H2020-SC6-CO-CREATION-2016-2017 CO-CREATION FOR GROWTH AND INCLUSION
Grant Agreement nº 769975

SoCaTel

A multi-stakeholder co-creation platform for better access to Long-Term Care services

Start date of project: 01/12/2017
Duration: 36 months

Deliverable: D.1.3
Co-creation Manual

By FONTYS

Due date of deliverable: 28/02/2018
Actual submission date: 28/02/2018

Responsible WP: WP1
WP responsible partner: FONTYS
Deliverable responsible partner: URV
Revision: vs 1.0

Dissemination level		
PU	Public	x
CO	Confidential, only for members of the consortium (including the Commission Services)	
CI	Classified, information as referred to in Commission Decision 2001/844/EC	

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DOCUMENT CONTROL

Document version	Date	Change
vs 1.0	19/02/2018	First complete version

VALIDATION

Reviewers		Validation date
Coordinator	Blanca Deusdad	20/02/2018

DOCUMENT DATA

Keywords	SoCaTel, Co-creation manual
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Delivery date	28/02/2018

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SOCATEL

CO-CREATION MANUAL

| **February 2018**| **Fontys University of applied health sciences**

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2 ABSTRACT

This manual is based on the expertise of Fontys university Eindhoven and initial experiences from co-creation activities within the EU-funded SoCaTel project (2017-2020) (H2020-SC6-CO-CREATION-2016-2017), and is aimed to be further developed based on the co-creation experiences in 4 countries, involving service users, government authorities, universities and the private sector: Spain, Finland, Hungary and Ireland, thus covering different welfare state models and addressing different challenges and cultural settings. The interim version of this manual is primarily for consortium partners in the second phase Co-creation field sites. The final manual (due in 2020) will be a resource for practitioners in local and regional government, as well as NGOs, who provide services to older citizens and who intent to collaborate with them to co-create solutions for improving their service delivery.

This manual is aimed to inspire and inform about the different ways of practicing co-creation throughout different phases of the design process. The manual is written for the reader to get acquainted with the mindset, processes and tools for co-creation. However, we would strongly recommend making use of the literature and sources provided in this manual, to get a deeper understanding of the methodologies.

SoCaTel, addresses the challenge of developing relevant and meaningful digital public services with and for older citizens. In so doing, the project takes a situated-practice based approach when defining, designing and implementing services to older citizens. SoCaTel puts forward solid frameworks for co-creation, impact assessment, ethics and change management, promoting a smooth introduction of co-creation approaches into public administration. The outputs of the project will be a). the SoCaTel platform, which will allow service providers to provide services for their clients as effective and relevant as possible and b). services that are co-created for and through the SoCaTel platform.

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We define co-creation as an act of creative collaboration between stakeholder groups with shared goals, in which value is created. In the SoCaTel project specifically, we define co-creation as a collaborative process between stakeholder groups, bringing in both empirical knowledge and professional expertise, to generate knowledge and develop meaningful digital public services that are tailored to the needs of both the aging population and providers of these services.

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3 ABOUT THIS MANUAL

This interim manual is based on the initial experiences from co-creation activities within the EU-funded SoCaTel project (2017-2020), as well as prior experiences with co-creation in projects involving the aging population, like SIA-RAAK SCHAT and SIA VETO. During our first project months, we developed, implemented and evaluated initial co-creation activities in the Netherlands.

The SoCaTel consortium has undertaken a preparatory study to pre-select the specific needs within the context of social services to be addressed by our pilots; such as better coordination among professionals and end-users; simplification of paperwork, so as to make a reduction in personnel costs for bureaucratic tasks, instead of spending more time in giving a better social intervention (casework) with users/patients, giving support and following up cases. SoCaTel will also shorten all processes: from application to service delivering. Consequently, this will decrease waiting lists for citizens eligible for benefits. Moreover, it will integrate care not only vertical but also horizontal involving in the process a wide range of stakeholders

This manual aims to present the findings from the first two pilot studies in the Netherlands in order to document and facilitate the knowledge transfer between the field sites. In two years' time, we will publish a final version that will be based on four studies (in Finland, Hungary, Spain and Ireland).

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Figure 1: SoCaTel consortium - a team of 13 partners coming from 7 member states: Spain, Finland, Hungary, Ireland, Netherlands, Cyprus and France. 5 of the partners represent leading academic institutes, 3 represent public authorities, 2 represent SMEs, 1 represents a large industrial enterprise, 1 is a foundation and 1 is an association.

3.1 DEFINING CO-CREATION

We define co-creation as an act of creative collaboration between stakeholder groups with shared goals, in which value is created. In the SoCaTel project specifically, we define co-creation as a collaborative process between stakeholder groups, bringing in both empirical knowledge and professional expertise, to generate knowledge and develop meaningful digital public services that are tailored to the needs of both the aging population and providers of these services.

3.2 WHO IS THIS MANUAL AIMED AT?

The interim version of this manual is primarily for consortium partners in the second phase co-creation field sites (M15-M18). SoCaTel will be piloted in 4 countries, involving service users, government authorities, universities and the private sector: Spain, Finland, Hungary and Ireland, thus covering different welfare state models and addressing different challenges and cultural settings. The final guidebook (due in December 2020) will be a resource for practitioners

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in local and regional government, as well as NGOs, who provide services to older citizens and who intend to collaborate with them to co-create solutions for improving their service delivery.

3.3 HOW TO USE THIS MANUAL?

This manual provides guidance as starting point for professionals in care and welfare to use in co-creation sessions. It provides care and welfare professionals with good insight and practical examples on how to co-create with older citizens as well as other healthcare professionals and NGOs.

The manual is deliberately kept concise in an effort to convey the essentials of practicing co-creation. However, we do recommend readers and aspiring practitioners of co-creation to immerse themselves in the numerous references, websites and books recommended in this manual.

We propose that PDOCA (plan–do–observe-check–adjust)- cycle (see figure 2) is followed in all the co-creation activities or interventions in order to learn from action (Tague (2005). It is an iterative five-step management method used for the control and continual improvement of processes and products.

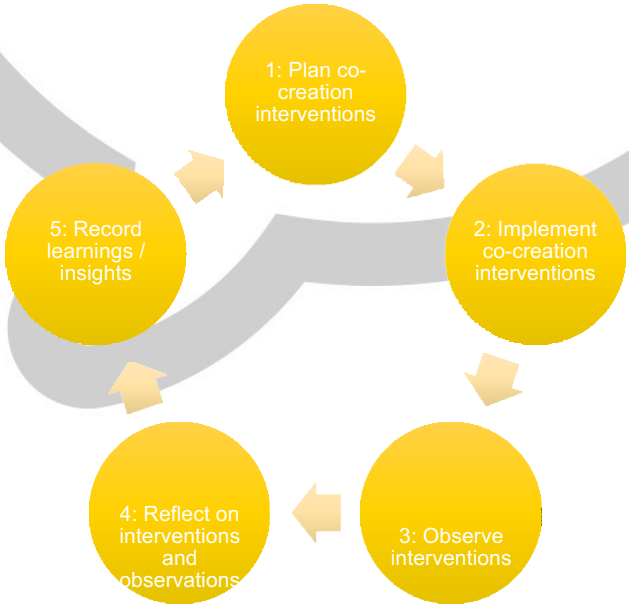

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Figure 2

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IN DESCRIBING THE FIVE STEPS WE HAVE MADE WELCOME USE OF THE CONCEPT VERSION OF THE COCREATION MANUAL DEVELOPED WITHIN THE HORIZON 2020 EUROAGEING PROJECT (2015).

STEP 1: PDOCA CYCLE CO-CREATION INTERVENTIONS.

To plan your interventions first read the manual and other resources available to you. This manual contains a lot of practical advice and tips that can be considered as you think through and plan your interventions. It is important to have a very clear idea of what you want to achieve with every intervention—for example, when you set up a project group or undertake a workshop. It might be useful to discuss the event with the project group (and other stakeholders, if possible) and compile notes for you to be able to recall at some later date.

STEP 2: IMPLEMENT CO-CREATION INTERVENTIONS.

Be careful to implement your plan but also stay open for the possibility of having to adapt it as new information and insights emerge during the co-creation intervention, as it is being implemented. A key element of reflective practice is to stay open, observe, and adapt when appropriate.

STEP 3: OBSERVE INTERVENTIONS.

Observation is the key to learning. In order to learn we need to attend carefully to what is happening when we conduct co-creation activities. For example, when we do a workshop we should not only do all the activities, but also should try and capture what is happening, and try and imagine why some things are working, and others not. Why is this particular group working well together and another is not? If it is obvious, correct the situation, if possible and make note of it. Thus, as we do these activities we continually calibrate them for our own situation, whilst using the guidelines and tips to support such calibration.

STEP 4: REFLECT ON INTERVENTIONS AND OBSERVATIONS.

This step can take place whilst the intervention is being implemented (as suggested above) and afterwards. It is important afterwards to spend some time to consider the process and outcomes of the intervention, especially in terms of what worked and what did not work. This reflection can be individual but it is

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better to do it as a project group. It would also be very valuable to include all stakeholders in such reflections. What worked? What did not work? Why did it not work? What should we do differently? This would be a good time to consult this guidebook and other resources of co-creation to help you answer these questions. In this guidebook, there are a number of templates with questions to help guide the reflection and learning process.

STEP 5: RECORD LEARNINGS AND INSIGHTS.

Be sure to carefully record all learnings and insights. Both those that emerged during the implementation of the co-creation intervention (what we call “reflection in action”), and those that emerged afterwards when you reflected on the intervention (“reflection after action”). In the manual, there are a number of templates with questions to help guide the reflection and learning process. Use the previous mentioned templates to record your own resulting insights and add them to the guidebook. This will help you to plan your future interventions.

To summarise: Central to this manual is the idea of reflective practice. This means that this guidebook offers starting points, guidance and suggestions for you to start your practice of co-creation. However, it is necessary that you follow an action-learning process (outlined above) to make sure that you are able to adapt or calibrate the process in ways that are appropriate to your specific situation. Only then will co-creation have the potential to be transformative.

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4 CO-CREATION: WHY, HOW, WHAT?

This chapter will describe how co-creation is understood from a designer and practitioner perspective. It will give some background on co-creation, discuss its basic principles and end with a proposition for the co-creation activities in the design process in the SoCaTel project.

4.1 FROM USER-CENTERED DESIGN TO PARTICIPATORY DESIGN

Co-creation is a methodology or mindset that is both used in business ventures and in design project. Within the field of design, the action of co-creation within the design process is often referred to as participatory design. Participatory design is a movement in the field of design that has become more evident over the course of the past few decades. In traditional (user-centred) design processes, there is a clear division between the roles of the designer and the end-user within the project. The designer is the expert, and the user usually merely a subject of research. The user, in these processes, has a very passive and responsive role. The designer is in charge. These design processes often lead to products and services that are tailored to the wishes of the end-user, but not necessarily fit the demand. Nowadays design is not as much about designing desirable products or services, as it is about designing pleasant, meaningful experiences through interaction with products and/or services.

Participatory design processes have been developing since the 1970's, a movement that started in Nordic countries (Spinuzzi, 2004) (Sanders & Stappers, 2008). It encompasses an approach to design and user-research that breaks away from the traditional designer-user relationship. In the field of participatory design, the designer or design-researcher acknowledges the empirical expertise of the user on the given subject. The user is therefore participating in the process as an active co-creator, rather than as a subject of research.

Participatory design is a field that is specific to the domain of design, whereas co-creation shares its origins with the domain of business as well. Just as in the domain of design, businesses operators came to the insight that working together

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with the customer was more valuable than working for the customer only. Rather than solemnly tending to the mass-market, businesses started catering to the needs of smaller, even individual, customer groups. Prahalad and Ramaswamy (Prahalad & Ramaswamy, 2004) are usually given credit for bringing the practice of co-creation to the domain of business

This origin from the notion of co-creation from two different domains exposes an important nuance. From the perspective of a designer, the co-creators are the users of the end product or service, from a business perspective the co-creator is the customer. If you purely look at semantics, a user is somebody who uses something, a customer is somebody who makes a purchase to use something. In the SoCaTel project, a third indication may be more appropriate to indicate the end user/potential customer of the SoCaTel platform, namely client.

4.2 THE CO-CREATION MINDSET

Co-creation is about creating value through collaborating on shared challenges (Lu et al., 2017). From an empirical perspective, customers are the experts on their experiences –not the designers, researchers or engineers. By mapping out their desired experiences with them, we can create meaningful future experiences (Philips, 2014).

Whereas traditional user-centred design processes follows the path of first researching the end user, then designing an intervention, and then testing the intervention with the end user to evaluate it, co-creation is about having an interactive process, bouncing ideas off of each other and stimulating the customer to take the drivers' seat.

It is essential, as a practitioner of co-creation, to keep an open mind towards the outcomes of your project. This also requires the ability to think outside the box as the facilitator of co-creation. Sometimes this also requires taking sidesteps from the beaten tracks and outside of your comfort zone. Instead of exploring outside

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of your frame of reference, you should abandon this frame of reference altogether.

For example, you want to improve an online service that requires the user to fill out long, completed application forms. With a traditional design-research approach one would perhaps decide to interview the user about what can be improved about the form and improve on those parts. With a co-creation approach would more likely ask the question “how would you like to get access to this service” and invite the user to tell about what they need for a proper access. This approach would be more likely to expose latent needs and lead to more radical innovation of the service.

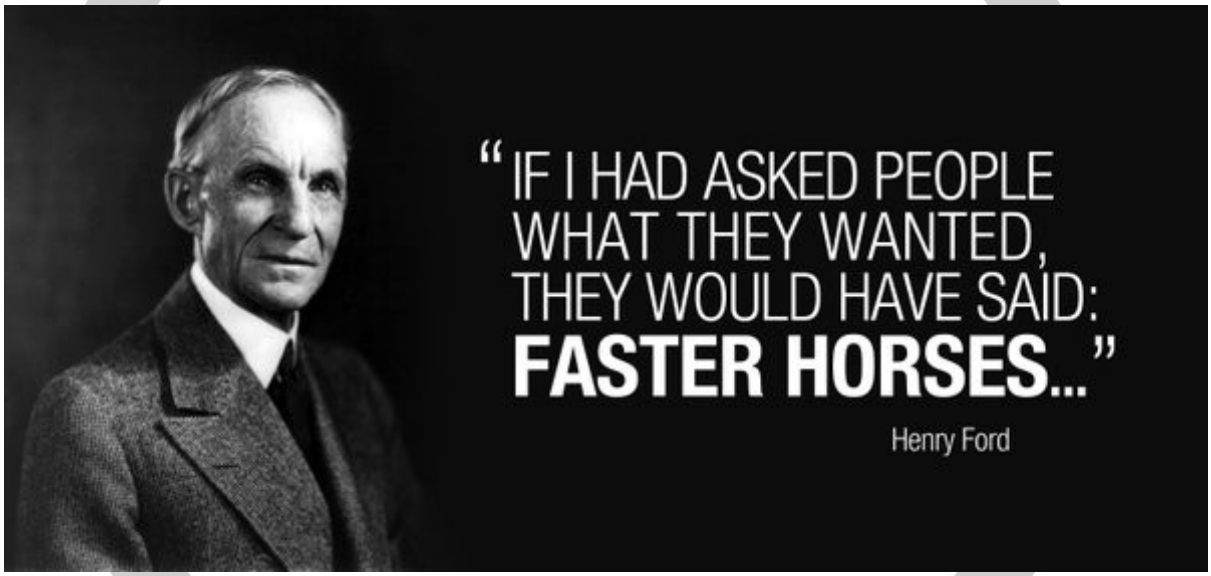

Figure 3: Quote about radical innovation [i]

There is no actual evidence that Henry Ford actually ever said this quote. In matter of fact, he probably didn’t. However, it is a quote that over the past few years became illustrative in conversations on the topic of creativity and innovation. It is a metaphor for user research: It is not about finding out what your client wants, it is about understanding what they really need. Namely, getting from point A to point B quicker. Thinking within the frame of reference and solemnly improving on systems and services in place, will therefore never spark true innovation.

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4.3 CREATIVITY

Creativity is not a skill exclusive to artists, designers and (amateur) crafters. Four levels of creativity exist, namely doing, adapting, making and creating (Sanders & Stappers, 2008). It is dependent on the individual how creative they are, but everybody is able to think in a creative way, and this is evident in everyday life practices (Wakkary & Meastri, 2007). People are able to accurate redesign everyday objects, including technology, to their own needs. This resourcefulness, and ability to be creative, can be harvested in co-creation sessions by using the right methods, tools and moderation (Oude Weernink, Sweegers, Relou, van der Zijpp, & van Hoof, 2017) (Sanders & Stappers, 2012). In co-creation sessions, the combination between creative thinking, experiences and expertise in different fields leads to innovation and the creation of value for multiple stakeholder groups. This also gives design-researchers a new role in the design process, rather than acting as a translator between the user and the design, they act as a facilitator for the user in the design process. This also implies that there are different ways of facilitation required for people in different levels in the creative process. (Sanders & Stappers, 2008).

