Age-ing Future
Curious toolbox

Meta-design toolkit for activating elderly group
and a sustainable ageing future

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CURIOUS TOOLBOX
Abstract

In the beginning of the 20th century, there were 87 million elderly people aged 65 and older. However, by the years 2030 and 2050, elderly people in China will rapidly grow to 243–252 million and 352–398 million, respectively. (Zeng, Y., 2010) The population aging transition will take place in China with this staggering rapidity, compared to European societies. Predictably, as for this aging pressure, Chinese society still needs more time to react to it. Ageing is not only a challenge for the society but also a big challenge for design. Along with the increasing numbers of the elderly, they cannot be ignored by design any more. The discussion here aspires to move the design mindset beyond accessibility or in other words ‘Design for disability’, and introduce ‘Design for capability’ as a process of social innovation. In the paper, the design research will focus on meta-design, as well as participatory design and social innovation as auxiliary research, for designing a ‘seed’ as a change agent. The ‘seed’, as a meta-design solution, can be described as ‘a shared design endeavor aimed at sustaining emergence, evolution and adaptation’ (Giaccardi, E., 2005). It offers a framework for both designers and users to change original mindsets in the practice. (Giaccardi, E., 2005) Furthermore, the following question will be carried through the whole research: how to reposition ourselves as designers on the intersection of meta-design, design for social innovation and participatory design? What is the design approach to generate tools that can encourage inactive elderly citizens as ‘passive receivers’ to transform as ‘active participants’? How can the tools studied here contribute in a synergic relationship within stakeholders as a mean to make elderly citizens’ urban living more sustainable in terms of participating, learning and expressing actively?

Key words

Meta-design
Designers’ roles
Toolbox
Ageing
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Xinyue Shao
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1. Introduction

1.1 Background and problem description

In the beginning of the 20th century, there were 87 million elderly people aged 65 and older. However, by the years 2030 and 2050, elderly people in China will rapidly grow to 243–252 million and 352–398 million, respectively. (Zeng, Y., 2010) Have Chinese society gotten ready for the challenge with this extremely high speed of population aging? Compared to European societies, the population aging transition has taken place over a century or more. In China, however, this change will take place within a few decades. As a result, China will reach more or less the same level of population aging as in most developed countries by the middle of this century. Indeed, the proportion of elderly in China will increase much faster than in almost all other countries in the world. According to UN population projections (United Nations 2005), it will take about 20 years for the elderly to increase from 10% to 20% of the total population in China (2016–2036), compared to 67 years in Sweden (1947–2014).” (Zeng, Y., 2010) Even Chinese government indicates that it will support the development of aging related service system, still, the current status of pension system is facing various dilemmas. Obviously, Chinese society still need time to react on this situation. Now, let’s put the policy aside for a while and asked who actually owns the problem? Is it the elderly? Yes, of course. This is the enter point of the whole project. To add a personal motivation, my two grandfathers who are situated in the problem, live totally different lives. As a conventional notion, the elderly has been taken as ‘passive receivers’ for long time. For instance, my grandfather is a typical ‘passive receiver’, he is silent and tolerant but become more and more isolated in his past memories. In the end, senile dementia breaks down his health and takes him away from me. On the one hand, these ‘passive receivers’ as my grandfather may get used to being silent or doesn’t know how to express his ‘voices’ that represent his inspirations, aspirations, values and challenges in their daily lives. On the other hand, the society didn’t offer more space for them to express their ‘voices’ or they are even being ignored nowadays. For my other grandfather, different from a traditional ‘passive receiver’, he is an ‘active participant’. He likes to explore new things and share them with
our family members. He is willing to participate in the changes happening in his life, the surrounding and the world. Then again, is it only owned by the elderly? No, of course not. It is you, it is me, it is everyone. You may respond ‘I am still young for this topic.’ Then when is old enough? Since we have owned life, ageing has become a part of our future. Indeed, everyone has a stake here as an individual to respond to an ageing future.

Also, in the research ‘Ingenuity in ageing’ by Dr. Yanki Lee, a design researcher in the Helen Hamlyn Center for design at the Royal College of Art, she highlights the notion of ageing as ‘a unique experience for each individual’ and ‘live in the presence of all your future selves’ by historian Peter Laslett as the base of her research. (Lee, Y., 2012) Therefore, what is explored here through design is to start from an individual aging experience to conceive a different ageing future as ‘a new idea that works in meeting social goals’ (Mulgan, J., 2006). Meta-design was adopted as an important approach to guide the design outcomes for this project, as well as, participatory design as auxiliary research to support meta-design to generate the final design outcome as a ‘seed’. A ‘seed’ can be described as ‘a shared design endeavor aimed at sustaining emergence, evolution and adaptation’. (Giaccardi, E., 2005) It offers a framework for both designers and users to change original mindsets in the practice. (Giaccardi, E., 2005)

