Towards a sustainable panel-based living lab approach in older adult care innovation

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Abstract

To tackle the current challenges in the care for older adults innovative solutions should be created. Herefore a panel-based living lab approach can be used. This requires a sustainable involvement of older adults and their caregivers, which is challenging. Based on the experiences in the 'Care Living Labs Flanders' program this paper will discuss how a panel based approach can be achieved. This case study was a combination of a plan evaluation and action research. A comparison between the initial plans and the steps towards a sustainable panel for the Care Living labs is provided.

Keywords: older adult care, user involvement, panel-based living lab

Introduction

Worldwide the care for older adults faces problems as budgetary restrictions and staff shortages (Ellenbecker, 2010) while the demand for care is rising (Hussein & Manthorpe, 2005). In addition most older persons indicate that they prefer to live at home and close to their familiar social environment (Buffel et al., 2014) which results in a growing pressure on informal caregivers. To tackle these challenges policy makers funded several care living labs (CLL) to create social and technical solutions that enable older adults to live longer and independently at their homes.

Essential in these CLL is the active participation of older adults, informal caregivers and professional caregivers in the creation and testing processes. In a panel-based living lab approach, they form the panel, which is the core of the lab. Nevertheless the formation of a sustainable panel with these groups is associated with several difficulties, such as getting access to the future users, striving for representativeness and keeping participants attached to a panel. In this paper possible strategies to tackle them will be discussed.

Care Living Labs Flanders

The case study used in this paper to reflect on the challenges for a panel-based living lab approach is the program 'Care Living Labs Flanders'. It is initiated by the Flemish government to tackle the challenges in the care for older adults. Currently six CLL (CareVille, InnovAGE, AIPA, AzoB, Online Buurten and LiCalab) and 23 projects are funded from 2013 to 2016. 'A project' is a string of activities creating and testing an innovation iteratively. In the first year (2013-2014) the CLL's started with the creation of their panels. Between the CLL different strategies are observed to recruit and commit their end-users, which will be discussed in this paper.

The panel-based living lab

Panel research is a term used in literature with many different connotations, most often it refers to repeatedly asking questions or profiling people over time. In social sciences and market research it is used for longitudinal survey studies on change in behaviour and attitudes resulting in larger scale results with stronger validity (e.g. Estrada, 2014). In medical practice one is experimenting with panel approaches to peruse an enhanced profiling and thus better care (e.g. Neuwirth et al, 2007).

Schuurman & De Marez (2012) defined 'panel' in panel-based living lab as a part of the "infrastructure", where users are recruited thematically and are profiled. They also studied its added value versus the more traditional living lab approach by analysing several Flemish cases. Ease of user recruitment based on specific characteristics is key. It makes implementation of a test phase for example faster: there is accurate and up to date data on potential participants to make the selection more specific, they already opted in regarding privacy and other operational aspects are also already covert, pre-activity information is available and it is easier to collect ex-post measurements because of the sustained relationship with the panel members over the different projects. But they also warn that to cherish these advantages time and effort needs to go to the recruitment and management of your panel.

Also in classic social sciences longitudinal survey studies retention of participants is a challenge. Based on social influence and relationship research Estrada et al. (2014) built a "tailored management approach", which makes sure communal norms are created that stimulate commitments to stay active as a participant during the subsequent studies. Commitment is created by working on compensation (built reciprocity by giving compensation before activities, focus on intrinsic motivation), communication (bidirectional, choice to multiple channels, personalised communication and tailored to the participants, creation of group identity), consistency (messages

predictable and recognisable over time, don't overburden, be clear on the rules, roles and values of engagement) and credibility (the organiser and the study are perceived as legitimate).

This advice is in line with the panel management experience within iMinds in domains not related to older adult care. Vervoort (2012) presented seven steps to create and maintain a panel based living lab on his team's experiences with panel management in several Flemish living lab cases (table 1).

