



DLA DISSERTATION

Applied Research of
Micro-renewal and Art Intervention Approaches
in Urban Public Space Context

HONGHAO HE 何鴻灝

SUPERVISOR : GYERGYÁK JÁNOS



University of Pécs
Faculty of Engineering
and Information Technology
Marcel Breuer
Doctoral School

Information and Engineering College of University of Pécs

**Applied Research of Micro-Renewal and Art Intervention
approaches in urban public space context**

DLA Dissertation

He Honghao
Supervisor : Dr. Gyergyák János



CONTENTS

ABSTRACT.....	1
CHAPTER 1. INTRODUCTION.....	3
1.1 Research background.....	3
1.2 Research significance.....	4
1.3 Research status.....	5
1.3.1 Research status of urban renewal.....	5
1.3.2 Research status of art intervention.....	8
1.4 Research ideas and innovative points.....	10
CHAPTER 2. CONCEPTS RELATED TO MICRO-RENEWAL AND ARTISTIC INTERVENTION.....	11
2.1 Micro-Renewal of public space.....	11
2.1.1 Definition of Urban Micro-Renewal.....	11
2.1.2 Characteristics of micro-renewal strategy.....	12
2.1.3 Diversification of urban micro-renewal.....	13
2.2 Artistic intervention.....	14
2.2.1 Definition of artistic intervention.....	14
2.2.2 The meaning generation mechanism of artistic intervention.....	14
2.2.3 The impact of artistic intervention on micro-renewals.....	16
2.3.4 Art intervention triggers the logic of space renewal.....	17
2.3 Summary.....	18
CHAPTER 3. THE ROLE OF MICRO-RENEWAL AND ARTISTIC INTERVENTION.....	20
3.1 The role of urban micro-renewal.....	20
3.2 The role of artistic intervention.....	21
3.2.1 Reshaping regional culture.....	21
3.3.2 Building bridges of society.....	22
3.2.3 Create signs and memories.....	22
3.2.4 Stimulate the vitality of space.....	22
3.3 The combination of micro-renewal and artistic intervention.....	23
3.3.1 Micro practice mode.....	23
3.3.2 To stimulate the vitality of space.....	23
3.3.3 Mutual promotion and complementation.....	24
3.4 Summary.....	25
CHAPTER 4. DESIGN PRACTICE OF MICRO-RENEWAL AND ARTISTIC INTERVENTION.....	26
4.1 Nanyuan Village Boonsel Roof Renewal Project.....	26
4.1.1 Project background.....	26
4.1.2 Project introduction.....	27
4.1.2.1 Investigation and analysis of the base.....	27
4.1.2.2 Existing needs.....	28
4.1.2.3 The location of the renovation project.....	29

4.1.2.4 Problems facing the renew	30
4.1.3 Propose micro-renewal and art intervention design scheme	31
4.1.3.1 Planning of space renewal	31
4.1.3.2 Selected building materials	32
4.1.4 Design and implementation of micro-renewal and art intervention	33
4.1.4.1 Implementation of the micro-renewal strategy	33
4.1.4.2 Strategies of Artistic Intervention	37
4.1.5 Later management and renewal	40
4.1.6 Summary	42
4.2 Roissypole public space renewal	43
4.2.1 Project Overview	43
4.2.2 Proposing a micro-renewal strategy	44
4.2.3 Creating conditions for artistic intervention	48
4.2.4 Forming subsequent spatial renewal	50
4.2.5 Summary	50
4.3 Restructured Mobility Hub	51
4.3.1 Project Overview	51
4.3.2 Propose strategies for micro-renewal and artistic intervention	53
4.3.4 Summary	58
CHAPTER 5, APPLICATION METHODS AND DESIGN PRINCIPLES OF MICRO-RENEWAL AND ARTISTIC INTERVENTION	59
5.1 Application methods of micro-renewal and artistic intervention	59
5.1.1 Design strategy of micro-renewal	59
5.1.2 Strategies for artistic intervention	60
5.1.3 Develop a follow-up update strategy for the space	62
5.2 Implementation principles of micro-renewal and artistic intervention	63
5.2.1 Based on the real demand of space	63
5.2.2 Guided by the micro-renewal strategy	63
5.2.4 Aim at sustainable renewal	63
CHAPTER 6. CONCLUSION.....	65
REFERENCE.....	67
PUBLICATIONS	69

ABSTRACT

As urban development and renewal enter a new stage, people are deeply rethinking the past urban macro and incremental development models. In the process of exploring the development direction of urban renewal, the concept of urban micro-renewal has gradually attracted people's attention and in-depth discussion. Urban micro-renewal transforms some small-scale, trivial and negative public spaces in a slight and gradual way, avoiding some social problems that arise in the process of traditional urban renewal, to achieve the purpose of stimulating the vitality of space, bridging the gaps in urban development and promoting sustainable development. Art intervention inherits the aesthetic characteristics of public art, like a social medium that penetrates into every corner of the city, playing a social effect of promoting people's dialogue, enhancing emotional identity, and rebuilding the community. Moreover, artistic intervention has the function of reshaping regional culture, building social bonds, and creating signs and memories in urban micro-renewal construction. The combination of urban micro-renewal and artistic intervention enriches the means of urban renewal, and practice in urban renewal has become a new trend.

From the perspective of urban public space renewal, this paper takes the combination of micro-renewal strategy and artistic intervention as the research object, and mainly studies from the following five aspects: First, analyze the research background, research significance and research status of micro-renewal and art intervention. Combined with domestic and foreign theoretical research, we will understand the current situation and research trends of micro-renewal and artistic intervention in urban renewal, and try to sort out the connection between them from their ambiguous relationship. Second, sort out the laws of urban renewal and development, expound the definitions of micro-renewal and artistic intervention, and analyze the characteristics of urban micro-renewal and the diversified implementation methods. At the same time, using the four elements of literary and artistic creation to analyze the meaning generation mechanism of artistic intervention, it provides theoretical support for the subsequent design and application. Explore the relationship between artistic intervention and urban micro-renewal, and summarize the logic of artistic intervention triggering urban space renewal. Third, on the basis of the previous research, summarize the role of micro-renewal and artistic intervention in urban renewal, analyze the basis of the integration of micro-renewal and artistic intervention, and the mutual influence of the two. Micro-renewal provides a place for artistic intervention, and artistic intervention enriches the design methods of micro-renewal. Fourth, apply the related theories and summary results of micro-renewal and art interventions to design projects through practical research. Elaborate and demonstrate how they play a role in renewing target spaces for the purpose of sustainable urban renewal. Fifth, through theoretical analysis and practical projects, from the perspective of urban renewal, summarize the application rules, methods and design principles of micro-renewal and art intervention.

This paper combines the theories of micro-renewal and artistic intervention, starting from their basic theories and related practical research, analyzes the connection between micro-

renewal and artistic intervention, and clarifies their mutual influence and promotion in urban renewal. The combination of micro-renewal and artistic intervention not only enriches the methods of urban renewal, but also enhances the quality of micro-renewal public spaces. Use flexible and diverse forms of artistic intervention to trigger space renewal and form sustainable urban renewal. Micro-renewal and artistic intervention build a bridge of communication between people, space and society with a micro-perspective and bottom-up renewal model, and repair the gaps that have arisen in urban development. The combination of the two provides a method and a new perspective on the urban renewal practice under the urban stock development model, which can improve the quality of living space from a microscopic level and promote a more harmonious, complementary and overall development of the city.

Keyword: Urban renewal, Micro-renewal, Art intervention, Urban public space

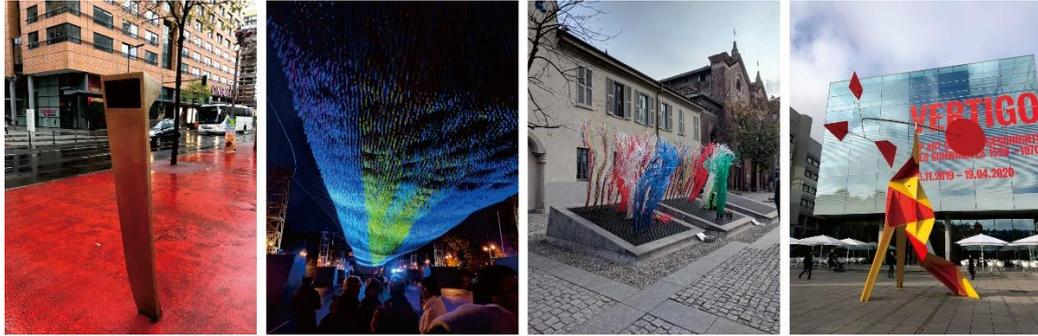
CHAPTER 1. INTRODUCTION

1.1 Research background

The rapid development of cities has become a topic of concern and public opinion for many years, and people have become accustomed to and accept the great changes brought about by urban development. Urban expansion has come to an unprecedented era, the boundaries of cities are expanding, and the consumption of resources is further increased. Some urban problems have also become prominent. For example, the problems of idle public space, aging, demolition, homogenization, and waste of resources have gradually appeared in front of people's eyes, forcing people to reflect on the incremental urban development method. People are gradually realizing that the incremental urban development model can no longer solve the current problems faced by cities. The simple and rough incremental development model will only increase the gap between cities, society and people. Under the influence of the concept of sustainable development, the existing urban renewal model has gradually attracted people's attention and in-depth discussion. The stock development model emphasizes the reuse and renewal of existing urban resources, reduces waste of resources, and tries some unconventional urban renewal methods. Therefore, the micro-renewal strategy has gradually appeared in people's field of vision.

Urban development brings population growth, and public space is also facing unprecedented pressure. Public space is the main place to maintain social relations and an important urban space to carry out other public life. The lack of public space will inevitably lead to the emergence of some social problems, such as the decline of group identity, unreasonable community construction, people's mental illness and so on. Therefore, seeking reasonable urban renewal methods and increasing urban public space has become a matter that cannot be ignored in urban development.

Art and social development are closely linked and mutually influence each other. The development of society provides art with a steady stream of creative resources and materials, and art uses various forms of expression to feed back the society. Art intervention is a part of the category of public art, and the emergence and practice of art intervention also reflects the demands of social development. With the improvement in people's awareness and awareness of aesthetics, various forms of artistic expression appear in the environment we live in. Art not only has the function of aesthetics, but also has other social functions. It is like a social medium that penetrates into every corner of the city, stimulates the potential energy in the city, and tells the story of the city and people's needs. This shows that art has become an indispensable part of public life and a way for people to express their demands for contemporary society, reflecting the importance of public art in social development.



Art enriches our lives in cities

Source: Honghao He

In the face of the shortage of public space resources and the public's increasing demand for public space used, urban renewal must not only face the cracks caused by the rapid urban development and the rupture of public relations, but more importantly, reshape and repair these cracks to establish the needs of society. "relationship". Urban renewal provides a practice place for art intervention, and allows art intervention to play an aesthetic and social role in it. In the context of globalization and neoliberalism today, artistic intervention also has the social effect of promoting dialogue, enhancing identity, and rebuilding community. ^[1] So artistic intervention has become a new trend in urban renewal practice.

1.2 Research significance

Urban renewal has always been accompanied by urban development, and renewal maintains the past and future of the city, allowing the city to continuously burst out with new vitality. With the changes of the times, urban renewal has become an important issue in urban development. People's cognition of cities is getting deeper and deeper, and they are becoming more cautious about urban renewal. In today's huge and complex urban system, every urban renewal has become sensitive and important. The urban micro-renewal strategy is put forward under this background, reflecting and rethinking the current rapid and rough urban development. Art intervention is no longer a purely ornamental and narrative form of expression, it has become a medium to promote communication, expression and repairing relationships, trying to use art to build social relationships. ^[2] Therefore, the role of urban micro-renewal and artistic intervention is in line with the current needs of urban renewal, and their combination has gradually attracted people's attention and research.

Under the concept of global resource shortage and sustainable development, the micro-renewal strategy is increasingly favored by designers and artists, and more and more urban renewal projects use this method of renovation. Micro-renewal and artistic intervention have set off a boom in the existing urban renewal construction. The projects combining urban micro-renewal and artistic intervention have gradually increased, and many excellent projects have also provided us with many opportunities for learning and reference.



Garden / Gallery Shanghai 2020



White Tangram Shanghai 2020



Captured Scenes Shenzhen 2019



Yongqingfang Renovation Guangzhou 2016

More and more urban negative spaces are being reactivated in China

Source: Honghao He

Although the form of micro-intervention in urban space by micro-renewal and artistic intervention is not new, there is not a very clear guiding idea about the practice of combining micro-renewal and artistic intervention, so it is necessary to further to discuss and analyze them. Hope to bring some constructive help for future project practice.

This paper discusses the urban micro-renewal and artistic intervention, expounds their importance of urban renewal, and helps to choose appropriate micro-renewal and artistic intervention to update urban public space. At the same time, art intervention upholds the aesthetic characteristics of public art and has certain social effects. Nicolas Bourriaud proposed: "Art has the function of negotiation, connection and coexistence, and is a place for social relations." [3] Therefore, it is necessary to explore the social impact on artistic intervention in urban micro-renewal, and make up for the deficiencies in the practice of urban micro-renewal.

1.3 Research status

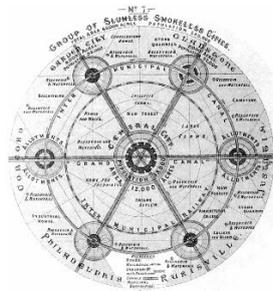
1.3.1 Research status of urban renewal

The western research on urban renewal theory have formed a diversified theoretical system

in more than a century, and it mainly analyzes and studies the problems arising of urban development. Due to the lack of scientific planning and the guidance of correct theories of the early construction and planning of urban development, some unpredictable urban problems appeared in the process of development. These phenomena make people begin to reflect on urban issues, stimulate the discussion of urban planning concepts and ideas, and promote the development of urban renewal theories.

The process of western urban renewal is mainly divided into the following four stages:

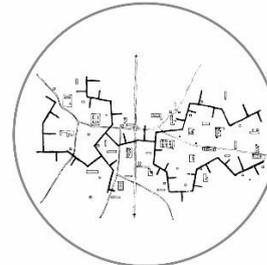
In the first stage of post-war reconstruction and revival. The representative theories of urban renewal practice in this period include: Ebenezer Howard's "Garden City" theory (Garden City), he believes that a city should be built with both the ideal city with rural advantages [4], the city as a whole should be viewed from a regional perspective. Le Corbusier's "Radiant City" theory, he tried to build a new city with a clear structure, well-defined zoning, and convenient transportation through urban planning [5]; The Peter Smithson in the United Kingdom put forward the concept of "Cluster City". They expounded the characteristics of the growth and change of cities in the process of development, and believed that in urban planning, one of the most influential factors on the urban structure should be discovered and used to intervene in the development of the city... ..It can be understood that the essence of the above urban planning ideas is similar. They regard the city as a relatively static state, and believe that the existing problems of the city can be solved through the support of capital and technology through ideal urban planning and renewal plans [6]. The city began to build rapidly, and the uniform urban appearance was sought after by architects and politicians. These monotonous and inhumane constructions have destroyed the neighborhood relationship and fairness between people in the original city, and aggravated social conflicts.



Ebenezer Howard's "Garden City"



Le Corbusier's "Radiant City"



Peter Smithson's "Cluster City"

Urban planning theory developed after World War II

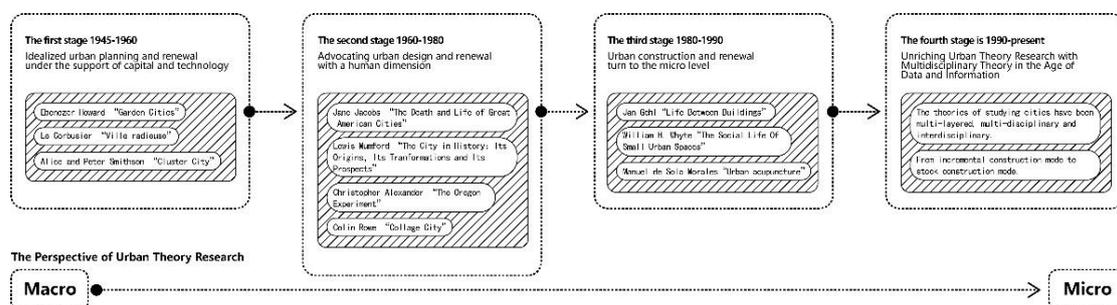
Source: Honghao He

The second stage were from 1960 to 1980. A number of theoretical works emerged in urban renewal, which benefited from the reflection of Western scholars on the first stage of urban renewal. In the book "Death and Life of America's Great Cities", Jane Jacobs attacks the principles and purposes that govern the orthodox theory of modern urban planning and reconstruction. The book points out that large-scale urban transformation will seriously destroy the diversity of the city, and advocates that small-scale transformation should replace large-scale urban renewal [7]. Lewis Mumford proposed in the book "The History of Urban Development": In the process of urban construction, we should pay attention to the

relationship between urban buildings and the natural environment, as well as the relationship between urban scale and people [8]. C·Alexander is the author of the book “Oregon Experiment”, in which he puts forward a zonal, small-scale spatial development model, and criticizes the large-scale, large-scale spatial development model [9]. Colin Rowe created the famous “Collage City”, in which he proposed the “Collage City Method”, which attempts to reassemble the fragmented history through collage, darn the existing historical relics, and use small-scale the urban renewal method of the city respond to the human events and space places in reality [10]. On the basis of theory and practice at this stage, many cities began to advocate urban design and renewal in a humanized dimension.

The third stage were from 1980 to 1990, and urban design theory was continuously improved during this stage. In the book “Life between Buildings”, Jan Gehl to explore the demands of people's daily activities on the living environment. He believes that small changes in the living environment can significantly improve the quality of living space [11]. William H. Whyte’s research on small urban space goes deep into spatial qualitative and morphological abstraction, and conducts a systematic investigation into human behavior and psychological and social comfort needs [12]. At this stage, Spanish architect Manuel de Solà Morales proposed a small-scale incremental urban renewal strategy based on the theory of “Urban acupuncture”, using a small catalyst point to stimulate the surrounding area in the form of “point cut-in” in the selected area. Environmental improvement, maximizing benefits of minimal intervention, and practiced in Barcelona since 1981[13]. It can be seen that urban construction has gradually shifted from a macro-extensive development model to a tiny, incremental urban micro-renewal model.

The fourth stage are from 1990 to now, the study of urban theory has formed multi-level, pluralistic and interdisciplinary. Urban development has gradually shifted from an incremental construction model to a stock construction model, and urban renewal focuses on the improvement of the living environment and the restoration of neighborhood relationships. The micro-level urban renewal development direction has been vigorously promoted. The development of micro-renewal also provides a practical platform for artistic intervention.

