上海市社区老年人居住满意度研究

Residential Satisfaction of the Elderly People in Shanghai Neighborhoods

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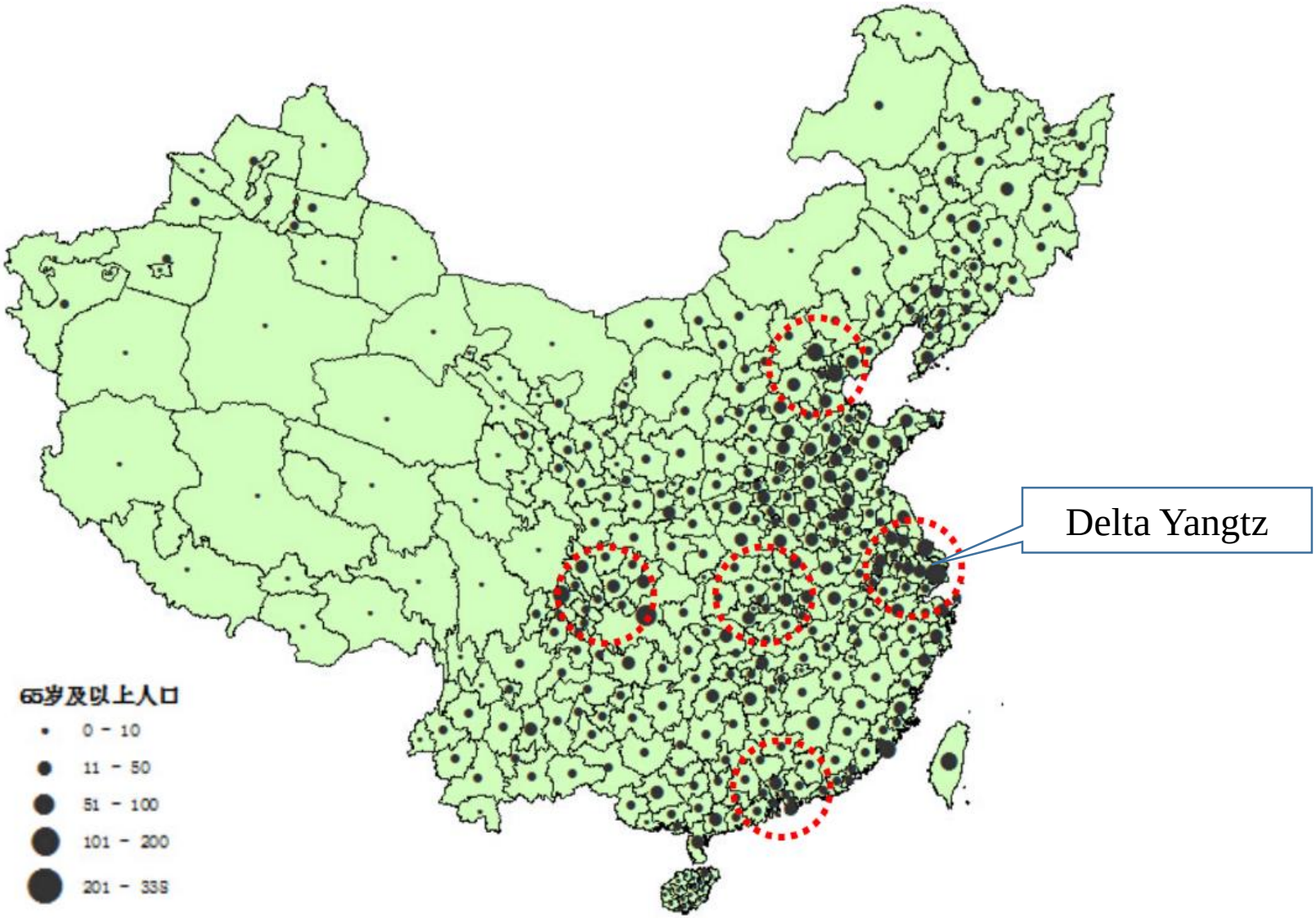


Data Resource: 6th Census Data

Shanghai

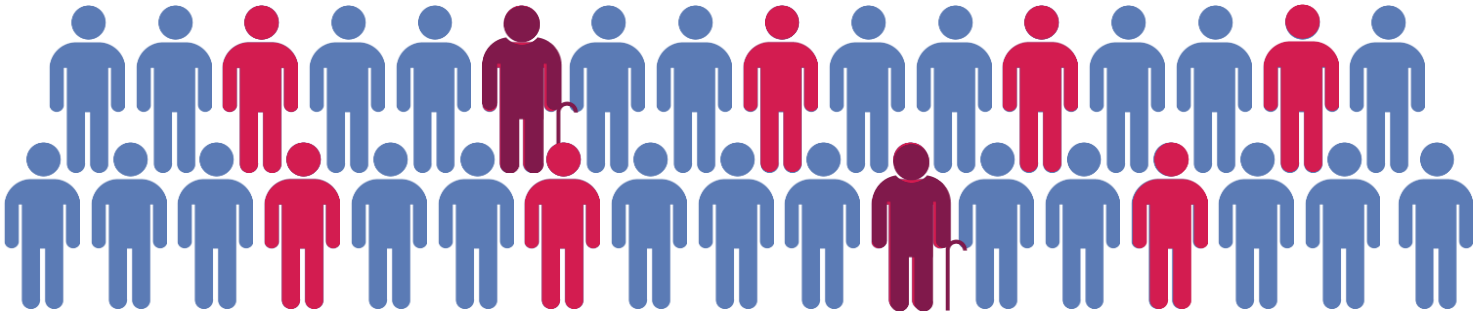
Total Household Population in 2015: 14,435,400

60+ 4,359,500 30.2%

80+ 780,500 5.4% of Total，17.9% of 60+

3.7% of 60+ disabled ， 13.1% of 80+ disabled

Resources Shanghai Municipal Bureau of Statistics，2015



Major Challenges for Aging-in-Place

‘Ageing in place’ as an alternative to institutional care settings is a recurring theme in politics but lacks concerted action, as few countries include older adults in policy decision making.

The goal of Aging-in-Place is promoting the older adults to live in their own homes and communities safely, independently, and comfortable regardless of age, income, or frailty level.

