Co-producing technology: harnessing digital solutions for social care

Thought
Leadership

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Contents

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Introduction

This paper explores ways in which people who use services are contributing to technological design and how the resulting digital solutions are changing the way we deliver social care and health and wellbeing services. It builds on earlier work[1], across the voluntary sector strategic partnership which focuses on how we lever the benefits of technology in a time of austerity.

Thought **Leadership**

Technology is changing the way we live. Can it also transform the way we deliver adult social care?

V O D G

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[1] VODG (2016) *Technology is changing the way we live. Can it also transform the way we deliver adult social care?* Accessed: https://www.vodg.org.uk/wp-content/uploads/2016-VODG-technology-report.pdf

To gather a range of views, knowledge and experience, we convened a roundtable to explore how different parts of the adult social care system are working to maximise the benefits of technology in meeting the challenges they face. This report addresses three focus areas:

- **The locality perspective** explores Leeds smart city agenda and reflects on the city's journey to maximising the advantages of technology and citizen driven health in supporting disabled and older people.

- **The integration perspective** describes how technology is being applied to support integrated health and social care.

- **The practice perspective** looks at why and how one provider has invested in their own app and is using this to support people with learning disabilities to develop skills, confidence and safety awareness in their use of social media.

Key themes which emerged from these perspectives, include:

- Older and disabled people are often most removed from digital technology but have the most to gain from it.

- User engagement and coproduction are key to the design of successful digital solutions. An inclusive approach also supports ownership and take up of the final product.

- Digital innovation should be focussed on an exploration of areas of concern involving people who use services, technologists and health and social care professionals.

- Leadership that promotes coproduction and champions technology is fundamental to both design and implementation.

- Providers can benefit by always considering the potential contribution of technology when developing projects or services.

- New digital solutions and platforms such as apps should be as simple as possible and look familiar to people who text or use social networking sites.

- Organisations do not need to be technologically advanced to reach digital solutions.

- Collaboration and engagement deliver success; technology is a tool which can support this.
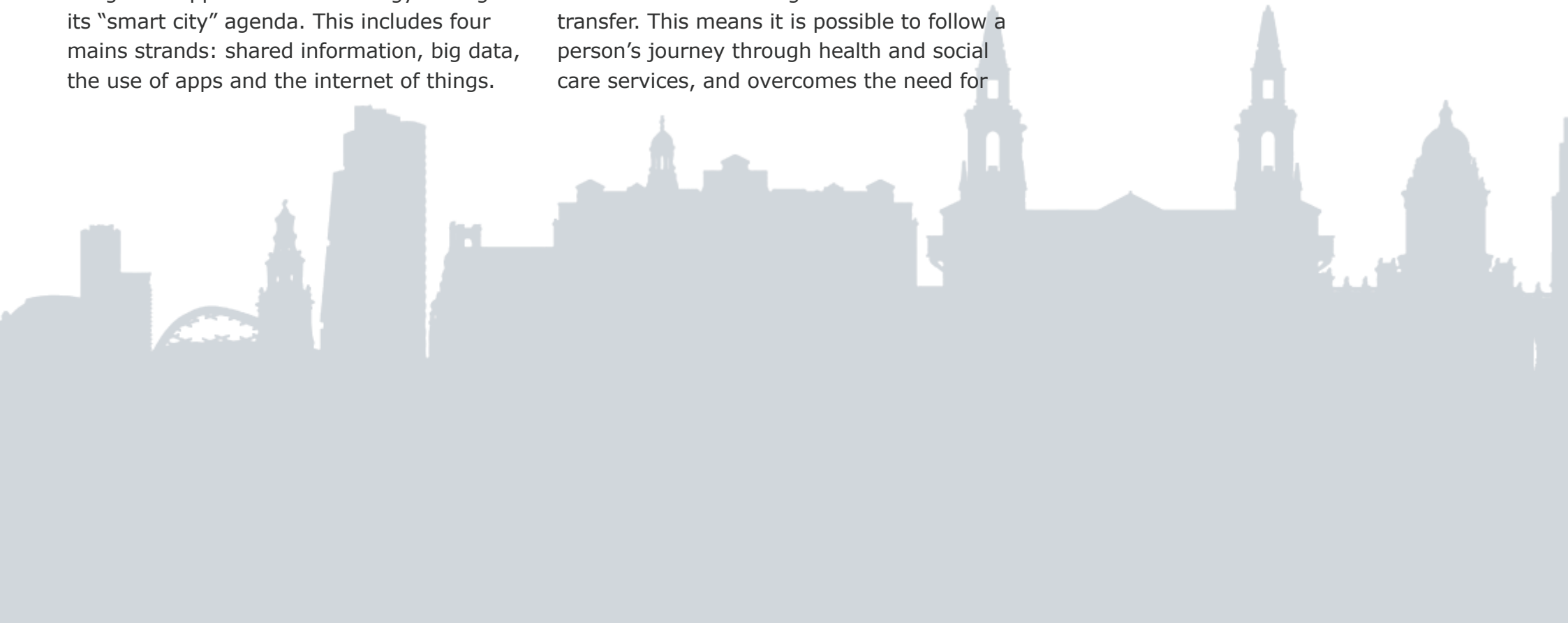
A locality perspective

