Design of Landscape Furniture in Shuangjing

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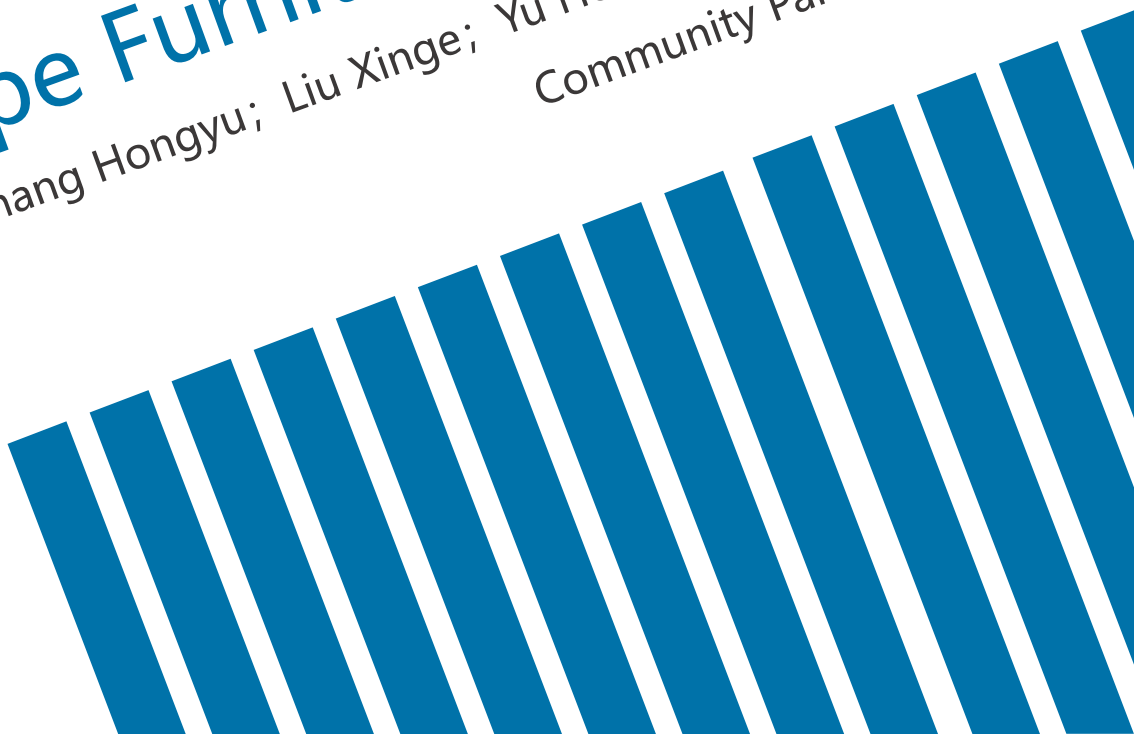
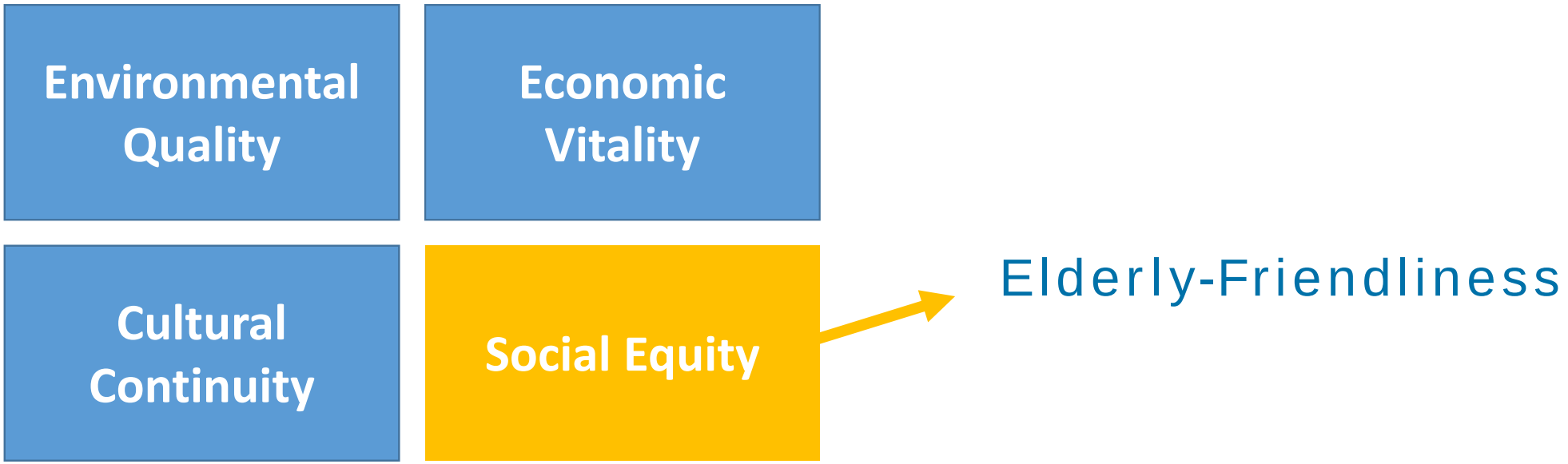