Residential Satisfaction (RS)

Residential satisfaction → life satisfaction

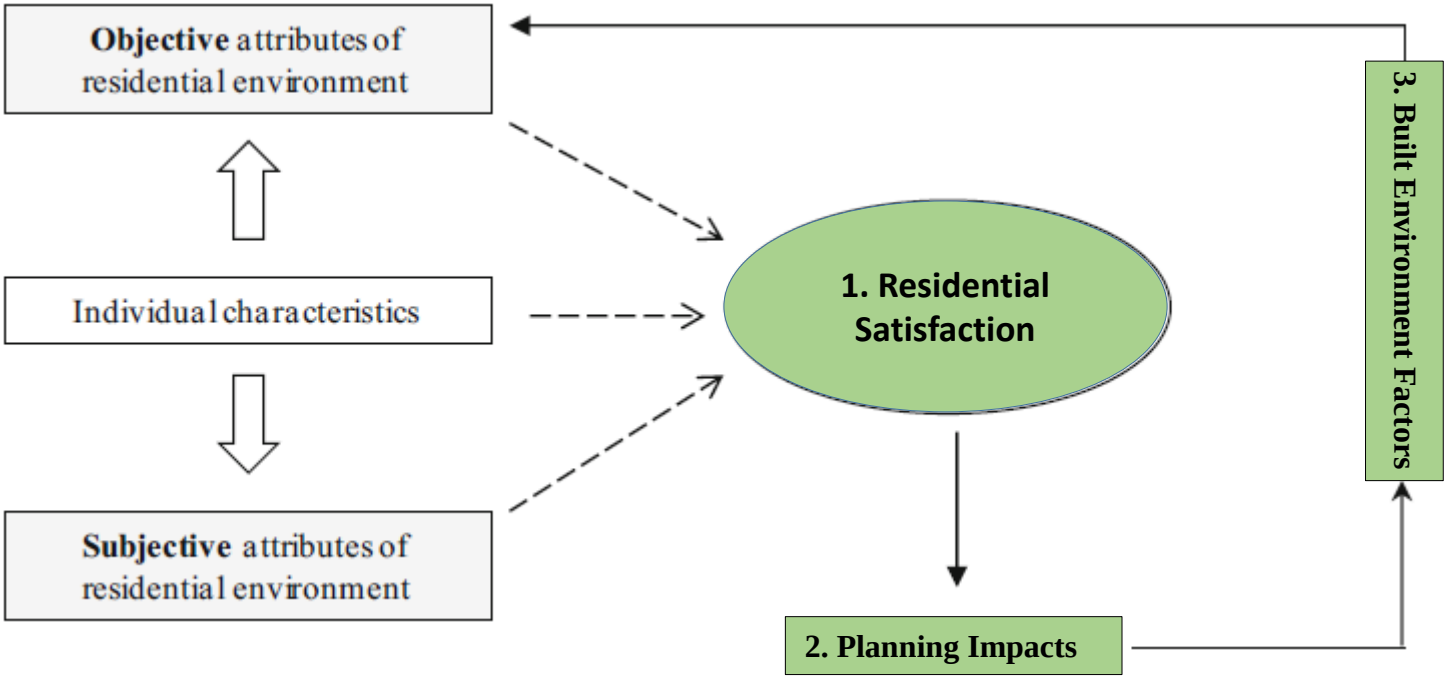
An indicator of success of neighborhood planning

Neighborhood characteristics critical to residential satisfaction

Improvement priorities → inadequacy of existing neighborhoods

Source: Braubach and Power, 2011; Burton et al. 2011; Costa-Font 2013 ;Galster, 1985)

Research Model



1.Neighborhood Characteristics

2.Built Environment Elements

3.Conclusions & Practice

1. Neighborhood Planning Features VS. RS

113 neighborhoods, N=3153

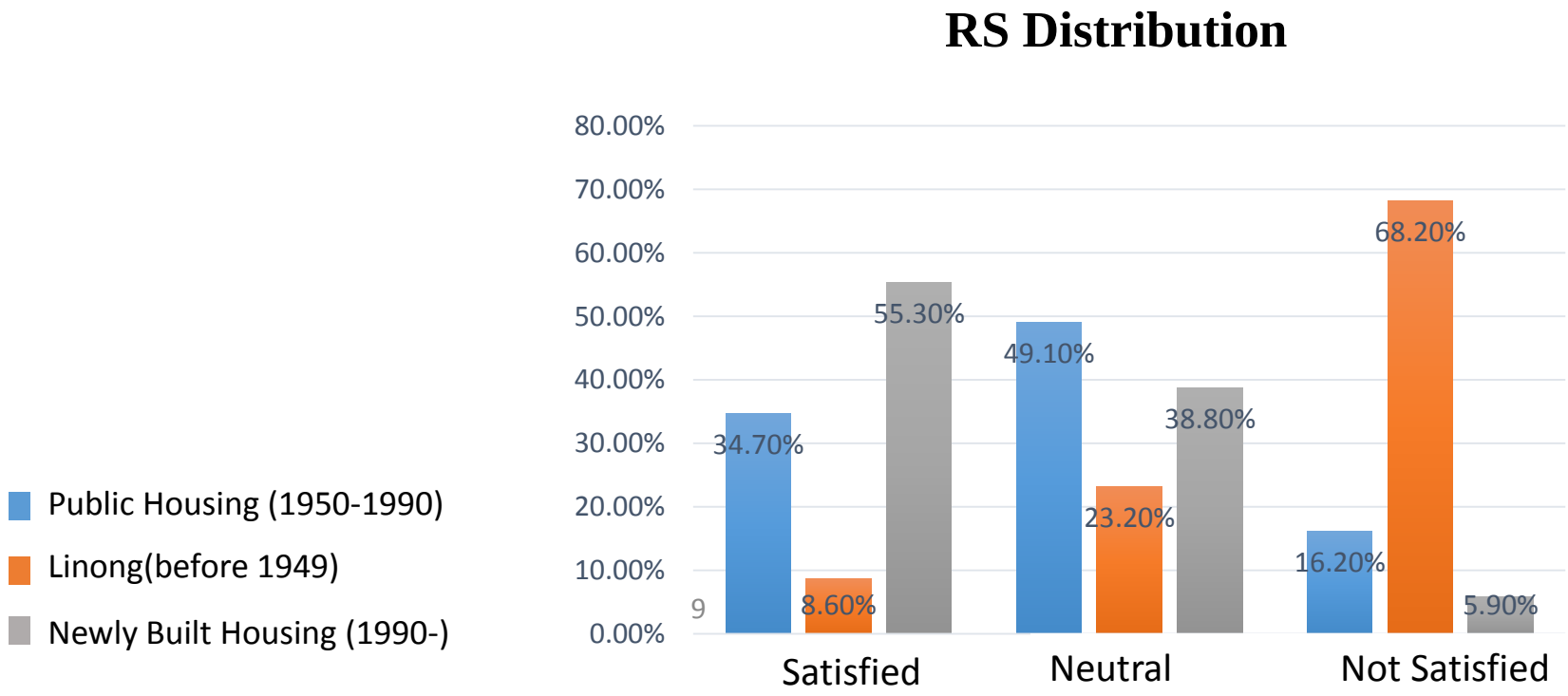
4th National Sample Survey （ 1‰ ）on the living conditions of China's urban and rural older populace, 2015