Innovation in health and wellbeing in Leeds

Leeds has an ambition to be the best city in the UK in which to grow old. To achieve this, it is harnessing digital solutions to help deliver its priorities including tackling health inequalities, providing accessible transport and high quality housing, easy access to information and opportunities to actively participate in the city. Leeds has an integrated approach to technology through its "smart city" agenda. This includes four mains strands: shared information, big data, the use of apps and the internet of things.

The city has explored how it can use data to address the concerns of citizens by delivering a more coordinated approach to health and social care. It has developed a set of information standards that allow data to flow across the whole system. Whether they are using a health or a social care service, citizens are identified by their NHS number to enable straightforward data transfer. This means it is possible to follow a person's journey through health and social care services, and overcomes the need for

an individual to relate the same information on multiple occasions. It also allows a level of analysis which has not previously been available. For instance, the system can tell commissioners which home care or residential services are most successful at reducing the number of people going back into the health services.

A locality perspective

Datasets that are not person-sensitive are made publicly available through Leeds Data Mill[2]. This means that anyone can use big data for the benefit of citizens. For example, it has been used to compare bus routes with GP surgeries and identify those that are not on a bus route. This information can then be used as a basis for discussions between the council and the bus company.

Developing Digital Health and Social Care Practioners
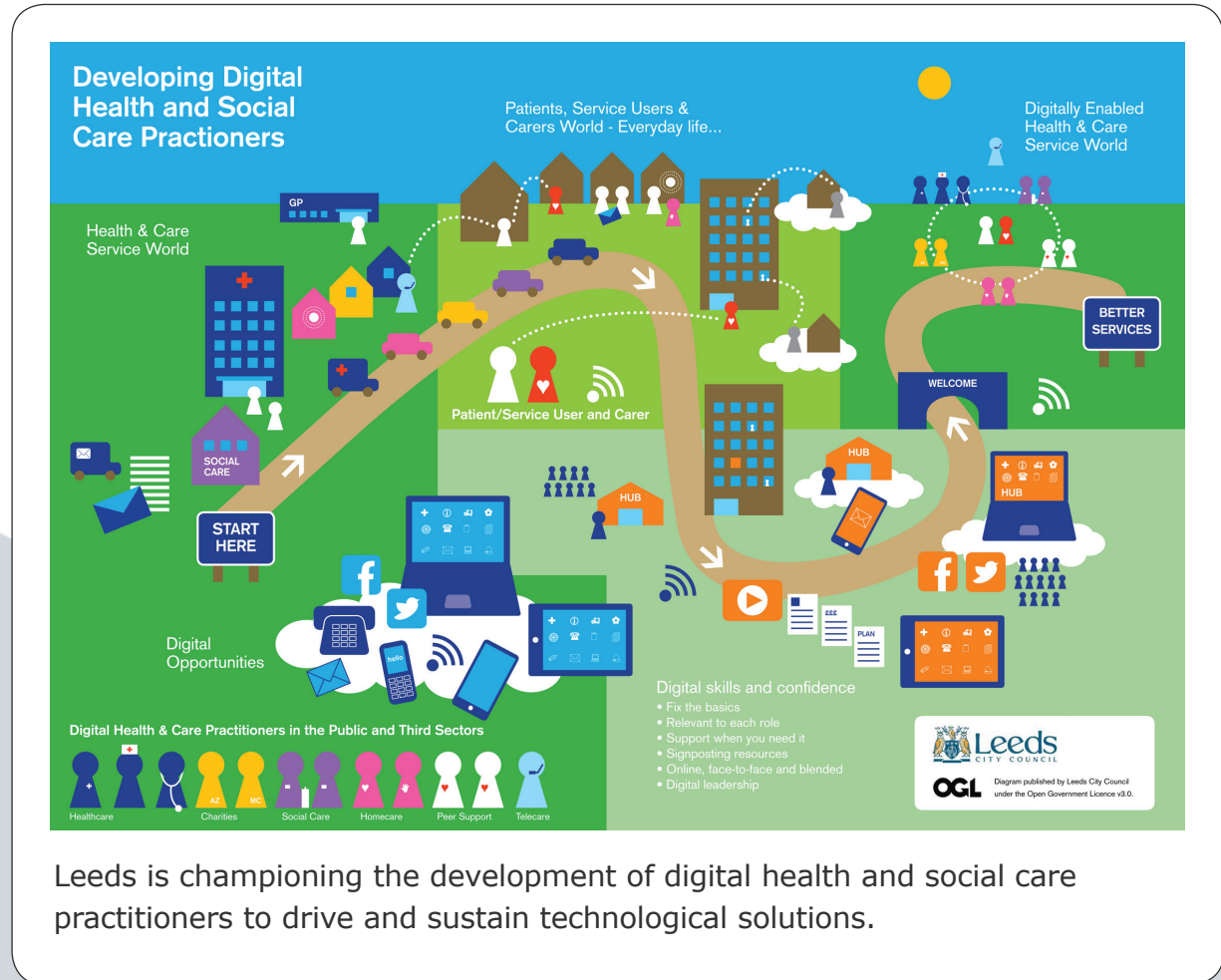
Leeds is championing the development of digital health and social care practitioners to drive and sustain technological solutions.