Table 1 Steps to create and maintain a panel in living labs

Steps	Explanation and instructions
Step 1: Define the purpose of the panel	What is the role of the panel? What are the parameters of the panel? What are possible motivators for the participants?
Step 2: recruit users	Define the profile of the panel members, the recruitment channels, the communication and the project flow (who when why). Participating should be fun.
Step 3: support the panel	Organise the helpdesk. Give the living lab a face through a single point of contact (SPOC). Training and inform panel members. Set up a system to share experiences. Feedback is a two-way street.
Step 4: live the lab	Capture central data. Measuring is knowing. What is the mixture? Keep track of linking devices and services to members.
Step 5: handle privacy	Protect members' personal space. Develop a procedure to handle personal data towards stakeholders (on need to know base).
Step 6: reward users	Provide motivators to cooperate (intrinsically, financially) (offer a mixture).
Step 7: maintain the eco-system	Define an entry and exit strategy. Build the community through 'member-get-member'. Expectation management is a continuous effort over the lifetime of the panel.

This experience is used for the coaching of the build-up of the CLL in Flanders. This experience was merged with specific knowledge on older adult care to improve the coaching as it is challenging to involve the multiple actors in this sector.

The challenge of multi actors and heterogeneity

The Flemish government required to include older adults as the central target group. Today, 20% of the Flemish people are 65 years and over. This ratio will increase to 25% in 2030 and 33% in 2040 (Federal Public Service Economy, 2015). A similar demographic change occurs in Europe (European Commission, 2015). However, 'the' older person does not exist. In fact they are a heterogeneous group with diverse needs and capacities. Using solely a certain age range is misleading (European Commission and Spanish Ministry of Health and Social Affairs, 2010). Differences between older adults are characterized by their health status, degree of dependency, social network, cultural background, socio-economic status, level of citizen participation, ... These aspects change during the life course.

Including this heterogeneous group of older adults to create and test innovations for elder care is necessary. Nevertheless there are other involved actors, like informal and professional caregivers. They may experience major direct and indirect effects from the innovations that are created. For instance social innovations where older adults help each other out may lead indirect to a decreasing burden of family caregivers (Lemey et al., 2015). There are also innovations (e.g. communication technology) to support caregivers directly. In both situations family caregivers, volunteers and professional caregivers should participate in the CLL.

Informal caregivers are also a heterogeneous group. There are spouses, children or other family members and volunteers. In Europe 21% - 43% of the non-institutionalised population of 65 years of age or over receive help or support at least sometimes on an informal basis (Riedel & Kraus, 2011). In Belgium the age of informal caregivers varies between 20 and 89 years (Panel study on Belgian households, 2001). About 6% of the European population aged 50 or over provides personal care for an older relative or family member. Almost 60 % of them is female (Riedel & Kraus, 2011). Other differences can be seen in terms of employment, marital status and hours of provided care.

The group of professional caregivers is also very broad and consists of nurses, nurse-assistants, doctors, dentists, pharmacists, physiotherapists and other paramedical professionals like dieticians, occupational therapists, speech therapists, hearing-aid specialists, audiologists, podiatrists, pharmacist assistants and non-urgent medical transporters. Also social workers and other staff (e.g. hygienic staff) from healthcare institutions and nursing homes should be included as they are part of the network of older adults. These professional caregivers also differs for variables like age, experience, job motivation, …

This heterogeneity of the multiple actors is an important point of attention for CLL when building a panel.

Recruiting older adults and their caregivers as future users

This heterogeneity and the dynamic characteristics of the population of older persons and their caregivers makes their recruitment for a panel in a CLL a challenging task. Several barriers can prevent them to participate (Mody et al., 2008, McMurdo et al., 2011; Law, Russ & Connelly, 2013; Wilding et al., 2013). The most common practical barriers are high travel costs and lack of time. Health related barriers can be divided in physical and psychological problems (e.g. cognitive impairment). Older adults with health related problems need assistance to participate in a CLL. Social and cultural issues also occur frequent. These are problems with language and literacy, financial problems or different cultures. Immigrants are often more sceptical towards research.

