Discussion Paper on Digital Solutions for Supporting Older People

Empirica, 4th February 2021

1. Introduction

Following on from an initial online meeting, this discussion paper is intended to serve as an intermediate step for defining in more detail how empirica may be able to effectively support the team in Dingle within the boundaries of the SmartRural21 project. This begins with a brief overview of the different types of digital solutions that are commonly available to achieve the desired outcomes of Dingle's Smart Village Strategy in terms of supporting older people and their families (Section 2). These types differ not only in terms of technological requirements on their practical implementation, but also in terms of roles and responsibilities of different local stake holders that may need to be involved when implementing them. Next, three examples from practice are briefly sketched, merely for illustrative purpose at the current stage (section 3).

In a next step, it is proposed to hold another meeting to discuss:

a) whether the aim of establishing a retirement village is correctly understood by empirica;

b) whether the different types of digital solutions generally available for achieving desired outcomes are deemed equally relevant by the team in Dingle.

The results of this discussion should help to guide further information gathering by empirica so that the information needs of the team in Dingle can eventually be met as comprehensively as possible. This concerns both the type of information that should be further collated and how this information should best be presented.

The content provided throughout the remainder of this short paper was developed against the background of the following considerations. During the first meeting, it was generally confirmed that that one aspect of Dingle's Smart Village Strategy focuses on establishing a retirement village in which older people can live independently and access medical and ancillary services. Envisaged outcomes include:

- application of smart technologies – among residents and among others in the community – to enhance care and quality of life,
- enhanced access to care facilities, supports and services,
- improved quality of life for older people and for their relatives (particularly relatives who live away from Dingle).

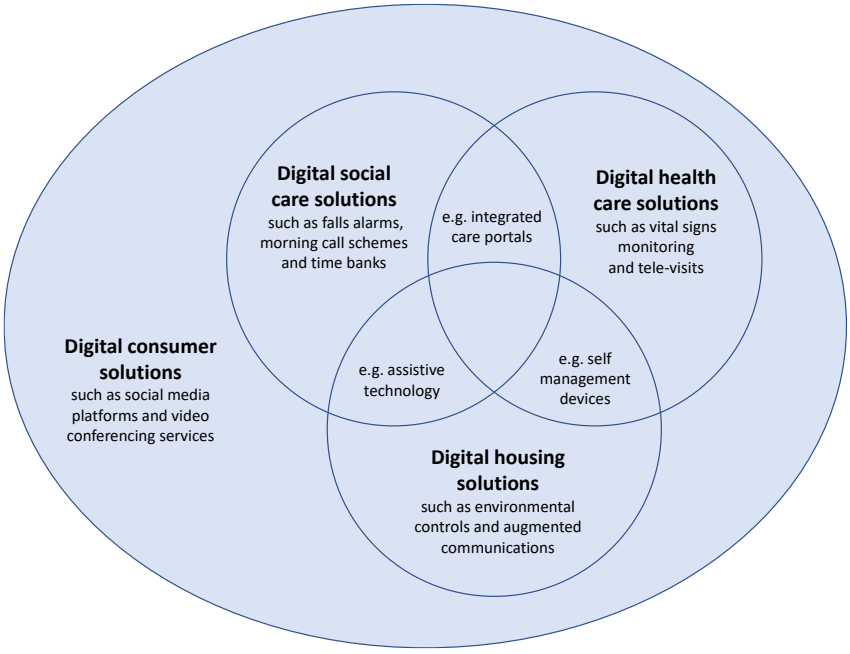
Furthermore, it was highlighted that - apart from merely putting technology in place - capacity building measures represent an important prerequisite for the wider utilisation of any digital solution enabling the desired support of older people living in the community. Connectivity constraints are another factor to be taken into account.

The discussion about the positive potential that digital technologies generally offer for the well-being and independent living of older people is anything else but new. Many pilot projects and reports in the media to watch in recent years have raised great expectations in this regard. It is however challenging in this field to separate the 'hype' from the reality. On the surface, at least, many of the innovations in the field of digital technologies appear, 'self-evidently', to have a high utility value for meeting the needs of older people and of ageing communities more generally. This can sometimes lead to a tendency to see the problem as

requiring only a "digital tool" to enable the well-being and independent living of older people. The reality, in many cases, seems quite different. Human needs are complex and are not necessarily easily met through simple 'technological fixes'.