[2] Leeds Data Mill. Accessed: https://datamillnorth.org/odi-leeds/

A locality perspective

Leeds has also teamed up with the Urban Sustainable Development Lab[3] to develop technological solutions to address the needs of citizens living in vulnerable circumstances. What sets this approach apart is that, rather than being driven by policy or technology, it is based on people's life experiences and concerns, such as housing, transport or loneliness. Older or disabled people, health and social care professionals and technicians are brought together to discuss a key topic and see which issues emerge that may have a technological solution. The technicians then use the ideas generated to develop a product.

Careview is just one of the many solutions that have resulted from collaboration between citizens, technicians and health and social care professionals. It is an app which can be used by people in public-facing jobs to identify households where there are signs of social isolation, such as rubbish not collected. The app allows the user to click on the property and creates a heat map around it. This is used to alert agencies that there may be cause for concern. So far Careview has been trialled by traffic wardens and police community support officers. Leeds City Council is currently talking to the Post Office about giving the app to postal workers.

An alternative approach to innovation has emerged from a partnership between Leeds City Council and Samsung. 1,000 older people who have identified that they could benefit from technology will be supplied with tablet computers and mobile phones. Samsung will then work with them and health and social care staff to develop a range of apps and other products that promote independence. Development areas include:

- **Falls prevention:** the device tells the user if their walking speed reduces as this is an indicator of an increased risk of falls.

- **Personal health monitoring,** such as sleep patterns and blood pressure.

- **Energy use monitoring:** spots changes in patterns. For instance, if someone has not made a cup of tea all day, the device could alert a relative, neighbour or third sector service that there may be cause for concern.

- **Tackling loneliness:** exploring how new technologies can support disabled and older people to be more connected.

[3] Urban Sustainable Development Lab. Accessed: http://sustainabledevelopmentlab.com/

A locality perspective

What do people say?

> We only 'do digital' in the health and social care sector in order to deliver better services.

(Commissioner)

> The biggest opportunity technology offers is the possibility of enabling people who use services to gain more power over their lives.

(Provider)

> We believe that the foundation of any smart city has to be its citizens and their life experiences.

(Technologist)

> Co-produced solutions lead to better outcomes.

(Commissioner)

An integration perspective

Next steps in harnessing technology in new models of care

There are now 50 vanguard sites developing new models of care to deliver NHS England's Five Year Forward View[4]. Vanguards are in their second year and currently cover 8% of the country. NHS England's ambition is that this will rise to 25% by 2019.

Of the 50 sites, 14 are multi-speciality community providers and six are focussed on advanced health in care homes. These two models play a substantial role in the integration of health and social care. Both models bring healthcare into the community and involve those aspects of social care that are about keeping people well. Each vanguard site has determined how the model can best be applied in their area, resulting in a range of projects and initiatives. As in Leeds, involving people who use services and those who deliver them, is key to designing solutions that work well locally.

