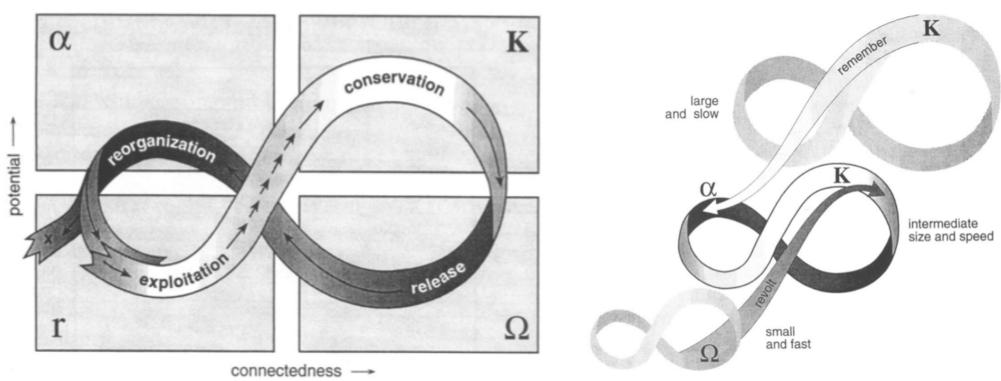
STIMULATE UTILIZATION AND SOCIAL INTERACTION IN PHYSICAL PUBLIC SPACE THROUGH THE IMPLEMENTATION OF DIGITAL TECHNOLOGY

- A. Motivation
- B . Problems
- C. Thesis definition
- D. Analysis
- E. Approach
- F. Conclusion
- G. Reflection



Complexity of Economic, Ecological, and Social Systems, Holling

Fig. 3: Source: Understanding Complexity of Economic, Ecological, and Social Systems , C. S. Holling

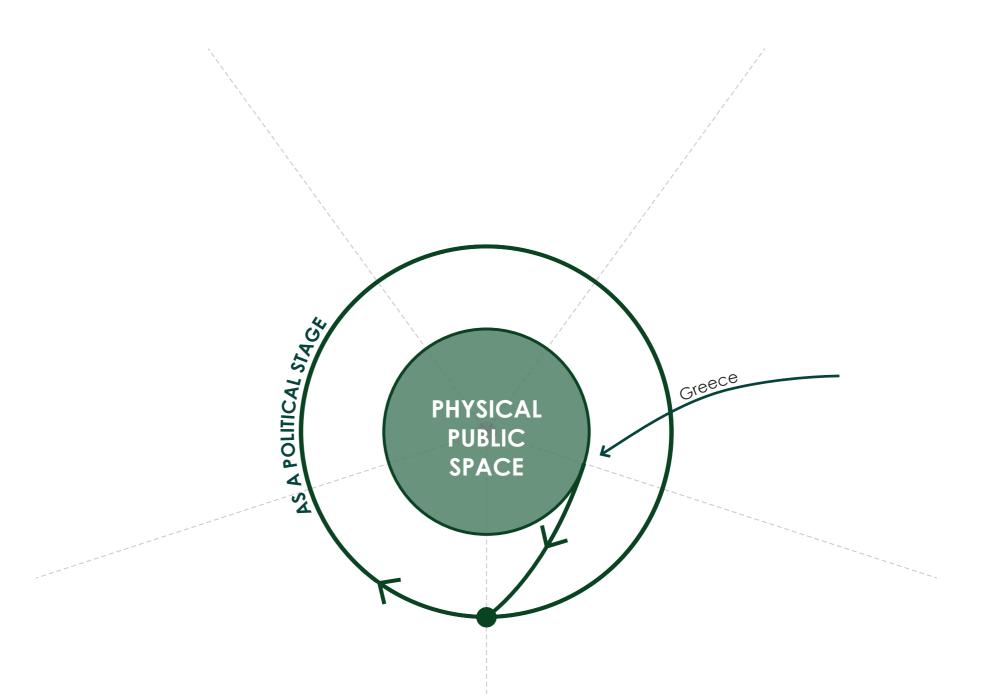
THE COMPLEXITY OF PUBLIC SPACE DEVELOPING SYSTEM

Political stage



1800s -1900s

Greece



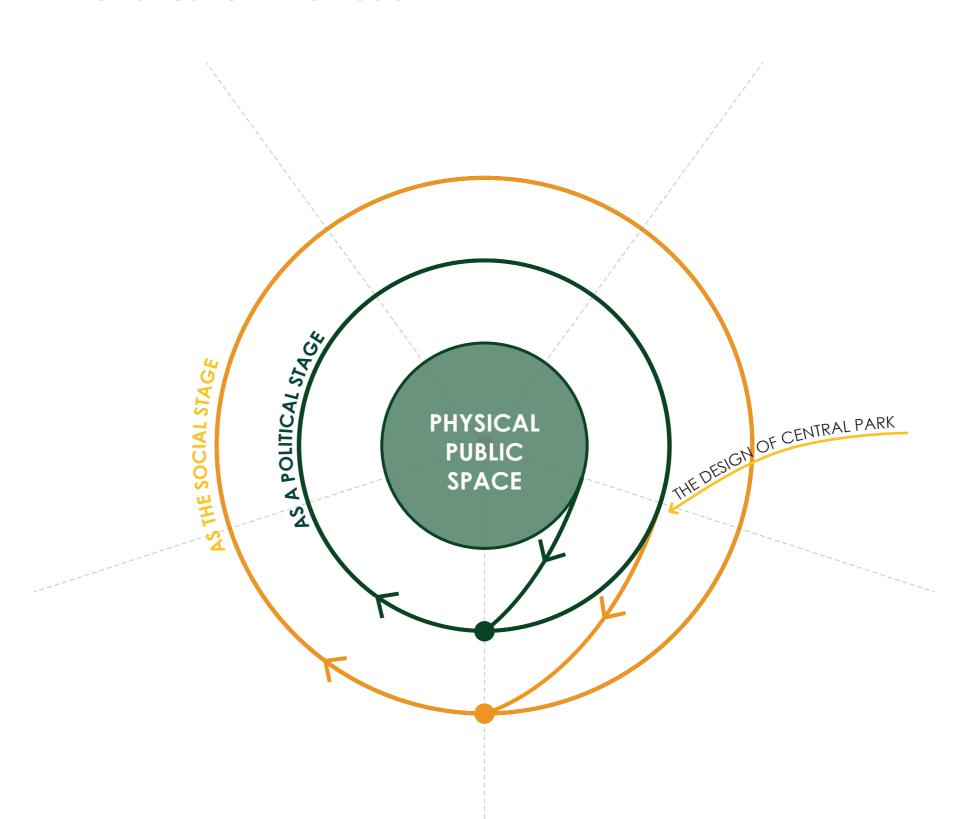
THE COMPLEXITY OF PUBLIC SPACE DEVELOPING SYSTEM

Social stage

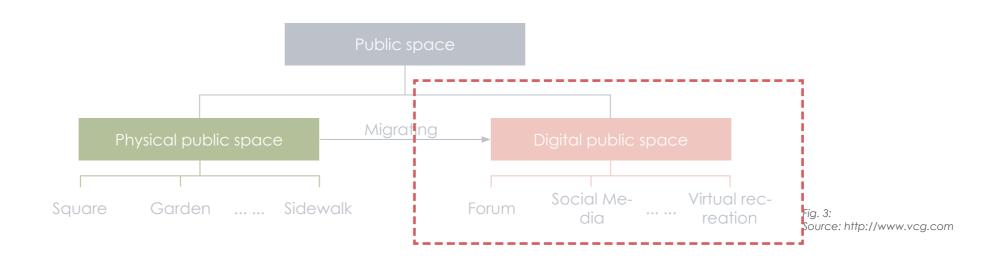


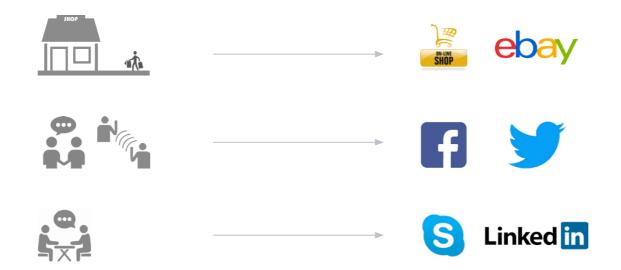
Since 1870s

The design of Central park in New York, Olmsted

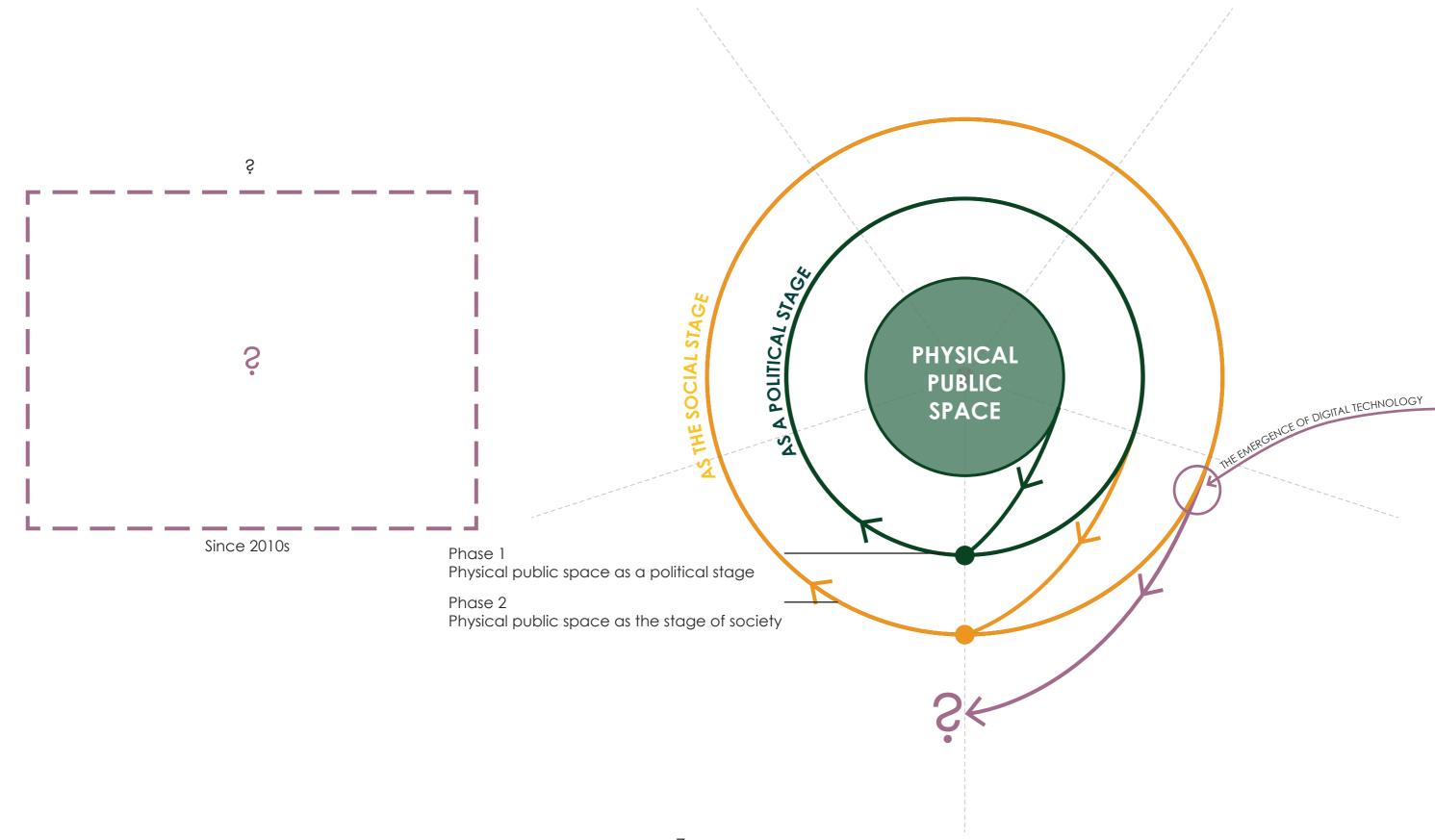


https://www.google.nl/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjf3v-a79PWAhWIZVAKHSdkAjoQjRwIBw&url=https%3A%2F%2Fwww.nycgo. com%2Fphoto-galleries%2Fcentral-park-photos&psig=AOv-Vaw2vumMeLx0g0FqnImtvNRtx&ust=1507099985722853





THE COMPLEXITY OF PUBLIC SPACE DEVELOPING SYSTEM



Problem statement

STATEMENT OF MOTIVATION

What will be the future of our physical public space in the new era?



Problem statement

STATEMENT OF MOTIVATION

What will be the future of our physical public space in the new era?



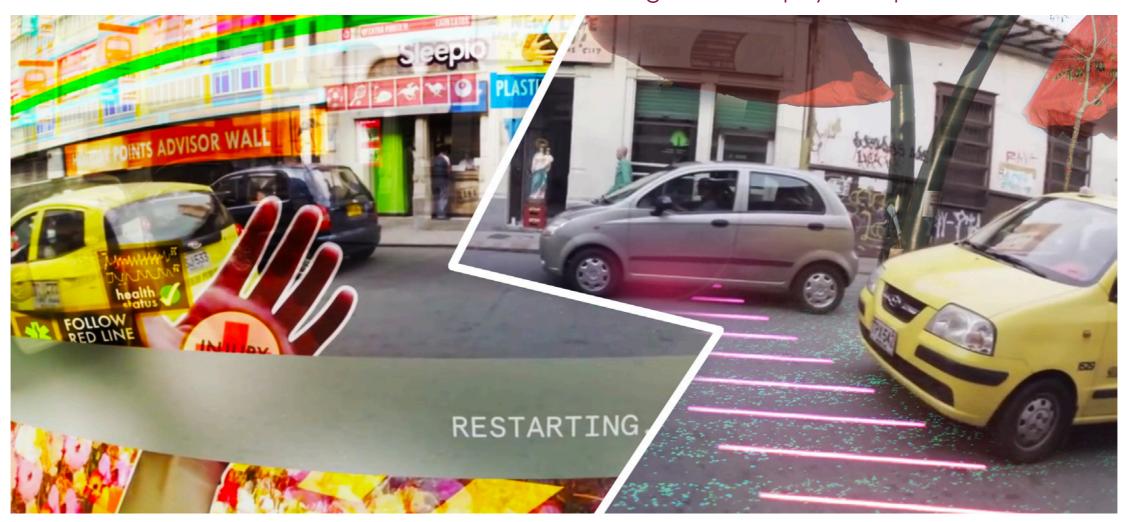
Is the Internet going to replace physical public spaces?

Problem statement

STATEMENT OF MOTIVATION

What will be the future of our physical public space in the new era?

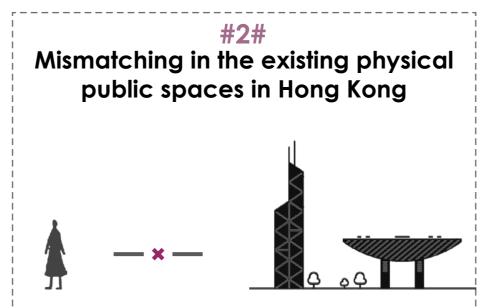
Is there a way that the digital and physical could come together and change how we design and use physical spaces?



Is the Internet going to replace physical public spaces?

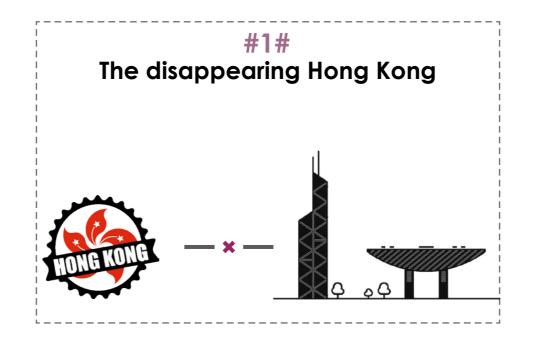








Problem analysis

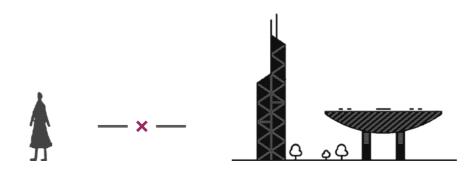






Problem analysis

#2# Mismatching in the existing physical public spaces in Hong Kong





Hongkongers enjoy less than half as much open space than citizens of other Asian cities – study

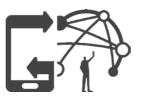
"The use of public spaces has become an increasingly hot topic in Hong Kong.

Although there's only a small amount public spaces in Hong Kong, their main problem is not the lack of open spaces, but rather they were not planned, designed and created to fulfil local needs."

