

PhD Workshop 2023

Towards Sustainable Transition of Age-Friendly Community Centres Based on Transition Design



M.A. Lijun Chen

Czech Technical University in Prague
Faculty of Architecture
Department of Building Theory

Supervisors: doc. Ing. arch. David Tichý, Ph.D.
prof. Ing. Vladimír Kočí, Ph.D., MBA

Wicked Problems



9%

2019

16%

2050

Percentage aged 65 years or older

- 15 or more
- 10 to less than 15
- 5 to less than 10
- Less than 5
- No data



UNITED NATIONS



Older People & The Existing Community Environment

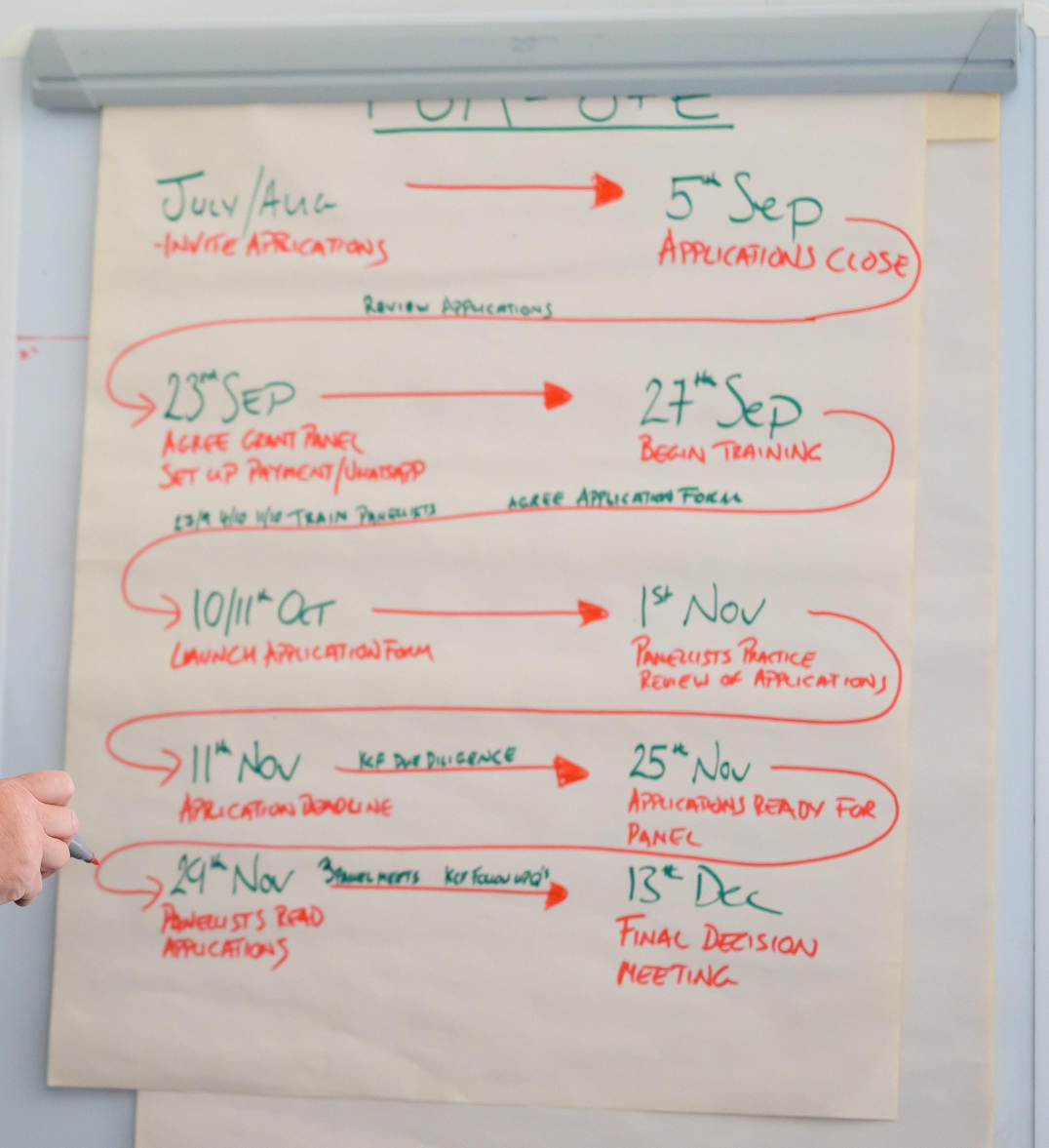


Age-Friendly Community Centres

- “Near-home” places of public life
- Group activities, social support, public information, and other purposes
- Living a scientific and healthy life, facing ageing with a positive attitude
- Participating in social activities more actively
- Stimulating the potential positive energy
- Improving the quality of life of the elderly
- Open and accessible to all ages
- A significant part of the “lifetime” community



Stakeholders' involvement is essential.





How can design engage in sustainable transitions in communities?

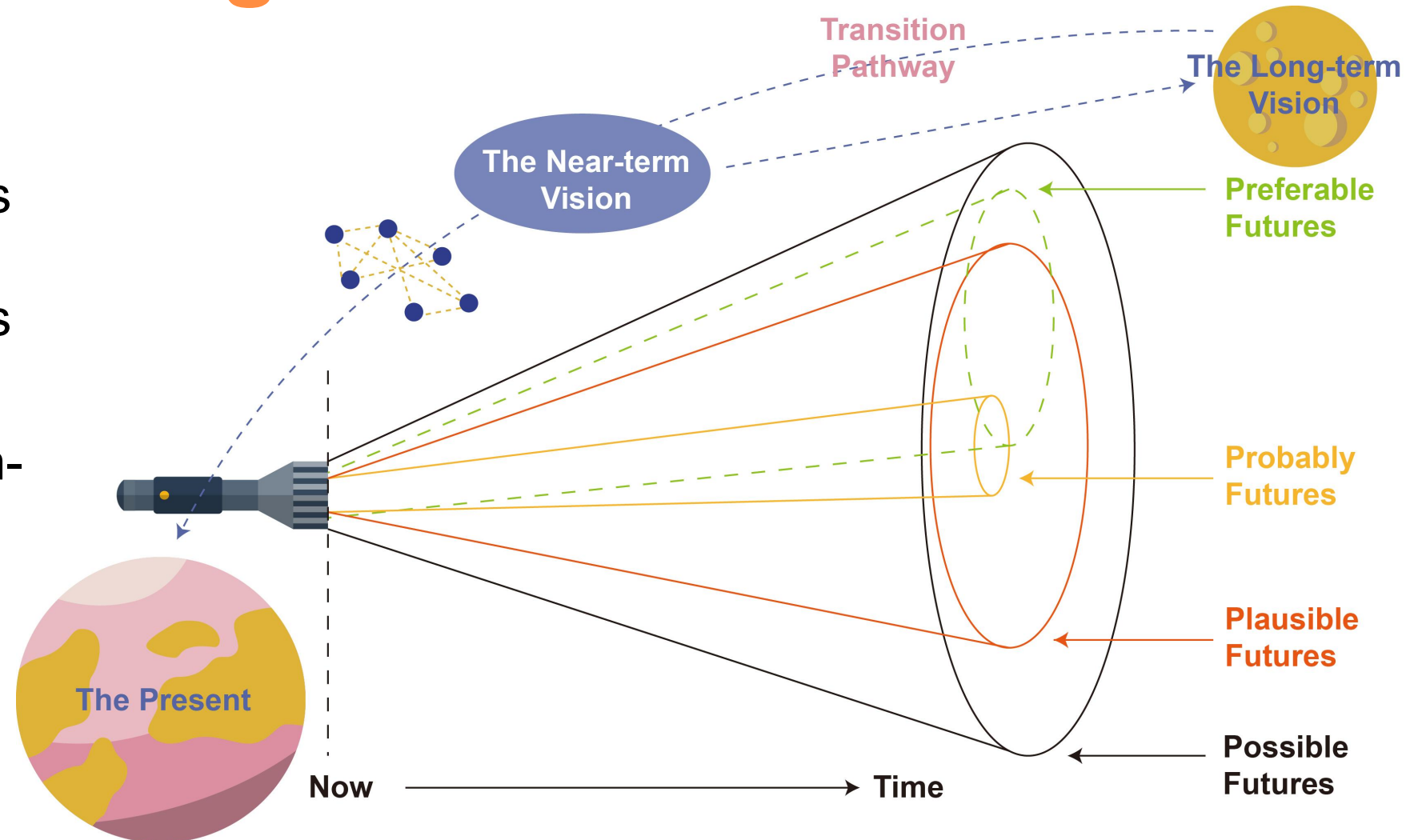
More Questions

- What are the current status and problems of existing community centres? Why do these problems exist?
- What would an ideal future community centre look like?
- How can community centres be systematically improved to become more inclusive and age-friendly? What role does transition design play in this?
- How can the long-term operation of the new system be ensured?