AN ESSENTIAL ASPECT OF FACILITATING CO-CREATION IS THE STRONG BELIEVE THAT EVERYBODY IS CREATIVE.

You really have to allow the participants put on designer glasses and stimulate them to think outside the box. This can be done by handing them proper tools, methods and materials, but also by giving them the confidence in their creativity.

4.4 CO-CREATION IN DIFFERENT PARTS OF THE PROCESS

Frog (Frog, 2014) defines three stages in a participatory design process: 1. Understand needs, 2. Create the design, 3. Refine the design. The first, and most important part, of a co-creation process is to understand the needs of the end user of the product. This is a diverging process. Understanding needs is defined as the fuzzy front-end of the design process (Sanders & Stappers, 2008). In this

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phase the outcome of the project may not be entirely clear yet and the focus lies on finding opportunities and (latent) needs of the end user of the to-be-designed end result.

Initially, in the field of design, co-creation took part in the first part of the process mainly: the fuzzy front end and idea generation (Sanders & Stappers, 2008). Nowadays, the users generally stay involved in the entire design process, including decision making, creating the design and refining the design. It can be helpful to have the same individuals involved throughout the process. This creates an initial base of support within the stakeholder group.

We defined the co-creation process as can be seen in Figure 4. The development of the SoCaTel platform and its services is an iterative, ongoing design and development process. In the different stages of this process, co-creation activities can take place, this will be described later on in chapter 7.

There are two main streams of input for this process. On the one hand there is the offline input through user and contextual research. This also encompasses the 'fuzzy front end' of the design process, as explained before. On the other hand, there is online input. In this stream (open) data is collected, first from external sources, later through the SoCaTel platform.

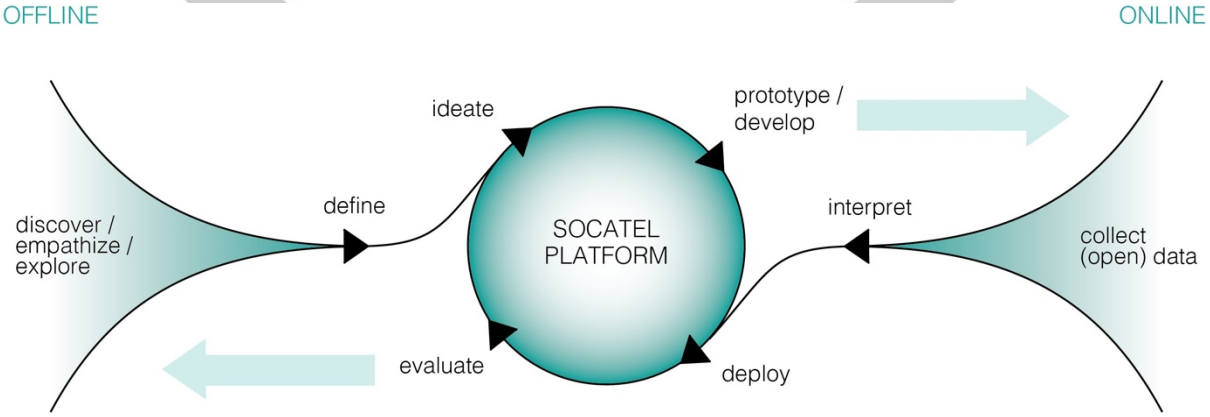

Figure 4: Co-creation activities in different phases of the SoCaTel Design process

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5 (SERVICE) DESIGN THINKING

Co-creation is a much-used approach for service design. Service design can basically encompass two different things. It can either refer to refining an existing service, making it more tailored towards the desires of the customer, or developing new (incrementally innovative) services. In this latter case it usually concerns services that are disruptive in their markets (e.g. AirBNB).

Service design is a discipline in the field of design that focuses on the development and improvement of services. Like in co-creation, in service design a large variety of definitions are available about its meaning. In general, service design focuses on the improvement of service experiences of a client, or on the development of an innovative and better service to reach the same goal (Schneider & Stickdorn, 2010).

The essence of service design is in understanding the needs of the client. This can be in different domains of interest: customer behaviour, social reference framework, the skills set, motives, and so on. Some of these aspects are measurable and convertible into data, like online shopping behaviour. Other aspects require qualitative research. Service designers almost always use co-creation methodologies to research their target group. In co-creation, the end-user is recognised as an expert in his own experiences, and service design is focused to improve these experiences. Therefore, many techniques are used in service design to document experiences and think about improvement of these experiences in close collaboration with the end-user.

Next to serving the customer needs, a second objective in service design is to design processes in the service provider more efficiently and better tailored to the core activities. So in general, service design provides benefits for both client and provider of the service.

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5.1 HOLISTIC PERSPECTIVE

To actually design an enhanced experience, the designer must take a holistic perspective at both the end user and the service itself. As an example: Insecurity can play an important role when older interact with digital services. Even if the interface is designed as user-friendly as possible, it may be that older people do not optimally utilize this service because they are hesitant to fill out application forms independently. That is why attention should be paid to the surroundings of the target group: Do they have family or friends who can help, and if so, how do we ensure that the target group contacts these people at the right time? Or should there be a phone service in place as well?

Also within the development of a service itself a holistic perspective must be used. It is important to design the service itself, but also how an older person comes into contact with the service, and what happens after the service has ended. These are the pre- and post-service phases. Within all of these phases so-called touchpoints exist. A touchpoint is any moment when a client of a service comes into contact with the service or service provider. This can be interactive moments, but also one-directional communication (for example, seeing a commercial of the service provider). For a client to have a great experience with the service provider, it is essential that the recipient of the service at every touchpoint has a pleasant, cohesive experience. This has everything to do with providing the user with the right information at the right time.

5.2 LEAN & ITERATIVE

All design processes, so also co-creation and service design processes, are iterative. Iterative means that it is worked in cycles, the output of one iteration is input for the next. This ensures that collecting information (by means of testing or evaluation) alternates with design activities (idea generation and prototyping). In this way, the final draft becomes fuller and further developed and more is learned about the subject and the context.

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Lean means that the end product is not fully developed at once, but in short iterations. Lean is based on the notion of the needs of the end user, and the input of the end-user at each iteration. The goal of lean is to minimize wasting resources (both material and man hours) to products or activities that people don't want to. Lean processes must ensure that more value is created by less work.

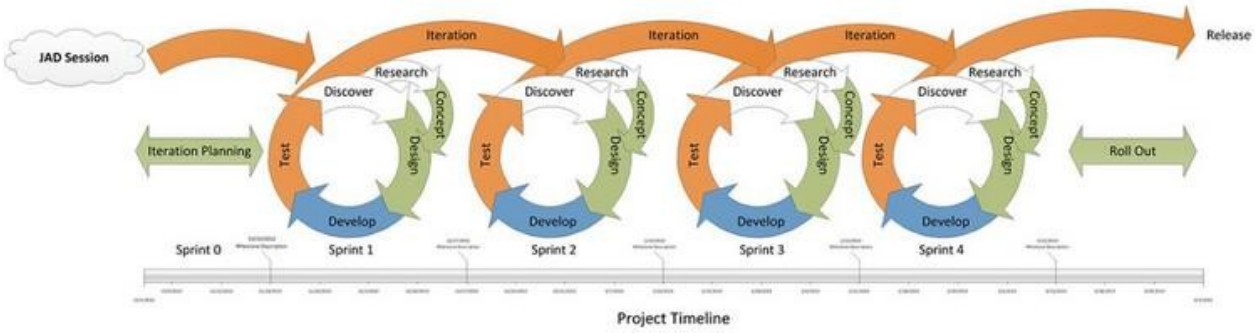

Figure 5: Visual representation of an iterative process[ii]

5.3 TOUCHPOINTS

As mentioned above, services can reduced to a series of touchpoints based on the perspective of the end-user (Schneider & Stickdorm, 2010). Touchpoints represent the moment in which the client of the service gets in contact with the service or the service provider. Touchpoints can be visualised within the medium where they occur, for example online, maybe even from a specific website, in a shop, or in contact with a person (see Figure 6: Example of visualizing touchpoints. Visualizing these touchpoints within an existing service is very valuable. It gives insight in the points where good services are provide and where there is room for improvement. Furthermore, touchpoints are often visualised on a timeline, but the order can vary between different clients. Some clients like to digitally find all information themselves, while another person prefers to have phone contact or even go to a physical location of the service provider. Especially the ability to offer services in such a way that they provide great experiences for individual clients with different needs is what makes it a good service. This

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manual describes different co-creation tools to evaluate and develop services, in these tools touchpoints are often used.

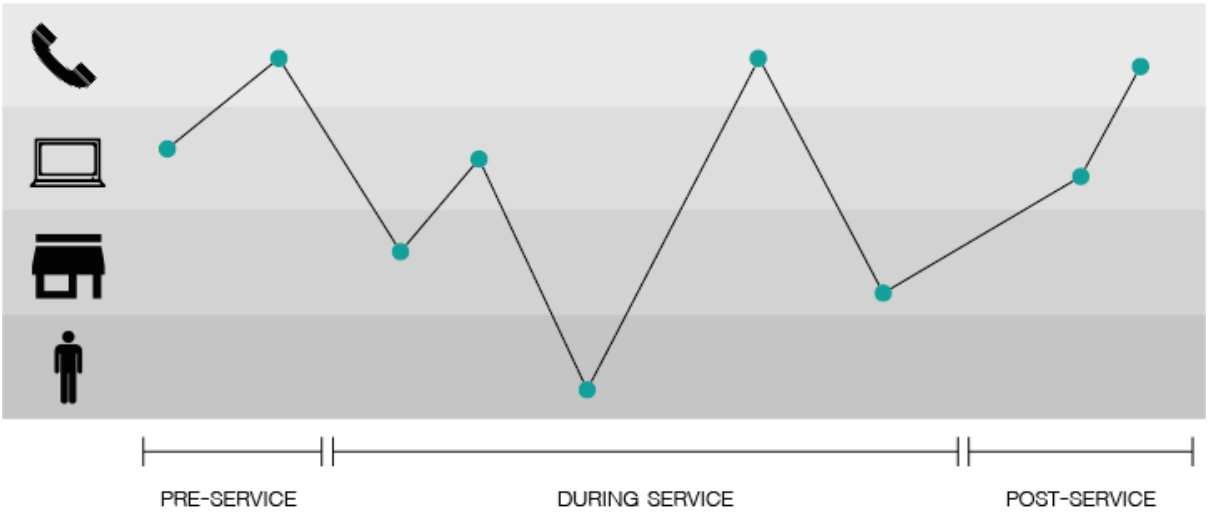

Figure 6: Example of visualizing touchpoints

6 CO-CREATION IN DIFFERENT PARTS OF THE DESIGN PROCESS

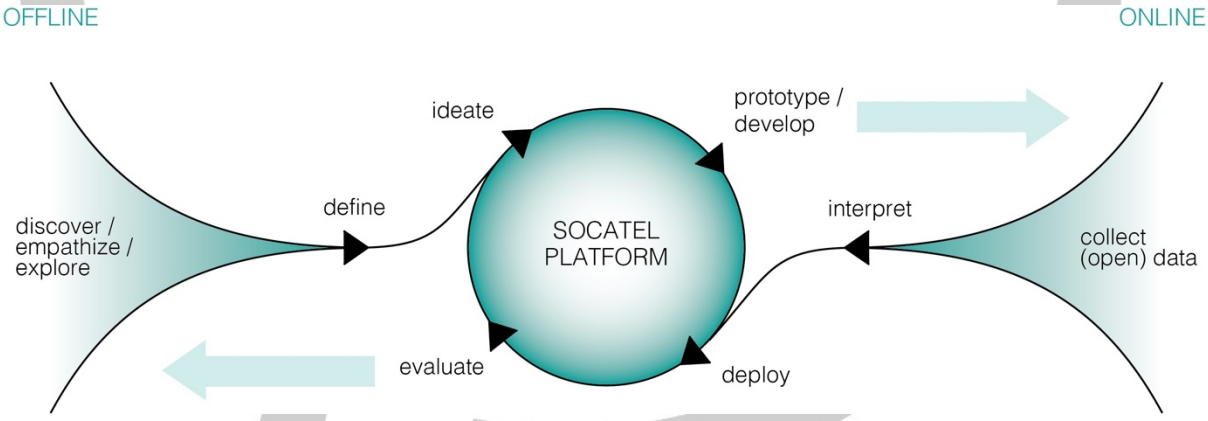

Figure 7: The SoCaTel co-creation process

Figure 7: The SoCaTel co-creation process shows the design process in SoCaTel where co-creation activities take place (see Figure 7). This is an ongoing, iterative process. Below, all the different phases in this process are further elaborated with regards to co-creation activities. Also tools in the overview of co-creation tools at the end of the manual will refer back to these different phases.

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6.1 EMPATHISE / EXPLORE / DISCOVER

In the front end of the design process, it is important to truly understand the problem at hand, as well as the underlying needs of the end-user or customer. In this phase, the end-user has to be actively involved. This is a diverging process, with the goal to collect as much information as possible and get a good understanding of the end-user. Notice opportunities and gain fresh insights in the topic.

This phase is essential in the co-creation process, because in this stage the relevance of the design for the target group is established. The emphasis at this stage is situated at the front of the design process, but during the iterations, it is important to go back to this phase on a regular basis to see how the SoCaTel platform can be supplemented based on new insights, possibilities and needs.

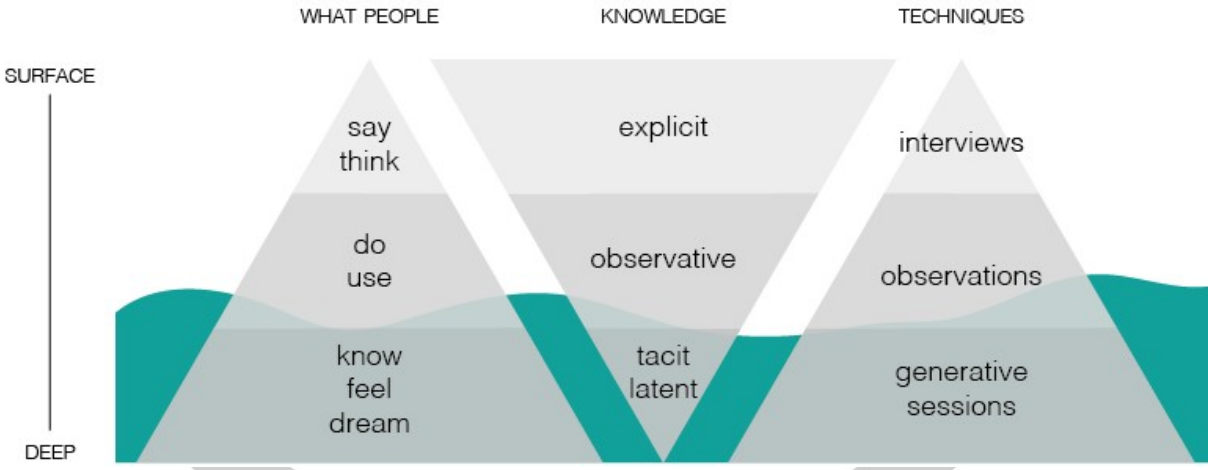

Figure 8: Different types of knowledge. Freely adapted from Sanders & Stappers' Convivial Toolbox.[iii]

6.1.1 LATENT NEEDS

Especially in the beginning of the process, it is important to gather as much information as possible. This can be done both from existing sources and the different stakeholders of the project. The type of information that you pick up from the target group can really depend on the tools you use. As shown in Figure 8:

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Different types of knowledge. Freely adapted from Sanders & Stappers' Convivial Toolbox different types of knowledge can be gathered from the target groups. This can be explicit or observable knowledge, these are things people say, think and do, but it can also be latent knowledge; things that people know, feel or dream, but they are not directly aware of. According to (Sanders & Stappers, 2012) these underlying needs can be retrieved by generative techniques. Generative means making, for example making collages or prototypes. There are a number of reasons why generative techniques work well in this phase of the process. First of all, participants have time to think and reflect during the act of making. Contrary, during an interview a quick answer is often expected. Secondly, the act of making results in a physical artefact about which the participant can tell a story and the researcher can ask questions about it. Finally, making stuff by hand will evoke a creative flow in the participant. So, it can be expected that the participant is able to deal with the challenge at hand in a more creative way.

