Digital Possibilities and Social Mission in the Voluntary Sector: The Case of a Community Transport Organisation in the UK

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Source: Voluntary Sector Review

Publisher: Policy Press

DOI: https://doi.org/10.1332/204080520X15787076882640

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Abstract:

Digital technology is seen as a panacea to meeting the financial and operational challenges faced by Voluntary and Community Sector Organisations (VCSOs), through delivering efficiencies and cost-saving, alongside improving quality of service. However, according to recent assessments in the UK, the rate of digital adoption is slow compared to other sectors. This study identifies how a VCSO in a period of austerity prioritises its social mission over functionality and efficiency gains from digital technology. Employing the heuristic of phronesis, we argue that VCSOs seeking to implement digital innovations need to strike a balance between instrumental rationality (i.e. what is possible to achieve with technology) and value rationality (i.e. what is desirable to pursue by VCSOs). Our key argument is that theories of value rationality provide a new explanation for the slow adoption of digital technology amongst VCSOs.

Key words:

Community Transport, Digital Innovation, Phronesis

Introduction

This paper examines critically the challenges faced by Voluntary and Community Sector Organisations (VCSOs) adopting digital technologies to manage rising demand and increasing efficiency whilst maintaining their social mission. The global financial crisis of 2008/9 precipitated in many western economies the introduction of austerity measures

across public social programmes. Governments attempting to address the effects of financial precarity and meet the growing demands of aging societies have encouraged VCSOs to supplement or replace non-statutory social services (Brake and Nelson 2007, Milbourne and Cushman 2015). However, VCSOs in western economies currently face economic, social, and operational challenges which limit their ability to fulfil these roles and deliver on their social missions[1] (Clifford 2017, Jones et al 2016).

Meanwhile, digital technology[2] is often cited as a panacea for the challenges facing VCSOs, through delivering improved quality of service and operational and cost-saving efficiencies (CharityComms 2016, Dodd 2015, Lloyd et al 2017). The UK Digital Strategy (DCMS 2017), the Charity Digital Code of Practice (Amar 2018) and the UK's Civil Society Strategy (CabinetOffice 2018) state that digital technology offers unprecedented opportunities for addressing social challenges and making charities more resilient and sustainable. The UK government is "committed to bringing together digital and civil society" (Cabinet Office, 2018; pp. 83) through the triple helix approach whereby the voluntary, private and public sectors work together to deliver "tech for good" (DCMS, 2017; pp.101). However, the rate of VSCO adoption of digital technologies is slow compared to other sectors (Cabinet Office, 2018) with just 31% of charities are using digital technology compared to 90% of small businesses (Amar and Evans 2018, LB 2016). The feasibility of delivering the 'tech for good' agenda is in question given austerity limiting the potential for investment (Bennett et al 2019).

This paper explores the challenges of digital innovation and adoption for VCSOs through an in-depth case study approach of a Community Transport Organisation (CTO) in a rural area of the UK. This study is based on a triple helix action research project involving the local Age UK team (VCSO), the travel time mapping company IGeolise (private sector), and university researchers (public sector). To date there has been a small, but important, body of work that has sought to identify the tensions between the social mission and the uptake of digital

[1] The social mission is comprised of founding philosophies and activities targeted at the issue or problem the VCSO seeks to address.

[2] Digital technology is an umbrella term for devices or systems that are connected to the Internet, interactive and 'intelligent', including volunteer brokerage platforms, smartphone volunteering apps, and social media.

tech (Burt and Taylor 2003, 2001, Gutierrez et al 2010, Jäger and Beyes 2010, McInerney 2007, Voida 2011).

We contribute to this literature by employing the heuristic of phronesis to argue that VCSOs seeking to implement digital innovations need to strike a balance between the two components of phronesis, i.e. instrumental rationality, which identifies what can be achieved with technology, and value rationality, which is the mission pursued by VCSOs. (Flyvbjerg et al 2012). Phronesis enables us to demonstrate how VCSOs cannot be homogenised when seeking digital solutions due to the variability around their social missions and the reasoning behind the services they provide. This brings value rationality to the forefront as an explanation for why the adoption of digital technology has been slow among VCSOs. On the face of it, CTOs seem well positioned to realise the benefits of digital technology to perfect travel logistics, including efficiencies in driver deployment and route planning with the associated savings of time and costs (staff and fuel). However, our case study shows the CTO prioritising the values of the organisation and the social needs of volunteers, clients and staff over functionality and efficiency gains from digital technology, despite facing the challenges of austerity. Although our case study is reflective of a specific type of VCSO with particular operational characteristics, the adoption of digital innovation needs to be incremental and bespoke for some VCSOs in order to preserve their social mission, mitigate transition risks to new technologies, and recognise the capital constraints in adopting digital technology. Innovators must recognise VCSOs' operational, volunteer and client needs, secure staff and volunteer 'buy in' and provide training.