Transition Design

Two Global Memes

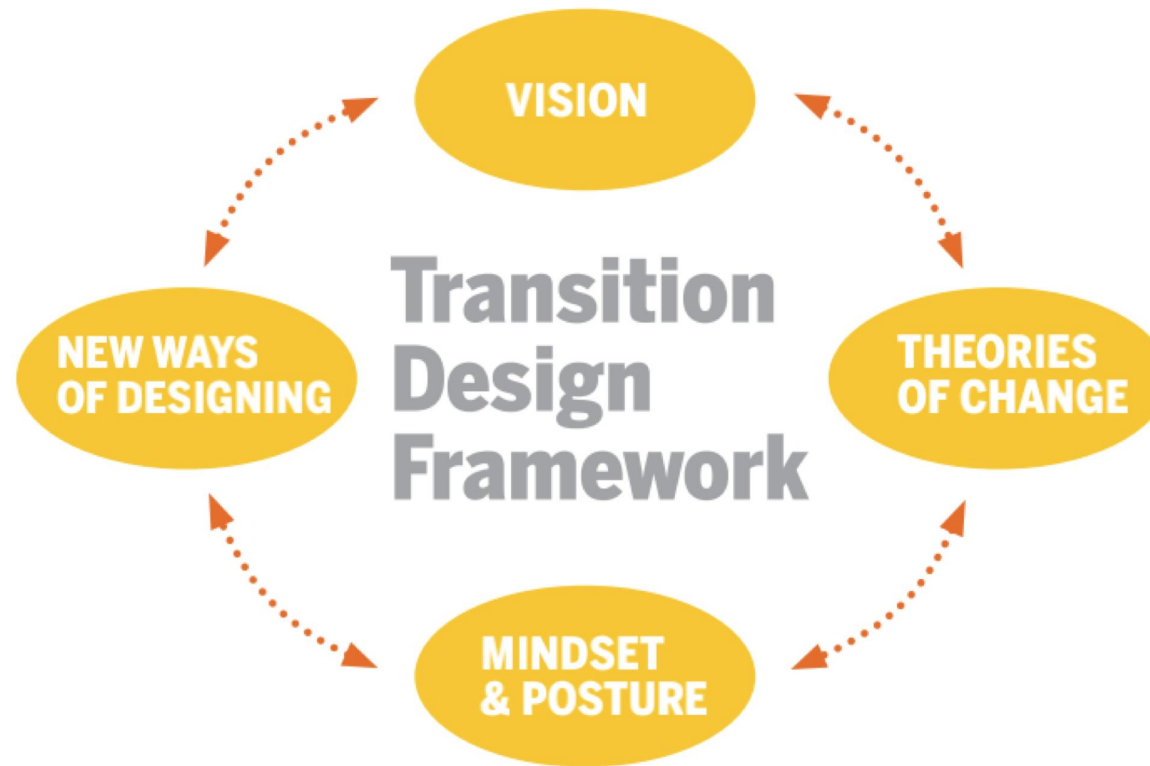
- Societal transitions towards more sustainable futures
- The need for intentional, system-level change and wicked problems resolution



Source: Terry Irwin, Cameron Tonkinwise and Gideon Kossoff
Illustrated by author

Transition Design

- Fundamentally changed
- Reconceptualise and re-imagine everyday life
- Local and regional ways of living
- Global scale



Transition Design Framework
Source: Terry Irwin

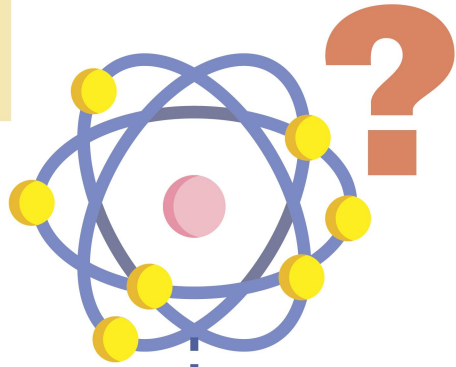
Aims and Objectives

- Defining wicked problems
- Researching stakeholders relations
- Propose transition frameworks and design strategies
- Finding new paradigms for system-level transitions
- Making future communities more inclusive and sustainable
- Healthy and happy ageing



Methodology

1 Wicked Problem in Age-Friendly Community Centres



2 Stakeholder Relations



3 Historical Evolution of the Wicked Problem (The multi-level perspective)



Theoretical Part



Literature research

Practical Part



Workshops



Interviews (Qualitative analysis)



Survey research (Quantitative analysis)

4 Future Visions



5 Designing System Interventions (transition frameworks and design strategies)



Methodology - Literature Research



Builds on secondary sources, including published and peer-reviewed literature, journal articles, and reliable sources of information, as well as verified media sources.

- Research with a focus on age-friendly living environments and design.
- Contributions and experiences in a multidisciplinary field.
- Conducted in the last 10 years and documented in English.

Output: narrative literature review

General Data Protection Regulation

All research is on a voluntary basis and I will inform participants of the purpose of this survey and activity and what data will be collected, and seek their consent to use the data. I will not share participants' data with any third parties without their consent, unless we are required to do so by law, to ensure that everyone is clearly informed of their obligations and rights. Participants have the right to withdraw their consent at any time and any personal data they have collected will be securely deleted.

For those attending on site an informed consent form for data use will be signed.

Privacy and consent statement

We may collect personal data from you, such as your age, gender, occupation and nationality as part of this academic research study. Your data will be kept confidential and used solely for this research. All data will be processed according to GDPR and other applicable data protection laws. Only the research team will have access to your data, and we will not share it with third parties without your consent unless required by law. Participation is voluntary, and you can withdraw your consent at any time, and any collected personal data will be securely deleted.

If you have any questions or concerns about how your data is being handled, please do not hesitate to contact us. transitiondesignafcc@gmail.com

Thank you for your participation in this research study.

Methodology - Survey



Before the formal release of the questionnaire, the pre-set questions were previewed several times and the content and focus of the questions were adjusted in order to validate their validity and effectiveness.

The purpose of the research questionnaire:

- To collect extensive data to analyse people's experiences of the existing community environment and community centres
- To identify problems and possible causes
- The directions and possible ways they would like to be improved.

Tools: Google Forms, WJX, Rawgraphs etc.

Methodology - Survey

第 1 节, 共 5 节

Future Age-Friendly Community Centres

Age-friendly community centres are public places close to home where community activities, education, employment, etc. can be carried out, and services such as social support and public information can be provided, especially to help older people to live healthily, to face ageing with a positive attitude and to participate more in social activities.

What will the age-friendly community centre of the future look like? Can we work together to improve our community environment? Join our questionnaire for a PhD research "Sustainable Transition of Age-Friendly Community Centres Based on Transition Design" and work together for a more sustainable and inclusive community of the future!

Privacy and consent statement

We may collect personal data from you, such as your age, gender, occupation and nationality as part of this academic research study. Your data will be kept confidential and used solely for this research. All data will be processed according to GDPR and other applicable data protection laws. Only the research team will have access to your data, and we will not share it with third parties without your consent unless required by law. Participation is voluntary, and you can withdraw your consent at any time, and any collected personal data will be securely deleted.

If you have any questions or concerns about how your data is being handled, please do not hesitate to contact us. transitiondesignafcc@gmail.com

Thank you for your participation in this research study.

说明 (可选)

Age *

Under 18

18-24

25-34

35-44

45-54

55-64

65 and over

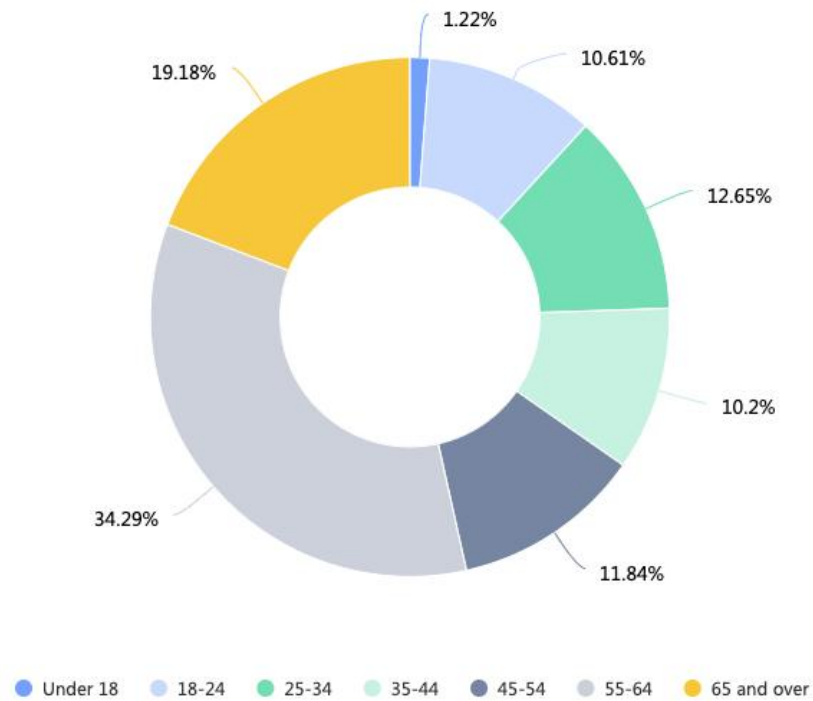
15 questions/5 min

e.g.

