgrounds.

Co-design with stakeholders procedures to identify and assess “promising” technologies and services.

Co-create and establish a “living lab” with JJH residents to help evaluate and develop new “ageing better” technologies.

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WP2

Identify needs and aspirations of users

WP3

Co-produce criteria and tools for assessing the potential added value of products and services

Evaluate process

WP4

Co-produce evaluation processes and criteria for living lab

Evaluate process

Identify new and emerging products and services

The Team

Living Lab

Evidence to support adoption (for housing and care providers

Evidence to support innovation (for developers

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What is the project?

This Three-year project funded by The Dunhill Medical Trust proposes the novel use of wearable sensors to gather real-world, in-situ data in order to develop a human-centred design tool for architects and designers, aimed at reducing the risk of falls for older adults in their dwellings.

1 Falls in the home are a leading cause of injury and mortality in older adults and place a significant burden on healthcare providers. Environmental features such as stairs or poor lighting can be problematic for older adults who often have a reduced ability to make appropriate stepping adjustments to accommodate them.

2 Growing evidence suggests that simple modifications to the use and design of older adult spaces can reduce falls risk and enhance usability. We have shown in laboratory-based studies that modifying lighting and step-surface decor can optimise stair walking safety.

3 Optimizing older adults' living spaces for usability and safety is thus feasible and important. However, designers often do not have the tools to model their approaches based on meaningful safety data derived from human movement studies, particularly that derived from real world environments.

Objectives

To identify characteristics of living environments associated with increased falls risk and/or sub-optimal movement patterns based on real-world data

To implement optimal home-based modifications that can inform how architects and designers approach occupancies.

develop a method for evaluating digital models of living spaces, identifying existing problem areas and how they can be improved & designing new homes.

Studies

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STUDY 1

Identify areas of older adults' living environments associated with increased falls risk and/or sub-optimal use.

STUDY 2

Implement and evaluate home modifications made based on areas identified in study one.

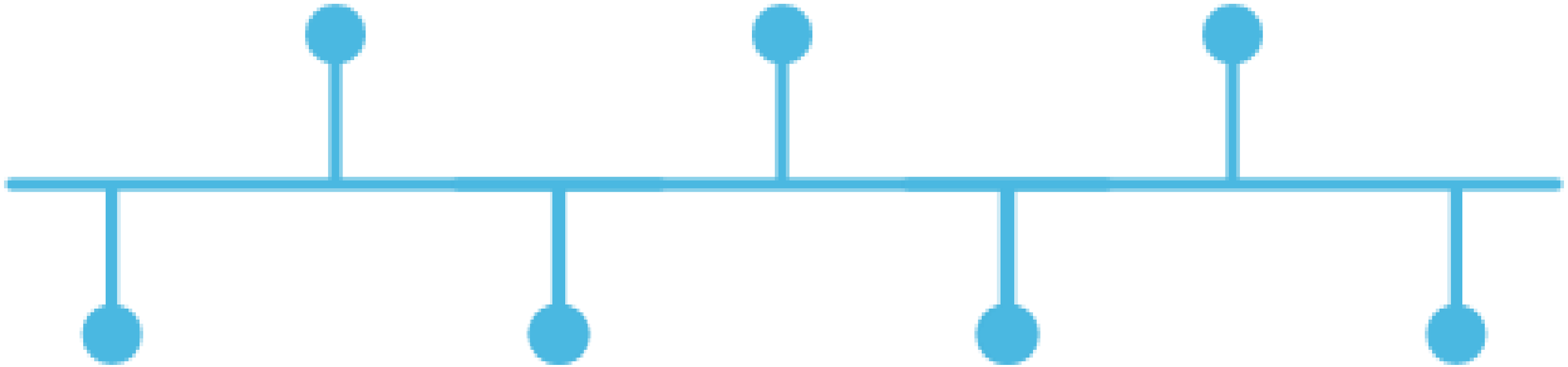
STUDY 3

Evaluate home modifications - extract outcome measures and compare them to the pre-modification results

STUDY 4

Design Evaluation - develop a software tool that designers can use to model environmental features

Work to date



Project began June 2022.

Recruitment of Post doctoral fellow as leading principle investigator.

Presentations of project proposal to stakeholders.

Established working collaboration with international co-investigators and Howz.

Recruitment & Advertisement material created

Training and development operating wearable technology

Visits to optimal and sub optimal housing schemes.

