

Space Service Design of Micro-regeneration for Siping Community

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ABSTRACT

The main content of this study is the Siping community micro-regeneration of "space service design". The study is mainly the expansion and rethink of Siping Community Space Creation Action of Open Your Space activities by Tongji University. The activities in Siping Road community space is about how a series of remaining public space, small-scale design intervention and place to be put in community-scale urban renewal strategies. After a year of exploration, the public space in Siping community and design intervention is guided to integrate various stakeholders and resources in the area, so as to form a benign service ecosystem, as the starting point to improve the current community in design area. This study will eventually be the service design of the spatial direction as a result of output.

This study is mainly started with the target research by qualitative and quantitative research methods, and also uses the observation, questionnaire, interview and service design research methods to study the user behavior and analyze the reason behind. By summarizing the research and introduction of Siping space micro-regeneration space service design, the guidelines for the implementation of the design puts forward the theoretical rules and guidance. The author also designed the "Collaborative Micro-regeneration Space Chronicles" as the ideal concept. And put it into the experiment again to test the design results.

Key Words: micro-regeneration, space service design, collaborative empowerment, updated process

Contents

Chapter1 Introduction.....	7
1.1 Overview	7
1.2 The purpose of the study	8
Chapter 2 Literature review.....	11
2.1 Concept of community and community empowerment.....	11
2.2 Psychological research on urban community users	12
2.3 The definition of space service design and methodology	14
Chapter 3 The background of micro-regeneration project in Siping community	17
3.1 The status of urban community public space service.....	17
3.1.1 Background of Siping Community.....	17
3.2 The definition of micro-regeneration of community	18
3.2.1 The purpose of the definition.....	18
3.2.2 The method of the definition.....	19
3.2.3 The definition of the micro-regeneration.....	19
3.2.4 Case studied	20
3.2.5 Summary of the definition	24
3.3 Research on the 57 micro-regenerations in Siping Community.....	24
3.3.1 Research the micro-regeneration by observation.....	25
3.3.2 The purpose of observation.....	25
3.3.3 The method of observation	25
3.3.4 Pre-observation	26
3.3.5 The process of observation.....	28
3.3.6 The conclusion of observation.....	29
3.4 Summary.....	33
Chapter 4 Design of Survey of Siping Community Micro-regeneration	35
4.1 The survey on spatial behavior and cognition.....	35
4.2 User-oriented survey	35
4.2.1 The purpose of survey	35
4.2.2 The outline of survey	35
4.2.3 Releasing the questionnaire.....	37
4.2.4 The result of survey	38
4.3 Single interview for micro-regeneration implementers	42
4.3.1 Single interview object	42
4.3.2 Single interview design	43
4.3.3 The implementation of the single interview.....	43
4.3.4 Result	44

4.4 Analyses and application of research tools for "Space Service Design"	46
4.4.1 Personas	46
4.4.2 Customer Journey Map	48
4.4.3 Stakeholders map	49
4.5 Summary.....	50
Chapter 5 Design guide and practice for Space Service design of micro-regeneration in Siping Community	53
5.1 Design guidelines for Space Service design of micro-regeneration in Siping Community.....	53
5.1.1 Design guidelines for designers.....	53
5.1.2 Design guidelines for community managers:.....	54
5.2 Design background.....	55
5.3 The main target of design	56
5.4 Design concept and description	57
5.4.1 Concept	57
5.4.2 Service system design	58
5.4.3 Storyboard	64
5.4.5 Touch point design	64
5.5 Prototype and test.....	67
5.5.1 Prototype	67
5.5.2 Test and feedback	70
5.6 Summary.....	70
Chapter 6 Conclusion.....	71
6.1 Main conclusion	71
6.2 Lack of the research	72
6.3 The further step of the reseach	72
References.....	75
Appendix Questionnaire of Siping community micro-regeneration space	77

Chapter1 Introduction

1.1 Overview

According to the data of the sixth census in 2010, there were about 300 million elderly people in China and more than 100 million children. Since 2000, China has entered the state of aging. It is predicted that the proportion of people aged 65 and over will increase to 22.7% by 2050. At present, the basic daily activities of the elderly in China are in the communities and the families. Especially the community is gradually becoming a member of the community activities, exchanges and entertainment important public space. The concept of community micro-regeneration is also needed to meet the various spiritual needs of community members. At present in China, the concept of "micro-regeneration" in the community is changed from the extensive construction of the traditional "big demolition" to the attention of sporadic blocks, idle plots, small micro-space quality enhancement and functional shaping, Space environment developed. This change requires a perception and acceptance process for community users' perceptions, behaviors, and habits.

At present for the community environment, the rise of the "micro-regeneration" is about following main reasons:

Firstly from the internal cause. In Shanghai, similar to the Siping community as the old users are the population base. As a result of the impact of aging, Shanghai in 2016 the proportion of the elderly for the first time exceeded 30%. Among them, the elderly part of the housing prices living in the last century, the seventies and eighties old-fashioned community.

Secondly, because the urban community residents gradually open self-consciousness, for the material and spiritual needs with the improvement of quality of life has become more extensive and varied. Advocating designers to take the lead from the bottom of the community

to create this issue in Shanghai has been gradually as the germination and experiments. In 2016, the Shanghai Municipal Planning and Land Resources Administration hosted the city update community innovation activities (including the Siping community), including 11 Shanghai communities in the city area. But for lack of management and community problems, the domestic society in this area of research and practice is still in a starting stage.

Thirdly, except the Chinese mainland, especially Japan and Taiwan, which are geographically and culturally similar, community development and community space services are relatively mature. In many of their practical activities, the development community is a kind of "bottom-up" movement and "participatory democracy" that deals with the structural shock of globalization. There are the typical cases of space service design. Although the social and cultural background of China mainland has a big difference from them, facing with with rapid urbanization and globalization problems, localization of community space service design still has great potential.

This topic is mainly from the end of 2015 by the Tongji University Siping community space creation action planning team launched the Open Your Space activities, as "2015 Bi-city Biennale of Urbanism \ Architecture" one of the external exhibition project with the theme of "Re-living city" The action attempts to create and implement community-scale urban renewal strategies through a series of design and involvement of surplus public spaces. During the period, a total of 72 small projects were put into the Siping community as the Siping community micro-regeneration project, and a number of community outdoor activities were carried out to make experimental attempts for community construction and community activation.

1.2 The purpose of the study

First of all, to promote the practical feasibility of modern urban communities to provide a better community living environment and application guidance for urban community users. Also to create a basic

theory guidance for micro-regeneration designers and community managers, in order to avoid that the actual operation of the situation can not suit with the situation. At the same time, to provide more effective testing data and research results for the continuous improvement.

Secondly, through the Siping community micro-regeneration, space service design in the community space can put into use of expanding service design in more areas of practicality. The scope of the Siping community is limited, but its historical reasons make it more representative in the Shanghai old-fashioned community. From this community space service design model, can be widely used in the case of more communities.

Thirdly, through this study, the author also hopes to help promote community users to participate in the community to create the subjective initiative. As to promote the exchange between the neighbors, urban community innovation can drive more industries development.

Chapter 2 Literature review

2.1 Concept of community and community empowerment

From the concept of the community, the German researcher Tennis first proposed the concept of community published in 1887, which refers that in the community will be defined as humane, with similar values, A strong social community. This concept only comes from the human factors to examine the word "community". In the 1930s, Chinese scholar Fei Xiaotong created the Chinese word "shequ" in the translation of Tennis' "Community and Society". In 1984, Fei Xiaotong joined the definition of geographical factors according to the particularity and universality of Chinese urban communities. The "community" was expressed as "the community is a group of social groups or social organizations gathered in a region formed in a life interrelated large group". In the Japanese society, the community also has the meaning of "life community". Their traditional community form is mainly composed of geographical factors together to support life, as in Japanese and the community concept of the most similar words "machi (town)", also intended to refer to a received or neighborhood, a certain range of the people formed by the social life community. In Taiwan and other communities, the community is considered the most basic unit of social organism, is where the crowd gathered. With the development of the community in the modern sense, the concept of "community" refers not only to the division of the geographical community, but also to breed such as the consensus community (Tang Guanhua, 2009), the idea of the village and other ideological level Communities, these community relations across material boundaries form a number of new community concepts that often accumulate in groups through major public problems across or beyond the strong sense of community in streets and courtyards. With the improvement of people's consciousness, these common problems are more important than the design of the material environment.

For the community making, it is firstly proposed by the Community Empowerment concept. The original meaning of the term is "community strengthening". In the early 20th century, Brazilian educator Paulo Freire proposed that the concept was transformed from personal behavior to social behavior through the process of sharing knowledge and resources. As community building is an empowerment of behavior in the social context, an active change process is involved. When the community or organization changes due to the behavior of the person involved also known as a benign conversion. It does not the individual needs and social needs. On the contrary, it can put both into a common development track. Community Empowerment must also focus on individual user changes and community changes. Freire argues that community building begins when people begin to listen to each other's opinions, engage in activities and free dialogue, realize the common ground between them, and make plans for new changes.

As the definition of the community in the community to precede the domestic researchers, the main form of the community to make a definition is mainly based on the natural history of the crowd composed of objective historical facts. While China's community research is based on foreign cases based on summed up in accordance with national conditions. Fei Xiaotong is more loyal to the original meaning of the definition of community definition. But in the interpretation of democratic self-government community ahead of the current national conditions, a high-level ideal form in the community study can be used as a future development Goals.

2.2 Psychological research on urban community users

From the psychological point of view, awareness and activities of people in the surrounding environment is largely depends on the external environment to give people the impression. Swiss psychologist Piaget suggested that human development or understanding of development is from the baby until adults as the result of their interaction with the outside world. He describes the continuous interaction between the body and the

environment as adaptation, which makes the psychological structure evolve and complicates in order to cope effectively with the requirements of the environment. The more complex the environment is, the more complex the human psychological structure. So a clear and recognizable environment is called a person in the cognitive psychology is not available factors, not only to give people a sense of security, but also enhance people's inner experience of the depth and strength. And in a particular environment, people's awareness of the surroundings is largely dependent on the environment for their own impression. Albert Bandura proposed the theory of ternary interaction in 1974, ternary means: personal, behavior, and environment. Bandura points out that "behavior, personal, and environmental factors actually act as determinants of interconnection and interaction". First, the environment is the potential factor to determine the behavior; Second, the interaction between people and the environment to determine the behavior; finally, behavior is the interaction of the three interactions. In the community-based behavior and activities, the quality of the environment has affected the personal activities and collective activities of the atmosphere, which can affect the individual's communication activities, to mobilize personal potential. Similarly, the frequency and quality of personal activities is also referring to change the corresponding environment in the human atmosphere. In the community, the interaction between people and the environment, the exchange of information can be carried out at a higher level.

Psychologist William Ittelson proposed a perceptual theory studied by Egon Brunswick and Jams J. Gibson, expressing that the perception was completely or largely determined by external stimuli, with three important points: (1) From the environment to obtain information, action is the most important factor. (2) People search for information all for a certain purpose. (3) Specific object and the overall perception of the environment is different.

These three points suggest that human perception has a great demand for the quality of the environment, and further demonstrates that human activities will be affected when the quality of the environment is

different. In view of human spontaneity, recreational activities and most social activities are dependent on the quality of outdoor space, when people are not aware of the environment or lack of quality, many special charm of the activities will be reduced or even disappear; and environmental conditions appropriate Of the environment, they will be healthy development. Jan Gehl compared and recorded all the activities of the Copenhagen city center in both spring and summer: from 1968 to 1986, the number of pedestrian streets and squares in the city center increased by double. In contrast to the improvement of these physical conditions, the number of stops and rest has doubled.

Gehl said that this comes from a sense of security and regional awareness. From the establishment of a social structure and the corresponding, different levels of space material structure are from the private space to gradually have a stronger public space of the transition, which can be outside the private house to form a stronger sense of security and Stronger subordinate to the consciousness of this area.

From the above literature can be seen, human perception, perception is built on the basis of the link with the environment. From the person's own behavior, cognitive laws and other internal factors, to the external environment of the form and quality, have decided how people in a scene, and even urban community environment how to interact.

2.3 The definition of space service design and methodology

The definition of space service design consists of two parts, one for the environment design methodology, and the other for the service design methodology.

The design of the environment corresponds to the micro-regeneration and the design of space involved in the context of this paper. In 2007, Prof. Lou Yongqi of Tongji University had given the environment design the following definition: Our environmental design is committed to using the overall, people-oriented and sustainable way to create and promote a sustainable "life-space ecosystem", including experiences, exchanges and places in the process of interaction between people and the

environment. This process of change makes the design of the environment from the category of space material design to the relationship between the design, interactive design, experience design, lifestyle design and service design.