Digital Innovation and the Voluntary Sector

Digital technology[3] and VCSOs have been studied from a number of perspectives: the benefits and barriers to adoption across the sector (Burt and Taylor 2001, Finn et al 2006, Nugroho 2011, Pinho and Macedo 2006); impacts on work distribution within organisations (Saidel and Cour 2003); the role of social media (Eimhjellen et al 2014, Jacklin-Jarvis and Cole 2019, Nah and Saxton 2013, Zorn et al 2013); and the uniqueness of VCSOs and implications for digital innovation (Gutierrez et al 2010, Jäger and Beyes 2010, McInerney

[3] Sometimes referred to as Information and Communication Technology (ICT).

and Andersen 2014). This literature shows that there are internal and external factors influencing the adoption of digital technology (Pereira and Cullen 2009).

The majority of research focuses on internal factors. For example, 64% of charities saw lack of resources as the greatest barrier to the adoption of digital technology (Amar and Evans 2018). The UK 2018 Charity Digital Skills Report found the top two barriers for adoption were: i) lack of funding (58%); and ii) lack of skills (51%). These are interlinked issues. VCSOs have to weigh up immediate, often un-recoverable, financial and non-pecuniary staff learning costs in technological investment against the future benefits expected though increased capacity and efficiency (Voida 2011). Embracing new technology can also create challenges for information governance (Gutierrez et al 2010), testing the limits of European Union General Data Protection Regulations, safeguarding and personal privacy to the point of possible disengagement by users (Zurich 2015). These issues are compounded by the size of VCSOs: in the UK 59% of VCSOs employ fewer than 50 people (NCVO 2018). Larger and more profitable organisations are able to invest in new technology and upskilling.

A smaller body of work has identified external barriers to the adoption of digital technology, such as the operational environment (i.e. local geographical, political and socio-demographic characteristics) and stakeholder needs (Chew and Lyon 2012, Osborne et al 2008). These factors condition both the challenges faced by particular VCSOs and the digital technology which could support their operations. For example, VCSOs providing specialized services to older people encounter age and the digital divide as external barriers to the adoption of digital technology (Eimhjellen et al 2014, Musselwhite 2019). User-centred, human-centred, and co-design approaches may offer another possible route to create bespoke digital solutions but questions remain about the capacity of VCSOs to engage with these approaches because the resources required tend to be oriented towards the needs and contexts of large commercial organisations (Lam et al 2012).

Unique to VCSOs, compared to private or public sector organisations, is their relationship with a particular constituency and their wellbeing (Chew and Lyon 2012, Gutierrez et al 2010). They are typically local organisations which depend at least in part on volunteers to provide services based on social need (Alfes et al 2017). In small VCSOs the distinction

between those who benefit from the voluntary effort and those who organise and undertake it can be blurred (Rochester 1998, Voida 2011). Any VCSO's social mission and operations are sustained by meeting external community needs and maintaining satisfaction levels of volunteers (Alfes et al 2017, Burt and Taylor 2003, Eng et al 2012, Nencini et al 2016).

Digital Technology and Social Mission

A niche body of work has attempted to understand the social mission of VCSOs as a factor in the uptake of digital technology. Writing widely on potential tensions between the social mission of VCSOs and uptake of digital technology, Burt and Taylor found that the extent to which technologies are exploited is shaped by the social conditions, philosophies and value systems which give VCSOs their essential character (Burt and Taylor 2001, 2003, 2001, Burt and Taylor 2000). These findings build on similar research insights (Boyle et al 1993, Moore 2000). Saidel and Cour (2003) also question how effectively VCSOs link social mission with making choices about digital adoption. Burt and Taylor (2001b, 2003) argue that embedded values and community relationships temper the extent to which VCSOs are able to exploit the transformational potential of digital technology because time and resources are dedicated to sustaining VCSOs' social missions. Radical shifts to new technology require a paradigm shift in organisational values and a reconfiguration of working arrangements in order to reconcile social mission and operational efficiency. Subsequent research has reiterated these findings (Dolnicar et al 2008, Jäger and Beyes 2010, McInerney 2007) with Jäger and Beyes (2010) identifying the 'balancing practices' necessary to allow VCSOs to achieve operational and financial sustainability without damaging the social mission. The rapid evolution and ubiquity of digital technology and its status in government policy mean that we must revisit the relationship between meeting social mission and adopting digital in VCSOs. In the next session we offer a conceptual framework for achieving this.