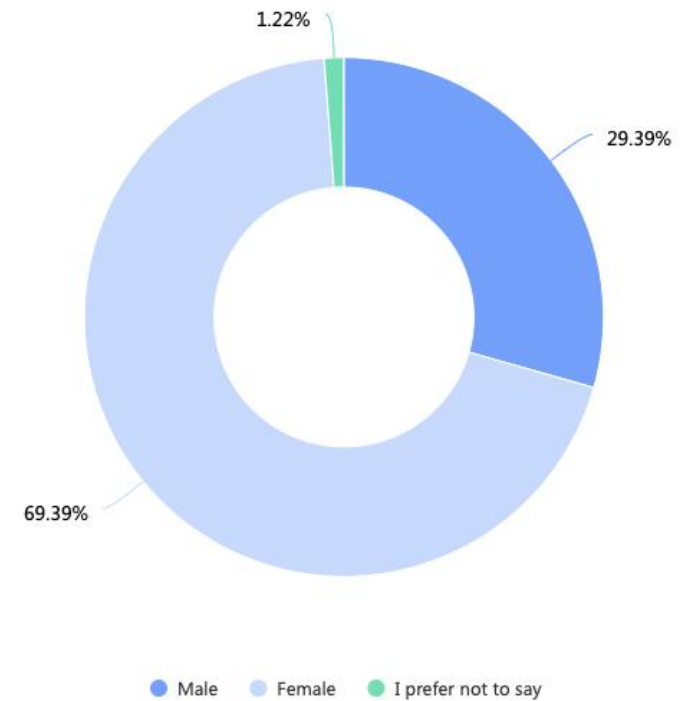
- Age/gender/country/Highest level of education/ occupation
- Does the community you live in have a community centre? (Yes, No, I don't know)
- Do you have any experience in community centres? (Yes or No)
- What do you think are the problems with community / community centres now? (Multiple Choice)
- What do you think could be improved in a future Age-Friendly Community Centre? (Multiple Choice)
- Which part of the community centre environment do you think needs to be improved to become more senior and all-age friendly? (Multiple Choice)
- Which ways do you think you can contribute to a future age-friendly community centre? (Multiple Choice)