-Lai-Chong Au

Problem analysis

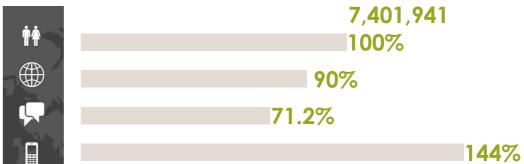
#3# DIGITALIZED SOCIETY in the Digital Era: The UBIQUITOUS Digital Technology

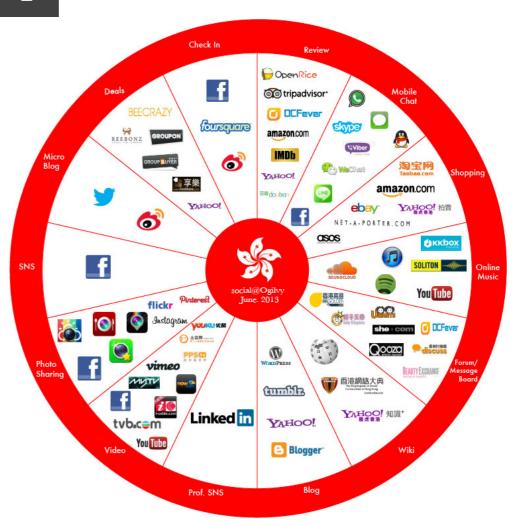


Establish

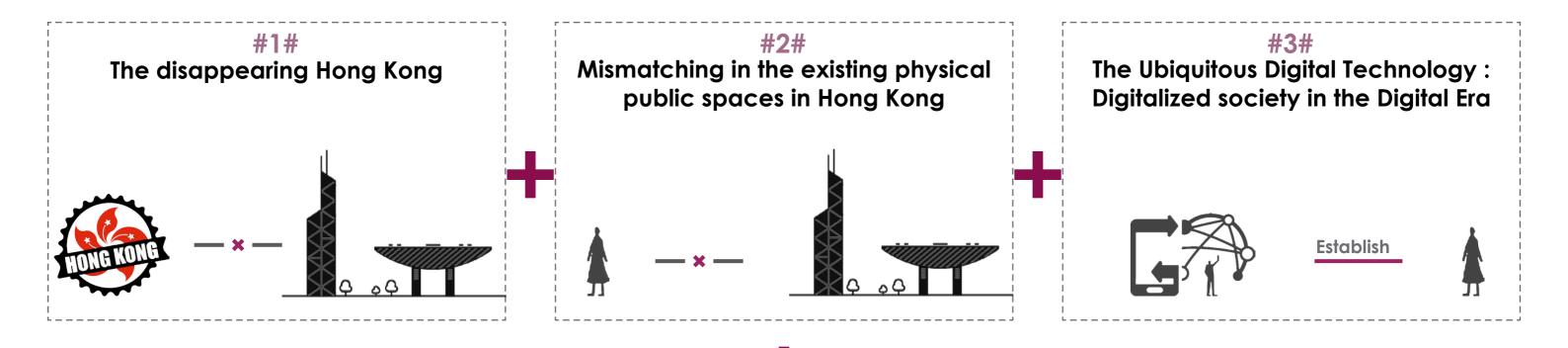






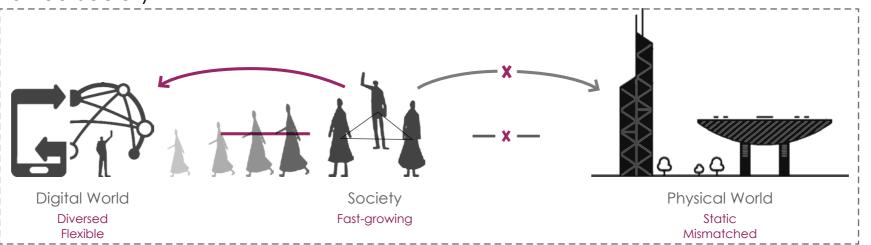


PROBLEMS



Problem Statement:

Migration and Digitization of Social Community and Interaction in Hong Kong's Digitalized Society



PROBLEM STATEMENT

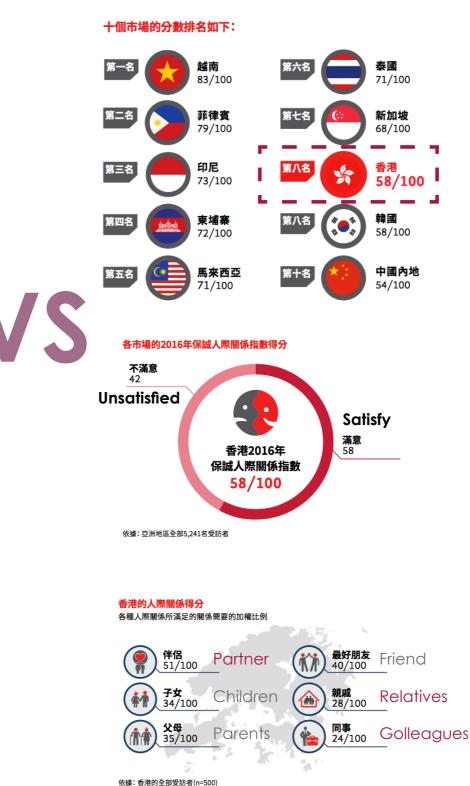
Social Relationships in Hong Kong are getting worse

TOP 10 MOST CONNECTED POPULATIONS WORLDWIDE GfK Connected Consumer Index score 2016 (forecast) rica 1,062

Social Relationships in Hong Kong are getting worse

Source: GfK Connected Consumer Index – The index measures how much consumers in each country connect with other people or content or technology, across 11 different device types (smartphone, tablet, mobile PC, desktop PC, wearables, smart TV, TV set-top box, videogame console, e-Reader, connected car and smart home).

bal 313



香港人 人際關係愈來愈差



2007年03月30日 f 🔰 🗗 🕓 🔽 🦠 🦠

【大紀元綜合報導】一項調查發現,香港人的人際關係愈 來愈差,傾向討厭別人的市民多了,寬恕別人的反而減 少。學者指出,經濟轉好,港人反而更加不開心。

城市大學應用社會科學本月中訪問了600多名市民,調查 發現有60%人都傾向容易討厭他人,較去年調查上升4個 百分點。近40%人在最近1個月內曾與人衝突,較去年同 期升6個百分點。只有32%受訪者願意與別人修補關係, 比率較去年下降12個百分點,顯示人際關係欠佳。

調查又發現,港人最令人討厭的事情,就是不懂得尊重別 人、講是非和推卸責任的人。另外,市民最普遍與人發生 衝突的原因,是家庭及生活瑣事,其餘的是工作、價值觀 及金錢問題等。

負責調查的城大應用社會科學系副教授黃成榮認為,雖然 經濟好轉,但港人生活壓力仍然好大,休息時間少,導致 人際關係欠佳。建議市民面對人際衝突時,應停下來想想 有甚麼辦法可達致雙贏,亦應學習寬恕別人,這樣才可以 令社會更加和諧。◊

Hypothesis



The necessity of PHYSICAL PUBLIC SPACE?

Health benefits:

- Space for exercise better cardiovascular health, lower obesity
- Better mental health less anxiety, depression, feelings of loneliness

Social benefits:

Space for social interactionBetter community relationships

Environmental benefits:

- Better air quality and ventilation
- Microclimate and relieving urban heat island effect



The Public Space Cycle

http://www.burri.world/en/content/public-space

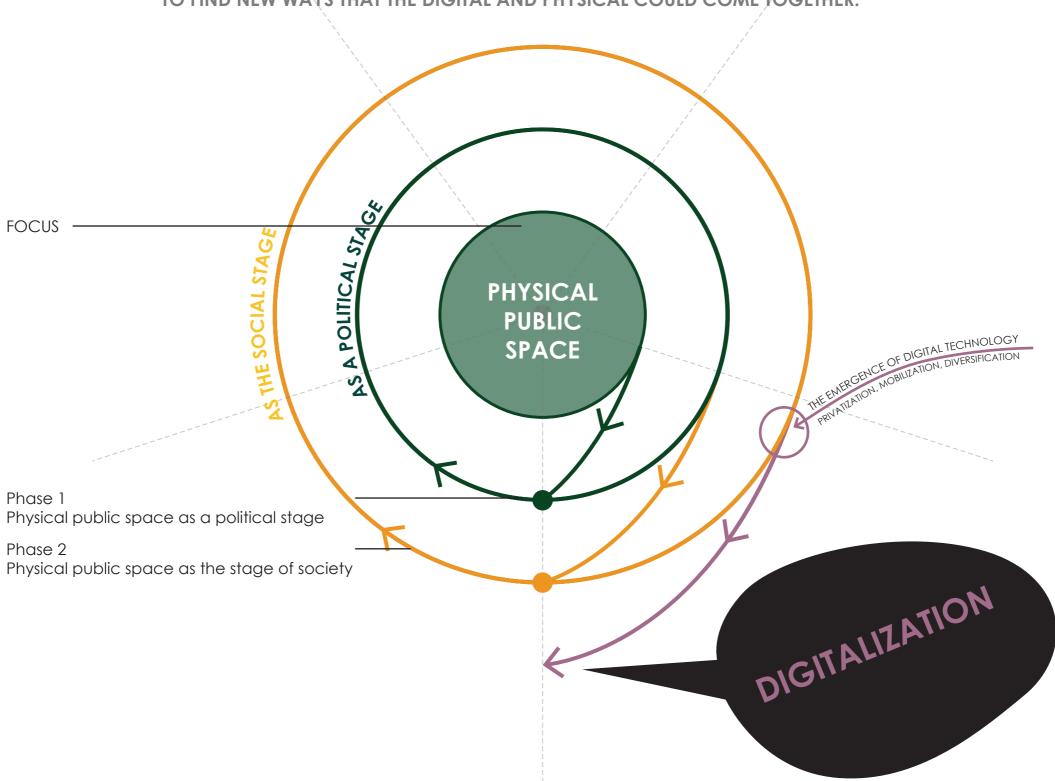
Unopened Space: Mapping Equitable Availability of Open Space in Hong Kong

Hypothesis

Hypothesis

DIGITALIZATION!

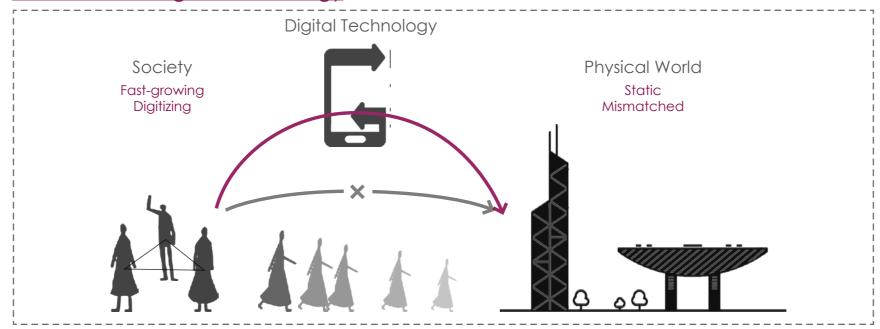
TO FIND NEW WAYS THAT THE DIGITAL AND PHYSICAL COULD COME TOGETHER.



Research question

Research Question

Can Urban Design bridge the gap between <u>fast-growing digitizing urban society</u> and the static dimension of physical public space in Hong Kong through the implementation of Digital Technology?





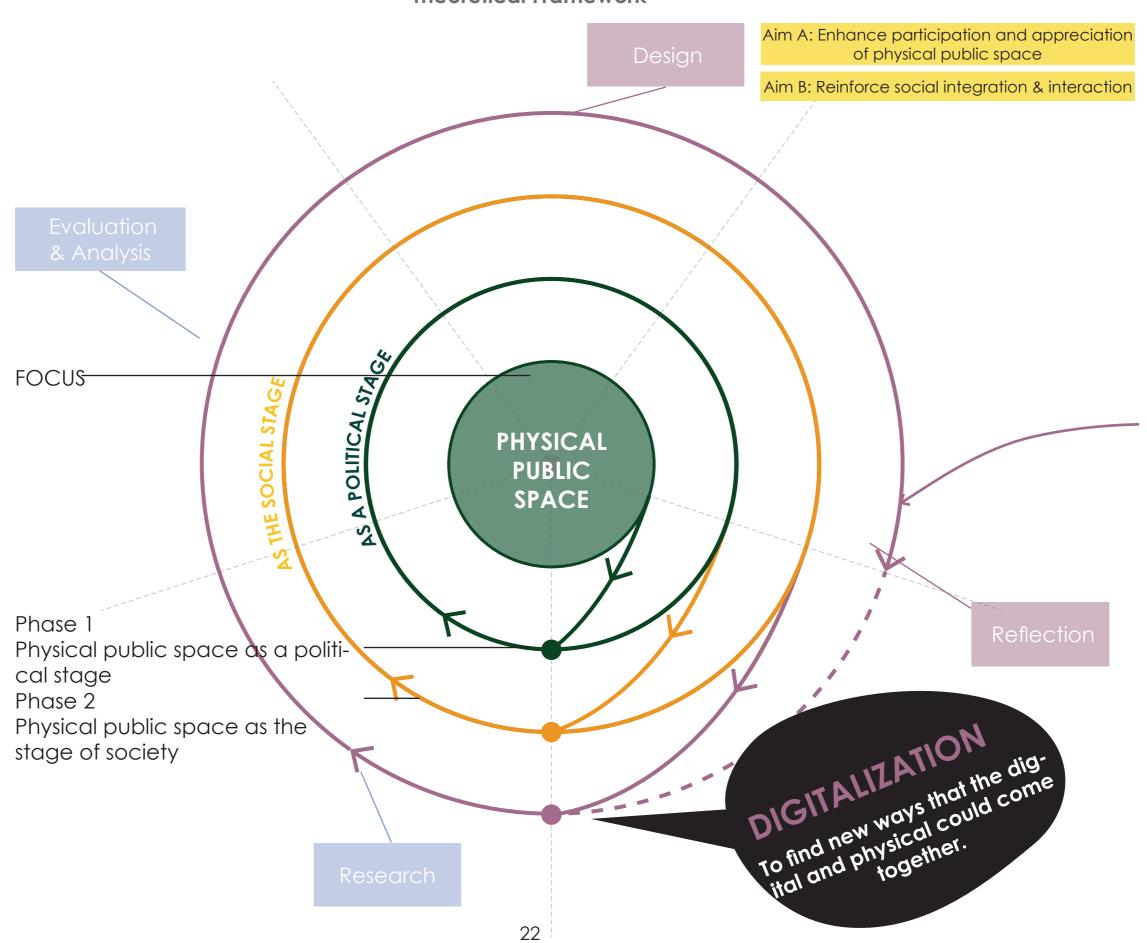
Aims:

A. To figure out a possibility that <u>spatial design approach</u> and <u>digital technology</u> can <u>coexist and cooperate</u>, which enhances both <u>citizens' participation</u> to public life and <u>their appreciation</u> of physical public spaces;

B. To create <u>dynamic public spaces</u> through taking the advantage of digital technology, which thus <u>reinforce the social integration and interaction</u> between different users of public space.



Theoretical Framework



Methodology

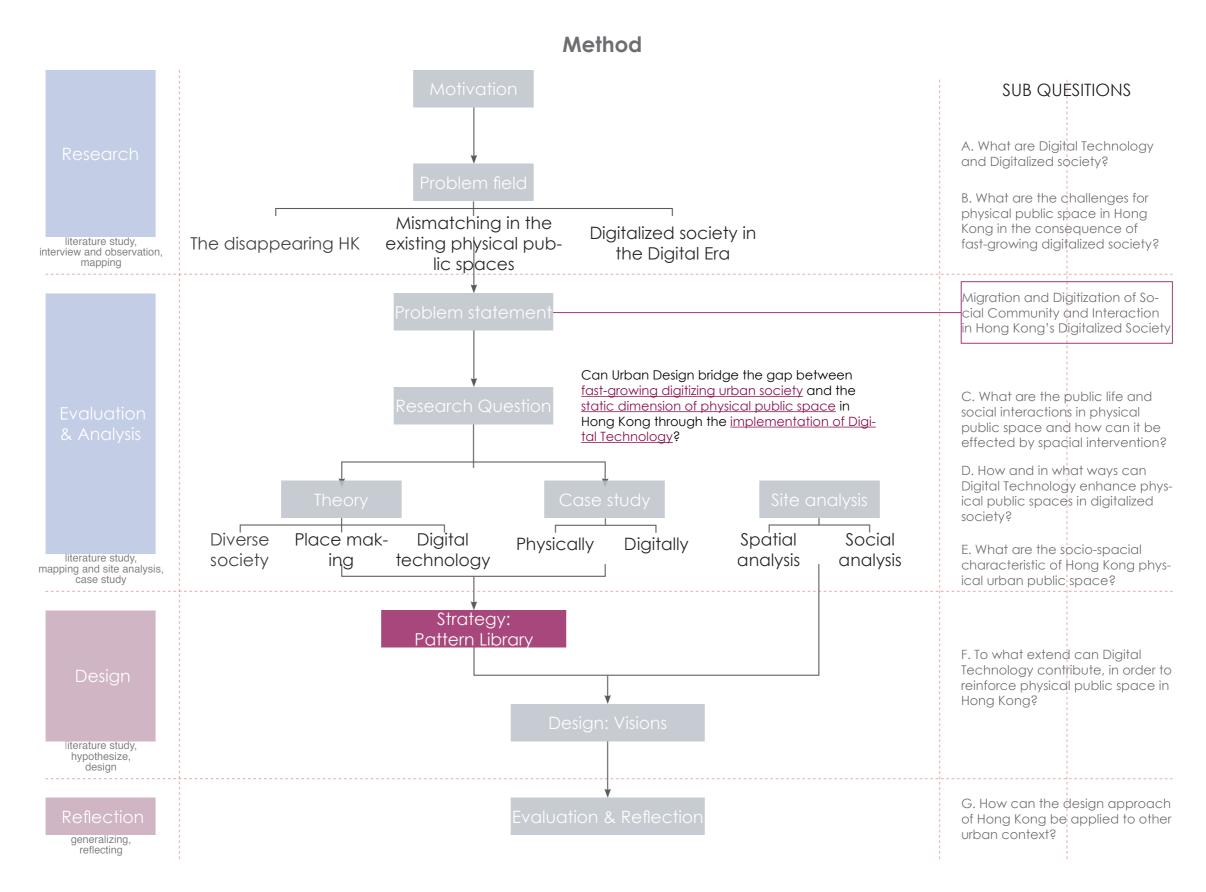


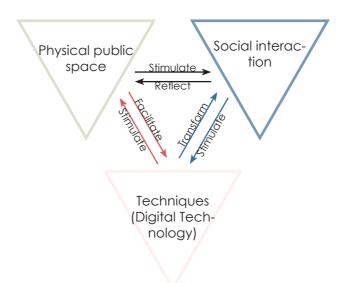
Fig. 13: Research framework Made by author

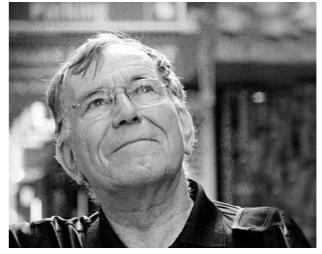
Relation & Organization

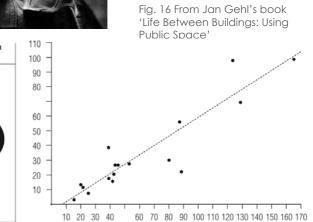












Jan Gehl

"The internet, which by then will have entered not only into our lives, but also into our bodies. The so-called "internet of everything"



Carlo Ratti
Professor of the Practice, Senseable City Lab, Department of Urban Studies and Planning, MIT



Christian Licoppe
Professor in Sociology of Information and Communication Technologies



Ralph Schroeder Professor in Social Science of the Internet at the Oxford Internet Institute

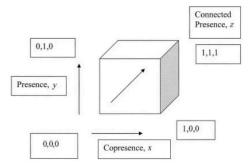
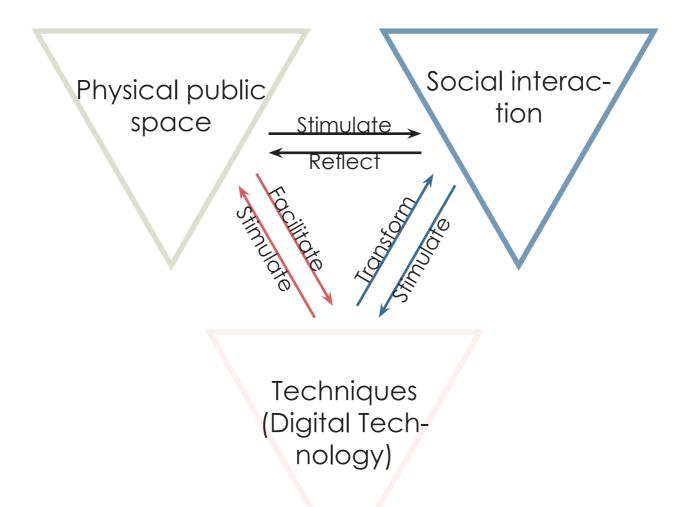


Figure 1. The connected presence cube.