Phronesis as a Conceptual Tool

Understanding the digital innovation process amongst VCSOs, as compared to public and private sector organisations, requires different theoretical interpretations (Boyle et al 1993, Gutierrez et al 2010, Saidel and Cour 2003, Zmud et al 2004). Previous research has primarily applied technology adoption models (Harrison and Murray 2007, Nah and Saxton

2013, Pereira and Cullen 2009) which pragmatically focus on the internal and external factors for digital take up. Despite the rapidly changing nature and ubiquity of digital technology in everyday life there is a surprising absence of contemporary theorisations of how digital innovation occurs within VCSOs. As stated above, little is understood of the tensions between digital possibilities and the social needs and social missions of VCSOs.

One heuristic with the potential to conceptualise this process is phronesis, which has recently gained traction amongst social scientists (Berti et al 2017, Blok 2018, Gunder 2010). Phronesis is a socially relevant form of knowledge or "practical wisdom on how to address and act on social problems in a particular context" (Flyvbjerg et al, 2012: 1) Phronesis is concerned with making decisions according to ethically and socially justified goals, such as equity and equality (Linke and Jentoft 2014). The practice of phronesis entails the key actors listening, engaging and interacting around commonalities to align objectives and develop a common language (Mason 2015, Mason et al 2013). Phronesis provides a conceptual and practical way of understanding innovation in VCSOs by exposing the balance between instrumental rationality (i.e. what is possible to achieve) and value rationality (i.e. what is desirable to pursue) (Flyvbjerg et al 2012). A phronetic approach is about pursuing the reasonable thing to do, even if this is counter to what would be regarded as rational from an instrumental perspective (Linke and Jentoft 2014). This is the key element which renders phronesis as an appropriate analytical lens for this study. By considering the organisational structure, social mission and operational context of a VCSO, we use phronesis to reveal the bespoke features a digital solution must possess to address specific needs. Thus, practical decisions can be made regarding whether a digital solution can address contextual unpredictability and/or whether the solution presented is aligned with organisational structure, social mission and operational context (including financial budgeting) (Turnley 2007). To date, phronesis has been applied in business organisational management (Berti et al 2017, Costello 2019) and innovation (Blok 2018) as a mechanism to understand the logic(s) of justification in complex human action (Gunder 2010). The concept provides conceptual leverage to advance beyond instrumental explanations focused on internal and external factors towards the often ignored ethical and value related factors in decision-making (Berti et al 2017). We advance phronesis as a new and insightful heuristic to explore and explain the tension between digital possibilities and social needs in VCSOs.

Community Transport and Digital Possibilities

In the UK, there are around 1,700 CTOs with over 60,000 volunteers and 10,000 paid employees (CTA 2012). CTOs epitomise the contemporary social, financial and operational pressures on VCSOs, and the potential innovation opportunities provided by digital technology. CTOs play a key role in addressing social challenges by utilising volunteer drivers to meet the need in the UK, Europe, US and Australia and elsewhere for flexible and accessible transport, e.g. to and from work, school, clubs, public services, and medical appointments, especially in rural areas where public transport is often poor (ECT 2016). CTOs serve vulnerable and isolated people, older people and those with disabilities, and those who cannot (for a variety of reasons) drive or access public transport (Battellino 2009, Delbosc and Currie 2011, ECT 2016). Like many VCSOs, CTOs face significant financial and operational pressures. Post financial crisis 2008/09, UK Government austerity measures have simultaneously increased demand and rereduced funding by cutting unprofitable public transport routes and UK local authority grant funding to CTOs (HoC 2013, RE 2016). Many providers have raised concerns to the UK Community Transport Association (CTA) about the sustainability of their operations (RE 2016).

Amongst VCSOs, CTOs are arguably well positioned to realise the benefits of digital technology because of the practical problem they exist to solve. From a logistical perspective, a CTO's purpose might crudely be characterised as a 'Travelling Salespersons' problem. i.e. a salesperson, in this case a volunteer driver, has to transport clients to a number of destinations in the minimum number of miles and at the lowest cost (Simon Bennett 1994). Digital technology has been widely used for transport system optimisation in other sectors such as road haulage (Banister and Stead 2004, Brake et al 2007).