To conquer these barriers a fine recruitment plan should be made. The identification of the target groups needs to be the starting point. Hereby inclusion and exclusion criteria should be set. These criteria should be in line with the goals of the innovation. Moreover it is important to make an overview of the sources were future users can be recruited. Community-based settings such as senior centres are effective sources to find community-dwelling older adults (Wilding et al., 2013). Care institutions and nursing homes can also be useful sources to find older adults and their caregivers. Gatekeepers, such as family, community leaders, institutional leaders and physicians, nurses, or other direct care workers can provide access to those sources, identify potential subjects and can be a decisive influence on participants' decisions to enrol (Mody et al., 2008; Wilding et al., 2013). Creation of an advisory board with these gatekeepers can be of value with information about the needs and concerns of the future users (Mody et al., 2008). During the identification of the future users it is also important to identify their motivation to participate in a CLL. Intrinsic values (loyalty, civic duty and the wish to improve the government), personal traits (education, family composition),

being responsible, trust in co-creation initiatives and the perceived abilities influence the willingness of older adults and their caregivers to participate (Elad et al., 2000; Law, Russ & Connelly, 2013; Voorberg et al., 2014).

In a next step the future users' needs to be contacted and a trust relationship must be built up (McHenry et al., 2012). Personalized outreach such as in-person contact or personalized invitations is highly effective across all populations (McHenry et al., 2012; Wilding et al., 2013). Face-to-face contact can be achieved through gatekeepers, active participants of the CLL or representatives of the CLL, like a panel manager. Both written and digital media can be used. Written folders with information about the CLL should be placed in spaces where older adults and their caregivers come along (e.g. waiting rooms for practitioners or churches). Other possibilities are an article in the local newspaper or an announcement on the local radio or television. Social media can be used to recruit younger caregivers. Explaining the goal and expectations is important during this contact, as well as convincing them of the possible benefits like access to helpful treatments, services, or diagnostic tests; social interactions with staff or other participants; recognition of one's contribution; or general altruism (Mody et al., 2008).

Method

In this case study insights from a plan evaluation and action research were used to map how the CLL's and their projects plan and organise to recruit future users for their panels.

Plan evaluation

A plan evaluation of the CLL was done through a document analysis of the submitted proposal of the CLL's and semi-structured interviews with their representatives. A content analysis on six themes (innovation goals, target population, networks, labour organisation, geographical area and technology) was performed in several steps. At first a close reading of the proposals of the CLL, submitted to the funding agency IWT, was performed. Meanwhile all information relevant for the six themes was selected. In the second phase this information was used to explore the CLL's views on innovation within the different themes. Thereafter these visions were compared with prevailing theories through deductive analysis. Data-extraction and the first step of the analysis were performed independently by two researchers. Differences were discussed with all researchers (n=5) leading to research triangulation (Denzin 1989).

Additionally 29 semi-structured interviews were conducted with the CLL's representatives to collect missing data and to verify the results (membercheck) (Hannes, 2011). The coordinators of the CLL's were contacted by email. They invited other representatives for the interview through mail, telephone or personal contact. Mostly there were two researchers to perform the interview. One researcher led the interview, while the other took notes. Interviews were recorded digitally (45-150 minutes). The interview locations were chosen by the CLL coordinators. The same method for analysis as in the documents was used for the interviews. Additional insights from the interviews were integrated into the results.

Action research coaching session

The action research was presented to the CLL as a coaching trajectory. It started in 2013 with a half day workshop where all representatives of the CLL were invited. At least the panel manager and the CLL's coordinator was expected. The four CLL's which were active at that time were represented. During this workshop presentations and Q&A was given on the background knowledge of iMinds on good practices (see Panel-Based approach). When two additional CLL's joined the CLL, an information meeting was kept for them communicating the information of the workshop.

Based on the information of the workshop each CLL received the opportunity to upgrade their plan to recruit participants for one of their first projects. A three hour coaching session with the coordinator and panel manager took place with two iMinds coaches, one with experience in panel management and one with experience in user research on digital tools for older adult care. This two-way process learned the starting CLL's how to make the advice operational for their own situation, and the iMinds coaches gained insight in the specificities of panel management in the domain of older adult care.

Results

These two methods showed different lenses on the CLL case. First, insights from the plan evaluation will be discussed, subsequently those of the action research approach.

The initial plans of the six platforms

LiCalab, AzoB and CareVille wanted to set up a stratified panel in line with the demographical composition of their regions (using age, sex, nationality and social economic status as variables). Only three CLL's (LiCalab, AIPA and CareVille) described the plan to include informal caregivers in their panel. AzoB and Online Buurten stated that they wanted to include informal caregivers during the interview. InnovAGE did not plan to include informal caregivers, but uses an organization of informal caregivers as representative for the actual informal caregivers.

