Updating Shanghai: Life from the ground up
EXPLORE YOUR FASCINATION!
SHANGHAI

上海 = ABOVE SEA
SHIKUMEN CHARACTERISTICS

- Decorated Stone Doorframe, Black Wooden Door
- Courtyard Skywell
- Dormer Windows
- Roof Terrace
- Grey & Red Bricks
- Balconies & Bay Windows
SHIKUMEN = COLLABORATION

ENGLISH (TUDOR)
FRENCH (CITE)
SHANGHAI VERNACULAR
FENG SHUI
CHINESE SOCIETY

RENTAL HOUSING
MARKETS
PUBLIC FACILITIES
SMALL INDUSTRY
MAIN ALLEY
RESEARCHING THE SOCIAL STRUCTURE

- DISTANCE IN MAN,
  ON WHICH DISTANCES DO WE INTERACT?

- TERRITORIALITY,
  CAN WE CONTROL THE SPACES WE USE?

- PRIVACY,
  CAN WE CHOOSE THE AMOUNT OF PEOPLE WE WANT TO ENCOUNTER?

- ENVIRONMENTAL APPRAISAL & ASSESSMENT,
  ARE THE SPACE WE USE PLEASANT?
DISTANCE IN MAN

ON WHAT DISTANCE SOCIAL INTERACTION TAKES PLACE

<table>
<thead>
<tr>
<th>Distance</th>
<th>Intimate Close</th>
<th>Personal Close</th>
<th>Social Close</th>
<th>Public Close</th>
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</thead>
<tbody>
<tr>
<td>0-0.15 m</td>
<td>INTIMATE CLOSE</td>
<td>0.45-0.75 m</td>
<td>1.2-2.1 m</td>
<td>3.6-7.2 m</td>
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<tr>
<td>0.15-0.45 m</td>
<td>INTIMATE FAR</td>
<td>0.75-1.2 m</td>
<td>2.1-3.6 m</td>
<td>7.2 m</td>
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<tr>
<td>0.45-0.75 m</td>
<td>PERSONAL CLOSE</td>
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</tr>
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<td>SOCIAL FAR</td>
<td>7.2 m</td>
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<tr>
<td>3.6-7.2 m</td>
<td>PUBLIC close</td>
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In what type of space does the social interaction take place?
IN WHAT TYPE OF SPACE DOES THE SOCIAL INTERACTION TAKE PLACE?

- Public
- Social
- Personal
- Intimate

Distance of Interaction:

- 1 person
- 10,000 people

Amount of People:
IN WHAT TYPE OF SPACE DOES THE SOCIAL INTERACTION TAKE PLACE?
IN WHAT TYPE OF SPACE DOES THE SOCIAL INTERACTION TAKE PLACE?

DISTANCE OF INTERACTION

AMOUNT OF PEOPLE

10,000 PEOPLE

1 PERSON

PUBLIC

SOCIAL

PERSONAL

INTIMATE

OUTSIDE/COMPOUND

LOBBY/WAITING AREA

ELEVATOR

HALLWAY

APARTMENT/ROOM

1 PERSON

10,000 PEOPLE
MAIN ALLEY - Lǐ - 里
SEMI-PUBLIC
HOUSE - SHÍKÙMÉN - 石库门
PRIVATE
TRANSITION AREAS

SOCIAL HOTSPOTS
FUNCTIONS WITHIN THE COMPOUND/NEIGHBORHOOD

RESIDENCES
SMALL SHOPS
FACILITIES FOR RESIDENTS

RESIDENCES
SHOP HOUSES
SMALL INDUSTRY
COMMUNAL FUNCTIONS
FUNCTIONS WITHIN THE COMPOUND/NEIGHBORHOOD

CLOSED OFF FROM THE URBAN FABRIC
ONLY ACCESSIBLE FOR RESIDENTS

POROUS ENTITY
ACCESSIBLE FOR EVERYBODY
CHINA
THE SHIKUMEN PARADOX

THEY CAN’T BE SAVED, THEY CAN’T BE KEPT

ARCHITECTURAL HERITAGE & SOCIAL HERITAGE

FOUR OPTIONS
1. DESTROY THE SHIKUMEN
LOSE THE BUILDINGS AS WELL AS THE SOCIAL STRUCTURE
MOST COMMON OPTION, AS IT IS HIGHLY PROFITABLE
2. DESTROY AND REBUILD

