

ADEPT

# LIVELABS

ADEPT SMART Places Live Labs



**White  
Paper #5**

**Adult Social Care**

**December  
2021**



[www.adeptnet.org.uk/LiveLabs](http://www.adeptnet.org.uk/LiveLabs)

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# ADULT SOCIAL CARE

## Introduction

This is the fifth in a series of white papers from the £23million ADEPT (Association of Directors of Environment, Economy, Places & Transport) SMART Places Live Labs programme funded by the Department for Transport (DfT). These papers are part of our commitment to transparency and are intended to share learnings and insights as they happen. This will allow industry colleagues to capitalise on work done through what is a wide-ranging innovation programme covering the smart materials, energy, social care, communications, mobility, and environment spectrum.

The white paper has been developed through a series of 'Chatham House rules' one-to-one discussions with our local authority Live Lab leads, and we thank them for their openness in sharing their experiences to date. We hope that this and future white papers are useful and will help accelerate innovation for local authorities across the transport, planning and environment sectors. More details on our teams and their individual projects can be found on the Live Labs pages of the ADEPT website.

The Live Labs programme was created with the intention of bringing innovation to local roads, environment, and transport. However, through our commitment to knowledge-sharing both within and between local authorities, business partners, and citizens, opportunities to deliver wider social benefits have been identified. This white paper is focused on one such opportunity - the delivery of adult social care to improve the lives of some of the most vulnerable members of our communities.

The Buckinghamshire and Suffolk Live Labs have demonstrated how the application of smart technology can be expanded to offer much greater social value than initially anticipated in the planning and rollout of highways innovation projects. Both Live Labs are working in a similar field, namely the use of different sensors across their respective local networks. By using different technologies, the two Live Labs can complement one another without expending unnecessary time and effort through the duplication of work.

The teams have been enthusiastic about sharing their findings, detailing both the opportunities presented and challenges faced in harnessing digital innovation to support vulnerable people.



## The approach to adult social care

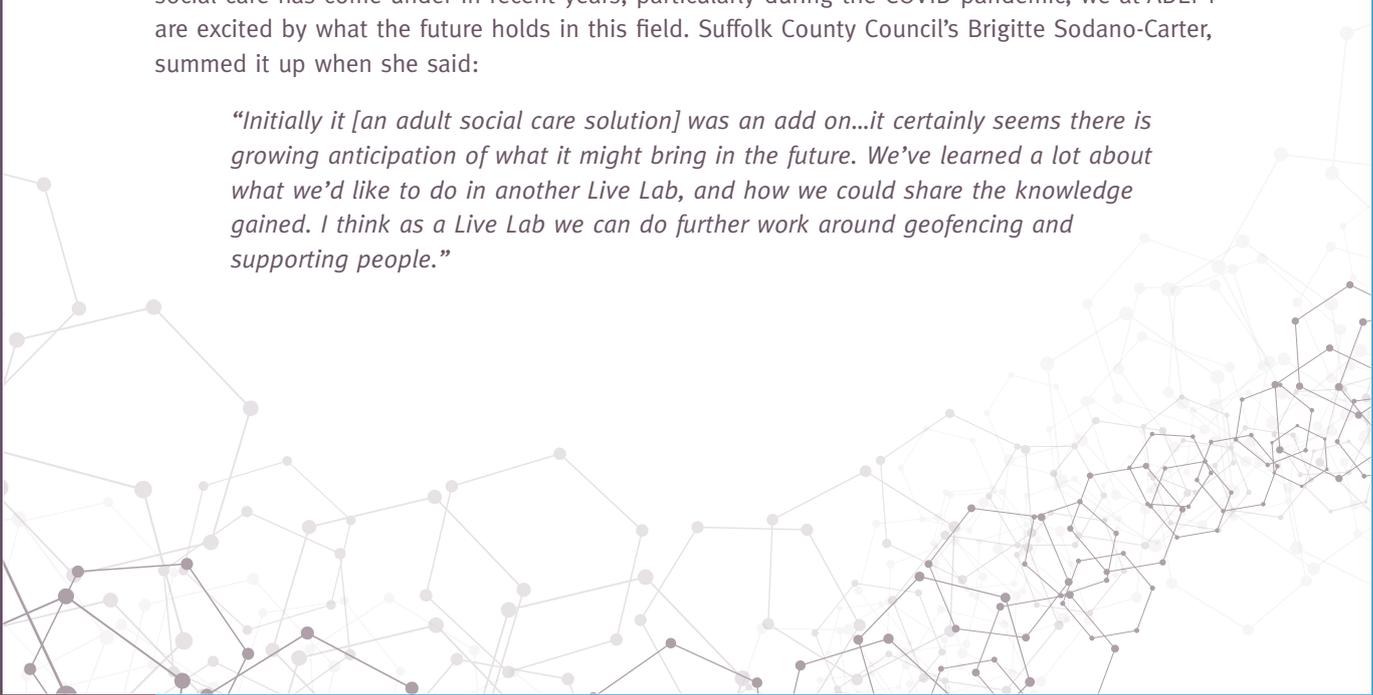
Life-changing innovations can often emerge from unexpected places. In the case of the Buckinghamshire and Suffolk Live Labs, the enhancement of existing street lighting infrastructure through the installation of sensors, coupled with the utilisation of local communications network technology, has resulted in proposed adult social care solutions.

In Suffolk, the rollout of a long-range wide area network (LoRaWAN) across the entire county could be exploited to make drastic positive change to the quality of life for vulnerable individuals. LoRaWAN enables the sending of data from sensors to a gateway and then to the internet, with coverage ranging many miles. The sensors in question enable the monitoring of everything from weather conditions, wind speed and road surface temperatures, to air quality and traffic volumes. Installed across the county, the sensors have been tested in different environments – urban, rural and coastal – so the trials could be replicated nationally.