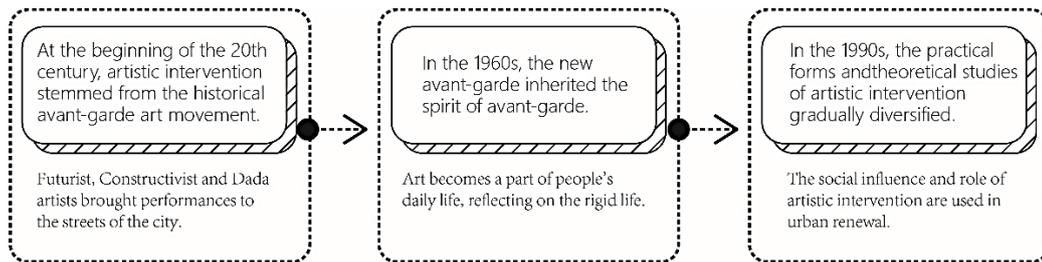


The content of the development of urban theory in different stages, the research direction gradually turns to the micro level.

Source: Honghao He

1.3.2 Research status of art intervention

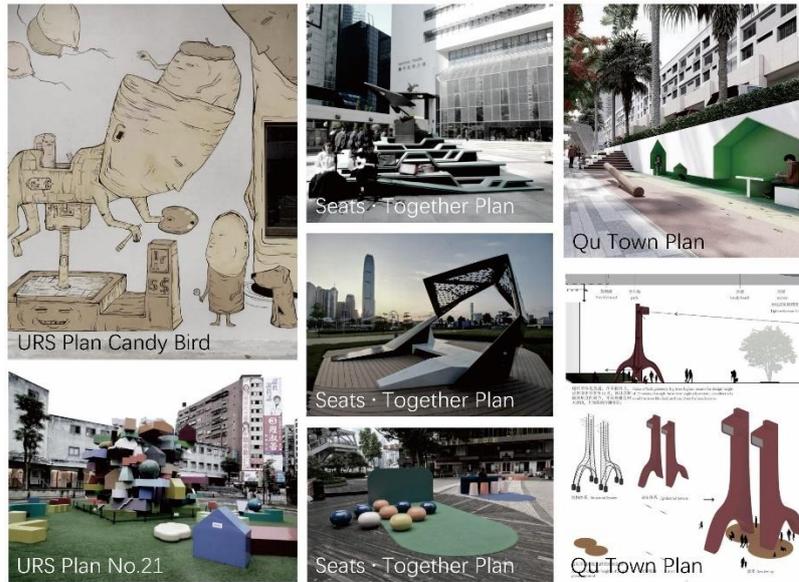
Art intervention, which belongs to a form of expression of public art, is a new phenomenon in contemporary art. Artistic intervention stems from the historical avant-garde art movement away the early 20th century. Futurist, Constructivist and Dada artists brought performances to the streets of the city, making artworks a public event for the masses. In the 1960s, the new avant-garde inherited the spirit of avant-garde, and began to choose to criticize the social reality at the level of daily life, trying to stimulate public participation. In this way, art becomes a part of the daily life, allowing the audience to reflect on the rigid life through the perception of a familiar daily experience. By the 1990s, the practical forms of artistic intervention were gradually enriched, and Western research on artistic intervention also began to develop during this period. The main researches on art intervention focus on “relational aesthetics”, “discrimination aesthetics” and “dialogue aesthetics”. Nicolas Bourriaud’s “Relational Aesthetics” emphasizes the social efficacy of “repairing broken social bonds” and “connecting interpersonal exchanges” brought about by artistic intervention; Critic Claire Bishop’s “Aesthetics of Discrimination” expounds the critical effect of art on society; There is also Grant Kester’s “Aesthetics of Dialogue” which focuses on the dialogue of artistic intervention [14].



Art intervention has mainly experienced three periods of development.

Source: Honghao He

With the improvement in economy, culture and quality of life, the practice of artistic intervention in urban renewal frequently appears in China. The role and impact on artistic intervention have been recognized by the government and the public. However, compared with the results of Western research, this emerging art phenomenon in China has not received more extensive attention to the academic circles. In China, Academic research on the art intervention in urban public space is still in a fragmented stage. The lack of systematic research on art intervention leads to the disconnection between art intervention practice and academic research.



Urban Micro-Renewal Plan
 1. Taipei Urban Regeneration Station Abbreviation: URS Plan 2010
 2. Shenzhen Qu Town · Yantian Plan 2013
 3. HongKong City Dress Up : Seats · Together 2017

Artistic intervention in urban micro-renewal

Source: Honghao He

Since the 1990s, the practice of art intervention space has frequently appeared in various media, international biennials and urban renewal projects [15]. China has also joined the ranks, with many artists and designers discussing the problems encountered in the process of urban development, trying to create works of art in public space. These practices have accumulated experience of the practice of art intervention in urban public space, and localized the ideas and viewpoints of art intervention, rather than simply borrowing and appropriating Western research results, to fill some gaps in the practice and exploration of urban renewal and art intervention. However, as it is still in the preliminary stage of practice and exploration, a complete design system for urban renewal and artistic intervention has not been formed. Therefore, the combination of urban micro-renewal and artistic intervention is still in the early stage of practical exploration, in China.



1. Cloud Village 16th Venice Architecture Biennale, Italy
 2. HELLOWOOD Budapest Urban Renewal Project, Hungary
 3. Slip Slidin' Away Public artwork by Jessica Stockholder in Vienna, Austria
 4. Berlin Wall Artwork Artwork in Berlin City Public Space, Germany

The frequent appearance of artistic interventions in urban public spaces.

Source: Honghao He

1.4 Research ideas and innovative points

This article discusses on the basis of previous studies on urban micro-renewal and art intervention. From the perspective of urban micro-renewal, this article discusses the basis, function and influence of the combination of micro-renewal and artistic intervention. At the same time, it analyzes the characteristics of micro-renewal, the meaning-generating mechanism of artistic intervention and its logic of triggering spatial renewal. Finally, the relevant theories of micro-renewal and art intervention are applied to real design projects, and the design principles and design methods of micro-renewal and art intervention are proposed.

There are two innovations based on the research results of this paper. First, study the ways and functions of micro-renewal and art intervention to stimulate the vitality of space in the perspective of urban renewal. Urban micro-renewal is not only the renewal of the material level, but also pays attention to the renewal of the spiritual level of public space. At the same time, it expounds the influence and function of the combination of micro-renewal and artistic intervention. Second, works of art intervention space frequently appear in Chinese urban public spaces, and many artists and designers often use art intervention space to create in various art exhibitions to express their ideas and problems they face. Thus it can be seen that artistic intervention has won everyone's approval and the public's aesthetic needs have been improved. This paper explores the role and influence of artistic intervention in urban micro-renewal, and provides a reference angle for the integration and implementation of micro-renewal strategy and artistic intervention.

CHAPTER 2. CONCEPTS RELATED TO MICRO-RENEWAL AND ARTISTIC INTERVENTION

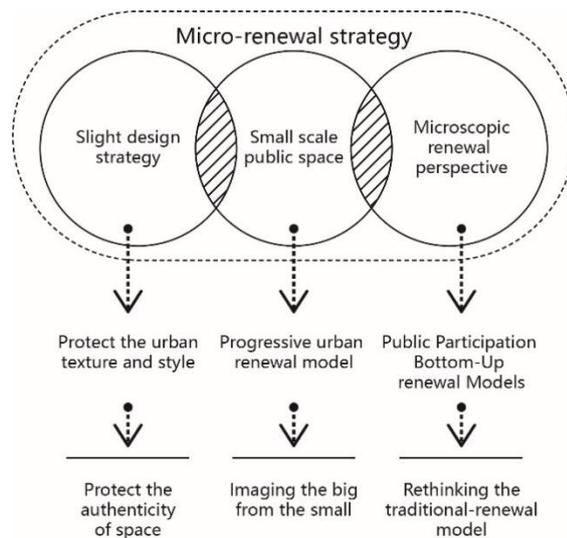
2.1 Micro-Renewal of public space

2.1.1 Definition of Urban Micro-Renewal

In our life, some ordinary and even trivial urban public spaces exist in the gaps of the community, flowing in the corners of the streets, in front of the windows of the canteens, at the entrances of restaurants, and on the roofs of buildings. These spaces are commonplace because people can see them everywhere ^[16]. But these public spaces have the potential to be energizing points of urban and community vibrancy that can bring about a range of urban responses.

Micro-renewal refers to the targeted repair, transformation, protection and repair of the existing buildings and space environment while maintaining the basic context and pattern of the original site, so as to renovate the basic environment, fill the space gap, and stimulate urban vitality, etc. ^[17] The "micro" of micro-renewal to be studied and explored in this paper is also reflected in the following aspects:

1. The micro-renewal emphasizes the "slight" attributes to design intervention, and takes a slight design strategy, which does not affect the daily life of residents and does not destroy the original urban texture and style as the premise of the update;
2. The general micro-renewal strategy is aimed at small public spaces, which can better play the role and influence of micro-renewal. Imaging the big from the small, forming a progressive urban renewal;
3. Micro-renewal is also reflected on the micro-city perspective, starting from the construction of public spaces around people's lives, preserving the authenticity of society and space, encouraging different groups to participate in the renewal process, and emphasizing the bottom-up renewal model.



Definition and impact of a micro-renewal strategy.

Source: Honghao He

2.1.2 Characteristics of micro-renewal strategy

The micro-renewal strategy is different from the traditional urban renewal model. It weakens the role of the government and developers in urban renewal, emphasizes public participation, and advocates a bottom-up renewal mechanism. The characteristics of micro-renewal are manifested in the following aspects:

1. Flexibility

The micro-renewal advocates optimizing and improving the space in a slight way, reflecting on the traditional renewal model. Micro-renewal often adopts some unconventional renewal methods, which not only brings diversity of the space renewal method, but also adds interest in the space and breaks the traditional renewal mode.

2. Economical

Micro-renewal implementation and construction consume less time, and construction material savings and renewal benefits are maximized. Micro-renewal minimizes the waste of construction resources and reflects the concept of green and sustainable strategies.

3. Diversity

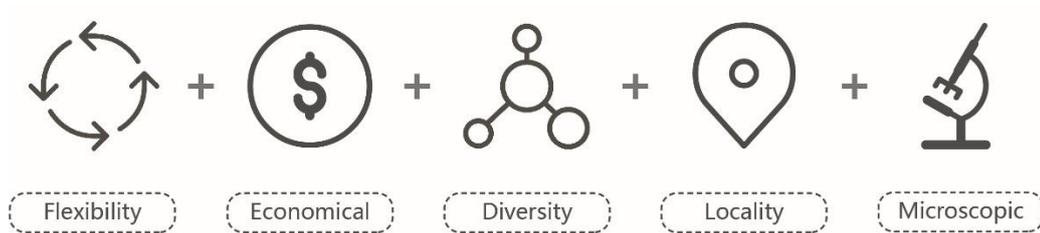
The micro-renewal implementation is diverse, inclusive and open. It can not only accommodate the different ideas and viewpoints of designers and audiences, but also attract the participation in different groups to build a diverse organizational structure.

4. Regional

The micro-renewal is mainly based on gradual renewal, respecting and continuing the original historical context and urban texture in the site, emphasizing the particularity of the space, so that the micro-renewal practice can reflect the regional cultural characteristics and create a rich and diverse urban characteristic.

5. Microscopic

Micro-renewal not only updates the public space from a micro perspective, but also stimulates the vitality of the space through small changes. Moreover, the implementation of micro-renewal is based on the participation and needs of the people, which is different from the top-down macro-construction model in traditional renewal.



Characteristics of micro-renewal strategy

Source: Honghao He

2.1.3 Diversification of urban micro-renewal

The location selection, expression form and cooperation mode of urban micro-renewal are flexible and changeable, and are not restricted by the volume and area of the site. The target space of micro-renewal can be as small as fragmented building gaps or as large as streets and alleys ^[18]. At the same time, micro-renewal can be combined with public art creation, using the power of art and design to criticize the problems of the space, so as to achieve the renewal of the physical space to the spiritual level, showing the multi-dimensional characteristics of the micro-renewal strategy.

Micro-renewal involves knowledge of multiple disciplines such as culture, art and ecology, and different intervention angles will produce different forms of expression. The forms of expression range from temporary activities to permanent decoration, from movable art installations to fixed urban sculptures, from two-dimensional graffiti art to three-dimensional space renewal design. Various micro-renewal manifestations are helpful to achieve the purpose of updating.

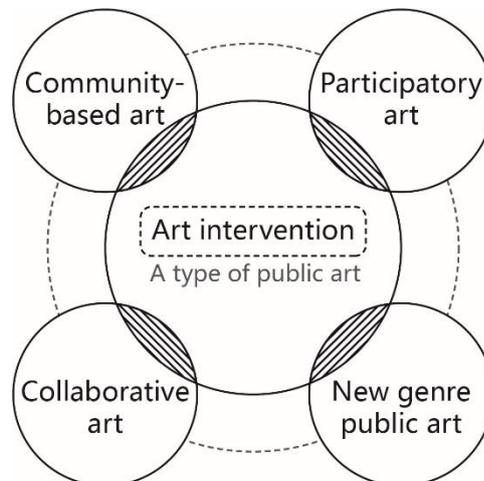
Micro-renewal can also carry out various cooperation modes. The micro-renewal model reflects the bottom-up characteristics, encourages the public to participate in the renewal and construction, weakens the dominance of the government and designers in the micro-renewal, and turns the roles of the government and designers into coordinators of space renewal. Pay attention to the role of the public in micro-renewals, at the same time cooperate with non-profit organizations to gain more support for the micro-renewal strategy.

2.2 Artistic intervention

2.2.1 Definition of artistic intervention

Art intervention, which belongs to a kind of public art, is a new style of art in the 1990s. In terms of expression, artistic intervention is presented as a mixed-media event art that is carried out on a specific site and completed by artists and participants. In terms of content, art intervention refers to the art in which the artist intervenes in a specific social scene and conducts a critical dialogue with the scene. It penetrates the tentacles of art into the social field, becomes a connection between people, repairs broken social bonds, stimulates dialogue, and enhances recognized art form.

As a derivative form of public art, art intervention has overlapped connotations of the new phenomena of contemporary art such as community-based art, participatory art, collaborative art, and new genre public art ^[19]. At the same time, art intervention inherits the aesthetic characteristics of public art, promotes people's dialogue, enhances identity, and rebuilds the social effectiveness of the community. Therefore, both artistic intervention and public art have a strong social dimension.



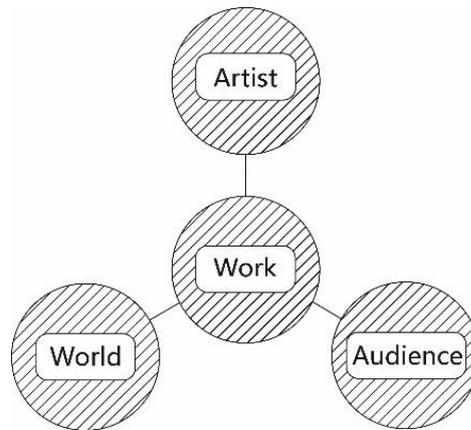
Art intervention and other contemporary art have overlapping connotations.

Source: Honghao He

2.2.2 The meaning generation mechanism of artistic intervention

In order to understand the difference between art intervention and traditional art and its effect. This paper uses the four elements of literary and artistic creation proposed by the romantic theorist Meyer Howard Abrams—artist, work, audience, and the world to analyze the meaning-generating mechanism of art intervention. The four elements of artistic creation experience different role transitions to different artistic expressions, and they interact to

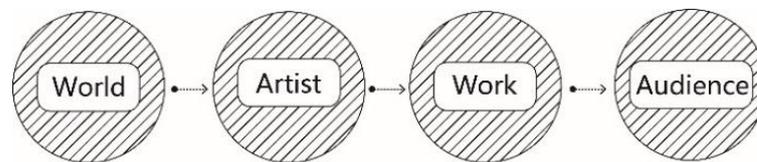
generate the meaning of art works [20].



The Four Elements of Meyer Howard Abrams' Literary Creation

Source: Honghao He

The meaning generation of art follows a principle of "encoding-decoding", and the four elements of artistic creation operate in this principle. In traditional art, the artist encodes the objective world, and then reflects the encoded objective world in a specific artwork. The audience interprets the artwork, which is a kind of decoding behavior, which is a linear and irreversible meaning-generating mechanism [21]. Compared with the "encoding-decoding" meaning generation mechanism of traditional art, public art has made great breakthroughs, and these breakthroughs can be understood from the four elements.



The Mechanism of Generating Meaning in Traditional Art Works

Source: Honghao He

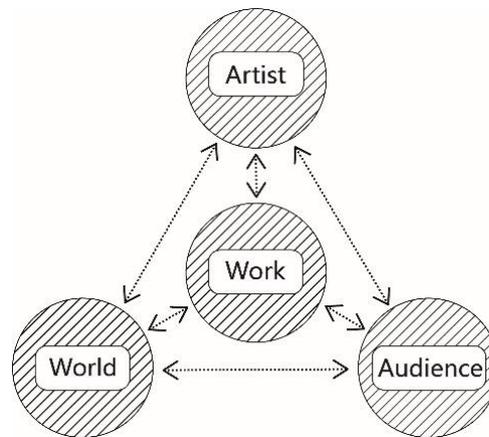
First, the concept of "world" as a place, the place is different from the reflection of the objective world in traditional art. In public art, the question on place is raised, emphasizing that "world" is the perception of various phenomena in the place;

Second, the "artist" occupies a dominant position in traditional art, but the equal relationship between the artist and the place is in public art. The artist is no longer the sole subject of artistic creation, and the place is no longer the absolute objective world that the artist regards as artistic creation. Artistic creation is affected by the "particularity" of the place, and the subject status of the artist are weakened;

Third, the element of the audience, the emphasis on the particularity of the place in artistic creation can trigger the audience's subjective consciousness. The audience is no longer passively watching works of art, but actively participates in them, and the viewing method needs to be adjusted according to the particularity of the place;

Fourth, for the elements of "work", the world, the artist, and the audience have become effective ways to generate the meaning of the work, and the meaning of the work is no longer unique to traditional art. There are many possibilities for interpretation, and the ways of interpretation are also diverse, resulting in different meanings.

Art intervention breaks the linear "encoding-decoding" meaning generation mode of traditional art. The interaction and mutual influence of the four elements of literary and artistic creation change from the traditional one-way linear "encoding-decoding" principle to a reversible relationship in the meaning generation mode of artistic intervention. Therefore, art intervention is more likely to arouse public participation and resonance than traditional art.



Art Intervention Mechanism of Meaning Generation

Source: Honghao He

2.2.3 The impact of artistic intervention on micro-renewals

The meaning generation and interpretation of art intervention works is diverse, respect the social values of different groups, pay attention to the daily needs of people's lives, and arouse people's artistic emotions. Therefore, the combination of art intervention and micro-renewal can promote micro-renewal to create a public space that is closer to life and easy to resonate with space, and uses the influence of art intervention to attract different groups of people to participate in space renewal, give full play to social power, and energize public spaces ^[22].

Public art is a carrier of urban culture. It reflects the cultural heritage and humanistic spirit of a city and is an effective way of expressing urban culture. As a cultural phenomenon, public art works show the relationship between art and the city, art and the public, art and society, and a new direction for the dissemination of urban culture ^[23]. Therefore, artistic intervention can promote the reshaping of urban regional culture. It can organically combine the unique and profound urban regional culture with urban micro-renewal to create urban public spaces with regional characteristics. Moreover, people that do not live in the area can

also feel the unique culture of a city. It can be seen that artistic intervention plays an important role in the dissemination of space culture, and also provides an effective cultural carrier and means of implementation for micro-renewal.

