LDF Transforming Homecare Calls to Improve Customer Satisfaction – Summary Report – What users say….

Happy to try new technology but don't just leave me the box and walk away, provide drop in centres and workshops to help us

What technology can you provide us?? How do we find out about it??

We find mid-day visits a nuisance

I'm too old to use technology – you should be speaking to younger people that are interested.

Why would I want something that opens and closes the curtains or switch on the lights? Doing these things gives me a feeling of independence and a bit of activity. Climbing a mountain is probably out of the question but while I can still get up and turn on the lights I am going to continue to do so!

I've got my phone here and this is my telly remote... I sometimes get them mixed up

I used to have a mobile phone I then forgot how to use it, so I threw it away… I do miss it

I would love to learn new things and happy to trial

I would not want to replace seeing a person but maybe for one call I could see a recording on the television.

Summary of Project

This Discovery project was undertaken by Birmingham City Council, Worcestershire County Council

and Solihull MBC, who have a combined annual spend of c. £105m on Homecare (Birmingham £80m, Worcestershire £20m, Solihull £5m). The three councils were supported by Aston University, which carried out the user research and extensive desk-based research into technology and claims made on its behalf. The project was managed by Goldfish, a user experience design company.

The project was managed via Trello as an open and collaborative platform and regular blogs were published on https://medium.com/@birminghmamldf/technology-in-homecare-6c7dfd156ae7

Background

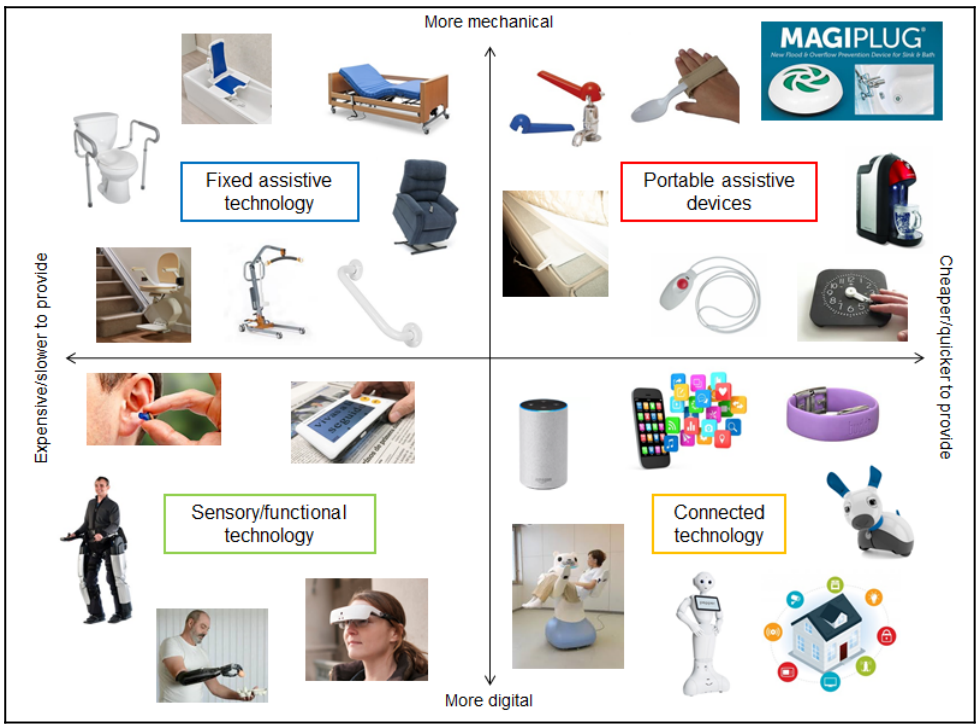
In 2015, more than 350,000 older people in England were estimated to use home care services, 257,000 of whom had their care paid for by their local authority. The United Kingdom Homecare Association (UKHCA) estimates that around 249 million hours of home care are delivered in England each year (https://www.kingsfund.org.uk/sites/default/files/2018-12/Home-care-in-England-report.pdf) at an average cost of £14.15 - £18.22 an hour giving at total estimated costs of c £4bn pa. In addition to this there are a large number of self-funders.