KEEP THE FAKE BUILDINGS, LOSE THE SOCIAL STRUCTURE

POPULAR HOTSPOT XINTIANDI USES THIS METHOD, AS WILL THE PROJECT LOCATION
3. RENOVATE

KEEP THE BUILDINGS, GENTRIFICATION WILL PUSH THE ORIGINAL RESIDENTS OUT

JIANYE LI, PORTMAN HOUSE, TRIED AND FAILED
4. DO NOTHING

IT WILL KEEP THE ORIGINAL RESIDENTS AND BUILDINGS, BUT WILL EVENTUALLY FALL APART AND LOSE EVERYTHING
GOALS

MAINTAIN & RENOVATE SHIKUMEN
KEEP THE SOCIAL STRUCTURE & ORIGINAL RESIDENTS
3 AREA’S

SHIKUMEN, PUBLIC AREA (SHOPS & PARK), HIGH-RISE TOWER

RENOVATED SHIKUMEN INTENDED FOR NEW UPPER CLASS

HIGH-RISE TOWER FOR FORMER SHIKUMEN RESIDENTS

PUBLIC AREA ACCESSIBLE TO ALL

ORDER:

- CONSTRUCT HIGH-RISE TOWER
- RELOCATED SHIKUMEN RESIDENTS TO TOWER
- RENOVATE SHIKUMEN
- SELL SHIKUMEN TO NEW CHINESE UPPER CLASS
Client: OCT

Goals;
Create profit by redeveloping the cultural and historical valuable area on the bank of the Suzhou Creek

Requirements;
Redesign the project location within the context of the existing masterplan
500-600 Apartments
40-60 sqm per apartment
20% commercial functions
End User; Current Shikumen Residents

Description;
Working class, low budget, aging population
Value their social interaction, long time residents
Average household size; 3

Needs;
Small, affordable housing (40-60 sqm)
Social space for various activities such as playing cards and exercising.
Keeping the walking areas as level as possible
SHENYU LI TO SONGJIANG

RESIDENTS RELOCATION

35 KM
MATERIAL PUBLIC AREA

WOODEN FACADE PANELS AND PLANTS
MATERIAL SHIKUMEN

RENOVATE WITH THE EXISTING TRADITIONAL GREY AND ORANGE BRICK
MATERIAL TOWER

WHITE CONCRETE

GLASS

RENDER BY LUXIGON
SEPARATE SLABS AROUND CENTRAL CORE
DIVIDE HORIZONTALLY INTO 3 LAYERS
MAKE THE RELATIONSHIP HORIZONTAL INSTEAD OF VERTICAL
EARLY MODEL

3 SLABS

OPPOSITE OF EACH OTHER

CENTRAL CORE
P3 MODEL

2 SLABS

HEXAGON AROUND THE CORE

EAST AND WEST FACADE OPEN
FORM STUDIES

TWO BUILDINGS BECOME ONE

SLABS GROWN TOGETHER
FORM STUDIES

IT SEEMS THE SUPERFORM IS CREATED BY CUTTING AWAY PARTS OF THE HEXAGON

IN THE PROCESS, IT WAS CREATED BY ADDITION TO THE SLABS
DESIGN APPROACH

CONSTRUCTED AROUND A SERIES OF SCALE MODELS BASED ON THE DISTANCES AND INTERACTION FOUND IN THE SHIKUMEN

WORKING FROM OUTSIDE IN; THE ROUTE FROM PUBLIC TO PRIVATE
DESIGN

Yǔjīng Gōngyù, 玉井 公寓
JADE WELL APARTMENTS
ROUTING

BASED ON ORIGINAL NEIGHBOURHOOD LAYOUT
GROUND FLOOR

3 LEVELS: PATHS, GREEN, SOCIAL SPACE

-1 SOCIAL SPACE
0 PATHS
+1 GREEN AREAS
GROUND FLOOR

PATHS OF DIFFERENT FUNCTIONS CROSSING

SOCIAL SPACES AND GREEN SPACES IN BETWEEN
ELEVATORS

SEPARATE ELEVATOR FOR THE DIFFERENT LAYERS OF THE BUILDING
BRIDGES

CONNECTING THE ELEVATORS TO THE GALLERIES

ALSO FUNCTION AS SOCIAL SPACES
GALLERIES

GALLERIES CONNECT THE BRIDGES TO THE HOUSES

EACH HOUSE HAS A PRIVATE OR SHARED COURTYARD
APARTMENTS

625 APARTMENTS, MAJORITY BETWEEN 40 AND 60 SQUARE METERS
IN WHAT TYPE OF SPACE DOES THE SOCIAL INTERACTION TAKE PLACE?
IN WHAT TYPE OF SPACE DOES THE SOCIAL INTERACTION TAKE PLACE?