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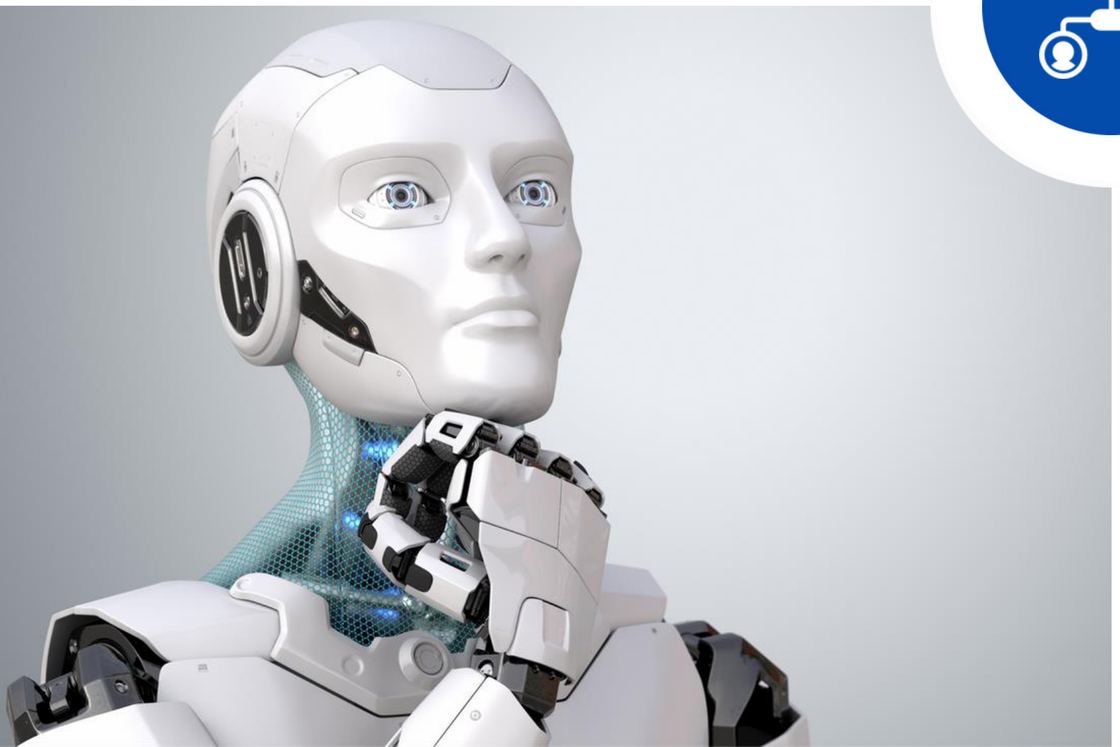

- Cobots
- Autonomous Mobile Robots (AMRs)
- Articulated Robots
- Humanoids
- Hybrids

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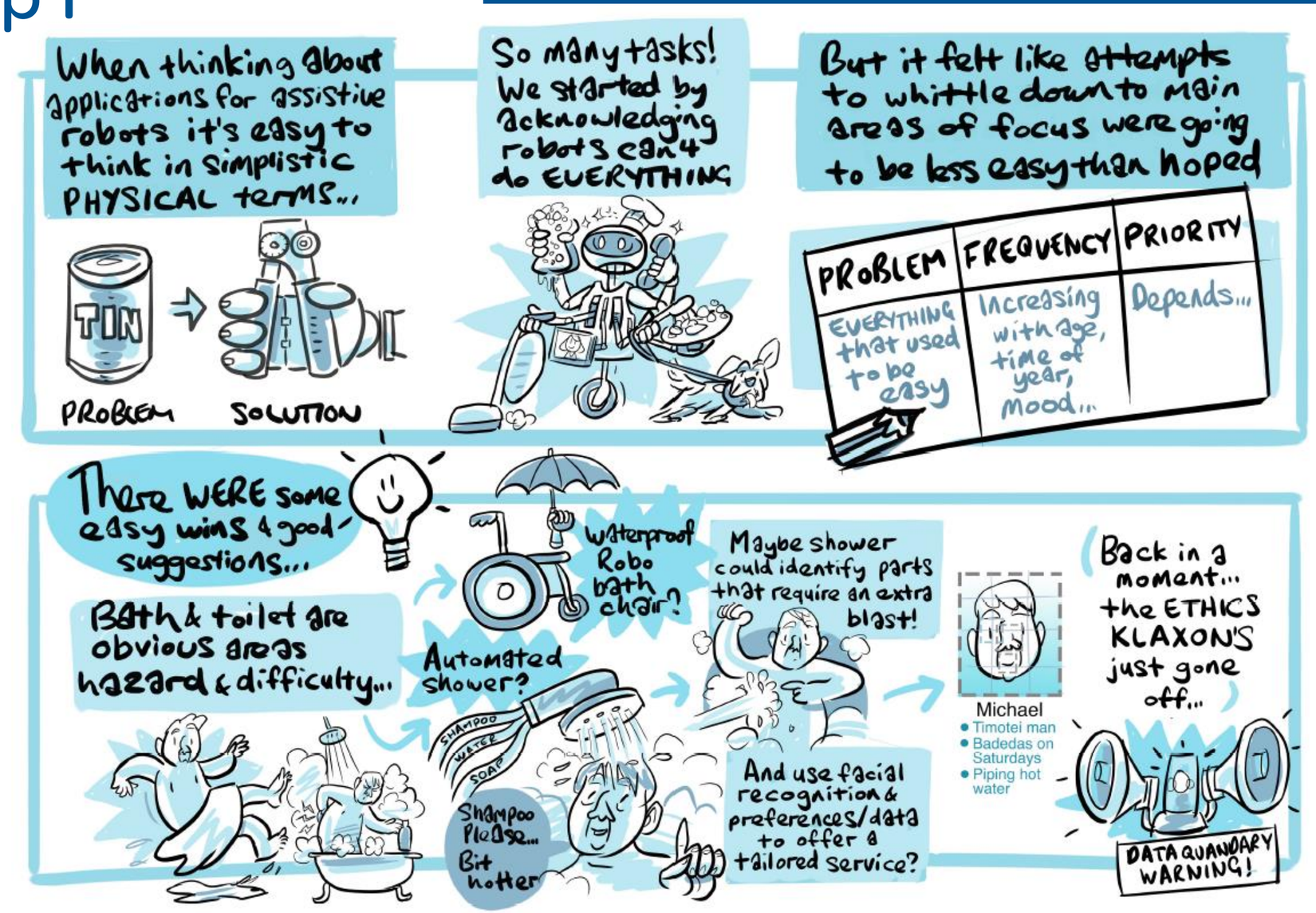
Workshop 1