Art intervention provides multiple renewal methods of urban micro-renewal strategies. Art intervention covers a variety of artistic expressions, such as installation art, street art, art events, graffiti art, public sculpture, etc. These rich expressions help Micro-renewals realizes the purpose of transformation, reflects the value of urban public space, and optimizes and enhances the quality of urban space.



Various forms of artistic intervention in the city

Source: Honghao He

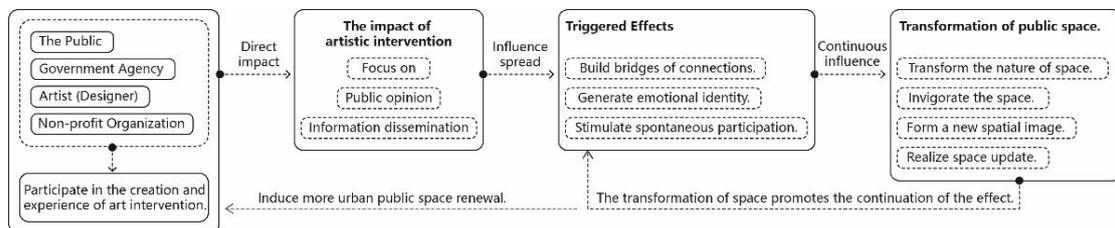
2.3.4 Art intervention triggers the logic of space renewal

In the micro-renewal strategy, artistic intervention can trigger space renewal. By using art intervention to integrate space resources and attract people to participate, art intervention can spread and diffuse its influence over the micro-renewal space, and stimulate subsequent space renewal. The influence of art intervention in the space has brought about a series of changes in the nature and environment of the space, including changes in the space image, emotional identity, and usage. It not only promotes the communication between the public and the space, but to a certain extent prompts the public to pay attention to and discuss the problems existing on the space and seek solutions ^[24]. The artistic intervention based on the micro-renewal strategy has a catalytic effect on the renewal of public space, and also makes the public space had distinct artistic characteristics.

This paper analyzes the internal logic of artistic intervention in promoting space renewal of the micro-renewal strategy. Disassemble the micro-renewal and artistic intervention to promote the renewal of public space, sort out the relationship between them, and provide

reference to the artistic intervention in the micro-renewal strategy.

1. Perform artistic intervention based on micro-renewal, and encourage different groups to participate together;
2. Intervene in the micro-renewal space through art to attract people's attention, interact with the space and form public opinion. A series of changes in spatial forms and states form information dissemination and diffusion;
3. With the continuous spread of influence, art intervention gradually builds a bridge between people and society in public space, more and more public understood space information, increase people's emotional identity, and stimulate spontaneous activities and updates in space;
4. Under the influence of the continuous fermentation of artistic intervention, the micro-renewed public space changes the original image cognition, space nature and usage mode of the space. Artistic intervention also enhances the vitality of public space renewal and realizes the purpose of micro-renewal of space;
5. The renewal of public space to meet the needs of the public to carry out activities will naturally attract more people to participate in it, and people are more willing to spontaneously come to the space to participate in public life, so as to continue to produce effects and stimulate more possibilities;
6. The transformation results formed by the micro-renewal of public space and artistic intervention will not only achieve the renewal of the target space for transformation, but also form an imitation effect, stimulate more negative public space renewal of the city, and gradually promote the renewal of urban space.



Art intervention triggers the logic of space renewal.

Source: Honghao He

2.3 Summary

This chapter explores and analyzes the reasons, development status and definition of micro-renewal in urban renewal. At the same time, it expounds the definition of artistic intervention,

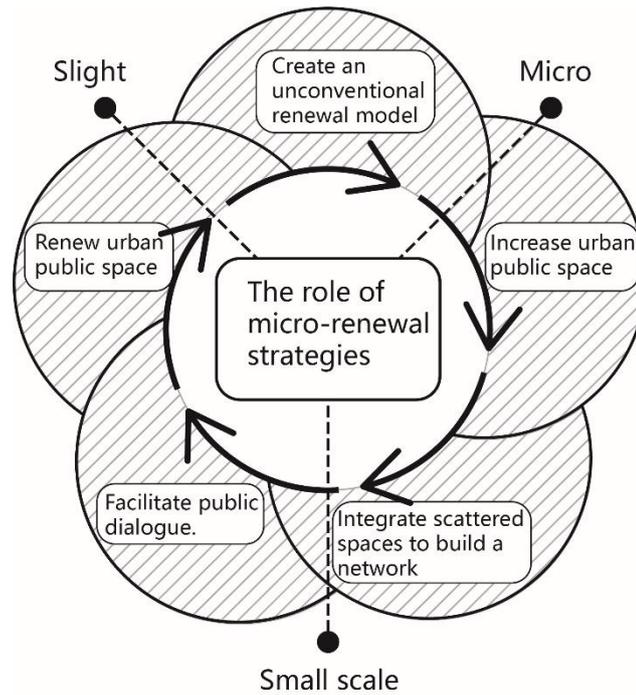
uses the four elements of literary and artistic creation proposed by Meyer Howard Abrams to analyze the difference between artistic intervention and traditional artistic meaning generation mechanism, and understands the impact on artistic intervention in public space. Finally, it analyzes the impact on artistic intervention on urban micro-renewal in practice. In addition, the exploration of the logic of art intervention triggering space renewal in the micro-renewal strategy has laid a theoretical foundation for the practice and application of the following micro-renewal and art intervention.

CHAPTER 3. THE ROLE OF MICRO-RENEWAL AND ARTISTIC INTERVENTION

3.1 The role of urban micro-renewal

Micro-renewal is different from the traditional urban renewal mode. The practice mode of micro-renewal is bottom-up, emphasizing starting from the micro-level of the city, respecting and continuing the original texture and information on the place, and updating the space with a slight design method. The role of urban micro-renewal is reflected on the following aspects:

1. Renewal urban space.
The micro-renewal rebuilds the ordinary, trivial, idle and aging public spaces of the city, and rejuvenates these "unpleasant urban spaces" into public spaces that can attract people to come and gather.
2. Increase the urban public space.
Micro-renovation of street and lane space will help to increase the usable area of public space and ease the pressure of urban population growth on the demand for public space. The practice of micro-renewal increases the diversification of urban public space and enriches the public places of people's daily life.
3. Create gridding and systematization.
Urban micro-renewal can increase the point-like public space of the city. Micro-renewal is a gradual construction mode. With the increase in point-like spaces, the connection and radiation between them is improved, which promotes the networking of public spaces and forms an effective integrated space strategy.
4. Stitching cities fosters dialogue.
Micro-renewal helps to promote community renewal, increase the sense of identity between people, repair the gaps between urban development, activate communities, and promote communication and exchanges with different groups.
5. Create an unconventional renewal mode.
Micro-renewal is a reflection on the traditional update mode, and the update strategy is flexible and changeable. Breaking away from the shackles of the traditional update mode, the micro-renewal strategy has a free space to play, creating a good environment for artistic intervention.



The role and characteristics of the micro-renewal strategy.

Source: Honghao He

3.2 The role of artistic intervention

3.2.1 Reshaping regional culture

The culture of a city originates from the common concepts and customs formed by people living in a region for a long time, and reflects the unique charm of a city ^[25]. The development of urban culture is relatively stable and independent, but also has the characteristics of nationality and region. As a way of artistic creation, art intervention cannot avoid the regional culture contained in the place in the process of creation. The specificity of these places, such as regional culture and humanistic spirit, will react to the intervention in art. Because art intervention in urban renewal needs to interpret regional culture, understand people's spiritual and cultural needs, fully explore and utilize regional culture, and form artistic creations with regional cultural characteristics. Art intervention is conducive to the dissemination of urban cultural characteristics in micro-renewal, so that personal experience and group culture can be integrated, and these experiences can be internalized into a sense of identity and belonging, so as to achieve the purpose of reshaping regional culture ^[26].

3.3.2 Building bridges of society

The works of art intervention in the micro-renewal space are usually continuous, and the audience can experience the art projects for a long time, so that the audience, art and society can form a long-term dialogue relationship. This long-term conversation is a process of finding identity. Artists do not forcefully intervene in place to create in the practice of art intervention, but establish interactions and exchanges with audiences and participants through a microscopic perspective and a negotiated creative method. Let the work intervene in the micro-renewal space in a "weakened" attitude ^[27]. The gesture of micro-renewal space also shows that artistic intervention emphasizes cooperation, negotiation and dialogue, and builds a bridge between place, art, public and society. Art intervention repairs the gap between space and the public, and at the same time promotes the cooperation of the public and multi-party institutions, creates more opportunities for connection with society, and realizes the interaction between art and society.

3.2.3 Create signs and memories

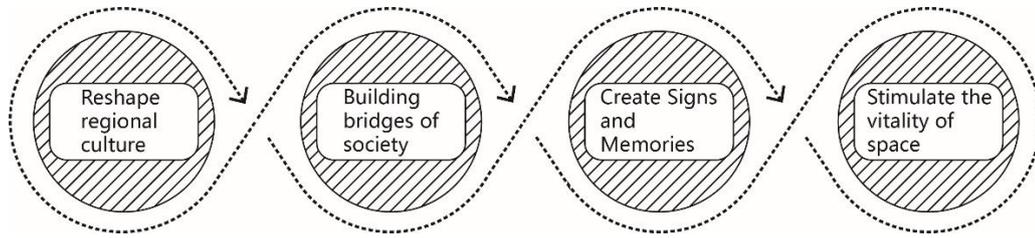
As a means of urban micro-renewal, artistic intervention can combine new technologies and high technologies in the process of creation to form a distinct and novel artistic expression. It not only makes the artwork become the visual focus in the public space and attracts the attention to the public, but also can be shaped into an iconic landscape in the space, enhance the recognition of the public space, and leave a deep impression of people ^[28]. Artistic intervention to create iconic landscapes is conducive to emphasizing the particularity of public spaces, avoiding the phenomenon of homogeneity in the process of micro-renewal, and highlighting the individuality of micro-renewal spaces. Artistic intervention creates iconic landscapes by strengthening the visual experience, deepening the public's memory of the place and awakening people's attention to the space, attracting the public to participate in the experience of the space, and establish an emotional exchange of the space.

3.2.4 Stimulate the vitality of space

In the practice of urban micro-renewal, art intervention should not only enhance the artistry of the space, but also undertake the responsibility for stimulating the vitality of the space. As a form of artistic expression in public space, art intervention can easily arouse people's attention and discussion, and stimulate the public's curiosity about space

^[29]. There are various forms of artistic intervention, which can bring rich interactive forms of the space and stimulate public participation and experience. Artistic intervention can increase the use of space, improve the quality of space, and provide the public with the

possibility of carrying out various activities. Artistic intervention gradually stimulates the vitality of the space by stimulating curiosity, enhancing the spatial experience, and maintaining spatial flexibility and micro-renewal strategies.



The role of artistic intervention in the renewal of public space.

Source: Honghao He

3.3 The combination of micro-renewal and artistic intervention

3.3.1 Micro practice mode

The micro-renewal strategy and artistic intervention both take a micro-perspective as the starting point in the practice of urban space. In the process of micro-renewal, the bottom-up renewal model is emphasized to respect and protect the original texture and culture of the place [30]. Moreover, the micro-renewal perspective is closer to the life of the public, which is conducive to creating an urban public space that the public likes. Artistic intervention intervenes in urban public space in a micro-stance, pays attention to the needs of the public, restores social bonds, stimulates the vitality of urban space, and promotes people's communication [31]. It can be seen that art intervention focuses on people's daily life and needs and presents a micro-art creation method. Artistic intervention and micro-renewal emphasize micro-practice methods, creating conditions for their combination.

3.3.2 To stimulate the vitality of space

The micro-renewal strategy stimulates the vitality of urban public spaces through micro-renewal models. This microscopic renewal model helps to improve the quality of public living space, fine-tune and transform it on the basis of respecting the current status of the space, and gradually promote urban renewal. The urban renewal models from macro to micro aims to better stimulate the vitality of urban space and provide the public with high-quality urban public space [32].

The practice of art intervention in urban public space is not only a form of artistic

expression, but also exerts a social influence. Art intervention is like a catalyst for space, changing the nature of urban space, disseminating information about space, attracting public participation, and stimulating the vitality of space ^[33].

Micro-renewal and artistic intervention stimulate the vitality of urban space through different ways, and their common purpose also becomes the basis of integration.

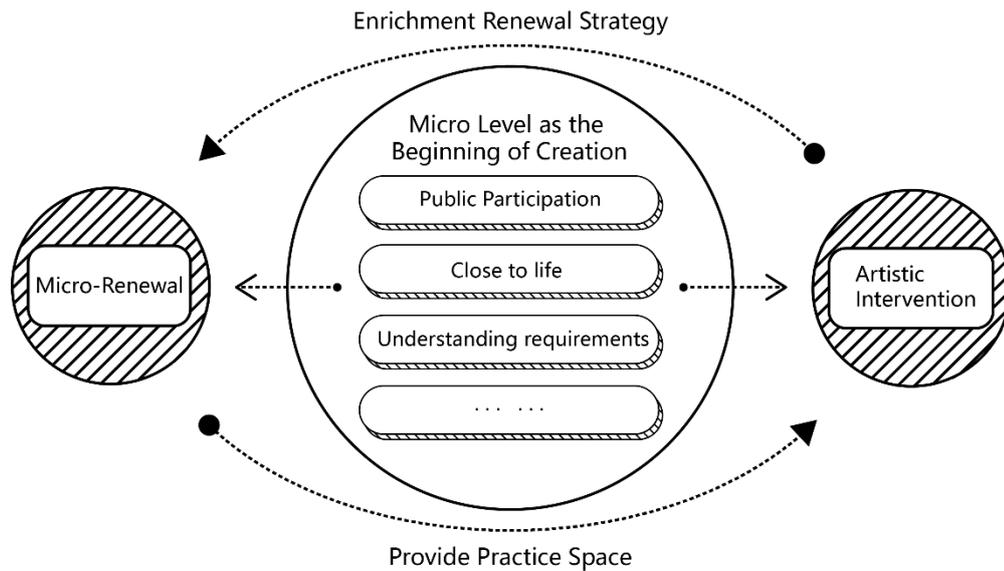
3.3.3 Mutual promotion and complementation

The combination of artistic intervention and micro-renewal not only enriches the means of implementing micro-renewal strategies, but also meets people's aesthetic needs for public spaces and improves the quality of public spaces. Under the influence of art intervention, it promotes the public's interaction and enhances their sense of identity, exerts the social influence of art intervention, and allows the micro-renewed space to achieve spiritual renewal.

Interpretation of art intervention works is ambiguous, expanding the influence of works in space. The impact on artistic intervention will blur the boundaries of public space, bring changes of the surrounding space, and even promote the replacement of functions of the surrounding space, so that micro-renewal can get rid of the limitations of boundaries of physical space, expand the radiation range of micro-renewal space, and promote Updates to other surrounding spaces ^[34].

Micro-renewal provides a place for artistic intervention to practice, allowing artistic intervention to form a specific form of expression and enriching the connotation of micro-renewal space. Art intervention pays attention to the needs of the public's daily life, and integrates the public's cognition and experience in the process of creation. Build artistic creations that meet the needs of space renewal. Artistic intervention allows the "publicity" of Micro-renewal to be better displayed.

Therefore, the combination of artistic intervention and micro-renewal enables them to promote and complement each other to achieve the purpose of urban renewal.



The relationship between micro-renewal and artistic intervention in urban renewal.

Source: Honghao He

3.4 Summary

This chapter expounds the influence and role of urban micro-renewal and artistic intervention. Urban micro-renewal not only increases the public space to meet the needs of urban development, but also bridges and repairs the existing gap between the city, and promotes people's communication and identity. Art intervention is not only a carrier of art and culture, but also has a certain social impact. Art intervention plays an active role in urban renewal, building a bridge between people, space and society, reshaping regional culture and stimulating space vitality. Finally, summarize and summarize the basis and role of the combination of micro-renewal and art intervention, and provide a reference from the design projects of micro-renewal and art intervention in the future.

CHAPTER 4. DESIGN PRACTICE OF MICRO-RENEWAL AND ARTISTIC INTERVENTION

4.1 Nanyuan Village Boonsel Roof Renewal Project

4.1.1 Project background

Chinese cities are rapidly expanding and developing, and many large cities have internationalized modern architecture. Metropolitan cities also retain urban villages with low living costs, which are characteristic of the development of large cities in China [35]. A large number of people poured into cities to work, but most people could not afford to buy houses, so renting houses in urban villages became their main choice.

Urban villages are generally located around the central area of the city. Driven by the high land value, villagers have built high-rise buildings, mainly for living and renting. Due to the lack of reasonable planning and correct guidance of urban villages, the building density of villages is getting higher and higher. The villagers are keen to pursue the economic benefits of renting, but ignore the public space for living in urban villages. As a result, the public space in urban villages is insufficient and scarce, the exchanges and communication between villagers are significantly less, and everyone's sense of identity and belonging to the region gradually declines.



1. Shangyong Village - Urban Village in Guangzhou
<http://pic.vjshi.com/2020-08-23/22c939b74c03daf9ef1e1713df28c4a0/00001.jpg?x-oss-process=style/watermark>
2. Nanyuan Village - Urban Village in Shenzhen
<https://www.sohu.com/picture/311152435>
3. Zhangqiao Residential Area - Shanghai's urban village
<https://baijiahao.baidu.com/s?id=1674443949315648133>
4. High-density buildings in Tangxia Village - Guangzhou Urban Village
<https://baijiahao.baidu.com/s?id=1674443949315648133>
5. Overlooking the building in Yulu Village - Shenzhen Urban Village
<https://www.163.com/dy/article/DR1P956N05129QAF.html>

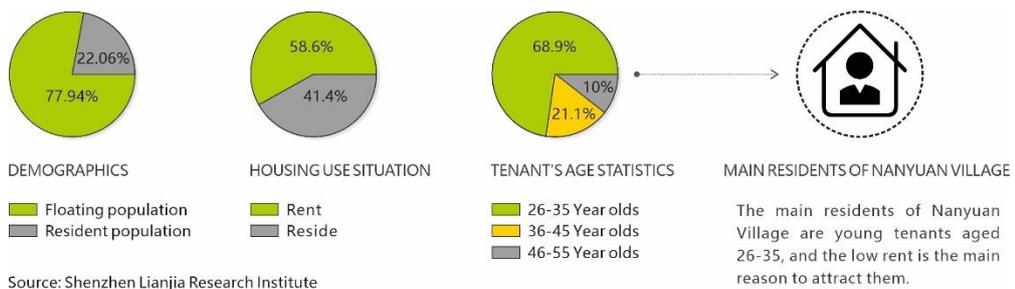
4.1.2 Project introduction

4.1.2.1 Investigation and analysis of the base

1. Overview of Nanyuan Village



As one of the largest urban villages in Nanshan District of Shenzhen, Nanyuan Village has a total population of about 35,000 people, with a local registered population of 2,617 and a permanent population of 26,500 (accounting for 77.94% of the total population) [36]. It can be seen that the majority of the residents living in the urban villages are migrant workers, and the local aborigines are in the minority. Due to the declining quality of the village's living environment, many aborigines have relocated to other areas. Through the analysis of the population data of Nanyuan Village provided by Shenzhen Lianjia Research Institute, it can be seen that most of the residents of Nanyuan Village are young people aged 26-35. Urban villages provide them with relatively low rents, which is the main reason for them to come.