The budget is not only large in absolute terms but is also under increasing pressure. "Social care [which includes homecare for the elderly] in England has been required to make savings of 26 per cent (£3.5 billion) over the last four years as needs in our communities are rising. We believe that on current trends, social care will be underfunded to the tune of £4.3 billion by 2020". (Association of Directors of Adult Social Care).

The pressure on other budgets can have knock-on effects on social care spending. For example in the West Midlands around 2,100 CQC registered nursing home beds will be lost in the coming years, which will mean an increased need for expensive 'wrap-around' care at home for 2-4 weeks while patients recover from operations.

The Discovery Project was not just about financial savings it is also looking at how technology can transform home care and bring it into the 21st century. Council's, NHS and Providers want to enable people to remain independent in their own homes with the right support from both technology and people, with the possibility that they will not enter social care provision.

Nearly all Councils and NHS provide technology that is fixed and portable as depicted below. This discovery project was created to assist the move to the digital and sensory technology and equipment provisions as depicted below:



Headline Conclusions of Discovery Project

- User research suggests that not only do older adults and the recipients of homecare vary in their needs, they also vary in their willingness and/or ability to use technology. For example over half are willing to learn about new technology, however one third of those questioned were opposed to it being used to replace home-care visits. The quotes above show some of the range of views expressed. Therefore a person centred approach in all care assessments is critical and must include technology.

- User research on carers suggested that they were positive about the potential of technology but had different levels of confidence. Most believed training would be necessary.

- This diversity of needs and attitudes to technology is a significant potential barrier to adoption of 'one size fits all' technology solutions and so technology needs to be tailored to the circumstances of the user, with due consideration to training needed.

- The homecare assistive technology market is fragmented and confusing. There are a wide variety of technology solutions available. Many councils and homecare providers have experimented with different technologies, for example Alexa.

- The pace of new developments is fast and it is better to focus on technology meeting a customer need eg Communication or Sensors than individual products

- There have been claims that technology could change the way homecare services are provided (eg providing automatic prompts to take medication) which could lead to better outcomes. This is encouraging but the claims are often anecdotal. Our own research and that of others suggests

that there are few examples of scientific reports on the quantifiable benefits of technology in caring for older people - see for example (p48) http://publications.jrc.ec.europa.eu/repository/bitstream/JRC91622/lfna27072enn.pdf

- The current situation duplicated effort. Hundreds of vendors are selling their solutions to hundreds of councils and homecare providers, each of which has to assess the technology individually. While individual telecare companies or councils have in-depth experience of certain technologies, it is unlikely that they have tested all the available technology worldwide.

- The confusion is made worse as the different homecare technologies for individual recipients should ideally work as an integrated whole, giving a whole picture of the recipient. However often they do not 'talk' to each other or there is no intelligent system to prompt actions to be taken.

- A workshop with existing Homecare Providers revealed a real interest in working alongside this project which resulted in their carers completing and submitting questionnaires and recognising the benefit of technology in transforming homecare services.

Headline Recommendation of Discovery Project

When starting this project the participating councils believed there would be small number of technologies that could be standardised and implemented to reduce homecare visits. During our research it became clear:

1- That user needs and willingness to use technology varied so much that there was no one solution;

2- No one product has emerged in the market as a clear leader. Technology has worked to address specific issues but there is no end to end solution. Even well-known products such as Alexa have drawbacks. The lack of a consistent coherent approach that supports the citizen and public sector bodies is a missing gap and the infrastructure of the collation and response from this data is missing in many organisations.

3- Although there were some obvious potential benefits there was limited robust assessment of the savings from technology

4- Providers of Homecare are interested in working alongside this project as it provides a platform to deliver homecare in a non-traditional setting.