To narrow down the topic into a specific context here in the paper, the design practices and research contextualizes in Xi’an, which is the capital of Shaanxi Province, China and has a population of 8,705,600 and in Växjö which is a city belongs to Kronoberg County, Sweden. In the first research phase, the survey was sent out to the public both in Xi’an city and Växjö city, with the purpose of inquiring the general notion of the boundary of ‘become the elderly’. In the second research phase, interviewing was selected as a tool to a further grasp of collaborators which are defined here as over 65-year-old active and independent citizens. Interviews took place in Xi’an city and five public parks and one nursing home that were selected specifically. In the third research phase, ‘Life dictionary’ workshop was managed as the same time as the interview, with the purpose of learning from the collaborators about their active lifestyle. In the phase of co-design and prototyping the final design outcome, it took place in Växjö city. For the project, internal stakeholders comprise over 65-year-old active and independent citizens, over 65-year-old and inactive but independent elderly citizens, designers and the public.
The focus for the project in the current stage is the relationship within the internal stakeholders. As for the further growth of the project, it may lead the focus to the relationship between internal stakeholders and external stakeholders, for instance, policy makers, product manufactures and care service providers. (see figure1)

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**Figure 1: Stakeholder map for ‘Ageing Future’ project**

1.2 **Purpose and research question**

This paper aims to contextualize and explore how design can intervene in this complex and future-oriented social issues of ageing, meanwhile, repositioning the role of design, rethinking design approaches and generating the design solution. As well as to question ourselves as designers and the public, whether the word ‘future’ is only owned by young, whether the word ‘ageing’ is only owned by the elderly. With the intention of changing the conventional notion of ageing and raise awareness of the situation of ageing. A different perspective on aging will be taken here: Rather than focusing on disabilities, the focus here will be on the capacities. Instead of working for problem solving, the approach
here will be to work for integration of empathy, system thinking and complexity. Design needs to look for and develop new tools that can encourage synergic relationship within internal stakeholders in the current stage and between internal stakeholders and external stakeholders in the future as well. Moreover, the tools can activate elderly citizens to become ‘active participants’ and work for the needs of participation, affection, understanding, creation, identity and leisure as fundamental human needs. (Manfred Max Neef, 1991) Furthermore, by using it to create a space that allows various inspirations, aspirations, values and challenges in their daily lives to be heard and open for discussion.

In short, the research questions are formulated as how to reposition ourselves as designers on the intersection of meta-design, design for social innovation and participatory design? What is the design approach to generate tools that can encourage inactive elderly citizens as ‘passive receivers’ to transform as ‘active participants’? How can the tools studied here contribute in a synergic relationship within stakeholders as a mean to make elderly citizens’ urban living more sustainable in terms of participating, learning and expressing actively?

2. Theoretical Framework

2.1 Design research landscape
2.1.1 Approach to work with complexity

**Meta-design as an ambitious design field.** In terms of ‘meta-design’, it adopted the Greek word ‘meta-’ as a prefix which means ‘change of place, order, or nature’. Compared with ‘design’, ‘meta-design’ seems like has greater ambitions semantically, as for it involved the meaning of ‘change’. Along with the development of the notion of meta-design, the term stands out from conventional design field and provides a chance to reconsider the boundaries and scope of design critically and reflectively. (Giaccardi, E., 2005) One organization worth highlighting is the Center for Life Long Learning and Design (L3D) of the University of Colorado at Boulder. Which has been working on developing meta-design conceptually and operationally. Conceptually, meta-design proposes a design theatrical framework for creating new environments and tools to encourage users to participate in ongoing systems actively as ‘owners of problems’ (Fischer, G. et al., 2004.) and contribute to continuous development of the system as co-designers. Moreover, meta-design emphasizes an ‘under-designed’ system (Fischer, G. et al., 2004.) so that design spaces for others could be created, as well as ‘designing the
design process’ (Fischer, G. et al., 2004.) to allow broad participation. Different from conventional design, no matter objectives, techniques, or processes meta-design shows it ambitions of changing. Therefore, meta-design is selected as an approach to meet complexity and intervene in the situation of aging.

*Meta-design has capacity to work with the complexity and the emergent challenge.* To demonstrate the capacity of meta-design in working with the complexity as the emergent situation of ageing and the challenge to open up the system for users, including the four areas mentioned below.

**Open system.**

Operationally, the theoretical work on frameworks and approaches of meta-design is adopted ‘The seeding, Evolutionary Growth, and Reseeding(SER) Process Model’ (see figure3) by L3D.

![Figure 3: The Seeding, Evolutionary Growth, and Reseeding (SER) Process Model, (© L3D, University of Colorado). (Fischer, G. et al., 2004)](image)

This model comprises three phases which are: seeding, evolutionary growth and re-seeding and briefly two groups of stakeholders which are developers and users. Usually the whole process of design is divided into two different stages: design time and use time. (Fischer, G. et al., 2004.) Generate a seed and seeding the seed to an information space are two steps that are included in the design time, and in this design time meta-design collaborates with participatory design and its designing-with mindsets (Sanders, Liz, and Pieter Jan Steppers., 2014) for shifting the role of users, which is defined as over 65-year-
old active and independent citizens in this project, as ‘experts of his or her experience’ (Sanders, E.B.-N. & Stappers, P.J., 2012.) of active and positive elderly lifestyle, to work together with the developer, which is defined as designers in this project. Here the objective is that designers are learning from users’ experiences to understand the existing needs the approaches of being ‘active participants’ and generate a seed for seeding. In the phase of evolutionary growth, it is use time for various stakeholders of ageing as co-designers to create and contribute their emergent needs, objectives of ageing into the seed. In the phase of reseeding, it is another round of design time for designers back to the system and work with all the information from the evolved information together with stakeholders to reseed an evolved seed for new emergent needs and objectives. Through this meta-design working process, which comprises the idea of inclusive participation and evolution, meta-design creates a modifiable and evolvable open system for users. With the aim of supporting more complex interaction, this open system empowers users to modify it at use time for emergent needs. (Fischer, G., & Giaccardi, E. 2004 [in press])