Elderly-Friendliness

Topic Description

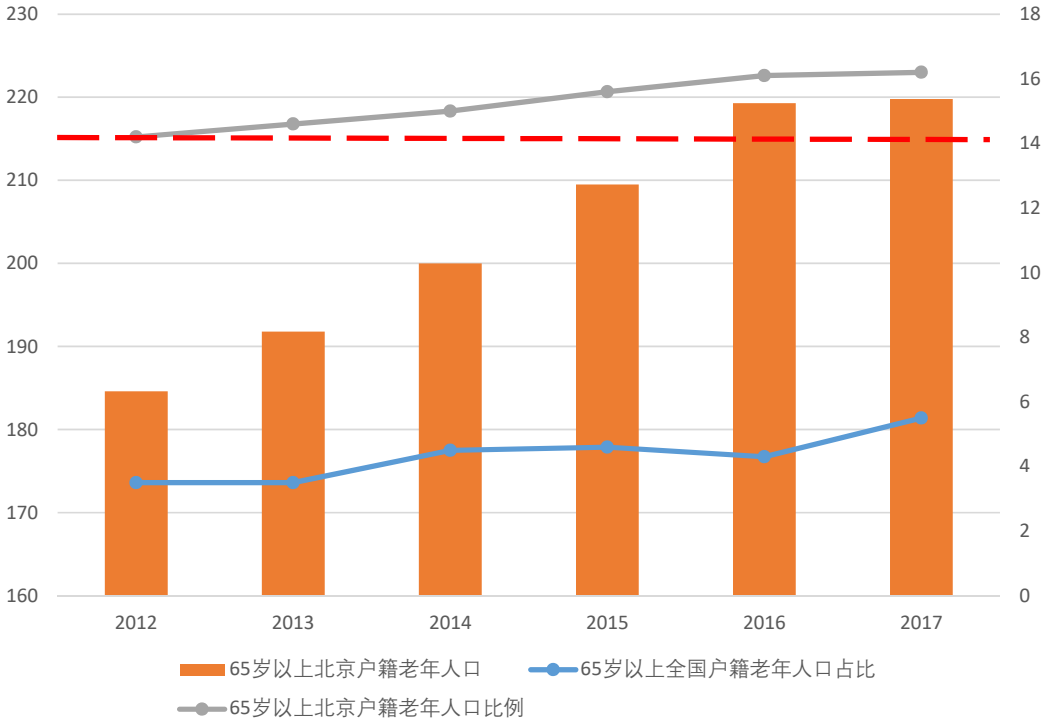
Sustainability



What's the present situation of elderly-friendliness in shuangjing?
What do elderly people of shuangjing need?
Can we do something to help them?

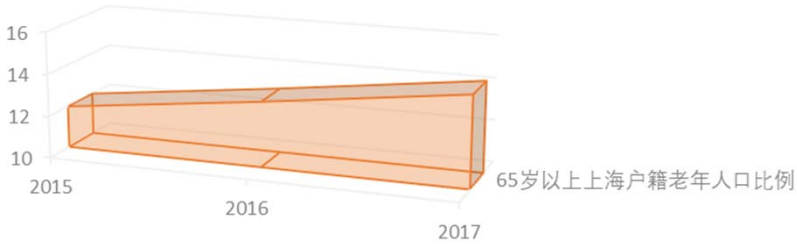
Population Aging in Beijing

"When the proportion of population aged over 65 reaches 14%, the region will enter into DEEP AGING period; when it reaches 20%, the region will enter into SUPER AGING period"



- Beijing has become a **DEEP AGING** city
- A 60+ elderly in **EVERY 4 PEOPLE**

- The aging level **FAR EXCEEDS** the national average
- The trend is **STILL EXPANDING**



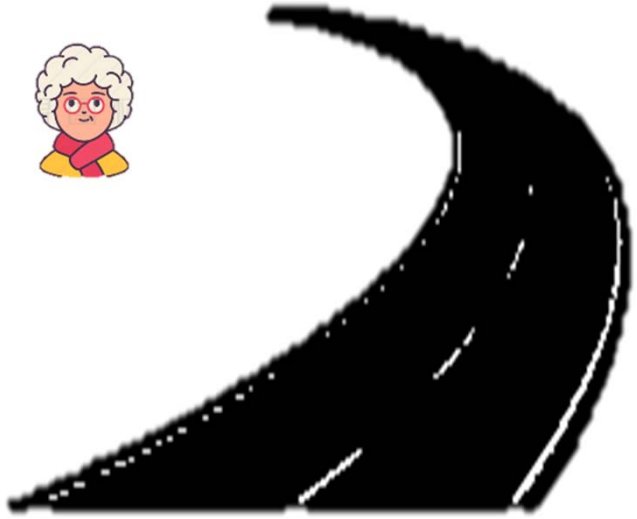
Population Aging in Beijing

"Before 2025, Beijing will enter into SUPER AGING period"

- There are more and more families entirely consisting with the elderly.
- Every 2.5 labers raising one senior citizen

×2.5

- The number of elderly people continues increasing.
- Citizens live longer and longer nowadays