From the service design, with the service economy on the market reform, the 20th century, the global economy began to transition. Service design in such a design-driven and industrial transformation of the background came into being. The term "service design" first appeared in the "design thinker" group consisting of Morello, Hollins, Manzini, Erlhoff and Pacenti, etc. in the early 1990s. Subsequently, Marc Stickdorn also proposed "service design is a way to cross the discipline." In 1992, Buchanan proposed, "Design disciplines are potentially integrated because design thinking can be applied to any field of human experience. Tukker and Tischner put forward the concept of product service system (PSS) in 2006 ". Product service system is tangible products and intangible services, and its purpose is to meet the needs of the target user. "

The methodology used in service design is the research method that will be used in this paper. The service design flow structure is non-linear, and this structure uses an iterative approach. That is, every step of the implementation of the service design process is likely to return to the previous re-test. (Stickdorn, 2009) The four steps of the iterative process are:

- (1) Exploration
- (2) Creation
- (3) Reflection
- (4) Implementation

From the perspective of space service design, as pointed out by Professor Lou Yongqi, the "living space-ecosystem" guided by service design is the core object of environmental design. In the above methodology, the relationship between people and things. It is from the perspective of sustainable "environment and people" way of thinking. The combination of the two angles is the methodology of the environmental design. Also the need for interdisciplinary knowledge of the complementary service design includes the toolkits: customer travel map,

system map, and stakeholder map.

Although the current service design in the development of urban community on the theoretical literature is still very few, but there are still many environmental design and service design projects in the user-centered design concept through the establishment of the system to solve all kinds of problems. From the definition of the new environment defined by Lou Yongqi, it can be seen that the boundaries of environmental design and service design are slowly blurring, not only the two parts overlap in the study, but also diversify with other disciplines trend.

Chapter 3 The background of micro-regeneration project in Siping community

3.1 The status of urban community public space service

3.1.1 Background of Siping Community

1. Basic background

Siping community in this article specifically refers to Siping Road street community, which is 2.75 square kilometers, the resident population of more than 10 million. Demographic characteristics of the high density, the average population category, mostly in the seventies and eighties in the last century in the settlement of the elderly groups, including college and above accounted for 39% of the population. Space characteristics for the public space is crowded, residential buildings and street pattern bias stereotypes, coupled with the overall aging of housing, space quality needs to be updated.



Figure 3.1 Area of the Siping community from this study

2. Community form

Siping community is currently the form of Shanghai old type of residential community¹ one of the most significant feature of the unit community: First, the population within the community has a high degree of homogeneity. The local residents mainly from the end of the last century settled here in the older generation of residents, the average age of more than 50 years of age, the degree of education concentrated in secondary school Level. After retirement, because of the same cultural environment, its family structure and lifestyle are highly homogeneous, so that the atmosphere within the community showed the atmosphere of old life; the second is the introversion of community activities, the community open to all 22 residents of the activities of the facilities, places of study and entertainment space; third is the role of personal life and production roles coincide. For most of the retired population, they show a special overall mindset and habit in community communication. This trend of stable life is not only used for life, but also in work and communication.

3.2 The definition of micro-regeneration of community

3.2.1 The purpose of the definition

Since the concept of "micro-regeneration" is a new term that social designers and practitioners have generated in the project since 2015, its boundaries are still relatively vague. In the process of design practice, there will be misunderstanding due to understanding bias. The next concept definition of "micro-regeneration" will be a key role in the promotion of the design rules and promote effective dissemination. Also it can eliminate the existing projects in the stakeholders of the understanding of the deviation, to achieve better cognitive effect.

In terms of design practice, the correct conceptual definition can provide the right guidance for its possible future practice projects. Therefore, for the design part of this article, the concept of the design

¹Zhang Jingxiang, A Comparative Study of Chinese and Western Urban Residential Communities - Type, Endoplasm and Evolution. Modern Urban Studies, 2005.5,8-13

process will be defined in the correct range and research content.

3.2.2 The method of the definition

This chapter is for the "micro-regeneration" of the need for the behavior of the object, the process, the purpose of one by one to explain. At the same time, as a kind of design behavior, it should be extended to the specific design practice, through the case analysis of a more comprehensive way to explore the "micro-generation".

3.2.3 The definition of the micro-regeneration

(1) Object: Tiny public spaces or small area.

Siping community micro-regeneration activities itself is also one of the earliest community micro-regeneration activities in Shanghai. It is obvious that "micro-regeneration" covers the object of community residential public space. With these small-scale spaces as the update target, the possibility of transformation is more than the large-scale space. The transformation of low threshold, designer-led updating in the participatory community activities can gradually turn the initiative to the real users. The "micro-regeneration" plays the highest land use efficiency to the community environment flexibility.

(2) Procedure: Perform a small scale of update or add.

The "micro-regeneration" operation process has three main features:

1, The small scale. Unlike the general "big demolition and construction" mode of urban construction, micro-regeneration in the construction of the scale of the transformation is more biased towards the fragmented land, idle land, small space to upgrade the function and quality. In short, the "minimally invasive surgery" updates to achieve the purpose of improving the community space environment.

2, The small project. The period of "Micro-regeneration" from planning to the actual construction of the construction is short. The perspective of human and financial resources is more conducive to sustainable community development. The cost of the project required for renewal is therefore relatively low.

3, The small impact. Unlike the large-scale community update, the impact of a single "micro-regeneration" on the community is limited, and

it can carry the function and quality of the role of radiation can only narrow the audience. Therefore, the population influence during the implementation process can also be within the controllable range.

(3) Target: To enhance the quality of public space or upgrade the purpose of the function.

"Micro-regeneration" comes from the homeowners and tenants of the various informal alterations² in the Chinese old houses. This kind of alteration is because that Chinese old-fashioned area can not meet the daily living needs of the people. These people live in the spontaneous space for living, or for livelihood maintenance, or for the party leisure. For the direct use of space users, this "regeneration" has a rigid demand. But because of the lack of scientific planning and improve the public management, to many areas of urban order to maintain a lot of drawbacks. With the local government to develop a "historical building repair mechanism", Shanghai's old-fashioned community every eight years through the government from top to bottom to repair, its purpose is not only to improve the practicality and safety of the building itself, but also to enhance the space function. The purpose of community renewal is essentially the same in the process of economic development. The difference is that "micro-regeneration" is refined according to the characteristics and limitations of today's community space development. Therefore, "micro-regeneration" meets the living space on the basis of the function, beging to improve the combination of functional and spatial quality from daily life to public activities required for infrastructure and environmental upgrades.

(4) Summarize the three steps defined above, "micro-regeneration" in the context of this article is defined as: Redesign the public sporadic space or small space or a small scale update, so as to enhance the quality of public space or upgrade function.

3.2.4 Case studied

To explore the modern domestic and foreign community update means with the concept of "micro-regeneration", you can find the concept has

² China government procurement network: "非正式改建", http://www.ccg.gov.cn/gpsr/lltt/201609/t20160928_7374612.htm , 2016.

been in many places germination prototype, which distinguish between the two categories:

- Single-point intervention

Single-point intervention refers to the single project of micro-regeneration. The concept of "micro-regeneration" has many similarities. For example: the design goal is more of the city's signs, interactive devices, facilities and other items. Beijing odd design company designed a traditional alley of smokers in the community of cultural problems. They put forward an interactive function of the device design to solve environmental problems unabling to meet the daily needs of local smokers. This design is not only designed to deliberately change the behavior of smokers under the premise of the combination of alley in the basic elements of the alley, but also to make the smokers and residents to share the fun, convenience and cleanliness. This design intervention is small, so you can explore in depth to the user's use of behavior, psychological factors, and more like a group of people designed for the sketch. Compared to the breadth, it is easier to meet the needs of the user.



Figure 3.2 Old Beijing alley smoking point light design project

The project "sound board" is a multi-sensual interactive device, located at the entrance of the King's Cross Station, attracting tourists, office workers and local residents for the 2012 London Olympics. The touchable, audible and visible soundtrack provides an interesting and memorable experience for important landmarks in London, responding to the participation and co-operation of the Olympic games. This kind of "micro-regeneration" does not last long. The purpose of this design is

that it can be updated iteratively and can constantly change the environment.



Figure 3.3 The project "sound board" (Resource: <https://chloemeineck.wordpress.com/2012/07/31/songboard-london-kings-cross-station/>)

Summarize the single-point intervention community space listed in this paragraph; "micro-regeneration" has the following characteristics:

(1) The "micro-regeneration" is separate and costs low. It is more suitable for community space update the initial test phase. It has a lower investment risk and access threshold. In the future also has a strong room for improvement.

(2) Single point of design involved in the small problem, sometimes the target user's small needs, or the use of the user fragmented time into a small design output.

(3) Because of the simple method of single point intervention, the radiation area and the breadth of the population are small. so its influence will be limited, and it is easy to be iterated in the macroscopic overall spatial updating process.

(4) In the artistic aspects of the single-point intervention, it is more likely to art of ornamental and space to transform the combination, and not easy to produce a sense of disjunction. For example, a small number of devices implanted in the community, not only can enhance the role of space quality, but also has the potential to become a landmark.

- Multi-point intervention

In foreign countries, many open neighborhoods have begun to create activities similar to "micro-regeneration" communities. Such as in Japan,

are called "community-based construction" which is more close to the concept of micro. Japan's community designer Yamazaki Ryo's community building activities in the Hoi Ho area of Sakai City, Osaka, began to expand from the range of local residents. The design approach is mainly based on the locals' schedule and living habbbits. The breakthrough point of the project is that each of the local households in the courtyard where visitors can see the place placed in different animal modeling furnishings. So the designer not only redesign the furnishings, but also involved more people in the public space to set up local characteristics of the furnishings, in order to attract people stop . According to the location of these furnishings, they created a map of all the different animal shapes, and distributed to the local residents in order to promote the scope of people to expand the activities of the map. This design involves not only the use of the local cultural heritage of the original carrier, but also broke the local people had narrow range of activities, to encourage people to find the original but the neglected landscape.



Figure 3.4 Project "The zoo of Kango" in Sakai City, Osaka. From Yamazaki Ryo

Summary the multi-point community space listed in this paragraph has the following characteristics:

(1) The "micro-regeneration" design involved in the network of multi-point between the overall community relationships under the mutual

contact and influence.

(2) The spatial problems of different cultural backgrounds and objective environment are different, but in the same community system, the emphasis is on the direction and the direction of the problem is targeted. So the multi-point intervention type of "micro-regeneration" is not easy to copy to another space.

(3) Due to the distribution of multi-point distribution, the impact of a single project audience is relatively wide, from a cognitive point of view, many times appear in front of the user, leaving the impression of the environment than a single individual strength, the behavior of the impact of the effect is more obvious.

3.2.5 Summary of the definition

"Micro-regeneration" in English literally translated as "Urban renewal in micro level"³, or "Urban Micro", meaning micro-level urban renewal or urban regeneration. By summing up the definition and case classification process, the author summed up the "micro-regeneration" into five characteristics:

- Low risk
- Low investment
- Flexible
- Involved
- Cultural

To sum up, I believe that the broad sense of the "micro-regeneration" can actually occur in any place in the city, only in terms of means and performance techniques are different. In this paper, the selected object is limited to the Siping community, which is itself a more typical residential community in the city, and has a considerable number of "micro-regeneration" after a systematic update and organization.

3.3 Research on the 57 micro-regenerations in Siping Community

³ Global Times 环球时报: "Urban renewal on a micro level ", <http://www.globaltimes.cn/content/982106.shtml?from=singlemessage&isappinstalled=0> , 2016.5

3.3.1 Research the micro-regeneration by observation

In this paper, the observation method is one of the methods of qualitative research in research. The reason for the early stages of research in the pre-observation, first, because the Siping community "micro-update" experienced two quarters of the creation of space activities, has been put into use in the state, through intuitive observation, can get the most authentic user usage and status quo The Second, because as the initial observation and analysis of the status quo, the real collection of information at this stage, to the future of the relevant design intervention to provide a comparison, easier to make a comparison in the test phase. The observation method is presented in a variety of ways, and this section mainly uses the form of video and photographs to present the results.

3.3.2 The purpose of observation

- Understand all the "micro-update" since the completion of the investment so far since the use of the situation and effective utilization.
- Use the most intuitive first-hand information to understand the user in the use of "micro-regeneration".
- Capture the user in the actual behavior of the details and a small reflection to understand the user in the existing environment of the experience process for the research process of this article to make the basis for preparation.