Often, technology enfolds its full potential only in conjunction with human support, whether provided on a voluntary basis or in form of (publicly or privately) paid services. In such cases, the desired end user support can frequently not be delivered by digital technology alone, but by incorporating specific roles played by family member, volunteers, or professional services into a digitally enabled support scheme. Beyond merely implementing software products and digital devices, in such cases the desired "digital solution" therefore tends to also require the agreement of reliable collaboration processes among those parties that have a role to play in effectively providing desired levels of support to older people with help of technology, e. g. when it comes to those living with chronic conditions or physical restrictions. The latter frequently proves to be a critical part, making it difficult to replicate existing models of digitally enabled support of older people. Often, the adoption of digital solutions that have proved useful elsewhere requires certain adaptations to match with locally prevailing framework conditions, be it in technological, personnel and other regards. On the other hand, more and more digital services are appearing on the consumer market that offer easy-to-use means for interacting with and among older people, e. g. when it comes to staying in touch with family members living elsewhere.

Figure 1 – Types of digital solutions potentially available to address the specific needs of older people



2. Overview of digital solutions generally available

For our purposes, digital solutions potentially relevant to the goals outlined above can be pragmatically grouped in a manner that maps loosely to the 'technology market' segments that typically structure the delivery of support to older people. As graphically summarized by the schema overleaf (Figure 1), they concern:

- digital social care solutions,
- digital health care solutions,

- digital housing solutions,
- and digital consumer solutions

Digital solutions to support remote social care provision, sometimes referred to as telecare solutions, represent perhaps the most widespread category of technology applications addressing the specific needs of older people. So called first-generation telecare solutions, sometimes referred to as social alarms, use a simple telephone unit and a pendant with a button that can be triggered when help is required by the user. Monitoring centre systems receive the call and identify the caller and their address; initial diagnosis of the nature and urgency of the need can be explored by voice link; nominated response personnel (informal or formal carers) are alerted as required by the situation, following an established protocol. So called second-generation alarms add a 'passive' or automatic alarm dimension (no need for the older person to actively trigger the alarm) enabled by the implementation of sensors such as smoke, fire and flood detectors, among others, in the older person's home. When activated, these trigger an alert to a call centre and initiate the necessary response. So called third-generation telecare is a more advanced type of telecare service, which collect everyday activity data automatically through various sensors such as front door open/close detectors, fridge open/close detectors, pressure mats, bed/chair occupancy and electrical usage sensors; data is presented to care personnel or family carers to monitor wellbeing and assess the need for help and support. Mobile phones and GPS systems in principle enable the traditional home-based telecare services provided to older people when they are out and about. A range of mobile apps have emerged by now enabling remote monitoring of phone location by professional carers and family members to protect against falls, wandering, online scams and abuse around the clock. Also, digital technologies have come to use during the recent years for organizing self-help and volunteer support in the realm of non-medical elderly care, e. g. in the context of the time banking movement.

Digital health care solutions represent another pillar of support for independent living of older people, in particular support for dealing with the typically chronic diseases and health problems that become much more prevalent with increasing age. The extent that these can be better managed in general and that the need for hospitalisation or other forms of institutional care can be avoided or reduced is another key element of independent living for older people. In this context, the range of supports needed typically include not just clinical (medical) monitoring and intervention, but also a broader range of homecare supports that more traditionally fall within the scope of social/homecare services. Here again, with the advent of mobile technology, a variety of Apps have emerged on the market to help older people managing their health and wellbeing, e. g. when it comes to medication management.

Another field covers a range of 'domotics' technologies and applications, from standalone devices that address particular needs (such as augmentative communication devices), through various types of environmental control system to fully integrated smart homes. Such solutions are primarily directed towards home automation. Examples range from simple aids such as door intercoms to networked solutions that make it possible, for example, to have certain house functions, such as opening the window, carried out automatically according to personalised schedule.