In the last decade there have been a number of technological developments which have the potential to enable smarter and more flexible community transport systems (Brake and Nelson 2007, Mulley et al 2018). First, there has been a proliferation of smartphone apps to enhance the recruitment, management, and deployment of volunteers: Spedsta, Volunteer Local and VolunteerMatch are examples of apps which match volunteers and clients utilising the location-detection and mapping capabilities of smartphones Second, dynamic vehicle

scheduling software packages such as MobiRouter, TrapezeGroup and RoadXS are available, specifically designed to optimise the management of transport fleets. The RoadXS software, specifically designed for CTOs, features smart journey tracking, route planning, cancellation management, driver suggestions and real time reporting. These digital technologies can be termed radical innovations based on their possibility to optimise CT operations through transforming passive databases (of volunteers and clients) into systems of insight which are integrated with vehicles and drivers and interactive in real time (Dickinson et al 2015, Mulley et al 2018). In principle, digital technology has alluring possibilities to positively transform the operational efficiency of CTOs and improve their quality of service.

Research on CTOs has focused on their role in addressing mobility and social exclusion (Battellino 2009, Battellino and McClain 2011, Gray et al 2006, Nelson et al 2017, Pereira and Cullen 2009, Rosenbloom 2009, Schwanen 2016) and quantifying and modelling the spatial gaps in transport supply and disadvantage (Delbosc and Currie 2011, Duvarci et al 2015). Academic literatures specifically on CTOs and the adoption of digital technology has a longer but limited history (Mulley and Nelson 2012, Mulley et al 2018). Early work focused on the internal factors of how service provision decisions were made argued that the adoption of new practices in CTOs was dependent on a combination of leadership, staff culture, and available resources (Bryman et al 1992). Some CTOs began moving their paper records to computer-based client databases and driver scheduling systems stored on local drives in the 1990s (Cassidy and McGuinness 1993) while others explored the potential of computerisation to improve operational efficiency. Bennet (1994) found that visualised diaries were found to assist decision-making in trip allocation. However, also finding that sorting passenger pickups and planning an efficient route was not an appropriate task to automate; arguing that fuzzy logic, rather than the Travelling Salesperson model, was a more useful to CTO vehicle brokerage (Simon Bennett 1994). Bennet (1994) concluded that computerisation was better placed to assist rather than replace human decision-making due to the complex array of competing multiple variables (such as driver and passenger preferences). A key barrier to the adoption of vehicle booking software in the UK was that these systems had been developed for large scale public transport systems and not tailored to localised CT operations (Mulley and Nelson 2012). Mulley et al (2018) further suggest that future researchers should consider how mobility packages should be formed around

different types of clients and to identify what ICT support would be necessary for users. We argue that there remains a gap in our understanding of the bespoke social needs and priorities of CTOs and the internal and external barriers to adoption of digital technology.

Case Study

In this section we use a case study of a UK Community Transport Organisation (CTO) to explore the possibilities for digital innovation. Case studies are a valuable research tool for understanding complex contemporary social phenomena, in 'real life' contexts, over which the investigator has little or no control (Yin 2009). They are a frequently used methodology to study CTOs and digital innovation (Battellino 2009, Bryman et al 1992, Burt and Taylor 2003, Cassidy and McGuinness 1993, Mulley and Nelson 2012, Mulley et al 2018). Our case study is of a digital innovation project, TAP Mapping, undertaken with the local Age UK team Community Transport Department (Transport Access People - TAP). TAP underpins the delivery of Age UK's work in the area by deploying volunteer drivers using their own vehicles or minibuses to pick up and drop off self-funded and Local Authority funded clients to non-emergency health and well-being appointments (such as GP or hospital out-patient appointments and social events like coffee mornings). The service is necessary in the study location, which is unitary authority characterised by dispersed rural communities. Of a population of 553,697 (2016), over 39% live in small settlements of fewer than 1000 people. Of the 34 settlements over 1000 people, only five have populations between 20,000 and 30,000 people (ONS 2019). The nearest major city is in the adjacent county and is 60 miles away. Public transport is provided by buses – which are, in some areas, infrequent and expensive – and a mainline railway with four branch lines.

The aim of the local Age UK team was to increase the capacity of TAP to deliver their social mission – promoting independence in the community – by exploiting the potential of new time mapping analytics, transport management software and smart phone apps to improve the recruitment, deployment and management of volunteer drivers. Led by researchers based at the nearby university, the project was a collaboration with TAP and the mapping software specialists IGeolise . This relationship enabled a new flow and application of knowledge between typically disconnected organisations (Ranga and Etzkowitz 2013).

A valuable strength of case study research is its ability to accommodate the wide variety of data sources used (Yin 2009). The research on which this paper is based comprised 12 months of collaboration between two of the authors and the organisation. This included participant observation throughout the period of study, 10 initial and six follow up semi-structured interviews each lasting approximately one hour. Interview participants included the local Age UK CEO, TAP Systems Manager, Transport Manager, and 6 Transport Planners. Members of the organisation provided feedback on the data and reports generated during the project. A telephone survey was also carried out with 93 volunteers (45% of total cohort). Data included meeting minutes and workshops in which potential digital innovations were interrogated and discussed. These materials were analysed thematically using NVIVO and cross-checked by the research team. One key theme was the relationship between digital innovation and social need. The data from this theme are used in this paper. Our analysis below draws on these sources to discuss the role of phronesis in the adoption of digital technology.