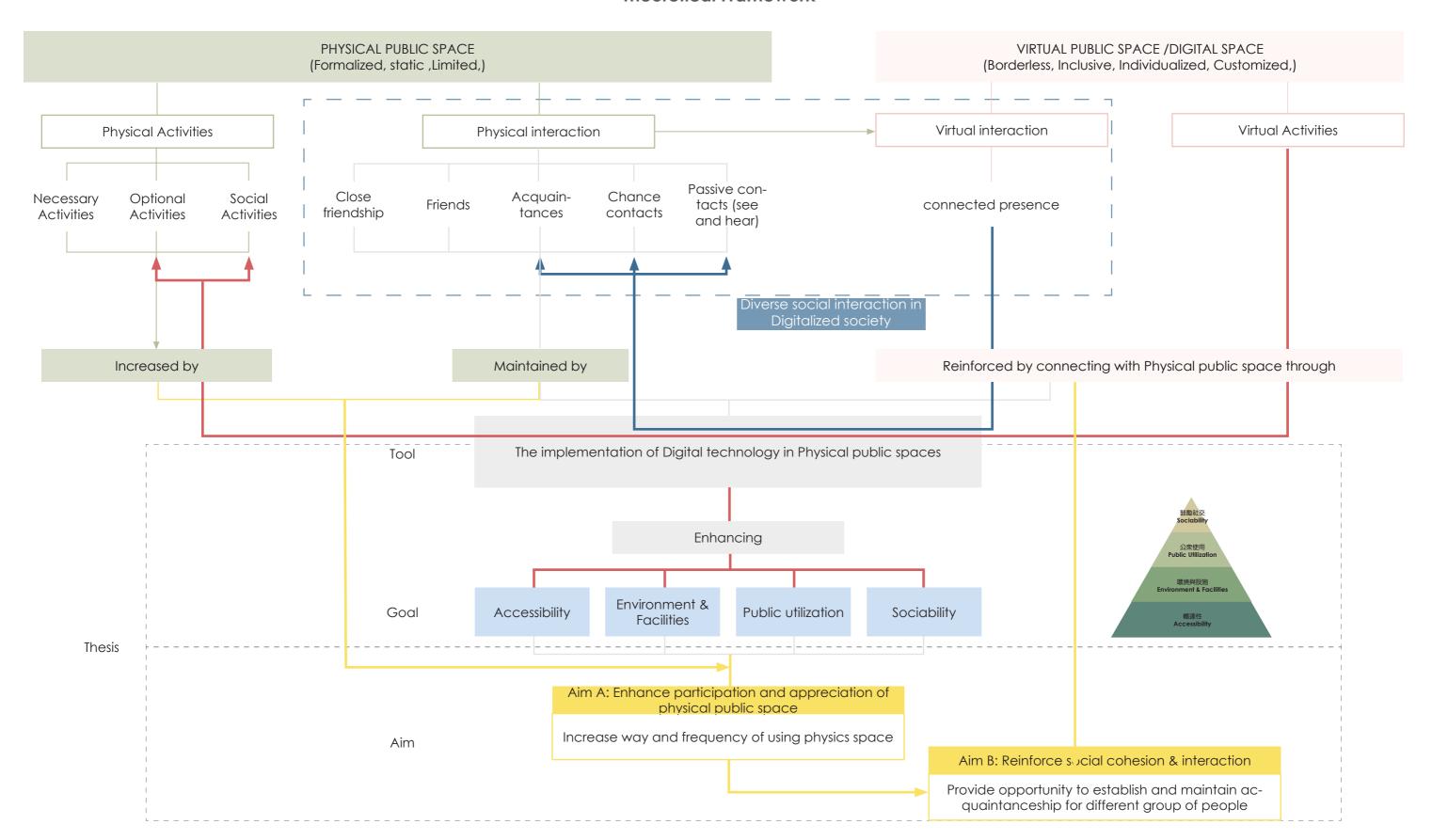


Relation & Organization



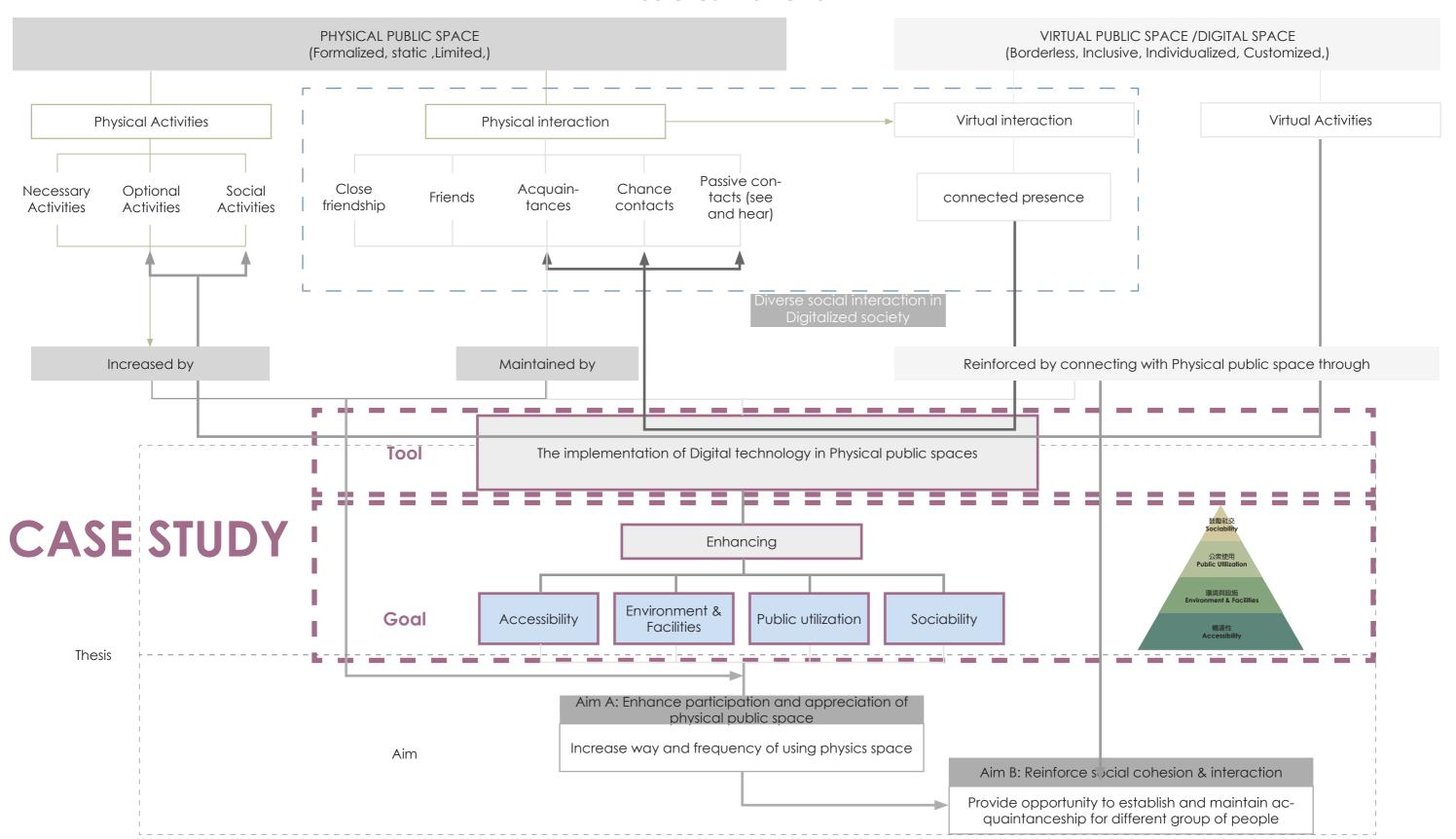


Theoretical Framework





Theoretical Framework

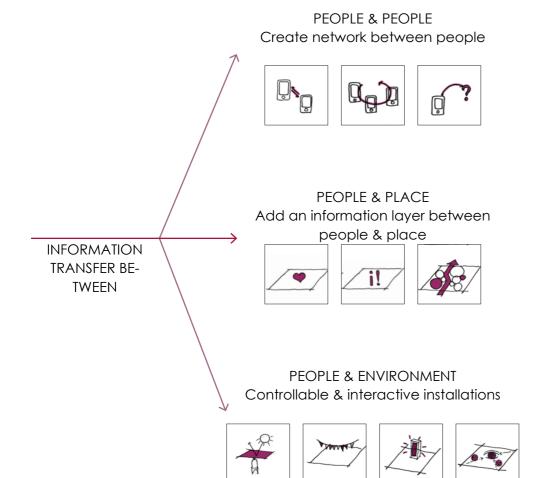


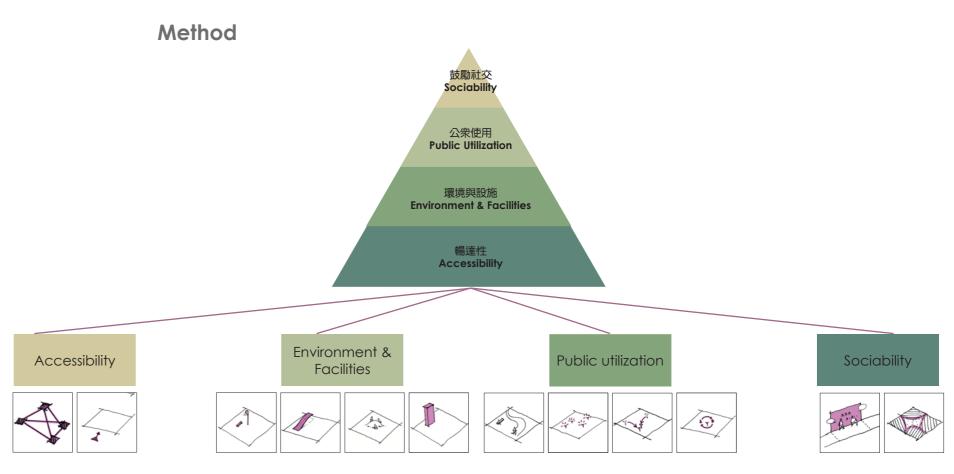
Strategy

Ideal Standard/ Goal/

Tool

#Digital technology#





Patterns



Case studies

Accessibility



Environment & Facilities





Sociability



Public utilization



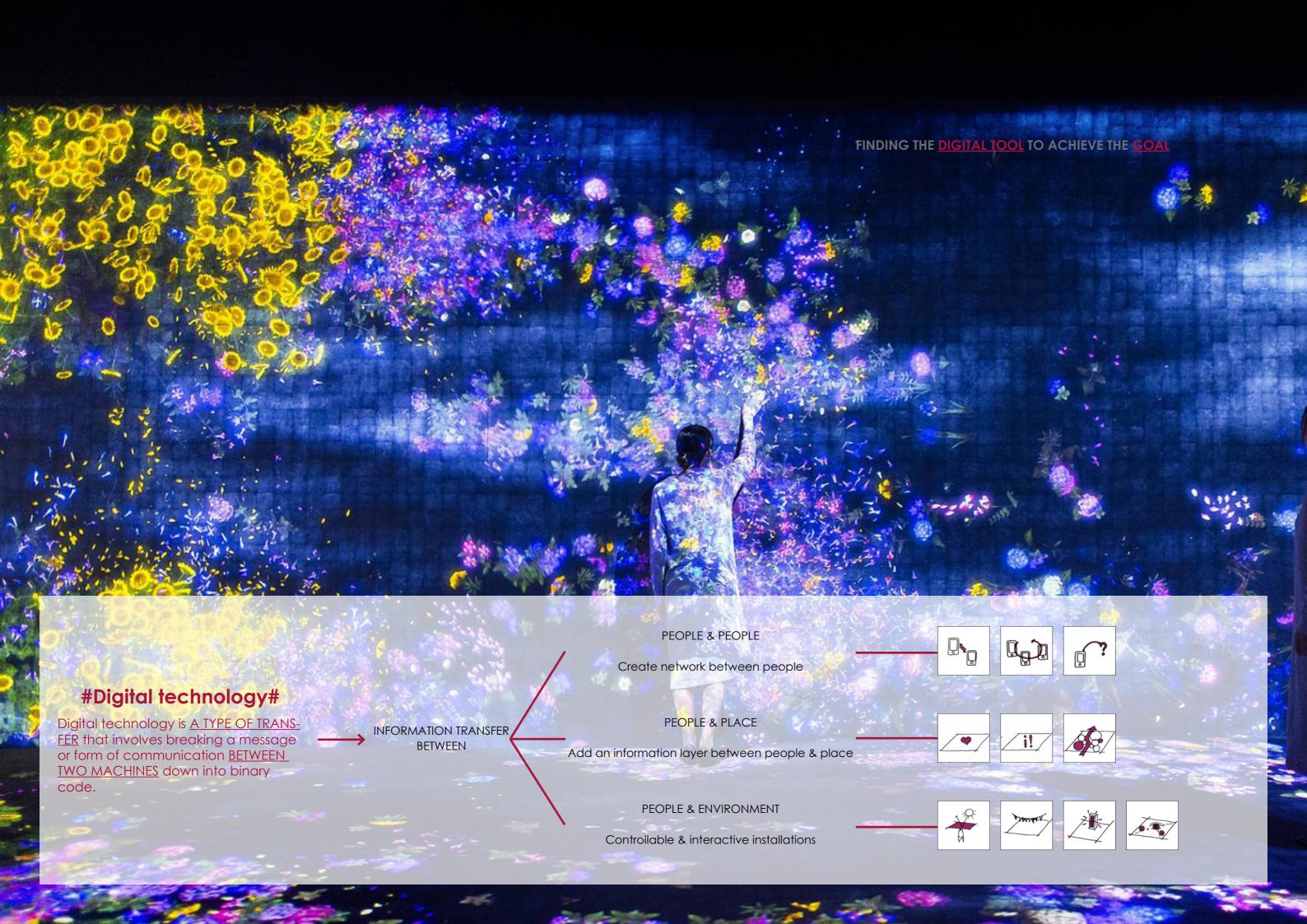


Analysis

Case studies







Case studies

Information transfer between PEOPLE & PEOPLE

Add layer of Digital information between people & people

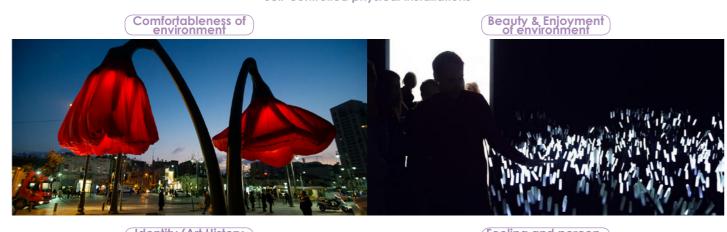


Between strangers



Information transfer between PEOPLE & ENVIRONMENT

Self-controlled physical installations



Identity (Art History and Culture)

Feeling and perception of environment

Information transfer between People and Place

Add layer of Digital information between people and place



Experience of place

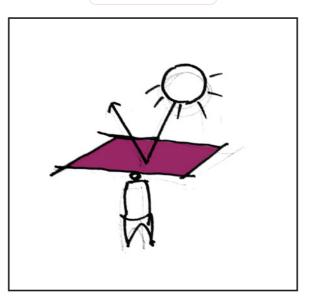




Case studies

Information transfer between People and Place Add layer of Digital information

For Art and Culture



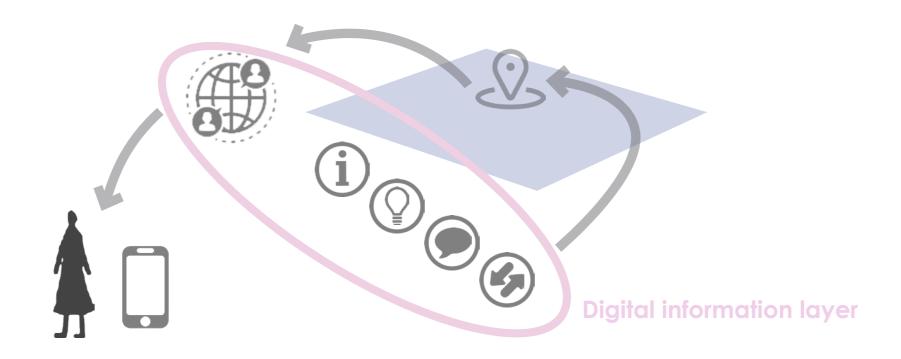


This application was developed for tourism in various cities across the world. It allows users to experience the story of a soldier (written as historic fiction) at the physical location of the story, providing a historical narrative of the site. The project overlays digital narratives over physical place, which enhance the meaning and understanding of heritage and the cultural significance of place. And the participants also proved that they had a better understanding of the place and its history as the result of the experience.