These young tenants hope to get physical relaxation and release psychological pressure

after work, and long for a public space for mutual communication. Young tenants work in different areas, and they have the ability to spread information widely, which is also a characteristic of this group.

2. Traffic network and public space

Nanyuan Village is an urban village with high building density and dense population. The distribution of public space in Nanyuan Village is extremely unreasonable, even a state of absence. During the investigation, we found that the street-facing space in the village is basically saturated. These spaces need to undertake the functions of the village's daily traffic, vehicle parking, stop and communication, and basic greening. The daily traffic space carries the function of people's public life, which is also a common phenomenon in urban villages. Due to the scarcity of public space, people have to seek other spaces as public spaces for communication. Although there are some public spaces in the urban village, these spaces have been used as parking lots, and the public spaces for people's activities have been gradually encroached.



1. Nanyuan Village entrance gatehouse
2. About 7m of street space in Nanyuan Village
3. About 2m of street space in Nanyuan Village
4. Public space occupied by cars



NANYUAN VILLAGE TRAFFIC NETWORK

-  7.0m-8.5m street
-  1.5m-3.0m street
-  Public space

4.1.2.2 Existing needs

1. Nanyuan Village with high building density and dense population has a strong demand for increasing public space, which can not only to increase the places for their activities, create a safe and comfortable space for stopping and interacting, but also improve young tenants' understanding of Nanyuan. The sense of belonging and identity of the garden village re-constructs the relationship between people and the environment.

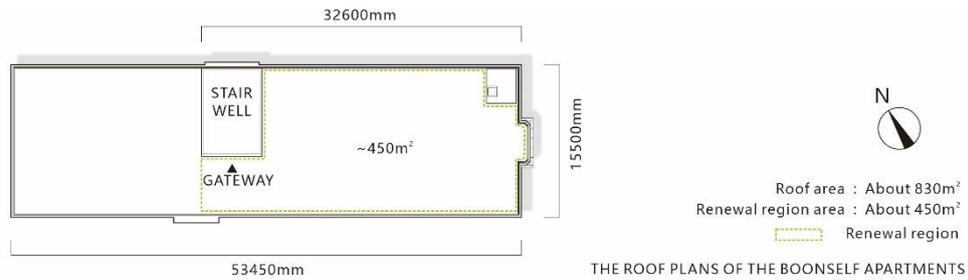
2. With the continuous development of the city, the residents and tenants living in Nanyuan Village also put forward new requirements for the existing living environment.

Nanyuan Village needs to continuously improve the existing conditions, and hopes to enhance the vitality of the community by increasing the public space, thereby promoting the gradual renewal of the area. Only continuous renewal can maintain the vitality of the village and attract young tenants to continue to live in Nanyuan Village.

3. Shenzhen Nanshan District Urban Management and Comprehensive Law Enforcement Bureau and the residents of Nanyuan Village hope to change some negative impressions of urban villages through urban renewal. Create new public spaces on the basis of the existing urban villages, update those negative public spaces hidden in the villages, and form a new public space network system to meet the needs of people.

4.1.2.3 The location of the renovation project

After investigation and analysis, we turned our attentions to the roof space of the village due to the shortage of ground public space in Nanyuan Village and the lack of target space for renewal. The high-density village buildings provide us with a lot of available roof space, and the building height of this area is relatively uniform, and a better view can be obtained from the roof space. With the support of government agencies, the site for the micro-renewal and art intervention design project is located on the roof of a 6-storey building in Nanyuan Village. We hope to form a new public space in Nanyuan Village by updating the roof space, and also to form a new driving force for community renewal. The roof of the building belongs to the Boonself Youth Apartment. It is next to the main traffic road and has convenient transportation conditions. The roof area of the apartment is about 840m², and the roof space is usually idle, and the people living in the building are mainly young tenants.



The roof space environment of the Bangshe apartment before it was renewed. The apartment has a total of 6 floors.

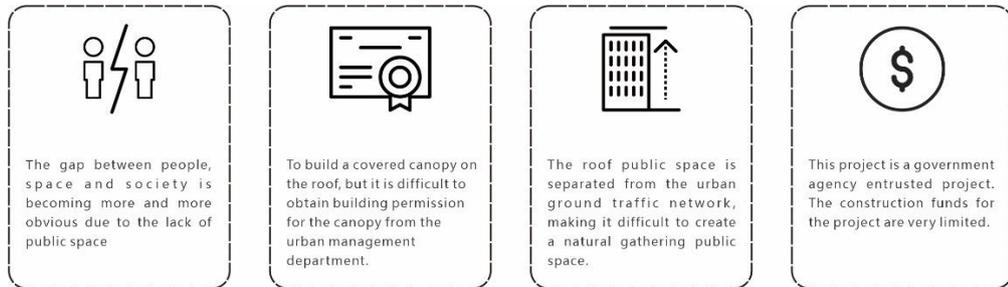
1. The roof space is hardly used by anyone.
2. You can enjoy the stretched skyline from the roof of urban village.
3. The roof has been planted with some simple vegetation.

4.1.2.4 Problems facing the renew

1. Because urban villages have not been properly planned and guided for a long time, the gap between people, space and society is becoming more and more obvious due to the lack of public space. The alienation of the relationship between people and people and space has led to the gradual reduction of communication between people, and the residents' sense of community identity will also decline, hindering the renewal and development of the village. Therefore, how to repair the relationship between people, space and society, and enhance people's sense of identity with the community is one of the problems faced by the renewal;
2. To create a public space on the roof of the apartment can be far away from the traffic network and get a relaxing space where time flows slowly. However, the isolation from the roof public space from the ground is not easy for people to discover, and it is difficult to form a natural gathering urban public space. So, how to create a roof public space that can attract people to come spontaneously?
3. Shenzhen, Guangdong, China is a city with very hot summers. In order for people to comfortably stop and communicate in the space during the summer day, it is necessary to add a canopy to the roof space to form a shading space. However, it is difficult to obtain building permission for the canopy from the urban management department.
4. The cost of the project is very limited. How to complete the renovation with a roof

area of 450m² within a limited range of funds has become an important problem with this project.

With these difficulties, we began to think about how to make this roof a new public space where people would like to gather.



With these difficulties, we began to think about how to make micro-renewal.

4.1.3 Propose micro-renewal and art intervention design scheme

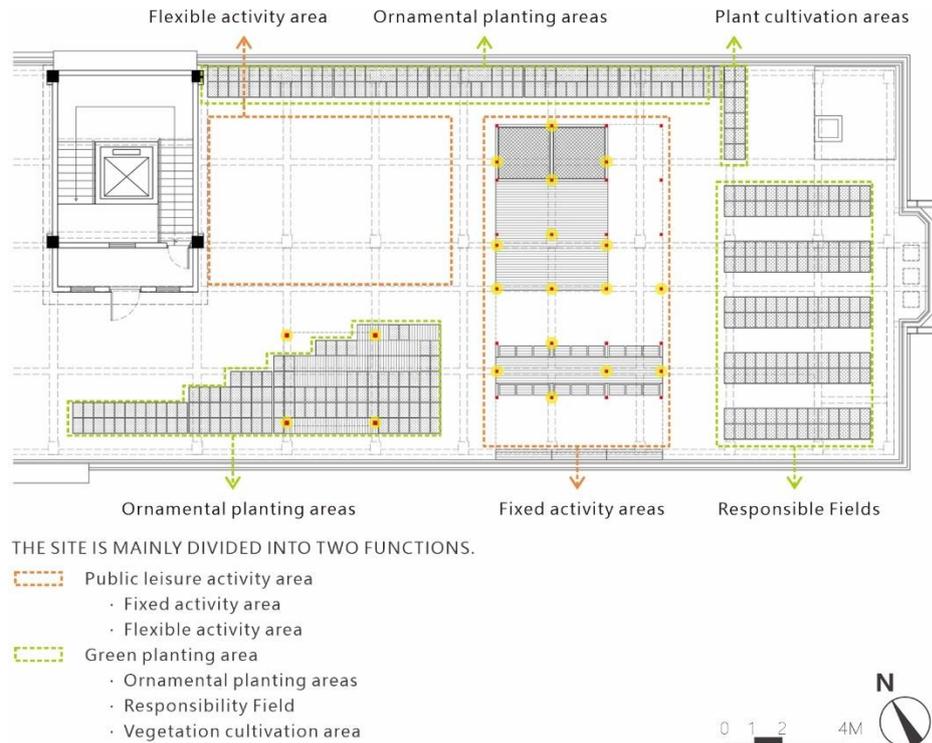
4.1.3.1 Planning of space renewal

After researching the site and area, we propose a design method of micro-renewal and artistic intervention. On the basis of the existing roof space, micro-renewal is carried out to reduce the cost of project construction, increase greening and new functions. At the same time, the use of art installations to intervene in the space increase the functionality and interest in the space to attract the public to come to the public space spontaneously. It is also necessary to retain the flexibility of the space to create possibilities for more subsequent art interventions. Through the strategy of micro-renewal and artistic intervention, Nanyuan Village will be created an "oasis in the city", a public space where people can overlook the city and relax.

Due to the limitation of design funds, we chose 450m² of roof space for renovation. The space planning is mainly divided into two functional areas:

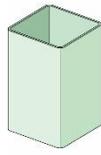
1. Public leisure activity area, which can be divided into fixed activity areas, mainly providing basic space facilities, such as chairs, tables and leisure platforms. A flexible activity area, this area is reserved for the possibility of artistic intervention in the roof spaced in the future, as well as flexibility for carrying out other public activities. The combination of fixed and flexible public leisure activity area allows the roof public space to have more possibilities, creating a favorable environment for subsequent renovations.

2. Roof space planting area, this area is composed of three different functional areas, namely ornamental planting area, responsible field and planting cultivation area. Ornamental planting area is to provide ornamental and space beautification functions. Responsibility fields are spaces used for vegetable cultivation, where people can reap the fruits of their labor. The planting and cultivation area is used for the cultivation of space vegetation, and at the same time, it acts as a function of publicizing planting technology



4.1.3.2 Selected building materials

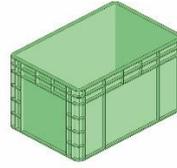
Micro-renewal advocates updating and stimulating space vitality on the basis of target space. This not only conforms to the development model of the stock of urban public space, but also allows the idle public space in the city to be fully utilized. At the same time, project funding also plays a decisive role in the selection of design and construction materials. Based on the micro-renewal and artistic intervention design scheme, we choose building materials that are economical, durable and easy to maintain. Not only to reduce the cost of construction, but also to facilitate maintenance and update in the future. The project uses steel, logistics transfer boxes, wood, and solar panels as the main building materials.



STEEL



SOLAR PANELS



LOGISTICS TRANSFER BOX



WOOD

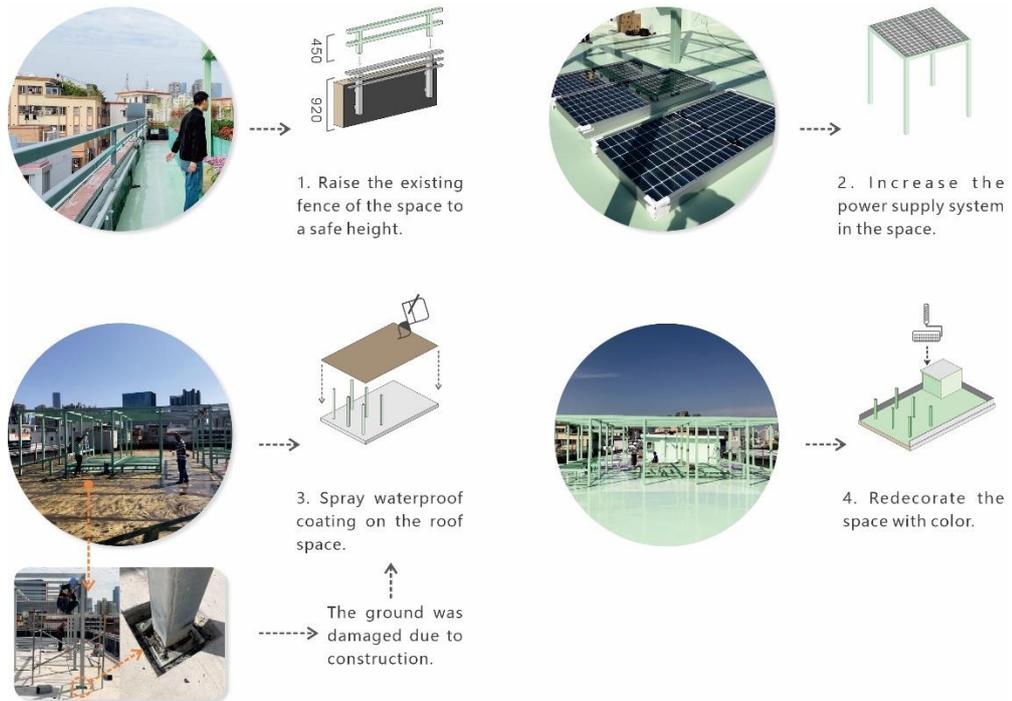
4.1.4 Design and implementation of micro-renewal and art intervention

4.1.4.1 Implementation of the micro-renewal strategy

1. Basic renewal of space

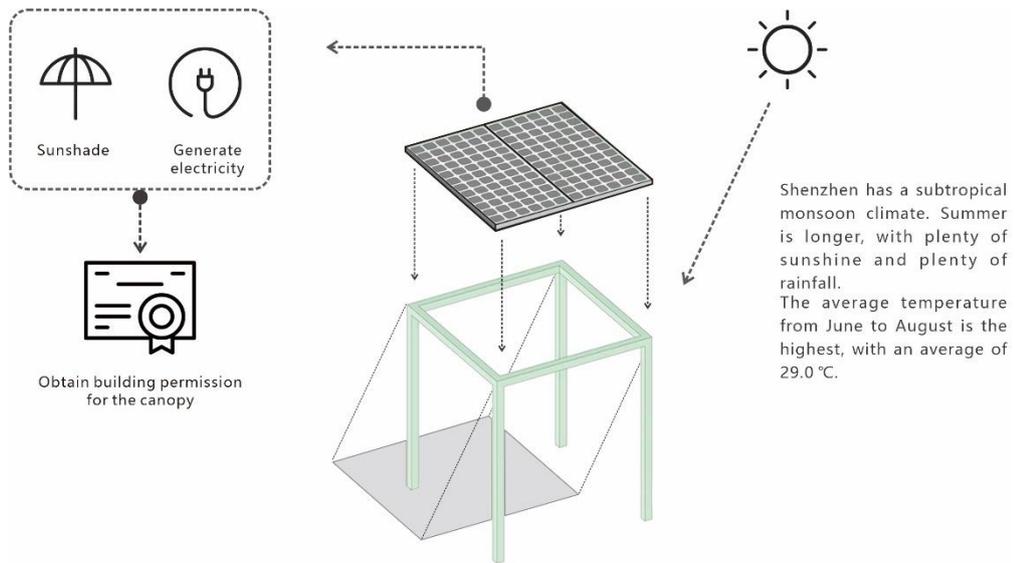
Before the construction of the project, the utilization rate of the roof space of the Boonsel self apartment was low, and the original space was not suitable for public activities with many people. The space mainly has the following problems: 1. The guardrail enclosed by the roof space does not reach a safe height; 2. The space lacks power system; 3. There are hidden dangers of water leakage of the roof space; 4. The wall paint of the space is peeling off. These reasons cause the roof space to gradually move away from people's sight, and people's sense of alienation from the space will become more and more obvious.

The implementation of micro-renewal needs to solve the above problems and make the roof spaced a safe and suitable place for public activities. At the same time, the renewal plan is implemented on the basis of the original space to reduce the construction cost of the project and achieve the purpose of micro-renewal. First, add steel guardrails to the original guardrails in the space to increase the space fences to a safe height. Secondly, the power supply system of the space is increased to provide night lighting and power protection for activities after the update. Third, re-spray the ground waterproofing paint in the roof space. Reasons for spraying: On the one hand, the construction of the modular unit destroy the previous roof ground, and there is a hidden danger of water seepage on the ground. On the other hand, the roof planting area will increase the wad time of the ground. Finally, the roof spaces interface image is updated uniformly. The interface image uses bright light green as the basic color tone of the space, creating "an oasis in the city" in Nanyuan Village and attracting public participation.



2. Insert greenery, shading and solar panels

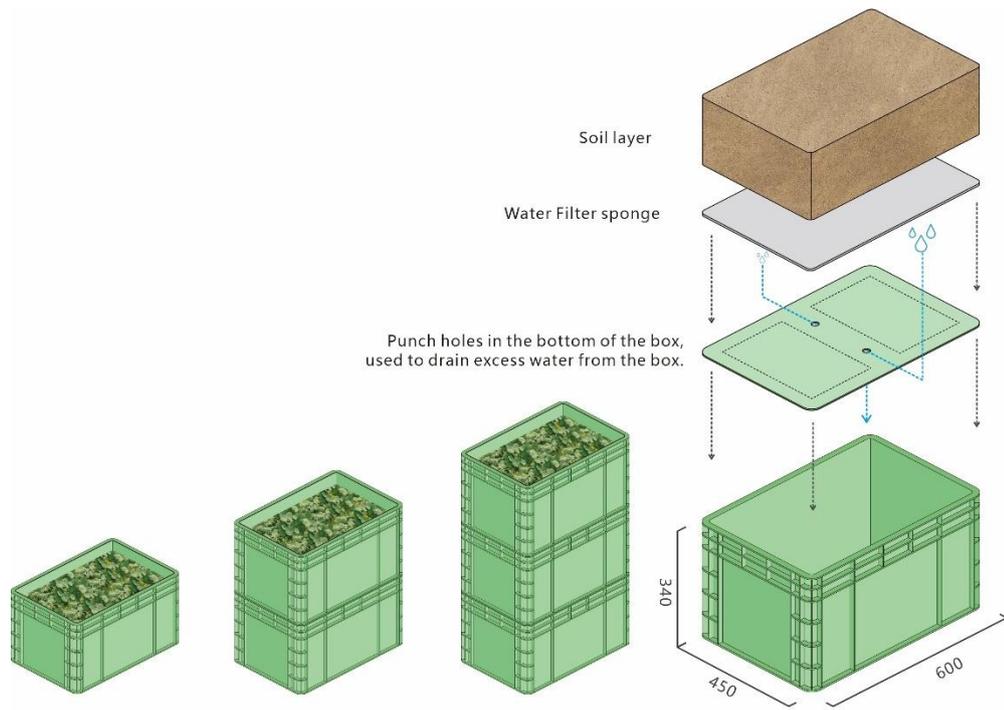
The modular unit size of the roof renewal project is designed according to the size of the solar panel, so that the solar panel can be combined with the unit module. The addition of solar panels on top of the modular units can provide the roof space with the electricity needed to meet the needs of events. At the same time, solar panels form a shaded space for people to stay and communicate. If there is no shaded space, people cannot stay in the public space for a long time in summer. Solar panels provide a shaded roof space for the public and enable sustainable electricity use in the space. The space canopy formed by the solar panels had been approved by the urban management department because of the solar energy system that could help to achieve a low-carbon city.