Project Process, Outputs and Outcomes

At the outset of the project in 2016 the naive expectation, by all partners, was that the project process would be linear and instrumental: i) identify TAP's innovation priorities; ii) identify technological solutions; and iii) implement solution. The imagined outcome was the adoption of a new digital technology that would radically improve TAP's efficiency and quality of service. Figure 1 illustrates how the project process was different in practice. Following identification of TAP's innovation priorities, researchers proposed two innovation options: adopting existing technology or developing new. However, as discussed next, TAP rejected the proposition of any radical transition to new a digital transport management software. The final output in 2017, following an iterative dialogue and decision-making process between TAP, the researchers and IGeolise, was a bespoke list of functionality improvements to be implemented incrementally rather than a radical technological/software transition. In sum, the outcome of the project was not the 'overnight' transition to a new technology which instantly improved the efficiency and quality of TAP operations. Instead, the outcome was a realisation that TAP has technical and social priorities and that meeting their social mission was relatively more important than

maximising the efficiency of their transport system. The reasons why TAP rejected transition to an existing or new digital technology is focus of our discussion.

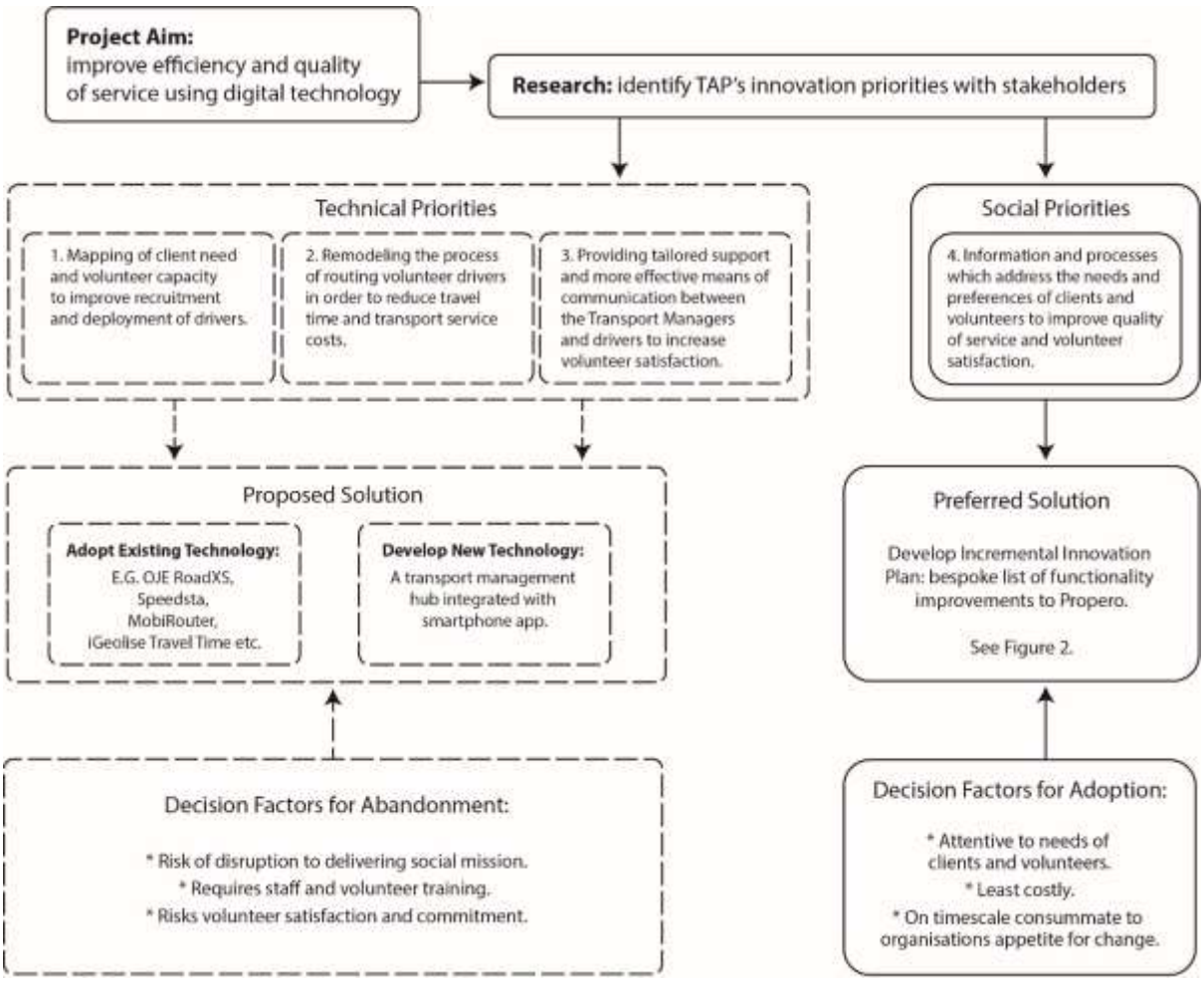

Figure 1: Project Process, Decisions and Outcomes

Findings

Our first key finding is that adoption of a new technology was not rejected on grounds of functionality. The researchers offered a number of available technologies which could address TAP's innovation priorities and functionality needs. The CEO of Age UK could see, with caveats, the value of these to the organisation:

> *The worry with technology is that people lose human contact, so it's a balance ... The efficiency of the gains we get from new technology means we are actually supporting more and more people … which obviously generates more finance. And for us that's brilliant because we are a charity and so it puts more money*

back into our pot so we are able to support more people. It becomes a virtuous not a vicious cycle (20/06/16).

The technological solution suggested to TAP was able to manage identifiable variables such as routes, driver availability and petrol consumption. However, the intangible variables – the relationship between clients, volunteers and staff, and the variability in clients' and staff's needs and wishes – could not be incorporated. That these should feature at all in decision-making is a reflection of the culture of the organisation, embedded staff working practices and the nature of TAP's social mission which promotes independence and sociability, not just transport.

Social Mission