3.3.3 The method of observation

This article uses the POEMS framework proposed by the Institute of Design, Illinois Institute of Technology as a basis for observing method. The main guidance is how to observe and later finishing analysis. POEMS mainly represents five aspects that must be identified in the observation process:

- P for People or the users.
- O for Object, that is observed when the object, especially with the observer-related objects.
- E for Environment, which refers to the environment in the context.

- M for Message refers to the related information.
- S for Service, which means that the observer may be associated with the service.

3.3.4 Pre-observation

- The process of pre-observation

Through the pre-observation on November 20, 2016, the author conducted a preliminary survey on all the existing "micro-regeneration", focusing on whether or not it is still in normal use, and whether there is any post-management. And then, on March 1, 2016 the author observe the data as a supplement again as contrast.

项目编号	名称	存在与否 (2016.11)	现状	备注
1	四平空间	1	更新成珠宝工作室	
2	为一个或多个工人准备的铁圈	1	偶尔有人使用	
3	画廊王国	1	塑胶带损坏严重	
4	短管的持久	0	装置本身完好, 灰尘落叶严重	过期间被搬走
5	网联	1	完好	
6	家园	1	木质腐朽, 鲜有人坐	
7	廊	1	少了一个装置	
8	移动种子馆	0		
9	洞	1	有人使用, 但居民反映可有可无	
10	左右之间	1		
11	215步移动墙	1	基本完好	
12	街边谈	1	已经被其他涂鸦更新	
13	主视觉墙面	1		
14	互动伞	0	被搬走	
15	在建筑与街道之间	0	被搬走	
16	迎门	0	被搬走	
17	在这里, 在四平	0	被搬走	
18	须臾不休	0	被搬走	
19	项目影片	0	被搬走	
20	与“同”有关的一切	0	被搬走	
21	四平互动拼图	0	被搬走	
22	达人纪录片	0	被搬走	
23	飞毯	0	被搬走	
24	舞蹈	0	被搬走	
25	四平记忆影像征集	0	被搬走	
26	彩色广场	0	轮胎机脏无人文静	
27	圣诞树	0	被搬走	
28	互动花海	0	被搬走	
29	树之泉	0	被搬走	
30	井盖地图	0	被搬走	
31	风之韵	0	被搬走	
32	变色龙	1	被印上了各种广告	
33	来电	0	被搬走	
34	转吧	1	前方堆放了很多杂物, 且排线严重	
35	城市肌理的时间线	1		
36	合通	0	被搬走	
37	绿野仙踪	1	跳板板面和轮胎目前还在	过期间被搬走
38	原色生活	1	被当成了垃圾桶	
39	好好道	0	被搬走	
40	暖心阅读	0	被搬走	
41	球场	1	油漆剥落严重	
42	同桌	0	被搬走	
43	微笑墙	0	被搬走	
44	焰之舞	0	被搬走	
45	节奏	1	已经变成停车场	
46	马里奥	1	新建的小房子还在	
47	树晶球	1	灯还能亮	
48	珍珠棋局	1	棋子全部掉光	
49	来玩吧	0	被搬走	
50	弃物再建	0	被搬走	
51	手工包	0	被搬走	
52	活力街道	0	被搬走	
53	街边谈	0	被搬走	
54	反常	0	被搬走	
55	堆肥系统概念	0	被搬走	
56	照见本质	1	掉落了部分镜面	
57	四平人	1	被印上了广告	
		总计	23	

Figure 3.5 List 1 of observation for micro-regenerations in Siping

From the beginning of the December 2015, the first quarter of the Siping micro-regenerations are 57 projects (excluding short-term activity items). The existing rate for a year is 40.35%. Most of the disappearance of the "micro-regeneration" is the whole as a withdrawal of the waste, including the re-building device, landscaping wall decorations and so on.

In the pre-observation conducted on February 15, 2017, the changes in the community's "micro-regeneration" in the relatively short interval were examined on the basis of the previous observation. The specific

results were as follows:

Table 3.6 List 2 of observation for micro-regenerations in Siping

四平社区“微更新”预观察统计表2

项目编号	名称	存在与否 (2016.11)	存在与否 (2017.2)	说明
1	四平空间	1	1	更新成珠宝工作室
2	为一个或多个工人准备的镜圈	1	1	偶尔有人使用
3	圈圈王国	1	1	塑胶带损坏严重
4	短暂的持久	1	0	装置本身完好, 灰尘落叶严重
5	间联	1	1	完好
6	家园	1	1	木质腐朽, 鲜有人坐
7	膨	1	1	少了一个装置
9	润	1	1	有人使用, 但居民反映可有可无
10	左右之间	1	1	
11	215步移动墙	1	1	基本完好
12	街边谈	1	1	已经被其他涂鸦更新
13	主视觉墙面	1	1	
26	彩色广场	1	0	轮胎脏/2017.3清走
32	变色龙	1	1	被印上了各种广告
34	转吧	1	1	前方堆放了很多杂物, 且损毁严重
35	城市肌理的时间线	1	1	
37	绿野仙踪	1	0	跷跷板和轮胎目前还在/2017年后清走
41	球场	1	1	地漆剥落严重
45	节奏	1	1	已经变成停车场
46	马里奥	1	1	新建的小房子还在
47	树晶球	1	1	灯还能亮
56	照见本质	1	1	掉落了部分镜面
57	四平人	1	1	被印上了广告
58	总计	23	20	
59	存活率	40.3508771929825%	0.350877192982456	

During the first observation and the second observation, the number of “micro-updates” survived from 23 to 20. Survival rate decreased from 40.35% to 35.09%. The three items that disappear are the “short lasting” and the interactive category “Color Square” and the “Wizard of Oz”. In the conclusion of the first observation, although the survival rate of the space class and the interactive device class is the highest, all of the two types of “micro-regeneration” appear in the results of the second observation. From the official reasons of the community, it was learned that they disappeared due to safety reasons. It can be seen that in the “micro-regeneration” classification with high relative survival rate, it is still possible to cause loss due to objective problems such as lack of protection and safety in the later maintenance and management.

- The result of pre-observation

Through the implementation of two pre-observation, the author of the Siping community "micro-update" situation has a preliminary understanding. Draw the following summary:

1. Siping community in 2015-2016 year, "micro-generation" of the inventory are less than 50%, of which the natural rate of death is very high. More performance in the device itself still exists, but due to disrepair caused the user can not use.
2. Decorative interactive category "micro-regeneration" the highest rate of death in all types, the relative completion of the process is simple, little for the community users just need to design context.
3. Space category, interactive device category "micro-generation" the highest rate of death in all types, the relative completion of the high, the design for the user behavior needs, such as recreation, communication, parent-child games.
4. Siping community "micro-regeneration" is still in the trial stage, the latter part of the management and maintenance issues are still out of touch, resulting in "micro-update" is not as other community entertainment fitness facilities supporting maintenance measures. This result is to accelerate the "micro-update" the speed of death, reduce its available life.
5. In the early stage of "micro-generation", the designer is the main means of participation, to the late due to the lack of platform mechanisms, designers rarely participate in the late tracking and maintenance

3.3.5 The process of observation

The shchedule of observation:

Table 3.7 The schedule of observation

Place	Catogory	Date	Time
Fushun Rd. Tieling Rd, "Mirror circle"	Space	2016.11.26 Sat.	13:00-16:00
Sujiatun Rd, "Home"	Space	2016.12.7	13:30-16:30

		Wed.	
Sujiatun Rd, Fushun Rd, "Connection"	互动装置类	2017.1.25 Wed.	9:30-11:45
Jinxi Rd, "Run"	互动装置类	2017.2.12 Sun	13:00-16:00
Fushun Rd. Tieling Rd, "Circle kingdom"	Space	2017.2.14 Tus	9:30-11:45

The first observation of the scene to be covered on weekdays and weekends, in order to ensure that the observation results in the working days and non-working days have shown. Secondly, in order to ensure the validity of the observation results and the availability of the next design phase, the selection of the "micro-regeneration" objects are quite high frequency in use.

3.3.6 The conclusion of observation

● The result of POEMS

From the results of P (People), Siping community "micro-regeneration" is mainly used in the community of middle-aged and parents of children. As the implementation of this observation time covers the weekdays and weekends, 50 years of age in the activities of the elderly basically covered all the time, and became the main use of the object. Among them, the basic activities of more than 2 people appear in the community around the various places, and the age of partners will not differ too much. Followed by a combination of parents and children, appeared in the afternoon after school school. Due to the uniform distribution of primary and secondary schools in the Siping community, there is often a chance to contact the community public space and the "micro-renewal" later in the afternoon.

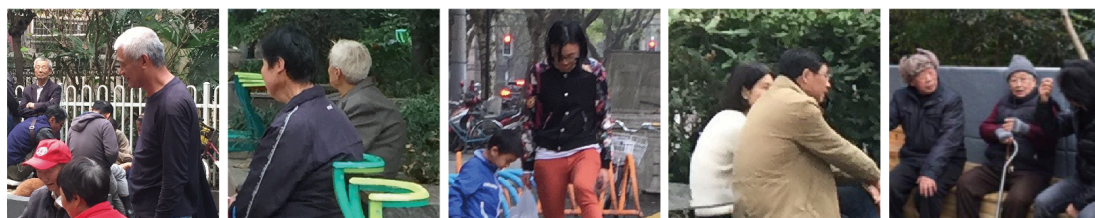


Figure 3.8 The photo of People

As a result of O (Object), the "micro-regeneration" as objects that are directly touched by the observer, the surrounding and environment-related objects. Mainly divided into (1) The use of "micro-update" where the open space held small activities and small facilities. (2) The "micro-renewal" facilities used in conjunction with the original facilities at the site. (3) Similar to the "micro-update" function and common use of facilities. (4) Facilities that are completely different and common to the "micro-update" function. These objects have a certain effect on the use of the "micro-generation" itself, some of which are functionally antagonistic and others that complement each other. For the user, these objects are more functional to meet their behavior needs for community space, but also to expand the scope of the activities of the user.



Figure 3.9 The photo of Object

From the E (Environment), the space used by the target user belongs to the community that was built in the second half of the last century. First of all because of the high concentration of residential areas, public space is usually given several functions, such as: traffic, rest, parking, activities, entertainment, etc., so the environment in this environment has flexibility, versatility and other characteristics. Second, the "micro-regeneration" in the micro-space, due to the management of the original problem leading to environmental quality is lacking.



Figure 3.10 The photo of Environment

In the case of information collection from M (Message), there are two types of information related to "micro-update", one is direct interpretation type information, mainly around the "micro-update", Used to directly explain the name of the project, design ideas and other information. What is lacking is that each item does not have such a description, and that such comments do not explain how to use it, and that there may be a deviation in cognition and use for items that are slightly decorated with works of art. The other is indirect implicit information (the following figure 1, 3 and 4), indirectly through the Siping creation activities of other contact points and the surrounding official release of information, indirectly expressed in the Siping community in the "micro-update" presence.



Figure 3.11 The photo of Message

From the S (Service), The "micro-update" may occur in the main types of services: (1) Short-term "micro-update" related activities category services. Such services usually carry out thematic activities at the time of the event in the community, providing community users with short-term entertainment, interest, convenience, education and other services. Such services are closely related to the existing "micro-updates" at the site, and (2) Long-term convenience services. To the surrounding retail shops as the base, the radiation community within a few community space, serving the entire Siping community and all the surrounding residents.



Figure 3.12 The photo of Service

- Common problem

As the result, the first problem that can be found is the management and maintenance is the big problem. Combined with the results of pre-observation, you can speculate in the Siping community "micro-regeneration" began to put into use a year, the community facilities maintenance department for its late cleaning, maintenance is almost zero. So that users can not use them. For projects that are relatively easy to damage the depreciation of the "mirror circle" and "Run" project, the production of materials easy to wear, easy to pollute and the project under the weak management of the original loss of function, resulting in space and waste of resources.



Figure 3.13 The project "Run" in 2015 and 2016



Figure 3.14 The project "Home" in 2015 and 2016

Second, the more obvious problem is that a considerable part of the "micro-regeneration" has not been used in the right way. One of the reasons for the use of the problem is that part of the device due to too artistic form of expression so that cause the user's cognitive obstacles.

The second reason is that the majority of the residents in the Siping community are older people, and their understanding of the new things is limited. There is no way to understand what "micro-regeneration" is and why it exists.

- The individual problem

Different "micro-regeneration" projects show big difference. Combined with the results of pre-observation, it can be found that the density of the population is different in different populations. Such as the public space area and business shops less Sujiatun Rd "Home", "Connection" and other projects with a relatively high utilization rate. And in the shop in rows of Fushun Road Tieling Road area "micro-regeneration" are used in relatively low frequency. But also in the surrounding commercial industry and more cases, it is easy to affect each other.