Methodology - Survey

1. Age

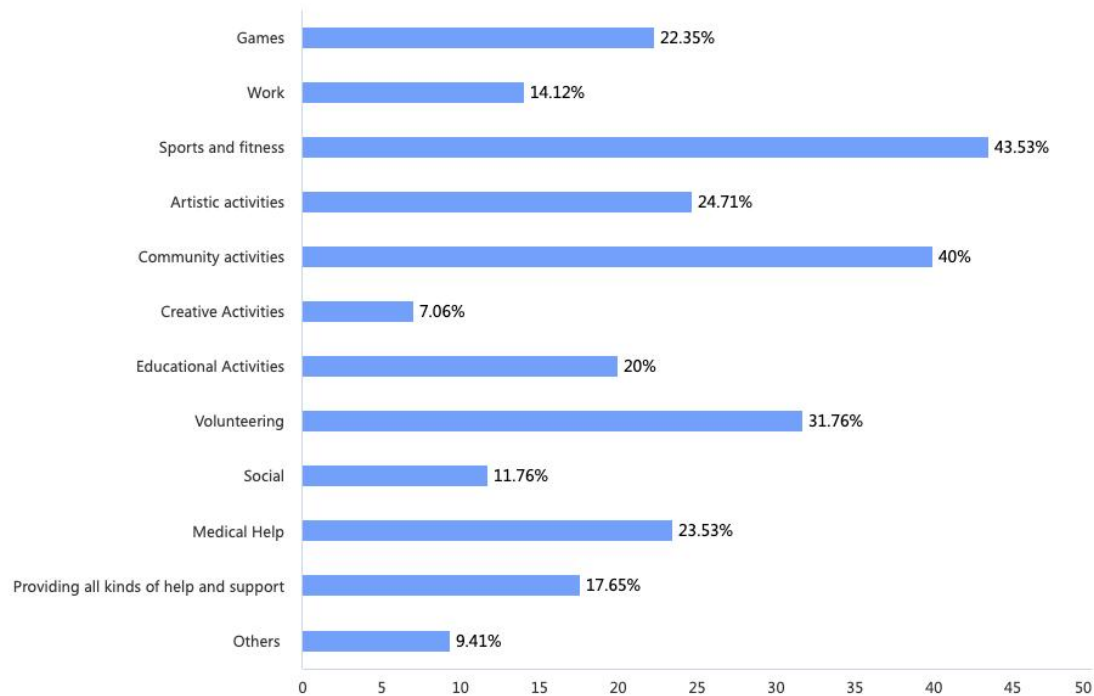


2. Gender

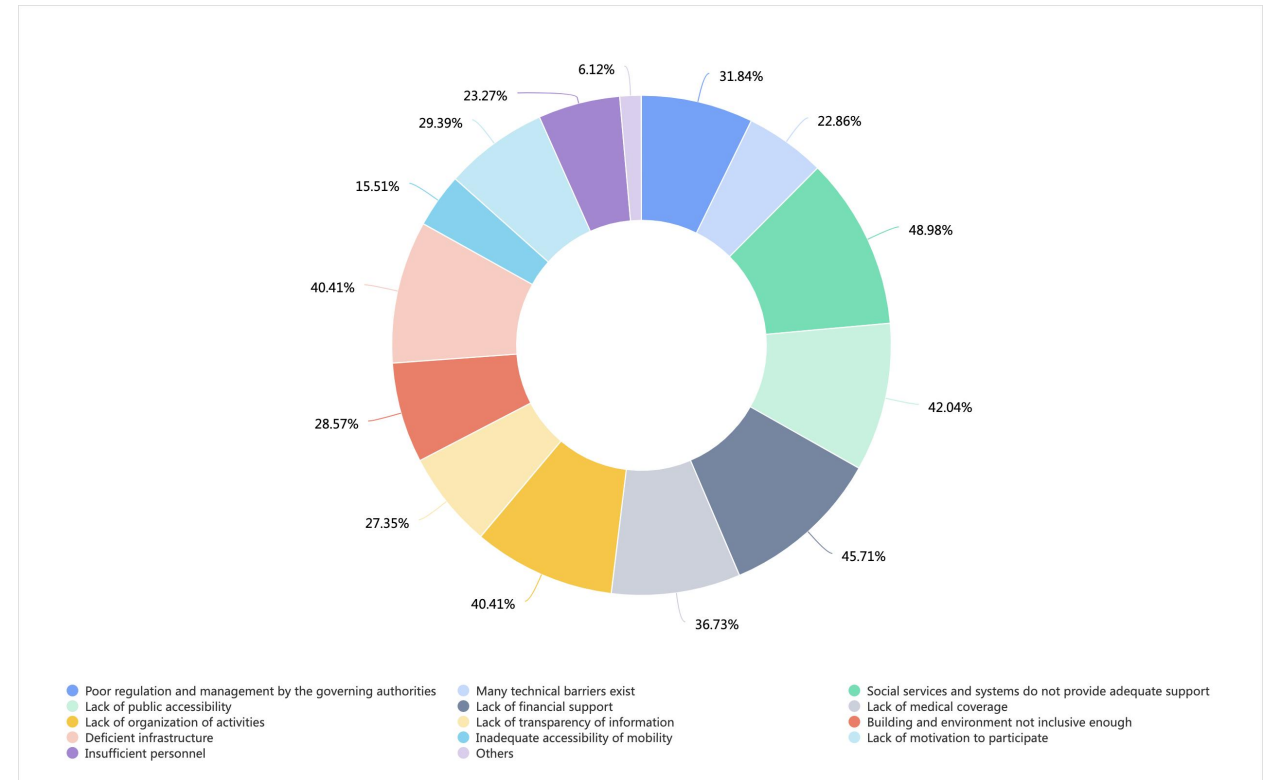


Methodology - Survey

7. What activities are you involved in at the Community Centre?



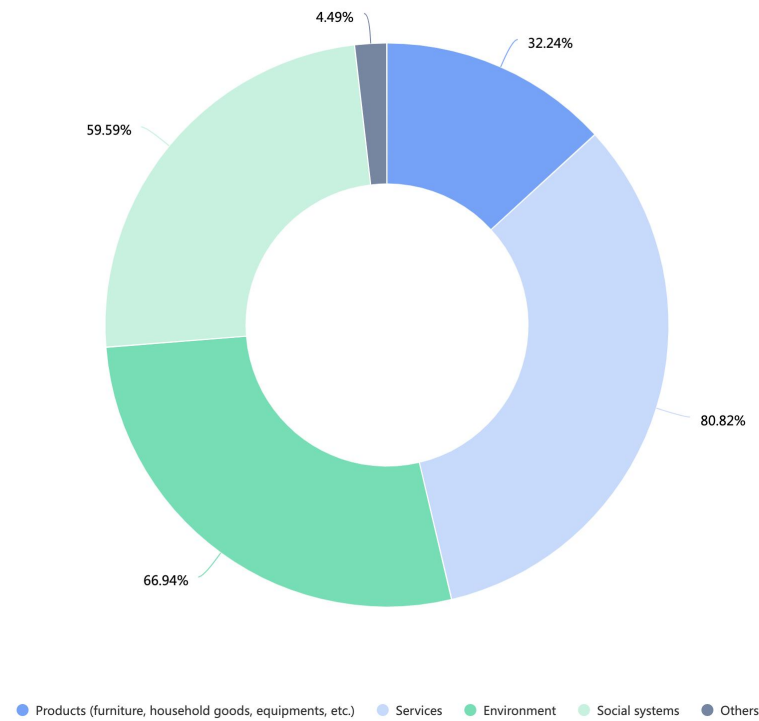
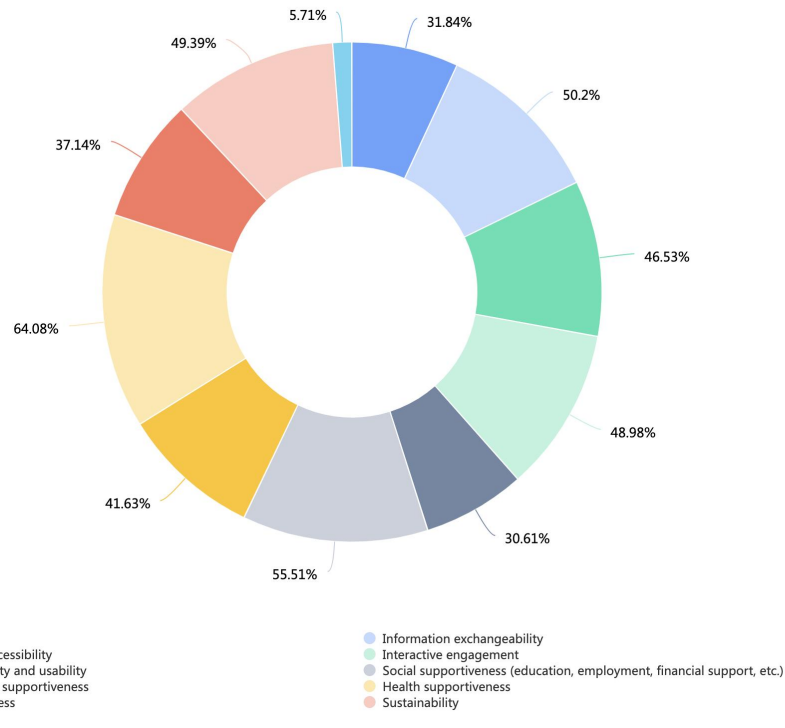
12. What do you think are the problems with community / community centres now?



Methodology - Survey

13. What do you think could be improved in a future Age-Friendly Community Centre?

14 Which part of the community centre environment do you think needs to be improved to become more senior and all-age friendly?



Methodology - Interviews

Interviewees and number:

Target group: people aged 55-70 (around 25)

Stakeholders: design professionals, community workers, etc.
(around 25 people)

Duration: 10 minutes/person

Recording: notes, photographs, audio or video recording (prior consent of interviewee sought)

Tools: Excel, Atlas.ti

Before the interview:

Introduction of myself and the background, brief description of purpose and research, and what is community centre. Collecting basic information about the interviewee.



Methodology - Interviews

Before the formal interviews, several interview previews of the pre-set questions were conducted and the content, communication method and focus of the questions were modified in order to test the validity of the questions and to obtain the most valuable results from the interviews within the limited time available.

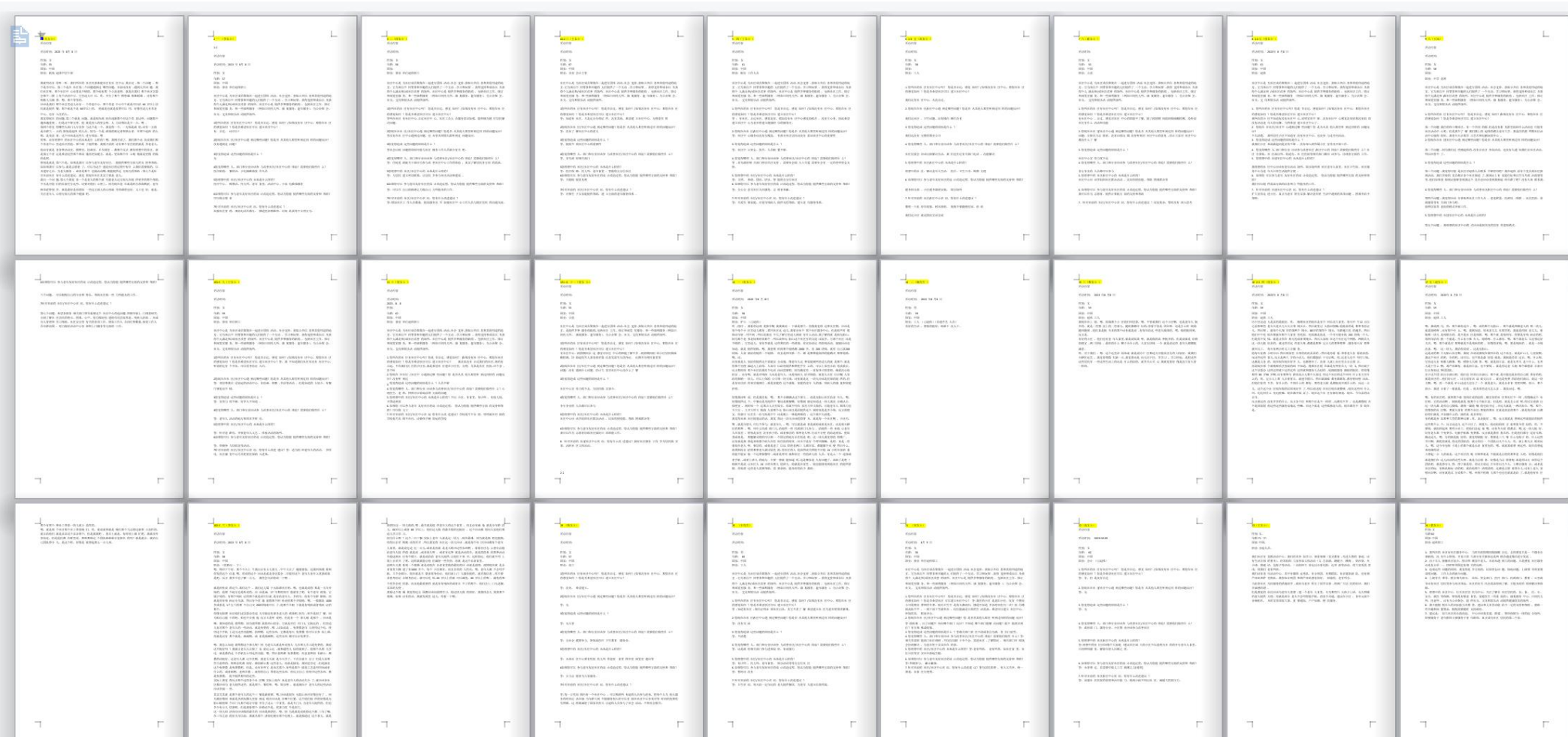
Questions:

1. Is there a community centre in your community? Have you ever been to one and how did you feel about it? /If there is no community centre, how do you feel in the community? Do you hope that the community can establish a community centre?
2. What problems have you encountered in your community/community centre now? Have you heard the same problematic responses from others?
3. What do you think are the causes of these problems?
4. who do you think are the people, sectors and industries that should be involved in improving the community/community centre experience? What is needed from them?
5. what is your ideal future for community/community centres?
6. if you could be involved in the process of designing and renovating an age-friendly community, what areas do you think you could support and help?
7. What are your suggestions for improving the current state of the community/community centre?

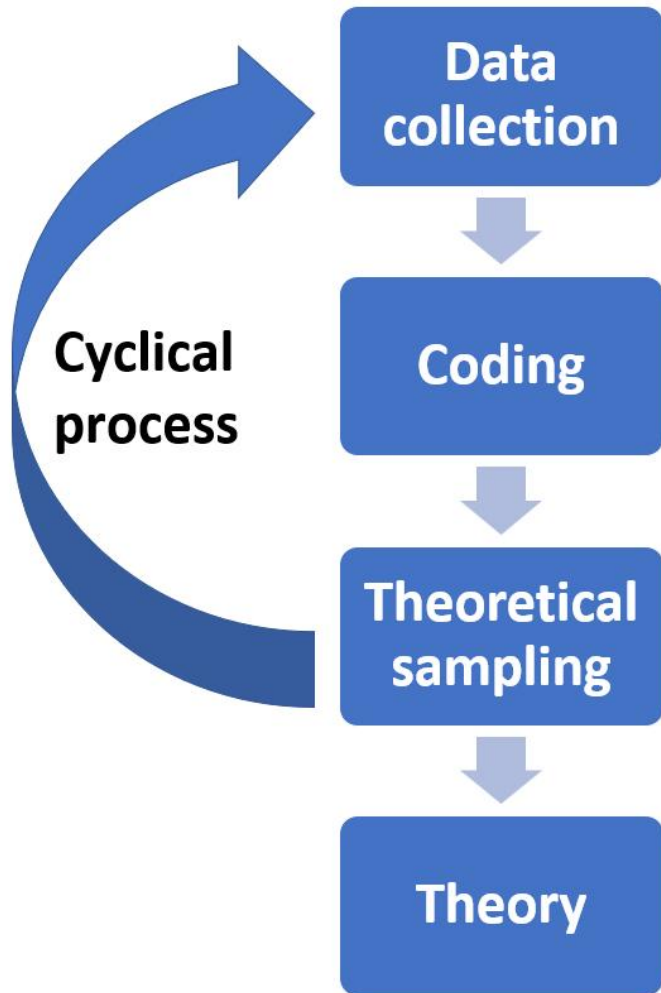


Methodology - Interviews

45 people have been interviewed so far, including older people, community workers, volunteers, design professionals, etc. The result is being organised.