**The emergent challenge.**

In this unpredictable real world, the challenge of design is not solving continuous emergent problem, but rather creating spaces and open up for more creative and sustainable solutions. In this way, improvisation and evolution transcend luxury as a necessity. (Elisa Giaccardi & Gerhard Fischer, 2008) To accommodate to improvisation and evolution, meta-design proposed the SER model to support an open system as mentioned before. However, meta-design still needs to face to the challenge of creativity and evolution are understood and addressed insufficiently, when it applies to the real world. (Giaccardi, E. & Fischer, G., 2008.) Three levels of design are contained within meta-design, which are ‘designing design’, ‘designing together’ and ‘designing the in-between’. (Fischer, G., & Giaccardi, E. (2004 [in press]). (see figure 4)
Figure 4: Overview of the design space for meta-design. (Fischer, G., & Giaccardi, E. 2004 [in press]).

As the figure shows that the second and third level of design space for meta-design are working for the dimensions of social and cognitive, besides, meta-design also supports bottom-up initiatives. Social innovation is seen as an approach to contribute sustainability. (Mulgan, J., 2006) And main aspect here in the project is focus on social. Therefore, social innovation could collaborate with meta-design in order to complement and reinforce meta-design applies in the reality environment. By involving existing place and active individual stakeholders or active communities as users at use time are the means of collaboration happens between meta-design and social innovation. To challenge the mainstream ideas of how things, have to be solved, the approaches of bottom-up social innovation lies in: (1) (re)consider the importance of collaboration; (2) Reunion of existing assets in an innovative way; and (3) depend on individual efforts instead of expecting the general change happens in the politics, economy. (Manzini, E., 2014.) And creatives communities are involved in, as ‘active participants’ to invent, enhance and manage feasible solutions for sustainable ways of living. (Meroni, A., 2007) These

<table>
<thead>
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<th>Levels</th>
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<th>Problem</th>
<th>Dimensions</th>
<th>Methods and techniques</th>
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<tr>
<td>First level</td>
<td>Designing design: meta-designers play an important role in establishing the conditions that will allow users to become designers</td>
<td>Anticipation. Users’ needs and tasks cannot be fully anticipated at design time (they are ill-defined and change over time)</td>
<td>Epistemological/computational</td>
<td>End-user development and seeding: users transform, modify, and adjust systems to achieve greater fit between what can be foreseen at design time and what emerges at use time</td>
</tr>
<tr>
<td>Second level</td>
<td>Designing together: designers and users collaborate in the design activity, both at design time and at use time, and at different levels of social aggregation (as an individual, group, and/or community)</td>
<td>Participation. Users need to be engaged in the problem framing/problem-solving process both at design time and use time</td>
<td>Social/cognitive</td>
<td>Participatory design: users are involved in the initial setting stage at design time, while critiquing and other support techniques empower users to learn and become designers at use time</td>
</tr>
<tr>
<td>Third level</td>
<td>Designing the in-between: defines how co-evolutionary processes and co-creative behaviors can be sustained</td>
<td>Socio-technical. Social and technical dimensions need to be integrated not only in order to be optimized and efficient, but to let new interactions and relationships emerge</td>
<td>Cognitive/social</td>
<td>Emotional seeding and agency patterning: methods and techniques to allow sensing, emotioning, and “affective” activities among users</td>
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creative communities could be involved in the evolutionary growth as users. For long-term existence, top-down and bottom-up social innovation need to collaborate with each other. (Manzini, E., 2014.) As the developers and users for reseeding the seed. In this way, all the information in the evolved information space could be meaningful resources to support reseeding an evolved seed for continuation grows in larger scale. Through collaboration with social innovation and participatory design (see figure 5), the emergent change of meta-design could be overcome.

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<td><strong>Design process</strong></td>
<td>DESIGN TIME</td>
<td>USE TIME</td>
<td>DESIGN TIME</td>
</tr>
<tr>
<td><strong>Collaboration of three design fields</strong></td>
<td>Meta-design + Participatory design</td>
<td>Meta-design + Social innovation</td>
<td>Meta-design + Social innovation</td>
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<td><strong>Collaborative factors</strong></td>
<td>• ‘under-designed’ system</td>
<td>• Users as co-designers</td>
<td>• Apply in reality (social environment)</td>
</tr>
<tr>
<td></td>
<td>• ‘Designing the design process’</td>
<td>• Apply in reality (social environment)</td>
<td>• Top-down and bottom-up</td>
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<td></td>
<td>• Designing-with mindset</td>
<td>• Bottom-up</td>
<td>• Various active users (individuals/communities)</td>
</tr>
<tr>
<td></td>
<td>• Shift the role of users:</td>
<td>• Various active users (individuals/communities)</td>
<td>• Existing place</td>
</tr>
<tr>
<td></td>
<td>• ‘experts of his or her experience’</td>
<td>• Existing place</td>
<td>• Existing place</td>
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Figure 5: The collaboration of meta-design, participatory design and social innovation

A Seed.