Figure 3.15 Different area of micro-regeneration

3.4 Summary

In this process of research, the author summed up the following points:

- The main definition of "micro-regeneration" in the context is: the public space sporadic space or small space, a small scale update or add, so as to enhance the quality of public space or upgrade functional purpose.
- The "micro-regeneration" is still in the initial experimental stage.
- The main problems focused on the management organization, design positioning and functional counterparts.

- In the next in-depth survey design, the author will focus on the user's design for the intervention involved in the behavior, the specific details of the understanding, so as to start the design of space services to provide a reliable basis for the facts.

Chapter 4 Design of Survey of Siping Community Micro-regeneration

4.1 The survey on spatial behavior and cognition

In this study, the author will use a variety of research methods from the perspective of quantitative and qualitative analysis. The object of this study is also limited in Siping community public space direct users and potential users. Therefore, in the face of a variety of research objects, it is need to investigate the research methods and processes for detailed planning.

4.2 User-oriented survey

4.2.1 The purpose of servey

In this study, the questionnaire was designed to help collect the basic behavior and cognitive habits of users in the use of "micro-regeneration". Through the questionnaire can also understand their real feelings and potential needs in use. The purpose of the questionnaire can be summarized as follows:

- Through the questionnaire survey to understand the Siping community residents for the "micro- regeneration" this design intervention in the form of attitudes and needs to understand their cognitive and behavior and design intent to match.
- Through the design of the relevant issues in the questionnaire, the Siping community users appropriate to express their views, to a peer talker's point of view to listen to their real voice, these late space service design results will have a positive role in guiding.

4.2.2 The outline of servey

1. The original community space service
 - In the scope of daily activities in Siping community

- Micro- regeneration the use of residence time
 - Commonly used community space services
 - Participate in community outdoor activities
 - Confusion in the use of community space services
2. The existing awareness of micro-renewal
- Through what channels to know the current community micro-regeneration
 - Knowledge of the existing micro-regeneration
 - Awareness of the presence of micro-regeneration
 - Comparison of community differences in community services
 - More inclined to pay attention to what type of community micro-regeneration
- Community micro-regeneration for daily changes in outdoor life
3. Use the behavior of the process
- Contact or use the most micro-updates
 - Choose to contact or use the micro-update mode
 - Activities that will be performed when micro-updates are used
 - How long will you stay before a micro-renewal project?
 - The same project of the situation
 - Move between different micro-updates (opportunity)
 - Usually and what kind of people contact
 - Single scene description of activities
 - Multiplayer scene description
 - The end of the situation (opportunity)
4. The demand for community public space
- The shortcomings of the existing community micro-update
 - Demand for existing community micro-updates
 - Existing community micro-update the form of demand
5. For the Siping community micro-update expectations
- Hope to be in such a micro-update to get what services
 - Hope to be in the existing system in contact with what kind of person
6. Views on participatory community micro-renewal design

- Self-expression for the micro-update views of the will
- Through what kind of channels or ways to express their own ideas

7. Basic information

- Age
- Gender
- Occupation
- Educational background
- ◆ How long do you live in Siping

四平社区微更新空间使用情况调查问卷

您好！我是来自同济大学设计创意学院的研究生陶梓楠。这次的调查的目的是通过一些简单的问题，了解大家平时在日常生活对于四平社区，尤其是其中“四平创客行动”中微更新设施使用上的认知和行为情况，从而深度了解大家对于社区空间服务的需求和未来的发展潜力。

同济大学设计创意学院
研究生 陶梓楠
电话：13661755047

【单选】平时多数情况会在什么时间到四平社区公共空间：
A.平日白天 B.平日傍晚以后 C.周末白天 D.周末傍晚以后

【单选】每次在四平社区公共空间平均会停留多长时间：
A.半小时以下 B.半小时到一小时 C.一到三小时 D.三小时以上

【多选】平时经常利用到的社区空间服务：
A.休息用的椅子或空间 B.健身运动设施 C.与人和交流或游戏的设施 D.供亲子活动的设施 E.便民服务（修鞋配钥匙等） F.社区居委会活动室 G.其他

【多选】一般和谁共同参与社区活动：
A.一个人 B.和朋友 C.和伴侣 D.和子女 E.和社区里的陌生人 F.其他

【多选】在使用社区空间服务中有什么样的困惑？
A.不知道如何使用设施 B.不知道如何寻找适合自己的公共设施 C.设施缺少管理难以使用 D.社区难以满足自己的需求 E.其他

【单选】您知道四平空间微更新吗？
A.知道 B.不知道

【单选】通过何种渠道知道现在的社区微更新：
A.社区宣传 B.亲友口口相传 C.之前的微更新活动 D.偶然在街上看见 E.其他

【多选】对于现有的微更新的有什么样的认识：
A.便民设施 B.艺术装置 C.丰富业余生活的设施 D.美化环境的更新 E.其他

【单选】您觉得社区中存在的这个微更新的数量？
A.0-5个 B.6-10个 C.11-20个 D.21-30个 E.31个以上

【单选】您觉得这些微更新的出现如何改变了您的生活
A.增加了外出次数 B.认识了更多的人 C.丰富了与家人的活动 D.生活更加便利 E.几乎没有改变 F.其他

【单选】您选择接触或使用微更新的方式：
A.路过驻足观察 B.直接接触或使用 C.邀请过亲友一起活动 D.给其中的项目提过意见和建议 E.其他

【单选】对于同一个微更新项目会逗留多久
A.五分钟以下 B.十五分钟以下 C.三十分钟以下 D.一小时以下 E.一小时以上

【单选】对于多个微更新项目的使用，您更倾向于哪一种：
A.通常只使用固定的几个 B.经常走动发现新的微更新 C.跟随亲友无目的地使用 D.根据熟识与否参与使用 E.其他

【多选】在什么样的情况下会离开移动到另一个区域
A.对于一件事物玩腻 B.没目的地移动 C.别的地方更吸引人 D.有明确想去的目的地 E.其他

【多选】您选择在一处地点停留看中的是什么？
A.人群聚集 B.环境优美 C.设施趣味性 D.设施卫生 E.其他

【多选】您希望未来社区微更新功能上增加什么改进？
A.便民网点 B.教育资源 C.文体活动 D.其他

【多选】您希望未来社区微更新形式上增加什么改进？
A.原委主导式 B.原委居民共同参与式 C.居民自发组织式 D.其他

【多选】您希望能在现有体系中接触到什么样的人
A.社区同龄居民 B.社区自主经营户 C.社会参与人员 D.居委会组织人员 E.社区设计师 F.其他

【单选】您是否愿意表达自己对社区更新的意见或参与其中？
A.愿意 B.不愿意

【多选】您愿意通过什么样的渠道或方式表达自己的想法？
A.市民信箱 B.居委会委员会直接提议 C.和其他居民讨论 D.其他

基本信息
年龄 性别 职业
教育背景 在四平社区生活时间
请画出平时通常在社区中的行走路线

Figure 4.1 Siping community micro-update space usage questionnaire (sample)

4.2.3 Releasing the questionnaire

As the overall population was small, so the number of access questionnaires was set to 30. In addition to the basic information obtained in the 30 interviewed questionnaires.

The total of 30 valid questionnaires were collected for the purpose of research, including 60% of men and 40% of females, with an average age of 55.9 years and an average length of 25.8 years in Siping community. Education is 3.3% for master's degree, 26.7% for undergraduate education,

6.7% for college education, 53.3% for high school education, 10.0% for junior high school education. Because these respondents are selected by the author to meet the conditions of community activities of the object, so these data does not represent the basic situation of the residents of the Siping community.

4.2.4 The result of servey

● Recogination to the micro-regeneration

46.7% know that the "micro-regeneration", the remaining 53.3% that do not know what these are. During the conversation, many of these inhabitants thought these are the normal facilities. Not only in the elderly have such confusion, the survey also shows 30-40 year-old young people also know little about this. It can be speculated that the current Siping community "micro-regeneration" in the general population within the performance and understanding of the process or there are some obstacles.

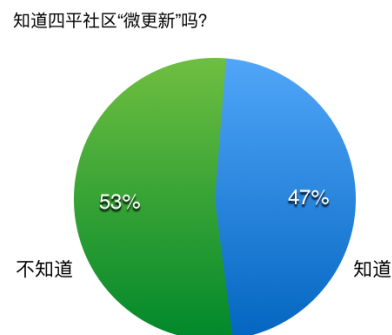


Figure 4.2 53% of residents didn' t know micro-regeneration

Most users will choose weekdays and weekends to go to the community during the day, refers to 66.7% and 86.7%; of which 40.0% of users stay in the community for 0.5-1 hours, more 36.7% The user will stay for 1-3 hours. It can be seen that the people who do not live in the community will not have the result of the previous observation because of the difference in the weekends and the peak of the crowd. This once again proves that the object of this study focuses on the middle age People, their daily activities range or community-based, and willing to pay a lot of time, or even all day outdoors. In the conversation, the author also found that although the respondents are willing to spend a lot of

time outdoors, but there are still many people feel comfortable at home, just to pass the time and choose to stay in the community. In addition, 60.0% of the users choose a person in the community activities, and the corresponding "most commonly used space service", select "rest with the chair or space" accounted for 60.0%, "fitness facilities" accounted for 50%, which are relatively suitable for single-person facilities. It can be seen that there are a lot of people living alone in the community. When the author asked the reason, some of the respondents said: "out of the time is a person, but in the community to meet the face of the number of people to meet more, sit together and take a few words, naturally, from strangers to become Can be a few friends on the neighborhood." (Interviewee Xu) visible community public space, in particular, has a specific function of space can promote the link between people and people.

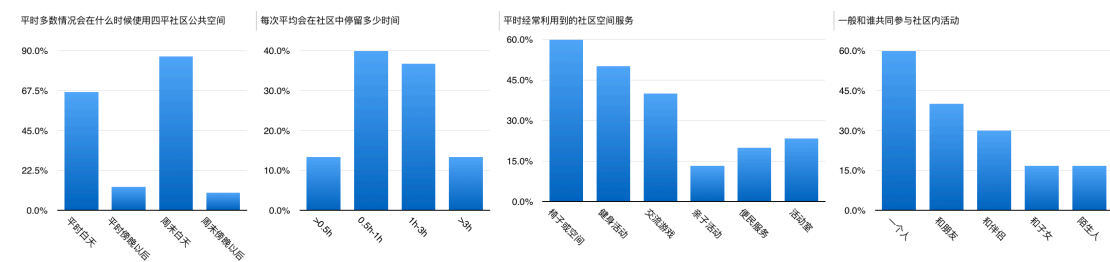


Figure 4.3 Community public space staying statistics1

About the "micro-regeneration" cognitive understanding, 21% of the respondents do not know how to use the existing "micro-regeneration" space services, 46.7% think that in the search for scattered space in the community service confused, occupy all the problems Of the majority, followed by 30.0% said that because of the lack of maintenance and management, part of the facilities are close to the use of the situation. In addition, up to 43.3% of users said that even if there are a lot of micro-regenerations around, some projects can not meet their daily needs of community travel activities. "Even if there are a lot of fresh things, their own up to the crowd once, and then will not pay attention to the original own in the chair to sit and chat, now or so, fresh this kind of thing, once after There is no." (Interviewee Qiu) I believe that now the biggest problem is focused on the user for the

"micro-regeneration" and other community space service awareness, including the initial search, use, the follow-up Memory did not leave a more accurate and smooth process memories. There are 73.3% of respondents in the answer there is a multi-election; we can see that the current gap in the cognitive is not a single.

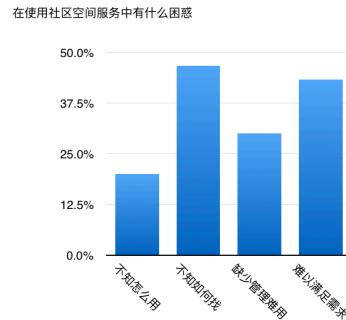


Figure 4.4 Community public space stay statistics 2

● Behaviours to the micro-regeneration

在受调查者中，对于“微更新”最初的行为，76.7%是通过平时无意间的路过观察的方式，仅33.3%的受访者会直接尝试接触使用。且在同一个“微更新”中，53.3%表示仅会停留分钟以下，且停留时间与人数呈反比。可见四平社区的居民在室外活动时的流动性较大，能让他们驻足停留的机会较小。“我平时么就在小区里散散步，走到哪里是哪里，怎么会考虑这么多停留原因。要么我遇到什么老邻居坐下来聊聊家常，看看人家下棋打牌。”（徐姓受访者）可以推测出目前的“微更新”更多的捕捉了使用者下意识的使用行为。由于前文所述使用者的认知上存在多个缺口，导致了其在行为上并没有真正关注并认可这样的设计介入形式。

Among the respondents, 76.7% of the initial behavior of the "micro-regeneration" was by the unintentional passing observation, and only 33.3% of the respondents would try to use it directly. And in the same "micro-regeneration", 53.3% said that only stay less than minutes, and the residence time is inversely proportional to the number. "I usually take a walk in the district, where is where, how will consider so many reasons to stay. I either met my old neighbors to sit down and talk about homemade, see people playing cards." (Xu surname Visitors) It speculates that the current "micro-regeneration" is more to capture the user's subconscious use of behavior. There are a number of gaps in the user's perception as described above, which leads to the fact that

there is no real concern and recognition of such a design intervention.