Methodology - Interviews



Qualitative Analysis - Grounded Theory

There are no theoretical assumptions, starting directly from realistic observations and generalising from primary sources to create an overview of experience, which is then upgraded to a systematic theory.

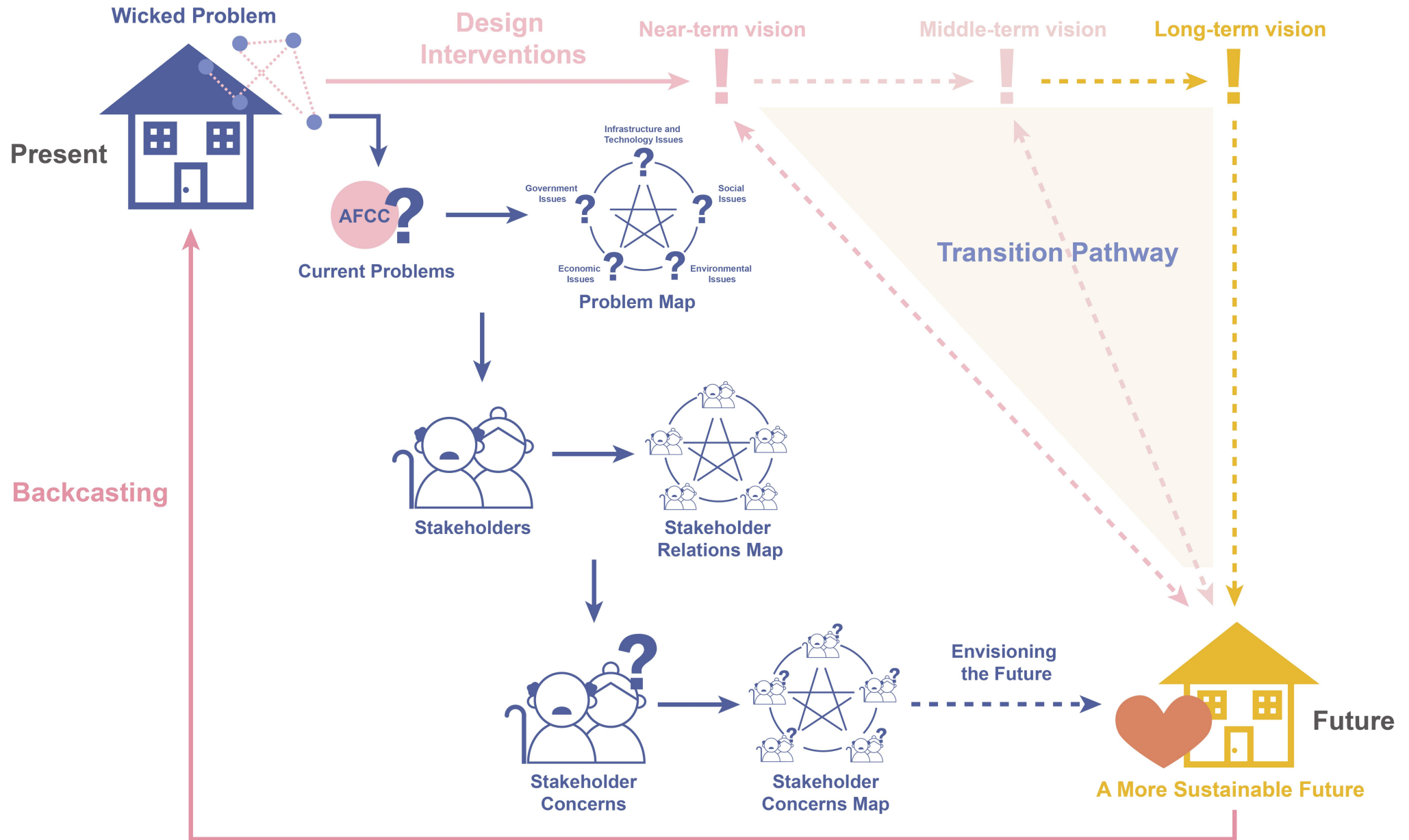
- Research process: bottom-up
- Search for various data
- Defining concepts
- Coding
- Domaining process
- Theoretical sampling and testing
- Constructing theories

Methodology - Workshops

TRANSITION DESIGN WORKSHOP Age-Friendly Community Centres in 2050, CTU in Prague, Czech Republic (2022)



Workshop Methods

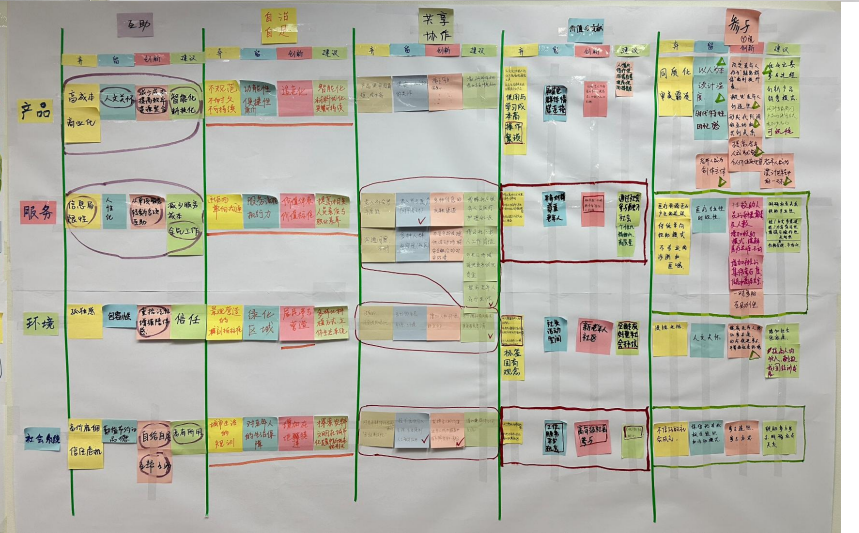
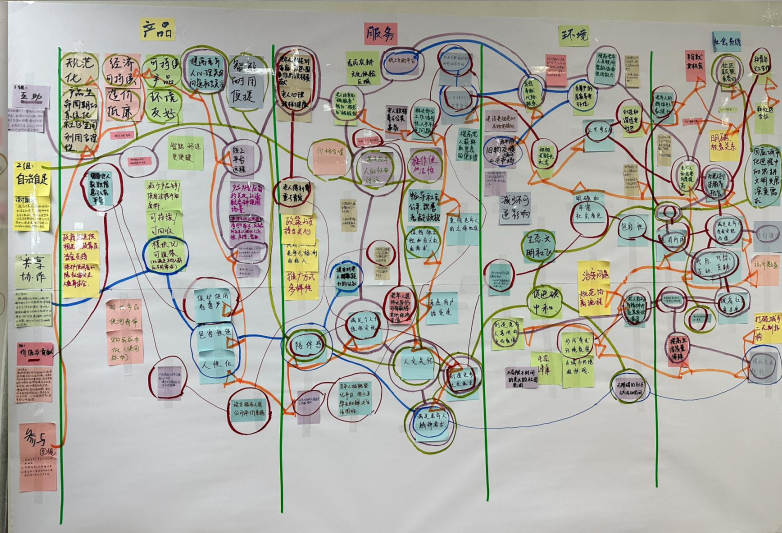
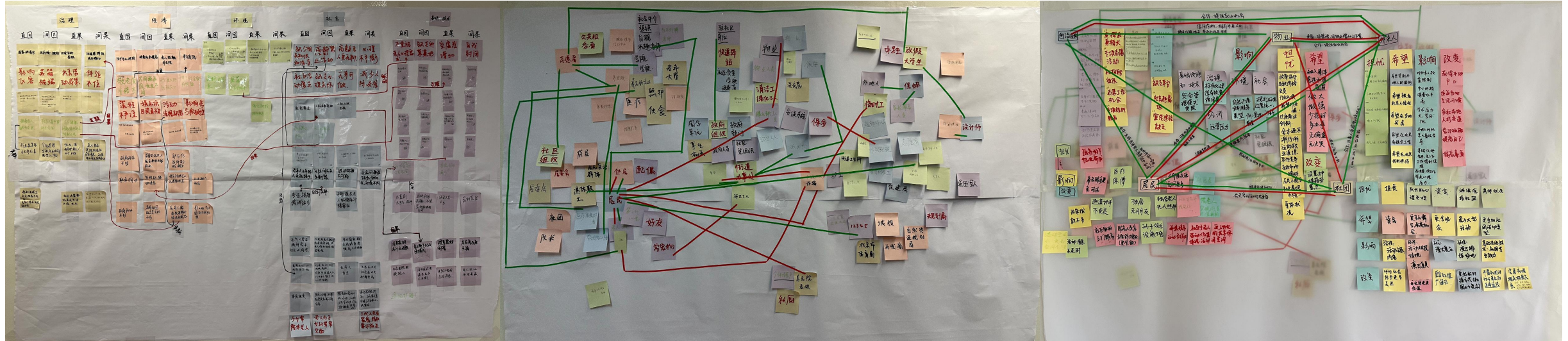