Care Robotics - Persona-based explorations of activities of daily living with residents: problematic areas and ideas for assistance.



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Workshop 1

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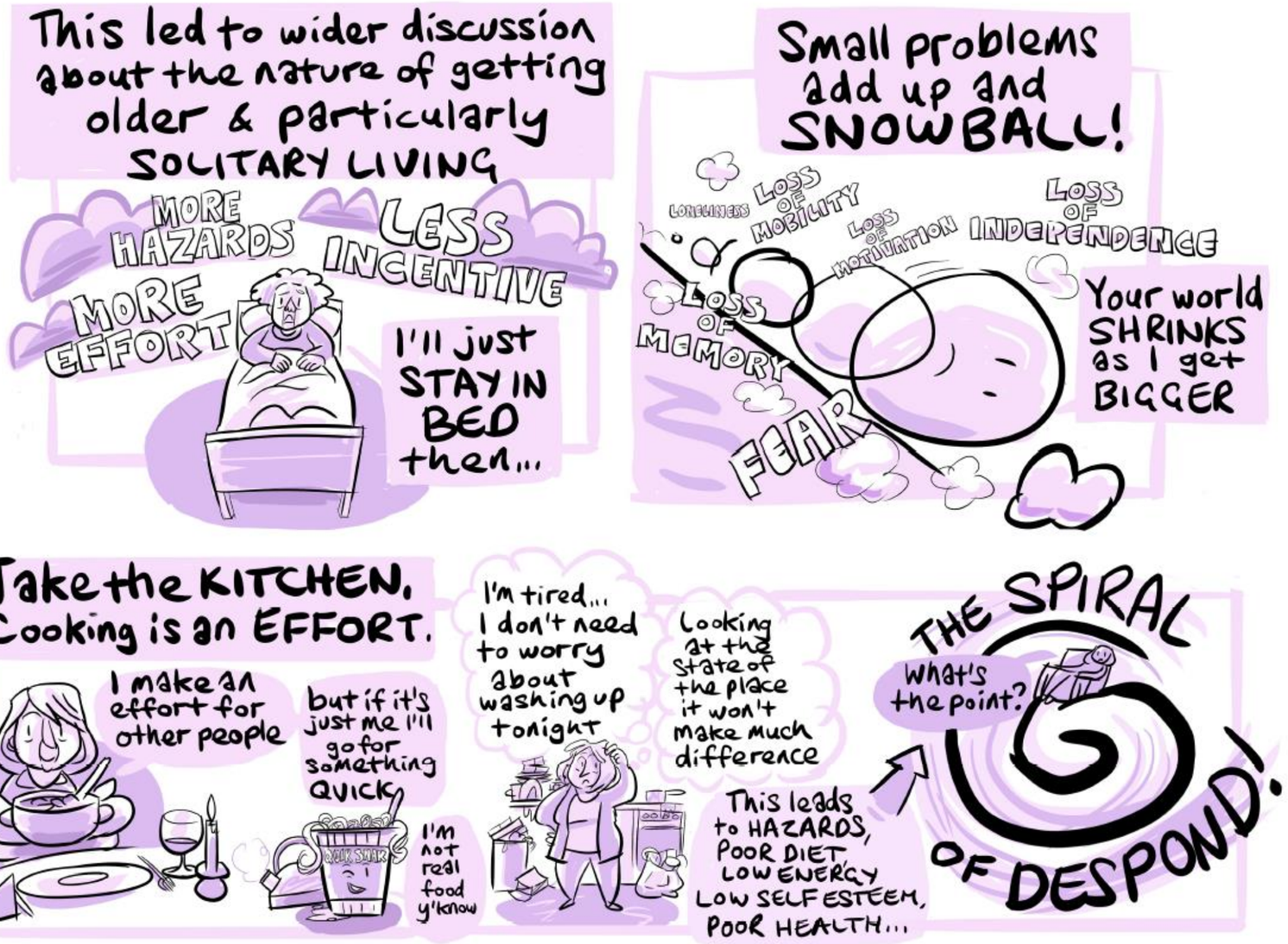
Workshop 1