Delivering TAP's social mission to make transport accessible to the vulnerable requires material capital (vehicles, petrol, etc.), human capital (volunteer driver time) but also, and unlike private businesses, social capital generated by reciprocity, trust, and cooperation between TAP, volunteer drivers, and clients. Further, the sustainability of VCSOs is reliant on the satisfaction of client, volunteer and staff needs and preferences (Alfes et al 2017, Burt and Taylor 2003, Eng et al 2012, Nencini et al 2016). TAP clients expressed accessibility needs (especially type of vehicle) and social preferences (e.g. for a chatty driver). Volunteers expressed preferences about which days and how far they wished to drive, travel time, and how they wanted to be contacted (phone or email). The nebulous and variable nature of these needs exposed the limitations of digital technology which could not accommodate them. In light of this, TAP decided to prioritise the social mission of the organisation over functionality and efficiency gains of new digital technology.

Tension between Digital Solutions and Social Mission

While technology may potentially have offered efficiency gains in terms of resources, the organisation followed a different logic in making its decision as they prioritised the social elements of delivering the service. Using the concept of phronesis shows that social mission, a practical wisdom and value rationality, embedded within a specific context, are important in decision making (Flyvbjerg 2004). As Linke and Jentoft (2014) showed (albeit in a different context), organisations may go against what would be regarded as rational from an

instrumental or technologist perspective. Taking seriously the power of value rationality provides a new explanation for the slow adoption of digital technology amongst VCSOs.

In our study the tension between instrumental and value rationalities exhibited itself at two decisions points. First, in early discussions about TAP's issues, a tension was identified between the benefits of digital solutions for vehicle routing and delivering TAP's social mission. In explaining the potential of Travel Time technology for TAP, the Director of IGeolise suggested that deployment of a volunteer driver could become "as easy as ordering a pizza" (11/03/16), a private sector framing focused on efficiency gains that unitised volunteers. Such a framing was at odds with TAP's description in 'pro-social' terms of the problem, the role of CTOs, and their objective to make transport innovation and infrastructure inclusive and accessible for everyone in society (CTA 2016). IGeolise's initial framing also did not grasp the complexity and messiness of volunteer deployment and management. For example, TAP's Systems Manager explained that a "volunteer's car is not necessarily suited for any journey because of clients' disability needs" and "clients can preference a gender or even a specific driver" (25/06/16). TAP did not frame volunteers as units who 'could be more efficiently deployed', like a pizza delivery person. TAP's Transport Manager asserted: "these are people who have given their time, changes to how we communicate with them and how driving jobs are given out risks their commitment" (24/04/2017). In keeping with a distinguishing feature of value rationality (Flyvbjerg et al 2012), TAP prioritised social need over maximising efficiency and profit.