Information transfer between People and Place Add layer of Digital information



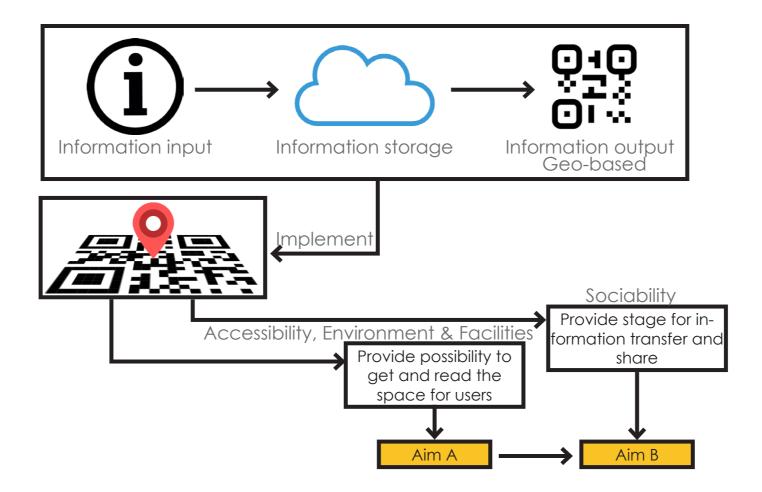
Interaction with people & space



Information transfer between People and Place Add layer of Digital information

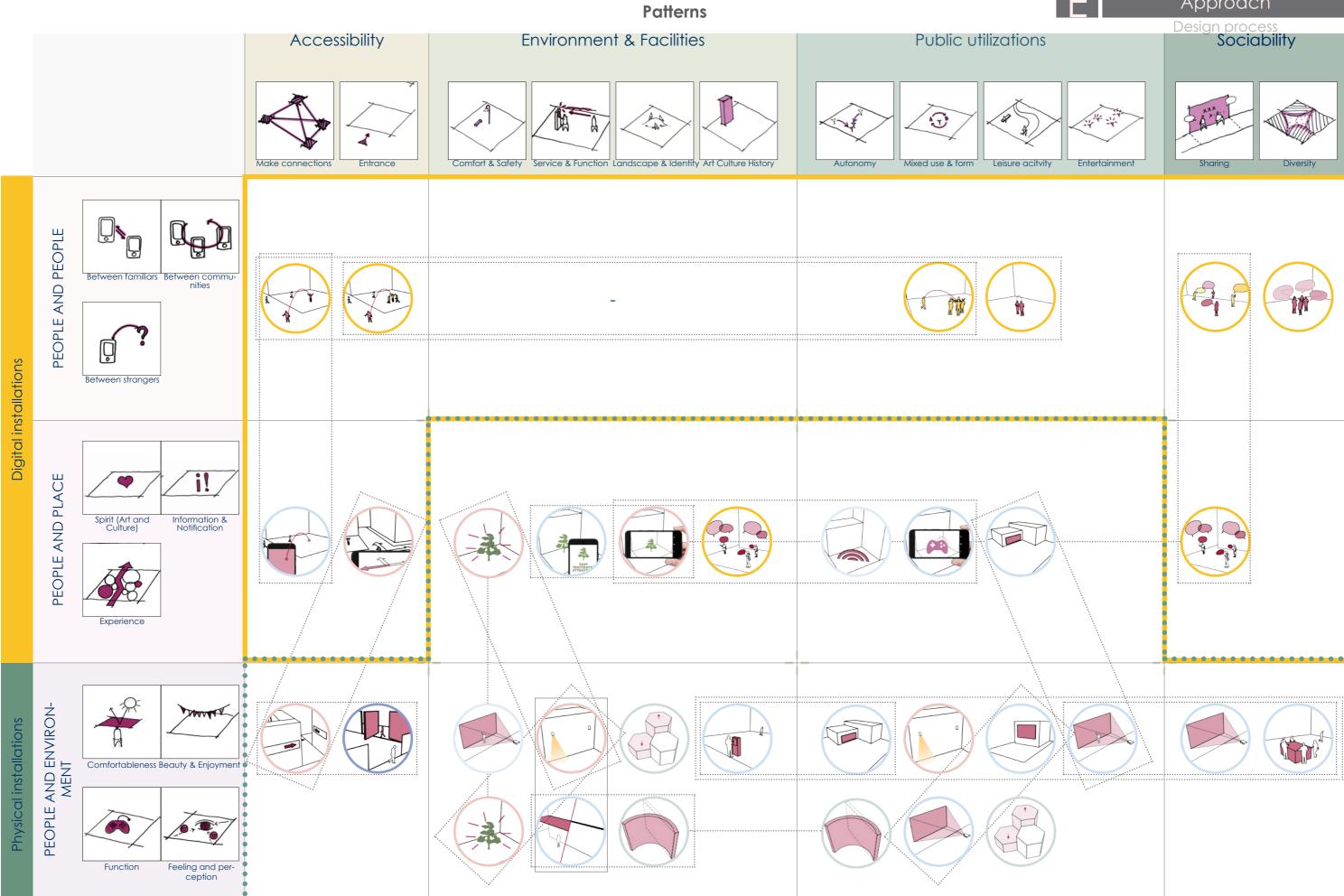


Running mode



			Patterns		Approach Design process
		Accessibility	Environment & Facilities	Public utilizations	Sociability
		Make connections Entrance	Comfort & Safety Service & Function Landscape & Identify Art Culture History	Autonomy Mixed use & form Leisure activity Entertainment	Sharing Diversity
Digital installations	Between familiars Between communities Between strangers	Enhance the accessibility of physical public space by spreading notification and information to the existing social relations		Create more possibilities for people in groups to use physical public space.	Provide a platform for citizens to communicate with familiars, communities or strangers, which could bring and extend the digital social relation into physical spaces.
	Spirit (Art and Culture) Spirit (Art and Notification & Notification	Creating information layer could help with the navigation, as well as giving informatic characteristic to specific space, that could thus makes it easier for people to get to or use.	Creating information layer help to present the culture, history or even vision of physical public spaces, which could not be seen by users directly, as well as forming and emphasizing its identity.	Help people to get to the space, read the space, understand the space and use the space well.	Creating information platform to emphasize layer could help with the navigation, as well as giving informatics characteristic to specific space, that could thus makes it easier for people to get to or use.
Physical installations	Comfortableness Beauty & Enjoyment Function Feeling and perception	Help with emphasize the entrance of physical public space, make it more NOTICABLE and RECOGNIZABLE, as well as WELCOME.	Improving the experience of an environment and the image of physical public space through implementing interactive installations, which could react and response to the situation at the present, including weather, time or users' movement and activities.	Allows variation and transformation for the static physical spatial form and facility regarding to different weather, time or users' movement and activities.	Manual controlled physical installations allows the entrance of physical public space be more flexible regarding to the location and form, thus to enhance the accessibility.









 $https://www.123rf.com/photo_29952198_hong-kong-related-symbols-and-concepts-word-cloud-illustration-word-collage-concept.html$



Hong Kong's society

Key words: Historic, Crowded, Shopping Paradise, multi-cultural and diversed



CROWD

HISTORICAL

Omero

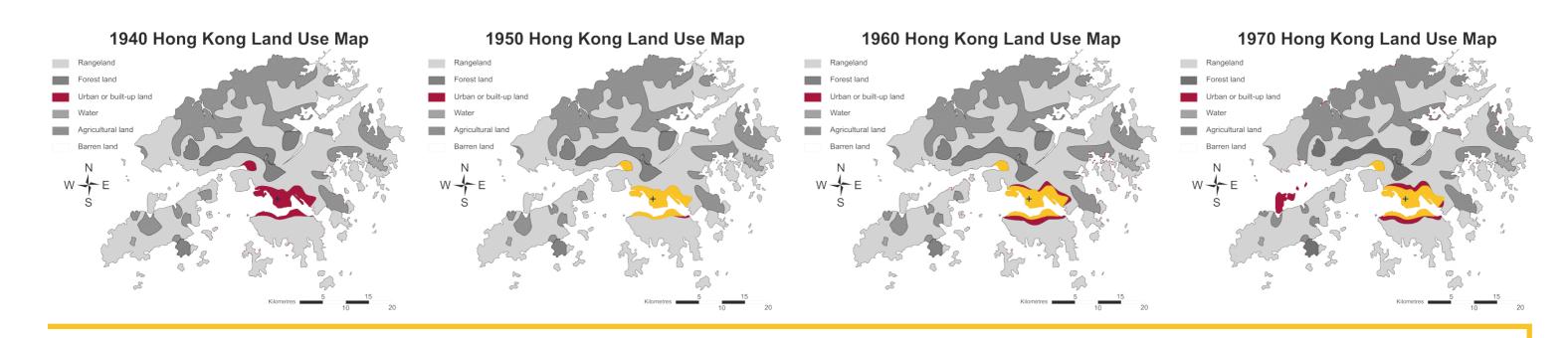


SHOPPING PARADISE

MULTI-CULTURAL AND DIVERSED

Site choose

"HISTORICAL"



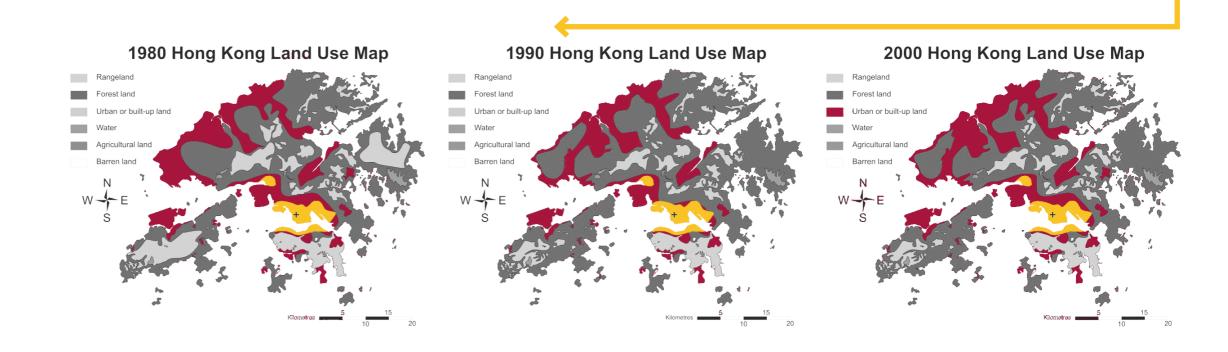


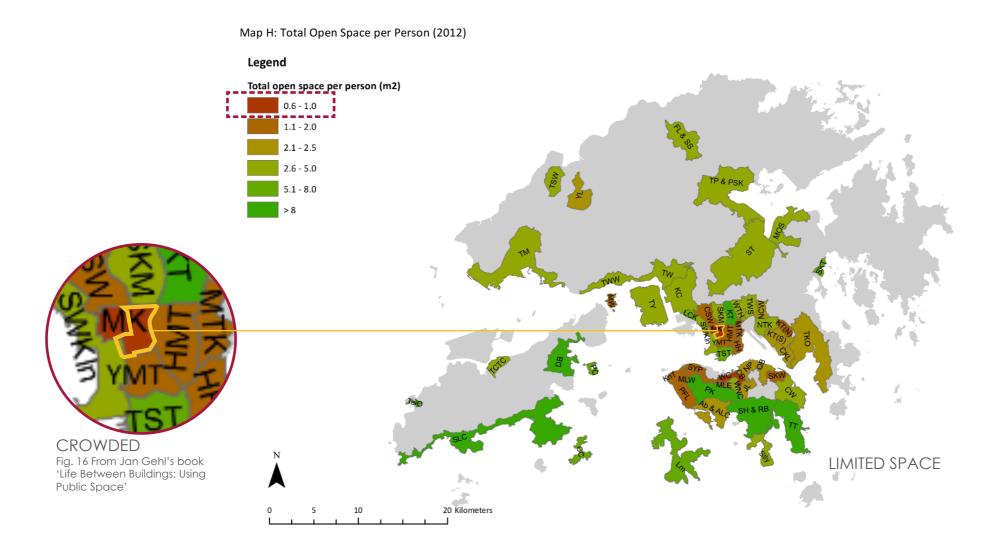
Fig. 16 From Jan Gehl's book 'Life Between Buildings: Using Public Space'

OLDEST

Hong Kong study

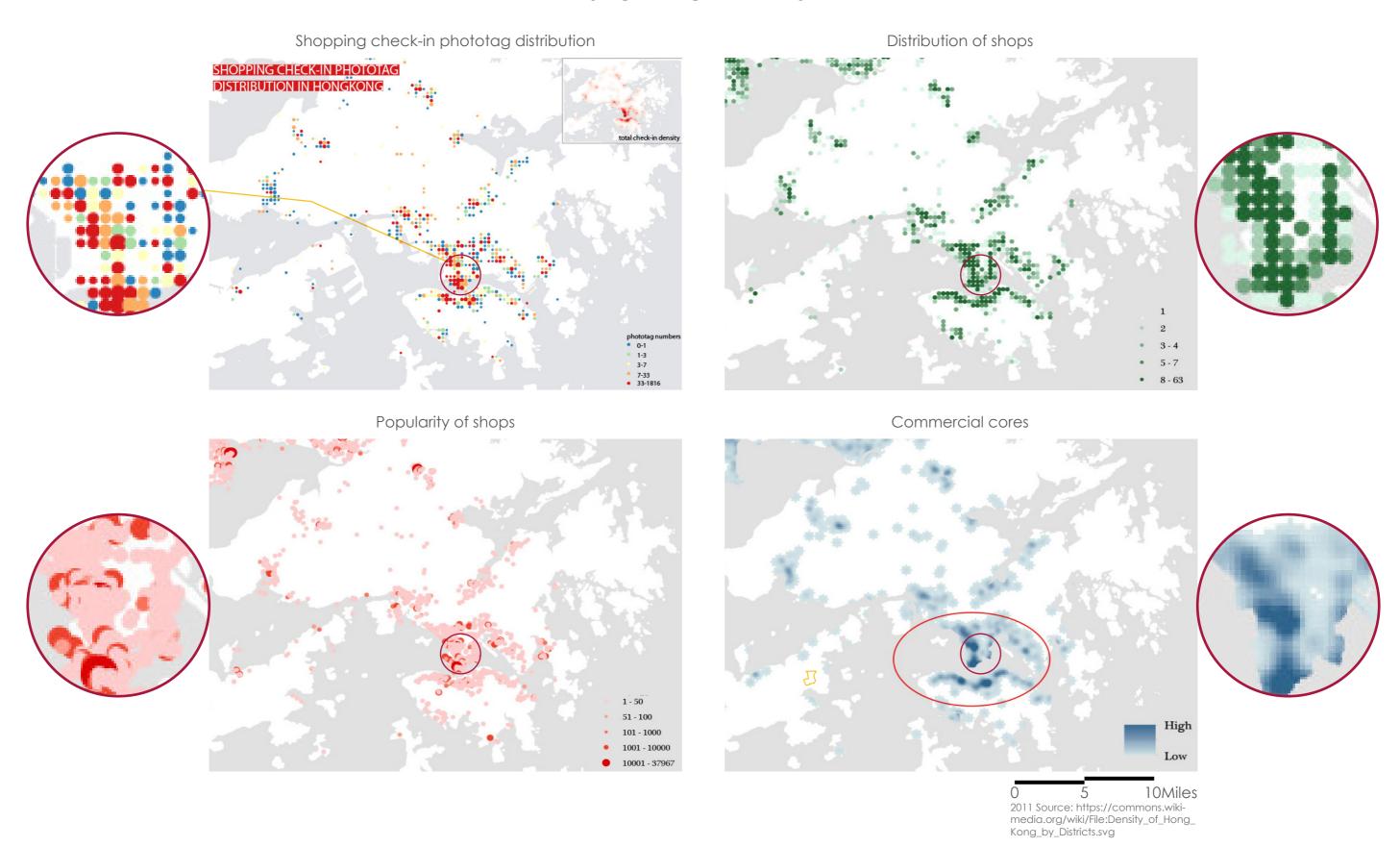
Site choose

"CROWD"

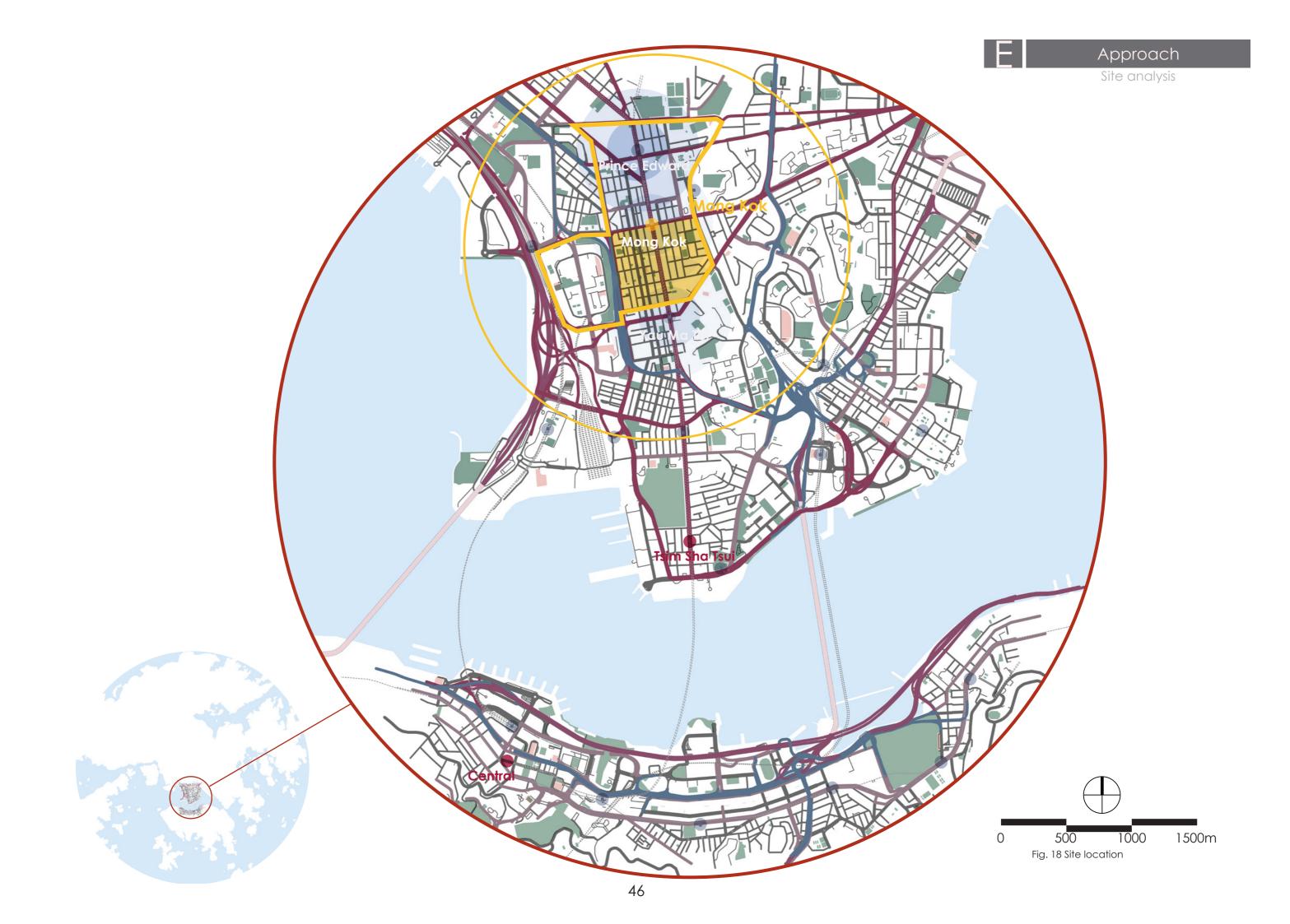


Site choose

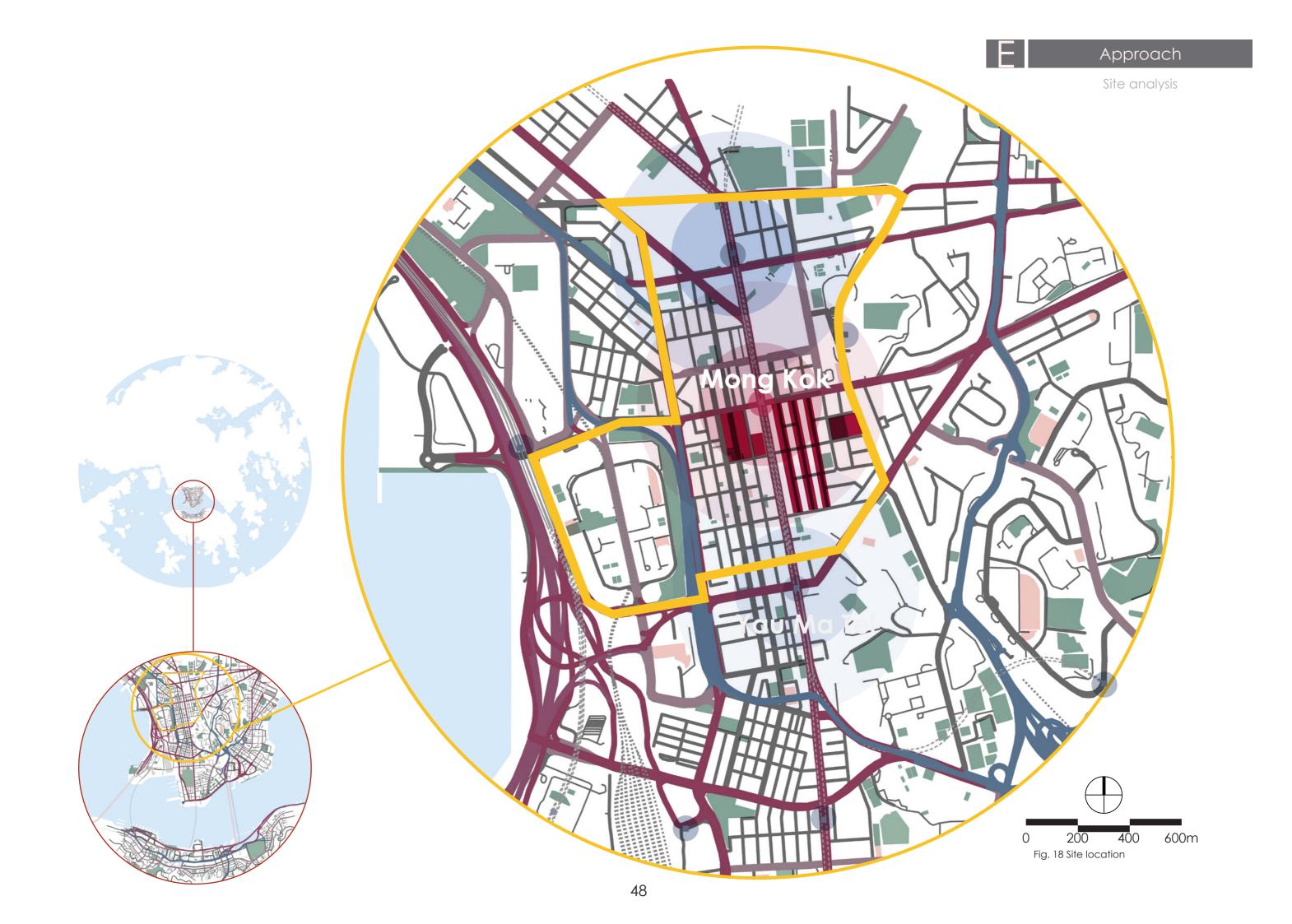
"SHOPPING PARADISE"