Therefore we are proposing following up this Discovery with two Alpha projects:

1. Provide a person centred assessment where technology must be considered using a standard AI methodology that matches the individual to the most appropriate technology to help them remain in their own home.

2. An independent organisation that could enable the public sector to act in a collaborative way testing and maximising the use of existing and new technology in care.

The bid for the Discovery project included a provision for a 'service map' for use of technology in

homecare. As no one particular technology was identified at this stage any service map would be too generic to be useful. This has been delayed until the Alpha project.

Summary of User Research Findings by Aston University

The research methods used were a mixture of desktop research, quantitative surveys by paper and online questionnaires, workshops and semi- structured interviews. This included the opinions of the following:

- Older Adults including recipients of Homecare Service
- Informal Carers and
- Professional Carers

The main conclusions have provided encouraging support for the use of care technology in the home. The academic research was in support of these findings.

The technology currently being used by respondents is a mixture of devices and;

- a fifth have access to a smart television
- Most have internet access through smart phones, laptops, and tablets as well, which accords with nearly 50% having a general level of interest in smart technologies of one sort or another
- Respondents have a reasonable level of technical knowledge and are willing to learn, with only 20% never wanting to find out about new things
- Respondents were open to using technology in their health and social care, even to the extent of reducing the number of care visits
- 40% were definitely against it but, as expected, most of these were the ones with little or no knowledge of technology.

Technology could lead to fewer visits in person and less human contact, which might risk loneliness. However most appreciated how technology could positively address this.

Professional carers were positive about the role technology can play in their care provision, including the use of social networks to link carers and patients. Technical competence was felt to be generally good with only two saying they had no experience and nearly everyone used a desktop or mobile computer of one form or another. It is important to give older adults, informal and professional carers technical support and training.

The recipient's questionnaire developed for the Discovery project was used for supporting semi-structured interviews with citizens. This was conducted alongside the care providers normal visit. These interviews quickly revealed that 'one size fits all' is not the answer to how technology will improve people's lives: each person is different and understanding their specific needs and attitudes is crucial. This was reinforced by a workshop that was conducted with people from independent-

living villages, full-time carers, parent carers for those with learning disabilities, and service users.

During the workshop it became clear that the attendees did not know what equipment and technology was currently provided and therefore trying to understand new or emerging technology would be overwhelming. Equally attendees did not know where to go or ask about this either.

In addition quite a few barriers to using technologies were identified. These were in line with those found in the academic research, the questionnaires, and other councils' users. Trust in technology needs to be built, particularly with its reliability and what happens if it fails, and people require more training and support to use it. As one person said: "Happy to try new technology but don't just leave me the box and walk away. Provide drop in centres and workshops to help us"

Summary of Desk-based Research Findings by Aston University

The primary research into users was supported an extensive review of the latest academic research into technology. It was supplemented by some recent investigations by local authorities into how their own home care provision could be improved by the use of such technologies. These are the main conclusions.

1. The case for using technology to support home care is increasing year on year as a result of demographic changes, access to the internet, and the variety of communications technologies now available.

2. Translating innovative technology from the academic laboratories into the real world is a major challenge. Expectations should be realistic and technology given a foothold so that it can evolve in practice. This "action research" will inevitably improve access to and involvement of the end users, whether they be carers or recipients of care. **Too many projects are technology driven rather than people driven.**

3. Increasing technology adoption means gaining "buy-in" from both carers and recipients. They should both be involved in the decision making and implementation process with heightened awareness, education, and training all being essential elements.

4. Technology can help social communication but benefits depend on the nature of a person's social circles and their geographical dispersion.

5. Ecology is everything: people, places, and technology can only be understood in their natural environment, which is why the same technology may be appropriate in one place and situation but not another. There is no universal solution applicable across the board and why it is better to adopt locally-grown solutions with collective ownership.