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[4] NHS England et al (2014) *Five year forward view.* Accessed: https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

A multi-speciality community provider

East and North Hertfordshire have introduced HomeFirst which supports older people and others with complex or long term conditions to remain at home rather than going into hospital or residential care. One of the keys to the success of HomeFirst lies in the intelligent use of linked data. It means information can be shared safely and legally and analysed in a way that leads to positive interventions by clinicians.

HomeFirst performs two functions:

- A reactive rapid response where health and social care staff respond with 60 minutes to people in crisis.

- A proactive "virtual ward" case management function. The "virtual ward" identifies people who are at risk of needing to go to hospital, triggering appropriate interventions to avoid admission.

An integration perspective

Advanced health in care homes

Sunderland Clinical Commissioning Group has introduced **digital NEWS** to care homes. This is a telehealth tablet computer linked to a cloud data platform which gathers and stores NEWS (National Early Warning Score), an almost universal measure understood by GP's, ambulance crews and hospitals and used for the early detection of acute illness. The NEWS feature is augmented with nutrition algorithms and pain scores.

The introduction of digital NEWS has resulted in:

- A reduction in 111 and 999 calls, accident and emergency visits and emergency admissions to hospital.

- Improved early detection of people who are acutely unwell.

- Increased capacity for general practice as care homes are now monitoring blood pressure.

- Sharing of clinical information across all providers

- Improved safety and quality of information on handover.

- Higher patient and carer satisfaction levels due to improved patient outcomes.

- The project has been well-received by care home staff who are now suggesting additional ways in which the tablet could be used.

An integration perspective

The adoption of technology solutions in the vanguard sites sits within the Local Government Association's[5] (LGA) vision for technology in social care. This is based on five key themes for how information and technology will be applied to transform the delivery of health and social care services:

- Integrating services and information for children, families and adults.

- Enabling people to interact with care services through digital channels.

- Promoting independence and wellbeing through the use of digital services and technology.

- Integrating commissioning through the improved use of information and analysis.

- Enabling care professionals to work from any base at any time.

The LGA also identifies two enablers which are key to digital transformation:

- Strategy and leadership engagement: time, money, energy and prioritisation are needed in order to deliver digital projects and keep things moving when there are difficult challenges.

- Collaboration with citizens and professionals: It is not the technology alone that makes for success but the "buy in" and collaboration of the people using it.

[5] Local Government Association (2016) *Transforming social care through the use of information and technology.* Accessed: http://www.local.gov.uk/documents/10180/7673874/CHIP+-+informatics+-+Transforming+social+care+through+the+use+of+information+and+technology/948029c1-f8d0-4487-859c-62f8407ccd61

An integration perspective

What do people say?

"Client or practitioner technology solutions will only be truly effective when they are designed, built and implemented with the input of those who are going to use them."

(LGA)

"Care home staff now have the knowledge and skills to carry out clinical observations which help us prioritise our work."

(Specialist nurse)

"Equipping the whole workforce to use digital technology is key."

(Provider)

"Do not underestimate the lack of digital skills in the health and social care workforce."

(Commissioner)

"Always have a technical person involved in designing projects. For instance, I have just learnt that walls can monitor walking and detect people who are risk of falls. We will build this into our next supported housing project. We would never have thought of this on our own."

(Commissioner)

The Local Government Association's future vision for care

Integrating services and information for children, families and adults

This means that care delivery will be better coordinated, interventions will take place early, and citizens will need to tell their story only once.

Enabling people to interact with care services through digital channels

This means that citizens will feel more in control of their own care and carers will have the information they need to support them in their caring role.

Promoting independence and wellbeing through the use of digital services and technology

This means that citizens will feel more independent and escalation of crises will be prevented. Both citizens and their carers will have increased reassurance and reduced feelings of social isolation.

Integrating commissioning through the improved use of information and analysis

This means that commissioners will be able to make better decisions that deliver value for money including improved outcomes for citizens.

**Enabling care professionals to work from any base at any time**

This means that care professionals will be able to deliver care more efficiently and effectively, working collaboratively across organisations.