6.1.2 CREATE EMPATHY AND DISCOVER SHARED CHALLENGES

In mixed co-creation sessions, where multiple stakeholders come together to create value, it is of great importance that these stakeholders can look from each other's perspective and create empathy for one another (Steenbakkers et al., 2015). The developer should be able to look at the development of the platform from the perspective of the end-user, and the end-user should understand some of the technological abilities, and so on. In this phase, also shared challenges can be discovered. Take time for this phase, and make a plan of how to achieve this in the context you are working in.

6.2 DEFINE

After the exploration phase, it is important to converge and to define what the most important opportunities, challenges and needs are to take into the design process. These can be used as a starting point for the ideation phase. These

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three phases can be ran through by the design team over a longer time, but they can happen within one co-creation session. Defining problems and opportunities can be done by the (main) researchers in the project, as well as together with the participants in the session. In the latter case, it is possible for you as a session leader/researcher to discover if the insights that you retrieved from the session correspond with those of the session's participants. To do so, write down what is being said and summarise and reflect on it together with the participants on a regular basis during your co-creation activity. Define and decide on the most important insight together with the participants. This will save you time in the analysis, and will form input for a new creative session to develop ideas.

It is also possible to submit the material to an extensive analysis after the session. It is important to include both the artefacts, brainstorms, etcetera, in the analysis, but also the transcribed statements of the participants. This provides a comprehensive dataset that can be analysed, depending on the output that you intended with the session: direct knowledge or input for the design process.

In the define phase also a decision making process takes place to distil the most fruitful opportunities and challenges. Furthermore, insights and information should be translated to usable input for the design process. This can be done in a lot of different ways, like making persona's and scenario's (please refer to the overview of co-creation tools).

6.3 IDEATE

The Ideate phase is a divergence phase, in which it is important to work with an open mind to the available information, data or design. Depending on the current phase of the project, several ways to diverge in the Ideate phase exist. In the beginning of the process brainstorming sessions will be most likely take part a lot, but also at the time a prototype of the platform is created, it is important that this phase reoccurs at each iteration as there is always something to improve. In later stages of the project the phase may also consist of ideate hackathons,

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where external experts release their creativity on the developed platform. It is great to involve all available stakeholders in this phase of the process, in order to develop ideas from different perspectives and standpoints (Van Hoof et al. 2014).

6.4 PROTOTYPE / DEVELOP

In the iterative process the development of prototypes is essential. Both the prototype of the end product, as prototypes of services and paper prototypes of the platform. The physical advantage of concepts ensures their testability or possibility to evaluate. A distinction can be made between high-fidelity and low-fidelity prototypes. High-fidelity prototypes are prototypes that are almost finished, and reach the level of the end product. Often, with this the end product can be tested in detail. Low-fidelity prototypes are quickly and cheap to make prototypes, to quickly and easily accessible test products and concepts, e.g. rapid prototyping techniques. Low-fidelity prototypes can also be developed within co-creation sessions by the participants.

For high-fidelity prototypes usually a set of requirements are delivered for the developers, to create a successful and user-friendly platform. Co-creation in the actual development of the platform is in the collaboration between the project partners at different pilot sites to provide a set of requirements for the platform. Besides the platform, the project will deliver new and improved services. Making a prototype for a service can be done in several ways. For example, scenarios can be developed and evaluated with the user, but in some cases it is possible to develop a genuine prototype of a service or specific touch points with the service (for example, the website). (Sanders & Stappers, 2012) (van Hoof J., 2014) In the overview of tools, a number of tools are provided to develop and test prototypes in different phases of the project.

When it comes to technology it is difficult to imagine what is possible in the field of technology for people who do not work with technology in a regular manner, particularly the elderly. Therefore it is important to properly prepare a session that is specifically about the use of technology with a toolkit tangible for the

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possibilities of technology. Another option is one that simplifies technology in such a way that participants can imagine technological functions to non-technological objects.

A way to do this is through the design of interfaces and wireframes. This is a technique where interfaces are drawn on paper, in this context user website experience can be tested. In a co-creation session technology can be developed by using building blocks, see (Oude Weernink, Sweegers, Relou, van der Zijpp, & van Hoof, 2017).

6.5 DEPLOY

Deploy refers to placing prototypes in the context, and therewith collecting new information, or data via the platform, or test results. This can be very simply done by means of evaluating paper prototypes or scenarios, but deploy is also used in sense of testing the platform in practice. In addition, services which may be developed for the platform can be explored context. In the first phase of the project prototypes do not need to be used in context to gather information or to evaluate. Depending on the phase of the project, this phase will also deliver different results. In an advanced stage data can be collected by deployment of the prototype and testing the user experience. In earlier phases it can provide substantive input for the platform and be used to evaluate and develop services in concept form.

6.6 EVALUATE

After concepts and prototypes are used in the context and/or by the targetgroup evaluation should take place. Both to the design, as well as on the process. It is likely that a form of data will be collected during the deployment. Qualitative data from interviews, but also data that is collected by means of the SoCaTel platform. Find out what data is collected, what the quality of the data is and how this can produce new input and insights for the progress of the project. Data collected in co-creation sessions can also be evaluated on the spot with the participants by having another critical look at the end result.

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Data can also be derived from tests with the prototype. Evaluate subsequently whether you have tested what you wanted to test (was test well developed) and is the collected data valid? What have you learned about the of the users experience with the platform or service, and what have you learned about the operation of the product?

In addition to the evaluation of the design, it is also important that the co-creation activities will be evaluated. For this purpose a reflection cycle is described in the introduction of this manual. Did the co-creation activities in this iteration lead to the intended results? What is learned and what can be done differently next time?

After both the design, being a service or platform, and the process are evaluated, the next iteration can be planned, with new co-creation activities.

6.7 COLLECT (OPEN) DATA

In the first phase of the project open data from other sources will be collected. It must be clear what open data sets are available. In addition crowdsourcing can be used within existing platforms, and later through the SoCaTel platform itself.

"Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential labourers." (Crowdsourcing.typepad, 2006).

Crowdsourcing is an online version of co-creation and is considered to be a form of open innovation. As a result, ideas and knowledge of large groups of people with different backgrounds can be put together, and value created (Füller, Mühlbacher, Matzler & Jawecki, 2009). The successful use of crowdsourcing in

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a project provides a sense of empowerment for the clients of a service. As with physical co-creation sessions, it is important that digital co-creation opportunities are well-designed.

6.8 INTERPRET

In order to work with open data sets and data coming from crowdsourcing activities, it is important to have data experts in the team who can convert the data into insights that can be of service to the design process. In this step it is difficult to really use co-creation activities. But the insights that come from the data can be fed back into the design team and to the end users

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7 DESIGNING A CO-CREATION SESSION

7.1 DEFINE GOALS

As mentioned before, co-creation sessions can be used in each phase of the project. They can have a different purposes or intended outcome goal at each phase of the project. During the first phase of the project the focus willbe mainly on research. In particular, to needs. This is also the moment for exploring existing services in a context and initial idea generation. In a later stage in the design process, more emphasis is put on the development, testing and improvement of the prototypes. Before each co-creation session it is important to have a clear goal and a desired outcome in mind.

If your goal is too ambiguous or too ambitious, the data will not be usable. Therefore, make sure that you work step-by-step, and do not try to do too much at once. At what stage of the co-creation process are you? Are ideas or prototypes available for you to evaluate with end users and stakeholders? Or are you still in the exploration phase and looking for information? And can your question be divided in parts or perhaps even single sessions? The less you want to know, the deeper you can go into the information you get.

At this stage, you also start thinking about what (physical) output of this session is preferred. Ideas? Inspiration? Research on needs and preferences? Aservice prototype?

7.2 CHOOSE YOUR PARTICIPANT(S)

Participant recruitment is best done by using including and exclusion criteria. Criteria for inclusion can be: (1) community-dwelling (i.e., aging in place), (2) age or referring to themselves as senior. Older adults who are likely to meet these criteria are best approached in person, given an information letter if they expressed interest in participating, and subsequently called to schedule an appointment. In order to support the goal of creating a broad comprehensive

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model, purposive sampling is used to capture the views of participants with different health statuses, living arrangements, different levels of cognitive development, different gender and level of technology experience. We advise to include one participant per household.

7.2.1 MULTI-STAKEHOLDER GROUP

A multi-stakeholder group is a mix of people with different backgrounds and experiences. For example, the project developer, ICT experts, designers, seniors and carers. In a mixed setting, conversation about shared challenges, the various participants perspectives wipe out. More understanding of each other's points of view is possible. In addition, ideas born in mixed groups are more relevant to multiple stakeholders.

A disadvantage of a mixed group form is the chance that some participants are more heard than others. Because they are more used and at ease to speak out in group situations. In addition, there is generally less in-depth attention to experiences and needs, because the participants do not share with each other. It is therefore essential that such a session is not taking place in a too large group and is well moderated.

7.2.2 HOMOGENEOUS GROUP

A homogeneous group is a group of participants with the same background or similar experiences. For example, a group of seniors, a group of health care professionals, a group of patients or a group of informal carers. The advantage of a homogeneous group is that the participants have similar experiences, and therefore calls often have more depth. This is ideally suited, to identify needs or to validate a concept specific to this target group (Van Hoof et al., 2014).

A disadvantage is that the participants also look at a subject from the same perspective or position. Developing ideas value creation relevant to multiple stakeholder within such a session is very difficult.

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7.2.3 SINGLE SESSION

Although a creative flow in groups is often faster, in some settings it could be preferred to conduct one on one creative sessions. Think about elderly who do not like to leave their house, or if security issues in the home environment are at stake. The advantage of a single session is that you can take the time to interview the participant. This can be very valuable, especially when older people are the target group. They are more likely to have more time and more to tell. A familiar environment can provide that the subscriber feels more at ease. The disadvantage of a one on one session is a slower developing creative flow, and information lacks group discussion. As a result, the output of such a session pretty one-sided.

7.3 PICK OR DESIGN YOUR TOOLS

For a co-creation session, it is important to prepare the tools well. You can either go with tools and methods that are specifically developed for this purpose (also see the overview of co-creation tools in this manual), or you can design your own tools (please refer to the tool ‘generative techniques’).

7.3.1 WORK WITH EXISTING TOOLS

It is generally less work to get started with already developed and validated tools and methods. This manual gives an overview of methods that can be used in different phases of the process. Before using a tool we advise you to study the literature and examine in which cases it is used. In the overview of tools the tools are briefly described, but also in books, websites and literature provided with the tools there is further explanation.

7.3.2 DESIGN YOUR OWN TOOLS

You can either completely design a toolkit from scratch, or adapt an existing tool or method to your own needs. Generative techniques are very suited for co-creation sessions. Generative means making, so these techniques are about expressing through the act of making. A very simple example is making a collage

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with visual cues like pictures. Generative tools are often used in the front-end of the design process, but can also serve purposes later on in the process.

Making your own toolkit can be tricky. At the one hand, you want to stimulate the creativity of your stakeholders and give them freedom to make things. At the other hand, you don't want to give them too much freedom because they might get stuck. The goal of these tools is to guide them in expressing themselves, in the direction of the themes that you as a researcher/designer want to address. In co-creation you are always looking for information that you don't have (rather than confirming information that you already have). So it is important to not only think about the themes you want to address, but also about what your participants might want to tell you. The book 'convivial toolbox' (Sanders & Stappers, 2012) gives a great outline to how to design your own toolkit generative research.

7.4 PREPARATIONS

7.4.1 BIAS

When organizing a creative session from which the output is not yet define (e.g. ideation sessions, research after latent needs), it is very important to set yourself free from bias. From your session a lot of information that will seem rather obvious will arise, and to keep focus you needs to differentiate between the information you (think you) already know, and the information that comes up in the session. Therefore, before you start, make a mind map about the topic at hand, together with the rest of your team. It is easier afterwards to differentiate the new information from the old information.

7.4.2 ENVIRONMENT

Plan your session in an environment where they can feel comfortable and free. Do whatever is required to get your participants in the right mind set for the session at hand. This can differ per situation. Sometimes it is worth the effort to travel to a participants' house to make them feel comfortable or to combine the

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co-creation session with a contextual interview. Especially older people sometimes find it difficult to travel and rather invite you in an environment they feel comfortable with.

In other situations, it might be wise to invite your participants to an inspiring environment, to stimulate the creative flow. Especially the more active and engaged older people enjoy visiting new places and socializing during the session and help think outside the box.

To create a nice environment, multiple factors play a role. Make sure there is enough light and fresh air in the room. If the room is too hot or has a lack of oxygen, this can affect the energy level of you participants. If the room is too cold or too dark, this can affect the focus of you participants. Obviously food and drinks are very important to make people feel welcome. Always make sure there is sufficient catering. This can be adapted to the customs of your country. Just don't forget that these people came to do you a favour, so treat them with respect.
When you invite older people to your co-creation activities, pay attention to background noise in the environment. Older people often suffer from hearing impairment, which will make background noise a unnecessary distraction.

7.4.3 PRIMING / SENSITIZING

In some cases, you might want to prime or sensitize the participants on the topic at hand. This can active a topic or question at hand in the mind of the people. The information that you will get after this is more legit because it is not ad hoc, people have had time to think about is. For example, when you are doing a co- creation session about what makes people feel at home, it is hard for your participants to express what makes them feel at home in their house while they are sitting in a meeting room at your company. Instead, you can send them a disposable camera before the session and ask your participants to take pictures of specific objects and places in their home that make them feel at home. If you develop these picture before the session, these pictures will trigger memories

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and evoke storytelling from your participants. They already start their journey (and your research) at home. Sensitizing materials can also encompass a diary, cultural probe (see tools) or a simple triggering questions you ask the participants at forehand.

Figure 9: Examples of a sensitizing kit

7.4.4 MATERIALS

Prepare the materials you are using before the session (to communicate with your participants) and the materials you use during the session well. Make it look neat and taken care of. If it shows that you have put effort in the preparation, your participant will be more likely to put their best effort into the workshop as well.

Also design your materials, exercises and assignments in a way that at some point it is complete or finished. A disposable camera is a great tool, as it has a limited amount of photographs. If you use diaries or a booklet with exercises to prime your participants, make sure the questions have a limited space to answer. This gives your participant context as to what kind of or how much of an answer is expected, and a sense of fulfilment when they finished it.

Especially if you are doing multiple sessions with the same toolkit, put some thought into organizing your materials in such a way that they are easily transportable to different location, easy to clean up/collect after the session and also provide easy access to the materials for your participants. Toolboxes are great for this purpose.

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7.4.5 PLANNING

Of course you prepare a schedule for your co-creation session(s). When does the session take place? With whom? Which subjects? What techniques? What duration? Select a team that is present at the sessions and can perform various tasks: moderate, observe, write down, pour coffee, etc. Make sure the session is moderated by someone who has experience with creative techniques.

If you plan to work with older people, note that older people generally have fewer obligations and therefore more time available. On the other hand, young people may be somewhat hasty. Plan enough time for your sessions.

We strongly recommend making a script for your sessions. This will help you with keeping track of the time you have planned per activity during the workshop, but can also be helpful to inform your colleagues about their specific tasks during the workshop.
Finally, if you have the opportunity, do a pilot version of the workshop you planned. This will help you to tweak your tools and also to practice your moderation part. Ask your pilot participant to give you feedback on the workshop and how they experienced it.

7.4.6 DOCUMENTATION

For future reference, all workshops should be well documented in writing, audio and video recordings. But make sure you have necessary approval of participants (see appendix) to make the recordings, to transcribe the recordings, to analyse the recordings and to save the recordings. When you ask your participant approval to save the recordings or transcripts it is important to substantiate the period of saving the material. Keep in mind that the **REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)** has strict rules and

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regulations on data storage, retrieval and destruction. Good documentation makes reflection on your data possible.

7.5 WORKSHOP

7.5.1 START

Welcome your guests in a pleasant environment and make sure they have time to adjust to this environment before starting the workshop. If the participants do not know each other, give them the opportunity to get acquainted. If they do know each other, give them the opportunity to catch up. Also make sure there are enough hosts available to answer questions from the participants and pour them a cup of coffee or tea.

Invite your guests to the table (or in some cases a wall) where you have prepared the workshop. If necessary, introduce yourself and others present. Explain the purpose and structure of the workshop. Be clear about how the session is documented and what happens with the collected data. This is also the moment to have your participants sign the informed consent. Please refer to the Ethics section for a more detailed explanation on this.