6. Care recipients are not a homogenous group, although they can be usefully sub-divided based on attitudes, experience, and education to help direct adoption. Their social groups or "norms" also need to be understood because they influence expectations and may provide support.

7. Training and confidence in using technology and the availability of infrastructure (e.g. Internet and Broadband) are cited as barriers by many organisations attempting to implement technology, both for care recipients and the carers.

8. Technology development should deliver functionality based on high-level goals of:

a. a holistic view of the person to meet their individual outcomes
b. free information flow; monitoring current status using multiple data sources; predicting future problems and interventions to address any issues identified;
c. supporting communications between all parties, carers, recipients, and managers; and
d. removing the demand of sensor management from recipients as far as possible, with ambient ones in place of wearables or interactive ones when feasible and appropriate

See the attached detailed paper for the full report.

Alpha Projects

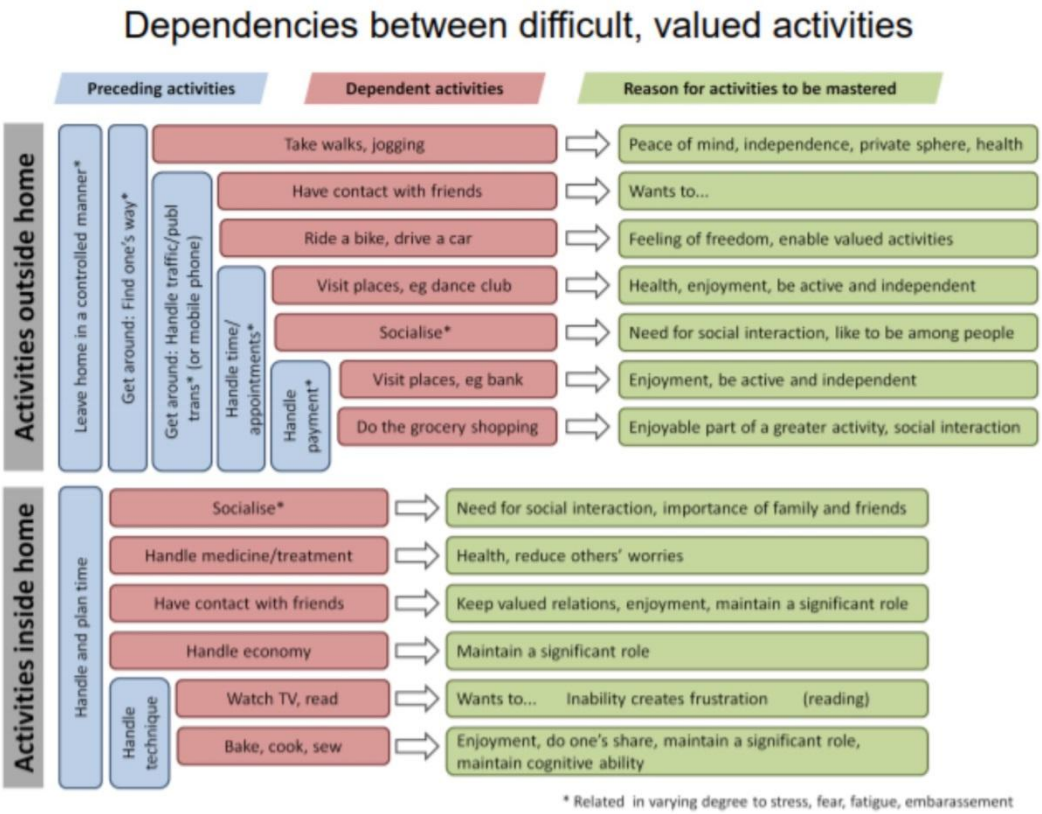
We recommend building on this Discovery pilot with two Alpha projects.

1- Alpha for Assessment Methodology

The outcome of this project would be a standardised methodology to;

- Undertake a person centred assessment where technology must be considered using a standard AI methodology that matches the individual to the most appropriate technology to help them remain in their own home working alongside providers.