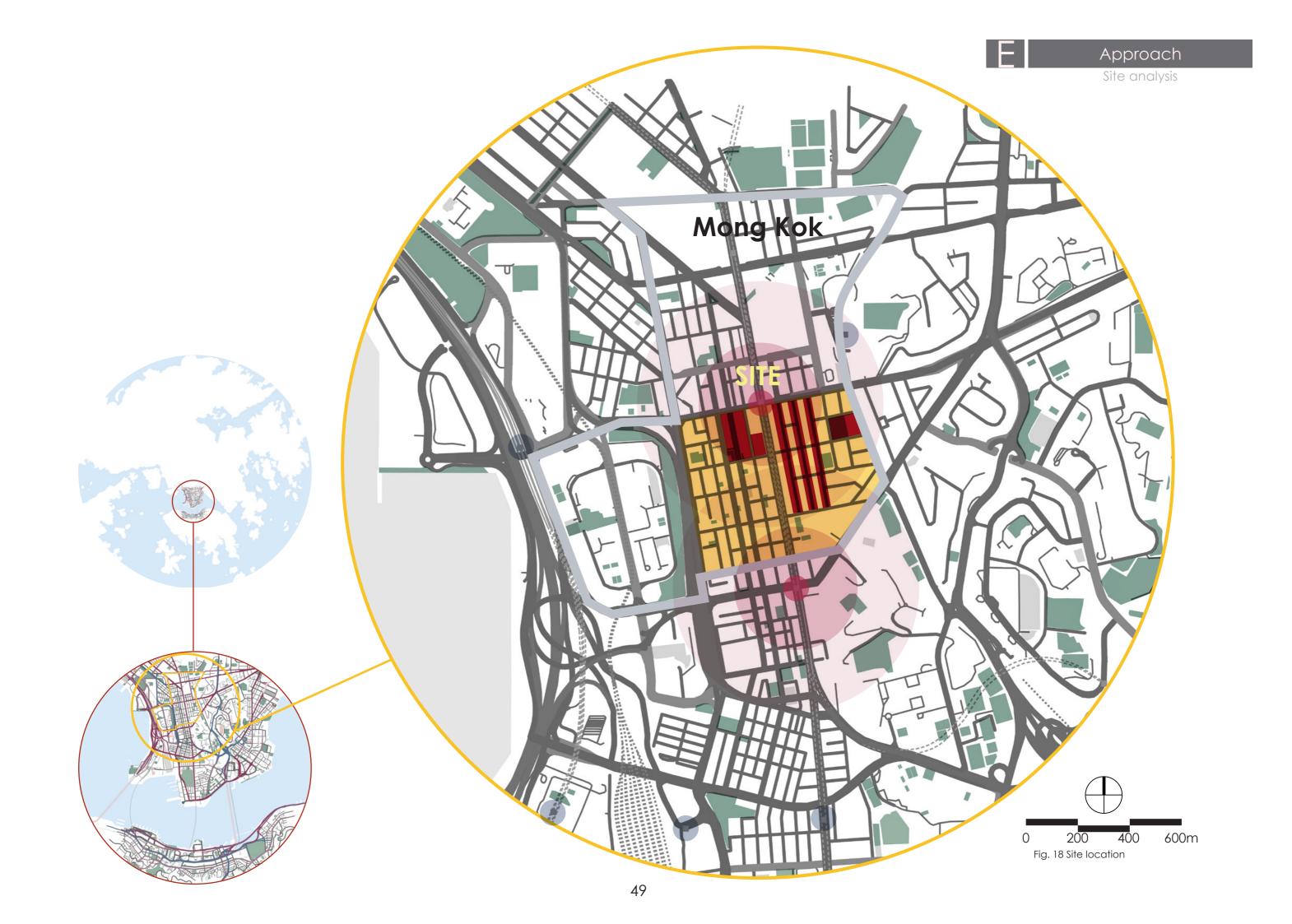


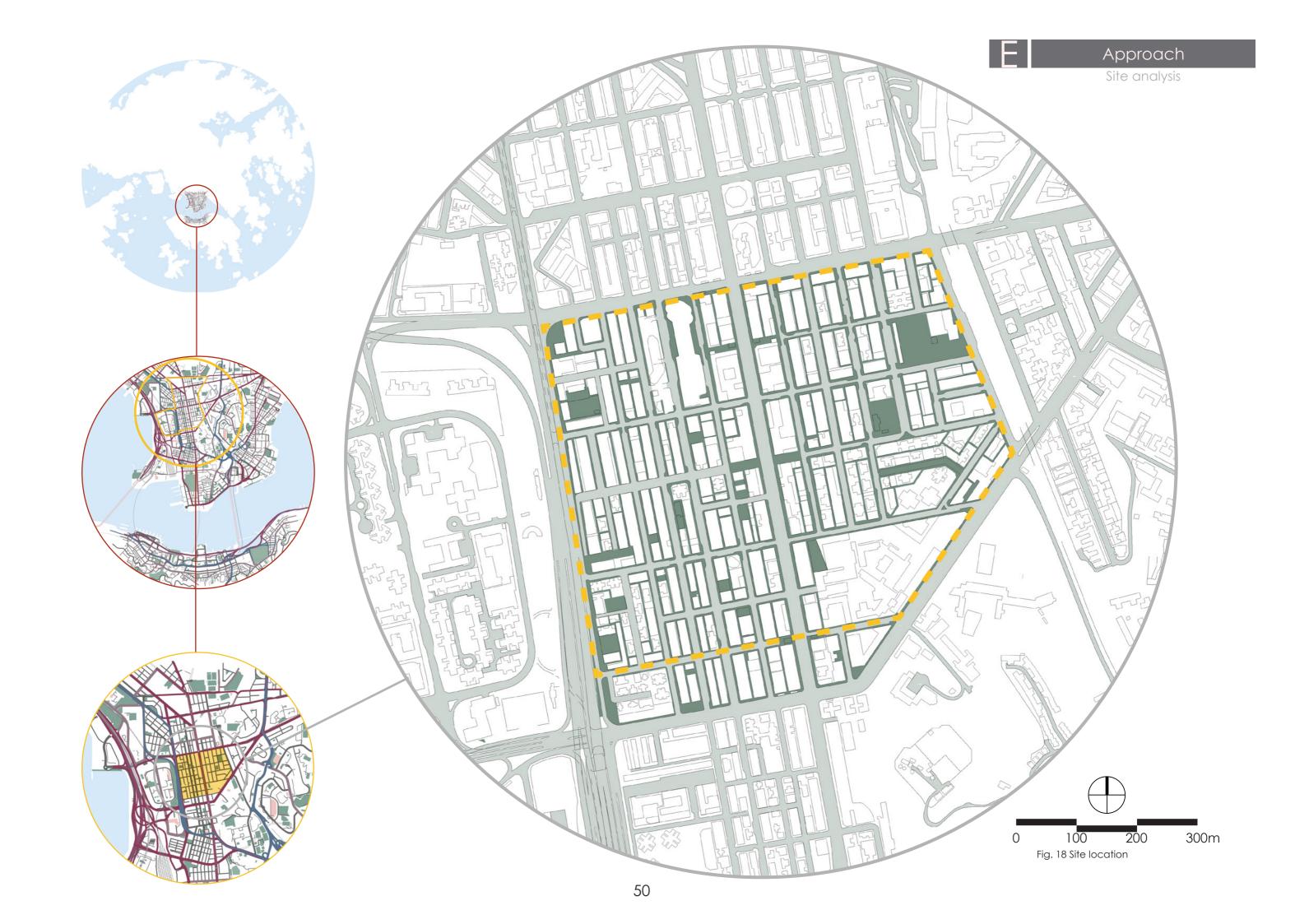














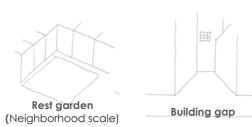
Site analysis

Contents Level









Building gap

















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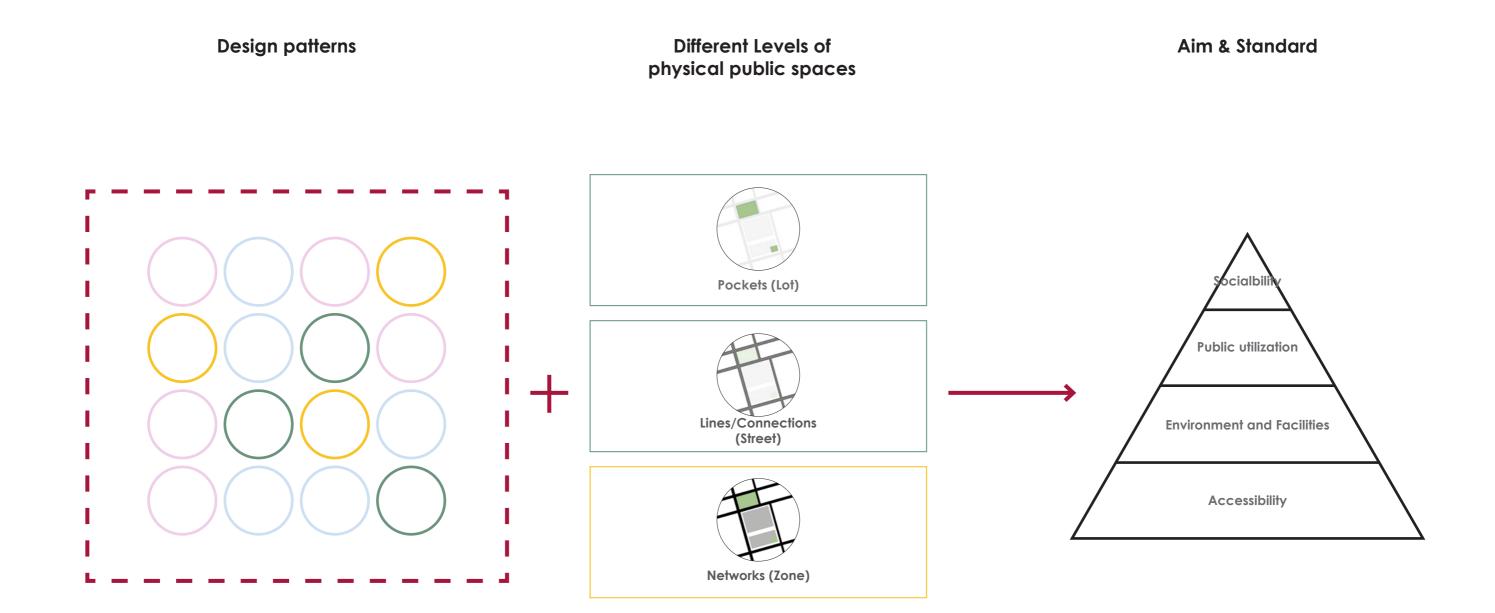








Design strategy





Level Contents Aims



Pockets (Lot)

FOR STAYING







- EFFECTIVE use of space,
- Improve ENVIRONMENTAL QUALITY,
- Promote DIVERSE social activities and public life,
- Stimulating urban social interaction and driving urban vitality.











- GUIDING FLOW of people
- CONNECT pockets, public & private, form network
- Act as an DAILY LIFE Extension

П





- Establish COHERENT and COMPREHENSIVE urban public space structure, thus to enhance PARTICIPA-TION and APPRECIATION of urban public space Create a COHESIVE urban public space system,
- Create a COHESIVE urban public space system, thus to reinforce SOCIAL INTEGRATION and INTERAC-TION