Rather than designing a complete system that is insufficient to tackle continuous emergent new tasks, meta-design claimed the system needs to be ‘under-designed’. Under-design proposes social-technical tools for the ‘owners of problems’ in order to use them in their own way. Besides, ‘designing the design process’ so that users can take over the tools work as co-designers. (Fischer, G. et al., 2004.) To unfold these two essential activities, the tools should support multiple usage, provide free space allows innovation and methods of usage. Since participatory design is collaborating with meta-design, and use a designing-with mindset, a form of toolbox enables methods, tools and techniques continuous are being involved while users are participating in the development process. (Sanders, Liz, and Pieter Jan Steppers. 2014) Therefore, toolbox is selected as a form of the seed. To face of ageing as an emergent situation and challenge, social innovation works as “a new idea that works in meeting social goals” (Mulgan, J., 2006) The seed here as this ‘a new idea’ to meet a goal of collecting various efforts to
reach different objectives of ageing. The content of the toolbox contains tools that aim to help users to explore their own objectives, capacities and methods for the theme of ‘Ageing Future’; and tools that provide various materials for the users to create physical tools. Meta-design tools ‘the five-levels of processing storytelling’ (Tham, Lockheart, et al 2008) is adopted as a tool to support self-exploration. For the reason that ‘the five-levels of processing storytelling tool’ promotes emergent synergies in a way of enabling individuals to recognize that they are part of community, while they are telling stories from the level of sensual, factual, systemic, future until synthesis. (Tham, Mathilda & Jones, Hannah, 2008) Finally, to pack all these crucial factors, it is a seed.

2.2 Approaches to contribute social sustainability

The landscapes for sustainability usually comprises of ecology, economy and culture. (Thorpe, A., 2007) Here the term of sustainability is used as social sustainability to address social issue of ageing, with the aim of working for human well-being in particular for the elderly group. The approaches include the following aspects. Firstly, design field notices more and more that design for disability is insufficient for facing the issue of ageing, and a change of design mindsets in needed. As the design research ‘Ingenuity in ageing’ claimed ageing as resources instead of a problem. (Lee, Y., 2012) This research provides design a new perspective of how design could work with the issue of ageing. Dr. Yanki Lee contextualize her research on the campus of Tsinghua University, which is one of best university in China, by collaborating with 9 retired academics. Through the in-depth investigation of this focus group, ‘ingenuity of ageing’ is concluded as individual capacity of addressing life challenges in the level of physical, psychological and spiritual; making connections with the surroundings; seeking opportunities for keeping and improving skills. Design is used as an approach to establish a platform with the intention of identify, show and discuss examples of aged culture. (Lee, Y., 2012) This research on ageing emphasizes how individual stakeholders have the capacity to find solutions in terms of ageing that suit their individual objectives best. Through the case study, it inspires ‘Age-ing Future’ project to consider the relationship between design and ageing is not ‘design for ageing to solve problems’ but ‘design with ageing for cultivating potential capacity’. Second, meta-design promotes a new approach
of design work and shift the role of designer to one of team participants. Since meta-design shares an objective with participatory design that includes users as co-designers in an ongoing process. (Fischer, G. et al., 2004.) In the stage of generating a seed, the designers work together with users, or in other word, ‘experts of their experience of ageing’ as a team. As it mentioned in the early section, meta-design requires designers to design an ‘under-designed’ system to open more space for users to participate in continue developing process and work for ‘designing the process’ in order to get broad participation. In the seeding phase, designers act more like an agent to facilitate innovation initiate by the elderly. In the phase of reseeding designers back to the system as team members, who are responsible for generation, analysis and interpretation of all the information (Sanders, Liz, and Pieter Jan Steppers., 2014) that are collected by the ‘seed’.

3. Method and implementation

3.1 Design research

3.1.1 Survey
In the first research phase, the survey was sent out to the public both in China and Sweden, with the purpose of inquiring a general notion of the boundary of ‘become the elderly’. In this survey, the term ‘elderly’ was still used as a vague definition to indicate to the group that this project will collaborate with. In total, the participants in this survey are 61, the span of the age is from 20 to 60 years old, the majority are 21 to 40 years old. Through the answers to the questions ‘how do you define the elderly?’ and ‘do you define yourself as elderly?’, showed that the notion of the elderly is not only about age but more about the way of act and think. Sometimes, it may only be about appearance. For instance, ‘the elderly is who are stubborn’, ‘age is experience’ and ‘it is just a state of mind’. This survey brings forward an interesting aspect for the project, which is although the general notion of ‘the elderly’ usually is stereotyped and negative, there still a group of people communicate ageing as valuable.
3.1.2 Interview

In the second research phase, the interview was select as a tool for face-to-face communication with over 65-year-old citizens. The interview took place in Xi’an city, China with the same questions, as provided in the survey, ‘how do you define the elderly?’ and ‘do you define yourself as elderly?’. The answers to these questions from the public are function as a trigger to bridge the discussion about ageing between the interviewees and the public. The answers to the interviews by over 65-year-old citizens unlike the answers to the survey by the public, they tend to simply defined ‘the elderly’ by means of age, and they consider ageing as a life situation. As for the question of whether they defined themselves as ‘the elderly’ and for what reason. They usually organize the answer in the structure of ‘In fact, I am…years old however, I am still…’ to emphasis that age is not a problem for them to keep a positive lifestyle. As one of interviewee said ‘In fact, I am 80 years old already, however, I am still dancing here with my friends every day.’ After the interview, for the next research phase is deep into reason and important factors behind these active mindsets.