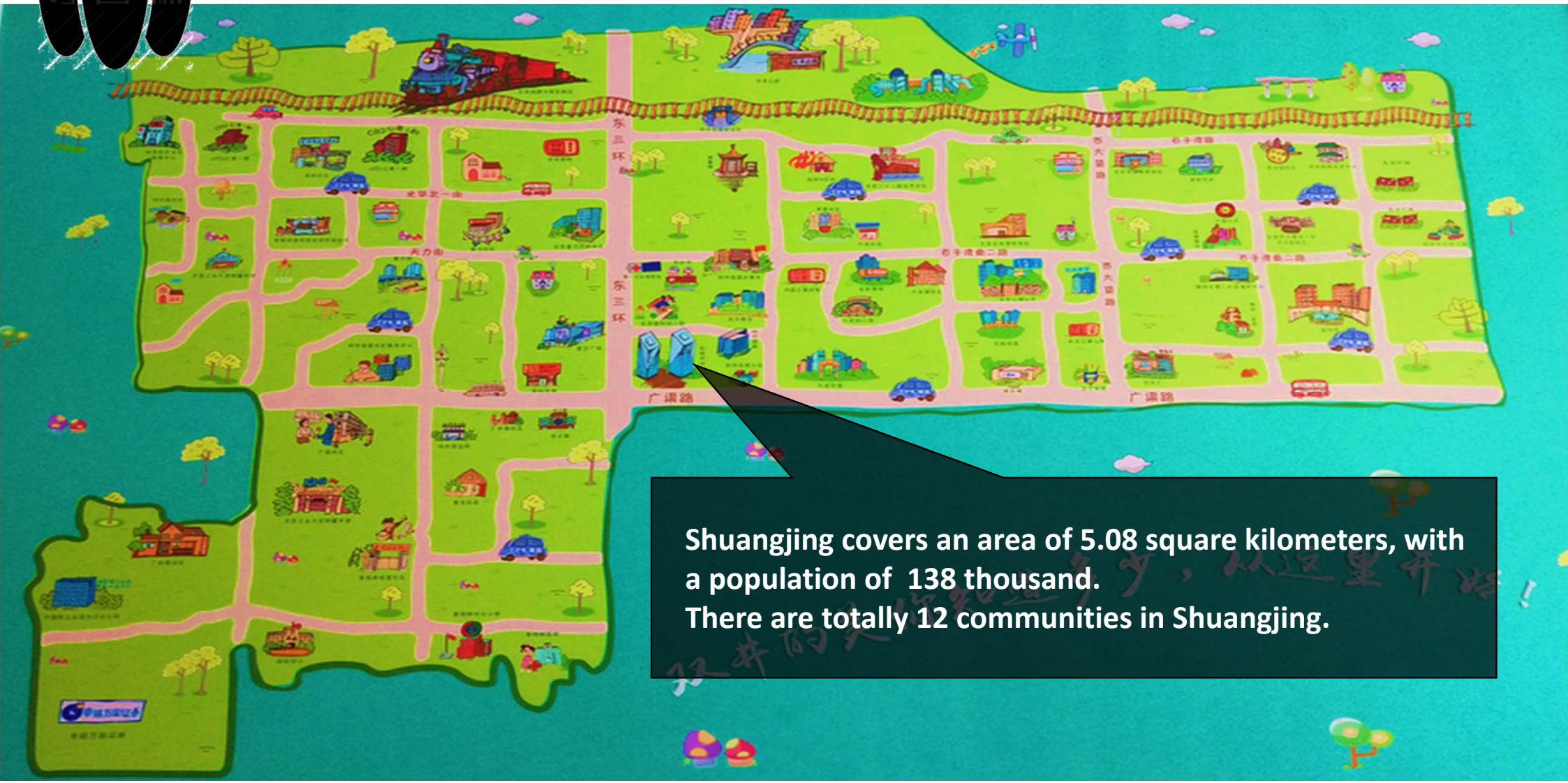


Potential Life Span

80

84.4

Shuangjing District is a big family !