Only few CLL's set a goal for the size of their panel. AzoB wanted two samples from the inhabitants of two different districts in two different urban regions. Each sample had to consist of 200 older adults. AIPA aimed at a broad and representative test population of at least 1000 older adults and professional caregivers in homecare services. The participants will all be inhabitants from semi-urban and rural regions. CareVille wanted to include 250 informal caregivers in their panel. InnovAGE stated that they have access to 8800 65+ vulnerable older adults from an urban region. However they did not write explicitly the intention to include them all in their panel.

All CLL's described inclusion criteria to recruit older adults. Only three CLL (LiCalab, AIPA and CareVille) described inclusion criteria for informal caregivers. Five CLL will include both healthy and dependent older adults. One CLL (InnovAGE) will only include frail older adults with a complex care situation. CareVille will include older adults with acute and chronical care requirements. AIPA, AZOB, LiCalab and Online Buurten described broader criteria which are not related to pathologies or care requirements. Criteria for ages varied between al CLL. All inclusion criteria are enlisted in table 2.

Table 2 Initial inclusion criteria for older adults of the CLL based on a plan evaluation

CLL	Inclusion criteria
AIPA	Every type of older adult, 50-55+, living at home, 20% socially vulnerable
LiCalab	20% 50-60, 50% 60-70, 20% 70-80, 10% 80+; 40%-45% light care requirements, 30% in need for chronical care, 15-20% high care requirements, 10-15% immigrants living at home, healthy older adults
CareVille	65+ older adults, with acute or chronical care requirements, older adults from different cultures, living at home and in residential settings, attention for deprivation
InnovAGE	Fragile older adults with complex care requirements, 60+, living at home , a service flat or in residential setting, attention for socio-economical profile
AzoB	65+, living at home or in a service flat, attention for socio economic status and origin
Online Buurten	Wide focus, 65+, healthy older adults, living at home, social vulnerable older adults

The CLL's planned to recruit older adults through various channels such as senior organisations, social housing companies, city councils or municipalities, several aid and care actors (like hospitals, nursing homes, public centre for social welfare, ...) media, personal contact, actions on events, fairs and campaigns. Table 3 provides an overview of the recruiting channels from the CLL.

Table 3 Initial recruiting channels from the CLL based on a plan evaluation

	AIPA	LiCalab	CareVille	InnovAGE	AzoB	Online Buurten
Senior organisation	x	x		x	X	
Social housing company	X					
City council or municipality	x	x	x	X		
Aid and care actors	x	x	x	x	x	X
Media	X	x		x		
Personal contact	x	x		X		
Actions on social events		x			x	
Actions on fairs and campaigns		x		x		

Methods to capture the wishes and needs of the older adults and informal caregivers varied. Most CLL planned to use a combination of online surveys, focus groups, interviews, written surveys, brainstorming, user testing. AIPA only mentioned the use of focus groups.

Plans to recruit voluntary caregivers and professional caregivers were not found in the initial documents of the CLL. However it is possible the CLL had such plans as the researcher did not check this during the interviews.

The adapted approach of the six platforms

Due to the heterogeneous group of older adults and the need of involving multiple actors a more systematic approach was needed without dropping the seven steps (see table 1) within the CLL case. Because both living labs and projects were starting up at the same time, the first two steps needed a lot of attention.

Step 1 Define the purpose of the panel: start with mapping multiple actors in the projects

Within the first step "Defining the purpose of the panel" an extensive analysis of the living lab panel was performed, based on the findings that all CLL defined their panel too closed and focused on older adults, forgetting all other involved panel members needed within a multiple actors panel.

To help them make this analysis we mapped together their users on a diagram with concentric circles with the primary user in the middle (figure 1). For example in one project the medication process of 50 residents in a nursing home will be studied and adapted. This implies not only that 50 residents need to be included, but also at least their family and professional caregivers. They are involved to give valuable feedback and are gatekeepers for access to the residents. In addition, organisations giving access to care professionals or family should not be forgotten, to provide access and give feedback. In every coaching session each CLL was made aware of the need to map the actors, to include and create a panel plan for every project.