Solar panel transportation and installation process records.



Inserting green features is an important part of the roof renewal project. In order to control the construction cost of the project, and at the same time considering the particularity of the project in the roof space, green placement requires more flexible methods and convenient green management. The design scheme adopts the logistics transfer box as the planting box of the plants in the roof renewal. The logistics transfer box not only reduces the cost of construction, but also has the characteristics of stability, high temperature resistance and not easy damage. Roof greening is presented through the different superposition of logistics transfer boxes, and three different functional areas are superimposed - green viewing area, planting area and plant cultivation area. Drainage holes need to be drilled into the bottom of the logistics transfer box, so that excess water in the soil can be drained to meet the conditions for planting plants. At the same time, add a water filter layer to the bottom of the box to ensure that the soil does not flow out of water.



Combine planter boxes of three different heights.



Box arrangement for responsibility Field



Box arrangement for greening viewing area



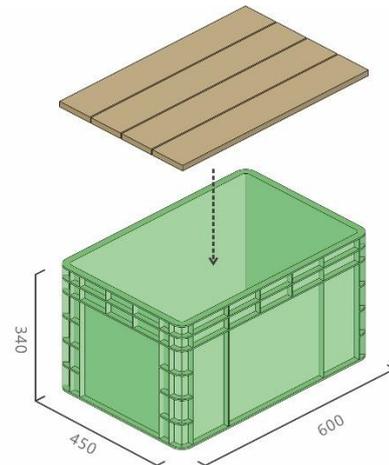
3. Add public furniture

The roof public space also needs to provide public furniture for people to use. The public furniture in roof renewal is mainly formed into two ways. One is to put different functionalities into modular units to form interesting spatial installations. The other is

based on a logistics transfer box, which is covered with wooden panels on top to form public furniture for people to sit on. The public furniture formed by the logistics transfer box and the wooden board can be moved according to the needs of people's activities to meet different behavioral needs. Some public furniture is combined with planting boxes to enrich the form of public furniture. The public furniture with different functions meets the needs of carrying out various activities in the roof space.

SEAT PRODUCTION PROCESS RECORD

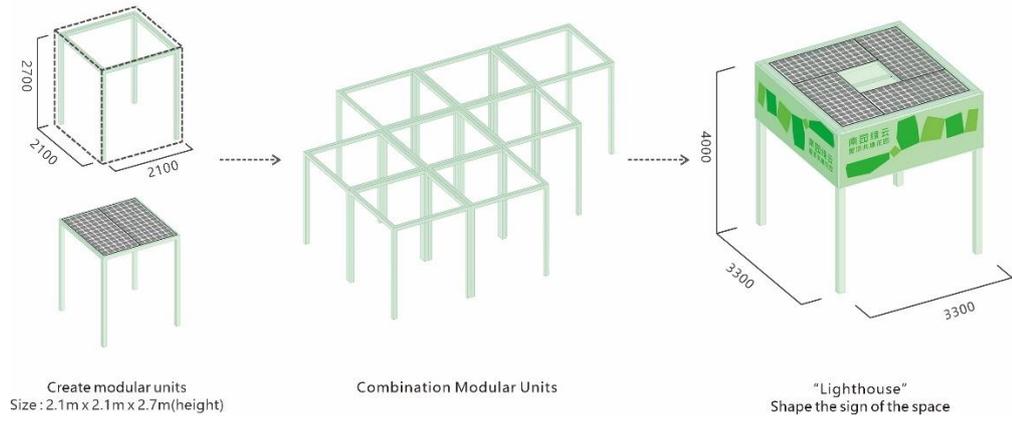
Make wood processing molds to improve production efficiency.



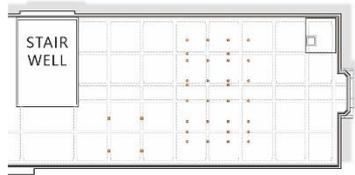
4.1.4.2 Strategies of Artistic Intervention

1. Installation of art intervention

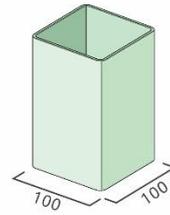
In order to make the roof space easier to construct and update, a modular art intervention strategy is proposed based on the implementation of micro-renewal. The modular unit device can respond to different activity needs of the space, and the modular unit device is easy to replicate and can be applied to other building roofs of the urban village. The size of the modular unit installation is 2.1mx2.1mx2.7m (H). A total of fifteen modular unit installations were used in the roof renovation. Three different functions are given to the modular unit installations, a mesh bed for leisure, a long table for chatting, and a yoga space for a wooden platform.



We also designed an art installation of different scales in the roof space, its name is "Lighthouse". On the one hand, it is to break the consistency of ordinary unit installations and bring a little change and contrast with the roof space. On the other hand, it is to shape the logo of the space, so that the public on the ground and other residents on the roof can also see the logo of this new roof garden, forming a kind of spatial memory.



■ Nodes for modular unit installation
 The structure network of the building



Modular unit size

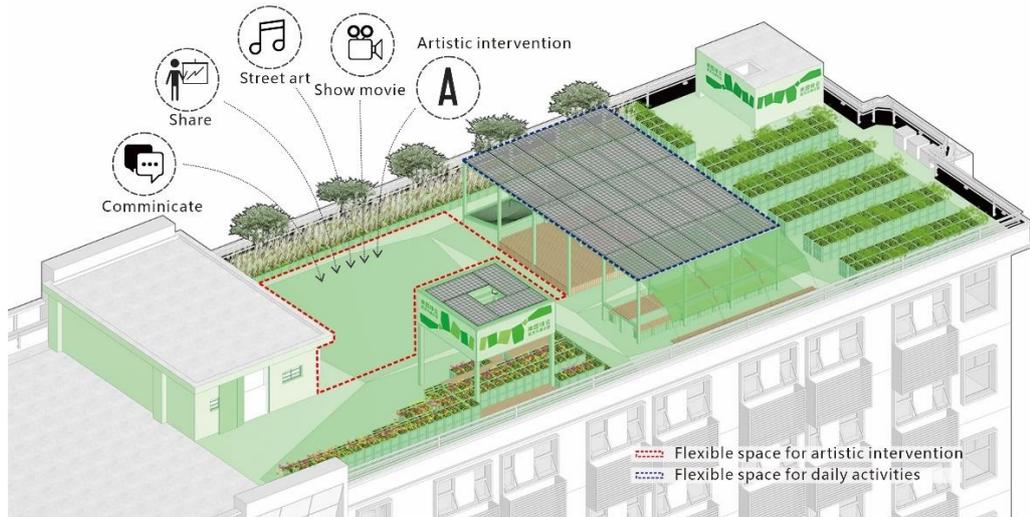


Modular unit construction process

2. Build a flexible space for artistic intervention

The organization and construction of spatial functions also has certain flexibility under the influence of the micro-renewal strategy. Building a flexible public space can adapt to the future development needs of the space and make the space adaptable. Therefore, a flexible space that can be used for artistic intervention is built in the roof space. The flexible space on the roof can reserve the possibility for temporary or non-fixed art intervention, and can carry out various works and activities of art intervention. Temporary art intervention works or activities can be replaced from time to time to maintain the vitality of the space and continue the public's freshness to the roof space. Of course, the flexible space are not limited to artistic intervention, but can also be used for other public activities in the space, expanding the flexibility of the space.

Build a flexible space for daily activities and a flexible space for artistic intervention.
 Make the space able to accommodate more possibilities.

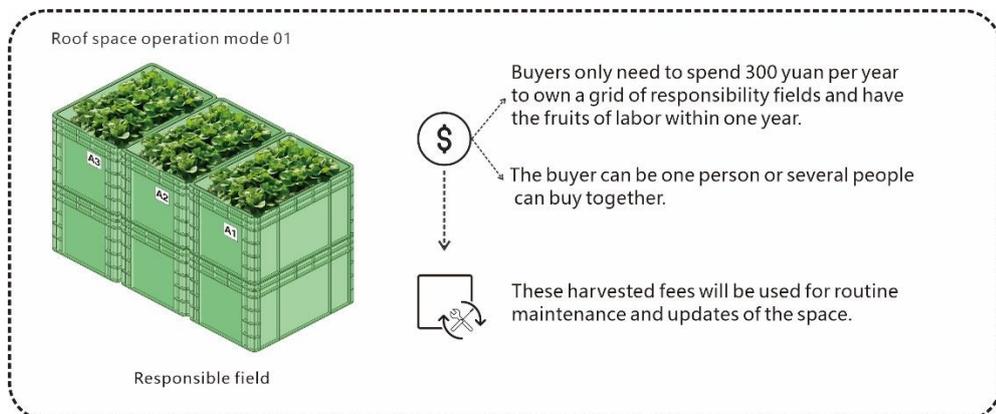


4.1.5 Later management and renewal

The roof space renewal project is far from the urban transportation network, and the later maintenance and continuous renewal are particularly important. In the early stage of project design, the later management and update issues need to be considered. In addition to adding rich and diverse functions, the micro-renewal and artistic intervention of the roof space also need to formulate some rules to maintain the space update.

1. Responsible for the operation of the field.

The responsible field is a free planting area, and everyone can grow vegetables by renting the responsible field. The renter spends 600 yuan (RMB) every year to own a four-grid responsibility field. These fees are mainly used for the maintenance and management of the roof space.



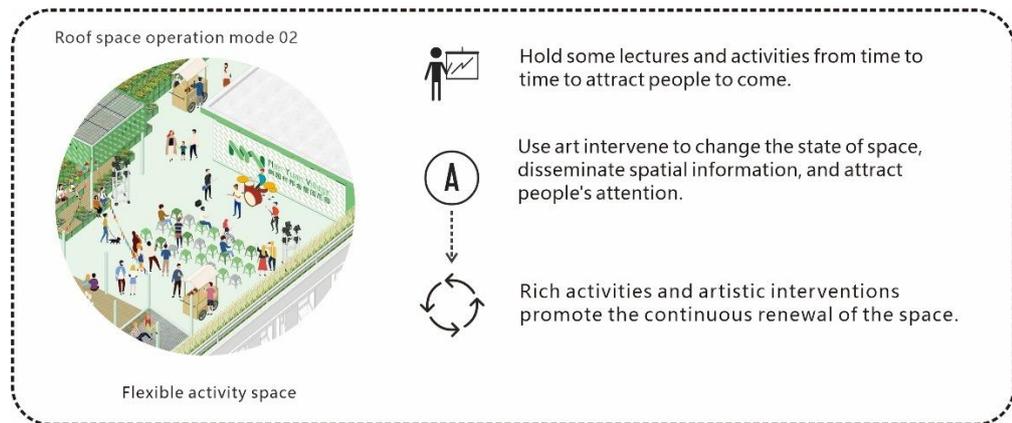
2. Build a diversified platform for activities.

With the support of different institutions, the roof space project can carry out related

public welfare lectures to attract different groups to this space. The space also has the service of renting out venues, providing an open-air meeting space and event space for some institutions. These activities can create conditions for the subsequent update of the space.

3. Reserve the possibility of artistic intervention.

Use temporary or non-fixed artistic intervention to stimulate the vitality of the space and enhance the attractiveness of the space. Play the role of artistic intervention to trigger the sustainable renewal of the space.



RESPONSIBILITY FIELD

The results of responsible field planting. The harvest of these plantings can attract people to communicate and share in the space, becoming the object of attracting people's attention.



REAL PICTURE AFTER THE CONSTRUCTION



4.1.6 Summary

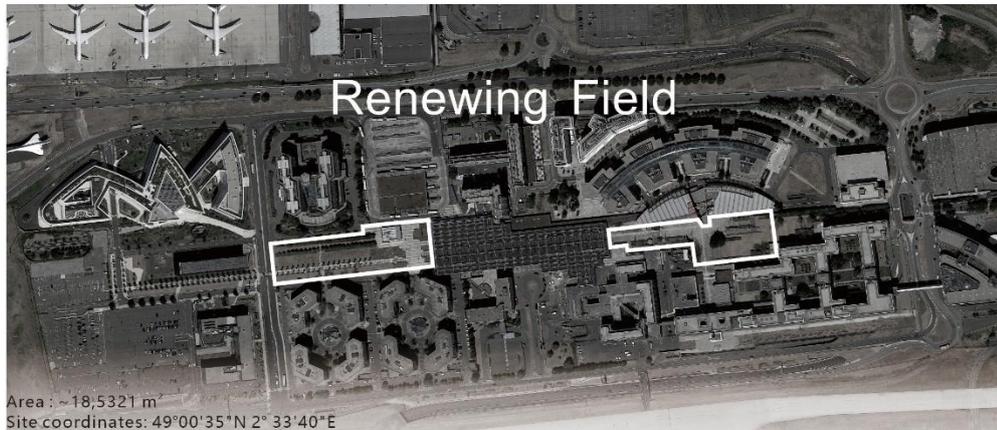
Through micro-renewal and artistic intervention strategies, the Nanyuan Village roof space renewal project gradually stimulates the vitality of the space by means of spatial foundation renewal, adding new usage functions and artistic intervention. It builds a new public space in Nanyuan Village, promotes communication between tenant groups and residents, and increases their sense of identity with the village. The use of modular devices, solar panels and logistics transfer boxes are combined into the form of an interesting space, allowing the micro-renewal of the space to form a sustainable renewal from construction

materials to post-operation. Micro-renewal and artistic interventions from small-scale roof space renewal, triggering people's attention to the roof space of urban village buildings, is conducive to promoting the renewal and construction of public space in urban villages.

4.2 Roissypole public space renewal

4.2.1 Project Overview

Roissypole is a space attached to Charles de Gaulle Airport in Paris, France. It is a mixed-use commercial, residential and service space that has evolved with the airport. It has a convenient transportation network and many high-class hotels, which attracts many businesses and residents to the area. Roissypole, as a progressive development, is not satisfied with the status quo. It dreams of creating a more attractive, better connected, more urban, more pleasant and safer living environment. The hope is to stimulate the potential for public space through the renewal of existing spaces and to enhance the quality of Roissypole's environment.



At present, there are certain service facilities around the airport, which can meet the needs of people's life, work and residence. Due to the airport's location far from the city center, foot traffic is very limited and there is a lack of public spaces that attract travelers.

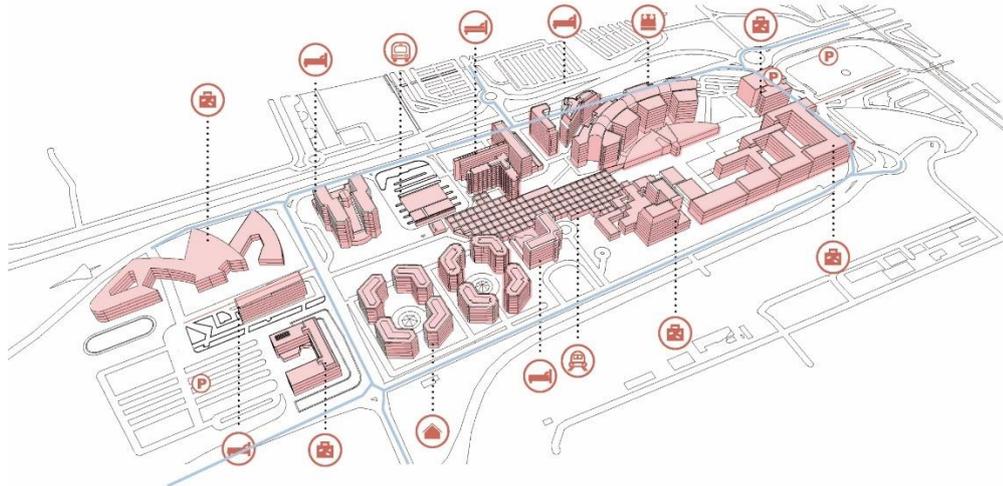


Renovation of the Surrounding Area

1. There are high-level commercial spaces for office and shopping;
2. There are hotels where passengers can rest and live;
3. A residential community has been formed around the site, mainly for airport staff;
4. There is rail transportation here, which is convenient for travel.

Roissypole is already surrounded by many functional areas, such as large commercial

areas, offices, hotel services, transportation hubs and residential spaces. It provides functions that basically meet the requirements of commuters, travelers and residents, but there is no communication and interaction between different groups. The area still has some fully used public spaces which still have a great potential. Therefore, it is hoped that the renewal of these spaces will make Roissypole not just a transit station, but a living space that connects the different functional areas and builds a place for relaxation and recreation.



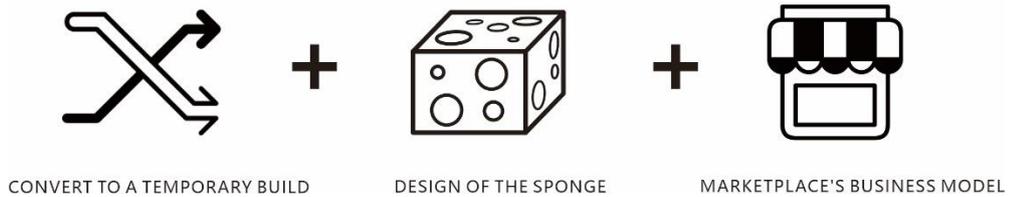
Different functional buildings around the Roissypole area

4.2.2 Proposing a micro-renewal strategy

1. Propose design concepts

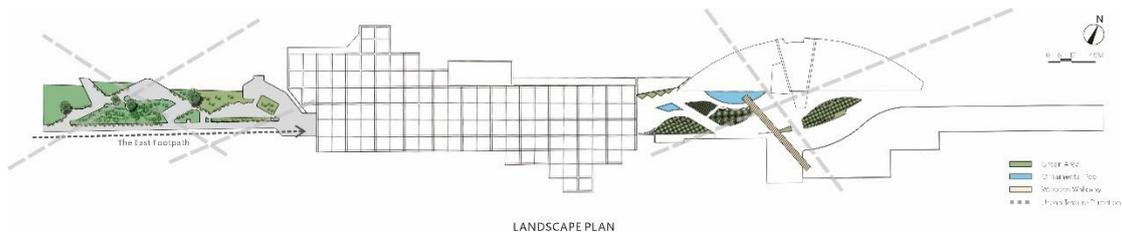
Based on the existing urban spatial resources, we propose a micro-renewal strategy for the renewal of the Roissypole area, aiming to stimulate spatial vitality from an economic, micro and sustainable perspective. These existing resources prepare the ground for proposing a precise micro-renewal plan, and they are the basis for its implementation. By analyzing the different functions around Roissypole, we envisage a complementary approach to spatial micro-renewal. Roissypole district needs not only high class and business service space, it also needs public space close to life, where different groups can participate and build bridges between them. So we proposed a sponge-like design idea, hoping to absorb different things to connect to the micro-renewal space. At the same time, we combine the concept of market to bring economic income and diverse street culture to enrich the function of the space.

Propose Design Concepts



2、 The basic functions of the space are renewed

Firstly, the convenient fast walking passage through the renewed space is retained to ensure that the travelers have the convenience of reaching different functions. Secondly, the green areas that lacked vitality was re-planned. The new green scheme is based on the analysis of the urban fabric, and at the same time, multiple landscape nodes are created to build a public space for relaxation and stopping. Finally, new landscape spaces are planned in Magellan space to prepare for the next addition of new spatial functions.