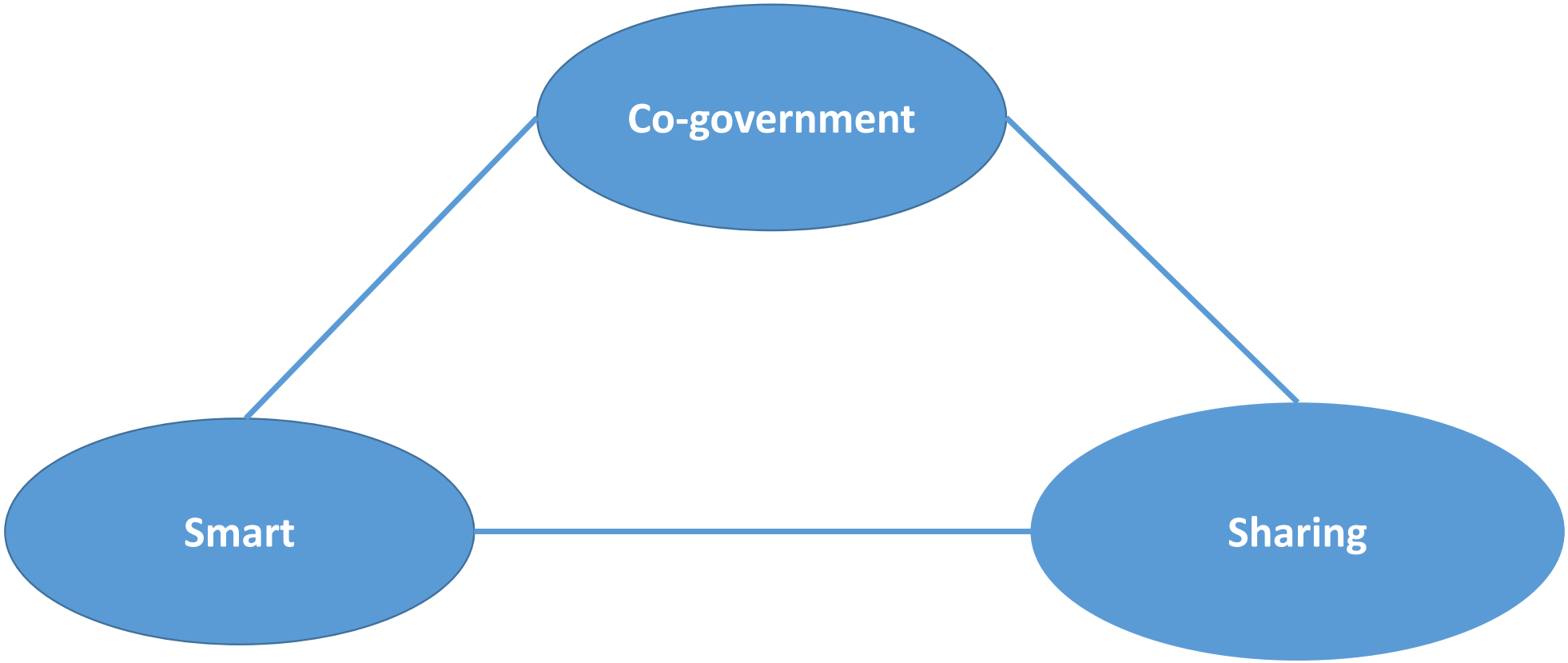


Shuangjing covers an area of 5.08 square kilometers, with a population of 138 thousand.
There are totally 12 communities in Shuangjing.

Shuangjing District is an aging community!

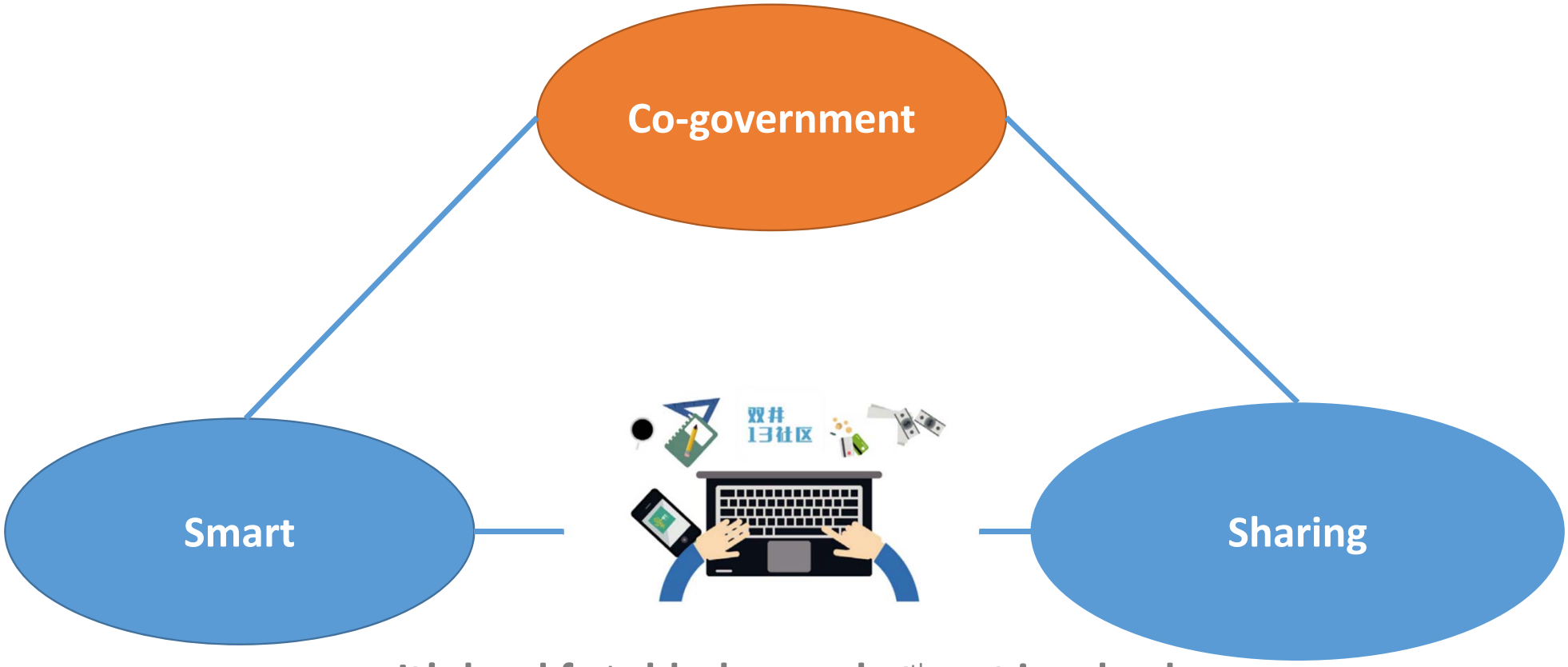
Introduction of Shuangjing

"Shuangjing is more and more ADVANCED !"



Introduction of Shuangjing

"Shuangjing is more and more ADVANCED !"



It's hard for elderly people to get involved.

A virtual community, — 13th community

Introduction of Shuangjing

"Shuangjing is more and more ADVANCED !"

Outdoor facilities for elderly people are not enough.

Introduction of Shuangjing

"Shuangjing is more and more ADVANCED !"

There is digital gap for elderly people

The Second Part

The Preparation of Transformation

General Course

"What adaption is suitable for Shuangjing?"