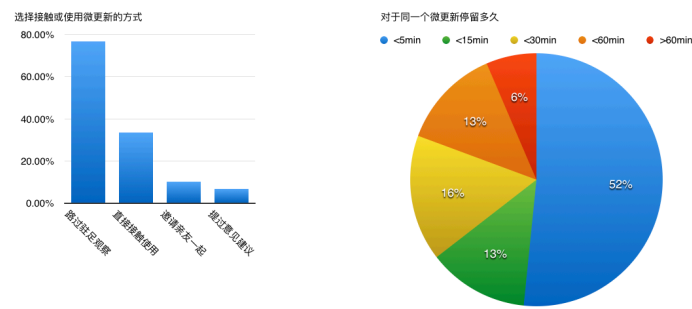


Figure 4.5 Preliminary behavior statistics 1

43.3% of the respondents said that once the approval of a place, they will be fixed to use that one; 33.3% said that often will be everywhere to find around the new things. And 70.0% of the respondents said they were moving because of the aimlessly moving, and in the process of gradually discovering new things, and then choose whether or not to use according to the conditions of good or bad; and only 6.67% of the respondents had clear destination in the community. 70.7% focus on the environment is good or bad, 36.7% focus on facilities interesting, 36.7% focus on facilities health or not, 30.0% is the crowd is gathering whether the crowd is in the "micro-regeneration", the user in the identification and choose to use a "micro-regeneration". The Visible residents of the Siping community in the choice of the use of community space services, the original intention and there is no intention to find specifically, most of the unconscious road, once found in line with their needs and expectations of facilities will show a clear recognition, and this recognition will Change over time to use loyalty. "I usually like the community in the green chair, because compared to the general wooden chair seems to be more clean, and on the road is very clear to my eyes to see." (Interviewee She)

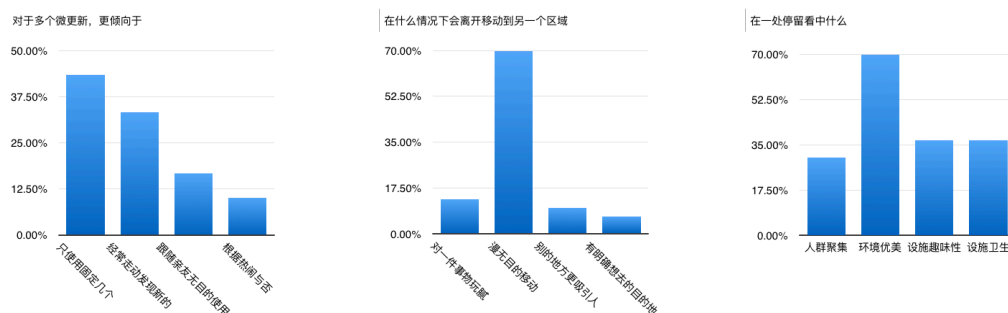


Figure 4.6 Preliminary behavior statistics 2

- User's expectations

(1) 36.7% of respondents believe that they want to increase cultural and sports activities in the community, 26.7% hope to increase educational resources. In addition, many of the respondents also expressed the hope that some of the current "micro-regeneration", because "micro-regeneration" is to stimulate the residents spontaneously spontaneous activities.

(2) 60.0% of the respondents said they usually have a variety of ideas and suggestions for the space can not be expressed. From the management and residential level, the two are still isolated barriers. It still lacks a platform to allow both sides to update the information.

(3) 43.3% of the respondents said that not only people within the community, but also hope that the usual access to people from the community and resources. 56.7% welcome designers to be able to come to them, and designers to make friends. Residents are even more willing to put their own dissatisfaction with the community space and opinions directly to the designer rather than neighborhood management department.

(4) 83.3% of the respondents expressed willingness to participate in the design community with the management of the neighborhood. 23.3% expressed their willingness to improve their own community space environment. It is inherently active and expressive, and the constraints of various restrictions and objective conditions can only temporarily maintain the status.

4.3 Single interview for micro-regeneration implementers

4.3.1 Single interview object

The single interview is mainly for participation in the Siping community micro-regeneration process and the deep users. From their point of view, not only can dig out user experience and feelings, but also from a design point of view of the participants in the role of the process of conversion and cognitive changes in behavior.

4.3.2 Single interview design

Preparation phase of target selection

- According to the definition interview object, determine the target visitor character features.
- Through the past "micro-regeneration" participants in the activities of the circle, the initial target audience, and issued an interview invitation.
- Persuade the target respondents to participate in the interview, determine the list after the proposed interview schedule.
- Preparation for the single interview content
- According to the questionnaire in the relevant participatory design involved in the problem, targeted to set the interview.
- Set the relevant questions from the perspective of "micro-update" early decision-making participants.
- Predict possible answers and try to extend the problem to more in-depth investigation.

Core stage of single interview

- Introduction (about 2 minutes)
- Basic situation opening (about 5 minutes)
- Discussions based on participatory design involvement in the questionnaire (about 15 minutes)
- Expect and outlook for future space services (about 15 minutes)
- End

4.3.3 The implementation of the single interview

In the single interview, the author interviewed a total of five people who had participated in the "micro-regeneration", including community-related personnel 3 people. Their basic information is as follows.

Table 4.7 Single interview objects

No.	Particitants	Gender	Age	Job
CY1	Chen XX	F	52	Staff of community
CY2	Wang X	F	45	Teacher

CY3	Xu XX	F	43	Community volunteer
CY4	Song X	F	67	Retired
CY5	Jiang XX	F	60	Leader of the block

4.3.4 Result

- The possibility of community-based micro-regeneration

Through the interviews of community-related personnel, the most information obtained by the author is through the active community organization and influence spread, the participation of the bottom of the residents is very promising. Including the involvement of new things around them, making micro-regenerations themselves a good platform for communication, which is a very important basis for motivating them to participate in more expressive views. Only in the early cause of their initial interest, will have the possibility of participation in the form of diversity.

CY2: I think it is interesting if you own, do it yourself, naturally someone will understand to use. There is the number of facilities, itself less to no one can notice that people will not come up with.

I: So you think because of the emergence of these facilities, you or the number of people around to go out more?

CY2: it should be said to change more than before the outside to be lively, the environment is good we are willing to come out, they are willing to come out to sit down and chat, so there is also known. If you are cold and clear they feel boring. Now many people do not know because this becomes met, meet greeting to know.

Therefore, it can be found that it is possible to further develop into synergistic design participation only if the participation in micro-renewal has been developed. In the case of Siping community, there have been a lot of previous collaborative activities as an experiment, in the course of practice to test out this model has a certain potential.

- The extension of the micro-regeneration mode

As described in Chapter 3, the micro-regeneration is defined in the context of this article to: update or add a small scale range to sporadic or small spaces in the public space, so as to enhance the quality of the public space or upgrade the goal of. In this definition, theoretically, as long as there is sporadic small space, micro-regeneration can occur in any place. In the interview, for the extension of the micro-update model, the respondents said that this is the current neighborhood of Siping residents a big demand point. A copy of the pattern to allow more people to understand what is the micro-regeneration, it can bring any changes to make up for people's lack of knowledge; Secondly, micro-regeneration can meet the needs of the prevalence is not one or two community individual problem.

CY3: you said this micro-update, one that I understand, do not say I generally do not know the original name of this call, let me (community volunteer) usually count here more familiar do not know, most people need not say The. If this thing is a little more, or someone else to do a good move to our side, we see here there, there are other places, naturally know, "Oh, this is the use of this" feeling.

- The micro-regeneration itself requires iterative update

A number of respondents expressed expectations for facilities such as changing micro-regenerations. Because of their own serious damage, lack of management and other factors led to some projects have been irreversible damage; Also because the project itself is not accurately cut the needs of users, hoping to change the design of the conversion function; more reason is objective, All the actual existence of things are mobile. Micro-regeneration is involved as a smaller design, iterative update conditions than the average city update is more simple, so not only objectively easy to update, from the user's perspective also showed the same view:

I: Do you think the update project is now can be retained?

CY4: reservations can be retained, that is, you can improve it again.

And then to consider the deep level, but after all, now just the beginning Well, we may not think it is very comprehensive, and some places can be improved, such as adding more functional point. It is still relatively simple. If you can do good can be promoted out.

I: Do you think compared to regular maintenance to repair, or regular to update, more biased in favor of which one?

CY4: that is a regular update is better, because no matter what time to see a long time there will be a visual fatigue, of course, still need to maintain, but the maintenance of the most important thing depends on the residents themselves. But the update will depend on your designer.

Author: Do you think how long the update cycle is better?

CY4: I think about a year or so. Because a year is almost outdated, and do not need to get rid of all, part of the can, and may increase some, may also reduce some.

4.4 Analyses and application of research tools for "Space Service Design"

"Space service design" is the expansion of service design at the spatial level. It is understood at the systematic level that people and people, people and organizations, organization and organization value and the relationship between the core stakeholders. Through different means, it enhance the service experience.

4.4.1 Personas

According to the observation method, the questionnaire survey and the result of the single interview, the author will make the user persona, according to their age, gender, occupation, hobbies and other factors to summarize the potential users.



Figure 4.8 Personas

- Primary Persona

Mr. Wang, 72 years old, male, retired worker. Living in Sujiatun Road Fushun Road District for more than 30 years with his wife together. Hobby is the chess, and chatting with neighborhood. There is 6 years ago after retirement has been in Siping community pension. Usually help his wife with housework, also often sits in the community to breathe fresh air, and join the chess game.

- Secondary Persona

Ms. Sun, 45 years old, female, is the community volunteer. Living in Anshan 8th village for about 15 years with her husband live together. Hobby is doing handcraft, flowers, walking and exercise. Usually jog in the in the public space.

- Thirdly Persona

Ms. Zhang, 34 years old, has a 6 years old son, teacher. Living in

Anshan 4th villages for about 8 years. Hold a three-member famili. She company with her son on the way to the school everyday. Usually is in outside to buy things. Hobby is cooking, reading and sports and walking outside with her son.

4.4.2 Customer Journey Map

According to the existing literature and research information, the author summed up the current Siping community micro-regeneration experience of each link corresponding to the user behavior. In this user journey map reflects the participants of the entire experience process, the behavior of the participants, the contact points according to the timeline of their respective behavioral movements, and their logical relationship.

Customer Journey Map

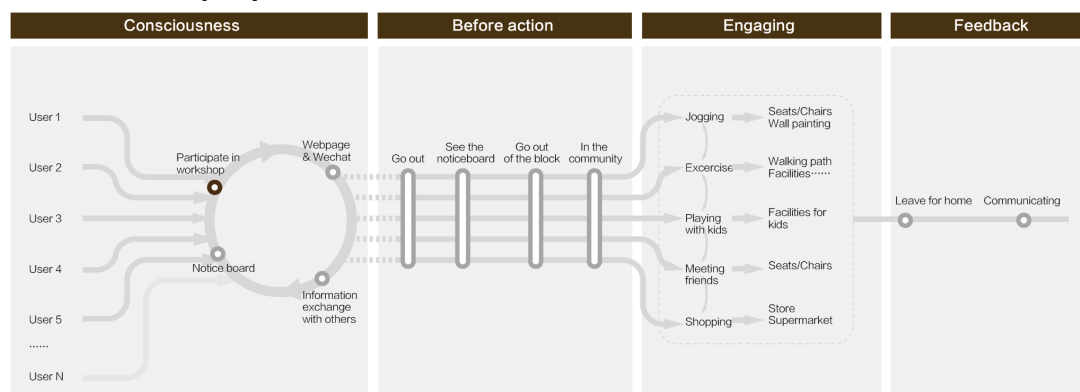


Figure 4.9 The customer journey map

The customer journey map can be divided into four stages according to time: Consciousness, early action, experience and post-feedback phase. In the consciousness stage, the user learns micro-regeneration because of different channels, which can be online chat group or public notice, offline community notifications, other's comments or experience in workshops. In the early stages of the action will be concentrated from different district location to the community public space. During the user's journey in the experiential phase, the user does not have a specific route of use. It is active for one or more purposes of use. Late feedback stage, a considerable number of users will be interested in conveying this experience to others, such as family, neighbors or friends.