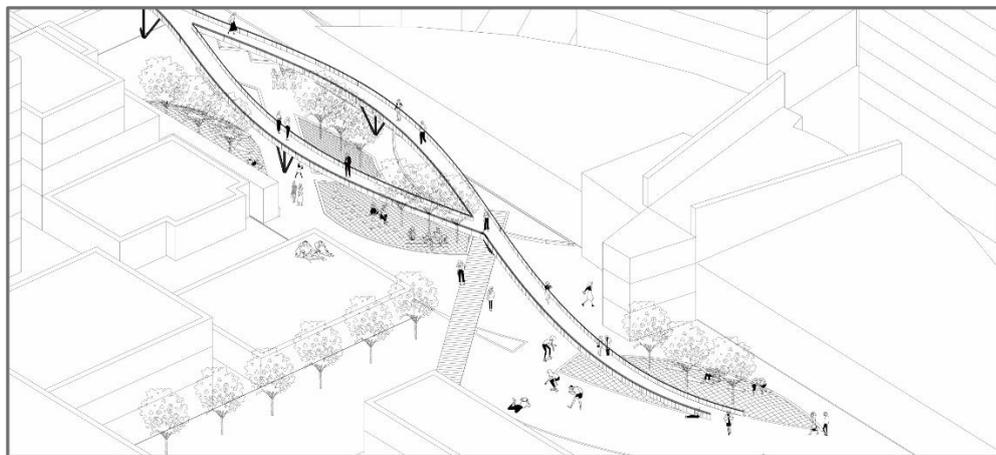
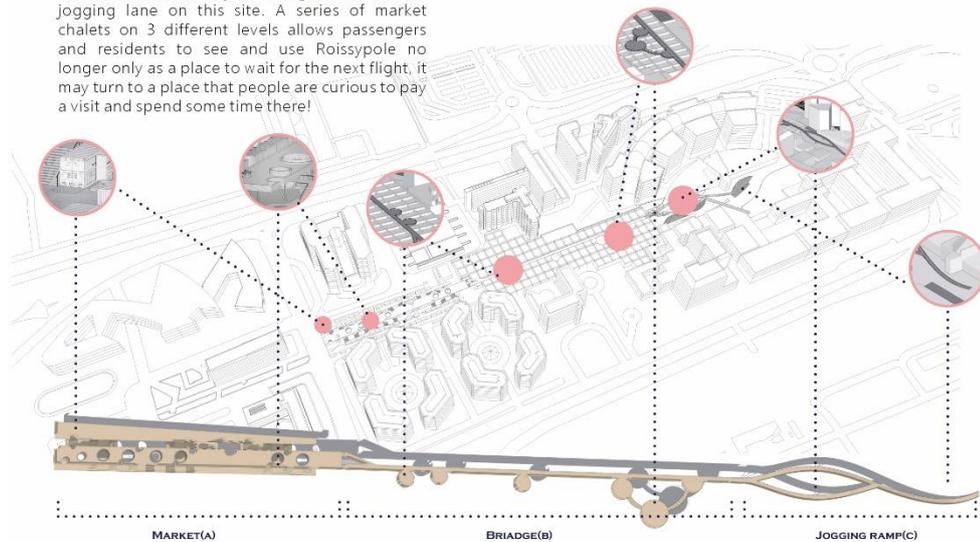
3、 Add new space functions

The design concept of sponge is used to build a new sky gallery. The sky gallery is 6.8m high with 3 levels of platforms of different heights, which enriches the form of public space and brings multi-dimensional traffic movement. The sky gallery forms a new public space with the function of shading and sheltering from the rain, facilitating the presence of visitors and residents. Moreover, the sky gallery creates a bridge between two different spaces, increasing the connection between them. The sky gallery also enriches the spatial experience of visitors, business people and residents, allowing them to view the city from platforms of different heights.

Design Functions and Service Groups



This is the reason why we designed the market jogging lane on this site. A series of market chalets on 3 different levels allows passengers and residents to see and use Roissypole no longer only as a place to wait for the next flight, it may turn to a place that people are curious to pay a visit and spend some time there!



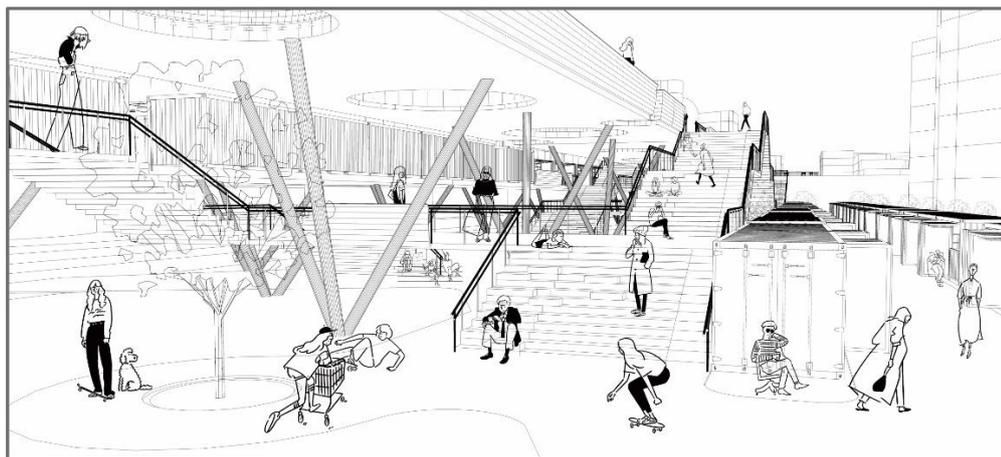
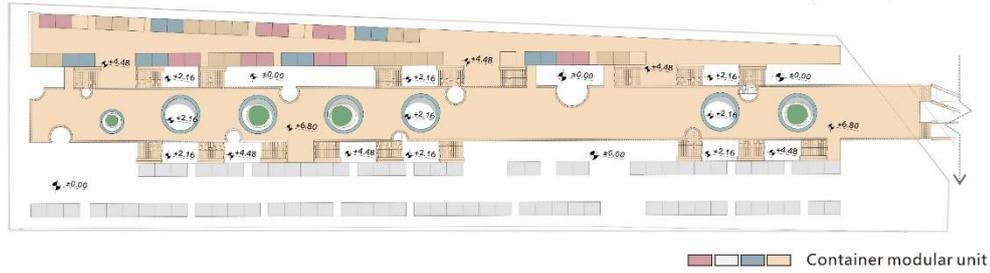
The addition of a sky gallery to renew the ground level landscape creates a new connection between spaces.

At the same time, the commercial space with added market function can not only improve the service capacity of the space, but also attract people to come and spend money. Moreover, it can allow travelers to experience the street commercial culture with regional characteristics and create a leisurely shopping area for travelers. It prolongs the time that travelers stay in the public space and creates conditions for communication and interaction between travelers and residents.

FLOOR PLAN 1 /PART A: MARKET



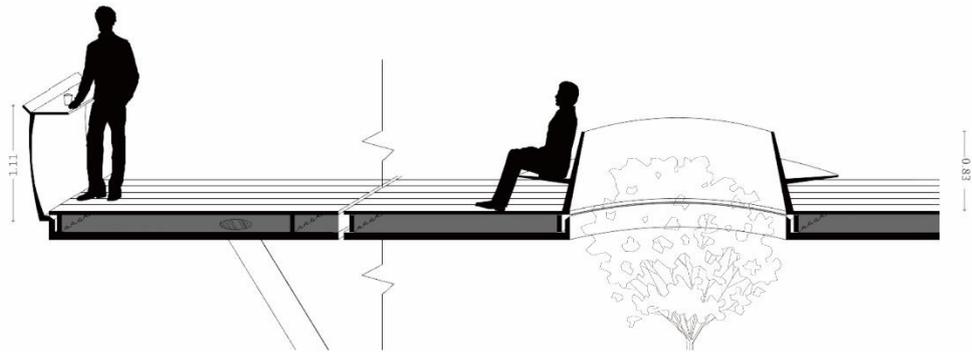
FLOOR PLAN 2 /PART A: MARKET



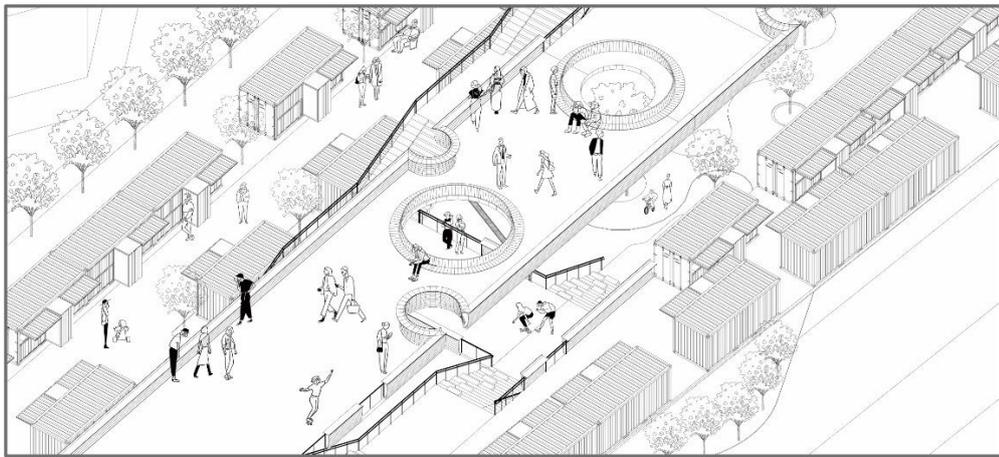
Viewing platforms of different heights and a marketplace space built with containers

4. Adding public furniture

Roissypole is surrounded by many different businesses, so the micro-renewal strategy needs to provide not only services for travelers and residents, but also a comfortable office environment for these business people, meeting their needs for functions in the public space. Public furniture also provides temporary and communicative spaces for the market, promoting people to stay and spend time for the space.



RAILING HAND DRAINAGE

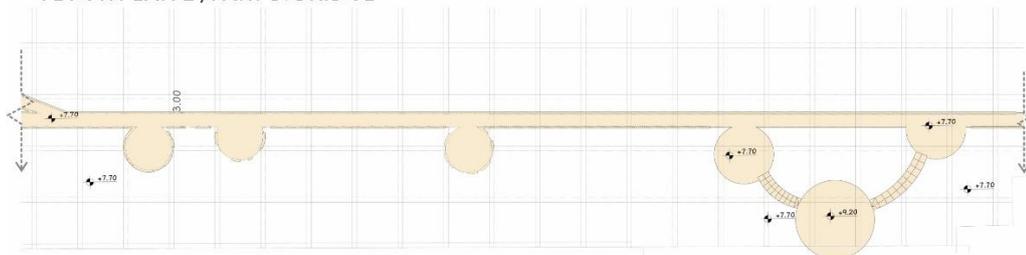


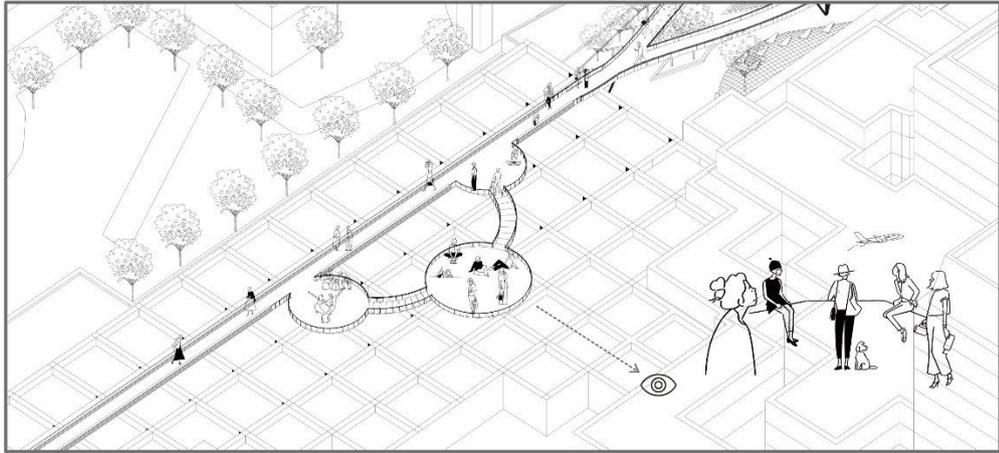
Adding bar top enclosures and circular seating to meet the needs of different groups of users. Public furniture also facilitates the dining space in the marketplace.

4.2.3 Creating conditions for artistic intervention

The sky gallery creates some nodal public spaces on top of the transportation hub building, creating small and intimate gathering spaces that enrich the public typology of Roissypole. The nodal spaces create some interesting viewing platforms where one can enjoy the dynamic landscape of aircraft taking off and landing. Moreover, the nodal spaces offer the possibility of street art interventions, creating resilient public spaces.

FLOOR PLAN 2 /PART B: BRIDGE

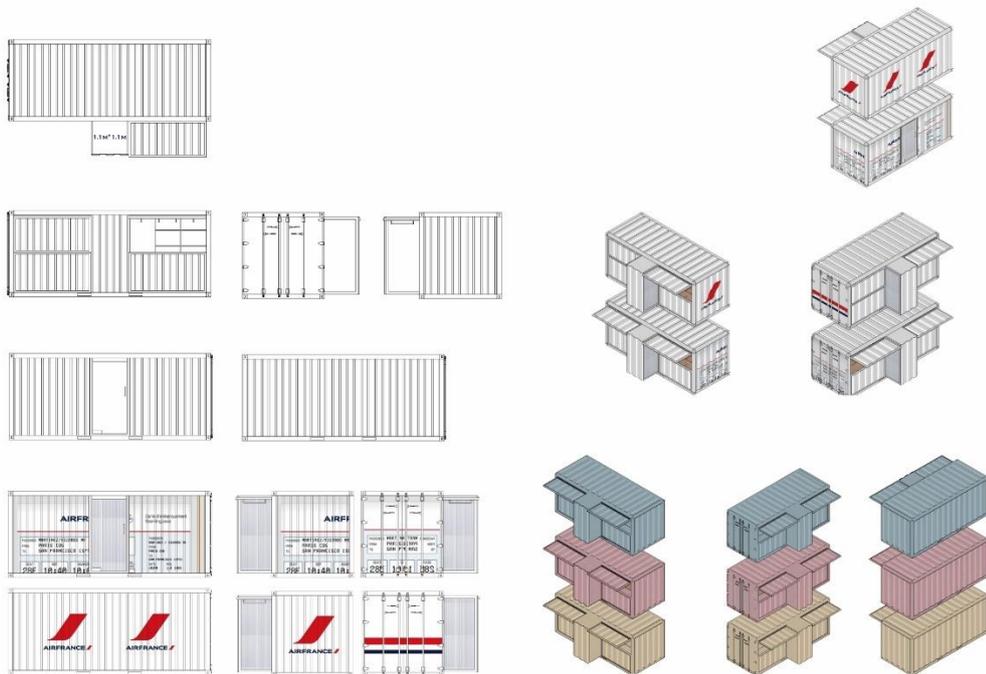




It is both a platform for viewing the landscape and a flexible space for artistic intervention.

The market business models uses containers as the basis of building. It can both form a temporary use space and reduce the cost of construction. Moreover, it retains the flexibility of space planning and can respond to the needs of the future development of the city in time. At the same time, the container also acts as a carrier of graffiti art in the micro-renewal strategy. In the future, artists can be invited from time to time to create graffiti works on the surface of the container, forming a kind of artistic intervention in the space, keeping the freshness of the space and helping to form a sustainable spatial renewal.

CONTAINER SIZE : 2.5m*6m*2.59m



We modified the wood and glass chalets in the market zone, into painted used containers. We believe it to be an attraction of the design. Containers are modifiable in shape, easy to form themes with simple paint, sustainable use and energy resource friendly. Compare to the classical market chalet we applied in the first stage, container market houses follow the atmosphere of airport and its surroundings, they are more advertising and fresher to travelers and local people.

4.2.4 Forming subsequent spatial renewal

Under the influence of micro-renewal and art intervention strategies, public spaces conducive to art intervention are constructed, and the social role of art is used to continuously stimulate the vitality of public spaces, trigger new public participation, and continue the vitality of public spaces. The combination of the market and the container constructs a commercial area with a territory, which enhances the economic income of the space and provides economic support for the renewal of the public space. Moreover, the container unit increases the flexibility of combination, reduces the cost of the subsequent renewal of the space, and enhances the operability of the renewal. In the face of new demands of urban development, the area can quickly make adjustments to achieve spatial renewal, avoiding the renewal method of pushing down and rebuilding.

4.2.5 Summary

Through micro-renewal and artistic interventions in the public spaces of Roissypole District, a platform for communication between visitors, business people and residents is reconstructed, allowing different groups to establish relationships to the public space. The use of the sky gallery increases the continuity of the area's public space, creates new public spaces, and effectively integrates other resources in the area, helping to turn the Roissypole District into a place of relaxation and leisure. Enhancing the quality of the spatial environment and enriching the spatial experience of visitors, business people and residents, the Roissypole District will bring a wider audience together and stimulate the potential energy of the area. The micro-renewal continues the spatial fabric of the Roissypole district, reducing the damage to the original space. The artistic intervention meets the requirements of the future urban development of the Roissypole district, creating an artistic and cultural identity for the district and increasing its recognition.



The Rendering of Roissypole Public Space Renewal

4.3 Restructured Mobility Hub

4.3.1 Project Overview

The tracks and stations of Petite Ceinture which once formed a part of the city fabric are now left with its mere traces and long abandoned spaces. With time, these were hidden by the plantation, and is now an overgrown vestige. Soon the people acknowledged its existence and started rejuvenating it in part, by transforming old stations into restaurants, or gardens, renting out spaces to private businesses, urban hiking trails etc. Yet, the most of the 32 kms of this stretch still remains neglected, running through prime locations of the Paris metropolis. Even though the width of space is limited, its linear expanse makes the overall volume of the unused space very large. The future of this extensive deserted network is still uncertain and looking for an effective solution.