3.1.3 ‘Life Dictionary’ Workshop

The context.

This research phase took place in China, this week-long design research aims to work with over 65-year-old citizens in Xi’an city. The ‘life dictionary’ workshop is conducted in one nursing home and four popular public parks with the intention of meeting ‘passive receivers’ and ‘active participants’, as two types of over 65-year-old citizens in terms of the attitude of ageing, for a better understanding of their needs, as well as grasp active participants’ strategies of exploring, learning and expressing. The workshop is described as creating your own 'Life Dictionary'. For the reason that the expression ‘in my dictionary there is a/no word called…’is really common to use in daily life to articulate and emphasis the speaker’s standpoints. The goal of the workshop is that through design approach to get the insight of the needs for the elderly group and sum up the important
factors of becoming active participants. Also evaluate the tools that are used here in the workshop for generating ‘curious toolbox’.

**The process.**

Each workshop is half day long in one place, it begins with a short introduction about ‘Age-ing future’ project, and the goals of the workshop, and then the tools will be provided for all the participants. After the participants create their ‘life dictionary’ the short presentation about the outcomes is required. Six participants from the nursing home attended the workshop. Over half of them had high education background, and the rest of the participants don’t have high education background. And twenty-five participants attended the workshop from all five public parks. The majority of them take part in various self-organized hobby clubs, and the rest of them participate in individual activities.

**The tools.**

The tools (see figure 6) are inspired by five levels of processing storytelling meta-design method. With the intention of encouraging collaborators telling stories in the level of sensual, factual and relational, the tools contain three participatory design exercises, which are ‘word collage’, ‘picture collage’ and ‘colour collage’. The collaborators need to express their current life state and future vision plan by using words, pictures and color to make collage. By working with collaborators in this way, so that enable them to express their thoughts not only facts but also emotions and relations. Moreover, these three design exercises were set step by step on purpose to enable collaborators to articulate a concrete state to communicate an abstract feeling. As an inquiry-focused approach, the stories may provide explicit answers to the following questions: How they express their value, inspirations, aspiration and challenges? What ‘age-ing’ means to them? What are their concerns about for now and future?
The elderly life as the loudest silence zine

Zine (see figure 7) is selected as a form to reflect on the emergent needs that the collaborators expressed through the tools that the ‘life dictionary’ workshop provided. The title of the zine ‘the elderly life as the loudest silence’ implies these needs for the elderly is not getting enough attention within the society, even though a large group of ageing population have these needs. This zine will be included in the ‘curious toolbox’ to show which needs that design endeavor to meet in the 'ageing future' project.
In order to highlight the needs of affection, understanding, participation, creation, identity and leisure, the following words are picked up from the ‘word collage’ section, which are ‘contradiction’, ‘friend’, ‘study’ and ‘open-minded’ as key words showed on the zine. The word ‘Contradiction’ is often used by the collaborators in the nursing home. The collaborators here have a common mindset, that to live in the nursing home is a way to let their children relief from the pressure of taking care of them. Although they believe this is the best way to show love and affection for their children, they still have strong feeling of loss their home. ‘Friends’ is mentioned the most frequently by the collaborators both form the nursing home and five public parks. ‘Friends’ means someone they know because they frequently meet in the park, supermarket or some other place, or ‘friends’ means someone they have known for a long time. When they spoke about how to become active, ‘Friends’ appear to be an important agent to encourage them to try new things. The word ‘Study’ is usually mentioned as an important thing in their current and future life by the collaborators from five public parks. In these the five parks, there are various activities taking place, some are organized by different self-organized hobby clubs, some are arranged by individuals. For instance: dancing, taiji, play chess, photography, play diabolo, chorus, Chinese calligraphy, and so on. All the collaborators here show a great enthusiasm of studying, they indicated that learning new things can help them find new values of life and feel satisfied about study outcomes, especially, when they have improved their skills. To keep studying is a way for them to meet the need of understanding, creation and identity. And their hobbies could help them become a part of community again together with others who have same interest. Within this community, the learning process became more simple for them, they could help each other find a solution together. The word ‘Open-minded’ is often picked up for expressing the mindsets that life, currently is optimistic and confident by the collaborators from the five public parks. Make plans for life and obey their own life routine is their approach to face ageing.