Older Residents Samples Distribution

Sample amount/percentage		Gender	
		Male	Female
60~64 years old	Amount	485	501
	Percent/%	49.19%	50.81%
65~69 years old	Amount	365	391
	Percent/%	48.28%	51.72%
70~74 years old	Amount	226	217
	Percent/%	51.02%	49.98%
75~79 years old	Amount	160	181
	Percent/%	49.92%	53.08%
80~84 years old	Amount	183	190
	Percent/%	49.06%	50.94%
over 85 years old	Amount	99	155
	Percent/%	38.98%	61.02%

Dependent variable -- Residential Satisfaction

According to the respondents' satisfaction with the current housing and the neighborhood, the answer "dissatisfied", "neutral" and "satisfied" are coded as 1, 2 and 3 respectively.



Independent variables – Planning Features of the Neighborhoods

1. Residential density

The building floor area ratio (FAR) is used to characterize the density, which refers to the multiple of the amount of total floor space in the building to be developed and the area of land plot.

2. Housing type

According to the completion time and building-neighborhood layout features, the housing in Shanghai could be divided into newly built housing, traditional housing and old public housing

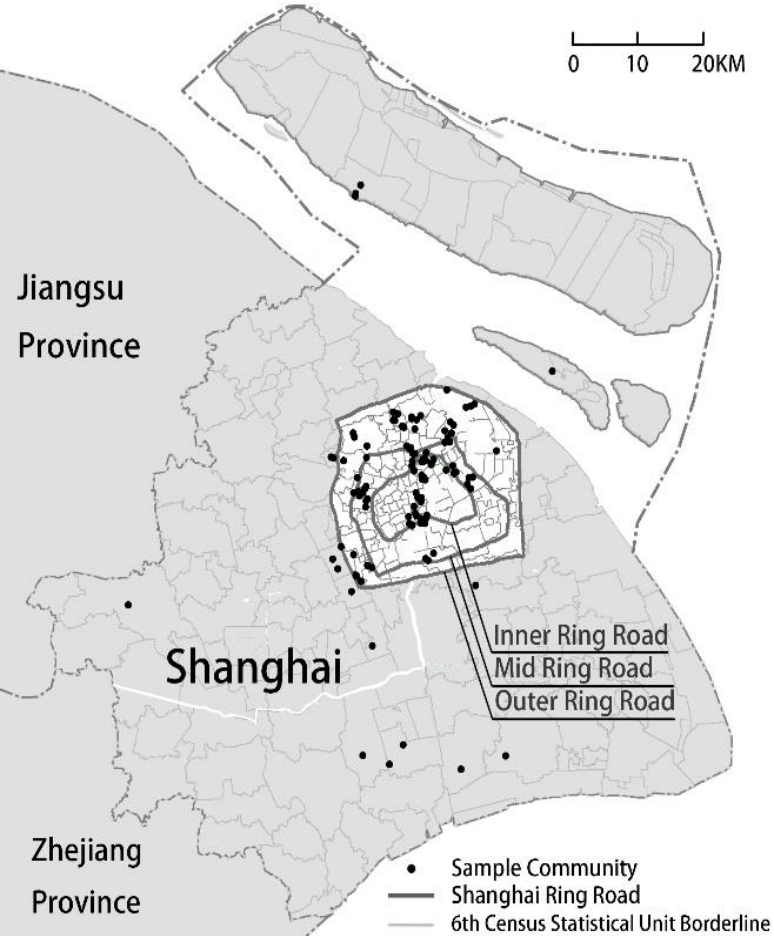
3. Location

Based upon the circular distribution characterized by three ring roads in Shanghai, the spatial characteristics of the respondents are divided into: outer ring and beyond, mid ring-outer ring, inner ring-mid ring and within inner ring

Sample Descriptions

Variables	Coding and range of values	Frequency	Percentage
Gender	Female (0)	1635	51.9
	Male (1)	1518	48.1
Marital status	Non married (0)	667	21.2
	In marriage (1)	2486	78.8
Educational qualification	University and above (1)	505	16.0
	High school (2)	697	22.1
	Junior high school (3)	1254	39.8
	Primary school and below (4)	697	22.1
Housing ownership	Rent (1)	33	1.0
	Right to use (2)	388	12.3
	Non-Ownership (3)	460	14.6
	Ownership (4)	2272	72.1
Housing type	Commodity / affordable housing (1)	901	28.6
	Traditional housing (2)	286	9.1
	Old public housing (3)	1966	62.4
Location	Outer ring and beyond (1)	518	16.4
	Mid ring-outer ring (2)	1045	33.1
	Inner ring-mid ring (3)	765	24.3
	Within inner ring (4)	825	26.2
Housing Satisfaction	Dissatisfied (1)	576	18.3
	Neutral (2)	1380	43.8
	Satisfied (3)	1197	38.0
		mean	Standard deviation
Age	[60,102]	70.7	8.6
Annual household income	[8540,784000] Yuan	88865.8	53497.2
The logarithm of total annual income	(9.05,13.57)	11.3	0.5
Living density	[0.7,4.5]	1.7	0.5