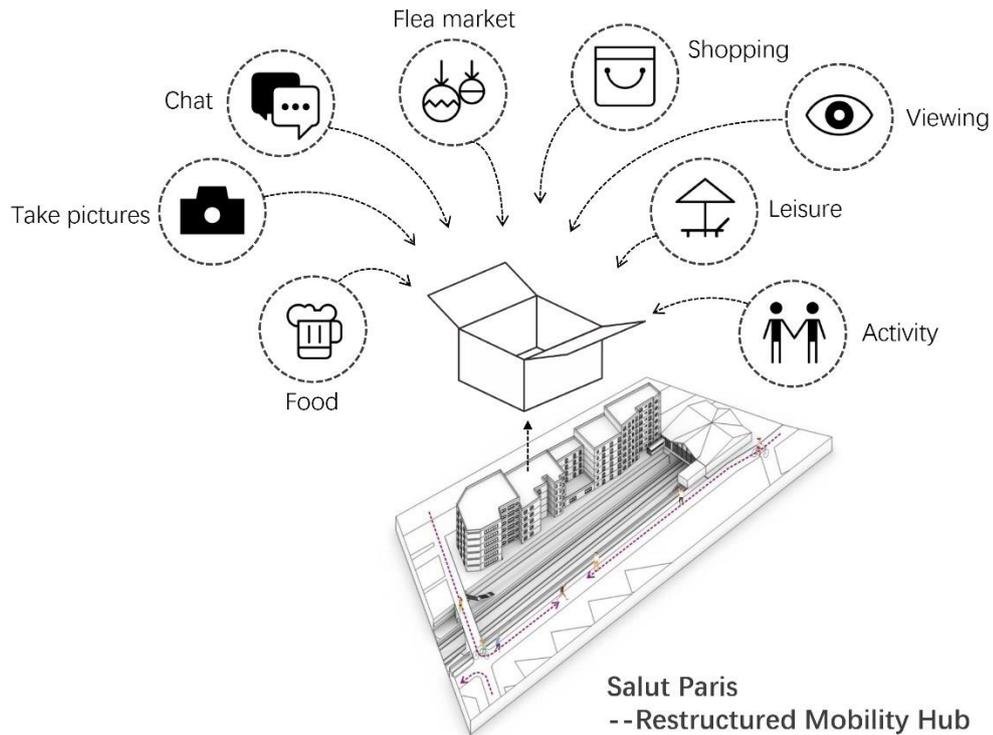


Track Space

People are already planting some flowers in the space, and there are usually some public activities held in the space.

Faced with a public space that possesses historical value and urban cultural identity, it became a challenge to us to use the area without destroying the essence of the railway tracks. Micro-renewal and artistic interventions became our design choices. We still hope that after renewing the rail space, people can still feel the past of the space. A story and nostalgia is woven for people to get a glimpse of 150 years of history.

We treat the site as a box that can accommodate different functions. So we preserved the spatial freedom in the design and did not add too many fixtures. This can make the space a container that can induce other activities and bring more possibilities. Thus, we want to renew the railway track space through the strategy of micro-renewal and artistic intervention.

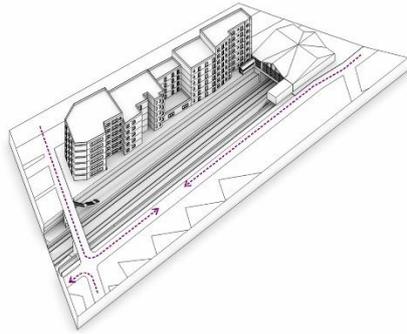


Meanwhile, the Paris railroad space is a circular urban underground space. The intention of our design is to form an influential radial area through the renewal of point-like spaces, and then allow the abandoned railway spaces to gradually reconnect to form the most vibrant urban public space.

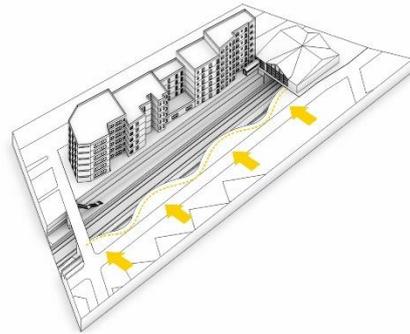
4.3.2 Propose strategies for micro-renewal and artistic intervention

1. Create nodes of stay

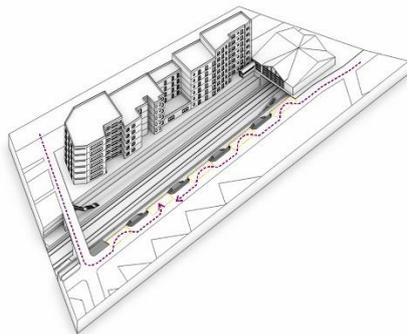
Since the railroad space is a sunken space in Paris, one of the reasons why the space has been lacking in vitality is that it has been out of people's sight for a long time. It is a public space that is very easy to be overlooked by pedestrians, and at the same time, pedestrians have no place to stop, to stay and to see the railway space. Under the micro-renewal strategy, we first created a public space at the street level where pedestrians could stop and rest, hoping to draw their attentions to the railway space. The created nodal spaces also provide the conditions for adding new functions next.



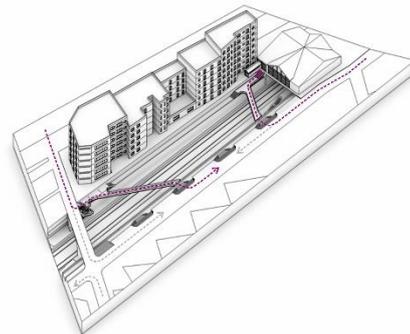
1. Original line of human action



2. Increase the space to stay on the roadside.



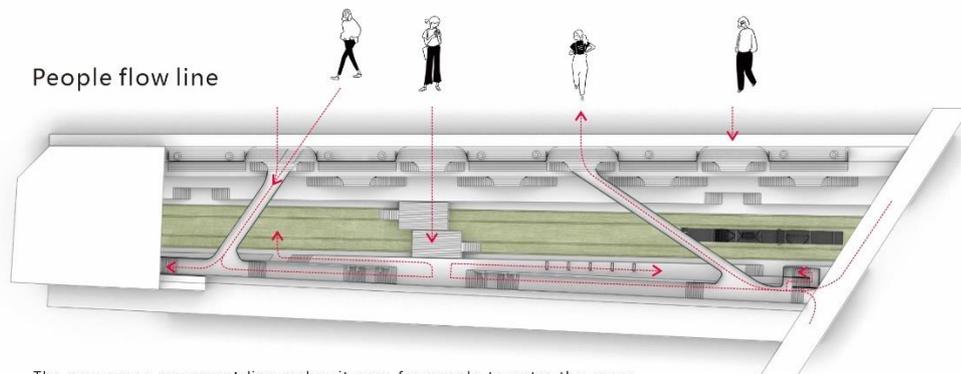
3. Increase public space and attract people's attention.



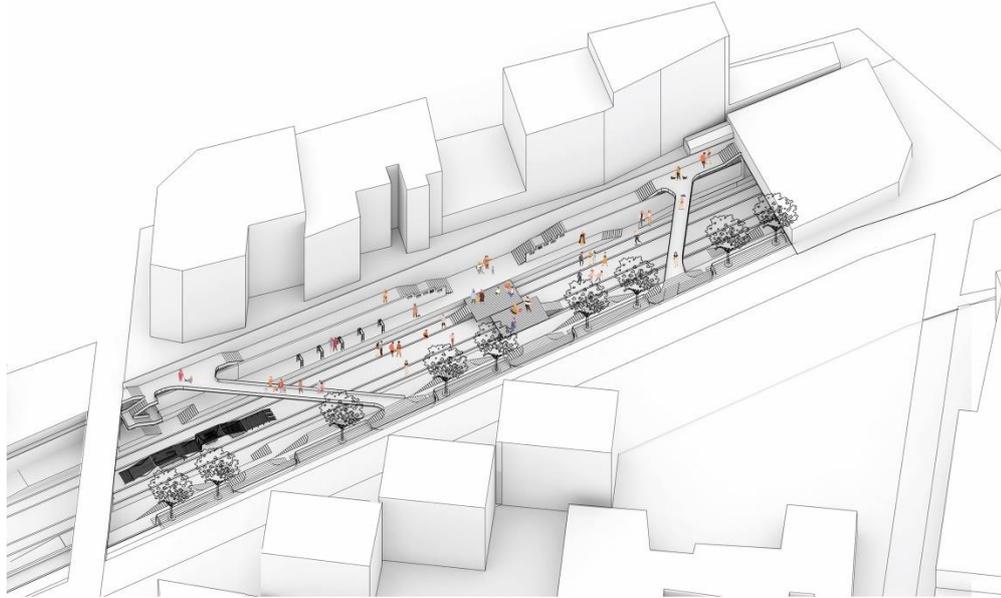
4. Form a new traffic route for the convenience of residents.

2、 Form new spatial paths

Attract public attention to the railroad space by creating nodes where people can stay. Next, we need to reconstruct and optimize the path of the space to create conditions for the public to enter the space easily. This can attract more people to come to the space for activities, which is also the basis of space renewal. Public access also enhances the security of the railway space, providing a reliable guarantee for sustainable renewal in the future.



The new space movement line makes it easy for people to enter the space, increases space safety, provides an adaptive viewing platform, and provides convenience for residents.



Public Access Enhances the Security of The Railway Space

3、 Preserve the original texture of the space

There are some people's spontaneous activities in the railway track space, these activities are not common, but they carry their memory of the space and tell the story of the space in the past. Therefore, retaining the original texture of space can trigger people's memory of space and inspire people's resonance for space. The continuously accumulated urban traces gradually form the unique culture of the space and attract the public and visitors.

Existing Activities in the Space

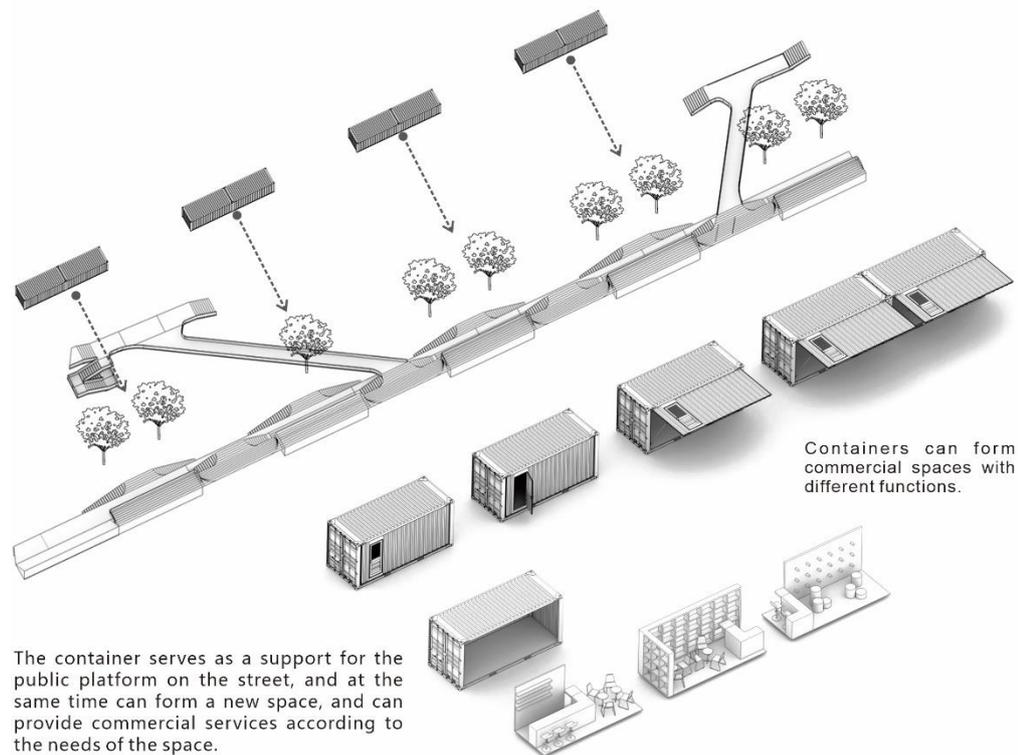


Keep the original features and activities in the space

4、 Placement of service functions

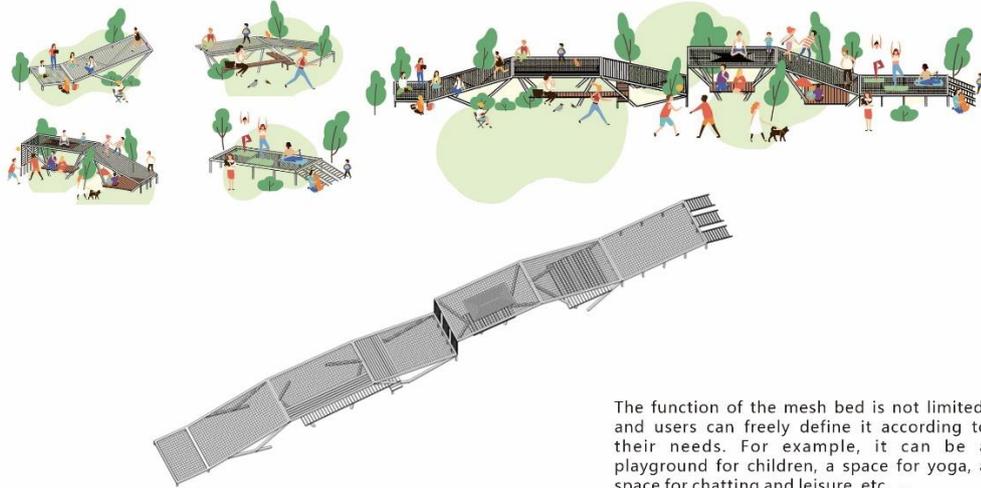
The creation of node public space through street space provides conditions for the placement of modular containers in the railway space. The use of containers are

economical and can have various possibilities of transformation. It can carry different commercial service functions in the railway space, providing consumption and leisure functions for the public who enter the public space. The different service functions increase the economic income of the public space, which can be used to maintain and renew the space in normal times. And by adding service functions, it allows the public to lengthen their stay in the railway space, which is beneficial to carry out other public activities in the future.



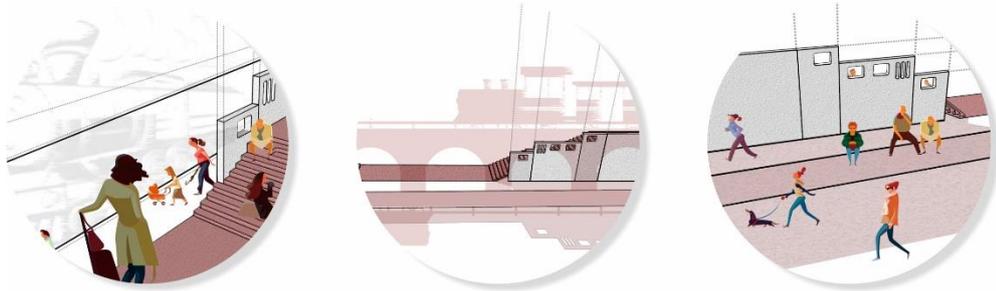
5. Increase the interest of the space

Create interesting public furniture and children's play facilities in the railroad track space. This not only attracts the surrounding residents to bring their children into the space, but also increases the furniture in the public space to meet the needs of people's daily use, and also becomes an activity spaces for children, gradually bridging the gap between space and people.



The function of the mesh bed is not limited, and users can freely define it according to their needs. For example, it can be a playground for children, a space for yoga, a space for chatting and leisure, etc. ...

In the railroad space we also make use of the shape of the former train window and design the wall in the form of openings to create a perspective on the public located inside the train. The public can appreciate the railway space through this window and recall the feeling of the train passing through the space in the past. By strengthening the public's experience of the space, we allow people to understand the past of the space and gradually arouse people's empathy for the space.



Stairs with light and shadow

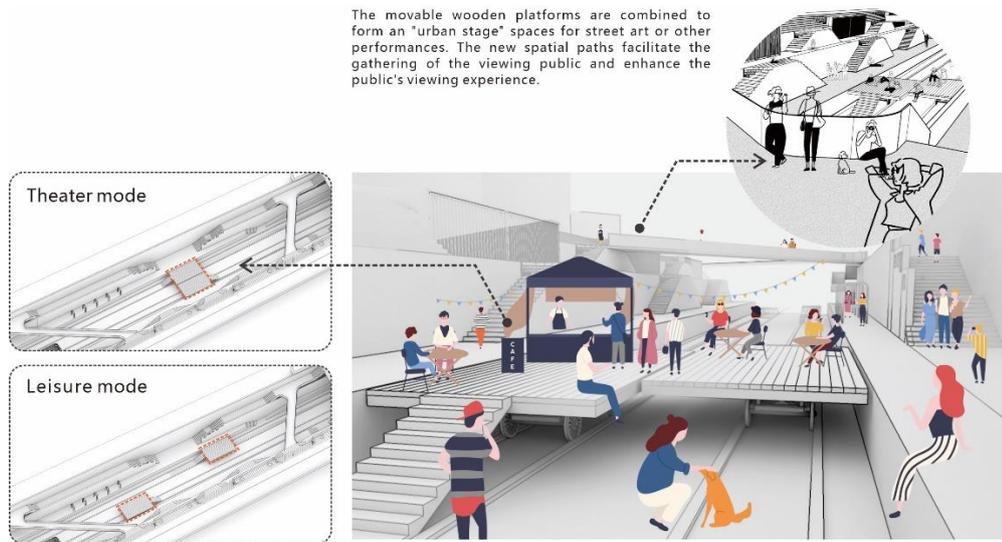
This was originally the hub of the trade center, so we extracted the element of the train's window. Through the simple expression, the light and shadow will also have an interesting displacement with the change of the sun, and this is also like the train's traveling track. It is not only a shadow game, but also a memory of bustling traffic.

6、 Build a moving space theater

The construction of a wooden platform that can be slowly moved on the railway track not only allows people to experience the charm of the railway track, but also can be combined to form a "city stage" spaces. The wooden platform provides a space for artistic interventions, providing space for street art or other performance activities. At the same time, the combination of the two wooden platforms creates a connection between the platforms on either sides with the tracks, giving the rail space more mobility.

The new spatial paths provide the public with different viewing perspectives when street performances or other activities are carried out in the Space Theatre. The newly planned paths facilitate the gathering of the viewing public, strengthen the central area of the site,

and enhance the public's viewing experience. The space is no longer a lack of vitality of urban public space, but a small theater in people's lives.



4.3.4 Summary

The micro-renewal and artistic intervention strategies not only preserve the essence of the Parisian railway space, continue the texture of the space, and allow people to feel the past of the space. Moreover, the micro-renewal strategy gradually stimulates the spatial vitality and draws public attention and access to the rail space for public activities. The new spatial transportation paths provide convenience for the surrounding residents and other publics, and also enrich the ways for the public to experience the space. By inserting service functions and constructing a mobile theater, the attractiveness of the space is increased and the subsequent renewal of the space is promoted. With the effect of micro-renewal and artistic intervention, the railway track space gradually appears in the public's sight, transforming the lack of vitality of the space in the city and filling the cracks created in the urban development.

CHAPTER 5, APPLICATION METHODS AND DESIGN PRINCIPLES OF MICRO-RENEWAL AND ARTISTIC INTERVENTION

5.1 Application methods of micro-renewal and artistic intervention

5.1.1 Design strategy of micro-renewal

5.1.1.1 Space interface repair

Space interface refers to the building facade that encloses the space, including doors and windows, walls, ground and so on. They can reflect the characteristics of a space that people perceive. To micro-renewal the negative public space, it is first necessary to perform a basic update of its space interface, which is the basis of the development of the micro-renewal strategy. Base updates to require features that preserve and extend the space. Secondly, the reusable materials in the space are retained and updated to reduce the consumption and waste of resources. Finally, decorate and update the existing interface in the space, improve the image of the space and optimize the space atmosphere, create a new space environment to eliminate people's sense of alienation from the old space, and stimulate people's desire to use the space.

5.1.1.2 Basic function update

Urban public space is a place for the public to carry out public life, and it needs to have certain basic functions to meet the needs of the public. Therefore, micro-renewals need to update or add infrastructure such as power supplies, drainage, and lighting in the space. The update of infrastructure is the basis of space activities. At the same time, basic functions are added, such as seats for rest, canopy for shelter from wind and rain, greenery for people to watch, etc., to attract the public to come and stay. The addition and update of basic functions make the space ready for public activities.