Overall, the outcomes of this workshop inspired a way to reach the inactive elderly group and a means to generate a toolkit through individual experience as a method. As mentioned before, active elderly friends are important change agents of activating
inactive elderly group, therefore, the toolkits will be deigned together with active elderly group as main co-designers in the design time and it will be taking over by them later in the use time. For the reason that ‘inactive elderly group’ is an imprecise target group and hard to be defined in the design time, so that in the design time and use time, active elderly group as co-designers can define it while they create toolkits. In this workshop, word collage, picture collage and color collage are used as three layers to encourage the active elderly group to tell stories, in the process of conducting the workshop, color collage functions better than the other two, since sometimes, writing and finding the right pictures becomes an obstacle for expression. It provides hint is that when the toolkits are generated, what elements might become the potential difficulties of using should always be cautious of.
Figure 7: The elderly life as the loudest silence’ zine
3.2 Manifesto: Ageing Future as a call for active participation

‘Age-ing future’ manifesto (see figure 8) will be included in the ‘curious toolbox’ with the purpose of articulating the stand point of the project. The word ‘ageing’ is split into ‘age’ and ‘-ing’ with the intention of showing that everyone is involved in this project as a stakeholder for ageing. Also calls for broad users to contribute their objectives and capacities to the issue of ageing and make changes by participating in this project. Moreover, ‘stay curious’, ‘keep explore’ and ‘speak out’ are summarized and emphasized as three important approaches to activate the elderly group through the design research.
THE MANIFESTO FOR AGE-ING FUTURE

Take the stake for ageing, for future.

WE OWN AGEING.
We are the stakeholders of our own life. We are the experts of our own experience of ageing.

Be an active participant.
Stay curious. Keep explore. Speak out. participate in your ageing actively through design.

Be an active motivator.
Stay open. Keep together. Be free. participate in activating an ageing future through design.

WE CAN MAKE CHANGE THROUGH DESIGN!

Figure 8: ‘Age-ing future’ Manifesto
3.3 Prototyping: ‘Age-ing Future, *Curious toolbox’ participatory design workshop*

<table>
<thead>
<tr>
<th>Goals</th>
<th>Introduce co-designers to generate toolkits for activating inactive elderly group through explore their own method of being active.</th>
</tr>
</thead>
</table>
| Objectives | • Introduce design approach of exploring individual capacity  
• Generate toolkits together with all co-designers for prototyping  
• Communicate the ‘everyone owns age-ing future’ mindset to all the co-designers |
| Timeframe | 3 hours (each workshop takes one and half hours) |
| Budget | None |
| Participants (co-designers) | • University Students  
• Active elderly citizens (over 65 years old) |
| Tools | • Pens(color pens, marker)  
• Double-sided tape  
• Name tag  
• Word and color cards  
• Collage materials  
• Loose-leaf notebook  
• Paper(A3)  
• Clips  
• Post-it note  
• Scissors  
• Cutters  
• Rulers |

*Figure 9: Overview of ‘Age-ing Future, Curious toolbox’ participatory design workshop*

**The context.**

This workshop aims to prototyping ‘curious toolbox’ by using participatory design approach. It took place in Växjö city, Sweden, students and over 65-year-old and active elderly citizens from the local senior club were invited as co-designers to join in the workshop. The goal of this workshop is that by providing a guidance of toolkit making for co-designers to generate their personalized toolkit that can be used to activate over 65-year-old and inactive elderly citizens.

**The process and tools.**

Finally, the workshop got six students participated in, four of them from design field, and other two students are from the fields of computer science and marketing. Unfortunately, no over 65-year-old and active elderly citizens participated in. The workshop utilized both conceptual tools and operational tools. The conceptual tools were the framework of the workshop itself that comprises the following three sections: the five levels of
processing storytelling method; identify the target group in terms of ‘over 65-year-old and inactive elderly group’; choose a goal that the tools will work with the needs of affection, understanding, participation, leisure, creation or identity. This conceptual tool, aims to guide co-designers to explore their own method of observing, learning and expressing. After this, the workshop moved forward to the stage of hand-on, various ingredients are provided for operational tools making. The ingredients included row collections of scrap materials, for instance, string, different kinds of paper, tapes, and collage materials. These variety materials offer a free space for co-designers to construct and interpret the intended meaning of their toolkits. (Sanders, E.B.-N. & Stappers, P.J., 2012.)

Figure10: Pictures from ‘Age-ing Future, Curious toolbox’ participatory design workshop
Analysis of the toolkits

Various toolkits (see figure 11) that were created by students from different study field, reflect on different objectives, capacities and methods. For instance, for the student who study computer science, made a guidance book for designing a computer program that can fit the needs for their future self, such as: bigger letters, more visuals than words, voice command and so on. For the student who is studying marketing, she created a business model of ice-cream shop for her grandparents which can encourage them start a new business also it is a means to meet different people to communicate with. For the students who study design, toolkits were created as one-a-day challenge notebook to encourage elderly to keep exploring new changes in life and the surroundings; interactive activities for emotional communication; posters as reminders to go out for exhibitions and so on.

To analyze the elements that were chosen the most by co-designers were images and symbolic shapes. Therefore, these two ingredients are essential for making the physical tools. One more thing that needs to be improved more, is a detailed introduction of using should be included in, when a toolkit has been made. There is no doubt that choosing suitable ingredients are essential and important. And attach a clear introduction of the
way to use it is as important as choosing the right ingredients for a toolkit. (Sanders, E.B.-N. & Stappers, P.J., 2012.) In the workshop, a short presentation was used as a form of introducing the toolkits. Obviously, it is more than insufficient, therefore, making the introduction for the toolkit should be added as the final step for generating a toolkit.