Furthermore, by making assessments consistently across numerous users, a large dataset could be collected. This would give the opportunity to use AI or machine learning to discover patterns of successful use of technology and create an intelligent system which could advise non-technical professionals such as social workers on which technologies to use.



The Alpha would develop this assessment methodology by testing and comparing several products which meet specific needs (the precise products to be tested would be finalised in the Alpha and the following are examples):

1 – understanding the citizen at home to improve the quality of homecare service delivery

Using a range of different technologies, linked together to give a whole picture of the citizen to provide actionable insights and alerts.

2 – communications to and from the citizen to reduce isolation and replace face to face visits

Communications are particularly important for recipients facing isolation eg in rural locations. Technology could also replace face to face visits which are purely prompts to take medications/water/food. We will look at several methods – automatic calls, SMS, app, smart TV – and assess their effectiveness.

3 – To create a service map to identify the new processes above (this would be a roll forward of funding from the Discovery Phase)

The West Midlands is a national testbed for 5G rollout. The West Midlands 5G organisation is interested in working with the councils in the Alpha project to support the testing of technologies that can only work with 5G infrastructure, for example where a high level of redundancy in connectivity is needed.

Dudley, Shropshire, Stockport Councils and Birmingham and Solihull Clinical Commissioning Group are keen to join the Alpha pilot. They all have experience in assessing and implementing technology

and are interested in creating the methodology we have described.

Proposed Costs for Alpha:

Technology costs £50k
Assessment costs £25k
Project management £25k

2- Alpha for National Technology Testing Organisation – Independent/Impartial

The Discovery Project revealed an opportunity for an additional more ambitious alpha, to build on the first. There is widespread duplication of effort, with councils, NHS and care providers all independently trying to assess technology, with more or less rigour. Equally, Self funders and informal careers such as family members do not have the ability to assess technology in this way.

We would propose setting up an independent organisation that could enable the public sector to act in a collaborative way testing and maximising the use of existing and new technology in care. This company would:

- Independently and impartially assess individual technology products against the agreed methodology, including feedback from users themselves.

- Test pilots with care providers, councils and NHS in real world conditions to ensure that it meets operational needs. Assessments would include recommendations on how to integrate the technology into council systems

- Publish ratings and allow users to rate products based on their own experience. This would provide a public facing website for self-funders and informal carers to get independent advice

- Run user groups and discovery sessions to uncover customer needs not currently met. Publish Innovation Challenges to encourage private sector companies, including startups, to develop innovative solutions

- Develop protocols for all technology to share information

- Collect user data to support the development of an AI system to provide intelligent recommendations for technology for non-technical carers

It would not act as a central procurement hub or require participating councils to buy through the not-for-profit company. It could later provide a way to use group buying power to achieve savings by negotiating deals on behalf of several councils.

It would be funded by annual contributions by participating councils based on their size – an average payment of just £10k pa would provide an operating budget of £1.5m pa. The cost to councils would be more than covered by saving they would make on face-to-face homecare visits with technology

solutions.

We believe it would be supported by ADASS. It could be piloted in the West Midlands where it would likely be supported by the Mayor of the WMCA, Andy Street, the former CEO of John Lewis and a strong advocate of not-for-profit companies and technology innovation in public service. The West Midlands is also the national testbed for 5G. It could be based at one of the participating councils to reduce costs. Having tested it in one region it could then be rolled out nationally.

The Alpha project would be to develop a business and operational plan including getting the support of key stakeholders including an agreement in principle for financial support from Councils, NHS and their providers. Once the plan was agreed with participating organisations the second phase of the Alpha would then set up the not-for-profit, create a brand and website and get it ready to trade.

Proposed Costs for Alpha:

Develop business/operational plan including engaging stakeholders, gauging council interest £30k
Set up company including legal advice on structure £15k
Develop brand, website £30k
Project setup costs post business plan - £25k