Low degree of the friendliness to the elderly in the existing public space → More friendly to the elderly

The available space of the built residential area is limited. → Micro transformation

There are 12 communities in different situations. → Strong replicability

Micro transformation of public space landscape furniture based on the psychological and physiological characteristics of the elderly

General Course

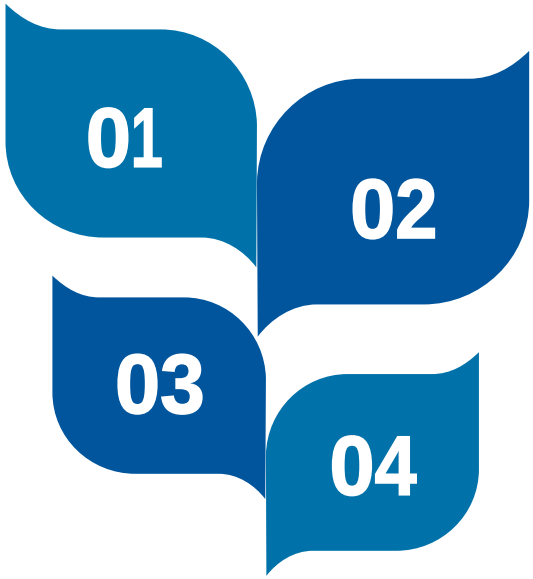
Train of thought of design

Analysis of psychological and physiological characteristics of the elderly

Analyzing the physiological and psychological characteristics of the elderly to understand the different needs of the elderly compared with other age groups

The design of landscape furniture

Combined with the characteristics of Shuangjing street, which are sharing, co-governance and intelligence, and according to the characteristics of the elderly, the transformation design being carried out to solve the existing specific problems



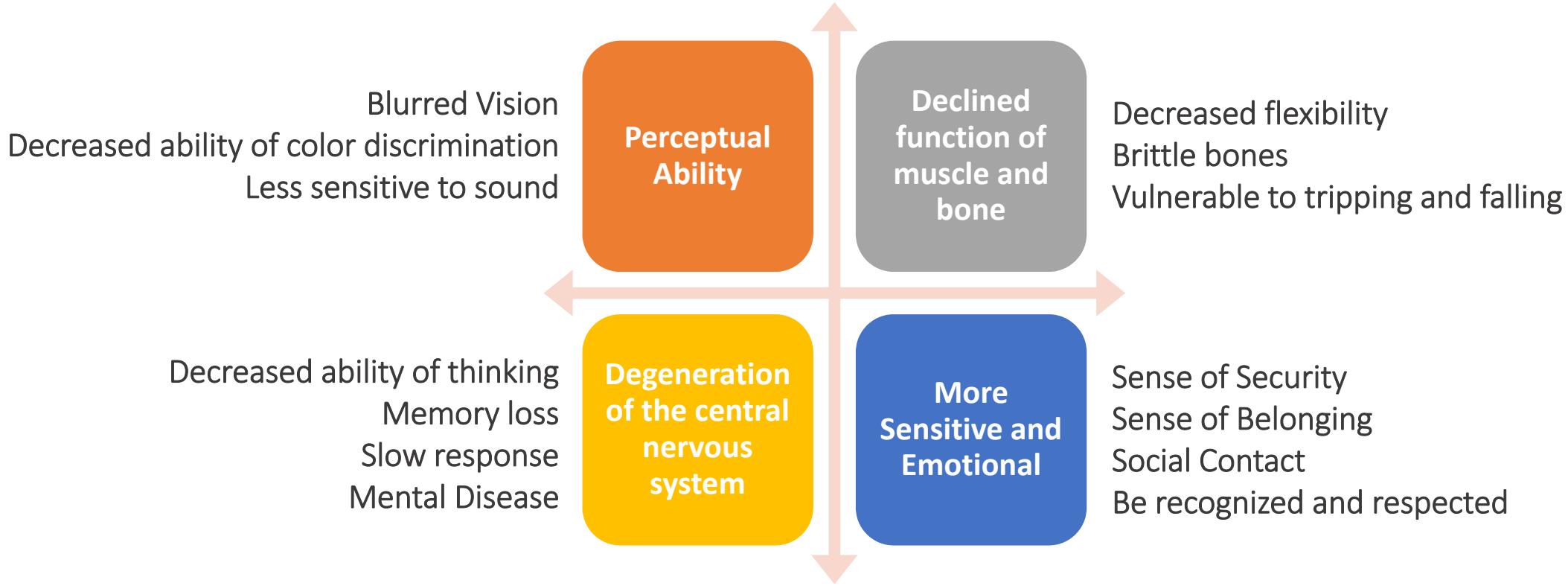
The concrete manifestation of the unfriendliness of the existing public space

Based on in-depth analysis of the current situation of the public space, identifying what is not suitable for the elderly

Replicability analysis

From the aspects of cost and space requirements, analyzing the replicability of the design scheme, and then analyzing the feasibility of the scheme