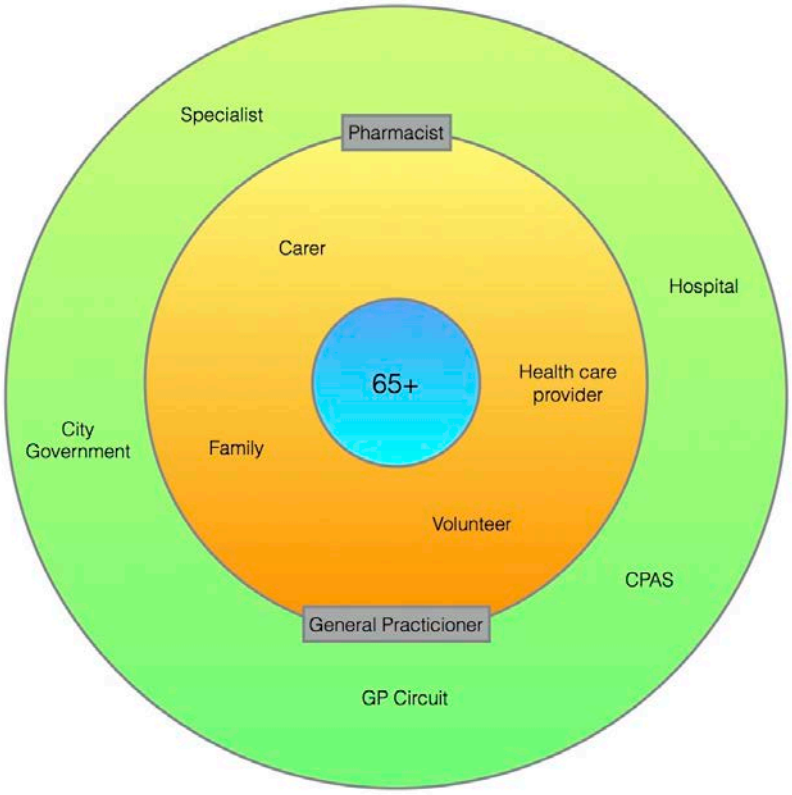

Figure 1 Example of mapping multiple actors for a project to be supported by a CLL

Step 2 Recruit users: keeping a systematic overview with a panel matrix

The heterogeneity within and between projects made it necessary to develop another tool to support the panel manager in knowing when to recruit who for what. In figure 2 an example is provided of the basic format for the same project example about the medication process and adaptation. The matrix has to be used in two steps. First there must be identified which panel members are required during which activity in each project phase by ticking to right boxes in the matrix. Next, the number of people with that profile to be recruited need to be filled in those ticked boxes. Doing this exercise for all projects helped the CLL's to determinate their communication and recruitment strategy. If vulnerable inhabitants in nursing homes are needed in the first project activity, there is less need to do a large communication campaign to recruit active older adults. This implies also that the organisational plan of the helpdesk becomes more clear and a financial plan on the budget for all panel activities can be made. It also reveals which type and how many of the needed panel members are not reached yet. For example it is classic that people of different origin and weaker socioeconomic status are less likely to be reached with classical city communication. Other activities are then planned, like house calls for example. The matrix is of course a living document, to be updated over time. The nearby activities need to be more detailed, than the ones planed in the further future. It is essential to determine the success parameters for these nearby activities up front. These parameters can also be used during the evaluation. The matrix can also be used to check if a new project request fits with the current profile of the CLL panel.

	Projectphase 1				Projectphase 2				Projectphase 3			
	Intake survey	Activity 1	Activity 2	...	Cocreation session	Activity 1	Activity 2	...	Field Trial	Activity 1	Activity 2	...
Seniors 65+												
subgroup 1												
subgroup 2												
...												
Health care provider												
subgroup 1												
subgroup 2												
...												
Carers												
Volunteers												
Familymembers												
Pharmacists												
General Practicioners												
Specialists												
Hospital employees												
Members city government												
CPAS-employees												
GP-circuit members												
.....												