Pocket spaces-Recreation area & Rest garden



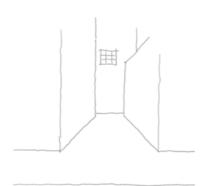


Fig. 23 Service condition of existing public spaces



Design process

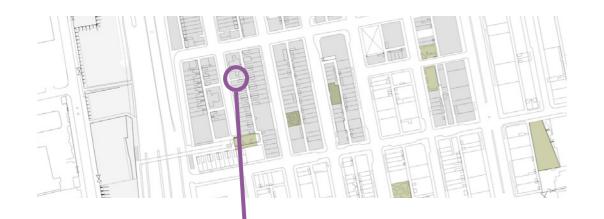
Pocket spaces-Building gaps

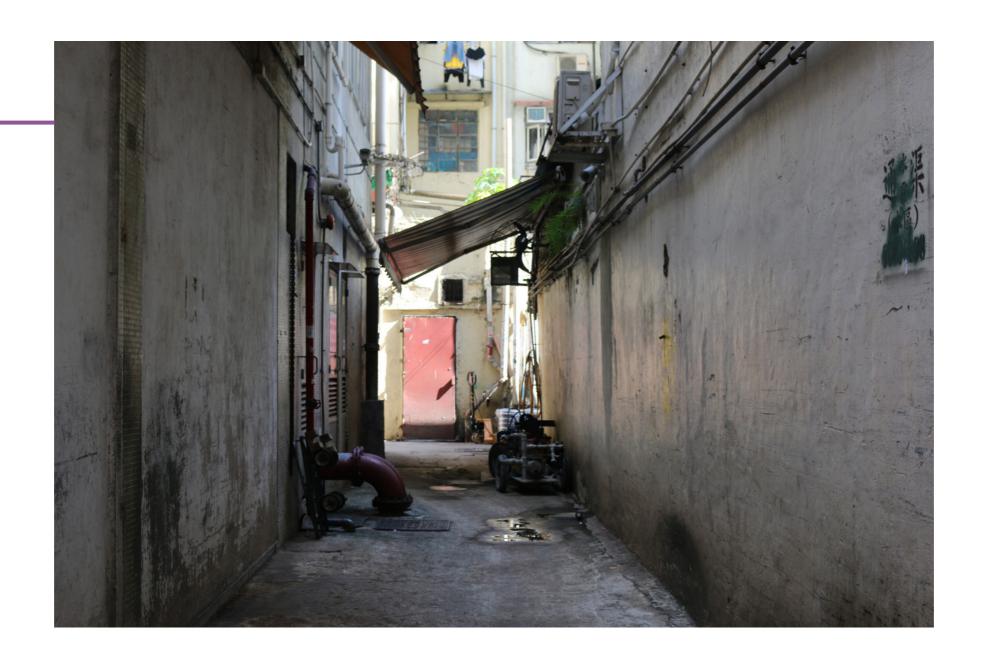




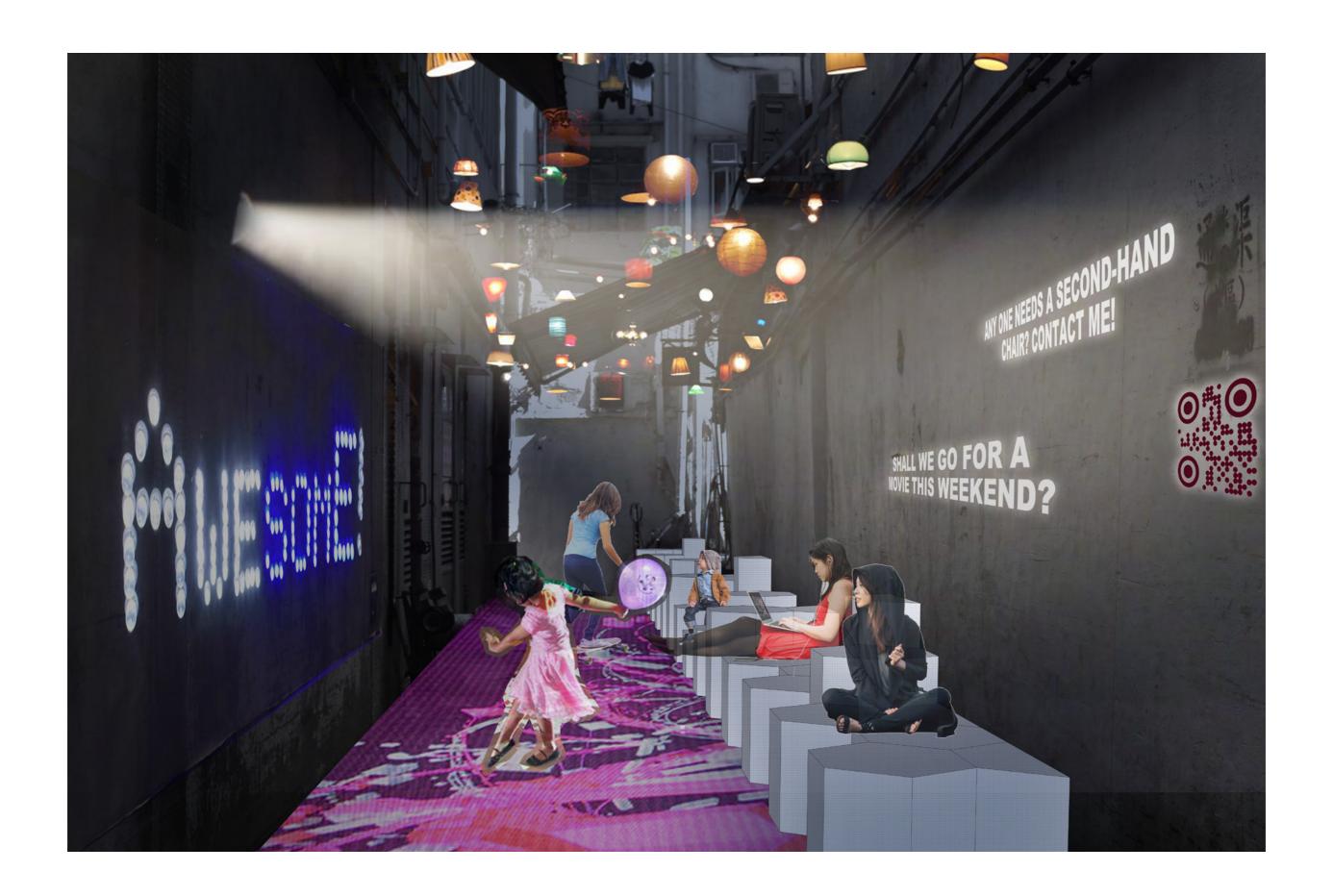


Design process

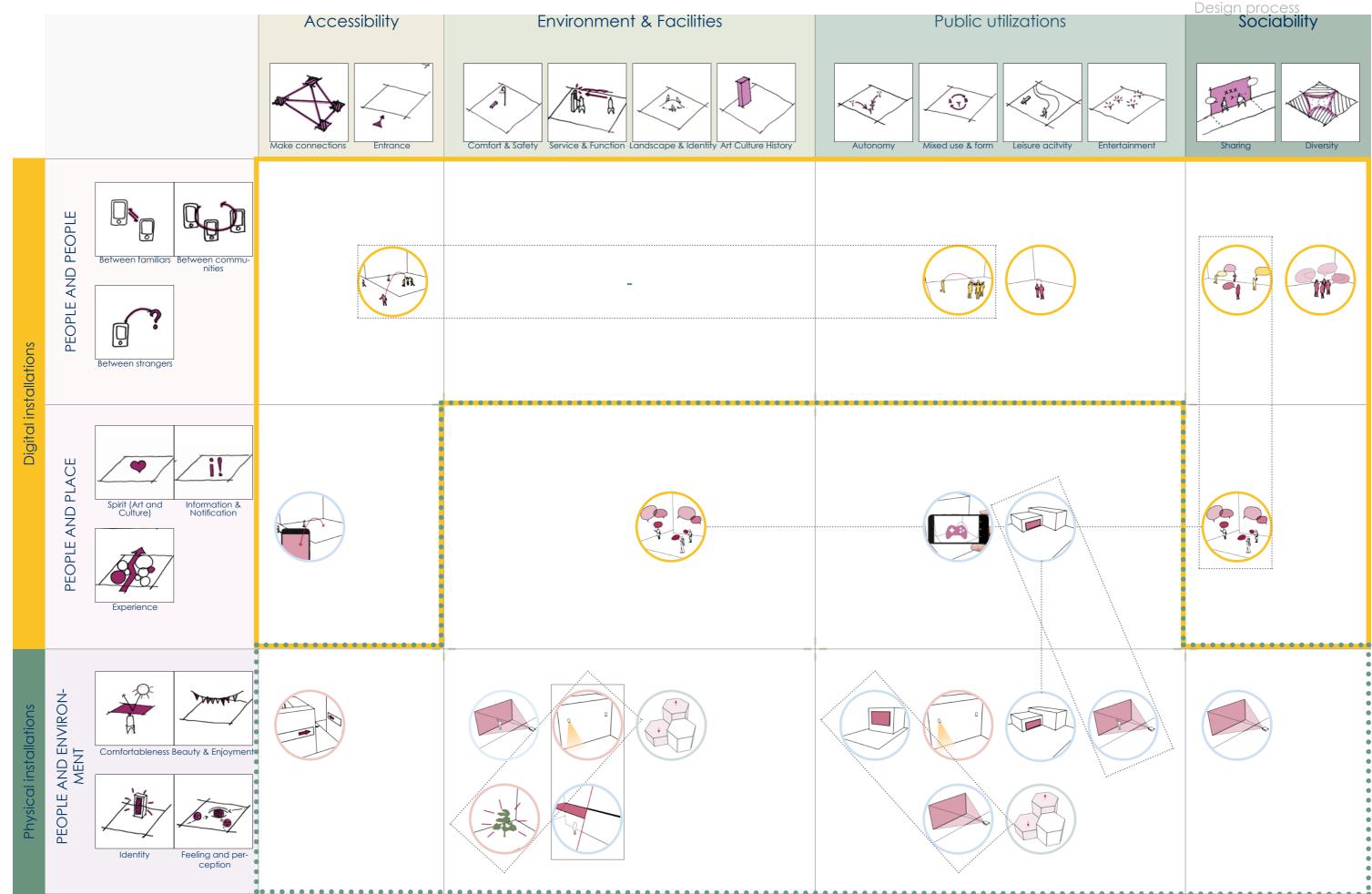




Accessibility Environment & Facilities Public utilizations Sociability



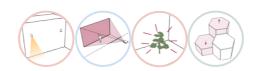


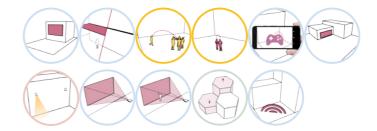


Accessibility	Environment & Facilities	Public utilize	Sociability
Ubiquitous and physically accessed but mentally unreadable	Narrow with empty facade, people some- times stand there or sit on the goods.	Empty in function, lack of usability	Lack of sociability

Existing and possibilities









Design process

People

Community, Stranger

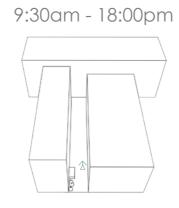
Short stay (Community, Strangers)





Pass by (Community, Strangers)





7:00am - 9:30am, 18:00pm - 20:00pm

20:00pm - 7:00am

Place

Left over space

Empty on experience

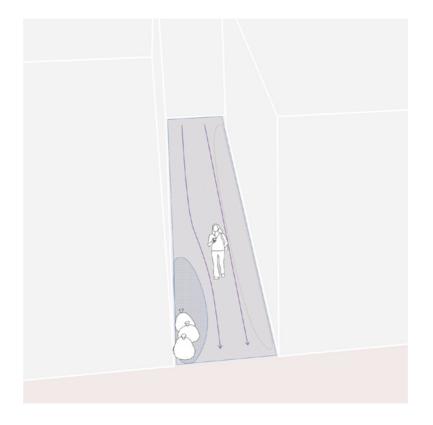
Environment

Narrow

Closed, deep and private

Lack of function





Scale Household	Street/block	District	Urban
Flow of pe	ople		Large
Publicness Private			Public

Existing and possibilities



Potential tools

Community (Residents/ Neighbor)

Pass by strangers

People

Place

Left over space

Empty on experience
Suitable for daily leisure activities

Environment

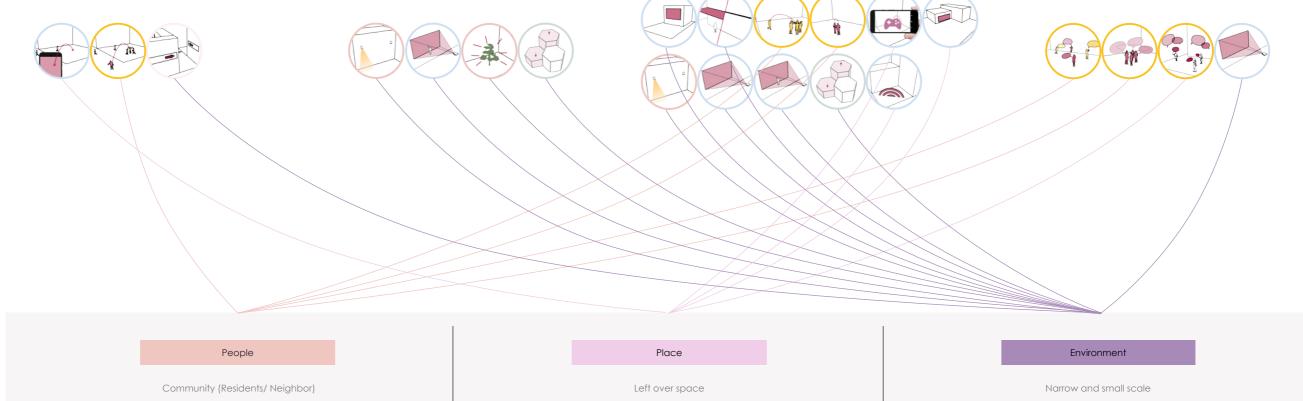
Narrow and small scale

Closed, deep and semi-private

Empty on function and decoration

Public utilize Accessibility Environment & Facilities Sociability Ubiquitous and physically accessed but mentally unreadable Narrow with empty facade, people sometimes stand there or sit on the goods. Empty in function, lack of usability Lack of sociability

Existing and possibilities



Potential tools

Pass by strangers

Empty on experience Suitable for daily leisure activities

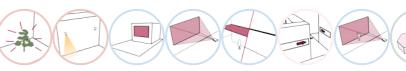
Closed, deep and semi-private

Empty on function and decoration

Outcomes

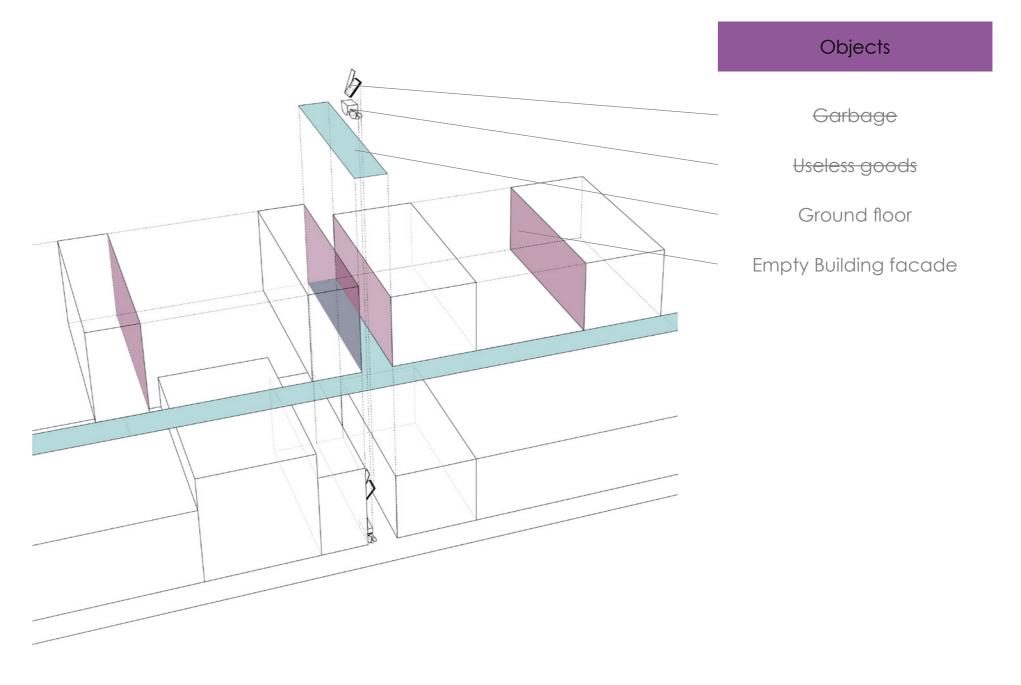


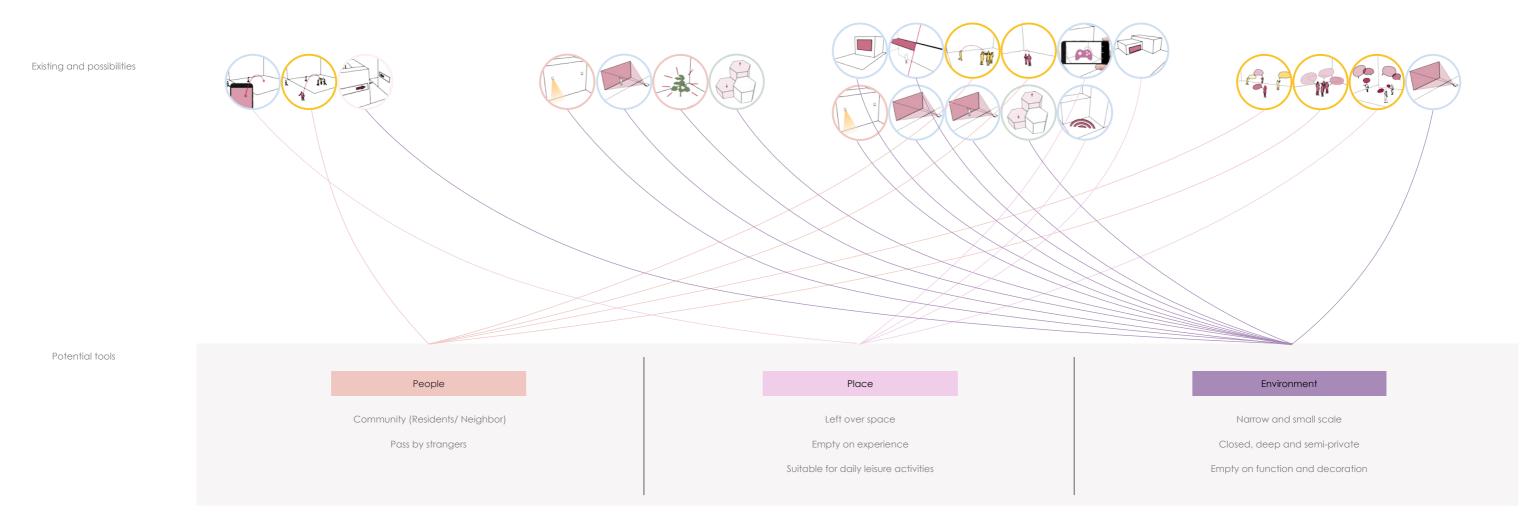




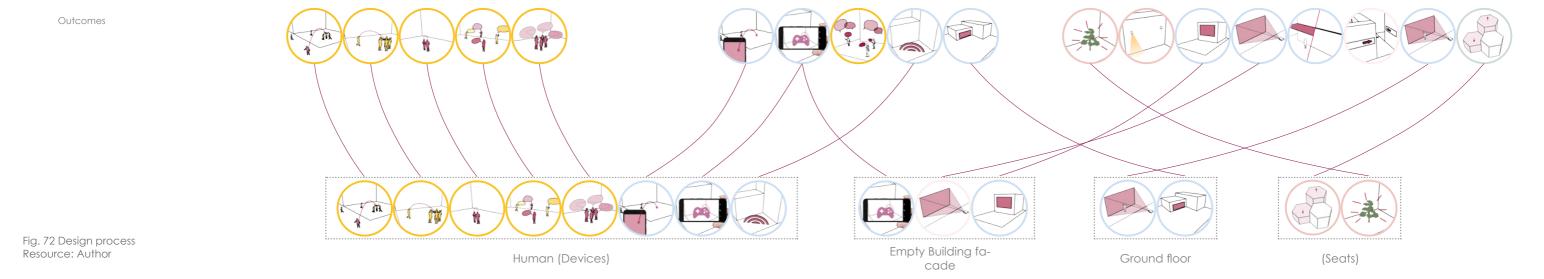
Design process

Pockets (Lot) Building gap





Sociability

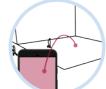






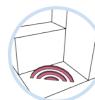














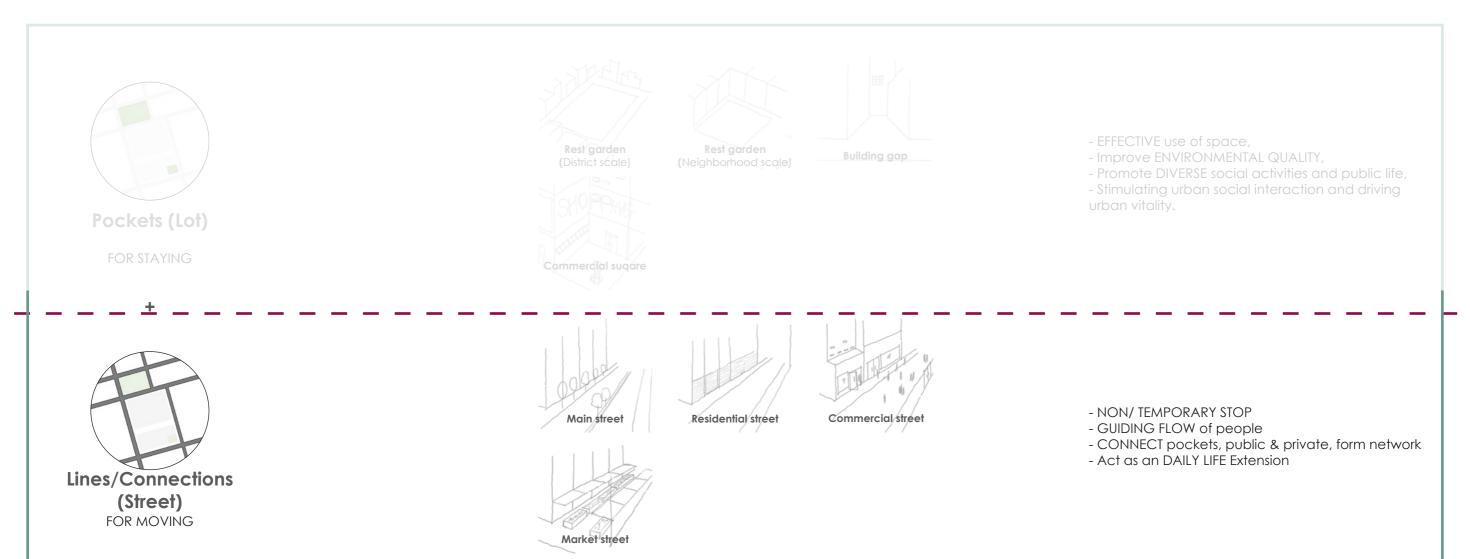








Level Contents Aims



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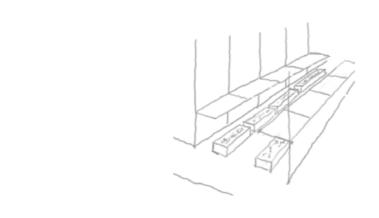