Methodology - Workshops

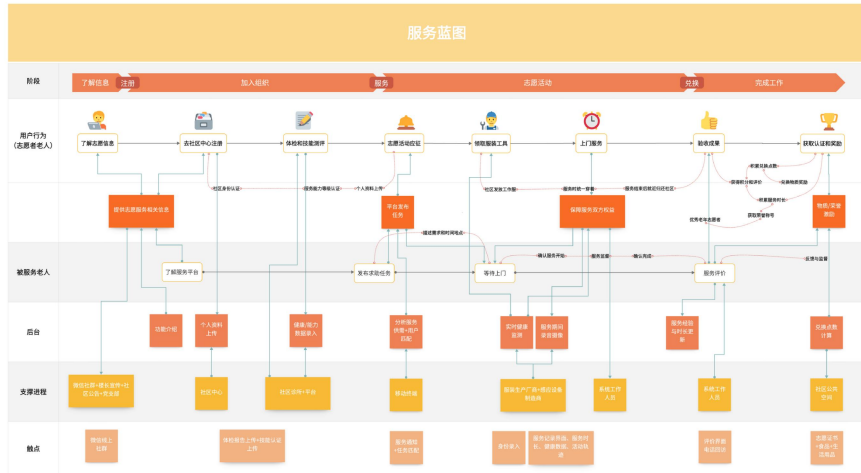
Transition Design Workshop 2 - Yangfangdian
Community, Central Academy of Fine Arts, China
(2023)



Workshop Results



Workshop Results



主题商定

自组织社团

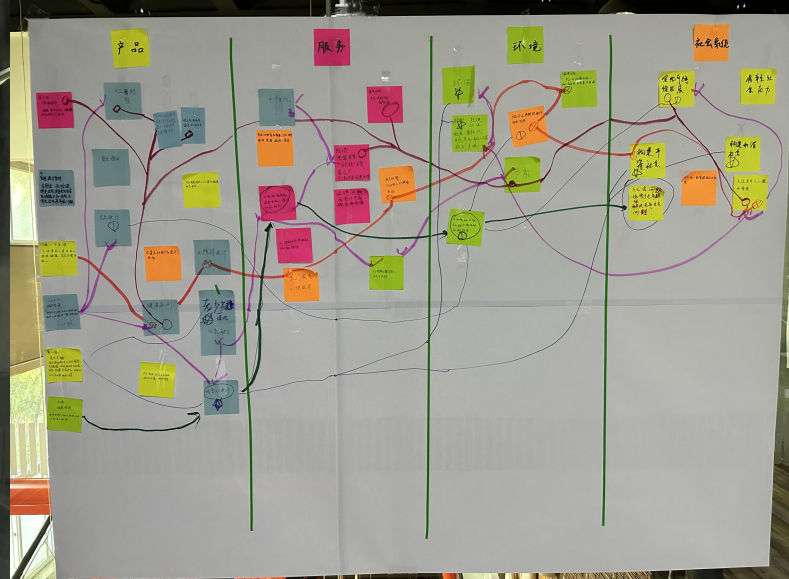
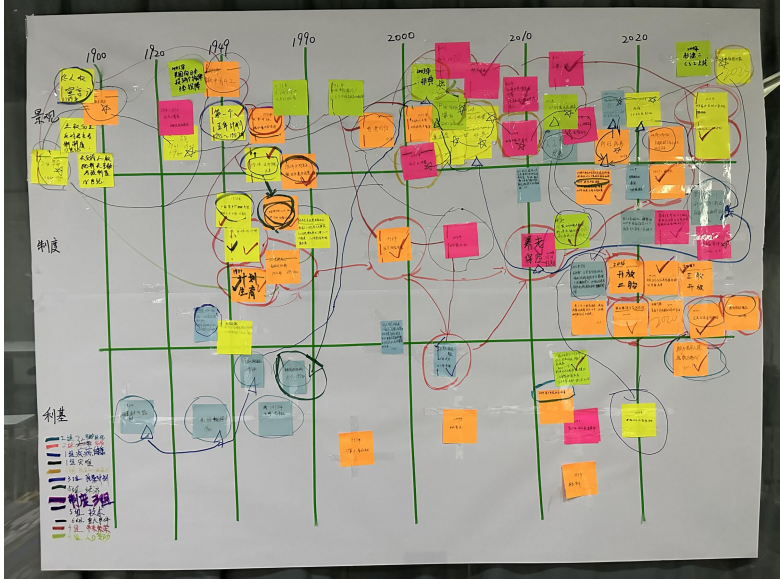
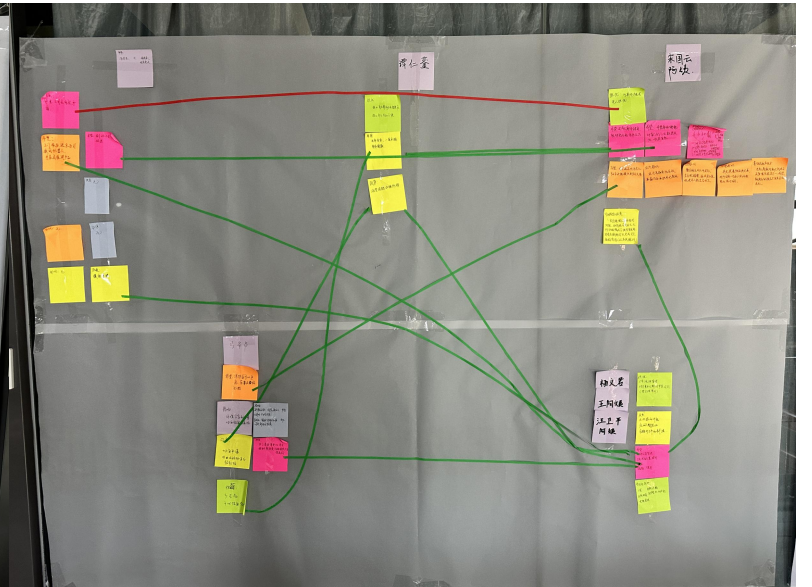
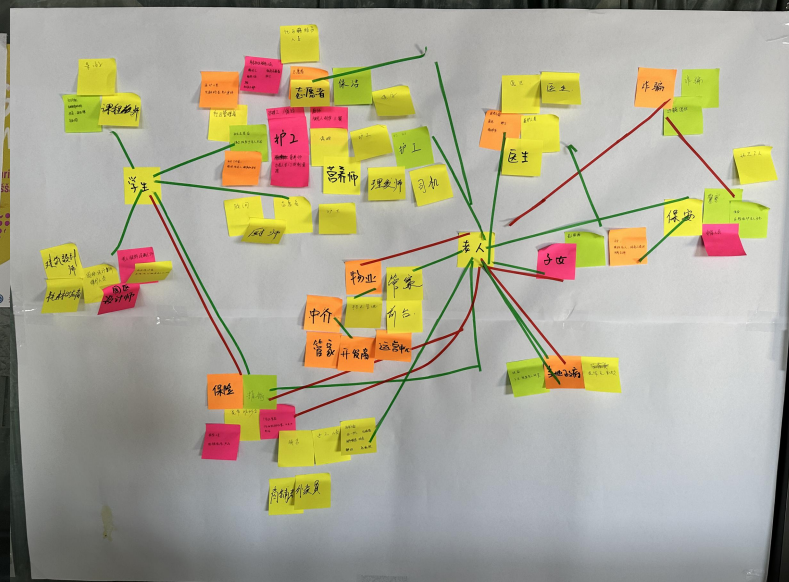
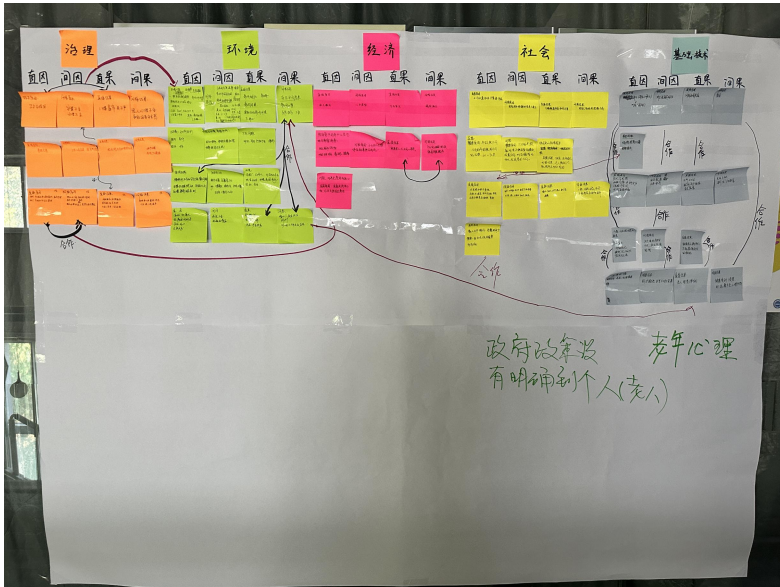