Timeline Project X

Figure 2 Support and interact with the panel: use of a SPOC and feedback is a two-way street

Step 3 Support and interact with the panel: use of a SPOC and feedback is a two-way street

In the CLL's plans the importance of the function of a panel manager as a fulltime job offering a centralised approach, with a known and trusted person for the panel (SPOC), was often underestimated. The workshop introduction, the coaching and the day-to-day experience of panel management made that CLL's without this function decided that they need it and had to find budget for it. The background of people performing this function (e.g. knowledge institute, care organisation, city) is divers, and not every CLL was able to create one full time position. AIPA for example tackles this challenge by involving a call centre, which is a partner in the CLL, to monitor and triage the questions and to provide first line information on planned activities. Every platform was suggested to create a helpdesk structure. Also the creation of material to make participation as easy as possible, as well as ways to communicate feedback and results about the activities are essential ingredients. In the start-up phase the material was created to inform people about the projects on websites, leaflets, during information sessions on a broader topic, … These activities are closely related to the next step.

Step 4 Live the lab: keep your panel involved

This step targets long term involvement over different activities supporting different projects. Crucial advice at the start was to change the plans of bulk recruitment at the start, which some CLL's had. Making use of the panel matrix helped to alter these plans. Creating a brand for the CLL, overarching the different projects was another tip, to enable to group identification leading to commitment and norms of reciprocity as described in the 'Tailored management approach' (e.g. figure 3). Platforms developed a logo and a website as a starting point, but differ in communication to present the CLL to stakeholders as well as older adults. Herefore folders, videos and events were used. At the start it was difficult to communicate both the goal of the CLL and the project in one message. This resulted

in miscommunication on the expectations to the participants. Most opted for a double strategy communicating in general about the CLL and specific about the projects to the people involved, informing them on the fact that this is part of a larger initiative. The heterogeneous group of older adults makes it not possible to take the use of internet and social media for granted. Although some platforms like Online Buurten, Licalab, AzoB and CareVille plan to use digital tools to communicate with their panel members, which is a project endeavour in itself, but opens up opportunities for the future tailored communication.

Figure 3 Example of visual and branding of a CLL (Careville)

Step 5 handle privacy: beyond privacy when discussing care related subjects

In every living lab handling the personal information of participants carefully is the key to build a trust relationship. It is important to offer information about the reason to collect information, the person who can see and use it and the purpose it is required for. The panel manager was suggested to be the key person to both inform and decide what the need to know basis of information is of every request made. Understandable informed consents for all participants, information sharing agreements with partners accessing this data are essential, as well as filling the platform activities with the Belgian privacy commission. Some care institutions, as gatekeepers, demanded extra precaution with their clients. The caregiver was then the contact person for the panel, serving as a trusted person, collecting the data for the project, without personal information. All subsequent contacts in the panel with this client have to go through the trusted caregiver. This request implied adaptations in the initial panel management approach of this CLL. In Before the coaching sessions and workshop on panel management took place, a dedicated workshop on privacy and the need for an ethical committee was organised. In every project in this domain one needs to reflect on the need to file for an approval of a medical ethics committee. Not every project innovating in the domain of care is required to do that, but it is an additional point of attention.

Step 6 reward users: recognition and fun more important than payment

In all living lab projects, and also the CLL projects the experience is that feedback is more important than presents or payment (e.g. Logghe et al., 2014). Today the first results and practical examples of the activities that can help to motivate current members as well as recruit new participants for future activities become visible (e.g. co-creation movie https://youtu.be/88IhYOAeriY). Providing a museum visit with a field test was an approach AIPA planned. Licalab organised two days to hear and celebrate their panel members. Three hundred and fifty people took part and 106 questions and suggestions were made. The event was celebrated on different media channels (twitter, their website and the local radio station).

Step 7 Maintain the eco-system: working with older adults, needs more follow up and attention to exit strategies

To let the panel grow over time, the advice is to create an environment where it is easy for current members to suggest new members, to pamper panel ambassadors, give people a central place where information about several projects can be shared (e.g. a website, a newsletter, …). It is important to realize that people can also leave the panel. Understanding why they do not wish to participate further in the CLL is crucial. Older adults can experience a lot of life changing events (e.g. illness, increased dependencies, loss of loved ones). These life events may change their commitment to the community, or may lead to the perception that activities are not appropriate for their condition. CLL should look for adaptations in the format of the activity to improve the participation of frailer older adults. Another confronting lesson learned early in the creation of the panel is that panel members pass away. Specific attention should be paid to communicate in the right way to relatives.