7.5.2 WARMING UP & BREAKING THE ICE

We always recommend starting with a warming up exercise or a creative ice breaker. Co-creation workshops usually demand a creative mind set from the participants, so it is important to spend some time getting the group in the right mood (usually this take ten minutes or so). This can be very dependent on the people in your sessions. Youngster might feel very comfortable brainstorming and using creative techniques, for elderly this might be more challenging. You can also grab this opportunity to have the participants get to know each other a little better by giving this exercise a personal touch or proving a team challenge. A few examples are:

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- *Instant architect*: Give the group paper/plastic cups and build a tower as high and creative as possible. Try to keep coming up with ways of making it even higher.
- *I did it my way*: Have the participants draw or write down their most creative moment (either in terms of problem solving or on a more artistic level), and share them with one another. Reflecting on their own creative ability will give them confidence for creative exercises in the workshop.
- *Not my cup of tea*: Pass a paper/plastic cup around in the group a few times, and have the participants come up with new purposes for the cup every time it passes them. E.g. use it as a flower pot, use it to sound proof walls, etc. This will get increasingly difficult when more purposes are mentioned.
- *Clumsy paper planes*: The participants put their dominant hand behind their back. With the other hand, they have to fold a paper plane. Whose plan flies the furthest? Working with the hands will get the creative juices flowing.

Make clear that this exercise is purely meant as a warm-up, and does not have anything to do with the purpose of the actual session. Also make sure it is a fun exercise to do, it can help to have the moderators involved in this exercise.

7.5.3 MODERATING THE SESSION

When moderating a co-creation session, it is of great importance to keep an open mind. You cannot know in front what the outcome of the session will be, if you would know, you would not have to organize the session in the first place. Set aside your own expectation and follow the flow of the conversations. However, do keep the eventual goal of the session in mind (e.g. a concept for a service) and keep steering towards it. Otherwise the result might not be useful for your project.

We recommend always having two moderators for the session. First of all because it is important that your planning is not dependent on one person. More importantly, during the session a lot of information will come to table, and two persons hear more than one. It can be very valuable to make notes on a flip over

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during the session, so not only you, but also the participants have an overview of the topics that have been discussed.

Especially when you are organizing a very creative session, you might have to deal with some resistance during the session. Some people will experience crafty activities as childish. To prevent or overcome this, make sure to properly inform people about the activities you have planned. Afterwards it can be good to reflect together with the group on the results, and how the activities led to these particular results.

During the session, if possible, create an environment where people can move actively through the space (if they are physically able to). Also make sure there is enough variety in activities. In larger groups it can help to switch neighbours every once in a while. It is advisable to make a planning for the different activities on forehand, so you can follow this planning while moderating.

As a moderator keep in mind that you communicate with older people. So keep good eye contact, leave pauses of one to two seconds between sentences and adjust your level of language output to that of the older people (not too difficult but also not too easy).

7.5.4 ASKING THE RIGHT QUESTIONS

During the session, it is important to ask people to explain their designs and ideas. What is the underlying thought? Why did they add certain images to their collage? What is the reason for the design that they have made? It's not naturally for everyone, of course, to start with the essence of the story on the table. Therefore it is valuable to ask the participants to make something that helps them in telling their story. On the basis of what they produce it is easier to ask questions on certain aspects. Make sure that you try not to fill in thoughts or emotions for the older person. Take time for to interrogate until both the moderator and the

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participant understand the meaning of the participant. Interrogation can be done with questions like:

(NARRATIVE QUESTION):

Name a subject, for example a time and place, and then ask the other person to tell you what they know about this. Then stay silent and do not interrupt orprobe during the answer. Let them tell you about the situation in their own words. Show a steady mild interest for instance by keeping eye contact and nodding your head (enough to keep them talking) and do not become excited when they get into relevant detail.

(REVIEW QUESTION):

Review questions are used to summarize and test your understanding of what you have heard so far. State what you understand and ask for agreement or otherwise. So your brother came out after your friend, is that correct? Review points can also be used to 'squeeze the lemon' for any more information. Is there more that you can tell me about this? What else were you thinking in relation to this?
Review questions can be used at natural break points, such as in changes of scene. They are also useful at the end, to summarize.

Give the participants time and space to formulate their opinion. You can do this by simple repeating and summarizing what the participants tells you. Both in speech and in writing. Something like: “I am afraid of these things”, “Oh, you are afraid of things, and those things are …… (pause) and wait for the participant to fill in.

7.5.5 FACILITATING GROUP DYNAMICS

Most of the co-creation sessions will take place in a group setting. It is important that everyone in that group is equal and thus also so treated equally by the

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moderators. Some individuals will by nature come more to the fore, others tend to be quieter and should be more actively involved in the discussions. Make sure that this happens, because everyone should be heard.

As an interviewer, be flexible when it comes to subjects and discussions. In the first instance, some discussions seem irrelevant to the topic at hand, but will result in valuable insights afterwards. Also make sure that you find common ground between the participants of the session. Make explicit what the participants have in common, so that more in-depth discussions about these topics can take place. Make sure to regularly summarize what you hear from the group, and check with the group if what you have heard is consistent with what they said, and that everyone shares this opinion. This can validate your information.

7.5.6 ENCOURAGING BIG IDEAS

One of the most difficult challenges in creative sessions is to get people out of their comfort zone; To really make them look at things in a different way and to expose them to activities that they normally would not undertake. Especially in brainstorming sessions and idea development, the ideas cannot be out of the box enough.

Activating wild ideas should start with a good warm up. It can also help when a moderator (or the partner of the moderator) goes along with the session. In addition, it is really depends on who your participants and moderators are in the session to what level the creative vibe is activated. Finally, the materials that are used in the session are important to stimulate creativity. Make sure that the materials are inspiring and easily accessible.

7.5.7 ETHICS

One way to acknowledge persons' interdependence is provided by co-creation. Co-creation is both a value and a practice. As a value, it recognises the necessary and unique contribution of each individual person, regardless of level of

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dependency, independency and vulnerability and position in a particular care practice, to what is experienced, described and valued as care. As a practice, it entails the actions, thoughts and emotions of all actors, including their experiences, dreams and aspirations. It requires skills, methods, and moral qualities like willingness, attentiveness, responsibility and responsiveness (Jukema, 2012). Examples of an information letter, approval form, and the co-creation ethical checklist are attached to this manual in the appendices. The co-creation ethical checklist is developed in order to have a clear overview of all ethical principles are considered.

7.6 ANALYSIS AND INSIGHTS

Thematic analysis can be employed to analyse the transcripts and –if applicable- artefact. Using qualitative data analysis software (Atlas.ti), inductive codes will be attached to quotations relevant to the research question. Each transcript is coded independently by 2 researchers, who subsequently have to come to an agreement to produce a single coded version of each transcript. Coding is detailed; often multiple codes representing different factors influencing technology use are attached to quotations. After each cocreation session, coded transcripts are discussed within the SoCaTel pilot-sites and then combined into one Atlas.ti file. In this way, new codes are added, overarching categories of codes are formed and refined, and a model of the findings is shaped. The entire process takes several weeks, and when a few new codes are added in a week, this indicates that data saturation is reached. A Microsoft Access database will be built, based on the input from the inventory of social services, and then used to describe the number of social services participants can offer and to determine the frequency of use of these services. These data and the data on background information of participants will be entered in SPSS in order to produce descriptive statistics.

Artefacts that came forth from co-creation sessions can also be used solemnly as inspiration and input for the design process, rather than to be extensively analysed.

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7.7 COMMUNICATION AND NEXT STEPS

After the materials have been analysed, they must be translated into useful input for the design and development process. In addition, the results can be described in a scientific article. Before developing your co-creation sessions, and in the analysis thereof, dissemination in any form should be considered. This can be done by a presentation to the team, but also by a more immersive session where the team can delve into, for example, the artefacts made in the investigation. The output can also be communicated in the form of an infographic, personas, requirement sets of scenarios, and be made accessible for the whole team.

Here again we recommend to use the PDOCA method (described in the introduction) to reflect on the activities and whether the intended output is the retrieved output. Based on the new insights additional co-creation interventions can be planned

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8 CO-CREATING WITH OLDER PEOPLE

8.1 GENERAL RECOMMENDATIONS

Based on research in the field of co-creation between experts by experience and (health care) professionals Vilans (2016) gave some tips and points for attention.

Tips on the practical issues that are important for a good cooperation:

• Make clear agreements on responsibilities and roles, time investment and compensation;

• Clearly define mutual expectations;

• Make use of appropriate methodology for all those involved.

Points of attention for a basic attitude and behavior:

• avoid thinking in a 'we and they';

• create a secure and open climate;

• Conversate with plenty of room for the transfer of assets;

• Do not fill in for someone else, but discuss with each other (Vilans, 2016).

8.1.1 CO-PRODUCTION

In accordance with the Netherlands Agefriendly (z.j.) co-production means: "a cooperation between local authorities, older people and senior citizens' organizations for the design and delivery of opportunities, support and services that improve the well-being and quality of life" ("The Elderly involved", z.j.).

How older people and/or other relevant stakeholders as the latter co-producer can be involved is described by the AFE-INNO-NET (n.y). (AFE-INNO VNET project: “Aging Well in Wales: Introduction to Co-Producing AgeFriendly Environments with older people in Wales", z.j.).

In the co-production methodology seven principles are described (National Development Team for Inclusion & Helen Sanderson Associates, z.j.):

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1. Older people are involved throughout the process, from start to finish;
2. The older people feel free to speak and to be heard;
3. Matters that are relevant for the older people are addressed;
4. The decision-making process is clear for the people concerned;
5. Skills/experience of the older people will be taken into account in the process of change;
6. Meetings, information and information supply are accessible for participating older people;
7. Progress is evaluated by discussing actual changes occurring in the lives of the older people.

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8.2 COMMUNICATION

8.2.1 NORMAL CHANGES IN SPEECH AND LANGUAGE FOR OLDER ADULTS

During aging speaking changes due to motor and cognitive changes. It is necessary to take into account that the speech rate is declining and that the attention and memory span shorten. Both the length and the content complexity of the message need to be adjusted, since there is a decrease in context understanding and processing speed. The quality, speed and efficiency of the incentive transfer decreases, with 'normal age forgetfulness' as a result. Despite these similarities, the aging process is personal and depending on education, background, health and personal interests (Visser et al., 2016). The age for the normal memory disorders can be reinforced by emerging dementia (Eulderink, Heeren, Knook, & Ligthart, 2004).

8.2.2 OLDER PEOPLE WITH COMMUNICATION PROBLEMS

Prevalence of communication problems in older people.

It is evident that communication problems play an important role in old age diseases. In virtually any disorder associated with cognitive decline, communication problems arise (Visser, Deeg, van Asselt & van der Sande, 2016). It is not possible to describe communication recommendations for older people of all conceivable client or problem groups in this manual. There is a lot of good literature in this area. We'd like to make a general comment both for the older as well as for the communication partner: communication can be tiring. Changes in the duration of the session, the way of communicating and preparation are important for the older person. Therefore, co-creation sessions need to be limited in duration up tot wo hours maximum. Hereinafter we limit ourselves to give a number of examples and practical tips and references to other sources.

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8.2.3 PEOPLE WITH A HEARING IMPAIRMENT

People are accustomed to exchange auditory information with each other. When communicating with colleagues and older people with a hearing aid/hearing problem, you must be alert to this limitation of course, or any information about the right way (Van Zaalen, Deckers & Schuman, 2018). It must be possible to use other senses and other forms of communication, such as sign language or gestures. Van Zaalen et al. (2018) give a number of tips in the communication with an older or colleague with a hearing impairment:

- Make sure your face can be seen and make frequent eye contact, ensure that there is good lighting and that there is no hair in front of your face;
- Talk quietly and articulate good and accurate, but without exaggerated mouth movements;
- Always write down names, addresses and appointment dates;
- Be patient and repeat your message when necessary. Use different words, if the message has not been received;
- In group discussions ensure that there is only one person speaking at a time, and it is clear who has the turn;
- Regularly check if you are on the same line.

8.2.4 APHASIA

Aphasia is a disorder in the comprehension and/or the expression of language, in which both the ability to write as the ability to speak may be affected (Visser et al., 2016). The person with aphasia has normal intellectual abilities. In the communication with the person with aphasia, it is important to the older person with aphasia to,

- be patient;
- use short, simple sentences as much as possible (De Bruyne et al., 2018)
- do not to interrupt the person when speaking (Eulderink et al., 2004).

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Van Zaalen et al. (2018) added to this:

- make optimal use of the remaining communication capabilities you allow the environment to communicate with someone with aphasia (Van Zaalen et al., 2018).
- start your conversation in a quiet environment and ensure that the attention is on you before you begin to talk, for example by touching the older, call the person by the name and have constant eye contact.
- emphasize the most important words in the sentence, but talk to the older person in an adult manner. Highlighting the most important words in your sentence can be done in different ways: writing, gesturing, drawing, using an icon and/or at the end of your sentence.
- do not use child's language.
- encourage someone with aphasia always to 'to talk with hands and feet. To ensure you understand each other, it doesn't matter in what way it is being communicated.
- if there any family members or other professionals are present, adjust their than any questions that the older self can answer.
- please note that people with aphasia also experience limitations in vision; therefore communicate in plain view.
- in using written information use a larger font, print key words in a different color and insert supporting icons or photos.

8.2.5 COMMUNICATION PROBLEMS IN DEMENTIA

Language and comprehension problems in dementia can cause communication problems (Scheres & De Rijdt, 2011). Contact with others is less with words and the communication initiative is more and more dependent on significant others. Known language problems in dementia are word finding problems, disorders in language comprehension and echolalia. In addition, it is possible that the person with dementia continually changes topic (Scheres & The Drive, 2011). Williams, Herman, Miele & Wilson (2009) showed that consciousness and therefore

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reduction of paternalistic forms of communication by caregivers of persons with dementia has led to less problem behavior and a better understanding of each other and more affirmation.

Language problems, and, in particular, problems with finding words, are the first signs of dementia (Van Zaalen et al., 2018). Converting your thoughts in phrases and words is something that people usually do throughout the day. In persons with dementia this process is not so evident. They can't find the right words fast enough. That makes their speech wavering and disfluent. Sometimes they choose the wrong words and are not well understood. In addition to this formulation problems, their understanding of messages often becomes more difficult.

The reaction of professionals to persons with dementia is often a paternalistic attitude of character, for example, 'Come Ms Jansen, we hit the showers. This sentence can be understood as 'we are going to take a shower together'. This is the literal meaning of the sentence, and so it can also be misunderstood by Ms Jansen with dementia. Yet, that is not what the professional meant.

Another performance problem in persons with dementia is that their processing speed is lower. All present incentives can no longer be filtered by 'the demented brain' (Van der Plaats & De Boer, 2014), causing overstimulation. In a conversation with someone with dementia you will therefore need to pause for a few seconds longer breaks between sentences) so that the person is able to process your message and understand (Van Zaalen et al, 2018). Within a co-creation session slower information processing can be difficult. A solution could be to use a buddy who is always alert that the person is well understood and well understand what is being said. A buddy can also be a language model. The use of simple sentences by the buddy can lead to the other attendees to also simplify the use of language (Van Zaalen et al., 2018).

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8.2.6 INTELLIGIBILITY PROBLEMS

Intelligibility problems can occur in people with multiple sclerosis or other neurological problems as a result of dysarthria or verbal dyspraxia of speech. Dysarthria is a disorder of the speech motor skills. Breathing, voice, resonance (the fullness of the sound), pronunciation and sentence melody (prosody) can be disturbed (Visser et al., 2016). It is therefore important to listen and to check whether the person, by imitating or writing down if the person with dysarthria is well understood. In verbal dyspraxia of speech the programming of motor movement, necessary for speech production, is disturbed. A person knows what he or she wants to say, but is not able to say it in an intelligible way due to motor movement initiation problems (Afasie Vereniging Nederland, n.y).

8.2.7 INTELLECTUAL DISABILITY

People with intellectual disabilities often find it difficult to understand what is being said and what the consequences of the expression are. Their information processing time is often longer; like people with aphasia they therefore benefit from not too long sentences, easy words and longer breaks. Please note that many older people with intellectual disabilities also often experience hearing and/or visual limitations (Van Zaalen et al., 2018). Take the time to communicate and to understand one another. The above presented tips for people with aphasia can be implemented in people with intellectual disability as well.

In case of long pausing, for example in the middle of a sentence, try to fill in as little as possible what you think the person wants to say. Consider the use of augmentative alternative communication aids.