Neighborhoods Samples Distribution

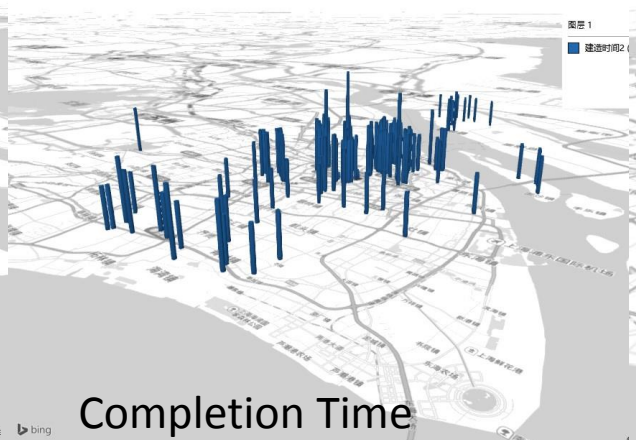


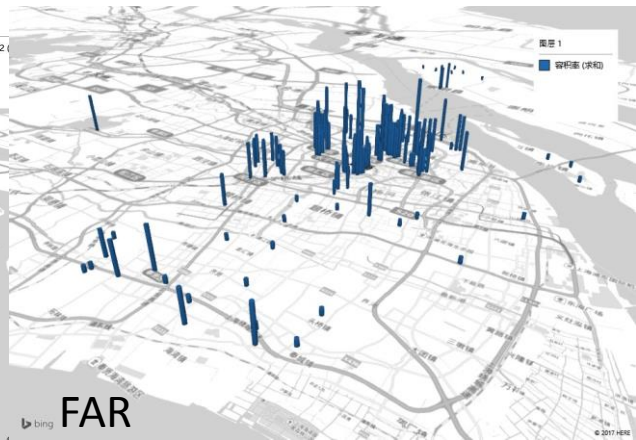
Location	Outer ring and beyond	Mid ring-outer ring	Inner ring-mid ring	Within inner ring	Total
samples	29	27	37	20	113

Huangpu District, Hongkou District, Yangpu District, Putuo District, Pudong District, Baoshan District, Fengxian District, Minhang District, Chongming District

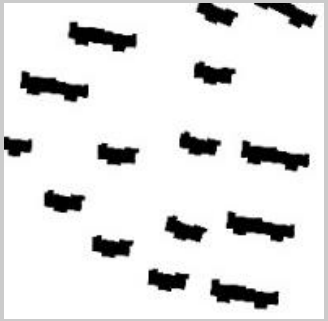
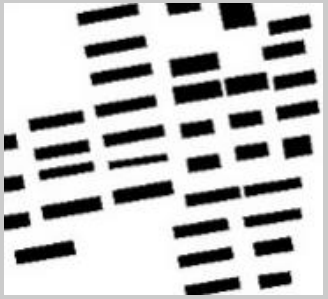
9 administrative districts
113 neighborhoods


Housing Type


Completion Time


FAR

Housing Type

Types	Built time	The features of the built environment	Main location	Morphology
Newly built housing	1998-now	Mainly consisting of high quality, high-rise buildings with lifts. Indoor function is complete. A high level of neighborhood environmental aesthetics, higher greenings, and well equipped with public amenities and open space.	All	
Traditional housing	1900-1949	Mainly consisting of high density, low-rise buildings with poor quality. Indoor function is incomplete. The community has no public service and public space is scarce.	Within inner ring	
Old public housing	1949-1998	Mainly consisting of low quality, multi-story buildings without lifts. Indoor function is complete. The neighborhood is equipped with a hierarchical configuration of public service and public space.	Inner ring-mid ring and within inner ring	

1. Jinse Liyuan Neighborhood, Pudong New District;
2. Shuncheng Li, Yangpu District;
3. Shui Dian Xincun, Hongko District

Results

Variables	Basic model (model 1)		Density model (model 2)		Location model (model 3)		Housing type (model 4)		Joint model (model 5)	
	b	Exp(b)	b	Exp(b)	b	Exp(b)	b	Exp(b)	b	Exp(b)
Constant 1							1.469	4.347	2.618**	13.708
Constant 2							3.816***	45.413	5.023***	151.903
Gender(Male=1)							.062	1.064	.034	1.035
Age		.829	-.011	.989	1.956*	7.074	.002	1.002	.004	1.004
Marital status (In Marriage=1)	-.188	7.769	2.231*	9.306	4.280***	72.222	.004	1.004	-.070	.933
Education qualification (Primary school & below as reference)	2.050*	1.056	.055	1.057	.017	1.018				
University and above	.055	.996	-.004	.996	-.001	.999	-.174	.841	.048	1.049
High school/vocational/ secondary	-.004	1.078	.088	1.092	-.025	.975	-.299**	.742	-.139	.870
Junior high school	.075						-.271*	.763	-.176	.839
The logarithm of total annual income		.786	-.272*	.762	.053	1.054	.286***	1.331	.374***	1.454
Housing ownership (Ownership as reference)	-.241	.661	-.428***	.652	-.188	.829				
Rent	-.414***	.657	-.425***	.654	-.271*	.762	-.950**	.387	-.962***	.382
Right to use	-.420***	1.216	.185*	1.203	.325***	1.384	-1.290***	.275	-1.351***	.259
Non-Ownership	.196**						.101	1.106	.047	1.048
Living density(Floor area rate)		.319	-1.127***	.324	-1.075***	.341			-.145	.865
Location (Inner ring as reference)	-1.142***	.114	-2.065***	.127	-1.932***	.145				
Outer ring and beyond	-2.168***	1.210	.187	1.205	.111	1.117			.839***	2.314
Mid ring-outer ring	.190		.190**	1.209					.478***	1.613
Inner ring-mid ring									-.147	.864
Housing type (Old public building as reference)					1.242***	3.464				
Commodity / affordable housing					.691***	1.996	.934***	2.543	.887***	2.429
Traditional housing					.025	1.025	-1.340***	.262	-1.160***	.313
-2LL	5655.091		6049.930		5774.870		5601.395		5779.565	
Pseudo R^2(cox and snell)	0.129		0.131		0.173		0.188		0.213	
Deviance R-squared	Chi-Square=5303.752;Df=5352;p=0.678		Chi-Square= 5992.222;Df=6139;p=0.908		Chi-Square=5614.934;Df=5897;p=0.996		Chi-Square=5352.559;Df=5650;p=0.998		Chi-Square=5758.535;Df=6228;p=1.000	