Physiological and psychological characteristics of elderly people



Activities of elderly people

Culture Activities

Chatting

Walking

Square Dancing

Resting

Playing Chess and Cards

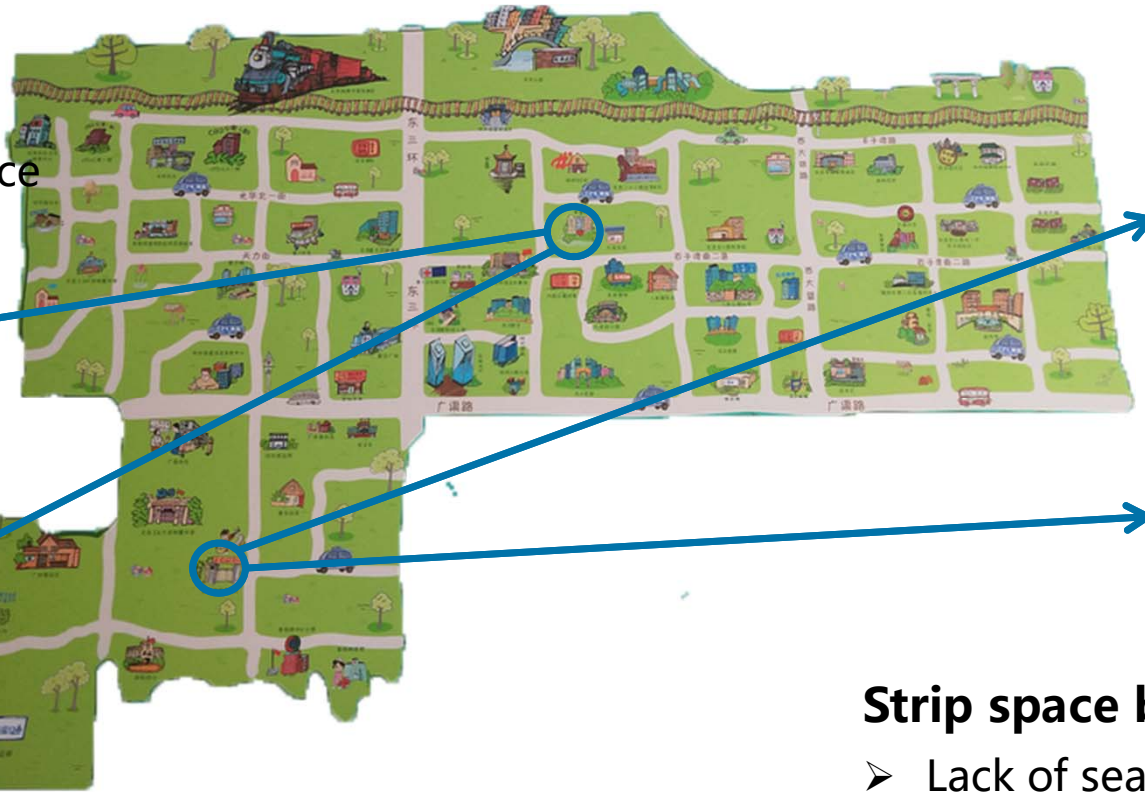
The Third Part

The First Design

Status Quo of Public Chairs

Centralized public space

- Rotten wood chair surface
- Temperature discomfort caused by metal chair surface and stone chair surface



Strip space between buildings

- Lack of seats
- Handrails limiting capacity

“Shared Chair” Scheme

Introduction of the scheme

Under the background of "**sharing, co-governance and intelligence**" in Shuangjing street, the "sharing seat" scheme is designed. The design of the seat fully considers the **physiological and psychological characteristics of the elderly** and meets the needs of the elderly to the greatest extent. In addition, in order to facilitate the management, **a shared chair slot** is designed in combination with the community card.

“Community Card”

Slot Embedded in RFID Module

Chair Suitable for The Elderly

Flexible shared chair

“Shared Chair” Scheme

Design of The Slot

smartphone+nfc chip:

- The proportion of the elderly using smart phones is not high
- Even with a smartphone, NFC is not always available for the elderly.

community card+RFID module:

- **Swipe the card to unlock** and then take the chair, which is easy to operate
- When returning the chair, swipe the card to unlock, return the chair and be recognized by the weight sensor, then complete the returning operation
- When swiping the card, the RFID module will **read the user information** in the community card and record the borrowing and returning, which is convenient for intelligent management and prevents the privatization of the seat

“Shared Chair” Scheme

Meet the needs of various elderly groups

Consider elderly people with difficulty in walking

Stress on safety, comfort and convenience

With armrest and backrest， aluminum alloy frame, use waterproof leather and PE vine cushion