8.2.8 AUGMENTATIVE ALTERNATIVE COMMUNICATION

Augmentative alternative communication includes all strategies, communication and tools enabling support or replacement of the voice or language of the older person. Forms of communication, without the use of tools come from the older person or its communication partner, such as supportive gestures, facial

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expressions, body posture and gaze direction. Communication with tools can be roughly divided into three categories: non-tech, low tech and high tech. Non-tech are non-technical tools, such as a communication board with icons or pictures to write down signs of a message. Simple technical tools such as a speak button with one or a few messages are covered by low tech support. Advanced technological tools, such as a voice computer, fall under the scope of the high-tech support (Van Zaalen & Deckers, 2015). Also applications (apps) on a tablet or smartphone can be used to support the communication; they are subject to high-tech.

AAC is not only focused on the better expression of the older, but also to the better understanding of the older person. In each older with a communicative limitation it should be taken into consideration which communication form fits the possibilities and impossibilities in communication. Also taking into account the physical and mental capacity, so that it can be connected to individual capabilities and needs (Van Zaalen et al., 2018). The choice for AAC must be adapted with all the parties involved, so everyone can communicate in the same way with the older person and the older person can use the same communication forms to various professionals and family members.

8.2.9 FEAR OF FAILURE

Effective communication means that you are connected to the other. That you make contact, understand and respect each other. It also means that you respect yourself. And often noticed apron to older people who suffer from fear of failure. To say that they haven't understood, or they don't agree, cannot be taken for granted in people with fear of failure. A personal buddy can be a worthy addition to the older person as well.

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8.3 TECHNOLOGY ACCEPTANCE BY OLDER ADULTS

Technology may support aging in place, but questions have been raised on the readiness of (community- dwelling) older adults to use these technologies, and it is unclear which factors play a role in their acceptance of technology.

Professional caregivers, product developers, managers, policymakers, and family members who are interested in stimulating (community-dwelling) older adults to start using technology for aging in place, need to be aware that acceptance depends on a large number of factors that may vary for each individual. Most of the time, an older adult will have a number of specific technology-related concerns, while the perceived benefits of a technology might be more abstract. Therefore, it is necessary to communicate concrete benefits to the older adult and, at the same time, reduce technology-related concerns specific for that individual. Demonstration of the technology, the opportunity to try out the technology in a risk-free environment, and training or coaching can be used for this purpose. It is advisable to involve professional caregivers, family members, and peers who already use the new technology in these interventions, since older people are sensitive to their influence (Peek et al., 2014) (Nieboer et al., 2014).

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9 OVERVIEW OF TOOLS FOR CO-CREATION SESSIONS

Below, a selection of tools that can be used for co-creation. Some of these 'tools' are really more an explanation of a method, others are very specific tools that can directly be applied. We advise to use the books and references provided to immerse yourself into the tool before actually working with it. Besides the tools listed here, there are a million different ways to give form to a co-creation session. Most important is that clear goals and questions for the participants are posed, and that enough materials are provided to immerse in the creative mind set. We recommend to always have ready: Flipover, pens, markers and post-its.

Tool		Phase
9.1	**Cultural probes**	Discover, Empathize, Explore
9.2	**Generative tools**	Discover, Empathize, Explore Ideate
9.3	**Collaging**	Discover, Empathize, Explore
9.4	**Storytelling**	Discover, Empathize, Explore Ideate
9.5	**LEGO Serious Play**	Discover, Empathize, Explore Define
9.6	**Diary Study**	Discover, Empathize, Explore
9.7	**Designing with emotions**	Discover, Empathize, Explore Evaluate
9.8	**Personas**	Define
9.9	**Scenarios**	Define
9.10	**Value Proposition Canvas**	Define
9.11	**Idea Generation**	Ideate
9.12	**Lotus blossom**	Ideate
9.13	**mind mapping**	Ideate
9.14	**Acting-out and role play**	Prototype Ideate Evaluate
9.15	**Rapid prototyping**	Prototype Ideate Evaluate
9.16	**Mock-ups**	Prototype Ideate Evaluate
9.17	**Six thinking hats by Edward de Bono**	Evaluate Ideate
9.18	**User experience and usability testing**	Evaluate
9.19	**Service blueprint**	Service design
9.20	**Customer journey map**	Service design

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9.1 CULTURAL PROBES

Examples of cultural probe kits[iv]

Discover, Empathize, Explore

Cultural probes are a great way to get to know your user group. Cultural probes were first described by Bill Gaver [vi] as a tool for designers to empathise and explore the user in the context. Probes are basically a way to collect information within a context without the researcher being present in that context.

Cultural probes are usually designed by skilled designers. They are objects that get a temporary place in the life of people and that serve to collect contextual, inspirational data about people's lives. This data is normally not meant to analyse as such, but to inspire and spark the design process.

When and why?	Probes are usually used in the front-end of the design process. They are used to provide inspirational data and inform the first steps in the design process.
With whom?	Cultural Probes are used with individuals in the target group.
How?	Cultural probes are often kits that the user will have in their personal environment for a set amount of time, usually one to two weeks. The package consists of multiple small exercises, for example in the form of booklets, cards, maps or boxes, that the user can complete over the course of the set time. Sometimes cultural probes are used as a standalone expedition for insight, empathy and information. Others follow a cultural probe study with a contextual interview.
Read more	http://designresearchtechniques.com/casestudies/cultural-probes/ Sanders, E., Stappers, P., Convivial toolbox, BIS publishers, 2012, Amsterdam B. Gaver, T. Dunne, and E. Pacenti, 'Design: Cultural Probes', interactions, vol. 6, no. 1, pp. 21–29, Jan. 1999. Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Rockport

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Publishers, 2012. Web. 28 Jan. 2017.

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9.2 GENERATIVE TOOLS

Example of a generative toolkit

Discover, Empathize, Explore

Ideate

Generative tools are a collective name for methods where making is involved. There are two incentives for using generative tools in the exploration phase of the process. First of all, the exercise of making will spark creativity in your participants. Secondly, making exercises will result in artefacts that can be used by participants to tell there story, and therewith communicate a more complete story. The researchers can use these artefacts to ask questions in more depth and the artefacts can be used for inspiration in the design process. Probes, collages and LEGO serious play (explained above and below) are examples of much-used generative tools.

When and why?

Generative design and research can take part in any phase of the design process, but is often used in the 'fuzzy front-end' of the process to explore the context, to empathize with the user and to discover latent needs.

With whom?

These tools can be used with the end-group, but also in mixed co-creation sessions or even sessions with professional stakeholders.

How?

According to Sanders and Stappers generative tools are best used for the path of expression along the line of experience. This means that during the session, a certain order of exercises should be respected. The strength of generative research is the creation of desirable future experiences based upon past experiences. Therefore memories should be triggered during these sessions, before dreaming about future experiences. Sanders and Stappers propose the following steps:

1. Start with observing and documenting what people currently do.
2. Recall memories from earlier experiences with a generative exercise with visual triggers
3. Reflect on these memories and possibilities for the future with a generative exercise that allows for abstract expression
4. Finally do a generative exercise with a generative tools to create prototypes for this future experience

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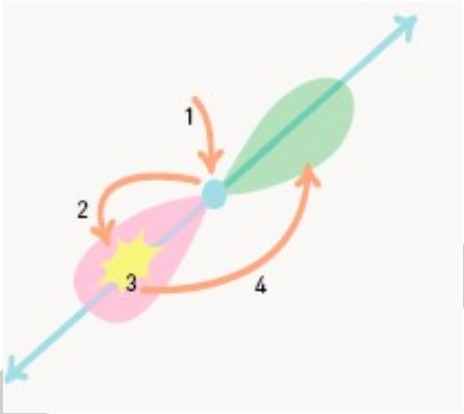

From past (pink) to future (green) [vii]

These generative toolkits should be designed well and specifically for the topic at hand. This can be done with special degined toolkits, but you could also use more generic materials for making, such as magazines, printed images and words, lego dolls, symbolic shapes, etc. Think about what you want to find out in these sessions, and tailor the toolkit accordingly.

For example, you are a kitchen designer and looking for new ways to involve children in cooking with their parents. You are going to invite a family of four (mom, dad, two kids aged 8 and 10) to a co-creation session. One of the activities in the session is to have this family make individual collages about what their dream kitchen would be. Most obvious would perhaps be to hand this family a stack of kitchen magazines and let them make a collage. However, in this case the family would go ahead and tell you about the cupboard space, color of the countertop and accessibility of the appliances they want to have.
What you actually want to know about is their activities in the kitchen. Do the kids have a space to do their homework when mom is cooking? Do they own steps to have a look at the pasta that is boiling in a pot? Do they have access to the candy pot? You have to include pictures of these activities in order to prime the family members, to encourage them to think beyond the conventional idea of a kitchen, and look at it as a place to socialize and be together. Not all information that you get might be relevant for your research question, but at least the information you get is complete.

Please refer to the book Convivial Toolbox to learn more about generative design and making toolkits.

Read more

Sanders, E., Stappers, P., Convivial toolbox, BIS publishers, 2012, Amsterdam

Oude Weernink, C.E., Sweegers, L., Relou, L., van der Zijpp, T.J., van Hoof, J. (2017). Lost and misplaced items and assistive devices in nursing homes: Identifying problems and technological opportunities through participatory design research. *Technology and disability,* 29, 129-140.

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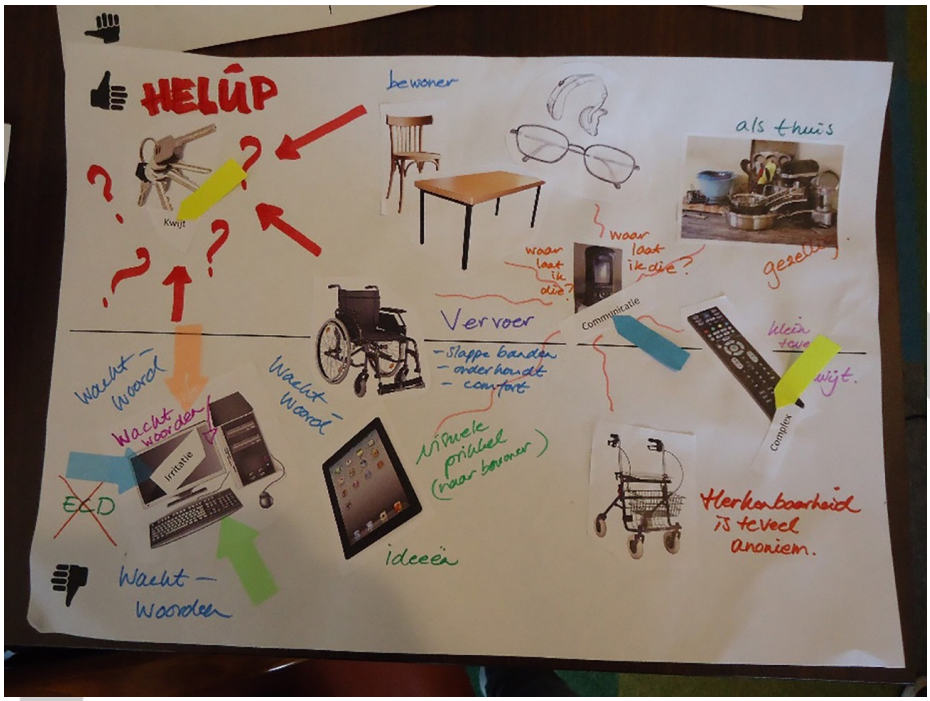
9.3 COLLAGING



Discover, Empathize, Explore	*Making collages is a great and accessible example of a generative technique. Having participants make a collage can help get them in a creative flow and help them communicate about a topic.*
When and why?	This tool is best used in the front-end of the design process, for discovery, exploration and inspiration.
With whom?	Collaging can be best used with a group of people, but can also be utilized in single sessions.
How?	For this tool you only need magazines and craft supplies and a prompt to make a collage about. In some cases you might want to provide your participants with a specific canvas considering the topic at hand, or a specific set of images (such as in the image above).
Read more	Oude Weernink, C.E., Sweegers, L., Relou, L., van der Zijpp, T.J., van Hoof, J. (2017). Lost and misplaced items and assistive devices in nursing homes: Identifying problems and technological opportunities through participatory design research. *Technology and disability,* 29, 129-140. http://www.designkit.org/methods/25 Sanders, E., Stappers, P., Convivial toolbox, BIS publishers, 2012, Amsterdam

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9.4 STORYTELLING

Example of storytelling by a user, guided by an artefact[viii]

Discover, Empathize, Explore

Ideate

There are different tools that can be used in storytelling sessions. Participants individually or jointly create stories about an imagined or envisioned future. Usually, technological possibilities should pose no restrictions in these scenarios.

When and why?	This method can be used in the front-end of the design process, to research possible joint futures, and is often stimulated with generative techniques, as explained above.
With whom?	Storytelling can be done with persons from the user group of the platform, but also with experts and external stakeholder groups.
How?	Create personas first. About whom are you talking? What is specific to that person? After you made the personas, then write scenarios with the personas. How are they using a product? Or how do they walk through a process? What's interesting? What takes a lot of time? What is difficult? What can be done better? Storytelling can be made visual by through the use of storyboards.
Read more	P. Parrish, 'Design as Storytelling', TechTrends: Linking Research and Practice to Improve Learning, vol. 50, no. 4, pp. 72–82, Aug. 2006. P. Wilkins, 'Storytelling as research', in Research in social care and social welfare: issues and debates for practice, 2004, pp. 144–153. Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.designkit.org/methods/35

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9.5 LEGO SERIOUS PLAY

Pictures of a LEGO SERIOUS PLAY workshop, to explore the topic of the sense of home, at Fontys University of Applied Sciences 2016

Discover, Empathize, Explore

Define

LEGO Serious Play is a generative method and toolkit especially developed by LEGO for innovation and to enhance business performances. There are special courses and boxed toolkits available to learn to work with this methodology.

When and why?	***"The LEGO® SERIOUS PLAY® Method is a facilitated meeting, communication and problem-solving process in which participants are led through a series of questions, probing deeper and deeper into the subject. Each participant builds his or her own 3D LEGO® model in response to the facilitator´s questions using specially selected LEGO® elements. These 3D models serve as a basis for group discussion, knowledge sharing, problem solving and decision making."*** *https://www.lego.com/en-us/seriousplay/the-method*
With whom?	LEGO Serious Play can be used in all sorts of group settings
How?	LEGO recommends using a trained facilitator for these workshops. However, the method is not much different from other generative workshops. Trained facilitators can be found through established networks, such as: http://seriousplaypro.com/
Read more	https://www.lego.com/en-us/seriousplay Wouters, Eveline & van Hoof, Joost. (2017). Professionals' views of the sense of home in nursing homes: Findings from LEGO SERIOUS PLAY workshops. Gerontechnology. 16. 218-223. 10.4017/gt.2017.16.4.003.00. https://www.youtube.com/watch?v=rld-gUrp-iw

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9.6 DIARY STUDY

Discover, Empathize, Explore

Diary studies are great for researching experiences in a context without the researcher being present.

When and why?

This is a method often used in the front-end of the design process to document experiences. Sometimes it is used in combination with a prototype, to document the experiences with that prototype. Diaries can also be used in to sensitize or prime participants preceding to a co-creation workshops, in order to have them reflect on the topic at hand. Cultural probes can also include diaries.

With whom?

Diaries are used by individuals from the target group that you are designing for.

How?

A diary can consist of questions and exercises. Depending on the purpose of research these questions can be the same every day, or unique every day. Often diaries are combined with an interview or workshop afterwards.

Diaries don't necessarily have to be physical booklet. They can also be done through text messaging or on the computer.

Read more

Felix E, de Haan H, Vaandrager L, Koelen M. (2015). Beyond thresholds: the everyday lived experience of the house by older people. *Journal of Housing for the Elderly*, 29, 329–45.

C. Lallemand, 'Dear Diary: Using Diaries to Study User Experience', *User Experience Magazine*, vol. 11, no. 3, 2012.

L. Palen and M. Salzman, 'Voice-mail diary studies for naturalistic data capture under mobile conditions', in CSCW '02 Proceedings of the 2002 ACM conference on Computer supported cooperative work, New York, 2002, pp. 87–95.

Mattelmäki, T. (2003). Vãinõ: Taking user centered steps with probes. *Proceedings of Include Conference, RCA, London*.

Mattelmäki, T., (2005). Applying probes: From inspirational notes to collaborative insights. *CoDesign: International Journal of CoCreation in Design and Arts,* 1, 83-102.