5.1.1.3 Add new functions

With the development and change of the city, people constantly put forward new usage demands. The micro-renewal space needs to add new functionalities to meet the needs of modern people. Adding new functions needs to be added according to the surrounding environment, people's needs, and sustainable development goals. It can not only meet the possibility of carrying out various activities in the space in the future, but also facilitate the later update and maintenance. Adding appropriate use functions is beneficial to attract public participation and promote the subsequent update and development of the space.

5.1.1.4 Building a flexible space

1. Flexible spaces the layout

Micro-renewal preserves the flexibility of space as much as possible in planning and design, so as to respond to the new usage requirements of future urban development, and can make timely responses and adjustments. Maintaining the flexibility of the public space shows the characteristics of the micro-renewal strategy, and can also meet the needs of carrying out different community activities.

2. Reserve the possibility of artistic intervention

Artistic intervention is increasing in urban renewal practice, and it has various forms of expression. The micro-renewal space planning is required to reserve flexible space areas to create conditions for art intervention space and meet the needs of art intervention. Create a micro-renewal space that can accommodate multiple artistic activities, stimulate people's imagination of the space, and create favorable conditions for the combination of artistic intervention and micro-renewal.

5.1.2 Strategies for artistic intervention

The manifestations of artistic intervention are diverse in public spaces. Under the influence of factors such as different space environments, different life experiences, and different understandings, the creative methods and expressions of art intervention works will be different. Although the "coding" method of artistic intervention will continue to innovate. However, we can still try to summarize the design method of combining art intervention and micro update from the project practice of micro update and art intervention.

5.1.2.1 Based on micro-renewal strategy

1. Pay attention to public needs

In addition to the aesthetic function of art, the artistic intervention in the micro-renewal needs to reflect the needs of the public. Focusing on and meeting public needs is the basis for the implementation of micro-renewal and artistic interventions. At the same time, art intervenes to reflect the needs of the public, allowing art creation to establish a relationship to the public. This relationship blurs the boundaries of art and life, and is conducive to attracting the active participation in the audience.

2. Respect the originality of space

The micro-renewal strategy advocates updating and optimizing on the basis of the original space. After a long period of accumulation, the space has a rich texture, and also retains the traces of life left by the public in the space in the past. Therefore, artistic intervention needs to respect the original state of space in the creation, and reduce the damage to the originality of space. Retaining the traces left by the public in the space in the past will help to awaken people's memory of the space and cause the public to resonate with the space.

3. Shape regional culture

The micro-renewal strategy should not only continue the regional culture of the space, but also spread the regional culture of the space. As a cultural carrier, art intervention can play the role of cultural dissemination and provide a way of cultural dissemination for the micro-renewal strategy. Therefore, art intervention needs to interpret and integrate the distinctive regional culture in the process of creation to enhance the cultural quality of the micro-renewal space. Let it create a unique artistic and cultural image and avoid the phenomenon of homogenization in urban renewal.

5.1.2.2 Ways of art intervention

In the design project, the ways of combining urban micro-renewal and art intervention can be divided into the following two situations.

1. Micro-renewal and artistic intervention are carried out simultaneously

The synchronization of micro-renewal strategy and artistic intervention means that they start to be designed synchronously in the project update plan stage. The micro-renewal space will also be affected by artistic intervention. The layout of the space update can be planned more accurately, and the space can be fully utilized. Art intervention and micro-renewal are combined to form part of the renewal space.

2. Artistic intervention after the completion of the update project

Artistic intervention did not participate in the process of micro-renewal project from implementation to completion. However, the micro-renewal project planning reserves the possibility of artistic intervention. In this case, the micro-renewal space acts as an incubator for artistic intervention, providing a place for artistic intervention to create. The micro-renewal creates conditions for artistic intervention, stimulates some spontaneous artistic activities and other forms of artistic intervention, and provides impetus for the subsequent development of the space.

5.1.3 Develop a follow-up update strategy for the space

Spatial renewal is a dynamic development process. Micro-renewal and artistic intervention should not only promote the renewal of public space, but also maintain the vitality of subsequent renewal of the space. Therefore, it is necessary to formulate a follow-up space update strategy to promote the sustainable development of public space.

1. Attract public participation

In the micro-renewal space, the use of artistic intervention and occasional events to keep the public's sense of the space fresh. At the same time, formulate a plan for regular maintenance of the space to maintain the quality of public space and maintain a good space experience. This is the basis of continued public engagement.

2. Build a diversified activity platform

Micro-renewals and artistic interventions need to build a diversified activity platform, use activities to gather different groups, and allow them to discuss different topics in the space. These activities need to be integrated into everyday life to engage and resonate with the public. Promote the renewal of the space through diversified activities and build an active new platform.

3. Possibility of reserved space for development

The development direction of public space is uncertain and there are many possible paths. Therefore, the space should not only reserve the possibility of artistic intervention and other activities. Moreover, it is necessary to retain the flexibility of space renewal and make timely adjustments as the city develops.

4. Correctly guide subsequent updates of space

In the subsequent updates of the space, we need to give the correct guidance. For example, guide public participation, build a platform for daily diversified activities, guide space renewed and maintenance, and provide more possibilities for subsequent updates. At the same time, strive for the support of the government and social institutions to provide guarantee for the subsequent update of the space. Through the correct guidance, the subsequent update of the space can be made sustainable.

5.2 Implementation principles of micro-renewal and artistic intervention

Through the previous theoretical research and the test of practical projects, three principles are put forward for the implementation of urban micro-renewal and art intervention.

5.2.1 Based on the real demand of space

Micro-renewals and artistic interventions need to examine and analyze the real needs of users from a micro-perspective. Make a more accurate update plan based on the actual situation of the site. Attract the public to actively participate in public life in the micro-renewal space. Avoid the space renewal plan being divorced from reality, only pay attention to the design expression and ignore the needs of the public, hindering the subsequent renewal of the space. Therefore, micro-renewal and artistic intervention need to build a platform to attract public participation based on the real needs of the public, and promote the sustainable renewal of public space.

5.2.2 Guided by the micro-renewal strategy

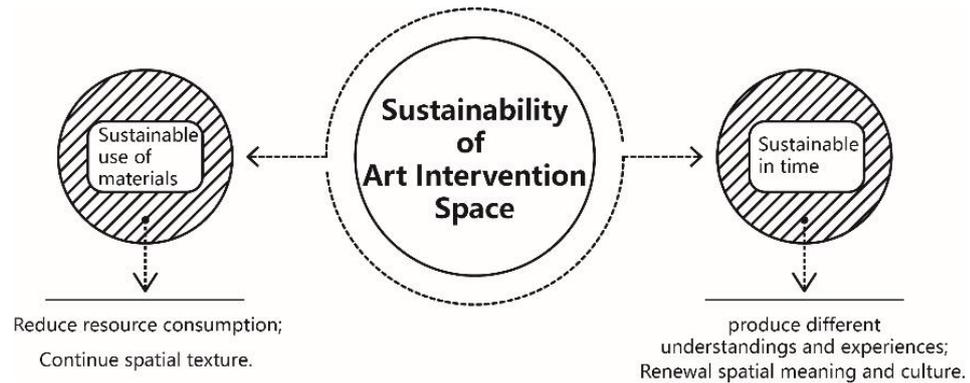
The micro-renewal strategy advocates a light, incremental model of urban renewal. Micro-renewals optimize and improve the unreasonable parts of the venue, and keep the reasonable parts of the space. Moreover, the micro-renovation is gradually completed in a planned and targeted manner, catalyzing the formation of a larger-scale renewal of the city. Artistic intervention needs to be guided by a micro-renewal strategy. Art creation starts from a micro perspective, and has a detailed understanding of site information, restrictions, interests and influences of all parties. Create while respecting public needs and preserving the culture of the place. Promote the realization of the goal of urban micro-renewal through artistic intervention, and make micro-renewal and artistic intervention the driving force for urban renewal and development.

5.2.4 Aim at sustainable renewal

Micro-renewal and artistic intervention need to take into account the needs of future urban development, so that public space can be continuously updated. Micro-renewal and artistic intervention can utilize the waste materials existing in the space and promote the sustainable use of materials. Discarded materials are recombined and presented through artistic intervention, forming a sustainable space texture. At the same time, combining

new technologies, new materials and reducing the consumption of resources, promote the sustainable renewal of public spaces.

In the concept of time, artistic intervention can continuously enrich the meaning in the context of multiple interpretations. Over time, as each person has a different understanding and experience in the work, the interpretation of artistic intervention has become more and more abundant. Under the influence of micro-renewal and artistic intervention, public space is constantly given new cognition, forming the sustainability of public space cognition.



Space is sustainable from material to time.

Source: Honghao He

CHAPTER 6. CONCLUSION

Thesis 1 : The combination of micro-renewal and artistic intervention can provide various design methods for urban renewal.

Micro-renewal is a slight and gradual renewal mode, which is different from the traditional urban renewal mode. It has the characteristics of flexibility, economy, microcosm, diversification and locality. On the basis of micro-renewal, the diverse forms of artistic intervention have brought rich means of renewal and increased the vitality and attractiveness of the public space. Therefore, the combination of micro-renewal and artistic intervention expands newer design methods and brings more possibilities for urban renewal.

Thesis 2 : Micro-renewal and artistic intervention have a common starting point in urban renewal, and can form mutual promotion and complementation.

Both micro-renewal and artistic intervention take the micro-level as the basis of creation. The micro renewal method promotes public participation, understands the public's needs and is close to life, and improves the quality of urban space and the happiness of residents. At the same time, micro-renewal and artistic intervention promote and complement each other. The micro-renewal provides a practical venue for artistic intervention, allowing artistic intervention to be presented. Art intervenes and enriches the means of micro-renewal strategy, which helps to achieve the purpose of micro-renewal.

Thesis 3 : Micro-renewal and artistic intervention need to formulate a renewal plan according to site characteristics, public needs, and functional requirements.

The micro-renewal and artistic intervention will be affected by the particularity of the space during the implementation process. It is necessary to retain the characteristics of the space and meet people's daily use needs, formulate a renewal plan that conforms to the actual situation of the target space, continue the regional culture of the space and display the spatial characteristics, and avoid the phenomenon of homogenization of urban space renewal.

Thesis 4 : In the renewal of urban public space, micro-renewal and art intervention build a bridge between people, space and society, promote people's exchanges and communication, and repair the cracks at the rapid urban development.

Micro-renewal stimulates the vitality of urban space, increases the public space around our lives, and provides a platform for the public to carry out public activities and exchanges. Art intervention that is easy to resonate with people, it can attract people to communicate and interact with the micro-renewal space, and enhance everyone's emotional identity. Micro-renewals and artistic interventions repair the bonds between people, people and space, and people and society, stitching up the cracks that have emerged from urban development.

Thesis 5 : Art intervention triggers the subsequent update of the micro-renewal space ,

forming a sustainable space renewed model .

The micro-renewal stimulates the vitality of urban space, increases the public space around our lives, and provides a platform for the public to carry out public activities and exchanges. Art intervention that is easy to resonate with people, it can attract people to communicate and interact with the micro-renewal space, and enhance everyone's emotional identity. Micro-renewals and artistic interventions repair the bonds between people, people and space, and people and society, stitching up the cracks that have emerged from urban development.

activate the hidden public space in the city and increases the use functions required by the space. At the same time, art intervention improves the space experience, attracts people's attention and generates public opinion, which can attract more spontaneous public participation, let more public understand the space, and stimulate other space activity. Under the influence of artistic intervention, the subsequent update of the space is triggered, and a sustainable renewal mode is gradually formed to maintain the vitality of the micro-renewal space.

Thesis 6: Micro-renewal and artistic intervention are the main strategies of urban renewal in China's major cities.

China's major cities have entered the era of stock development, gradually shifting from a macro-extensive development model to a slight and gradual urban micro-renewal model. The proposal of micro-renewal and artistic intervention is not only a reflection on the traditional renewal model, but also more flexible, diverse and economical, reducing the waste of resources and reducing the cost of urban renewal, and protecting the urban regional characteristics and historical culture. Therefore, the research on micro-renewal and artistic intervention has certain social benefits and practical significance for the current urban public space renewal in China.

REFERENCE

- [1] Z. Yanhua, Research on the Aesthetic Meaning Generation Mechanism of 'Interventional Art', Beijing: China Social Sciences Press, pp.02, 2017.
- [2] N. Bourriaud. Relational Aesthetics, Les Presses du reel, 2002.
- [3] Z. Yanhua, Research on the Aesthetic Meaning Generation Mechanism of 'Interventional Art', Beijing: China Social Sciences Press, pp.03, 2017.
- [4] E. Howard, Garden Cities of To-morrow (J. Jingyuan Trans), The Commercial Press, 2010.
- [5] L. Corbusier. La Ville Radieuse (J. Qiuye and W. Youjia Trans), Beijing: China Architecture & Building Press, 2011.
- [6] F. Ke, The Development Course and Enlightenment of Western Urban Renewal, Shanghai: Urban Planning Forum, vol. 1,pp: 59-61, 1998 .
- [7] J. Jacobs, The Death and Life of Great American Cities (J. Hengshan Trans), Jiangsu: Yilin Press, 2005.
- [8] L. Mumford, The History of Urban Development(N. Wenyan and S. Junling Trans), Beijing: China Architecture & Building Press, 2005.
- [9] C·Alexander, Oregon Experiment (Z. Bing and L. Xiaohu Trans), Beijing: Intellectual Property Publishing House, 2002.
- [10] C. Rowe, Collage City (T. Ming Trans), Beijing: China Architecture & Building Press, 2003.
- [11] Jan Gehl, Life between Buildings (H. Renke Trans), Beijing: China Construction Industry Press, 2002.
- [12] William H. Whyte. The Social Life of Small Urban Spaces (Y. Qimao / N. Xiaohui Trans). Shanghai: Shanghai Translation Publishing House, 2016.
- [13] D. Shiwen, "Urban Acupuncture" Theory-based Research of Community Micro Regeneration, Guangzhou: South China University of Technology, MA thesis, 2020.
- [14] Z. Yanhua, Research on the Aesthetic Meaning Generation Mechanism of 'Interventional Art', Beijing: China Social Sciences Press, pp.01-02, 2017.
- [15] L. Lingling and W. Yingting, The case and enlightenment of cultural events promoting urban and rural renewal, Planners, vol.34, pp.100-106, 2018.
- [16] H. Xiaolei, Discussion on micro-renewal of urban public space based on community construction, Landscape Architecture, vol.26, no.06, pp.8-12, 2019.
- [17] Z. Yuanhao, The Design Strategies Research on the Micro-regeneration of Old Residential District in Downtown Guangzhou, Guangzhou: South China University of Technology, MA thesis, 2018.
- [18] B. Lijun, Research on the Intervention of Public Art in Urban Micro-renewal, Nanjing: Nanjing Forestry University, MA thesis, 2020.
- [19] Z. Yanhua, Research on the Aesthetic Meaning Generation Mechanism of 'Interventional Art', Beijing: China Social Sciences Press, pp.01, 2017.
- [20] Z. Xian, The Four Elements Theory of Art and the Evolution of Western Literary Theory -- Abrams "Mirror and Lamp", Nanjing: Journal of nanjing normal university (social

science edition), vol.04, pp.80-86, 1986.

[21] Z. Xian, Classical Encoding and Decoding, *Literary Review*, vol.04, pp.85-96, 2012.

[22] Y. Feiyang. Research on Public Art Intervention in Community Building, Beijing: Beijing University of Architecture, MA thesis, 2020.

[23] W. Zhong, The New Orientation of Public Art—Art Activation Space, *Urban Environment Design*, vol.02, pp.216, 2016.

[24] W. Wenting, Research on the Strategy of urban public space renewal triggered by art events, Beijing: Central Academy of Fine Arts, MA thesis, 2020

[25] W. Min, The form of Public art in city culture construction, Jiangsu: Jiangnan University, MA thesis, 2013.

[26] G. Yuchen, Public Art Design Research Under The View of Urban Context Protection, Tianjin: Tianjin University, PhD dissertation.2016.

[27] Z. Yanhua, Research on the Aesthetic Meaning Generation Mechanism of 'Interventional Art', Beijing: China Social Sciences Press, pp.168, 2017.

[28] L. Rongling, Everyday Stories in Big City——Research on the Emotional Design of Urban Small-Micro Public Spaces, Tianjin: Tianjin University, PhD dissertation, 2020.

[29] K. Shuchang, Social Network Booting, *Urban Micro-regeneration Acting, Time-Architecture*, vol.4, pp.29-33, 2016.

[30] W. Zhongping, The Acupuncture for Urban fabric: Maximum Effect through Minimum Intervention, *New Architecture*, vol.03, pp.04-08,2015.

[31] Yamazaki Ryo, *Community Design: Rethinking the definition of "community", not only designing space, but also designing "the connection between people*, Taiwan: Faces Press, 2015.

[32] Z. Dan, Research on Design of Public Space in Old Community Based on Urban Acupuncture and Moxibustion, Chongqing: Chongqing University, MA thesis, 2019.

[33] The JUT Foundation for Arts and Architecture, *Symbiosis x Co-creation of postmodern cities: URS21 Chung Shan Creative Hub*, Taiwan: Gardencity Press, 2014.

[34] C. Shouheng, A Creative Journey towards Regeneration of Old town Public Space, *Urban Environment Design*, no.095, pp.179-182, 2015.

[35] L. Jinglei, Research on Space Value and Renewal of Shenzhen's Urban Village, Guangzhou: South China University of Technology, PhD dissertation, 2018.

[36] G. Landu, Research on Spontaneous Construction of Roof Spaces in Urban Villages, Shenzhen: Shenzhen University, MA thesis, 2018.

[37] Hou, Jeffrey, *City Rebellious: Global Atypical Urban Planning*, Taiwan: RiveGauche Press, 2013.

[38] Miles, Malcolm, *Art, Space and the City: Public Art and Urban Futures*, Routledge, 1997.

[39] W. Mali, *Art and Public Domain: Art Enters the Community*, Yuan-Liou Press, 2007.

[40] Catherine Grout, *Art Creation in Our Daily Life: Art Intervention Space* (Y. Mengyin Trans), Yuan-Liou Press, 2002

PUBLICATIONS

1. H. Honghao and J. Gyergyak, Enlightenment from street art activities in urban public space, *Pollack Periodica*, Vol. 16, Issue 1, pp. 169-175, 2021.
2. H. Honghao, W. Mengyang and J. Gyergyak, Intervention and renewal– Interpretation of installation art in urban public space, *Pollack Periodica*, Vol. 16, Issue 3, pp.139-145, 2021.
3. W. Mengyang, H. Honghao and B. Bachmann, The activation of industrial heritage: Transformation in the Petite Ceinture, *Pollack Periodica* Vol. 16, Issue 2 , pp.150-155, 2021.
4. Lu, C., He, H., Zhao, T., Borsos, A. and Gyergyak, J. ,The potential of residential area–A practice design at Roissypole, *Pollack Periodica*, Vol. 16, Issue 1, pp.157-161, 2019.