When a journey is over, the experience route will return to the beginning and repeat for the next term.

From the current user analysis, the author summed up the following points according to the customer journey map:

- The micro-regeneration in the consciousness phase of the information access channel is relatively simple, and because the middle-aged people are not familiar with online products, most of the online channels are still useless.
- In the experiential stage, there is a lack of rationality for single-purpose and multi-purpose user guidance. There is a lack of more prominent memory at the same time.
- In addition to the physical contact with the micro-regeneration, the user in other aspects of the contact for the service are relatively weak, so the micro-regeneration space service entity will be relatively low.

4.4.3 Stakeholders map

Based on the research on the micro-regeneration project and the author's own research, I summarize the stakeholder map of the current Siping community micro-regeneration space service.

behavior, the expectations. In addition to collecting the most intuitive data and analyzing it, the author also obtained the first-hand material of qualitative research and obtained some preliminary conclusions and assumptions. In the single interview phase, through a separate face-to-face conversation shows the participating in the micro-regeneration design and discussion of the residents of the real feelings and demands. Finally, the service design research tools summarize the user types, user needs, service objectives to help design the formation of the concept.

Chapter 5 Design guide and practice for Space Service design of micro-regeneration in Siping Community

5.1 Design guidelines for Space Service design of micro-regeneration in Siping Community

Based on the above summary and discussion, the author has drawn some design guidelines for Siping community "space service design" of micro-regeneration. Although the research content of this article is derived from the Siping community, also put forward the guidelines also take into account the general situation based on the Shanghai community. This guideline is intended to provide theoretical guidance for the design phase, as well as a summary of the findings and to focus on the design phase.

5.1.1 Design guidelines for designers

(1) When designing a community micro-regeneration, the designer should:

- Fully understand the definition of micro-regeneration so that ensure the impact of space to a minimum.
- Take short duration, small amount of work and small scale. The construction process around and should give minimized impact to daily life.
- Fully investigate the site and target users, focusing on its public space quality and functional aspects of the upgrade.
- The overall distribution should be combined with the surrounding format or facilities.
- In the design of each micro-regeneration should take full account of users, especially in the elderly population accessibility, identifiability and usability.
- In terms of material use, they should use environmentally friendly, energy-saving, recyclable materials, so as to avoid unnecessary harm to the environment and resources.

- In the assembly process, taking into account the possibility of micro-regeneration continuous iteration. It should be as flexible as possible, easy to follow-up construction and reconstruction.

(2) In the design of space services, the designer should:

- In the planning of micro-update area, the community should be geographical conditions, format distribution, spatial pattern taken into account, combined with the user's point of contact to do the overall planning.
- In the design of space service in different communities, it is necessary to gain a better understanding of the composition of the target groups and to understand the target groups through the community environment, the community management and the residents themselves.
- When analyzing user needs, it is necessary to understand the causes of multiple shallow and deep layers from the pain points of existing space services and analyze the problem by means of service design.
- Space service design should take full account of the feasibility of the actual conditions, including not only the existence of the design of the rationality of the contact point, but also the relationship between the system background to build the feasibility.
- In the design service system description, you should use the easy-to-understand language expression, as much as possible using icons and illustrations.
- In the construction of service systems should also take full account of the micro-update iteration, process design needs to maintain sustainability and flexibility in order to continuously upgrade the system and update contact points.

5.1.2 Design guidelines for community managers:

Community managers as important stakeholders in the system, they are not only responsible for assisting the work of designers, but also to do a good job between users and designers of docking communication work, so for community managers, should also be familiar with the design

elements, and designed to develop a reasonable work practices. For community managers, I will design guidelines summed up the following few to elaborate:

- Community managers should be in full communication with the designer in advance, for community users can convey the real needs and design will. And in the follow-up work in a timely manner to convey the progress and the situation.
- Community managers and designers in the studio should stand on the same side of the interests. The two sides should stand on the level of equal communication to exchange.
- Community managers need to plan a detailed work plan, including the rational choice of important time points, to provide the appropriate venue and related assistance.
- In collecting the views of both parties, it is recommended to use the workshop in the form, and as much as possible to invite all stakeholders involved.
- Community managers should not be confined to the traditional context, should not rigidly adhere to the conservative tradition of thinking mode, should be fully access to information, and a variety of social resources to broaden their horizons.

5.2 Design background

At present, according to the previous research results, the current design can be used as space service design experiment micro-update a total of 12 small projects (including multiple distribution projects, a total of 15). The source of the selection is based on the availability and completeness of the project in the previous observation study to ensure that micro-regeneration within the scope of the selection can continue to be applied in the space service system.



Figure 5.1 The range of area can be used as a design experiment

The design will occurred in about 0.75 square kilometers of the Siping community. In the original retained micro-regeneration project available on the basis of the development of the concept for space service system, and gradually implemented to the service and physical touch point design.

5.3 The main target of design

Target of design

- Link multi-stakeholder to establish a space service platform that all parties can participate in, so that from design to practical experience of the process can be open.
- Use of service design to establish the concept of space service design and kernel, combined with Siping community micro-regeneration. To establish a complete, sustainable space service system.
- Through the user experience design research and research methods, improve the degree of acceptance and understanding of more target users.

And through the above three design targets, I assume the ultimate goal of the design:

- Sustainable iterations of micro-regeneration. Let the experience

flow from the closed-loop to the open-loop transformation.

- Provide a reference endorsement for micro-regeneration construction. In this paper, the process of micro-regeneration iteration is tangible and materialized. This tangible entity will be able to become the next stage of micro-renovation of the construction by the experimental data.

5.4 Design concept and description

5.4.1 Concept

Based on all the research results and the conclusions, the author will deepen the concept of design under the discussion of community stakeholders. From the following keywords, such as "update, spatial cognition, behavioral activity, multi-party participation", the core concept is that "Allowing residents to participate in the historical process of writing community micro-regeneration iterations".

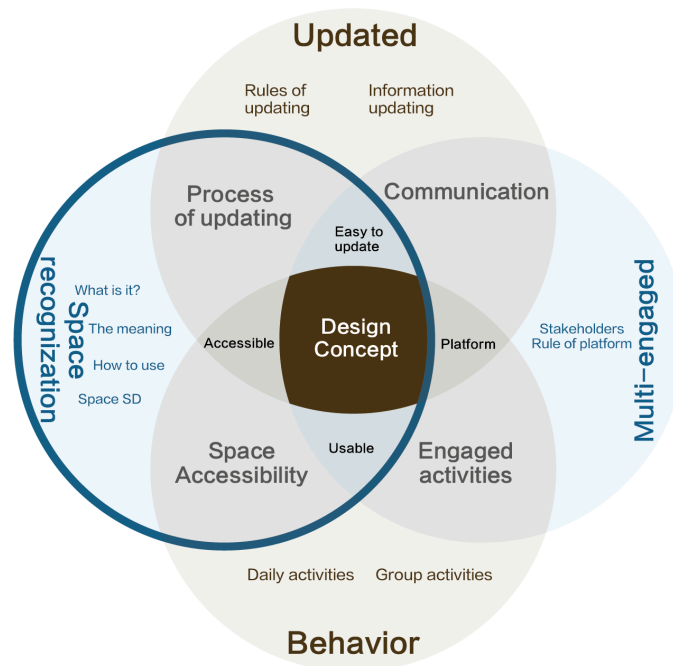


Figure 5.2 Design concepts

So the challenge of this design is:

- (1) How to enhance the micro-regeneration space service experience?
- (2) How to increase participation in this process?

(3) How to encourage micro-regeneration iterations and make the process available as a reference?

Based on the above discussion, the author introduces the design idea of "Collaborative chronicles of micro-regeneration space". The concept is derived from the "local chronicles". The local chronicles are the collection and their related local records, local work, local history, local culture and other matters or activities in general. The city history or local research can provide a variety of research reference value. "Collaborative chronicles of micro-regeneration space" means different from the general local chronicles, it carries the content not only by the official manager, but also from the actual user in the area. In space service design, the existence of space blog is not only a result in the end, but also in the early service experience stage to design the contact point of the way presented in the system.

5.4.2 Service system design

In this service system, there are three community stakeholders, neighborhood managers and designers of the three stakeholders. The community residents occupy the most important position in the system, they use the micro-update and space services as the main body, and the relationship between the other two sides is the force of cooperation and exchange of equal relations. In contrast to the stakeholder graphs in chapter 4, there is a greater focus on the deep linkages of the three stakeholders.

In addition, the stakeholders involved in this design are not only based on the person's own connection, but also in the community of different space for people to gather and connect. Such as community service centers, older universities and other places have become more social resources platform. There is also the potential for many stakeholders to communicate in depth about the outdoor activities that are directly related to micro-regenerations.

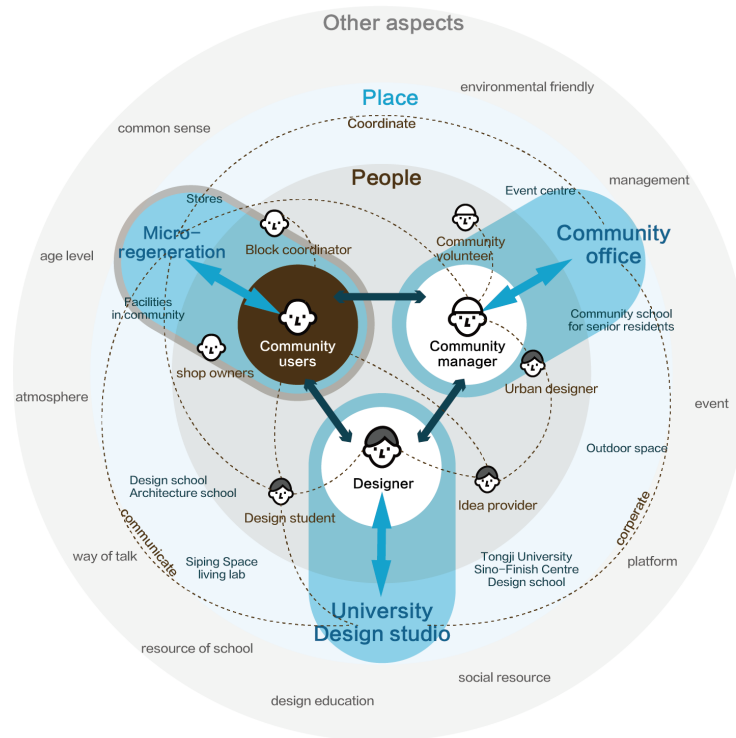


Figure 5.3 Stakeholders map after

Therefore, the "Collaborative chronicles of micro-regeneration space" makes up for the daily use of micro-regeneration and let residents get the information and recommendations.

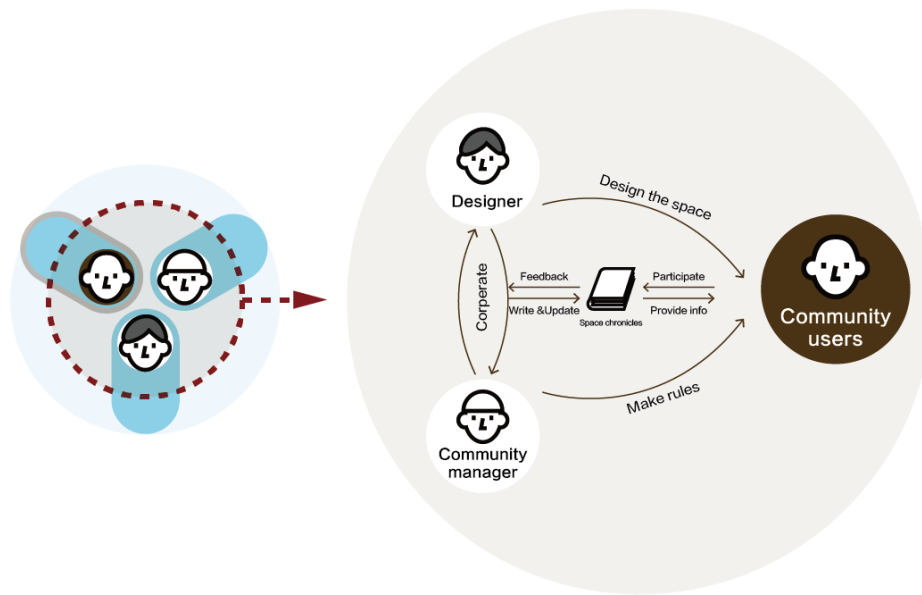


Figure 5.4 The relationship among designer, community manager and residents

Therefore, the role of "Space chronicles" should be a center of information exchange; it exists with the community micro-regeneration, users and design management. At the same time, "Space chronicles" should also follow the general habits of community users to fill the current users in the behavior and cognitive needs of the various information. Combined with the results of previous user research and the contents of the participants of the parties, space must include the basic information page, the use of search pages, feedback pages and supplementary pages.