Meet all kinds of activities

Enable a flexible disposition

Convenient for management and installation

Prevent privatization, can install easily, suitable for all kinds of community

Body size of the elderly

The standing process of the elderly

Folding chair for elderly

Folding walker with seat

Pile with lock

“Shared Chair” Scheme

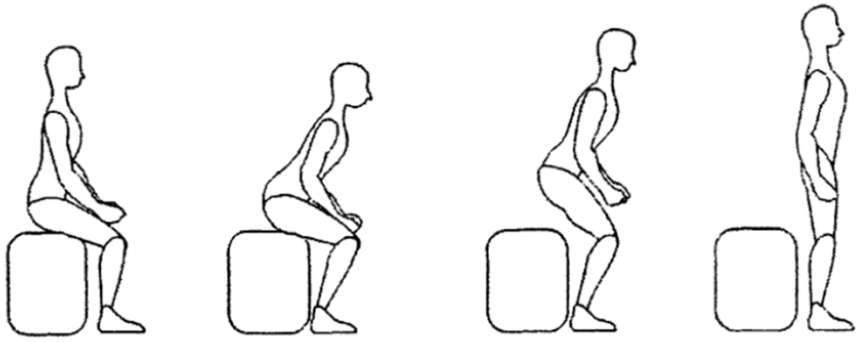
Folding chair for elderly

“Shared Chair” Scheme

Folding walker with seat for the elderly

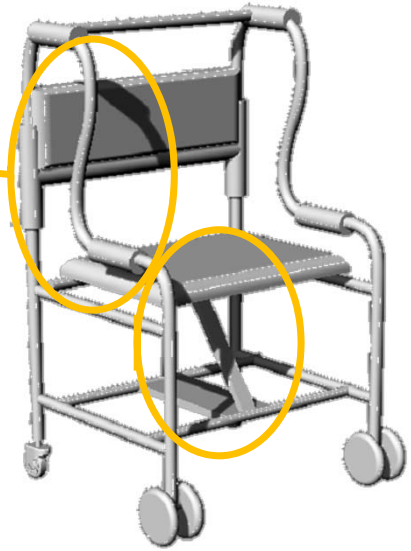
“Shared Chair” Scheme

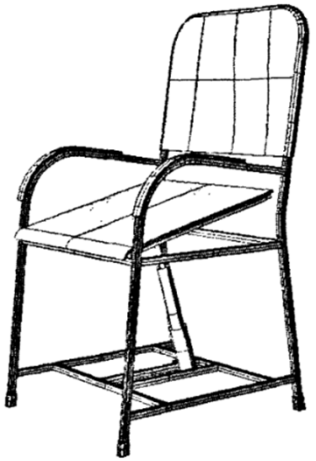
Details of design



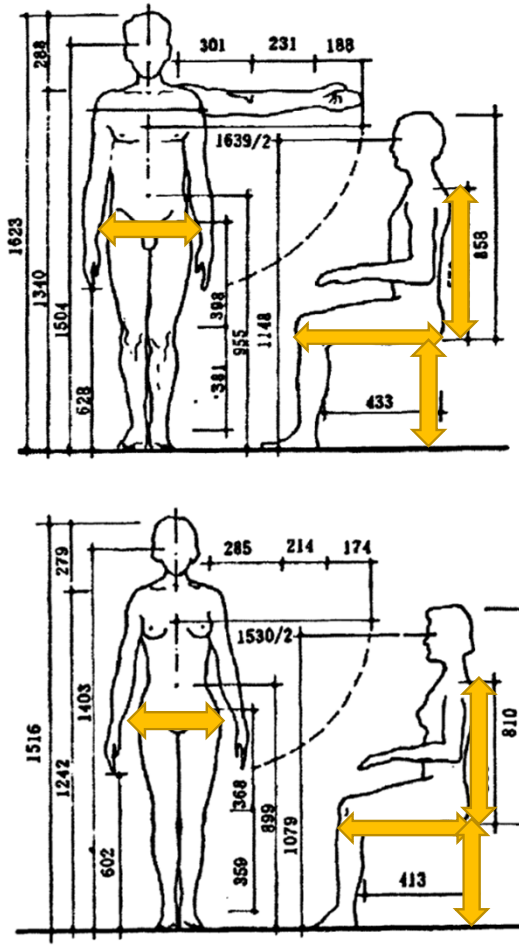
It takes longer for elderly people to stand.
They are more likely to lose balance.
Leaning forward while standing is helpful.

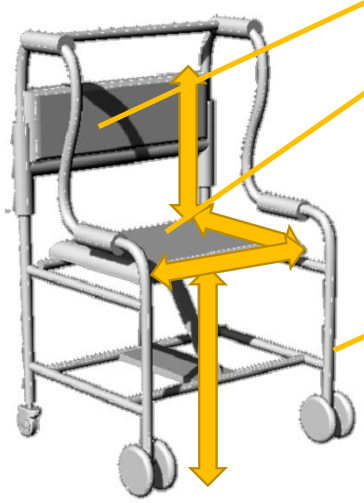
armrest





“Shared Chair” Scheme





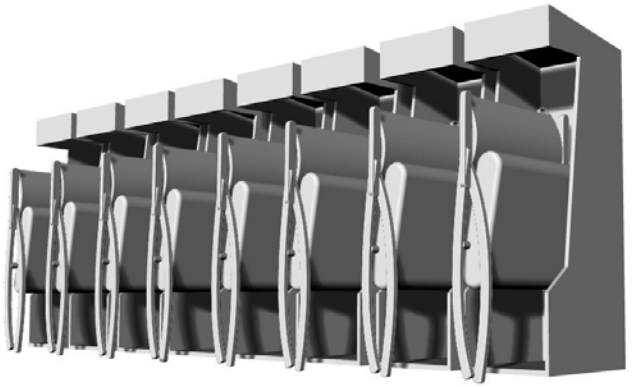
Vine Backrest

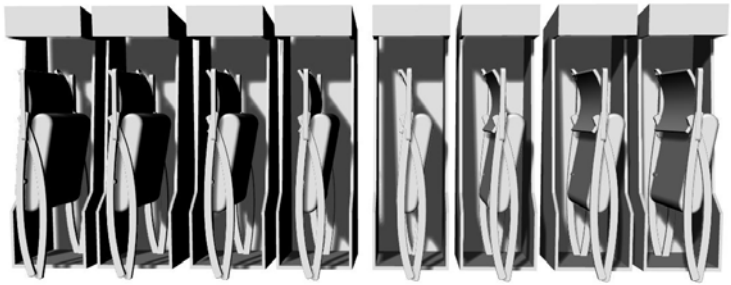
Waterproof Cushion

Aluminum Alloy Frame

“Shared Chair” Scheme

Introduction of the scheme





“Shared Chair” Replicability

Low cost

“community card” : already universal

RFID module: 15 yuan
Steel-galvanized stake: 120 yuan/row
Weight sensor: 30 yuan

Chair suitable for the elderly : 30 yuan

According to the calculation of 5 slots per row, the average cost of a single seat is about **63** yuan

Requirements for existing space:

The chairs are folded when they are idle, which reduces the space occupied by the public chairs, and requires less space for the renovation.