A practice perspective

Equipping people with learning disabilities to use social media

VODG member Camphill Village Trust (CVT) has been exploring how to develop digital solutions with the help of its GOT IT team. This is a team of people with learning disabilities who quality check information for accessibility. People supported by CVT are increasingly using digital media and consequently the team asked for information to be made available online. This led to CVT and the GOT IT team working with a small technology company to design a multi-functional app called CVT Connect.
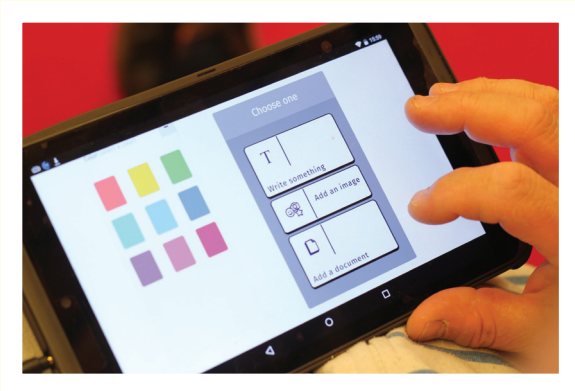
The app[6] is designed to address the concerns and ambitions of both CVT and the people they support by:

- Making information more easily available to people.

- Creating a safe digital environment in which people with learning disabilities can learn to use social media; this helps them develop skills and reduces anxiety about fraud and cyberbullying.

- Giving people supported by CVT a louder voice in the organisation by using virtual sticky walls where people can share their ideas with other.

- Providing a platform which will give people ownership over their personal profile and allowing them to chose who they share this with.

The GOT IT team drove every aspect of development. They worked alongside the designers to decide exactly what the app should do and identified four priorities. The app should:

- Enable everyone who uses it to have a one-page profile.

- Facilitate people working together.

- Provide information.

- Connect people living in different CVT communities.

The resulting app includes:

- Digital one-page profiles which people can update themselves.

- Share walls where people can pool their views; users of the app can self-select to join any wall.

- Noticeboards for current information.

- Shared resources.

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[6] A short film about the development of CVT Connect can be viewed at https://vimeo.com/198694689

A practice perspective

CVT provides training devices on which people can learn to use the app and then encourages them to buy their own. Local administrators oversee people's accounts. They can check what people are sharing through the app and support their learning about how to stay safe online.

New users are encouraged to create a profile and explore the APP through 'drop in' sessions for both the people we support and staff. A key organisational learning point has been that the app represents a culture change and a skills development issue for staff as well as people with learning disabilities. Staff are being encouraged to sign up to CVT Connect and to develop their own one-page profiles. Communication through the app is helping people create warmer, more personal connections as they share aspects of life outside of CVT through the profiles.

The development and implementation of the app has revealed a range of potential uses and add-ons, so how will CVT measure its impact? Potential success measures include:

- Uptake - CVT hopes that in time more than 50% of the people its supports will use the app.

- Integration - with person-centred planning, giving people greater day-to-day control of their plans.

- Changing relationships - by encouraging the people supported and staff to see each other first and foremost as people.

- Impact on governance - the extent to which the app is used to inform decisions about how the organisation is run.

A practice perspective

What do people say?

> We wanted to develop an app that is simple and easy to use for everyone.

(Person with a learning disability)

> The core purpose of your digital development needs to be clear.

(Provider)

> Not everyone has to be connected to everything.

(Commissioner)

> Some staff leave their technology skills at home.

(Provider)

> It is more achievable to start by building something simple that allows add-ons and connections.

(Commissioner)

> Poor access to fast broadband is a significant barrier to implementing digital solutions.

(Provider)

It is clear that to make change happen people who use services, their families and carers, alongside providers, commissioners and industry experts need to work together to capitalise on the opportunities that technology presents.

Summary

- Older and disabled people are often most removed from digital technology but have the most to gain from it.

- User engagement and coproduction are key to the design of successful digital solutions. An inclusive approach also supports ownership and take up of the final product.

- Digital innovation should be focussed on an exploration of areas of concern involving people who use services, technologists and health and social care professionals.

- Leadership that promotes coproduction and champions technology is fundamental to both design and implementation.

- Providers can benefit by always considering the potential contribution of technology when developing projects or services.

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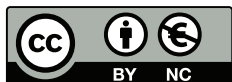- Collaboration and engagement deliver success; technology is a tool which can support this.

A shared way forward

While technology solutions are no substitute for face-to-face support, they have a growing role in the delivery of care and support services. They also provide a significant opportunity for disabled people to exercise more control over their lives and to be better connected. Whatever objective or area of concern we are seeking to address, the potential of technology is likely to become an increasingly valuable area of focus in social care, and presents an ever-growing range of solutions.

info@vodg.org.uk

@VODGmembership

www.vodg.org.uk

New Bridge Street House
30-34 New Bridge Street
London EC4V 6BJ

VODG