Technology has a role to play in sustainable social care systems and individual care arrangements. It cannot replace personal care, but has the potential to support those with care needs to live independent and active lives, and to assist those providing support.

The line between mainstream and care technologies is becoming blurred as commissioners, carers and people with support needs increasingly use ‘everyday’ technologies - not primarily designed with care in mind - in innovative and creative ways to facilitate their care arrangements.

If the potential of technology to support sustainable care arrangements is to be realised, it will need to be successfully embedded in care systems; based on a persuasive evidence base; useful to those who are caring; and - first and foremost - help achieve the outcomes users desire.

This Policy Perspective draws on expertise from service providers, commissioners, a technology industry body, designers, consultants and academics working in social and technology-enabled care systems, who participated in one of the Re-imagining Care Round Tables organised in 2018 by the Sustainable Care programme. It considers the current role of technology in care systems, and offers future-oriented guidance for its potential to contribute to a more sustainable care system.
The role of technology in making care arrangements sustainable

CONTEXT
How best to use technology to help create sustainable social care arrangements is a topical, important issue. It was one of the areas of focus chosen for a series of Re-Imagining Care Round Tables, held in London and Birmingham in 2018, bringing experts, practitioners and members of the Sustainable Care team together to discuss issues crucial for the sustainability of care arrangements in the UK. At a time when social care is high on the policy agenda and a growing focus of much public debate, the Round Tables were designed to inform the development of the Sustainable Care research programme and to guide the Sustainable Care team's advice to policymakers.

Government has promised a Green Paper on Social Care, and technology in care contexts features in the priorities for this set out by former Secretary of State for Health and Social Care Jeremy Hunt, in his speech on 20 March 2018, when he stated: “We must also recognise the potentially transformative role of new technology. We British are good at innovation, although sometimes less good at its application: so let’s see the brightest and best new ideas put into action to help us tackle the challenges we face and that will help us stay at home independently for longer”.

This Policy Perspective brings together discussions from a roundtable event which explored the role of technology in care systems with key stakeholders, including care commissioners, providers, designers and regulatory bodies from the care and technology sectors.

KEY ISSUES
Our population’s care needs are changing and this means the way we design and deliver care requires reform. People are generally living longer, many in better health, although they often develop multiple long-term conditions requiring complex care later in life. Demand is outstripping the supply of care, both by paid care workers and families / carers. People’s expectations are also that they will have control and choice regarding their care and living arrangements, and that they will remain independent in their own homes for as long as possible. It is within this context that the Round Table considered the role technology has, and could have, in contributing to sustainable care arrangements.

Technology and care: mainstream and care-specific devices
• Round Table contributors agreed that although technology alone cannot provide adequate care, it has the potential, as part of wider systems, to enhance or supplement existing care arrangements. Examples of existing ‘technology-enabled care devices’ include those linked to response systems which users can trigger when they require help, and others designed to alert emergency services in the event of fire, flood or dangerously low or high room temperatures. Newer developments include lifestyle monitoring devices, such as smart phone apps that help people manage their health conditions, and wearable devices that alert care services or family members if patterns of behaviour change.
• Participants emphasised that while technology should be ‘useful, usable and delightful’, historically, ‘technology-enabled care’ and other devices designed for people with care needs have rarely been ‘delightful’, often stigmatising and alienating users with unappealing and medicalised designs, or resisted by care professionals. While co-production of technology-enabled care devices is one way of addressing these issues, consumer digital technology – including smart phones, tablets and voice activated ‘personal assistants’ - is already more ‘desirable’, and found in more homes than estimated numbers of care-specific devices. These mainstream devices can be expected to play an increasing role within wider systems to facilitate the provision of care and support and help people remain independent.
• Hampshire County Council and the Argenti partnership (a consortium of organisations delivering telecare services on behalf of the council) are incorporating both specialist care technologies - including alarms, sensors and medication reminders - and consumer technologies into the care packages they provide. In some cases, care-specific technologies - fall detectors, epilepsy sensors, GPS tracking devices for people with dementia, etc. - are used alongside consumer technology. A customised Amazon Echo device to “ask Alexa” reminds some people to take their medication, or lets them check when their care worker should arrive. Video conferencing and tablets connect socially isolated adults to friends and family. The partnership reports improved well-being and that some care users feel safer and more secure. It has estimated savings of over £7m (net of contract costs) in the first 3.5 years, a figure based
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on reduced use of ‘non-personal’ homecare; delayed moves to residential care; and lower ‘carer burnout’.