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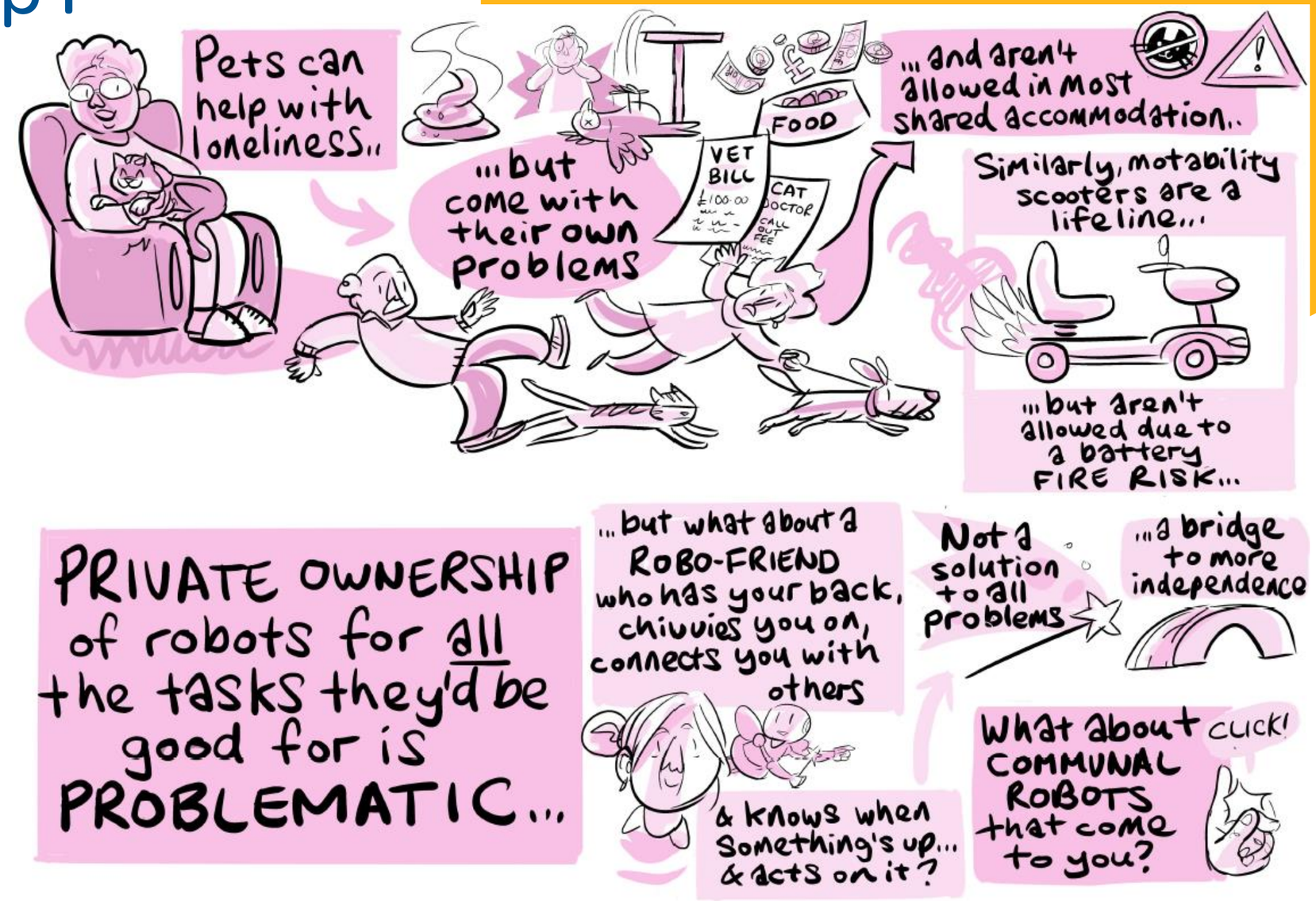
Workshop 1



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