Design process

Market street



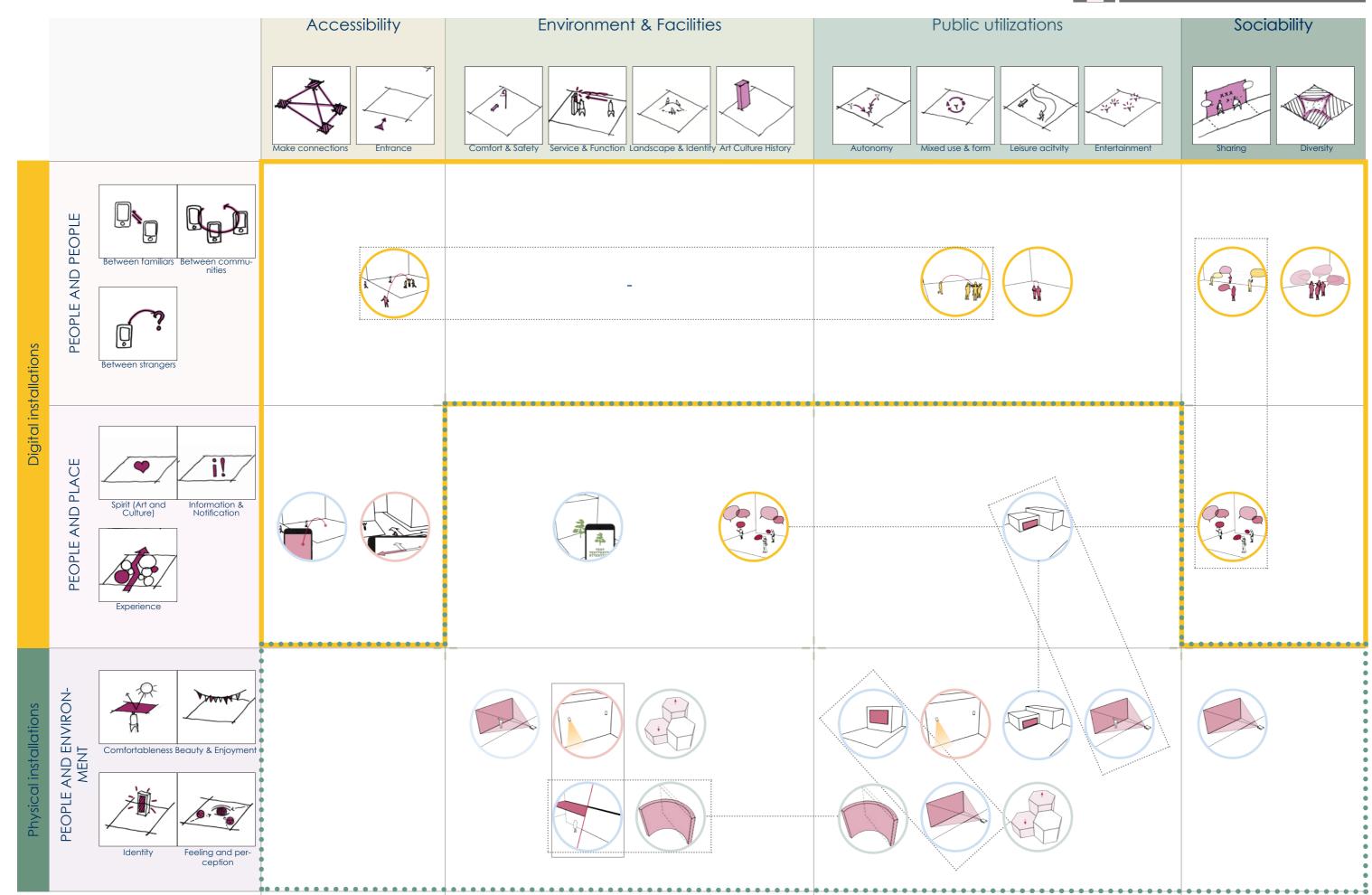






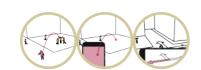
Accessibility Environment & Facilities Public utilizations Sociability

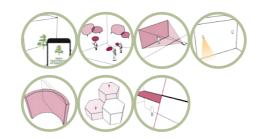


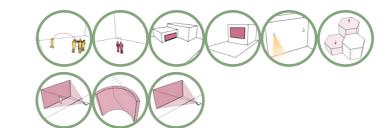


Accessibility	Environment & Facilities	Public utilize	Sociability
Ubiquitous and physically accessed but mentally unreadable	Narrow with empty facade, people some- times stand there or sit on the goods.	Empty in function, lack of usability	Lack of sociability

Existing and possibilities











Approach

Design process

People

Community, Stranger



Market Seller (Community)





Customer (Community, Stranger)



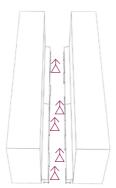
Residents (Community, Stranger)



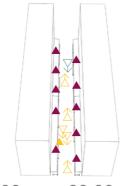


Large movement

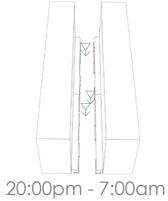
Noise and Dazzling



Before 7:00



7:00am - 20:00pm



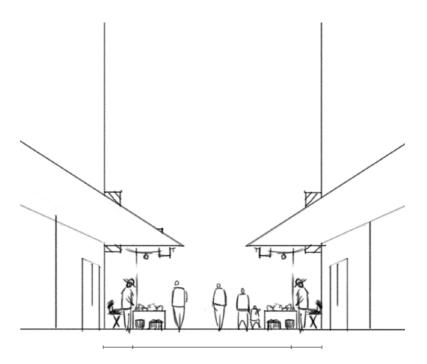
Environment

Narrow

Busy

Crowded





Scale Street/block District

Household Urban

Flow of people

Small Large

Publicness

Private Public Existing and possibilities

Accessibility Ublquitous and physically accessed but mentally unrepadable National first stand there or it on the poods. Empty in function, lack of usability Lock of sociability Lock of sociability

Potential tools

People

Community (Residents/ Neighbor)

Stranger

Place

A life style Daily used/ pass by and necessary Place for transaction

Noise and Dazzling

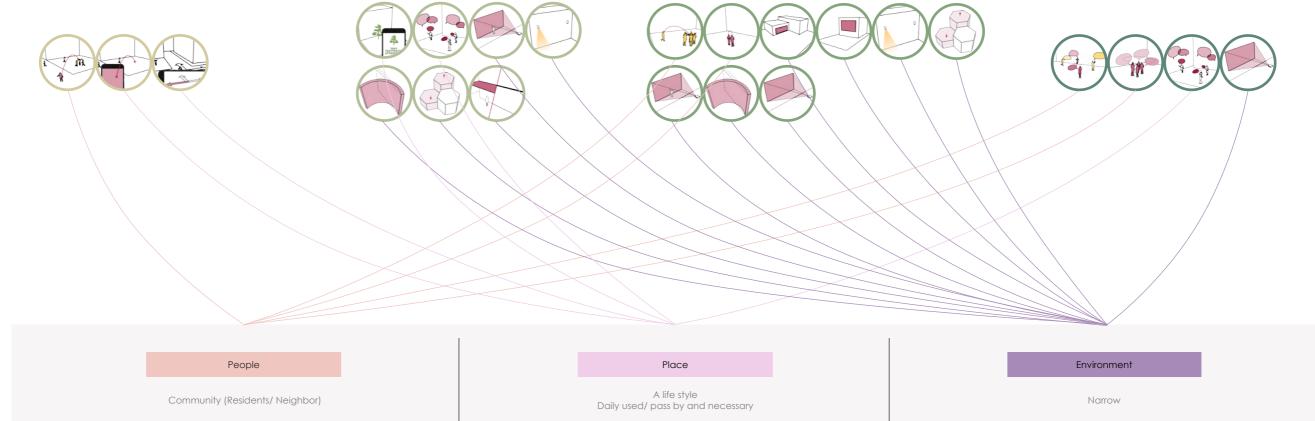
Environment Narrow

Busy and crowded

Mono-functioned

Public utilize Accessibility Environment & Facilities Sociability Ubiquitous and physically accessed but mentally unreadable Narrow with empty facade, people sometimes stand there or sit on the goods. Empty in function, lack of usability Lack of sociability

Existing and possibilities



Potential tools

Stranger

Place for transaction

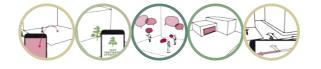
Noise and Dazzling

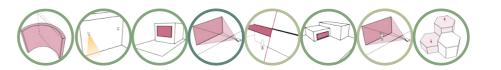
Busy and crowded

Mono-functioned

Outcomes

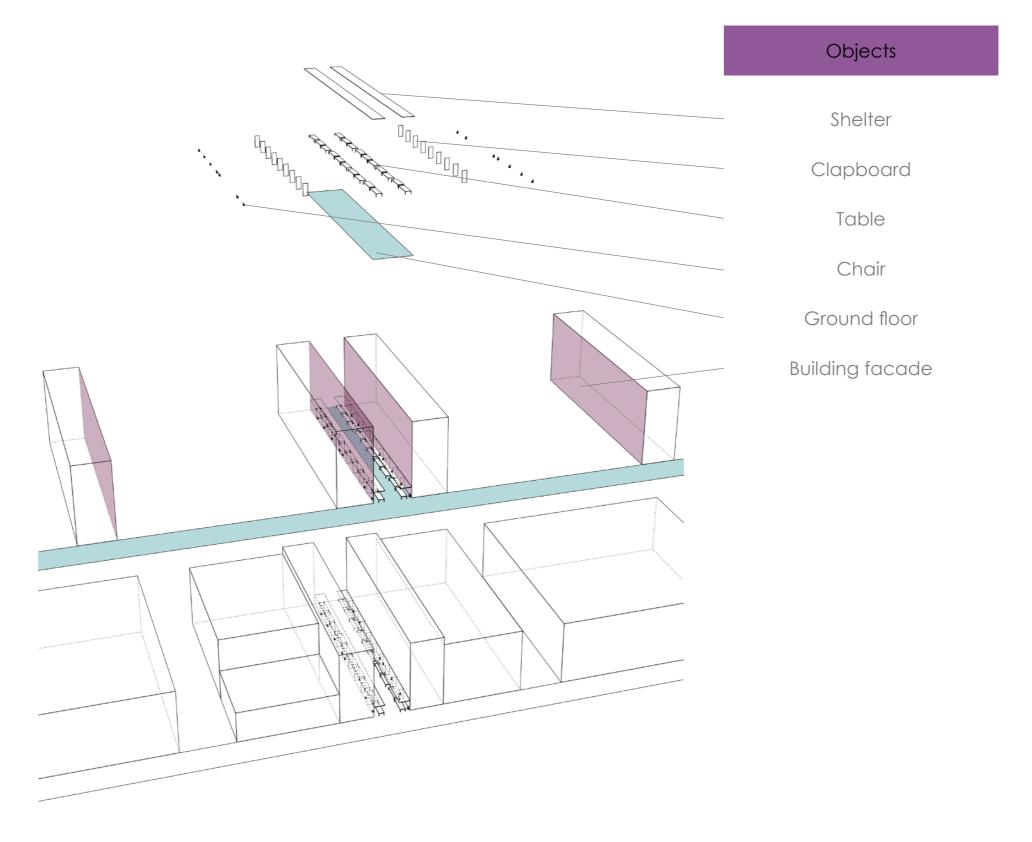






Design process

Lines/Connections (Market Street)



Potential tools

People

Community (Residents/ Neighbor)

Stranger

Place

A life style Daily used/ pass by and necessary

Place for transaction

Noise and Dazzling

Environment

Narrow

Busy and crowded

Mono-functioned

Oulcomes

Fig. 72 Design process Resource: Author

Human (Devices)

Ground floor

Design process







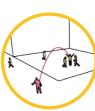


Approach

Design process









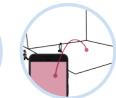














Contents Level Aims



Pockets (Lot)



Lines (Street)





Building gap









- CONNECT pockets, public & private, form network
- Act as an DAILY LIFE Extension







- Establish COHERENT and COMPREHENSIVE urban public space structure, thus to enhance PARTICIPA-TION and APPRECIATION of urban public space
- Create a COHESIVE urban public space system, thus to reinforce SOCIAL INTEGRATION and INTERAC-TION

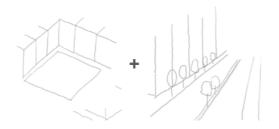
Design process

People





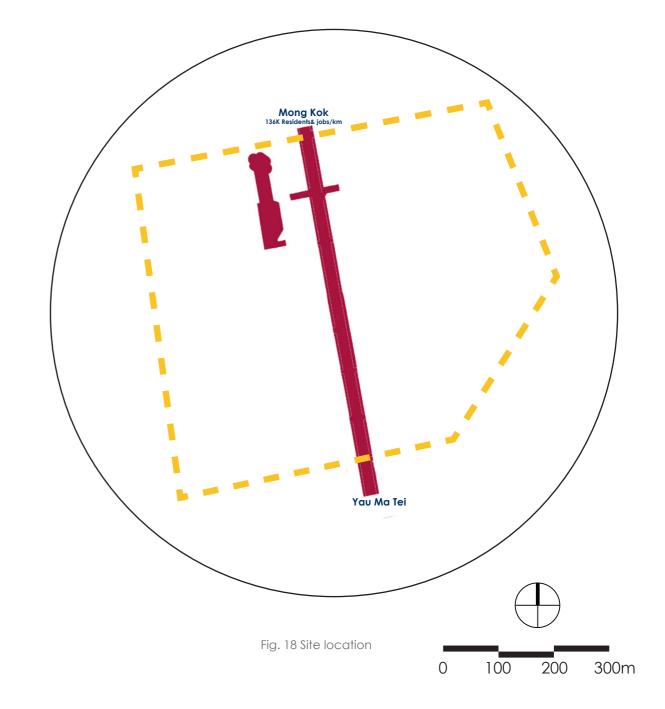
Place: Physical built environment





Networks (Zone)



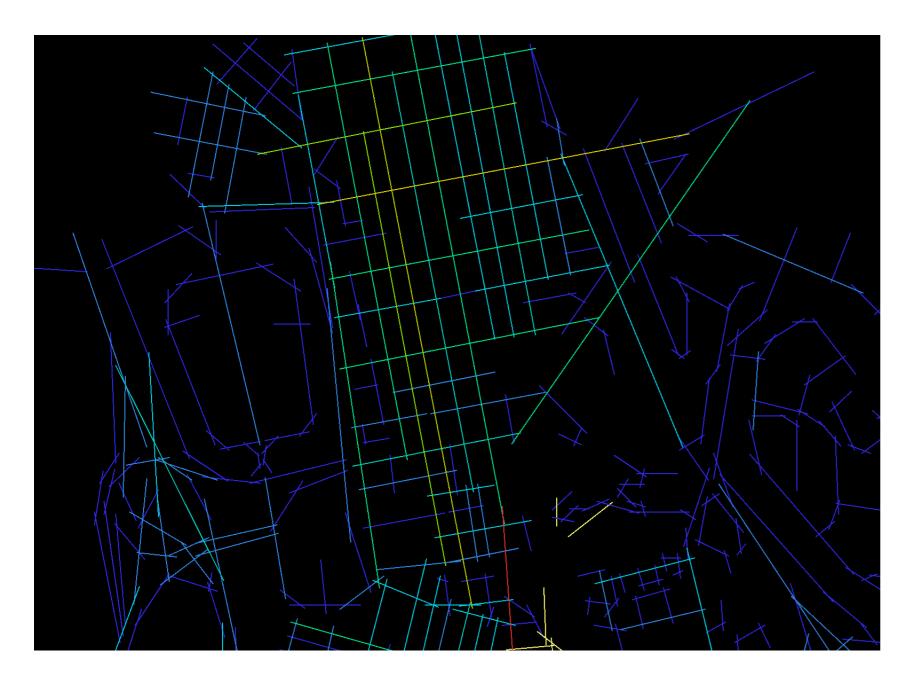


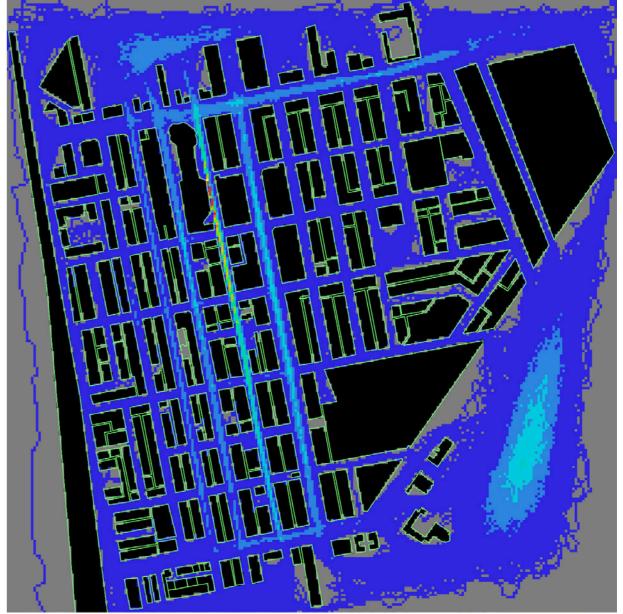


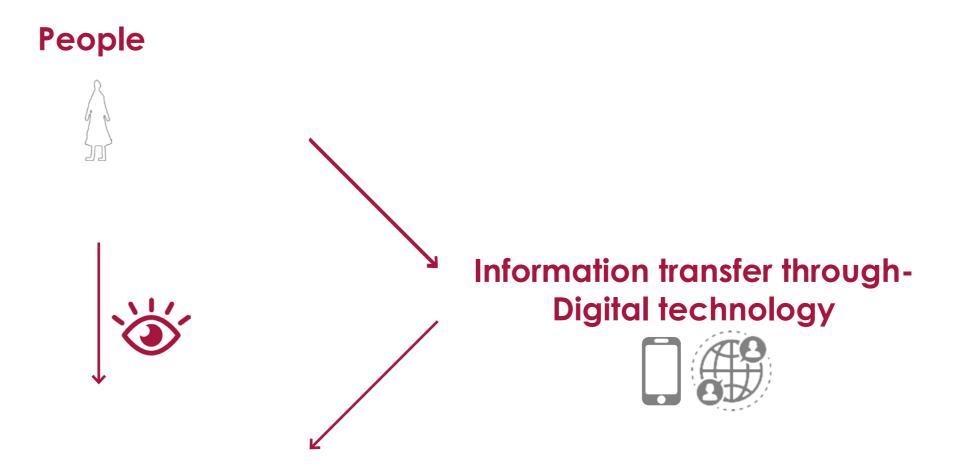
Networks (Zone)

Weak East-West connection

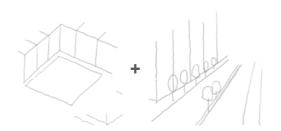
Unbalanced distribution on pedestrain flow