• Technology, including consumer digital devices and apps, also has a role to play in supporting those who provide care and support. Apps for mobile devices, such as Carers UK’s Jointly can help a carer, a family or group of carers and/or care workers to support a person by recording their appointments, monitoring their medications, and communicating to manage caring roles and responsibilities more efficiently. Technology can also help in organising care services, assist care workers, and improve how tasks are planned and coordinated, with potential to improve how personal care is provided.

Challenges and opportunities for technology and care systems

• Threat or quick fix? Round Table contributors felt that within social care, technology – whether mainstream or care-focused devices – is generally seen either as a ‘threat’ or a ‘quick-fix’.
  1. When seen as a threat or as unreliable, technology is resisted, rejected or abandoned by those working in the care sector.
  2. When viewed as a ‘quick fix’ that can be ‘bolted on’ to existing care packages it results in ‘silo’ approaches and disjointed solutions, with little or no consistency across the social care system.

• A ‘persuasive’ evidence base: There was debate about the sufficiency, or otherwise, of evidence on the potential of care technologies. Some felt this was not strong enough to persuade commissioners or care professionals of their value, and that reliance on short-term pilots had created a culture of suspicion and mistrust, with technology seen as peripheral to care roles. Others thought the evidence on applying technologies in care settings was now convincing, but that, without a long-term roll-out of innovative technologies, efforts to embed devices in care arrangements would not succeed.

• Systemic change and embedding technology: Systemic change is required which embeds technology within wider systems and allows the information it gathers to be used to provide seamless, responsive care. Too often technology is an afterthought, added to existing care arrangements. Contributors were keen to emphasise it offered ways of enhancing and supplementing, while never completely replacing, care delivered by people, rather than a ‘one-size-fits-all’ solution. To contribute to the sustainability of care arrangements, technology needed to be embedded in existing arrangements. Suitable infrastructure (including high-speed broadband), the ability to transfer and interpret the data produced; and the response service behind the technology is as important as the devices themselves.

• Culture change and an outcomes approach: Contributors felt organisational ‘buy-in’ and culture change were really important. Staff training is vital, including for those providing care assessments. Appropriate training could ensure technology is consistently viewed as a potential tool to achieve outcomes care users and those supporting them wish to achieve, not a ‘quick fix’ in which technology provides ‘the solution’ or is applicable to all caring contexts. Sector guidance has argued that when outcomes are considered first, and technology is applied with the aim of achieving these, devices are more likely to be used and adopted by care users, their families and care workers.

• Costs and benefits: Within local authority social care services, commissioners of technology face a significant ‘costs and benefits’ challenge: they may invest in technology, but its benefits may be felt in other parts of the system, such as NHS services. This makes justifying investment difficult, and has led some commissioners to rely mainly on larger technology manufacturers, neglecting smaller, ‘riskier’, but perhaps more innovative suppliers.

• Commissioners as ‘curators’ of technology: Contributors highlighted the role of care providers in empowering people who need support and their carers to define their preferred outcomes, and select the technologies best suited to their circumstances. It was agreed that familiar technologies, already in place, should be considered in terms of their potential to work well, even if they were not conceived or designed as care technologies. There is a role for local authorities in supporting people to select technologies suited to their needs and outcomes, as advisors on, and ‘curators’ of, a suite of options.