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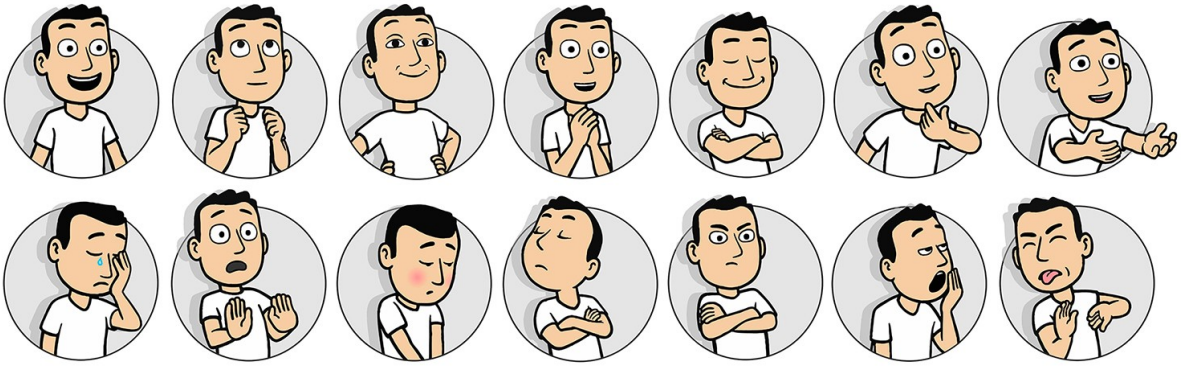
9.7 DESIGNING WITH EMOTIONS



The images used to portray emotions[ix]

Discover, Empathize, Explore *Evaluate*	*This method is developed by Pieter Desmet to study how products and experiences can elicit emotions. By making these emotions explicit, one can evaluate and develop better products for better experiences.*
When and why?	Explore: how do people feel about the present and why? Evaluate: how do people feel about the new design?
With whom?	Use it to get to know more about different people's perspectives either in a single session or a group setting.
How?	Use cards or an overview with different emotions. Show people the different ideas or a problem. Let people respond with emotions: what do people feel and why? You can also use this method to get to understand desires. When do they feel happy? What has to change to make people happy?
Read more	http://studiolab.ide.tudelft.nl/studiolab/desmet/files/2011/09/thesis-designingemotions-norman.pdf Desmet, Pieter. (2002). Designing Emotions.

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9.8 PERSONAS

An example of a persona[x]

Define

A persona is a fictional representation of a user group. It is an overview of a single individual from this group, and summarizes characteristics of this person, as well as goals, motivations, experiences, brands they affiliate with, hobby, family and sometimes even quoted or a schedule of their day. Personas are always based upon real (qualitative) data from research.

When and why?

Personas are a great way to translate insights and data from the research phase to useful input for the design process.

With whom?

Creating personas is something that is done by the designer or researcher, but it can be used in co-creation sessions with other stakeholders to provide inspirational input.

How?

Personas can be made by filling out existing templates or by creating a template for the specific purpose at hand. Personas should be based upon user research, but they should also stimulate the imagination.

Personas are great to 'test' concepts and prototypes without the end user actually being there, by asking yourself the question of how they would respond to the design.

Read more

http://www.servicedesigntools.org/tools/40

A. Cooper, *The Inmates Are Running the Asylum*. Indianapolis, IN, USA: Macmillan Publishing Co., 1999

A. Cooper, R. Reimann, and D. Cronin, About Face 3: The Essentials of Interaction Design. Indianapolis: Wiley Publishing, 2007.

Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam

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9.9 SCENARIOS

Example of a scenario in the form of a storyboard[xi]

Define *A scenario is a description of a particular (existing)r situation of (potential) use of a design to predict or explore future use. Scenarios can be written in text but also in the form of a storyboard.*

When and why?	Scenarios can be used for different purposes. They usually convey a concept through a story. This is a visual and engaging way to understand the user perspective of the interaction with the design. Scenarios can give the design team insight in how a future product should function, and get the team on the same page. They can also be used to evaluate concepts with users. Scenarios can also be the output of a co-creation session.
With whom?	Can be done individually as well as with different stakeholders in different settings
How?	Write down the story of the experience the user will have while using the platform, product or service from the perspective of the user.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.designkit.org/methods/35 M. B. Rosson and J. M. Carroll, Usability Engineering : Scenario-based Development of Human-computer Interaction, vol. 1st ed. San Fancisco: Morgan Kaufmann, 2002. J. M. Carroll, Making Use: Scenario-Based Design of Human-Computer Interactions. MIT Press, 2000. I. F. Alexander and N. Maiden, Scenarios, Stories, Use Cases: Through the System Development Life-Cycle. New York, NY: Wiley, 2004.

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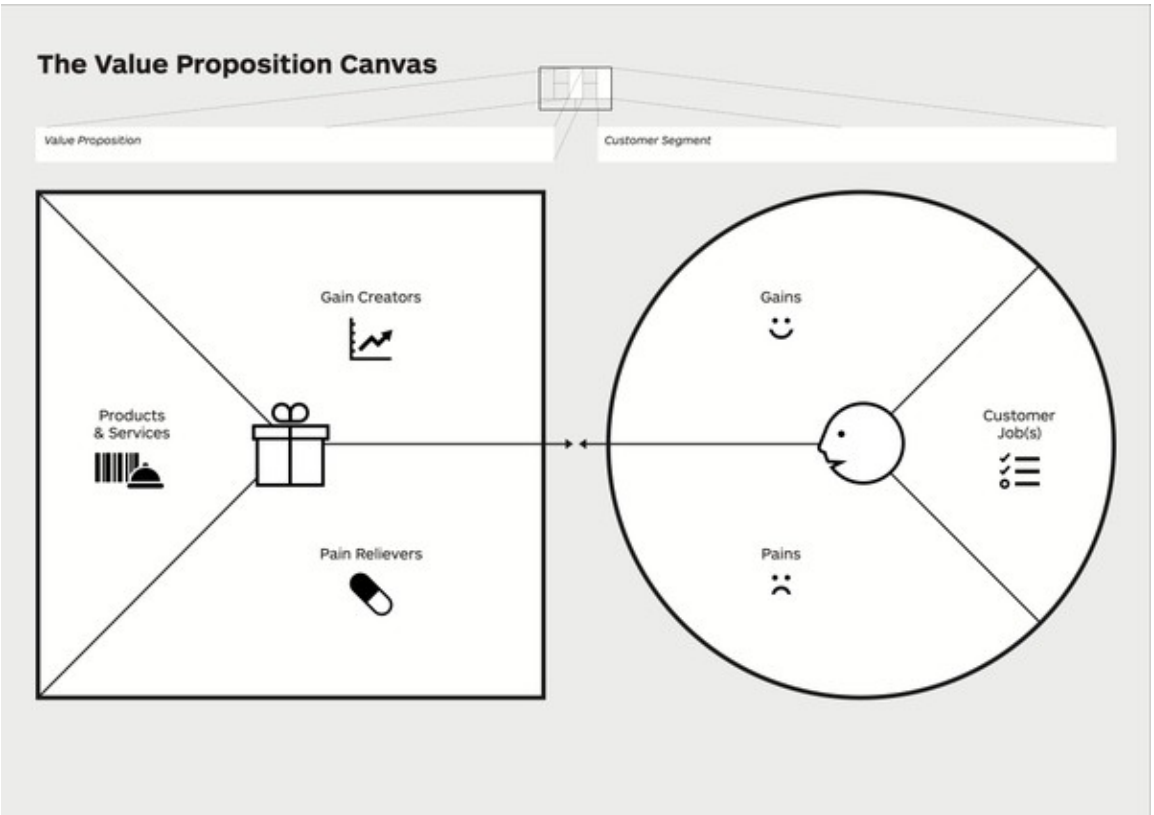
9.10 VALUE PROPOSITION CANVAS



The value proposition canvas.[xii]

Define *The value proposition canvas is a tool to visualize what your customer needs, and create value by connecting this to the envisioned product or service.*

When and why?	This tool can be used in combination with the business model canvas. This is a tool that can be used as input for ideation, but also to inform stakeholders about you user group or customer segment.
With whom?	This is a tool used by the design team.
How?	The video below will give a concise instruction of how to use the value proposition canvas.
Read more	https://strategyzer.com/canvas/value-proposition-canvas https://www.youtube.com/watch?v=ReM1uqmVfP0&feature=youtu.be

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9.11 IDEA GENERATION

Multi-stakeholder brainstorm sessions about the nursing home of the future

Ideate *Idea generation is essential in every design process. There are however uncountable numbers of ways to do idea generation, so we will elaborate on a few below, but mostly refer to books and websites that can help in this part of the process.*

When and why?	Idea generation happens in the ideation phase of the process. It is used for new input and concept development.
With whom?	Idea generation can be done within the design team, in homogeneous stakeholder groups and in multi-stakeholder sessions.
How?	1. Pick the topic or question you want to brainstorm about (define some starting questions. 2. Decide on which techniques you are going to use, pick multiple per starting question 3. Observe the brainstorm rules: - Every idea is a good idea at this point, don't judge, write it down - Build on each others ideas - Try to stay focused on one topic at a time - In brainstorms quantity go over quality, set a goal for your session (for example 100 ideas) 4. Start your brainstorm, use a technique until you run out of new ideas, then start a new technique 5. After your brainstorm, you can select the best ideas to develop or explore further. This can for example be done by using the COCD box: https://www.tuzzit.com/en/canvas/COCD_box
Read more	Byttebier, I., Vullings, R. (2015) Creativity in business, BIS Publishers Michalko, M. (2006). Thinkertoys: A handbook of creative-thinking techniques. Berkeley, Calif: Ten Speed Press. http://www.designkit.org/methods/28 https://personalexcellence.co/blog/brainstorming-techniques/

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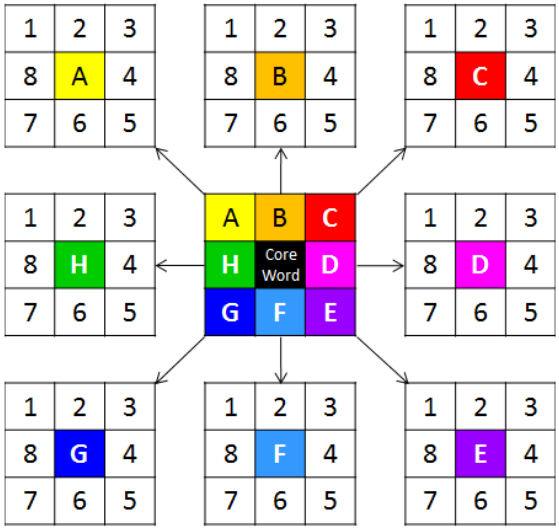
9.12 LOTUS BLOSSOM



How to use lotus blossom for a brainstorm[xiii]

Ideate	*Structured brainstorming by using association techniques.*
When and why?	This tool can be used in the ideation phase of the process, to brainstorm about a specific problem or opportunity. This is a great way to think beyond the first, obvious, solutions to a problem.
With whom?	This tool can be used in all different sorts of settings, but works best with a homogenous stakeholder group.
How?	Use the lotus blossom structure. Start with a problem or opportunity. And put this in the centre box of the lotus blossom. Brainstorm and associate words, ideas and concepts. Place the words around the core word. After that, place the new words into new quarters. Put more free associations around it. Repeat this as many times as you want.
Read more	https://www.slideshare.net/KoenPeters/using-cocreation-to-make-design-solutions-that-work-drupalcamp-leuven-2013 (sheet 22-23) https://thoughtegg.com/lotus-blossom-creative-technique/

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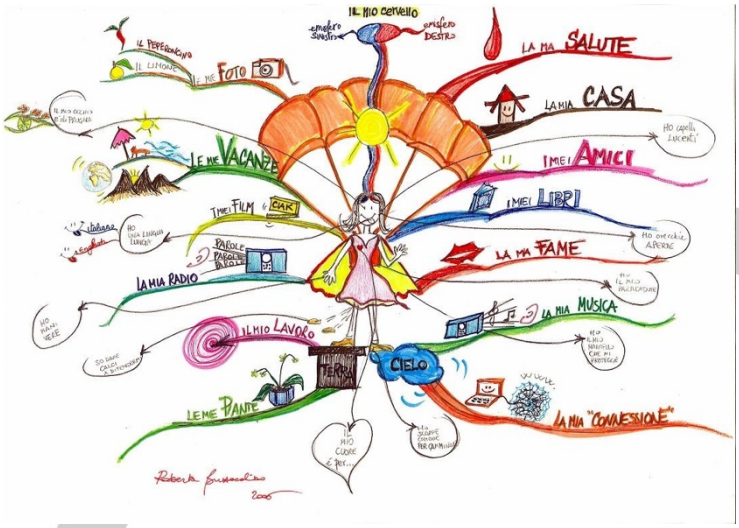
9.13 MIND MAPPING



Example of a mind map[xiv]

Ideate	*Choose a subject, put it in the middle of a piece of paper and write everything about around it.*
When and why?	This is a nice warm-up to start your brainstorm. Especially people who are not experienced in brainstorming might enjoy starting off with a technique that is familiar to most people. Mind mapping will provide you with topics to explore within the rest of your brainstorm. Mind mapping in general can be a nice way to get overview in your project.
With whom?	Mind mapping can be done individually, within the design team, or with participants in homogeneous stakeholder groups and in multi-stakeholder sessions.
How?	You can use a mindmap for a lot of things. To learn, to study, to think or create new ideas. Choose a central subject and connect words, thoughts, ideas, associations, etc with that central subject. You can write things down, but you can also draw.
Read more	Byttebier, I., Vullings, R. (2015) Creativity in business, BIS Publishers https://lifehacker.com/how-to-use-mind-maps-to-unleash-your-brains-creativity-1348869811 Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Rockport Publishers, 2012. Web. 28 Jan. 2017.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769975.

9.14 ACTING-OUT AND ROLE PLAY

Workshops in the VETO project by Fontys where professionals from the industries act out scenarios for making life more pleasant for bed-ridden older people in the nursing homes. The scenarios are acted out in combination with paper prototypes.

Prototype

Ideate

Evaluate

This is a great, active and approachable way to quickly , physically prototype and evaluate services and scenarios.

When and why?	Acting out sessions can be used in different stages of the project. They serve to make ideas perceptible and turn them in to an experience. The ideas can be adapted and evaluated right there and then, by the people involved.
With whom?	Can be done with different stakeholders in different settings
How?	Acting out means actually, physically acting out a scenario. The persons involved can get different roles in the play. Usually acting out is done in combination with (paper prototyped) artefacts. In some other cases, people can act out the artefacts as well. Especially in designing interactions between man and computer it can be valuable to have a person play the computer to test if the interactions come across naturally.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.designkit.org/methods/36 https://www.facebook.com/Project-VETO-Verpleeghuis-van-de-Toekomst-489845787776251/videos/ Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Rockport Publishers, 2012. Web. 28 Jan. 2017.

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9.15 RAPID PROTOTYPING

Example of a service prototype in action.[xv]

Prototype

Ideate

Evaluate

Rapid prototyping is a collective term for numerous methods and ways to quickly make prototypes about ideas, concepts and services. This can be done through several ways, like scenarios, mock-ups/paper prototyping and even sketches.

When and why?	The goal of rapid prototyping is to quickly make something tangible that can be evaluated.
With whom?	Can be done individually as well as with different stakeholders in different settings
How?	Rapid prototyping can be done using crafting supplies, drawing supplies or even by solemnly acting out scenarios. The real value of rapid prototyping is in evaluating the prototype with either the user or the design team by discussing it, if possible testing it, or evaluating the tangible concept. Rapid prototyping can also refer to the act of making a quick high-fidelity prototype, for example by using a 3D printer.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.designkit.org/methods/26

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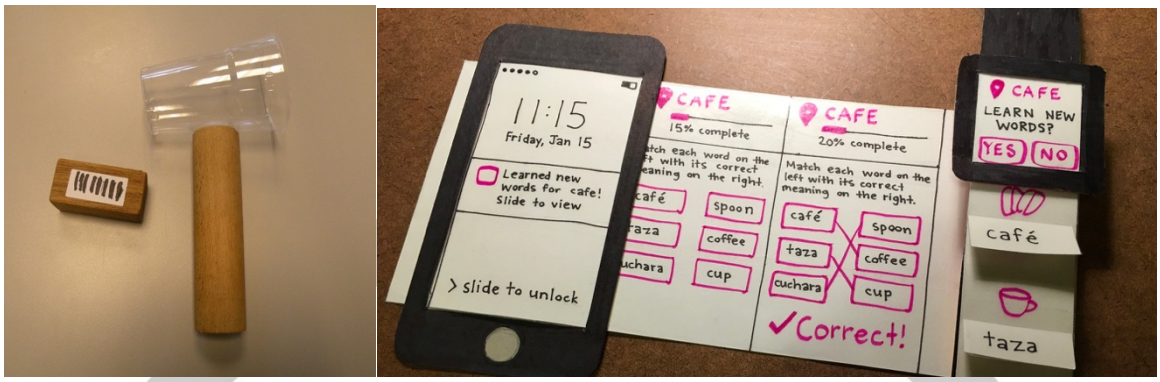
9.16 MOCK-UPS



Left: mock-up made during co-creation sessions with healthcare professionals in the nursing home in the SCHAT project of Fontys. Right: Example of a paper prototype to test an interface.[xvi]

Prototype *Ideate* *Evaluate*	*Mock-ups are physical and tangible explorations of envisioned products or interfaces. The key to mock-ups is that the technology does not work yet, but it can still be used to discuss, test and evaluate specific aspects of the design. Mock-ups are also referred to as paper prototypes.*
When and why?	Mock-ups are usually made in the front end of the design process to quickly test ideas. Making mock-ups can also be a standalone ideation tool.
With whom?	Mock-ups can be made by the design team and tested with users, but they can also be made by the users in co-creation sessions.
How?	Collect random craft supplies or create a specific toolkit for the topic at hand. Engage people to join you in your creative endeavour. Repurpose objects or use scraps. Mock-ups can also be used to test interfaces for apps or websites. In this case, the different screens are drawn on separate pieces of paper. With this tool you can test the interaction and flow with the interface. There are also tools available online to design these mock-ups.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam Sanders, E., Stappers, P., Convivial toolbox, BIS publishers, 2012, Amsterdam https://mashable.com/2012/06/07/mockup-tools/#VAiLzgaiMZq1 Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Rockport Publishers, 2012. Web. 28 Jan. 2017.