Tension between Functionality Gains and Social Need

Later in the project, a second point of tension arose between the functionality in a new digital software system and the social needs and preferences of the volunteer drivers, clients and staff. To manage client transport requests and arrange volunteer drivers TAP currently use a bespoke database called Propero, developed by a local IT consultant in 2001 with few improvements since. It is hosted on a local server, is time-consuming to use and lacks functionality compared with sophisticated, web-based apps such as RoadXS. It cannot, for example, display the location of drivers and their destinations to identify areas of overcapacity or areas of under capacity. Despite the Propero's limitations, TAP staff identified two risks related to the transition to digital technology. First, Propero had evolved

incrementally over the years through input by staff and volunteers to reflect the idiosyncratic nature of TAP provision and was augmented by the tacit knowledge of Transport Planners, especially how to "hack" any problems. While working with software developers might eventually accommodate these idiosyncrasies into a new system (see Figure 2 for TAP's desired functions), TAP staff were concerned that in the transition business would be lost, the quality of the service would decline and stress on paid workers, volunteers and clients would increase.

Figure 2: Innovation Plan - Functionality Improvements to be Implemented Incrementally

The second transition risk relates to the fact that the needs and preferences of volunteers and clients are valued above efficiency gains. The result of a volunteer driver survey which showed that, while 62% of volunteers owned a smartphone, only 53% would consider using a smartphone app to support volunteer driving, ruled out any new transport management system which required smart phones. Rather, this suggested that an agile process of co-production would be required to avoid disenfranchising volunteers with new technology. TAP's social mission – to actively promote inclusive relationships throughout the organisation (Burt and Taylor 2003, Voida 2011) surmounted the radical adoption of digital technology.

There are a plethora of off-the-shelf existing digital volunteer management software products and smartphone apps which have the potential to transform TAP's system. However, TAP rejected the proposal for radical transition to a new system in favour of a developing a bespoke innovation plan (see Figure 2) wherein functionality improvements would be made incrementally to Propero. This was preferred because the internal and external transition risks outweighed the efficiency and functionality gains of a new system. The underpinning social mission of TAP determined that the innovation process was not just about optimisation and efficiency but equally about developing solutions which work for clients, volunteer drivers, and their staff. For TAP, the bespoke solution list (see Figure 2) enables innovation to be delivered incrementally in partnership with stakeholders, the rationale being that this will result in sustainable transformation.

Discussion

The context for this paper is that VCSOs are struggling to deliver on their social mission because of a range of economic, social, and operational challenges (Clifford 2017, Jones et al 2016, Milbourne and Cushman 2015). Digital technology is being promoted, particularly in UK national strategies, as a panacea to meeting these challenging demands, creating efficiency, reducing costs and optimising technical operations (Amar and Evans 2018, CabinetOffice 2018, DCMS 2017). The logic behind the digital agenda is that it will make VCSOs more efficient, resilient, sustainable and improve quality of service (DCMS 2017, Lloyd et al 2017). However, despite this drive from national government combined with the ubiquity of apps, devices, data and Wi-Fi, in the UK the rate of digital adoption amongst VCSOs is slow and the sector is lagging behind compared to the private and public sector (Amar and Evans 2018, DCMS 2017). Responding to this, at the beginning of the paper, we set out to explore the reasons why adoption of digital technology was slow, what the barriers were, and how digital innovation should be approached differently amongst VCSOs. In this discussion we broaden our focus from our CTO case study to address these questions for the whole voluntary sector.

VCSOs are by definition social innovators, a quality recognised in policy debates referencing the innovation capacity of VCSOs as public service providers able to develop 'alternative approaches' to fill gaps where public and private sectors do not or cannot go to deliver

services (Chew and Lyon 2012, Osborne et al 2008). However, when it comes to pursuing their social mission through digital means, the appetite and capacity for innovation does not manifest itself across all VCSOs, especially where the transition might present a perceived threat to the continuity of delivery. Our case study has demonstrated a limit to that innovative capacity with regard to digital technology. This limit is partly to do with value rationality and the priority VCSO's place on delivering their social mission, as well as practical considerations of cost, skills, capacity and risk tolerance which are all components of phronesis. Where VCSOs serve the most vulnerable in society, the digital divide can also be a barrier to uptake.

It is also possible that the imperatives that drive national digital policy do not necessarily align with those of VCSOs. Arguably, digital provides the state with efficient systems and processes (especially in times of austerity) that are readily quantifiable, traceable, accountable and auditable. Adoption of digital may enable VCSOs to access government contracts and funding, and promises to optimise their activities, but at the same time has the potential to draw them into the shadow state. Meanwhile, the motivation for VCSOs to adopt digital is to improve the quality of service – to continue to solve the problem for which they were created in the first place – but as our case study shows, the transition can be too demanding.