RECOMMENDATIONS
Round Table participants felt the issues discussed called for policy, designer and research responses:

For policymakers, commissioners and local government:

1. Change must be systemic and systematic: Technologies must be embedded in wider changes in the care system, not ‘bolted on’ to conventional arrangements. The right infrastructure is as important as the technology itself, and whole service transformation may be required. Isolated ‘silo’ approaches to technology prevent widespread scale-up and spread of innovations that work. ‘Technology champions’ within Clinical Commissioning Groups and other organisations could influence attitudes about new care
technologies and broker relationships between local government, service providers and organisations which support service users and carers.

2. **Integrated health and social care**: The barrier for social care commissioners - that the benefits of investment in care technologies are often seen in the health system - needs to be seen from the perspective of an integrated health and social care system.

3. **Change hearts and minds**: Engagement with and investing in care professionals is crucial for successful uptake of technology. Training and up-skilling the care workforce could increase awareness of relevant technologies and how they can help clients live more satisfying lives. Training can also contribute to a wider culture change which can embed technologies into care systems.

4. **Outcomes first, technology second**: People with care needs and carers should be empowered to identify their needs and preferred outcomes. Service providers’ role should assess these outcomes and create flexible, “wrap-around”, person-centred care, prioritising use of existing resources and equipment (such as technologies already available in the home).

**For designers:**

1. **Blur the ‘care technologies’ / ‘everyday technologies’ distinction**: Categories are less important than helping people live their lives as they wish. Designers should work with people who need support to develop products that make a difference in their lives.

2. **‘Useful, usable and delightful’**: Technology should be all three, every time, to promote uptake.

3. **Co-design with users of technology**: Working with the users of technologies – those who need and provide support – provides essential insight into their ability to operate technology. This matters more than the capability of the technology itself.

**For the Sustainable Care research team and partners:**

Sustainable Care teams are working to build new evidence on these issues, focusing on:

1. **What do technologies contribute to**: Wellbeing of those receiving and providing care? Sustainability of care relationships, in care work and in caring at a distance? Coordination of work and care? Innovation in home care provision and ageing in place?

2. **What challenges and opportunities face the technology-enabled care sector, today? Tomorrow?**

**Footnotes**

1. *Technology changing lives: how technology can support the goals of the Care Act (2016)*, SCIE, London: SCIE.

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The recommendations in this Policy Perspective are from the Sustainable Care team, and do not necessarily reflect the personal and/or collective opinions of those taking part in the Round Table or the ESRC.

**ABOUT THE RESEARCH**

The **Sustainable Care: connecting people and systems** programme explores how care arrangements can be made sustainable with wellbeing outcomes. It studies the systems, work and relationships of care in the context of changes in technology and mobility and aims to support policymakers, the care sector and academics to conceptualise sustainable care as about ethics, justice and the distribution of resources. The programme focuses on adults living at home with chronic health problems or disabilities and their families, carers and paid workers. Funded by the ESRC, it is delivered by eight universities and Carers UK, led at the University of Sheffield by Professor Sue Yeandle. This Policy Perspective was prepared by Matthew Lariviere, Sarah Abdi, Alice Spann, Sarah Kate Smith, Kate Hamblin, Mark Hawley and Luc De Witte. Policy Perspectives were designed by Kelly Davidge.

**EXPERT CONTRIBUTORS TO THE ROUND TABLE**

- Mark Allen, Head of Strategic Commissioning Hampshire County Council/Argenti Partnership
- Steve Carefull, Director, PA Consulting/Argenti Partnership
- Sebastian Conran, CEO, Sebastian Conran Associates
- Charles Lowe, MD, Digital Health and Care Alliance (DHACA)
- Alyson Scurfield, CEO, Technology Enabled Care Services Association (TSA)

sustainablecare@sheffield.ac.uk // @CircleShef