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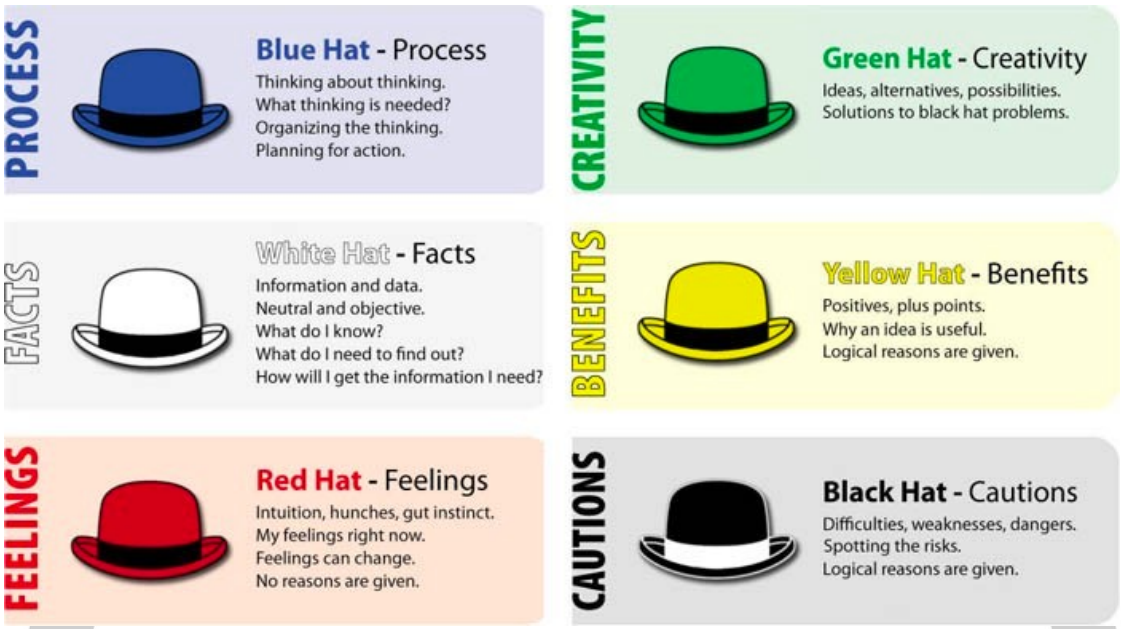
9.17 SIX THINKING HATS BY EDWARD DE BONO



The six thinking hats as proposed by Edward de Bono[xvii]

Evaluate

Ideate

Edward de Bono developed the method of six thinking hats. This methods forces to look at a problem, idea or concept from different perspectives. This allows the user(s) of this method to abandon their usual perspective and create fresh insights.

When and why?	This technique is great for evaluating ideas and concepts with a group of stakeholders at any time of the process.
With whom?	This tool is best used in a group of people, it can be interesting to gather people with different kinds of expertise and circulate the hats
How?	Either were the same (figurative) hat as a group and switch hats after a set amount of time to spark ideas and new input, or have everybody in the group wear different hats at the same time to spark discussion. Tip: Making the participants wear actual hats will make your sessions incrementally enjoyable. Consider crafting the hats prior to the session to get the participants in a creative mood.
Read more	http://www.debonogroup.com/six_thinking_hats.php https://www.youtube.com/watch?v=UZ8vF8HRWE4

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9.18 USER EXPERIENCE AND USABILITY TESTING

Evaluate *When prototypes are or have been deployed in context information and data can be gathered about user experience and the usability of the website. This is again a collective name for all sorts of methods that can be used to test your prototypes.*

When and why?	Testing can be done when there is an actual prototype that functions and that can be experienced.
With whom?	This is done with the user, if possible in context. It is not necessarily a co-creation activity, as the participants usually 'undergo' these tests. However, it is a necessary step in the development of a digital service.
How?	Usually this is done by emerging the user in the interaction with the prototype and interviewing them during or after the test, or via questionnaires or collecting data during the test. You can choose to collect qualitative data, quantitative data or a mix of both.
Read more	https://usabilityhub.com/ Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Rockport Publishers, 2012. Web. 28 Jan. 2017.

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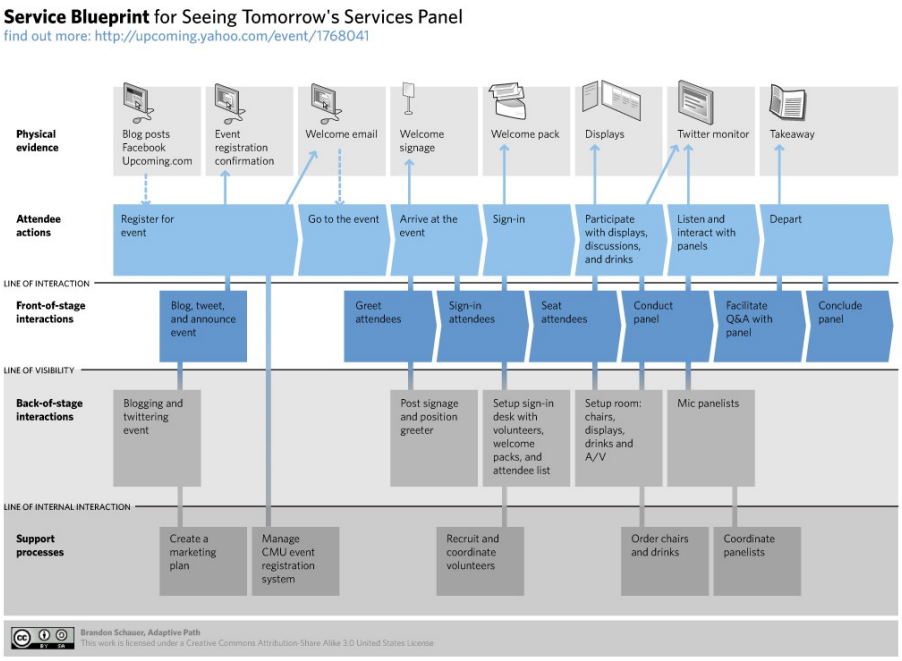
9.19 SERVICE BLUEPRINT



Example of a service blueprint[xviii]

Service design

The service blueprint is a canvas that can be used in different stages of the project. It is used to design services and especially look at services from both the side of the service provider as well as the side of the service receiver.

When and why?	This tool can be used in any stage of the process, either to develop a new service or to evaluate an existing one.
With whom?	The service blueprint can be filled out with both the service receivers and the service providers. It is a great tool to use in multidisciplinary settings.
How?	In the middle of the blueprint there is the line of interaction. On this line the touchpoints are documented between the service provider and the client. In the other lines steps such as processes within the company or actions from the client are documented.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.servicedesigntools.org/tools/35 Mary Jo Bitner, Amy L. Ostrom, Felicia N. Morgan, 2007, Service Blueprinting: A Practical Tool for Service Innovation, Centre for Services Leadership, Arizona State University,

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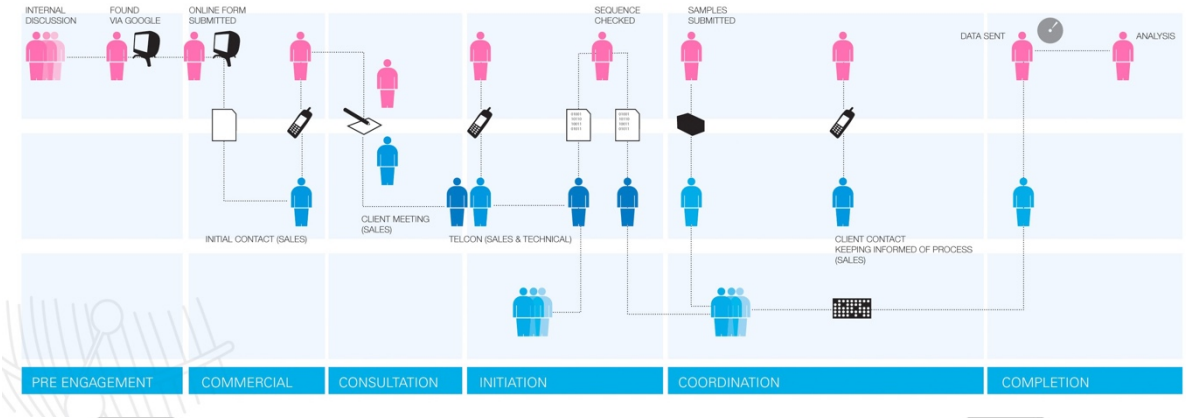
9.20 CUSTOMER JOURNEY MAP



Example of a customer journey map[xix]

Service design	*A customer journey map is an overview of all the touchpoints a client has with a service.*
When and why?	Customer journey maps can be used to evaluate or improve existing services or to develop new services. Customer journey are always visualized from the perspective of the user of the service.
With whom?	Customer journey maps can be made in co-creation sessions to envision new services. They can also be used in single sessions to document and evaluate existing services with the user of this service. Customer journey maps can also be the output of a design iteration and serve as input for other co-creation sessions.
How?	Making a customer journey map is basically making an overview of all the touchpoints a client (potentially) has with a service and evaluating these touchpoints on how 'good' they are. If you are not experienced with this tool, there are plenty of canvases that can be found online and be used in your session.
Read more	Schneider, J., Stickdorn, M. This is service design thinking, BIS publishers, 2014, Amsterdam http://www.servicedesigntools.org/tools/8 https://canvanizer.com/new/customer-journey-canvas

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10 COOD PRACTICES

10.1 SCHAT PROJECT

The SIA-RAAK funded SCHAT project is an ongoing project at Fontys University of Applied Sciences. SCHAT stands for Smart Care Homes and Assistive Technologies.

In nursing home a lot of items get lost or misplaced, from dentures and glasses to beds and keys. The goal of the SCHAT project is to develop and implement track and trace technologies to retrieve these items, or prevent them from getting lost altogether. This is all done from a user-centered perspective, using co-creation techniques. In the project consortium different SME's and nursing homes are involved. Below, some of the steps in the co-creation process are described.

10.1.1 STEP ONE:

DISCOVERING THE NEEDS OF THE HEALTHCARE PROFESSIONALS IN THE NURSING HOME, AND EXPLORING THE PROBLEM AND POSSIBLE SOLUTIONS IN CONTEXT.

Based on Oude Weernink et al. (2017). The researchers actively involve users at the beginning of the design process. This study aimed at involving the end-user as an expert and co-designer for the final design and therewith inspire and inform the research- and development team. The participants were 13 care professionals working in two nursing homes. This method can also be used to engage older people as end-users.

A methodology called contextmapping was applied. Context mapping is about documenting past experiences and create a desirable future experience. It makes use of creative tools that aid participants in telling their story. Our context mapping study consisted of two phases: a sensitizing phase and a group workshop.

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1. SENSITIZING PHASE

The first phase is aimed at preparing the participants for the workshop and create the right mind-set. All participants were given sensitizing packages two weeks prior to the session, to be used during five shifts. The assignments in the workbook differed per day, one example is: “Draw the inside of a storage room in the nursing home and elaborate on what items are inside”. The sensitizing packages were not meant to be analysed, but to make the user aware of their context before entering the workshops.

2. WORKSHOPS

The workshops were organized for the two nursing homes separately, but with the same set up. The main part of the workshop consisted of two exercises:

- Making a collage with positive and negative experiences with regard to assets that can be found in the nursing home. The assignment took twenty minutes and afterwards the participants presented their collages to each other. From their stories important insights and problems were documented on a flipover, visible for everybody.
- Secondly, participants were asked to make a prototype of a piece of technology that addresses one of the problems or opportunities they encountered during the first exercise. The technology did not have to be feasible or realistic. The participants received new materials like cardboard, paper, plastic cups, sticks, glue, scissors and tape. The exercise took thirty minutes and was followed by plenary presentations of the prototypes by the participants.

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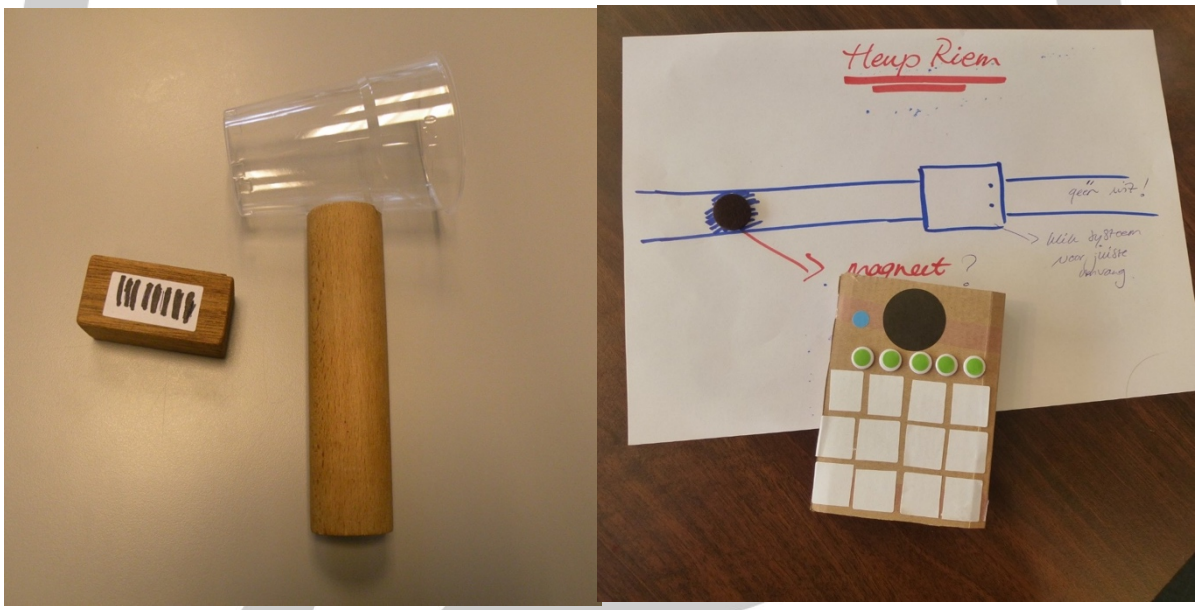
Results from collaging workshop



Results from prototyping workshop

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10.1.2 STEP TWO:

TRANSLATING THE INSIGHTS FROM THE WORKSHOP TO CONCEPTS AND SCENARIOS.

The insights from the first study were discussed among the designers and researchers. Insights from a literature review on tracking technology were taken in account and a total of 4 concepts including scenarios were developed.

One of the elaborated concepts including a scenario

10.1.3 STEP THREE:

SERVICE BLUEPRINT AND THINKING HATS IN A CONSORTIUM MEETING

All consortium partners (SME's as well as healthcare professionals) were invited to a co-creation session. The four concepts were used as input for these sessions, and the goal of these session was to first decide on which concept(s) to pursue and then to develop the concepts further from the different expert

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perspectives of the participants. The group was divided in two, and each group worked on two concepts.

Two techniques were used per group. First Edward de Bono's thinking hats were applied. This tool is included in the overview in this manual. The thinking hats portray different perspectives of looking at a problem or opportunity. While discussing the concepts, the participants were all invited to look at the concepts from a specific perspective, such as critical, optimistic or factual. New input was created for the concepts.