Methodology - Workshops

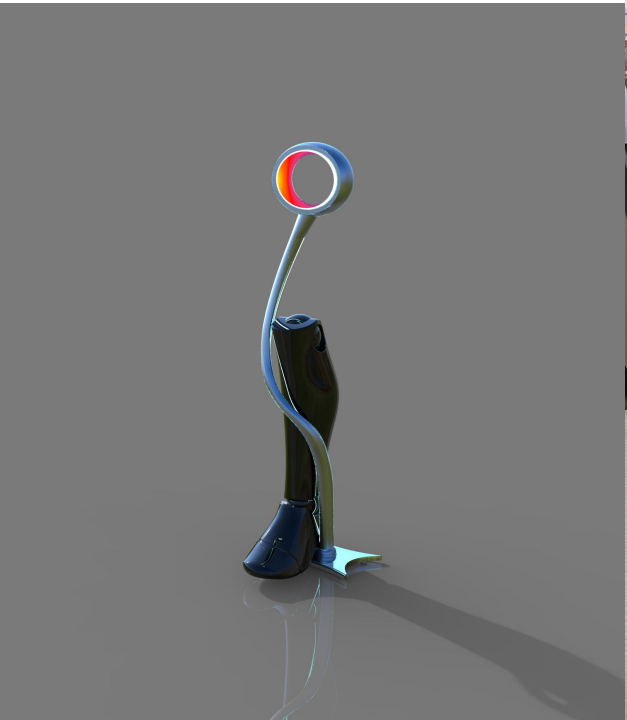
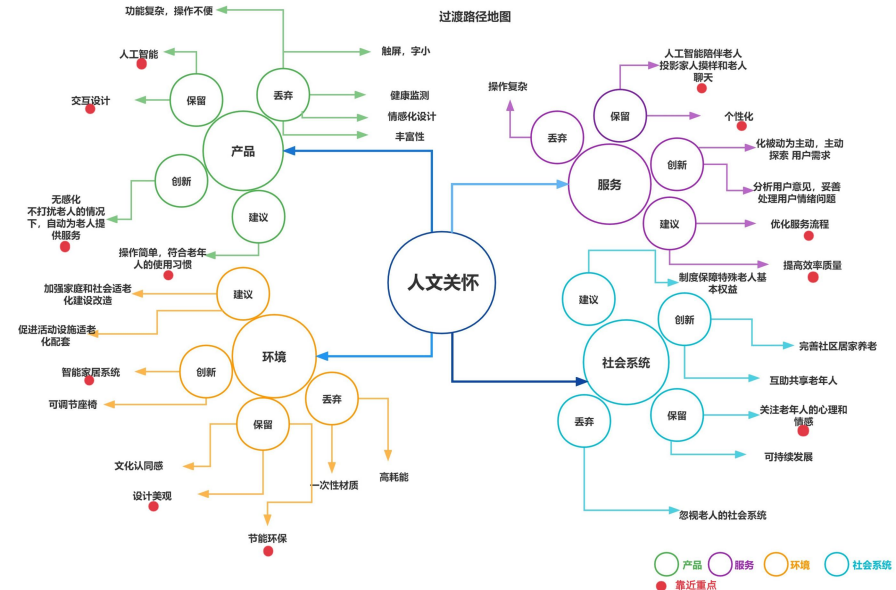
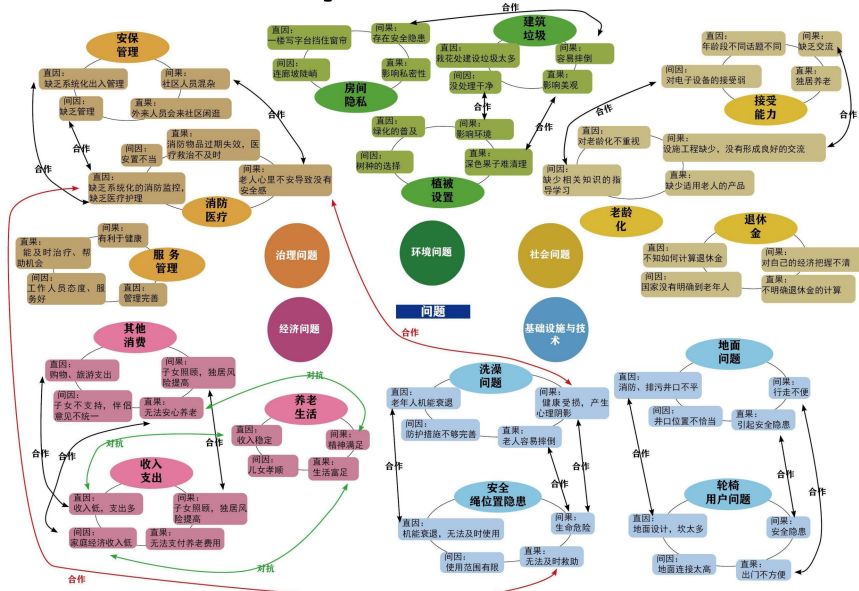
Transition Design Workshop 3 - Chunxuanmaoheyuan Community, Gengdan Institute of Beijing University of Technology, China (2023)



Workshop Results



Workshop Results



Projects

ZING

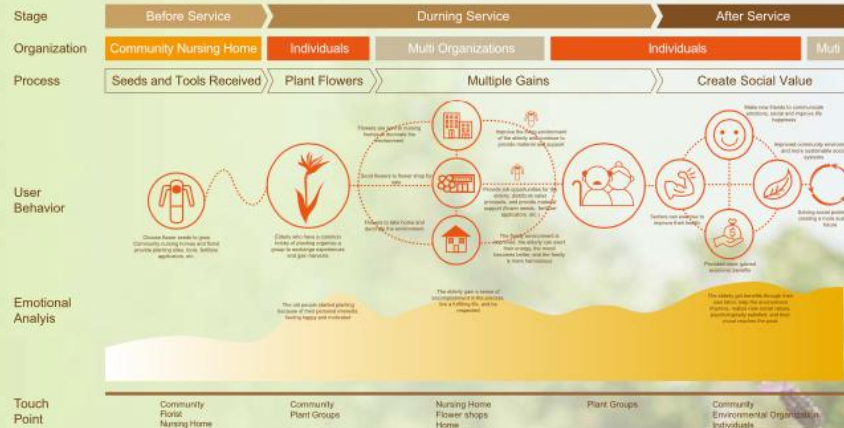
Community Flower Field Project

Many elderly will feel a gap after retirement, lost or even worthless, and think that they have lost their social value. The project is a product service system specially designed for the social interaction and social value re-creation of the aged. It aims to provide the aged with a dignified labor method, and continue to participate in social activities and play a role as a new type of labor force. As a key product in the system, the fertilizer applicator connects the hobbies of the elderly, different community institutions and services, labor force and economic value re-creation and other modules. By joining in community activities, the elderly not only improve the community environment while enjoying natural labor, but also exercise their bodies, gain dignity, a sense of achievement and benefits, exchange experiences and emotions with common lovers, have a fulfilling and healthy life, and continue to realize social value.

The elderly can use the fertilizer applicator provided by the community nursing home and florist to grow flowers and plants. After the fertilizer is used up, the bottom box can continue to be recycled for use as garden partitions, fences, and building materials. Community flower shops buy flowers and plants grown by the elderly and provide them job opportunities, and the sales money provides financial support for community nursing homes. Community nursing homes are responsible for managing, maintaining, and supervising the overall process, protecting the rights and interests of all parties, and providing the aged the necessary technical and personal support.