The Fourth Part

The second Design

Status Quo of Exercise Space and Facilities

Narrow exercise space

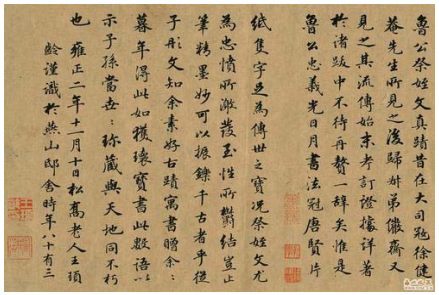
- parking chaos
- The square is not fully utilized

Simple and Crude footpath

- The road without guidance
- Uneven pavement

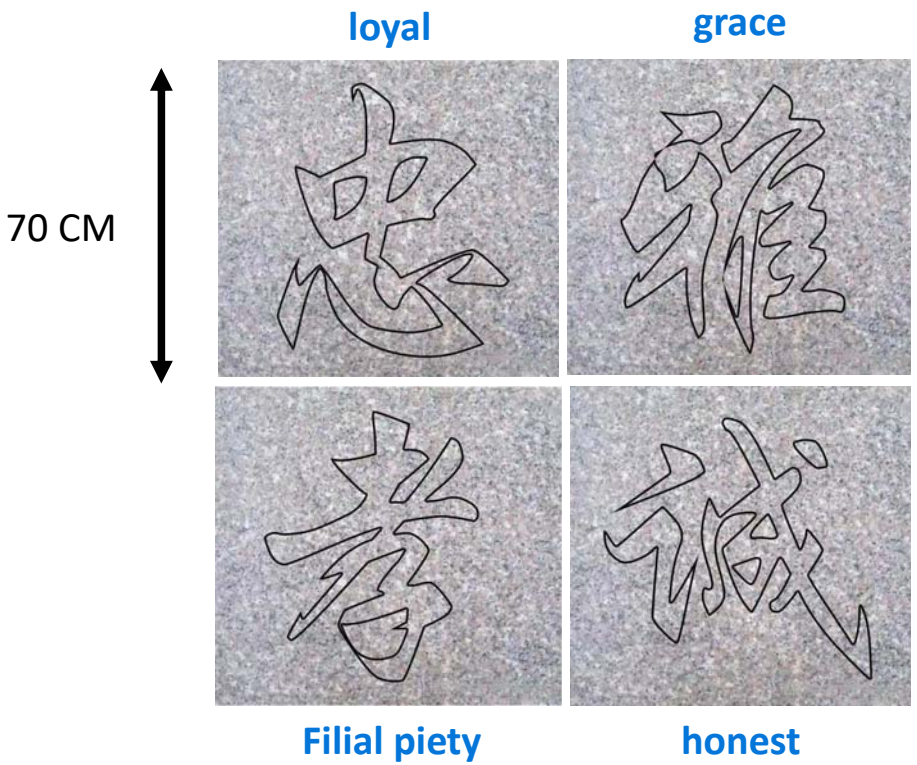
Design: Calligraphy Floor Tiles

Introduction of the scheme



Design: Calligraphy Floor Tiles

Introduction of the scheme



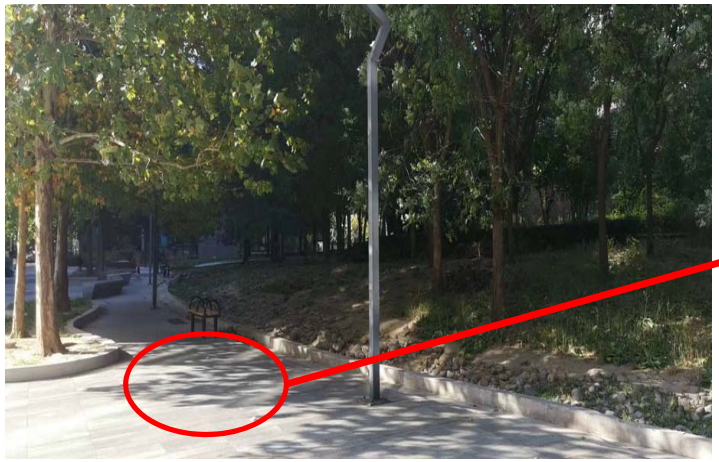
Traditional Calligraphy uses ink to leave traces on paper

Writing on the marble floor with water will leave traces

We carved the outline of the characters on the floor tiles

With the help of the outline, people who can't write can also enjoy the fun of calligraphy

Improvement : Footpath with distance mark



Footpath with distance indication:

- This simple and small design provides the intuitive goal of the elderly, and the long-distance floor tiles will bring a sense of achievement.

- we also can add other interesting sign on the floor tiles, such as the sign which remind the pedestrian that this pathway is suitable for walking.

Replicability

✓ Low cost

Carving on each floor tile ONLY cost **35 yuan**

A Chinese brush for floor writing ONLY cost **20 yuan**

✓ Micro Transformation

- Take up only a little space
- Beautify the square environment

The Fifth Part

The Reflection

Conclusion

Blurred Vision
Decreased ability of color discrimination
Less sensitive to sound

Perceptual Ability

Declined function of muscle and bone

Decreased flexibility
Brittle bones
Vulnerable to tripping and falling

Decreased ability of thinking
Memory loss
Slow response
Mental Disease

Degeneration of the central nervous system

More Sensitive and Emotional

Sense of Security
Sense of Belonging
Social Contact
Be recognized and respected

THANK YOU !