*p<0.05, **p<0.01, ***p<0.001。

Neighborhoods' Planning Features' VS. RS

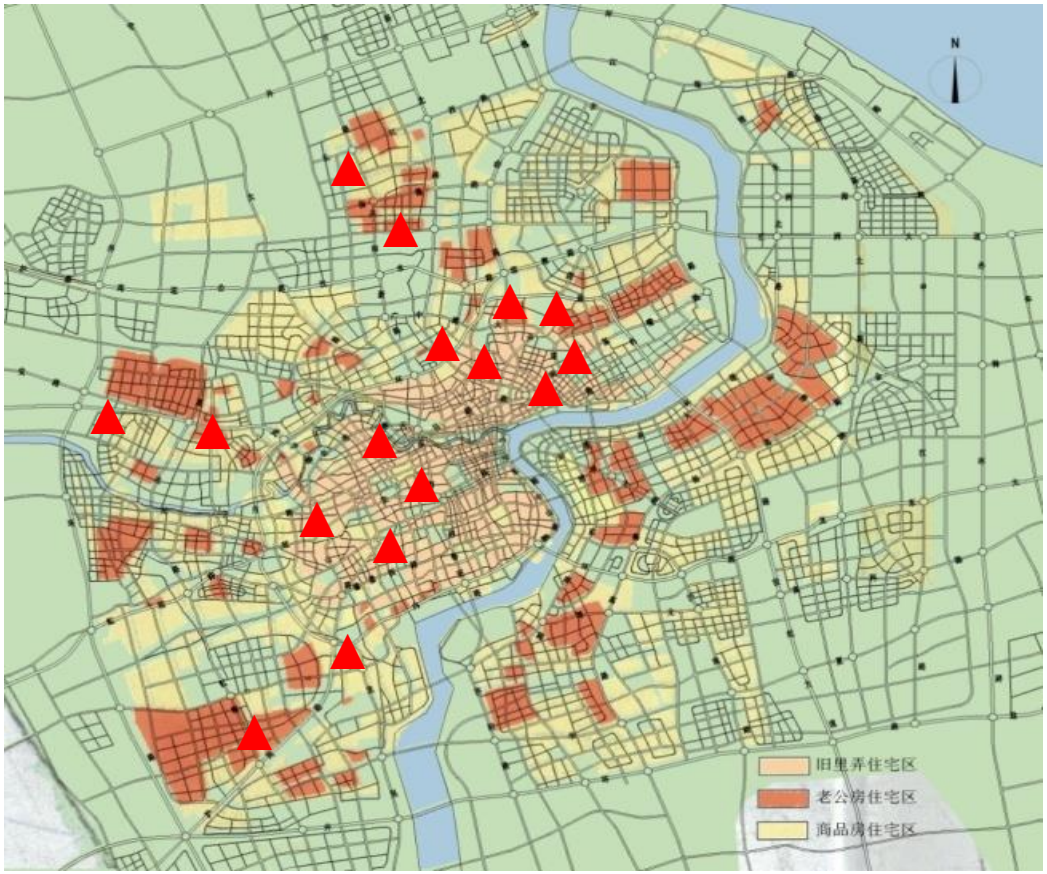
From the perspective of neighborhood planning features, provoke us into thinking about the pre-set disequilibrium from the position of city.

The three variables have different influences on the RS, while the degree of impact for **density** is less than that of **location**, and much less than **housing types**.

The impact of density is affected by location and housing type, although it does not show a significant effect in the overall model .

High density is seen by European and American scholars as an important factor leading to lower satisfaction. Research continues to demonstrate the **negative** relationship between density and residential satisfaction (Suzanna M.Lee et al., 2017; Adams, 1992; Lee & Guest, 1983).

2. Built Environment VS. RS



2220 interviews in 16 neighborhoods (N=1872)

Investigations in the neighborhoods in Shanghai, 2009-2013

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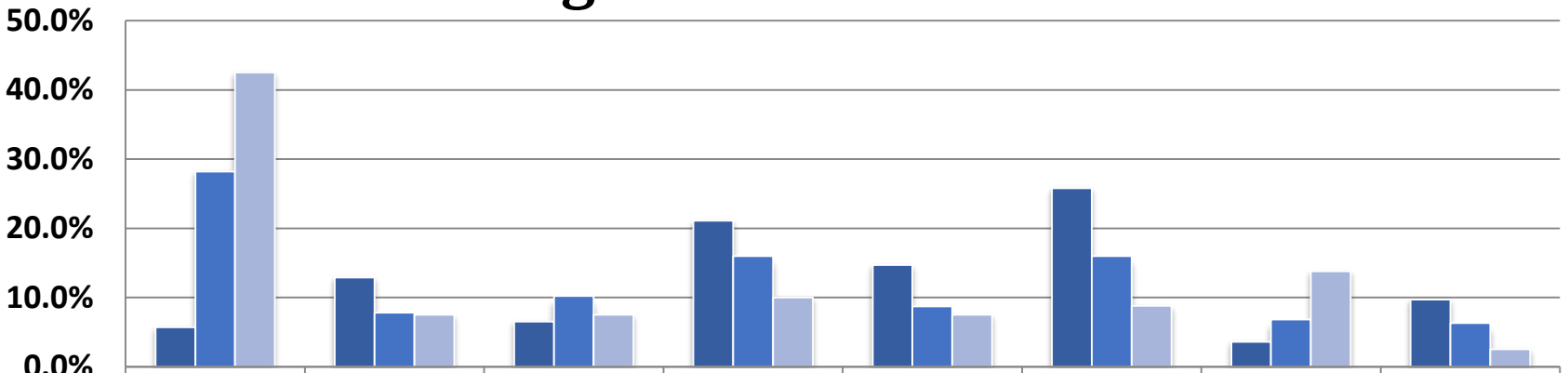
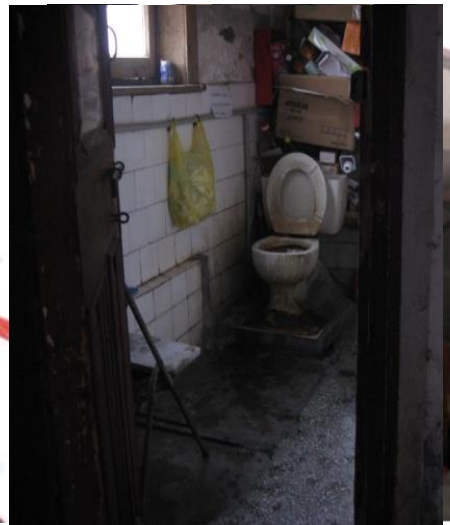
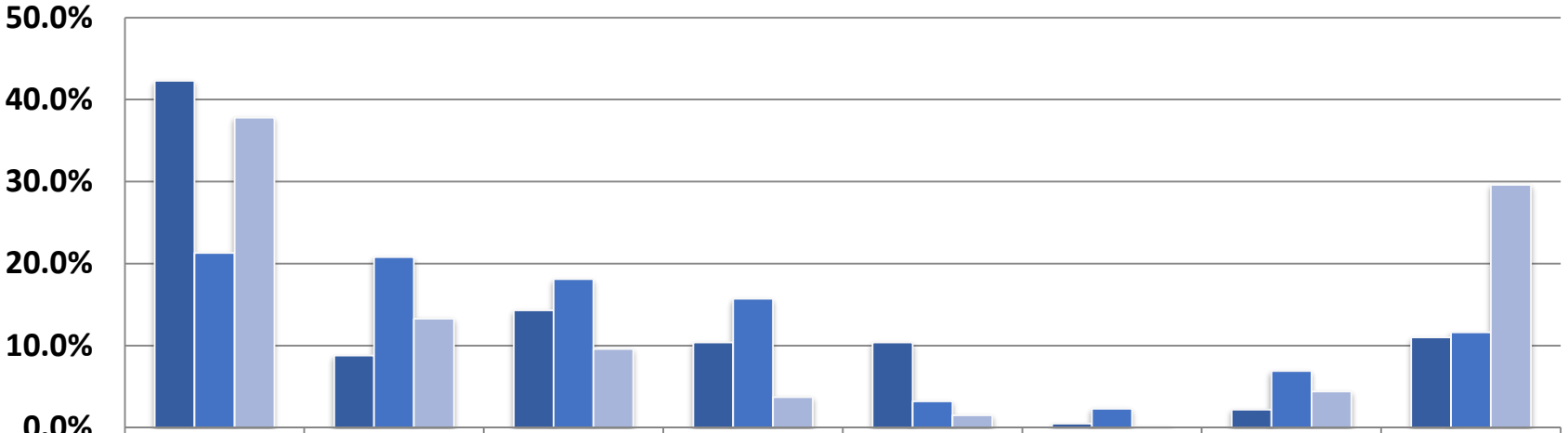
Building and Indoor RS