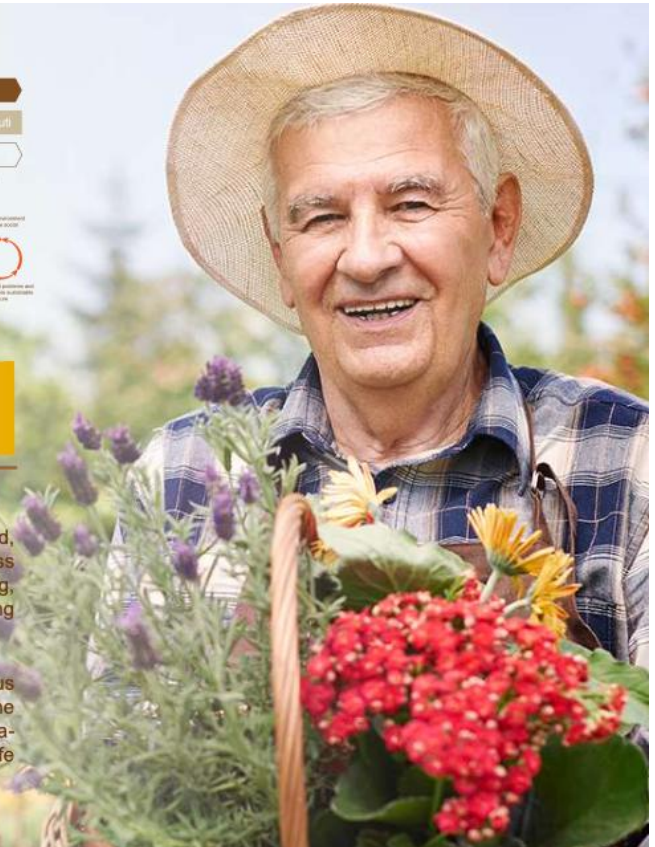


Service Blueprint



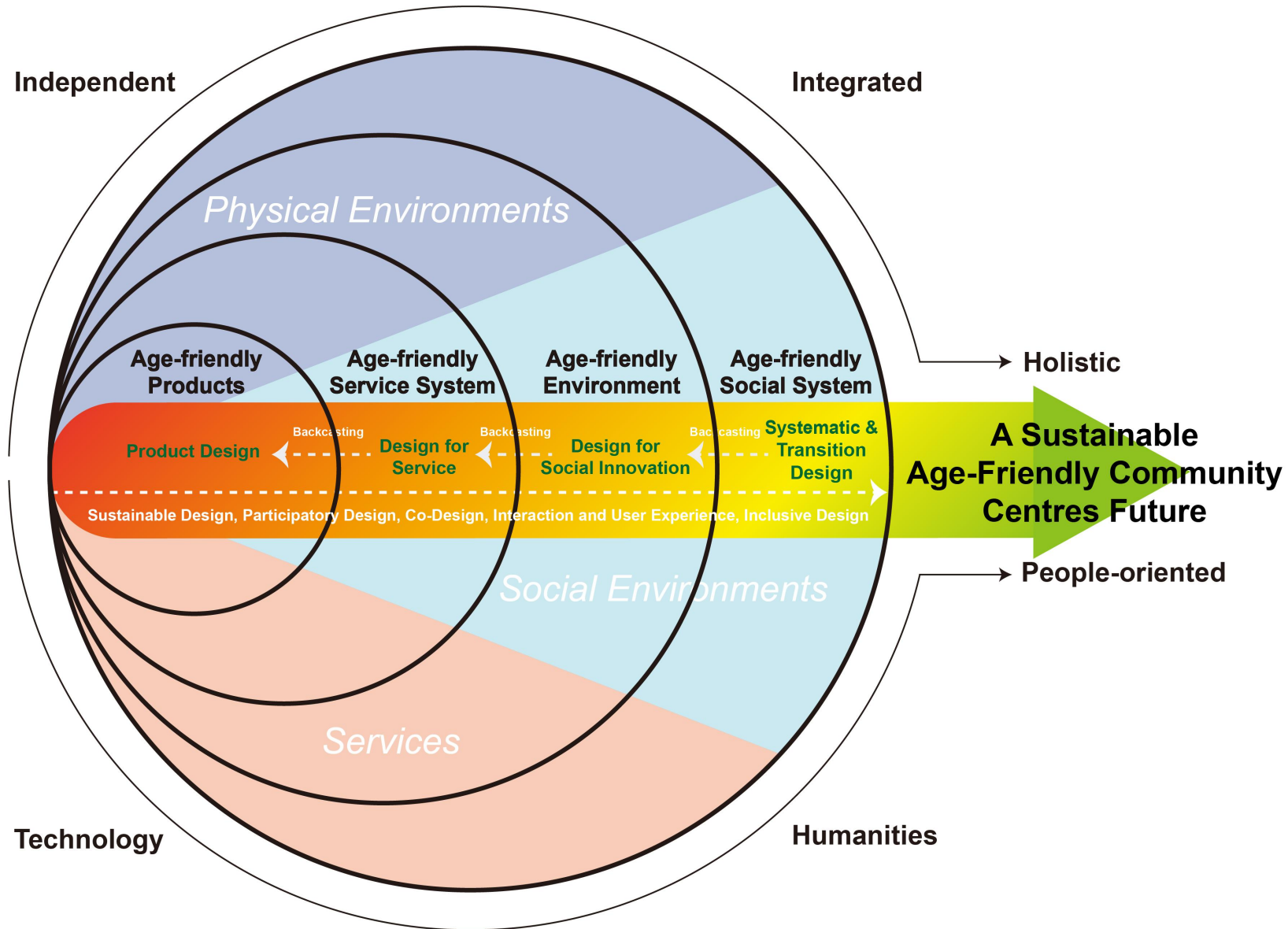
The age-appropriately designed fertilizer applicator sprays fertilizer through a two-handed, air-operated press. When using, push the air valve up and down to fill the outside air, and press the switch button to eject the liquid fertilizer in the bottle, which is convenient and labor-saving, and reduces the discomfort caused by the old people bending over for fertilization for a long time.

The material of replaceable fertilizer box is synthesized from degradable seaweed extract plus a safe dose of chloride. The edge of the fertilizer box is provided with a plug-in slot. When the fertilizer is used up, the elderly can fill the fertilizer box with soil or stones as a new building material, and build derivative products such as seats, flower beds, and fences to extend the life cycle of the products.



CONFIRMATION
IF DESIGN STUDENT AWARD 2023
SHORTLIST of 300!

Proposed Transition Framework



Conclusion

- Addressing population ageing to be healthier, more inclusive and more sustainable
- Sustainable transformation of age-friendly community centres
- Design strategies and new paradigms
- Contributing to future communities and Transition Design practice



Publications

Conference Proceedings (7):

- Chen, L. (2023). *Fears, Desires and Visions of Prague Residents: Transition to Age-Friendly Community Centres in 2050*. LIFE-CHANGING DESIGN, iasdr 2023, Politecnico di Milano, Italy, 9-13 October 2023.
- Chen, L., Marji, N., Emir Isik, G., Ravi Kumar, A., Kocí, V., & Tichý, D. (2023). *Sustainable Transitions in Age-Friendly Communities in Europe: A Participatory Approach*. Regional Development Between Theory and Practice - Regional Development as Part of Europe's Sustainable Transformation, Czech Technical University in Prague, Czech Republic, June 1st 2023.
- Marji, N., Kohout, M., Chen, L., Emir Isik, G., & Ravi Kumar, A. (2023). *AI-Enabled Transition to Smart European Cities*. Regional Development Between Theory and Practice - Regional Development as Part of Europe's Sustainable Transformation, Czech Technical University in Prague, Czech Republic, June 1st 2023.
- Ravi Kumar, A., Marji, N., Emir Isik, G., & Chen, L. (2023). *Investigating Urban Relocation of Post-Mining Cities: A Case Study of Most City in the Czech Republic*. Regional Development Between Theory and Practice - Regional Development as Part of Europe's Sustainable Transformation, Czech Technical University in Prague, Czech Republic, June 1st 2023.
- Chen, L. (2023). *Sustainable Transformation of Age-Friendly Community Centres Based on Transition Design*. Cumulus Conference Antwerp, University of Antwerp, Belgium, 12-15 April 2023.
- Chen, L., Emir Isik, G., Ravi Kumar, A., & Marji, N. (2023). *Inclusive Transformation of Age-Friendly Communities Based on Digital Technology Support*. Cumulus Conference Antwerp, University of Antwerp, Belgium, 12-15 April 2023.
- Chen, L. & Kocí, V. (2023). *Designing for Sustainable Community Transformation: Age-Friendly Communities for the Future*. AMPS Proceedings Series 30 Cultures, Communities and Design, University of Calgary, Canada, 28-30 June 2022.

Book Chapter (1):

- Chen, L. & Aslan, J. (2023). *Transformation of Inclusive Age-Friendly Community Centres: The Case Study of a Transition Design Workshop*. DESIGN IN ACTION Reflections on Social and Inclusive practices.

In Process (4):

- Tian, H., Chen, L., Huo, Y., Kocí, V., & Tichý, D. (2023). *Loc-globalisation Design: A New Approach to Systematically Reconciling Globalisation and Local Visions*. Cumulus Conference Beijing, China Central Academy of Fine Arts, 22-24 November 2023.
- Chen, L., Marji, N., Emir Isik, G., & Ravi Kumar, A. (2024). *Digital Technology Transition in Age-Friendly Communities: A New Approach to Social Innovation*. AMPS Livable Cities, New York, US, 14-16 June 2023.
- Marji, N., Kohout, M., Chen, L., Emir Isik, G., & Ravi Kumar, A. (2024). *Refugee Camps in Jordan as Livable Cities*. AMPS Livable Cities, New York, US, 14-16 June 2023.
- Ravi Kumar, A., Marji, N., Chen, L., & Emir Isik, G. (2024). *Digital Twin and Artificial Intelligence as a Public Participation Tool for Reclaiming Postmining Built Environment in the City of Most, Czech Republic*. AMPS Livable Cities, New York, US, 14-16 June 2023.

Proposal for Future Procedures

- Completion of the interviews in their entirety and **qualitative analysis** and organisation of the findings.
- Complete the **quantitative analysis** and organisation of the questionnaires.
- Completion of 1 more **workshop**.
- Compilation of work results for **publication** in 1-2 journals.
- Based on the results of the data analysis a **final age-friendly community centre of wicked problem map**, stakeholders map, Multi-level Perspective framework (MLP), future vision map and transition framework and strategies will be completed, with **design practice** specifically in the product design phase of the framework (4 graduates).
- Completion of final **dissertation**.



Thank you

chenliju@fa.cvut.cz