Conclusion

The plan evaluation revealed different plans to form a representative panel of older adults. However few CLL's had a strategy to include informal and professional caregivers. Nevertheless the innovations developed in the CLL's will also affect them. Thus, it important to define the target population clearly before the start of the recruitment and to set inclusion and exclusion criteria from the beginning. Most CLL planned a personalized approach for the recruitment, which proved to be successful in earlier research (McHenry et al., 2012; Wilding et al., 2013). Few CLL's had thought about a way to engage the end-users to their panel.

The seven step approach used in other domains of panel-based living labs is a valuable guideline for the creation of a panel-based living lab in the domain of innovation in older adult care. Because of the multiple actors a more systematic approach with the concentric circles and a panel matrix was designed, showing the assets and needs while growing as a panel over different projects. The essential function of a panel manager was reaffirmed. Extra attention within this domain should be paid to the existing care relations between care organisations and their clients, the need for filing of the project to the medical ethics committee and the delicate follow up of exit of panel members.

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Authors biography

Juul Lemey works as a scientific researcher in the Care Living Lab Flanders project. He has a master’s degree in Nursing and took further lessons in Innovation Management. Currently he is also lecturer (research methodology) in the department of Bachelor in Nursing at the Artevelde University College Ghent in Belgium. Alongside he is also active in research and education projects about communication technology for older adults and wound care. Finally he is also member of a research group on innovations in care. Picture at https://twitter.com/jlemey

Charlotte Brys received the MSc in the Clinical Psychology in 2012 and the MSc in the Gerontology in 2013, both at the Vrije Universiteit Brussel. After one year working as ‘reference person dementia’ in two nursing homes, she started as doctoral researcher at the Vrije Universiteit Brussel. She is a full-time member of the Scientific Consortium (KIO) at the CLL Flanders, from the Department Gerontology at the Vrije Universiteit Brussel. In addition, she is doing a PhD about the transition from mild cognitive impairment to dementia. Picture at https://www.linkedin.com/pub/charlotte-brys/54/a03/819

Koen Vervoort is panel management expert & support Living Labs @iMinds. He uses his experience (internally and externally) to perform panel management in complex Living Lab cases (Flanders-Europe), to pass on iMinds experience around panel management by hosting workshops, to benchmark iMinds Living Labs internal processes and approaches within the entire Living Lab community and beyond, to organize all fieldwork for Digimeter (www.digimeter.be) and to watch over all internal survey quality. Prior to this he was administrative ops @ i-City, the first Living Lab in Flanders. From 1994 until 2006 he performed and acquired insights about frontline management @ Mc Donald’s, Nike & IKEA. Picture at https://media.licdn.com/media/AAEAAQAAAAAAAAI0AAAAJGZmNzRlNWRhLTBhNTAtNDc3Yy1hODJkLWUxOTQ1YzM0YzZiZQ.jpg

Patricia De Vriendt (occupational therapist (BSc), gerontologist (MSc, PhD)) is a part-time professor (20%) at the Vrije Universiteit Brussel. She combines this job with a position at the Artevelde University College (75%), where she is head of a research group on innovations in care (http://www.arteveldehogeschool.be/onderzoeks-en-dienstverleningscentra/zorginnovatie). She is member of the Gerontology (www.vub.ac.be/GERO) and Frailty in Ageing Research (www.vub.ac.be/FRIA) Department. She is also a Visiting Professor at several universities. She is member of the Gerontopole Brussels, an Interdisciplinary Research Program consisting of 10 research groups @ VUB running a collaborative research program on Active and Healthy Ageing. She is also member of the research alliance group ‘Research in Geriatrics and Gerontology- REGG’ of the

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An Jacobs holds a PhD in sociology since 2005 (Ghent University). At the research group iMinds SMIT she coordinates the digital health projects of this research team. She has both expertise on adoption and appropriation of new technologies from a professional and end-consumer point of view. At the University of Brussels she teaches qualitative research methods and coordinate the master dissertation in Communication Science. At iMinds she has participated in and coordinated various European and Flemish projects and work packages with a focus on digital technologies development, use and appropriation in health and wellbeing. Currently she is also part as methodologist in the program coordination by iMinds of the Care Living Labs in Flanders (Belgium) http://carelivinglabs.eu Picture at http://smit.vub.ac.be/person/20/An_Jacobs