In considering the barriers to the adoption of digital, it is important not to homogenise the VCSO sector (McInerney 2007). Some VCSOs were born in the digital age, and the use of digital is in their DNA – such as Be My Eyes (which connects blind and low-vision people with sighted volunteers for visual assistance through a live video call). Nevertheless, there are many VCSOs established in a pre-digital age that are not 'born digital'. In some respects, CTOs might seem an obvious group for whom the adoption of digital has manifest benefits (witness the success of Uber). Nevertheless, the barriers to adopting digital are, as we have shown, enough to slow or stop the process.

Several scholars (Burt and Taylor 2003, 2001, Gutierrez et al 2010, Pereira and Cullen 2009) have identified how the barriers to digital innovation for VCSOs are not simply internal organisational capacity factors but also the tension between optimisation/efficiency and

delivering the social mission. The social mission of many VCSOs has not fundamentally changed since their creation and any perceived risk to the social mission, or a negative impact on volunteer satisfaction should not be dismissed lightly. Like many charities, Age UK's activities are delivered by a combination of paid staff and volunteers. Volunteers, unlike employees, cannot be compelled to undertake training and can leave the organisation without notice if they become dissatisfied with their volunteering experience. In this way the adoption of digital solutions has both potential and risk, which have to be weighed up carefully.

How, then, can we think through the relationship between VCSOs and digital differently, so that the benefits of adopting digital can be realised and the threats and uncertainties minimised? Our first assertion is that we have to reconceptualise this relationship from one dominated by instrumental rationality. In this paper we have discussed the concept of phronesis which, with its emphasis on practical wisdom for solving social problems, epitomises the ethic of the voluntary sector. Practically, phronesis encourages listening, engaging and interacting to align objectives. For VCSOs and digital designers, this suggests slow innovation (in the spirit of other slow movements which eschew fastness for doing things at the right speed as well as possible not as fast as possible). Indeed, it has been argued that radical technological changes do not always lead to radical innovation outcomes (Norman and Verganti 2014). On the contrary, a variety of studies have shown that incremental technological changes can lead to radical innovations in terms of the services they provide to users, such as the Smartphone (Kline and Rosenberg 2010, Vogelstein 2013). Our second suggestion is that innovation needs to be bespoke to VCSOs, especially those that were not 'born digital', to facilitate their social mission. In this project, rather than producing a digital solution for immediate adoption, an innovation plan embodied slow innovation. This also calls attention to the difference between adopting digital (e.g. existing platforms or software) and designing digital (e.g. bespoke solutions that take account of the individual needs of VCSOs).

Conclusion

In this paper we argue that a collective response that is underpinned by the practice of phronesis enables knowledge, insight, and capital to be brought together to support an organisation's social and digital transformation. We argue that innovation of this nature calls for a new logic, the key to which is a co-productive approach to identify the tensions between technical solutions, internal and external pressures and social mission. Our central finding is that the deviation from a technical optimisation model in our case study was driven by the simple fact that the VCSO's social mission and priorities superseded the efficiency gains and benefits of the technological innovation. This highlights a disconnect between technological advancement and the working practices of VCSOs. Plainly put, the exogenous drivers of austerity, an ageing population, the digital innovation agenda, and care commissioning practices/tendering process were less significant in determining the uptake of technological innovation than managing the complex demands of handling a heterogeneous group of clients, staff and volunteers. Fulfilling social purpose, coupled to an organisation's capacity to manage technological transition, can inhibit opportunities to change: new technological solutions have to cope with the idiosyncratic needs of various actors.

Our findings are important because of their wider implications for the future innovative capacities of VCSOs and their ability to adopt digital innovation. We argue that inter-sectorial collaboration provides a potential solution, but it should not be limited to actors from otherwise disparate sectors, e.g. universities, businesses and voluntary sector organisations. Various actors from within VCSOs, e.g. the volunteers, managers and clients, should also be included. Specifically, such collaboration requires careful consideration of a range of needs from organisational functionality, client needs, to support and training for staff and volunteer 'buy in'. Projects need to strike a balance between instrumental rationality and value rationality through a process of phronesis in order to achieve sustainable and inclusive transformations. Overall, this study has demonstrated that innovation is inherently complex and, consequently, researchers wishing to support digital innovation need to be sensitive to these complexities by offering an interdisciplinary approach in order to bring together the needs and interests of all stakeholders.

Funding details: This work was funded by an ESRC Impact Acceleration Account (IAA) under grant ES/M50046X/1. This work was also supported by the England European Regional Development Fund as part of the European Structural and Investment Funds Growth Programme 2014-2020 under grant 05R16P00305.

Conflict of interest statement: The Authors declare that there is no conflict of interest.

Acknowledgements: The Authors would like to thank Age UK's Age Community Transport team for assistance with this project.

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