	Elevator & Ramp	Bedroom	Living room	Kitchen	Bathroom	Lavatory	Balcony	Staircase
Linong	5.7%	12.9%	6.5%	21.1%	14.7%	25.8%	3.6%	9.7%
Workers Village	28.2%	7.8%	10.2%	16.0%	8.7%	16.0%	6.8%	6.3%
New Complex	42.5%	7.5%	7.5%	10.0%	7.5%	8.8%	13.8%	2.5%

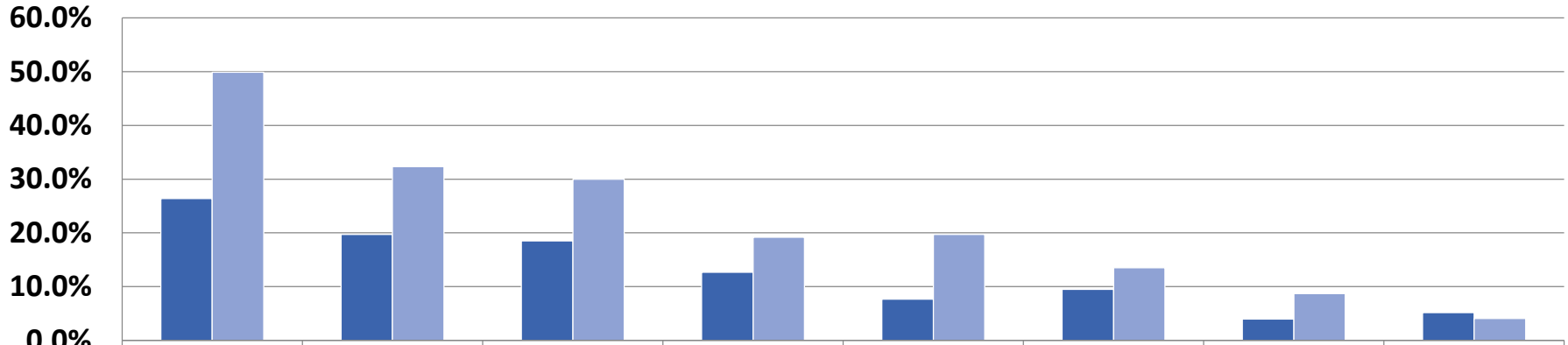


Neighborhood RS



	Open Space	Public Restroom	Outdoor Bench	Shade & Shelter	Accessibility	Stairs	Illumination	Other
Linong	42.3%	8.8%	14.3%	10.4%	10.4%	0.5%	2.2%	11.0%
Workers Village	21.3%	20.8%	18.1%	15.7%	3.2%	2.3%	6.9%	11.6%
New Complex	37.8%	13.3%	9.6%	3.7%	1.5%	0.1%	4.4%	29.6%

Service Demand Distribution



	Medical care	Meal Service	Safety	Home Service	Urgency	Accompany	Transit	Bath
Inner City	26.4%	19.7%	18.5%	12.7%	7.7%	9.5%	4.0%	5.2%
Suburbs	49.9%	32.3%	30.0%	19.2%	19.7%	13.5%	8.7%	4.1%

Built Environment VS. RS

Housing type has a significant impact on RS.