Finally, there is a growing range of digital consumer devices and services that have the potential to support older people's well-being and independent living. For example, video calling has become a popular feature also for older consumers, e.g. by means of WhatsApp, Facebook Messenger, Skype and other online platforms. Not at least with the emergence of the COVID-19 pandemic, video telephony is increasingly seen as a means of keeping in touch with family, friends and other loved ones. In the same way, other functionalities of social networking websites like Facebook, Instagram and Twitter provide an option for keeping in

touch with family and friends and meeting people with similar interests. Social media is also appealing to caregivers, e.g. enabling them to interact with people who share their cares and concerns in online support groups. On the other hand, several barriers seem to exist that still prevent the older generation from using social media. According to recent research, privacy concerns and trust seem to rank high on the list as a major obstacle. Technical difficulties such as a lack of computer skills and heavy web design make many older people struggle. There is also fear of inappropriate content when using social media. More generally, many older people still find it difficult to grasp and understand the purpose of social networking sites.

3. Some practical examples

Digitally supported coordination of professional and non-professional support for older people with chronic conditions: The regional health service in the Spanish region of Aragon, Servicio Aragon de Salud (SALUD), operates a telemonitoring service targeted at chronic patients, with the support of the Red Cross as social service provider. In 2016 the telemonitoring service was enhanced with a view to enable coordinated care delivery by different provider organizations operating in the region, including social care and health care providers. By means of an online platform operated by a contact center, access to service user-related information is enabled for various stakeholders. The center collects queries from users and refers them to the care provider that will resolve the user's requests. The call center also operates the telemonitoring scheme. If needed, the center refers enrolled users to the relevant care provider operating in the community. The call center may also send staff from an emergency unit or volunteer supporters working with the RED Cross to the users' home. Beyond this, the Red Cross provides services such as health education, health self-management programs, accompaniment services, or transportation services.

Low-threshold video conferencing service for local citizens: In Brühl, a small city in Germany, the demand for a digital solution enabling remote training sessions had first been voiced by a local music school. More precisely, the music school wanted to continue offering group lessons via video conferencing despite a contact ban imposed due to the COVID-19 pandemic. Apart from this specific request, the municipality noticed an increasing need for enabling remote contacts among the citizens and civil society organisations more generally. The administration set up a project group which decided to utilize an Open Source video conferencing platform, Jitsi, for offering a low-threshold service locally. The local video conferencing service entitled "Palim Plaim" (with reference to a popular TV program) can be used by the citizens for their own purposes and free of charge, let it be for family meetings, language courses, club meetings or for any other purpose. The administration of the service is solely in the hands of the municipality and no other service providers were brought in. When compared with commercially available consumer platforms, acceptance seems much higher. Particularly older citizens seem to trust the city administration more than other institutions or commercial providers. Within 14 days, 2840 participants in 649 conference sessions have spoken to each other for a total of 1696 hours. According to the motto "we connect", the public administration called for donations of computers, laptops and tablets to be used by older individuals and nursing homes. Around 30 devices have yet been donated by citizens and a local company. All donated devices were first reconfigured by municipal employees and then handed over to the users. After starting the device, the "Palim Palim" App opens automatically.

Web platform for local volunteer groups: Covering a rural region located between the rivers Rhine and Lahn in Germany, the “initiative 55 plus-minus” maintains an online platform to facilitate local projects run by volunteer groups. The initiative was launched by the Protestant Deanery of St. Goarshausen located in the region, but it is open to all interested people regardless of their denomination. The observation that ageing has undergone constant change over the last decades was the starting point for developing the initiative. The underlying idea is that that local people are to be supported in networking throughout the region and in implementing their own project ideas. The participants jointly develop innovative and creative projects and brig in their competences. The initiative has also developed an App entitled „ Mein Dorf 55+” (My Village55+) inviting senior citizens in the region to network and to shape their everyday lives together. Older people with similar interests can meet via the App and start new projects. Such projects may include regular events or a one-off meeting on a current topic. Meetings with an educational approach such as livestream museum visits, language courses or computer training occur as well as events where people "just" want to have a good time together. Projects run by volunteers with a focus on digital technologies include, for example "1:1 computer help", "Internet taster courses for beginners" and an "App café" to get to know and learn to use the initiative’s own App "My village 55+". The initiative has been running for 16 years by now, starting with a simple web site. About 900 users are currently registered. The COVID-19 pandemic has clearly given a push towards digital collaboration, and video conferencing has been enabled recently. A large team of volunteers and half a full-time project position provide support when it comes to generating new project ideas and implement these under day-to-day conditions. Advise on technical problems and on the placement of search requests concerning project ideas and related offers is provided. An editorial team evaluates posted project ideas in relation to established ethics rules (e.g. no moonlighting, no matchmaking).

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