- **INTIMATE**
- **PERSONAL**
- **SOCIAL**
- **PUBLIC**

**DISTANCE OF INTERACTION**

**AMOUNT OF PEOPLE**

- **1 PERSON**
- **10,000 PEOPLE**

**OUTSIDE** | PUBLIC AREA | ELEVATOR | BRIDGE | GALLERY | COURTYARD | APARTMENT/ROOM
---|---|---|---|---|---|---

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TRANSITION ZONES

SOCIAL HOTSPOTS

PUBLIC TO SEMI-PUBLIC:
SOCIAL SPACES ON GROUND FLOOR

SEMI-PUBLIC TO SEMI-PRIVATE:
BRIDGES

SEMI-PRIVATE TO PRIVATE:
COURTYARDS
APARTMENTS

625 APARTMENTS IN TOTAL

BOTTOM ALLEY 261 APARTMENTS
MIDDLE ALLEY 220 APARTMENTS
BOTTOM ALLEY 144 APARTMENTS

THE CONFIGURATION CHANGES AS THE SHAPE CHANGES

BOTTOM ALLEY HAS MORE FAMILY APARTMENTS
TOP LAYER HAS MORE SINGLE BEDROOM APARTMENTS
PHYSICAL VERTICAL CONNECTION

3 VERTICAL ALLEYS CONNECTED BY STAIRS

2 PLATFORMS CONNECTING THE VERTICAL ALLEYS
ELEVATOR SYSTEM

EACH OF THE THREE LAYERS HAS A SEPARATE ELEVATOR CORE

REDUCING THE AMOUNT OF DIFFERENT PEOPLE YOU CAN ENCOUNTER DURING THE AWKWARD ELEVATOR MOMENT
FLOW OF PEOPLE

ROUTE

TIME SPEND IN ZONE
WHAT KIND OF ACTIVITIES TAKE PLACE?

FROM THE STREET TO THE APARTMENT

OUTSIDE   LOBBY   ELEVATOR   BRIDGE   COURTYARD   LIVING ROOM   BED ROOM
FUNCTIONS

GROUND FLOOR HAS SHOPS

THE DECKS ARE CONNECTING ELEMENTS BETWEEN THE VERTICAL ALLEYS

EAST DECK IS FOR BREAKFAST AND EXERCISE

WEST DECK IS EVENING SNACKS AND MAHJONG/CARDS

FOOD STALLS ON THE DECKS ARE SAFE FROM CHENGGUAN
DECKS

SEMI-PUBLIC ELEVATED SPACE WITH SMALL COMMERCIAL FUNCTIONS

CONNECTING ELEMENT BETWEEN TWO VERTICAL ALLEYS
OPENNESS

THE TOWER IS OPEN TOWARDS THE SHIKUMEN
WHILE THE INSIDE IS MORE PROTECTED FROM THE OTHER,
MORE PUBLIC SIDE.
BRIDGES

THREE SETS OF BRIDGES CONSISTING OF 9 EACH MAKE THREE VERTICAL ALLEYS IN THE TOWER
BRIDGES

SOCIAL SPACE FOR EACH FLOOR
VISUAL CONNECTION BRIDGES ON THE FRONT
PHYSICAL CONNECTION IN THE BACK
GALLERIES

CONNECT THE BRIDGES TO THE APARTMENTS
EACH APARTMENT HAS OWN OR SHARED COURTYARD
Fēng Shuí

Geomancy, an early form of environmentalism

Work with the environment, not against it

Due to Feng Shui guidelines, almost every building in China is south facing
FENG SHUI, BA GUA