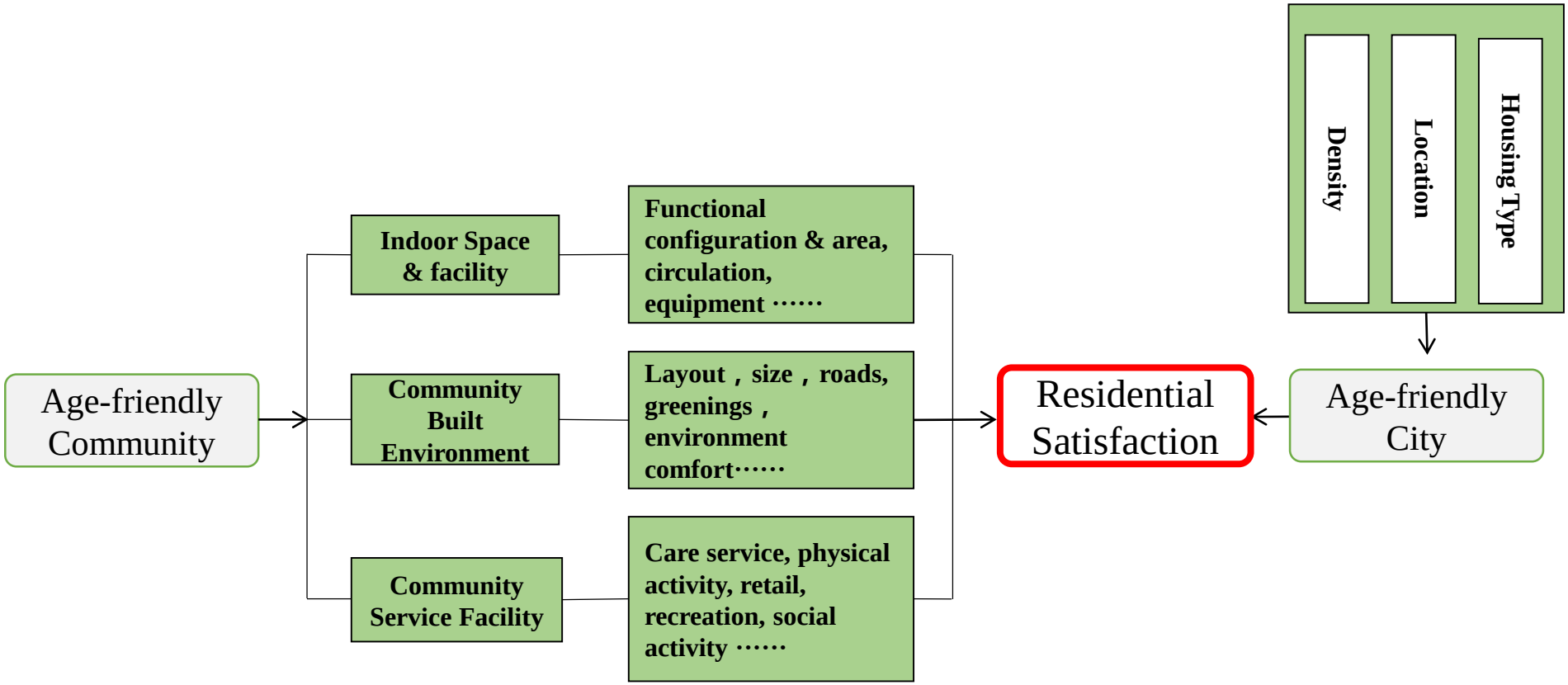
Commonness and Differences co-exist in the adaptive needs of the built environment.

The earlier the neighborhoods were built, the lower the RS level presents.

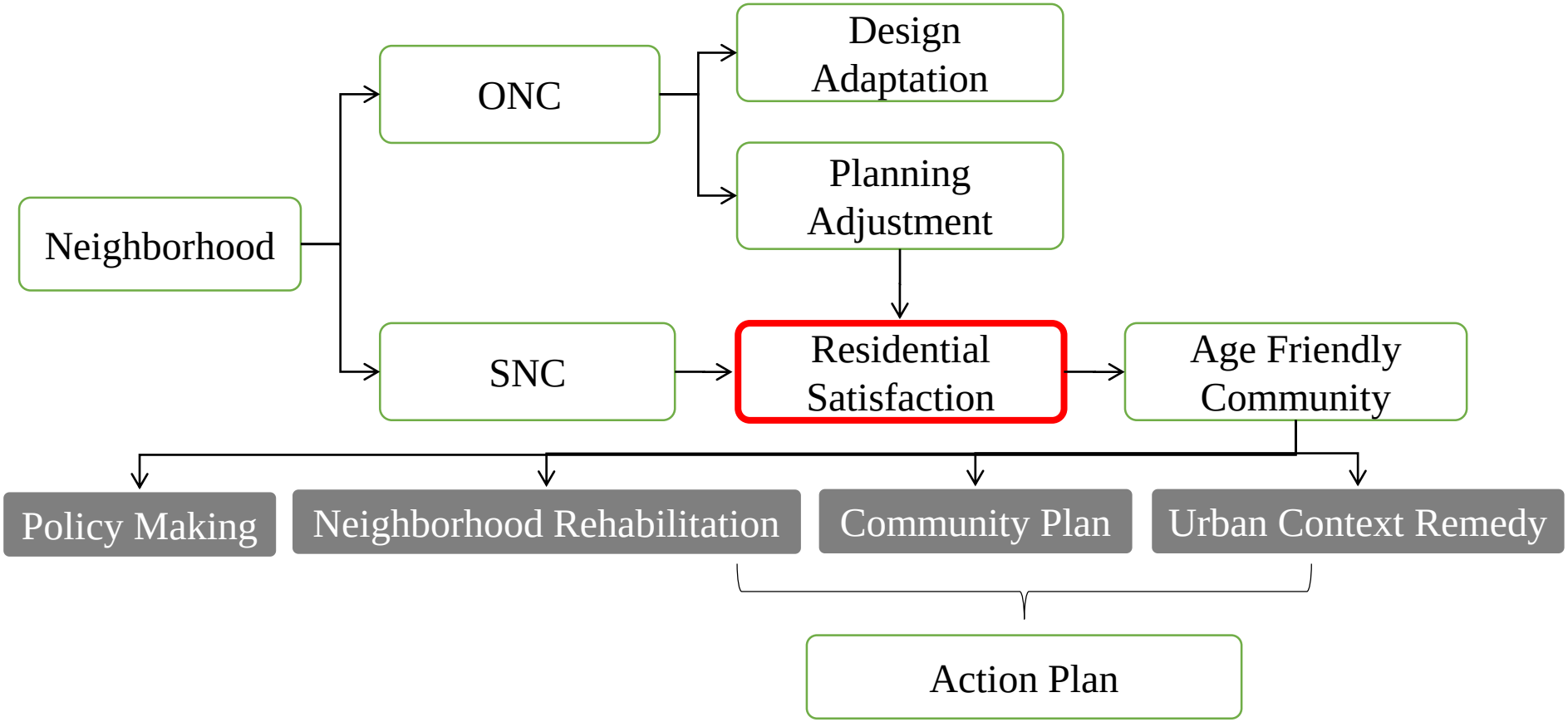
The common top three demands for the services are (i)the medical service, (ii)the meal service, and (iii)the care service.