Therefore, the service system of this article should from the user's perspectives. The residents can update the information provided by the micro-regeneration to understand and explore the community. Users in the process of leaving the feedback and records will become part of the micro-regeneration space and chronicles. So the system in theory should be a cycle of continuous and update the process.

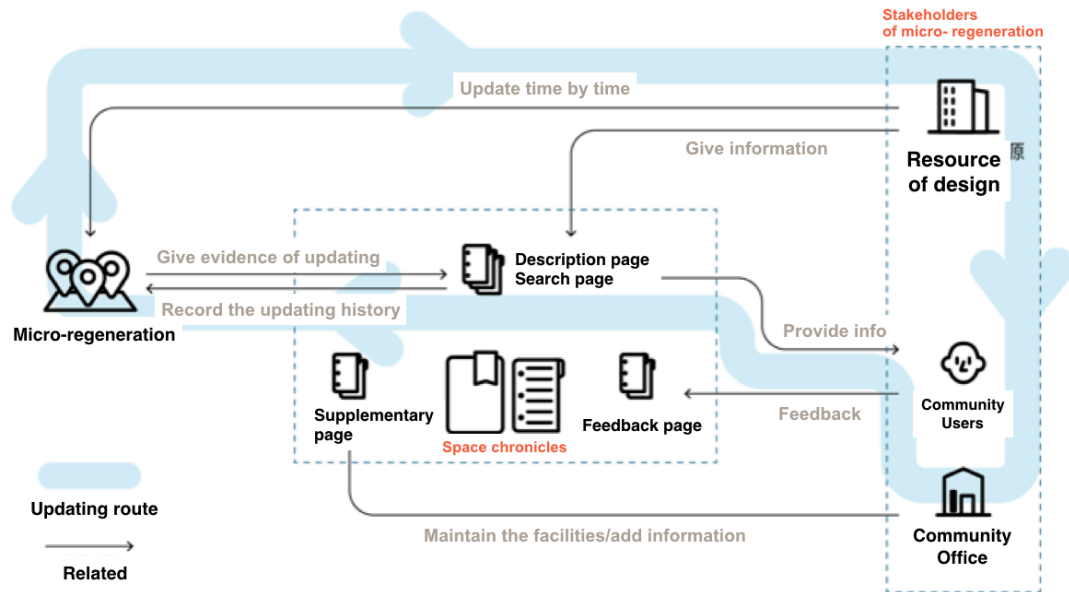


Figure 5.6 System map

"Space chronicles" is the adjustment of the existing micro-regeneration, also a re-design of the service system. In the next step, the horizontal axis represents the space service and the subject of the micro-regeneration. The vertical axis represents the different characters. The corresponding actions are the actions of each step in the service. The horizontal axis is divided into four parts: the consciousness stage, the initial stage of the action, the participation stage and the later stage.

In the conscious stage, the initial user is mainly through the online WeChat platform, and the line under the corridor posted notice, a variety of workshops activities, word of mouth and the spread of space between the communities with micro-regeneration. This stage of the community because of the age of the community is generally high, the main means or to spread under the line, so the space also takes the physical model.

In the early stages of the operation, the user can refer to the space in advance to retrieve the micro-regeneration destination that can go, and go out to the different micro-regeneration according to their needs.

At the participatory stage, unwanted users will use different micro-updates as needed. In the micro-regeneration around the instructions will be used as a guide, the user will first see the

micro-update basic description page, understand what this is and how to use, and understand what similar micro-update. Users can also search for recommended mobile routes based on what they want to do. It can also be based on the user who is with whom to get the recommended route, such as a person action, and children together, and partners together, will correspond to different recommendations.

In the later stages, the space also provides a page that can fill in the feedback; the user can leave their own comments, recommended micro-regenerations and walking routes. When the page is filled or micro-regenerations are iterated, these left pages are collected by the community manager into the micro-update space, as important information to save and spread. The picture shows the user experience history.

User Experience Map

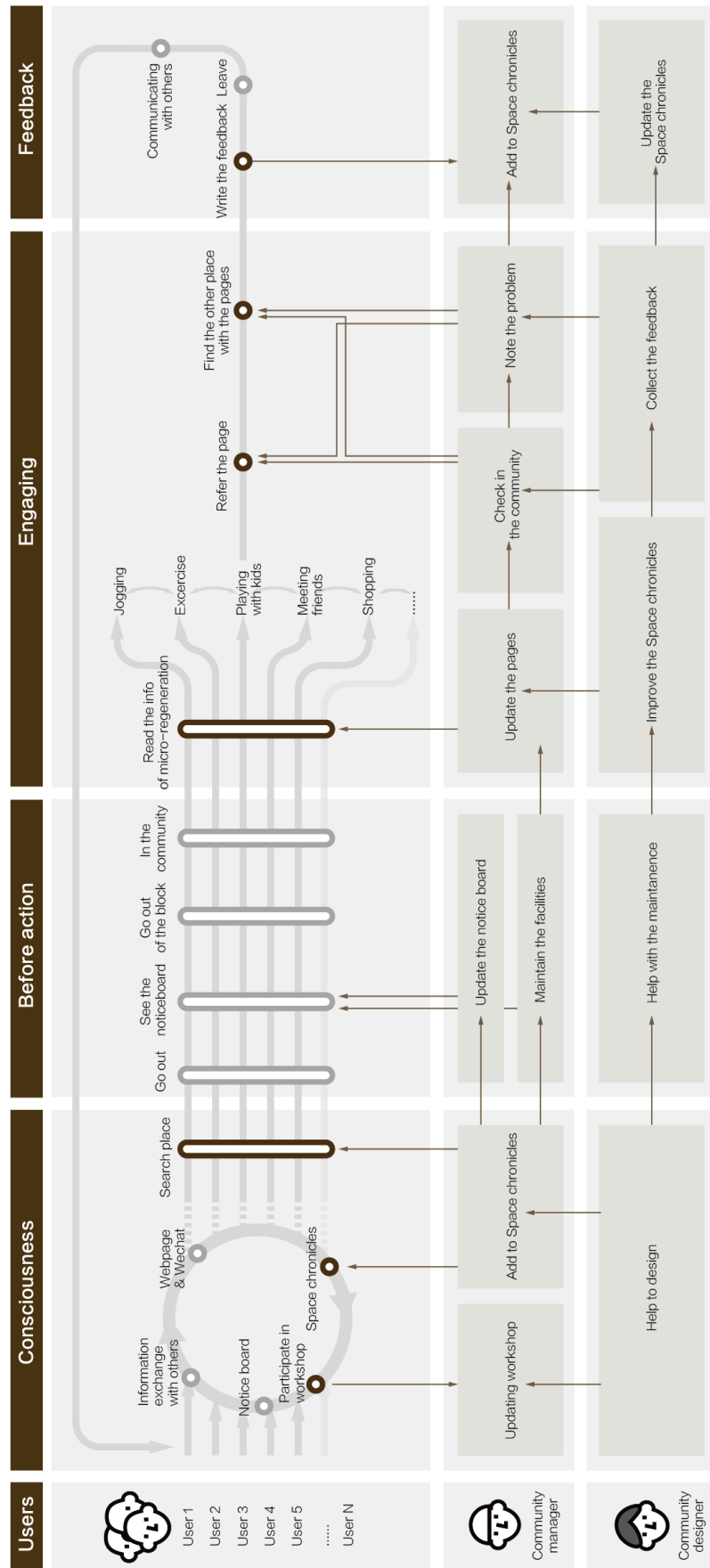


Figure 5.7 User experience map

As the micro-regeneration space spread, when the user experience to return to the consciousness of the process stage. In addition to WeChat, social network of community, residents can also get the information through the chronicles. So the design of the user travel map is a continuous iteration of new content and the process of recycling.

5.4.3 Storyboard

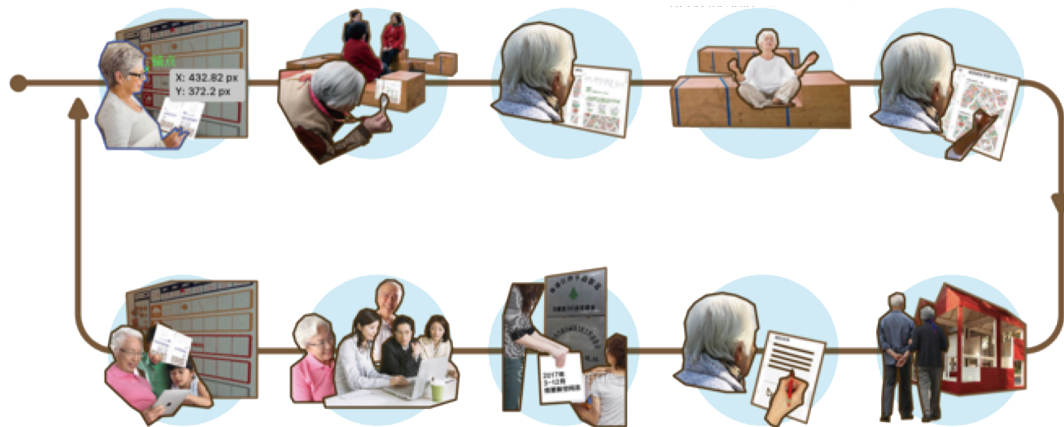


Figure 5.8 Storyboard

"Space chronicles" use a heroin, which is summed up by the Persona role in the above extracted characters. The space with the micro-regeneration iteration should continue to provide new information, residents can continue in such a carrier in the new things and experience. So the story version will eventually return to the beginning of the original story, is a cycle can continue the experience of the process.

5.4.5 Touch point design

In the context of this article, the local chronicles are extended to "Space chronicles", and its way of existence is not only the participation of community managers, but also the real thoughts, comments and personalities of the users who experience it.

The specific approach is to create a different function of the page, attached to each micro-regeneration around, and then provide users to fill the tools and guidance.

Therefore, the physical touch point design is mainly reflected in

the "Space chronicles" part of the page. Through the previous micro-regeneration using the results of cognitive and behavioral research, the author is mainly divided into five major categories of pages: Description page, Behavior search page, User search page, Feedback page and Supplementary page.

- Description page

This page focuses on the basic information of each micro-regeneration, giving the user a simple micro-update introduction, a graphical representation of the use, and a similarly updated map.

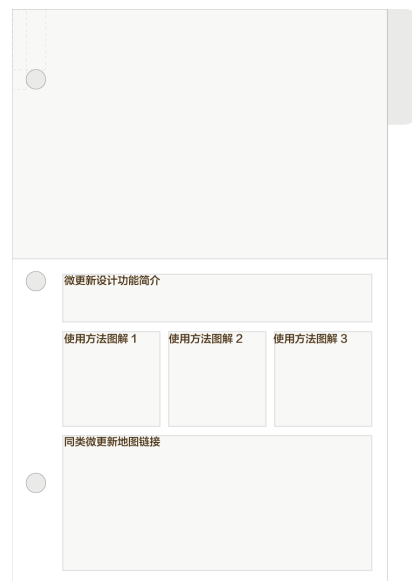


Figure 5.9 Description page

- Behavior search page

This page is intended for users who have specific goals and needs in the community. If you want to do something, there are a number of options to choose from. Users can choose to take pictures of the way to get information. This type of page is primarily for the users who often use Siping Community Public Space but are not very familiar with all micro-regenerations.



Figure 5.10 Behaviour search page

- User search page

This page is intended for users who do not have clear purpose in the community. User classification can be divided into individual action, with friends (neighbors), with family members and with children. Each category will provide a number of activity or reference suggestions, and guide the user to and use micro-regeneration.

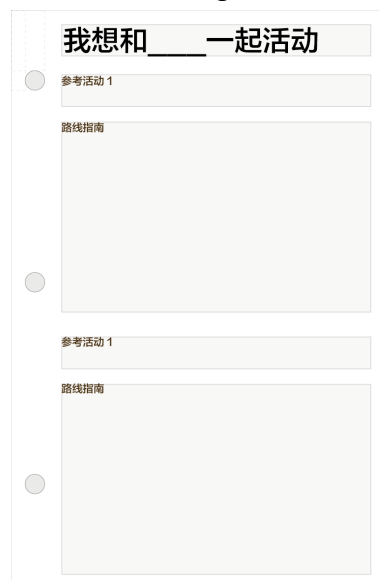


Figure 5.11 User search page

- Feedback page

The target of feedback page is the user, which is attached to the

release comments before the recycling. The users can write any evaluation, or experience records, or share walking routes and so on.