In a similar fashion, sensor technology could be used to allow vulnerable people to live independently for a longer period of time and still have access to carers if and when they were needed. Sensors installed in and around a house could monitor daily activities, detect faults and prevent accidents waiting to happen. If carbon monoxide levels were too high, if there was a water leak, if the vulnerable person needed to get up in the dark or deviated from their usual daily routine, a carer could be notified to investigate issues as they happened, without the intrusiveness of 24/7 access.

Recognising the possibilities offered by geofencing technology as well as the strain that adult social care has come under in recent years, particularly during the COVID pandemic, we at ADEPT are excited by what the future holds in this field. Suffolk County Council's Brigitte Sodano-Carter, summed it up when she said:

*“Initially it [an adult social care solution] was an add on...it certainly seems there is growing anticipation of what it might bring in the future. We’ve learned a lot about what we’d like to do in another Live Lab, and how we could share the knowledge gained. I think as a Live Lab we can do further work around geofencing and supporting people.”*



The Buckinghamshire Live Lab has been exploring a similar avenue, albeit using slightly different technology. In addition to home hub sensors, 12 of which are to be installed in volunteer homes by January 2022, wearable devices and a mobile app have been identified as complementary innovations. This has been made possible by the MESH network formed around Aylesbury, which uses interconnected sensors and nodes built into street lighting infrastructure. The app has multiple functions: it can keep track of the vulnerable person's mood, monitor the frequency of bathroom visits to predict UTIs, send warning messages concerning icy weather to prevent falls, and alert carers if the inhabitant (particularly helpful in the case of dementia sufferers) has left their home unexpectedly.

Wearable devices are able to locate the wearer through their proximity to a particular lamppost and can track the frequency of falls, allowing the person to be located quickly if they are lost. It also enables a greater degree of personal control and independence, as opposed to constantly being chaperoned by a carer. Buckinghamshire Council's Luciano Lopes describes the impetus behind these innovations:

*“The idea behind this is to explore how we can use the technology that is already available out there. The MESH network was available and we seized the opportunity to link with the services provided by the adult social care team in the area... in particular, carers going on a daily basis to see patients. The initiative is trying to demonstrate that we can be more efficient in delivering services. It is a benefit to the customer who has greater independence. It is a benefit to the families who have more information to put them at ease, and it's a benefit to the Council in terms of efficiency savings.”*



## Trusting the Technology

As with any widespread rollout of new technology, costs need to be considered. However, the most significant obstacle to a wider implementation of data-driven adult social care is building confidence amongst potential users that there are no ulterior motives behind the proposed tech solutions. Suspicion around data collection by local authorities, particularly concerning the sensitive issue of personal health, can result in a hesitant uptake of the available technology. As Brigitte says:

*“There needs to be some investment in the message. Get vulnerable people and their families clued up so that they can give informed consent, embrace this type of data and this type of new technology, and allow them to stay independent for longer.”*

Building confidence amongst vulnerable people and their carers that the technology available is to their benefit is of great importance. This may involve open discussions with potential users about which aspects of social care technology most appeal to them and which elements they feel uncomfortable with using, or think is surplus to their own requirements. For some, the sudden installation of multiple pieces of technology into their home can be quite intimidating. Others are not keen on the way in which wearable technology signifies their own vulnerability. Finding a happy medium requires in-depth trialling and stakeholder collaboration, two project elements that ADEPT and the Live Labs programme champion.

Engaging with target users and their families is the most immediate way of building a positive narrative around the available technology. Storytelling at a local level, which plays on regional variance in needs and desires, is one way of ensuring that the rollout of transformative adult social care is tailored to maximise effectiveness across the country. Families in Suffolk may have an entirely different understanding and approach to adult social care than families in Buckinghamshire. Furthermore, leveraging local charities and community organisations to encourage adoption of the technology is vital in trying to build faith in the solutions through informed consent. Without investing time and effort in the human element of these social care projects, they could struggle to get off the ground.



## Conclusions

Through the expansion of live data collection and the technological enhancement of local infrastructure, vulnerable people can live safer lives with greater personal control. Whether it be older people, people with disabilities, people suffering from mental health issues, or other vulnerable people, we want to enable as many people to be able to live as long and as independently as possible in their own homes. Greater independence not only allows for a more fulfilling life for the individual, but by providing long-term savings for local authorities, enables more efficient allocation of resources within each community.

The solutions being trialled by the Buckinghamshire and Suffolk Live Labs have the potential to have a positively transformational effect on their respective local communities, but it will require more than just a successful mobilisation and deployment for the effect to take hold. Fostering trust in data-driven solutions amongst the vulnerable, their families, and communities at large is critical to success and can only be achieved by developing a human-focused message.

Engaging in discussions with our communities as the local authority, as well as co-operating with trusted bodies - such as charities - at national and sub-national levels to help spread the message, is necessary to obtain informed consent and quash fears concerning the misuse of healthcare data.

Fostering partnerships and collaborations across the public and private sectors has been a guiding principle of the Live Labs programme, and there is no better demonstration of this than in the development of adult social care solutions in Buckinghamshire and Suffolk. Knowledge-sharing across local authority departments has produced somewhat unexpected results - innovations trialled in the highways sector have resulted in the proposal of adult social care solutions, a connection between two sectors not apparent at first glance. Greater collaboration going forward will reduce the unnecessary duplication of effort within local authorities, streamlining work and resulting in better outcomes from reduced overall effort.

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