4. Results and analysis

Curious toolbox (see figure 12) as the seed of the ‘Age-ing Future’ project, contains ‘The elderly life as the loudest silence’ zine, ‘Age-ing Future’ manifesto and an operating guide. The zine highlights the needs for the elderly group, in order to remind the users that meet these needs are important. Manifesto emphases all the users as the stakeholders and change agents for ageing. The manifesto aims to encourage the users act as designers to use this toolbox and produce toolkits for activating the elderly group by a means of sharing the methods of exploring, learning and expressing. Operating guide introduce two steps of using the toolbox, which are ‘individual methods generating’ and ‘toolkit making’ to the users. For the first step, meta-design tools ‘the five-levels of processing storytelling’ are adopted and adjusted as individual exploration tools to guide the users map out their own objectives, capacities and summarize individual methods of exploring, learning and expressing. This individual exploration tools operate as follows:

1. The users need to review their life experiences that when they try to explore and learn something for the first time.
2. Then follow each layer to map out this experience.

Level 1. The sensual – for 7 minutes (drawing, key words, color, etc.)

Trigger questions: What did you see, what did you smell, what did it feel like, what were the sounds?

Level 2. The factual – for 7 minutes (writing, drawing, etc.)

Trigger questions: What did you learn, what facts did you find interesting?

Level 3. The systemic – for 7 minutes (link different information, summary of the relation)

Trigger questions: How did what you learnt connect to the outside world, to other contexts, what are the relations?
Level 4. The synthesis – for 7 minutes (Highlight crucial factors, Summary the method)
Trigger questions: What are crucial factors that help you explore and learn something new? And sum up all information from four levels for summarizing your own methods of exploring, leaning and expressing.

Then the target group and goals need to be defined by the users. For the second step, a list of important ingredients for making a toolkit is provided for the users. These ingredients are images, symbolic shapes, words, and color. By reason that these ingredients can support multiple usage and multiple layers of expression. As mentioned before, a use guide for a toolkit is essential, therefore, an operating guide card is provided as the last step for making a toolkit.

Overall, the operating guide (see figure 13) and blank cards (see figure 14) offer an ‘under-designed’ system for the users in the use time, in a way of just provide framework rather than a complete system. In addition, blank cards create an open space in the toolbox, with the intention of supporting users to personalize and modify the toolbox for meeting emergent objectives for ageing.

Figure 12: Curious toolbox for the ‘Age-ing Future’ project
Aim:
This toolbox introduces a design position of the issue of ageing as well as design approaches for users to explore their individual capacities as co-designers and generate their own toolkits for activating the elderly group.

Content:
* Zine: The elderly life as the loudest silence.
* Manifesto: Ageing Future as a call for active participation.
* Operating guide: To get ready for making tools.
* Free space: It provides blank cards for supporting personalize the toolbox. Welcome to make any kinds of modifications for meeting emergent objectives for ageing.

Step 1: Individual methods generating
* Exploration mapping
* Target group and goals

Step 2: Toolkits/tools making
* Ingredients list
* Operating guide
Step 1: Individual methods generating
* Exploration mapping
* Target group and goals

Exploration mapping

Aim:
This exercise aims to help to review and represent your learning process in the following levels.

Materials:
* A sheet of paper
* Four different color pens
(one color for one level)

Refer to: The five levels of processing storytelling tool (Tann, Lockheart, et al 2008)

Important tips:
1. Please keep the time. For each level of storytelling you will get 7 minutes to map out.
2. Choose one color for each level, and make note for it.

Exploration mapping

Operates as follows:
1. Please review your life experiences that when you try to explore and learn something for the first time. It can be any kinds of new things, for instance, when you get your first smartphone.
2. Please follow each level and map out your experience.
Exploration mapping

Operates as follows:
Level 1. The sensual
(draw, key words, color, etc.)
7 minutes

Trigger questions:
What did you see, what did you smell, what did it feel like, what were the sounds?

---

Exploration mapping

Operates as follows:
Level 2. The factual
(writing, drawing, etc.)
7 minutes

Trigger questions:
What did you learn, what facts did you find interesting?

---

Exploration mapping

Operates as follows:
Level 3. The systemic
(link different information, summary of the relation)
7 minutes

Trigger questions:
How did what you learnt connect to the outside world, to other contexts, what are the relations?

---

Exploration mapping

Operates as follows:
Level 4. The synthesis
(Highlight crucial factors, Summary the method)
7 minutes

Trigger questions:
What are crucial factors that help you explore and learn something new? And sum up all information from four levels for summarizing your own methods of exploring, learning and expressing.
Target group and goals

Target group (in terms of “65+ inactive elderly group”) for the toolkit is

Eg.
Your future selves
Your relative
Your friends

Target group and goals

The toolkit will work for the needs of

Eg.
Affection
Understanding
Participation
Leisure
Creation
Identity

Ingredients list

Important ingredients need to be included in the toolkit:

Images (eg. collage materials)
symbolic shapes
Color cards
Color pens
Word cards

Step 2: Toolkit making

*Ingredients list
*Operating guide
**Figure 13: Operating guide cards for the ‘curious toolbox’**

**Ingredients list**

*Reason for including the following ingredients:*

**Images (e.g., collage materials):**
- Images tend to elicit emotions and memories suggest complete situations and stories and carry many different layers of meanings and associations.