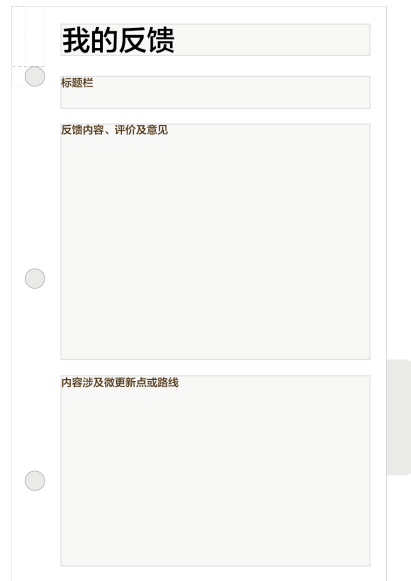


Figure 5.12 Feedback page

- Supplementary page

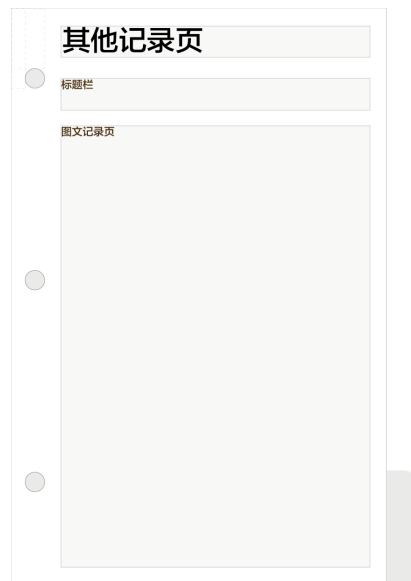


Figure 5.13 Supplementary page

5.5 Prototype and test

5.5.1 Prototype

The entity prototype is based on the framework of the above-mentioned touchpoint design. The actual situation of the micro-generation of the existing Siping community is made. The aim is to make a real design for the experiment and provide a clear idea for the concept of space.

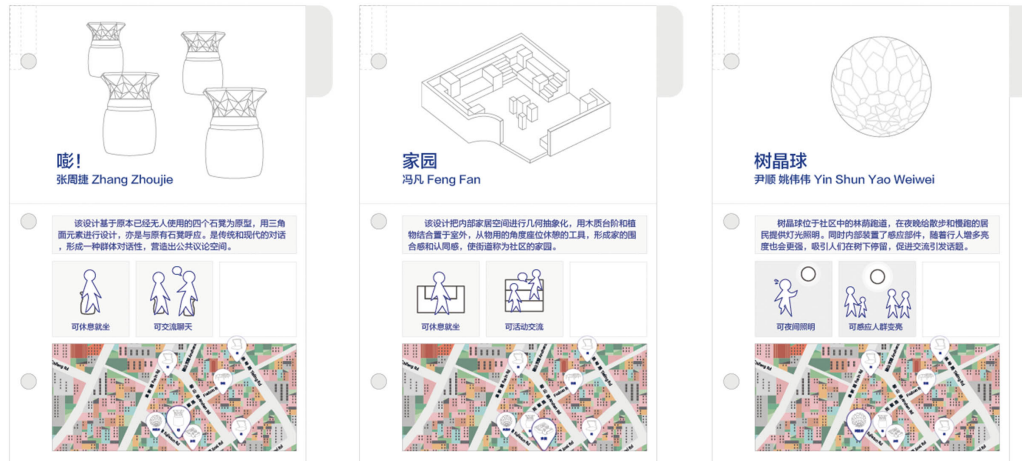


Figure 5.14 Description page 1



Figure 5.15 Description page 2



Figure 5.16 Description page 3

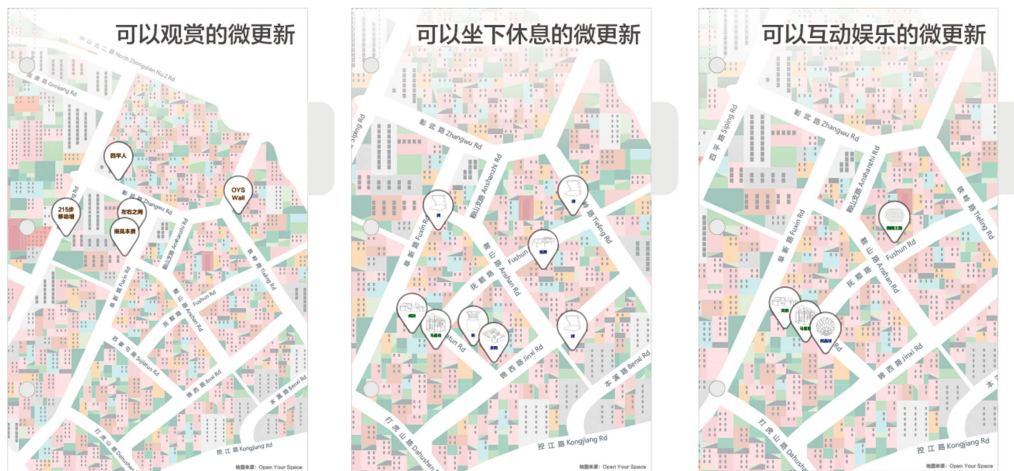


Figure 5.17 Behaviour search page



Figure 5.18 User search page



Figure 5.19 Feedback page and supplementary page

5.5.2 Test and feedback

This design is based on the Siping community micro-regeneration in the space service system on the redesign, and finally through the design of the contact point applied to the real user for the actual test, and made into a real collaborative micro-update space, and video The way the test results and user feedback. The specific experimental process will be presented in the reply.

5.6 Summary

The design practice mainly from the design of space service design approach, from the user travel, service systems, space systems and physical contact points several aspects of the design concept. The design concept of "Space chronicles" is defined by the local records as the prototype. The contact points are designed mainly through participatory collaborative writing and experience, micro - updating iteration records and spatial indication of different users. And these elements into a complete user experience process, so that the entire space service design more diverse and rich, and the addition of more accessible points.

Chapter 6 Conclusion

6.1 Main conclusion

In this research and design, the author mainly discusses the community users' cognitive and behavioral characteristics and the future development potential of community design, in order to understand the user behavior and analyze the reasons. And summarizes the research and introduction of Siping space micro-regeneration"space service design" design guidelines for the implementation of the design of the proposed rules and guidance. And put forward the design scheme and description of "Collaborative Micro-regeneration Space Chronicles", and put it into the experiment again to test the design results. In the whole process, the author made a few conclusions:

- Micro-regeneration itself is characterized by small, small impact, functional, localized, and iterative. Among them, because of the iterative characteristics, micro-update updates need to be implemented in a certain period in order to ensure its activity in space.
- Micro-regeneration space service design should be flexible, adaptable, participatory, and should be combined in a specific space service system in order to give full play to the advantages of the venue.
- Design conclusion is that micro-update as an experimental design intervention, still need to be constantly trial and error in order to expand its model to more places. So the record and analysis results at the initial stage are very valuable information. This process can not only be integrated into the micro-regeneration space service itself, but also with the stakeholders to complete, become a valuable historical data. This is not only a purpose, but also an experience process.

6.2 Lack of the research

First, the lack of literature. Micro-update as a new definition in recent years, the term can refer to the literature is very limited, most of them are in the actual project in the design of the parties agreed to the law. In this paper, the definition of micro-update is based on the definition of Siping community, and can not cover all the micro-update definition. In addition to the "space service design", although the use of the design methods are derived from the design of the methodology, but for the space of the literature at home and abroad are mostly based on the project experience and results, and in different cultures The "space" has different characteristics. So in addition to the literature in terms of cognitive and behavioral finishing, the rest of the blank part of the author can only pass the information of different subjects to sum up.

Second, in the research part of the set, the author although the use of qualitative and quantitative research combination, there will still be part of the lack of information. As the scope of Siping community is relatively small, the scope of sampling is relatively narrow, can not help but cause research and conclusions in the bias. In the future study should expand the scope of the study, a lot of users to dig the common and characteristics in order to make the study closer to the objective.

6.3 The further step of the reseach

The further research work of this subject lies mainly in three aspects:

First, the concept of micro-regeneration could be standardized.

Second, the design guidelines should expand the scope of application.

Third, the design of space services in the application could be specialized.

This study is intended to provide more theoretical and design recommendations for more community micro-regeneration and space service design. It also hopes that this study will focus on the micro-

regeneration in the design field and provide a reference for improving the user experience.

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Appendix Questionnaire of Siping community micro-regeneration space

您好！我是来自同济大学设计创意学院的研究生陶怿楠。这次的问卷的目的是通过一些简单的问题，了解大家平时在日常生活中对于四平社区，尤其是其中“四平创生行动”中微更新设施使用上的认知和行为情况，从而深度了解大家对于社区空间服务的需求和未来的发展潜力。

同济大学设计创意学院

研究生陶怿楠

电话：XXXXXXXX

〔单选〕平时多数情况会在什么时间四平社区公共空间：

A. 平日白天 B. 平日傍晚以后 C. 周末白天 D. 周末傍晚以后

〔单选〕每次在四平社区公共空间平均会停留多长时间：

A. 半小时以下 B. 半小时到一小时 C. 一到三小时 D. 三小时以上

〔多选〕平时经常利用到的社区空间服务：

A. 休息用的椅子或空间 B. 健身活动设施 C. 与人交流或游戏的设施 D. 供亲子活动的设施
E. 便民服务（修鞋配钥匙等） F. 社区居委会活动室 G. 其他

〔多选〕一般和谁共同参与社区活动：

A. 一个人 B. 和朋友 C. 和伴侣 D. 和子女 E. 和社区里的陌生人 F. 其他

〔多选〕在使用社区空间服务中有什么样的困惑？

A. 不知道怎么使用设施 B. 不知道如何寻找适合自己的公共设施 C. 设施缺少管理难以使用
D. 社区难以满足自己的需求 E. 其他_____

〔单选〕您知道四平空间微更新吗？

A. 知道 B. 不知道

〔单选〕通过何种渠道知道现在的社区微更新：

A. 社区宣传 B. 亲友口口相传 C. 之前的微更新活动 D. 偶然在街上看见 E. 其他_____

〔多选〕对于现有的微更新的有什么样的认识：

A. 便民设施 B. 艺术家装置 C. 丰富业余生活的设施 D. 美化环境的更新 E. 其他_____

〔单选〕您知道社区中存在的这个微更新的数量？

A. 0-5 个 B. 6-10 个 C. 11-20 个 D. 21-30 个 E. 31 个以上

〔单选〕您觉得这些微更新的出现如何改变了您的生活

A. 增加了外出次数 B. 认识了更多的人 C. 丰富了与家人的活动 D. 生活更加便利 E. 几乎没有
有什么改变 F. 其他_____

〔单选〕您选择接触或使用微更新的方式：

A. 路过驻足观察 B. 直接接触或使用 C. 邀请过亲友一起活动 D. 给其中的项目提过意见和建议
E. 其他_____

〔单选〕对于同一个微更新项目逗留多久

A. 五分钟以下 B. 十五分钟以下 C. 三十分钟以下 D. 一小时以下 E. 一小时以上

[单选] 对于多个微更新项目的使用, 您更倾向于哪一种:

A. 通常只使用固定的几个 B. 经常走动发现新的微更新 C. 跟随亲友无目的地使用 D. 根据热闹与否参与使用 E. 其他_____

[多选] 在什么样的情况下会离开移动到另一个区域

A. 对于一事物玩腻 B. 漫无目的地移动 C. 别的地方更吸引人 D. 有明确想去的目的地 E. 其他_____

[多选] 您选择在一处地点停留看中的是什么?

A. 人群聚集 B. 环境优美 C. 设施趣味性 D. 设施卫生 E. 其他_____

[多选] 您希望未来社区微更新功能上增加什么改进?

A. 便民网点 B. 教育资源 C. 文体活动 D. 其他_____

[多选] 您希望未来社区微更新形式上增加什么改进?

A. 居委主导式 B. 居委居民共同参与式 C. 居民自发组织式 D. 其他_____

[多选] 您希望能在现有体系中接触到怎么样的人

A. 社区同龄居民 B. 社区自主经营户 C. 社会参与人员 D. 居委会组织人员 E. 社区设计师 F. 其他_____

[单选] 您是否愿意表达自己对社区更新的意见或参与其中?

A. 愿意 B. 不愿意

[多选] 您愿意通过什么样的渠道或方式表达自己的想法?

A. 市民信箱 B. 居委居委会直接提议 C. 和其他居民讨论 D. 其他_____

[填写] 基本信息

年龄_____性别_____职业_____

教育背景_____在四平社区生活时间_____

[绘制] 请画出平时通常在社区中的行走路线