3. Conclusion & Practice

Neighborhood Attributes Associate with RS

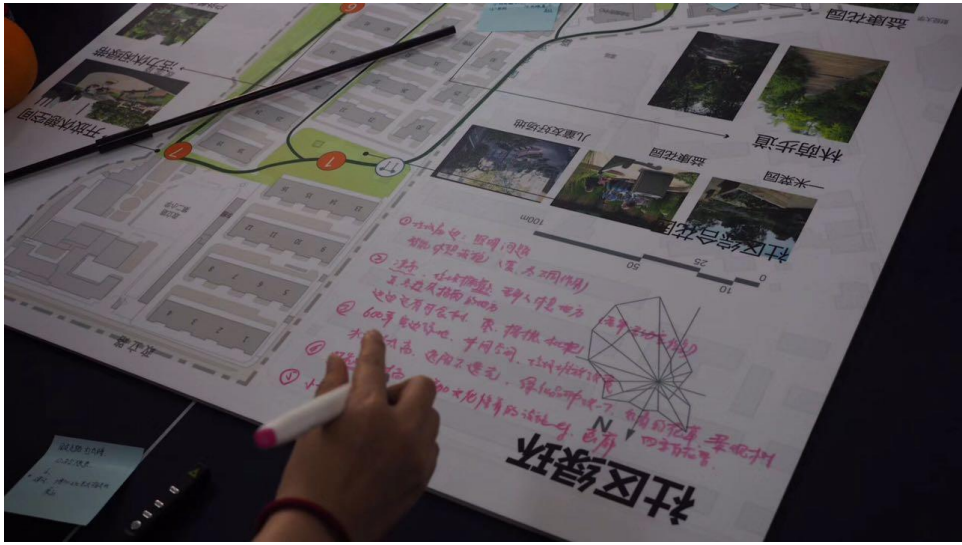


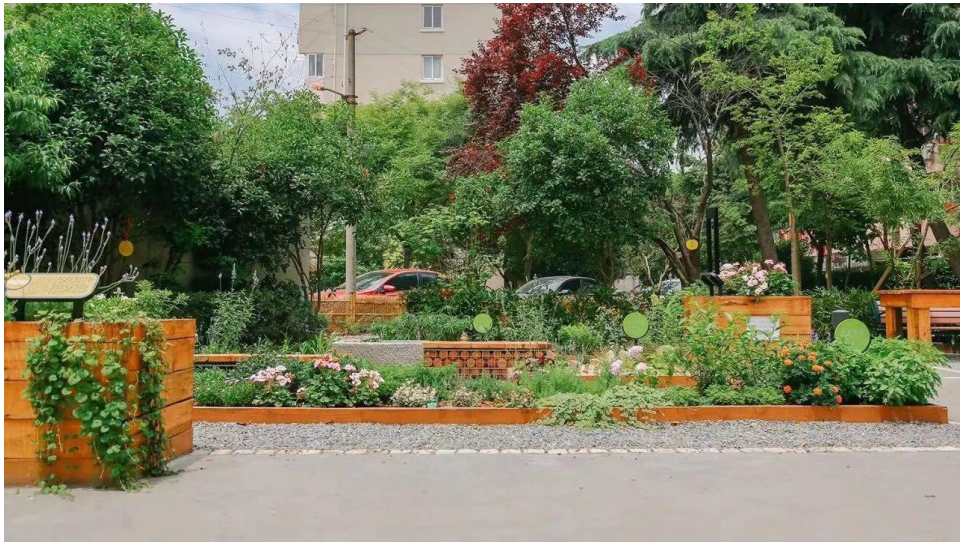
RS as a Mediation Variable

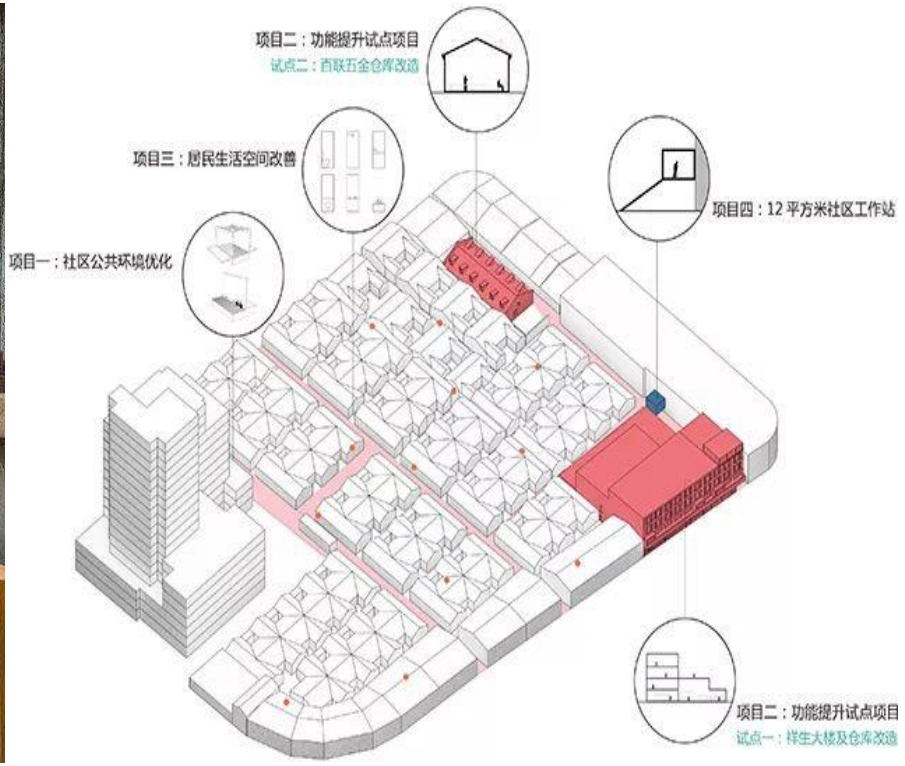


RS Oriented Rehabilitation

Activity Space Creation in the Public Housing Neighborhood in Pudong, 2017


社区绿环





Communication Space Creation in the Linong Neighborhood in Huangpu District, 2017

Continuously Community Serving with Observation……

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[1] Yifan YU, Fuqin Wang, Feiyang Zhu, Zhigang Yin. Residential Satisfaction of Elderly as Determinant Behind Design Thinking in Urban Planning. Nano LIFE, 2018,Vol. 08, No. 02, 1840004-01-10 https://doi.org/10.1142/S1793984418400044

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