GOOD MARRIAGE

WEALTH

FAMOUS
Fire
Eye
South
Red

RELATIONSHIPS/MARRIAGE
MOTHER
Organs
Red/PINK/White

CHILDREN/CREATIVITY
FUTURE
Metal
Mouth
West
WHITE

HELPFUL PEOPLE/TRAVEL
FATHER
Head
White/GRAY/Black

SCHOLARS

FAMILY/PAST
Wood
Foot
East
GREEN

KNOWLEDGE/SPIRITUALITY
Hand
Black/BLUE/Green

CAREER
Water
Ear
North
BLACK

BUSINESS

GOOD FAMILY

50-60 M²
SINGLE OR DOUBLE BEDROOM

K’AN

50-60 M²
SINGLE OR DOUBLE BEDROOM

55-65 M²
DOUBLE BEDROOM

50-60 M²
DOUBLE BEDROOM

35-40 M²
SINGLE BEDROOM

40-50 M²
SINGLE BEDROOM
PRIVACY ZONING OF THE APARTMENTS

SEMI PUBLIC

PRIVATE
PRIVACY ROUTE

THE FURTHER THE ROUTE GOES IN TO THE BUILDING, THE MORE PRIVATE IT GETS

AT THE END, THE BEDROOMS, THE MOST PRIVATE MEETS THE MOST PUBLIC

THE OUTER FACADE WILL BE STRAIGHT AND ANGULAR

THE INSIDE FACADE IS MORE ORGANIC
19TH FLOOR

CONNECTING FLOOR FOR THE MIDDLE AND TOP ALLEY

EAST DECK

MORNING AREA; EXERCISE & BREAKFAST
APARTMENTS

54 M2
TWO BEDROOM
SOUTH FACING
PRIVATE COURTYARD

38 M2
SINGLE BEDROOM
NORTH FACING
SHARED COURTYARD
LOAD BEARING CONSTRUCTION

WHILE A RIGID FRAME POSSIBLY COULD BE STABLE ENOUGH
K-BRACING HAS BEEN ADDED TO COUNTER TORSION AND HORIZONTAL
DEFORMATION
LOAD BEARING CONSTRUCTION

RIGID CONCRETE FRAME WITH STEEL K-BRACING

5000x9100 GRID

4000x9100 GRID

6000x9100 GRID

6400x9100 GRID

6000x9100 GRID

6000x9100 GRID
3D RIGID FRAME

CROSS FLOORS

GRID ADAPTS TO THE APARTMENTS
CONSTRUCTION BRIDGES

IF LENGTH INCREASES, THE RAILING GETS HIGHER

SUPPORTED ON THE RIGID CONCRETE FRAME AND CENTRAL CORE
INSTALLATIONS - SHAFTS

EACH APARTMENT HAS 2 SHAFTS

BETWEEN EACH OF THE 3 LAYERS A HORIZONTAL DISTRIBUTION SPACE
DAYLIGHT

SHANGHAI’S LATITUDE IS 31 DEGREES

IN SUMMER, THE HIGHEST POINT OF THE SUN IS 82 DEGREES
DAYLIGHT

... AND 32 DEGREES IN THE WINTER
HEATING/COOLING SUMMER

COOLING, USING THE SUZHOU CREEK
1.5M BELOW THE SURFACE CONSTANT ~14°C

WARMTH STORED IN AQUIFER
HEATING/COOLING WINTER

HEATING, USING THE HEAT FROM THE SUMMER IN THE AQUIFER

HEATING IS NOT MANDATORY IN SHANGHAI, BUT IT IS NECESSARY
INDOOR CLIMATE

OUTSIDE SOLAR SHADING
NATURAL CROSS VENTILATION
FLOOR HEATING/COOLING
POSSIBILITY FOR AIRCO UNIT IN FACADE
AIRCONDITIONING

AIRCO IS NOT NECESSARY DUE TO FLOOR HEATING/COOLING

IN THE HIGHLY LIKELY EVENT PEOPLE WANT AIRCO, IT WILL NOT DISRUPT THE FACADE
WEATHERING FACADE

WHILE THE BUILDING STARTS AGE, THE PRISTINE WHITE FACADE WILL TURN TO “SHANGHAI GREY”
WEATHERING FACADE

RELIEF IN THE PREFAB CONCRETE PANELS ALLOW THE BUILDING TO GROW OLD AND DIRTY IN A CERTAIN PATTERN ALSO FURTHER DEFINING THE THREE VERTICAL ALLEYS TOWARDS THE OUTSIDE
DETAIL

PREFAB CONCRETE FACADE ELEMENTS PROVIDE SOLAR SHADING

GLASS IN LINE WITH THE PREFAB ELEMENTS, HARD BORDER BETWEEN PUBLIC AND PRIVATE

PREFAB ELEMENTS ARE ENGRAVED TO AGE MORE BEAUTIFUL
BAYWINDOWS SLIGHTLY FADE OUTSIDE-INSIDE BARRIER

RAILING CHANGES ACCORDING TO THE INNER FACADE, EXTRA SPACE WHEN THERE IS A COURTYARD
THANK YOU
QUESTIONS?