The next step was to work out one of the concepts in a service blueprint (a more detailed explanation of this tool is also included in this manual). In the service blueprint, service concepts are developed into more detail, resulting in a clear overview of the actions of the provider and receiver of the service. The tool can also be used to develop internal processes in businesses.

At the end of the sessions the two groups presented their blueprints to on another for final remarks.

Sessions with consortium partners

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10.1.4 STEP 4:

RESEARCHING THE ACCEPTANCE OF TRACKING TECHNOLOGIES BY DIFFERENT STAKEHOLDER GROUPS

The concepts were further developed into concepts for two potential prototypes. Three focus groups were organized, one with family members of nursing home residents, one with healthcare professionals working in the nursing homes and one with the experts and stakeholders from the consortium. In these focus groups the general opinion regarding these technologies was explored and evaluated through statements about privacy, ethics and the proposed concept. The output from these three sessions were included in the further development.

As mentioned before, this project has not yet been finished. Currently plans are being made to co-create the interface for nurses to work with the technology.

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769975.

10.2 YOUR EVERYDAY LIVED EXPERIENCE

The main goal of this study was to explore the everyday lived experience of the house by older people. Based on Felix et al. (2015).

10.2.1 METHOD

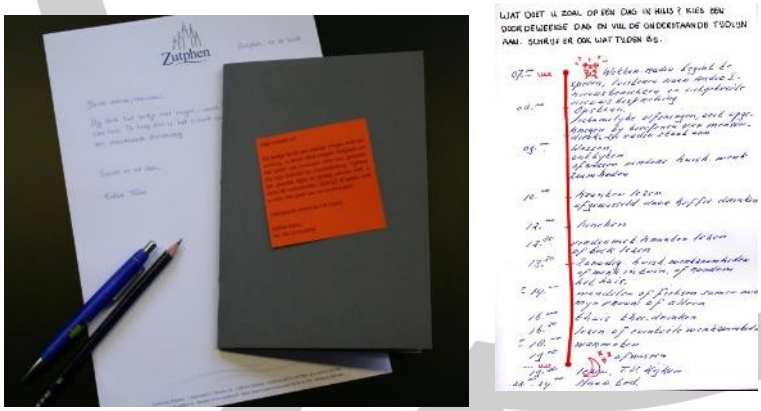
Diaries in combination with interviews in the home environment.

10.2.2 OBJECTIVE

Stimulate awareness of the everyday lived environment, in order to collect more in-depth information during the interviews. The participant becomes a co-researcher of his or her own environment.

10.2.3 REQUIREMENTS

Preparation time and materials to create and distribute the diaries. For the participants: time to fill out the questions. Approximately one hour for the interview.



The package as provided to the participant, including a diary, letter, pen, and pencil. And an example of a completed timeline with daily activities.

10.2.4 DESCRIPTION

A qualitative study design with mixed methods was used to explore older people's experience regarding their house. The study was carried out in Zutphen, the Netherlands. Twelve community-dwelling participants aged 65 years and older

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were purposefully sampled to provide variation in age, gender, marital status, tenure, and housing type.

Because the living environment is often taken for granted, “cultural probing” was the core of our method of data collection. This technique is mostly used in predesign research and aims at getting intimate knowledge about people’s everyday life and experiences.

The experience of the house by the resident is … “So fundamental a movement of everyday existence that it is not usually reflected

All participants received a blank diary with four instructions: Describe your daily activities, draw a map of the living room, describe your favorite place in the house, and describe your ideal old day. To emphasize its informal and inviting character, each diary was handmade. The diaries, together with a pen, pencil, and cover letter, were provided to the participants around two weeks before the interview took place. During the phone call to make an appointment for the interview, the participants were urged to complete the diary by pointing out that the content would be discussed during the interview. In the cover letter, the same message was repeated. This resulted in 12 completed diaries to be discussed during semi-structured interviews at the participants’ houses, so people were able to refer to their living environment. A list with open-ended questions based on a conceptual framework was used as a guideline; this also allowed the participants to freely express their experience of the house.

10.2.5 INSIGHTS & TIPS

- A strength of this method is the use of both diaries and in-depth interviewing. This worked two ways: Participants were able to prepare themselves for the interview and were stimulated to become more aware of their daily living environment. Cultural probes create a fertile start for a conversation and site visits.
- Make sure you adjust the probes to the target group. Variations are for example the use of a camera, blank notebook, maps or postcards.

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- Make personal contact with the participants in advance, and stimulate them to fill out the diary.

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769975.

10.3 PICTURE YOUR HOME ENVIRONMENT

The main goal of this study was to investigate the factors influencing the sense of home of older adults residing in the nursing home from the perspective of residents, relatives and care professionals. Based on van Hoof et al. (2016).

10.3.1 METHOD

Photography in combination with in-depth interviewing and focus group sessions.

10.3.2 OBJECTIVE

Stimulate awareness of the nursing home environment and provide an visual alternative for communication based solely on language.

10.3.3 REQUIREMENTS

Cameras and printed photos. Time for preparation and distribution of materials. Approximately 30-60 minutes for the interviews and 90 minutes for the focus group sessions. Participants: time to make photos.

Figure 10

10.3.4 DESCRIPTION

A qualitative methodology was chosen for this study, combining photography, in depth interviews with nursing home residents, and focus group sessions with relatives and professional caregivers. These groups were included to gain a wide set of perspectives. In total 78 people from four nursing homes in the south of the Netherlands participated. Residents either had a psychogeriatric, physical or combined diagnosis for admission.

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Photography is a method that has been used in research for decades. It allows participants to create a record of an event, capture complex environmental, health and social issues or to tell a story through images. As taking photos does not rely on language alone, it can be used with vulnerable or frail people who might not normally be included in research.

At the start of the project disposable cameras with a brief manual were handed out to the participants. After one week the cameras were collected and the photos were developed. The photos were used as a basis for the interviews (residents) and focus group sessions (relatives and staff). Individual interviews with residents were conducted, in order to maximize the input from every resident in a secure setting. Participants were asked to describe what the pictures meant to them in the context of the sense of home. In the focus group sessions more attention was paid to interaction and discussion of the findings among participants. The interviews were supplemented by items from a topic list, based on literature.

A professional said about making photos: "Since I'm stimulated to take a photo and tell something about it, I'm thinking about what we can do differently. Once I started to make photos I saw many things that can be improved".

10.3.5 INSIGHTS & TIPS

- Using a visual method stimulates people to become more aware of their everyday living and working environment. It prompts involvement and is fun to do.
- Sometimes there was a substantial period of time between taking photographs and the interviews (about two weeks). In future projects we would advise the researcher to undertake the photography together with the participants and conduct the interviews simultaneously or directly afterwards. The participants will be able to remember better why a certain picture was taken and provide a better description.

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- Think about the medium you use: in our case the disposable cameras resulted in half of the photographs being blurred. And again: adjust the method to the target group.
- Some relatives found it challenging to provide the photos.

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10.4 FIRST EXPLORATORY SOCATEL CO-CREATION WORKSHOPS IN EINDHOVEN

On February the 21st 2018 two co-creation workshops took place in Eindhoven. In these workshops two co-creation methods were tested. Furthermore, initial information about services in the context of the aging population was gathered. A short overview of the activities, we refer to the sessions as session 1 and session 2:

10.4.1 INTRODUCTION.

In session 1 we did not take time for the participants to elaborately introduce themselves, in session 2 we did. Consequently, in session 2, it took almost forty minutes before we actually started with the workshop.

10.4.2 WARMING UP.

In session 1 we used the “I did it my way” ice breaker (7.5.2) to warm up the creative session. We found that this was a very individual, long and quite difficult exercise (the moderators participated in the exercise).

In session 2 we used the “not my cup of tea” icebreaker. This was an easier exercise that also facilitated the group dynamics. Again, the moderators participated in the exercise.

Participants working on collages while students are observing dynamics and taking notes

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10.4.3 COLLAGE MAKING

We used the exercise of collage making (tool 9.3) to talk about what the participants need from services and others, and what they can mean to others. The participants received a canvas with these two questions and a set of magazines to give a visual response to these questions.

In session 2 we modified the canvas a little and put the word ‘services’ in the middle of the canvas to have the participants tailor their answer a little more towards institutional services. However, we noticed that the magazines provided did not evoke the right triggers. For the future, we would recommend either using specific magazines related to the topic, or a more carefully crafted toolkit with selected images.

The participants presented their collages and the moderator wrote down important topics on a flipover

Participants telling about their collages while writing important themes on a flipover

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10.4.4 BRAINSTORM

The next step was to form ideas regarding specific themes from the collage workshops, and place these ideas in one of three environments: Home, outside, online. These ideas were noted on a flipover.

Eventually, this part of the workshop ended up more as a group discussion about certain themes that were important to the partipants. This was also very insightful though. Furthermore we noticed that we needed more time for the collaging art than planned, so this part was a little rushed.

Brainstorm structured by images of 'locations'

10.4.5 THEMES

Our first insights from this study shows both semantic as latent themes. We see that there are a number of things important to the older population in our group: Safety, sustainability and contact with neighbours and family and friends.

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Furthermore we found that the older generations use technology and digital services as a way of expressing “I see you” (e.g. by playing WordFeud games and likes on Facebook) and as a way of letting people know they are still there and still okay. The people we spoke to don’t like the idea of needing help, they prefer to help others. On top of that, they find it hard to express their needs to other individuals, this is easier done with an institution.

It also became clear that there are a lot of social systems in place, which should be acknowledged and respected in (additional) digital services.

10.4.6 SOME ADDITIONAL INSIGHTS

- We really tried to keep this session concise in its goals, but still were too ambitious and did not get everything done within the time planned
- We tried to steer the discussions in the direction of technology and digital services, but really felt resistance from the participants in talking about this topic
- The second group was clearly less creative and visually oriented than the first group
- We did not have time to do a pilot study, but we would really recommend this. After the first session, we tweaked the tools and questions last minute for the second session

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- In both sessions the participants mentioned how the visual cues from the magazines inspired them to think about the posed questions.

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1 APPENDICES

CHECKLIST 'ETHICS IN CO-CREATION SESSIONS'

This checklist aids in considering some ethical issues that should be viewed in the sessions.

PRINCIPLE	AIM	PRESENT (YES/NO)
Previous to start session		
Data privacy and security: Information letter	Information letter was presented. Informed consent was signed before the start of the session.	
Data privacy and security: Informed consent	Purpose , benefits procedure, and possible risks are outlined. The form should inform how the session will be recorded (e.g. video-recorded), how the acquired data will be processed and stored. Possible reuse of the data is described. Contact information of the researchers is provided. Signatures of the participants.	
During the co-creation session		
Information	Participants were informed both verbally and in writing before the start of the co-creation session (i.e. regarding duration of the session, videotaping)	
Ease of redraw	Participants understand how to redraw from the session of desired.	
Transparant process	Participants understand the plan and purpose of the co-creation prupose	
Equality of participants	All participants are involved in the co-creation session; no participants are excluded to state their perspectives.	
Security of speech	There is an atmosfere of securtiy; all participants feel that everything can be said.	
Role of moderator	The moderator helps the participants to feel at ease, and facilitates the interaction between group members.	
After the co-creation session		
Transparant process	Participants are explicitly informed about who has access to the provided information and who will keep it safe and confidential.	
Information	Participants are explicitly informed about the dissemination of the results.	

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CHECKLIST 'ETHICS IN CO-CREATION SESSIONS'

This checklist aids in considering some ethical issues that should be viewed in the sessions. Completed forms should be returned to the Chair of SoCaTel (Yvonne van Zaalen).

PRINCIPLE	AIM	PRESENT (YES/NO)
Previous to start session		
Data privacy and securtiy: Information letter	Information letter was presented. Informed consent was signed before the start of the session.	
Data privacy and security: Informed consent	Purpose , benefits procedure, and possible risks are outlined. The form should inform how the session will be recorded (e.g. video-recorded), how the acquired data will be processed and stored. Contact information of the researchers is provided. Signatures of the participants.	
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Role of moderator	The moderator helps the participants to feel at ease, and facilitates the interaction between group members.	
After the co-creation session		
Transparant process	Participants are explicitly informed about who has access to the provided information and who will keep it safe and confidential.	
Information	Participants are explicitly informed about the dissemination of the results.	

NB. Are there items missing that should be considered during the session? Please, note them below.

Items		

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PARTICIPANT INFORMATION SHEET

SOCATEL
Co-creating for a better life

Fontys

Co-creation for better access to long-term health and social services

We would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

WHO ARE WE AND WHAT THIS STUDY IS ABOUT

We are a team of researchers based at Fontys University of applied sciences, interested in involving older people, healthcare workers and other professionals interested in health and social services in a process referred to as co-creation. This means simply listening to what older people and other interested parties have to say about current health and social services, and how they could be improved. This research is funded by the European Commission under its Horizon 2020 program.

WHAT WILL TAKING PART INVOLVE?

In the first instance, participation involves attending a **focus group**. This is a conversational event that brings together 4 or 5 people who have an interest in health and social services. Following this one-off focus group, you may be invited to attend a **workshop** focused on co-creation of new or improved health and social services. You are free to choose whether to participate in one or both of these events that will take place over the next 6 months.

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The **focus group** will take approximately 90 minutes. Focus groups take place in an office managed by Fontys. If you decide to take part, you will receive further details about date, time and location.

The co-creation **workshop** will take about 3 hours, with a break half way through it. People who participate in this workshop will be invited to meet again approximately 10 months later, when they will have an opportunity to discuss proposed improvements to the services that they put forward at the first workshop meeting.

The focus groups and the co-creation workshop will be video-recorded. This is important in order to capture the participants' views accurately. The proceedings of the co-creation workshop will also be video recorded. This is to ensure that we get an accurate picture of the kinds of changes that are proposed to the services. Moreover, the video-material could be used for educational and scientific purposes.

WHY HAVE YOU BEEN INVITED TO TAKE PART?

We are inviting you to take part in this study because we believe that you can give us valuable information and views on the current organization and delivery of health and social services for older people. Your views matter to us as you have recent experience of and/or expertise on these services.

DO YOU HAVE TO TAKE PART?

Participation in this study is completely voluntary. The decision to participate - or not - is yours. Accepting or not accepting this invitation will not in any way affect services that you may use currently or in the future. If you do decide to participate, you are also free to withdraw from the study at any time, without giving a reason.

WHAT ARE THE POSSIBLE RISKS AND BENEFITS OF TAKING PART?

We do not believe that the research poses any risks. If you need assistance in attending the focus group or co-creation workshop, we will work with you to ensure that your journey to the research location and back to your residence is smooth.

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You do not stand to directly benefit from participation. However, as the project hopes to yield improvements in how services are delivered, there may be such improvements that all potential service users can benefit from.

WILL TAKING PART BE CONFIDENTIAL?

Signed consent forms and video recordings are collected and retained as part of the research process. This means that you will be asked to sign the consent form and to participate in the research discussions under your own name. After the research events have taken place, we will ensure that the consent forms and recordings are safely kept and accessed only by research team members.

HOW WILL INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED?

Signed consent forms and original video recordings will be retained in Fontys university of applied sciences. This is in order to enable full exploitation of the research data in publications that may be prepared or completed after the project has finished. Under freedom of information legislation you are entitled to access the information you have provided at any time.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

It is important that the widest possible audience gets the opportunity to consult and learn from the findings of this project. Making findings available on open access basis is also a core requirement of the funder, the European Commission. People with a potential interest in the findings include academics, university students, policy makers, service users, and diverse professionals working in the planning and delivery of health and social services for older adults. In order to facilitate access to all these groups, the research team will publish and publicize the findings in diverse, open forums such as college classrooms, the Internet (project website), online courses, academic journals, international conferences and publications (journal articles, book chapters and reports).

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WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

For any questions or further details, please contact:

Name:

Phone:

Email:

THANK YOU

Contact researcher:

Name:

Phone:

Email:

Respondent identification number:_____

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Informed Consent Form

‘SoCaTel: co-creation with older people’

1. I hereby confirm that I have read and understand the information provided to me on_____. I have had the opportunity to ask questions and these have been answered satisfactorily.
2. I understand that my participation is voluntary and that I am free at any time to step out of the research without providing reasons. This will not, in any way, affect my medical care and rights.
3. I give permission for making photo- and video recordings during the co-creation sessions. This photo- and video material is collected for teaching and research purposes.

4. I understand that my participation in the photo- and video recording is voluntary and that I am free at any time to refrain from this participation without providing reasons.
5. I understand that all the relevant data collected during this study will be used by researchers at Fontys. I give permission to these researchers to use the video recordings for educational and scientific purposes.
6. I give permission to participate in this research study.

Name respondent	Date	Signature

Researcher	Date	Signature

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