**Symbolic shapes:**
- Support making abstractions and formulating general relations, patterns and rules.

**Word cards:**
- Words are powerful at expressing abstractions such as symbolic meaning or mental content.
- Words are also good starting triggers for people who are more accustomed to using words vs. thinking with pictures.

**Color cards/Color pens:**
- Support formulating various senses.
Curious toolbox also provides blank cards for supporting the further development of the toolbox. Hence, welcome to make any kinds of modifications in order to meet the emergent objectives and needs for the issue of ageing.
Figure 14: Blank cards in the 'curious toolbox'.
5. Discussion and conclusions

This paper promotes meta-design work together with participatory and social innovation as a design approach to work with the social challenges of ageing. As for the design mindset of ageing, the intention of this project aspires to move beyond ‘Design for disability’, and introduce ‘Design for capability’ as a process of social innovation by shifting designers’ role into an agents and team members in the working process of meta-design. The elderly group here in this project is to work with is over 65-year-old citizens. And according to their attitude for the issue of ageing, the elderly group here in this project is categorized as ‘passive receivers’ and ‘active participants’. ‘Passive receivers’ as one kind of ‘inactive elderly groups’ are seen as the target group for the project. ‘Active participants’ are seen as co-designers to work together with designers as a team for producing a seed as a means to activate ‘inactive elderly groups’. The seed as a meta-design outcome takes the form of ‘curious toolbox’ to empower users to contribute their objectives, capacities and methods for the issue of ageing by generating toolkits for the ‘curious toolbox’. In the recent stage of the project, the seed can only contribute change in a small scale, the individual users or communities can take over the toolbox and generate their own toolkits as a shared approach of participating, learning and expressing, for activating the elderly group that they defined as participate in the issue of ageing inactively. Due to the toolbox supporting broad participation, individual users, communities even power structures can continue to develop the toolbox in order to meet emergent objectives and needs for ageing, along with more and more stakeholders involved in, more aspects of the issue of ageing will be noticed and various approaches for the challenges of ageing will be discovered and further contribute to a sustainable urban living for the elderly.

Nevertheless, for meta-design, interdisciplinary collaboration is important for generating a powerful seed, and it enables a seed to involve multiple aspects of concerns and has great adaptability and flexibility when it is applied in the real social environment, which for this project in the current stage, is still far from being reached. For the participation in prototyping the ‘curious toolbox’, it is not expected to get active over 65-year-old citizens to participate, so that the ‘curious toolbox’ lost a chance to be further improved. For the further development of the project, the prototyping of the ‘curious


### 7. Appendices

Appendix 1: Survey

Appendix 2: Poster for the ‘life dictionary’ workshop

Appendix 4: Pictures from the ‘life dictionary’ workshop

Appendix 5: Poster for ‘Age-ing Future, Curious toolbox’ participatory design workshop

Appendix 3: Pictures from ‘Age-ing Future, Curious toolbox’ participatory design workshop

Appendix 4: Pictures from graduation exhibition

Appendix 5: Poster for the graduation exhibition

Appendix 6: Workshop for the graduation exhibition
Hej,

I am a third-year design student at Linnéuniversitet in Växjö. I am currently working on my bachelor's degree thesis. For my thesis, I put my research on the elderly group for social innovation. In order to find my access points for the project, I would like to get the insight of the boundary that how public define elderly.

Here I would like to listen to your opinions.

I really appreciate your help!

XINYU SHAO
Design + Change program
3rd-year student

*Required*

1. Which category below includes your age? *

   [ ] 18-20
   [ ] 21-30
   [ ] 31-40
   [ ] 41-50
   [ ] 51-60
   [ ] 61-70
   [ ] 71-80
   [ ] 81-90
   [ ] 91-100

2. Do you view yourself as elderly? *

   [ ] Yes
   [ ] No
   [ ] Sometimes

3. 2.1 If your answer is yes, please write down the reason below.

4. 2.2 If your answer is no, please write down the reason below.

5. 2.3 If your answer is sometimes, please write down the reason below.

6. How do you define elderly? *

7. 4. What kind of public spaces you usually see the elderly stay or meet? *

   [ ] Park with green garden
   [ ] Crowded commercial areas
   [ ] Cafe
   [ ] Shopping center
   [ ] Senior Citizen Activity Center
   [ ] Bookstore
   [ ] Library
   [ ] Other:

Thank you!
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DESIGN RESEARCH WORKSHOP

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LIFE DICTIONARY WORKSHOP

Workshop holder: Xinyue Shao
Department of Design, Linnaeus University, Växjo, Sweden
Research for graduation thesis
AGEING FUTURE

CURIOUS TOOLKIT DESIGN WORKSHOP

HELLO! MY CO-DESIGNERS!
LET'S DESIGN TOOLS TOGETHER FOR ACTIVATING ELDERLY GROUP!

Time: 16/4/2018 (Monday) and 18/4/2018 (Wednesday) 14.00-15.30
Place: M2096, 2nd floor M-building, Linnaeus University
Facebook event page: Age-ing future curious toolkit workshop
Email: xs222ae@student.lnu.se