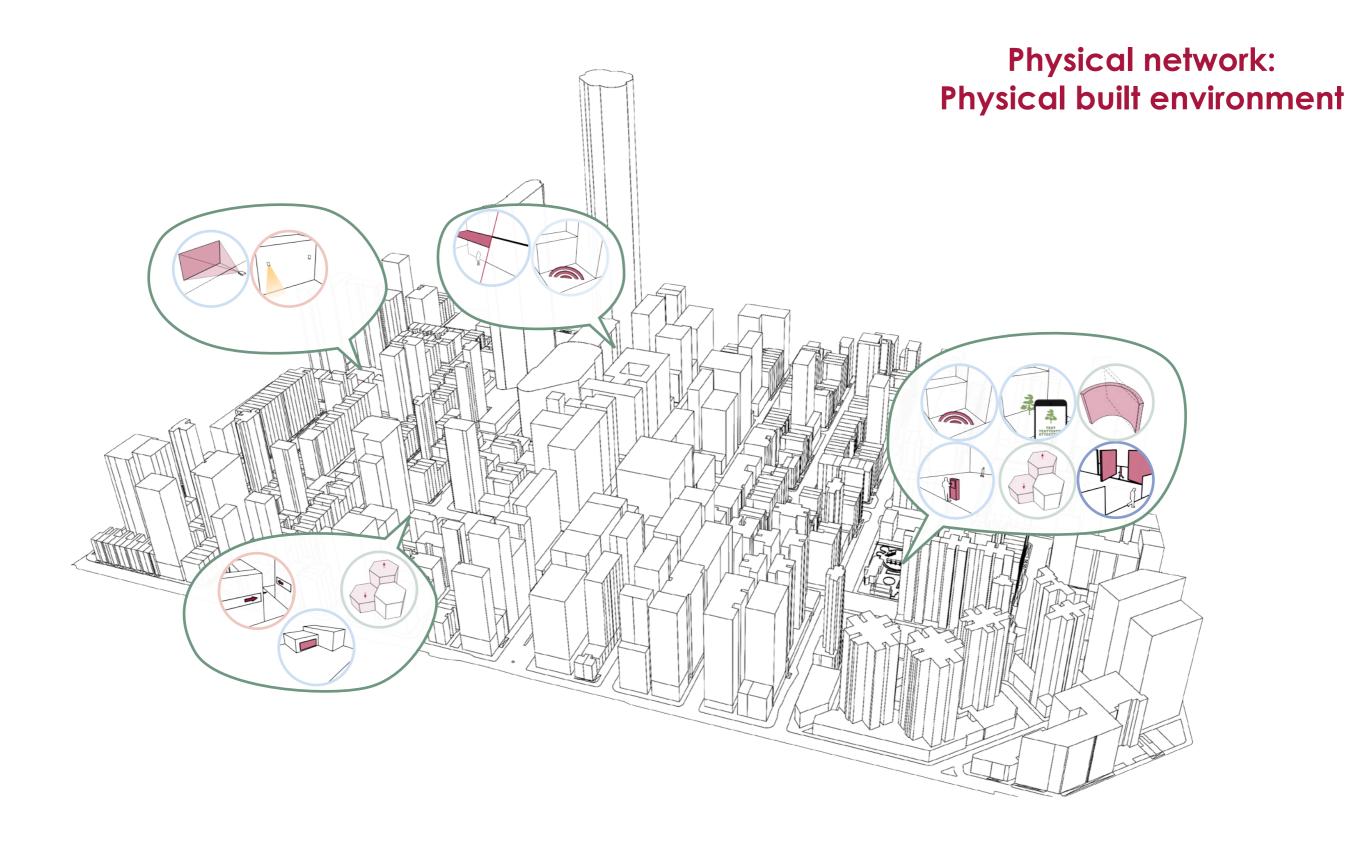




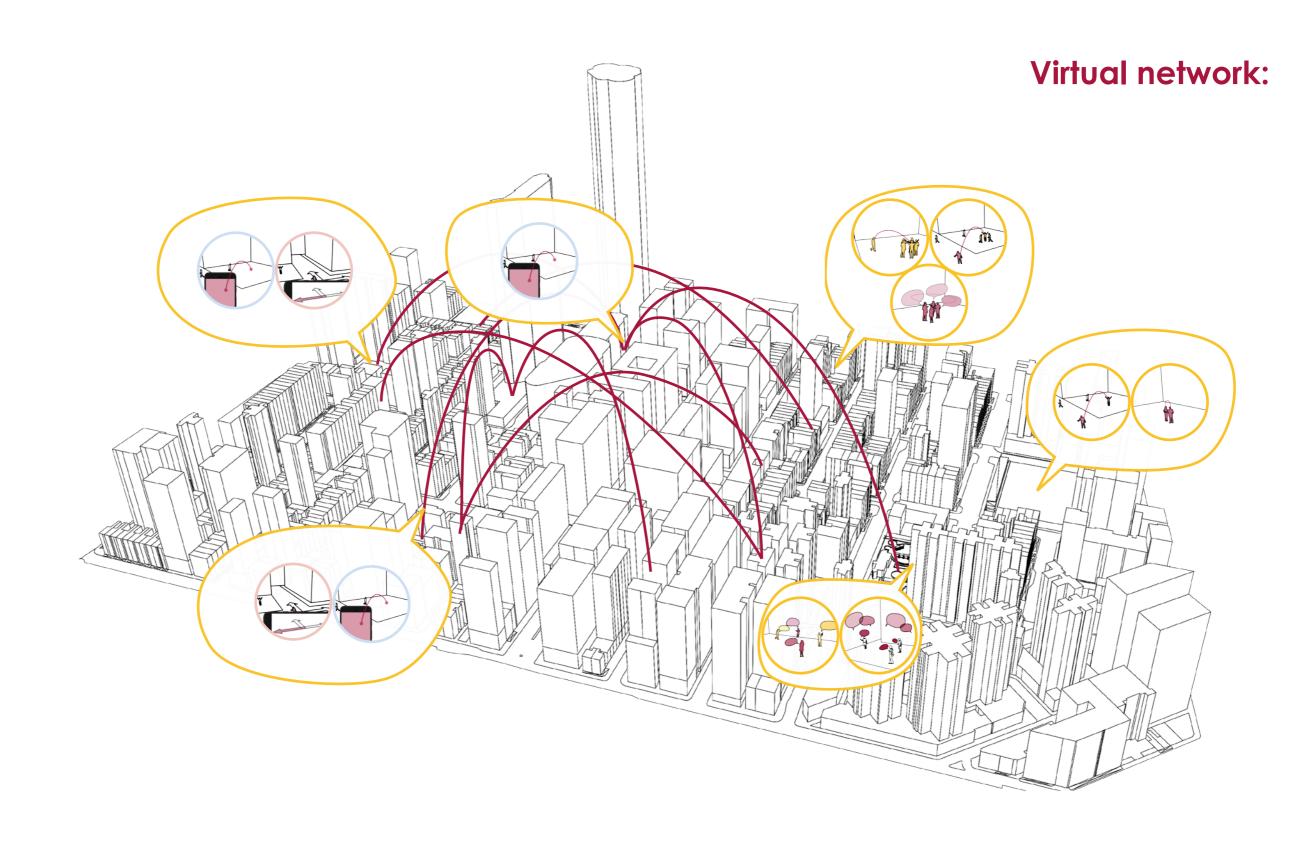
Place: Physical built environment



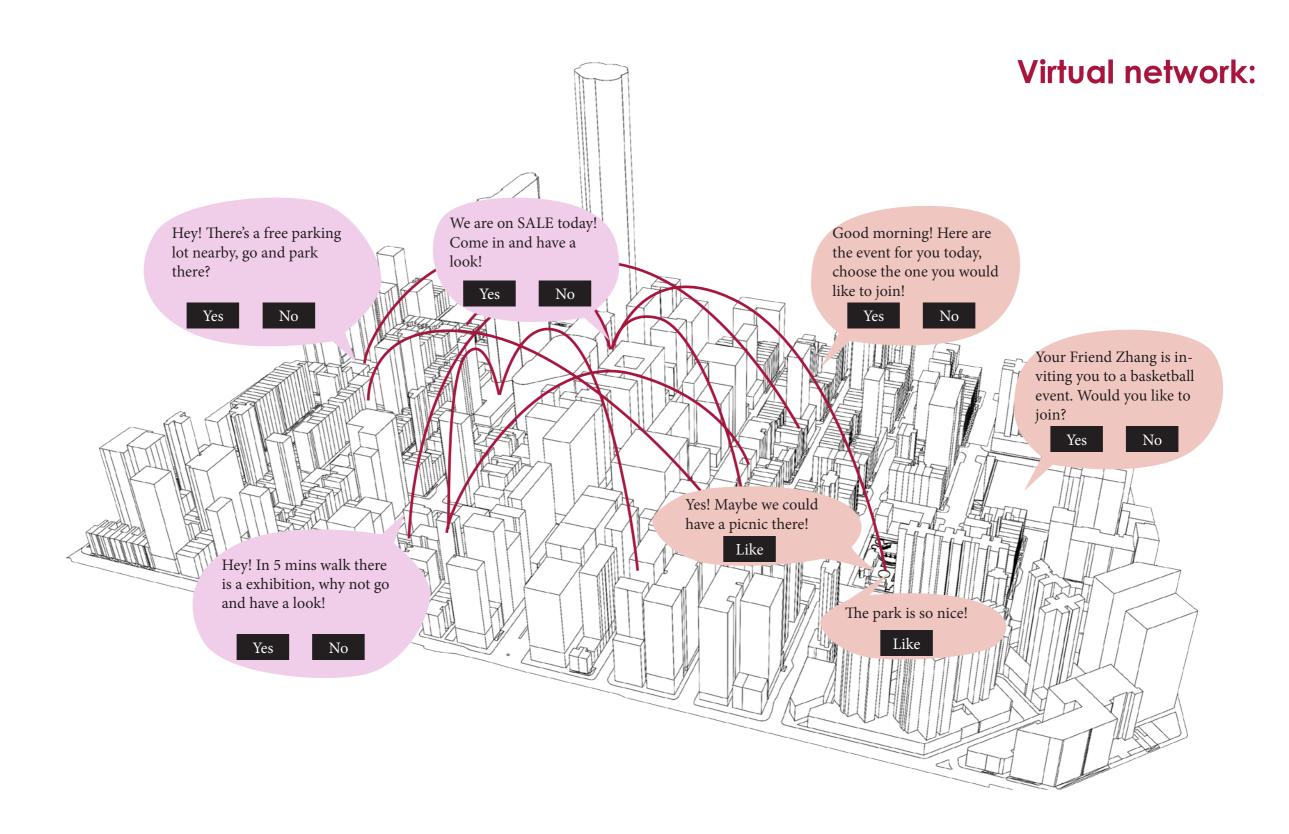




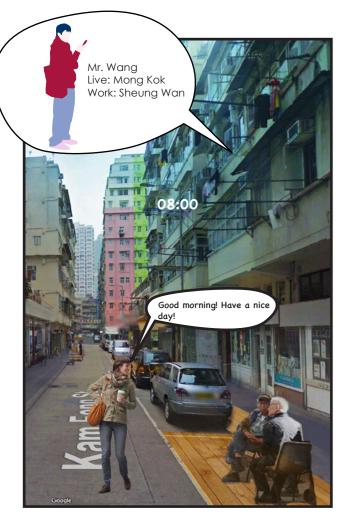


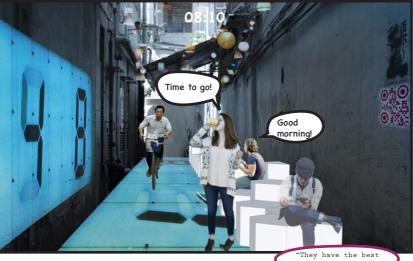


















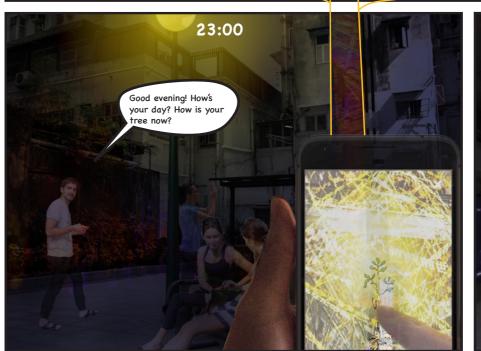






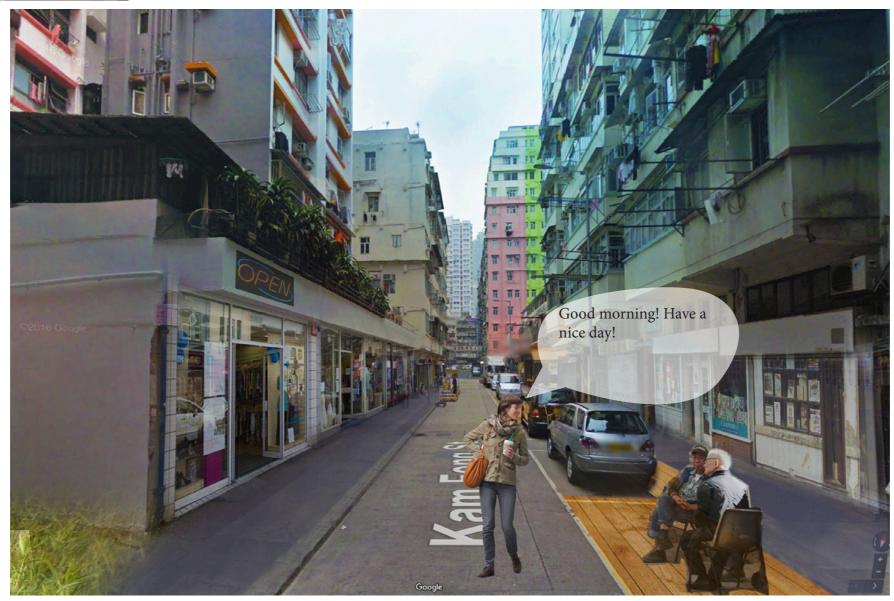




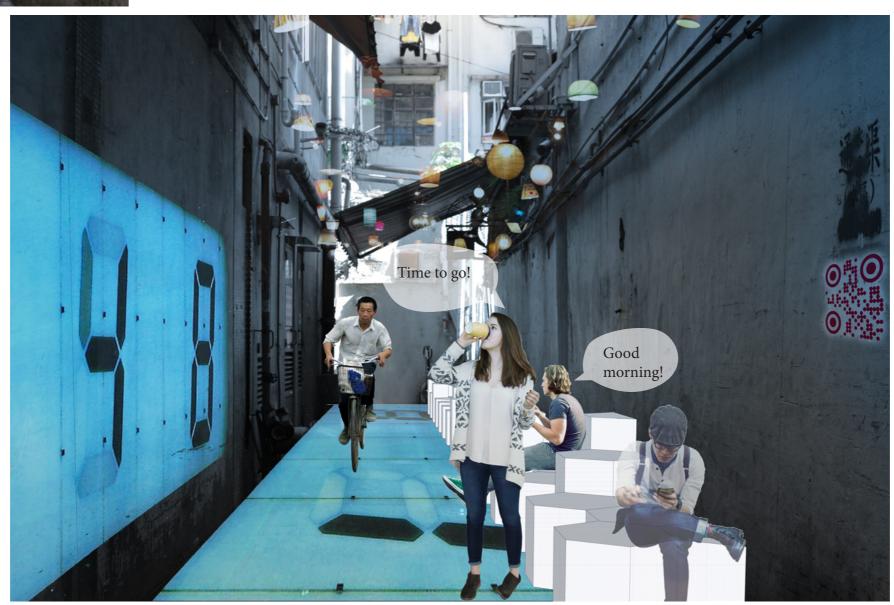










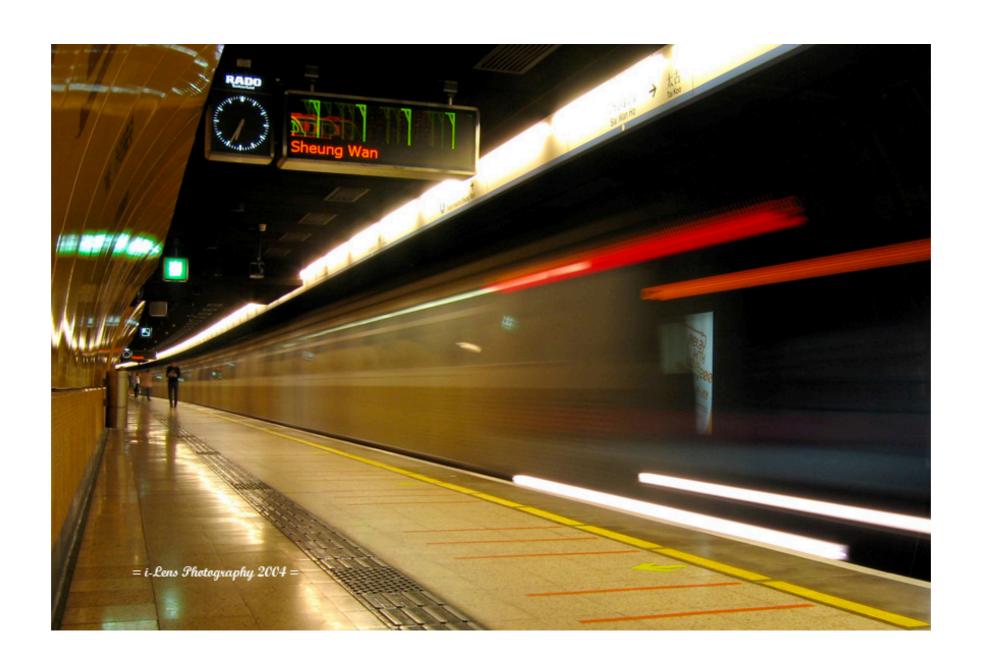


Yes agree!

Really?! I'll buy it next time!

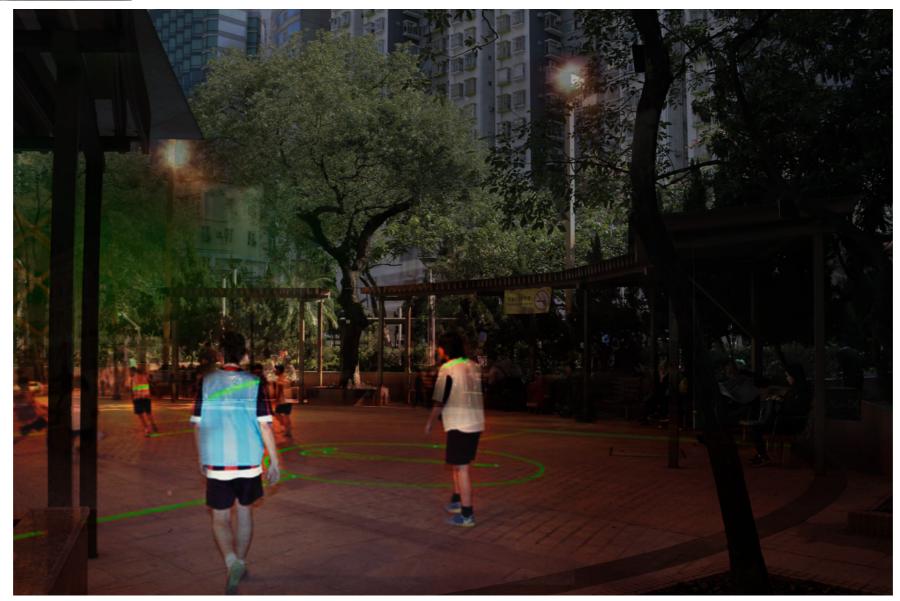




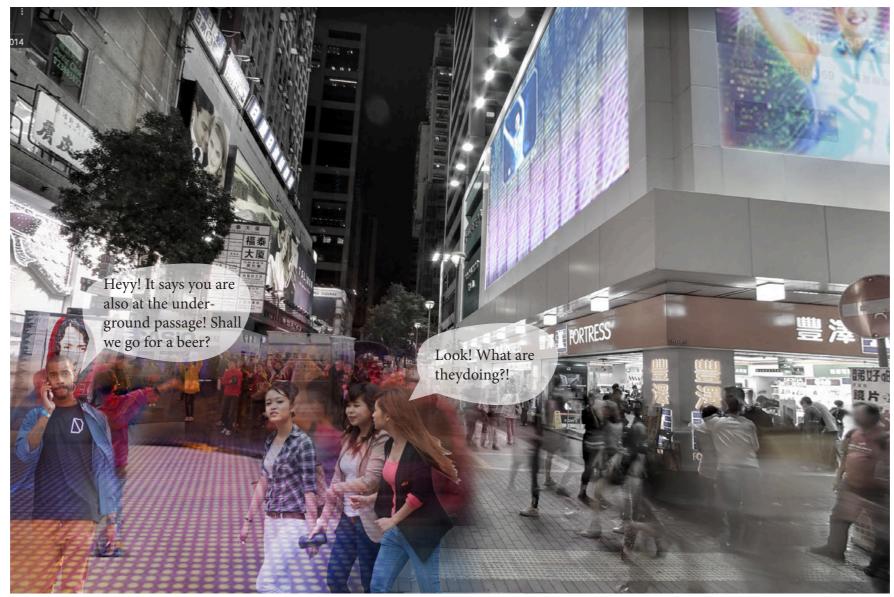




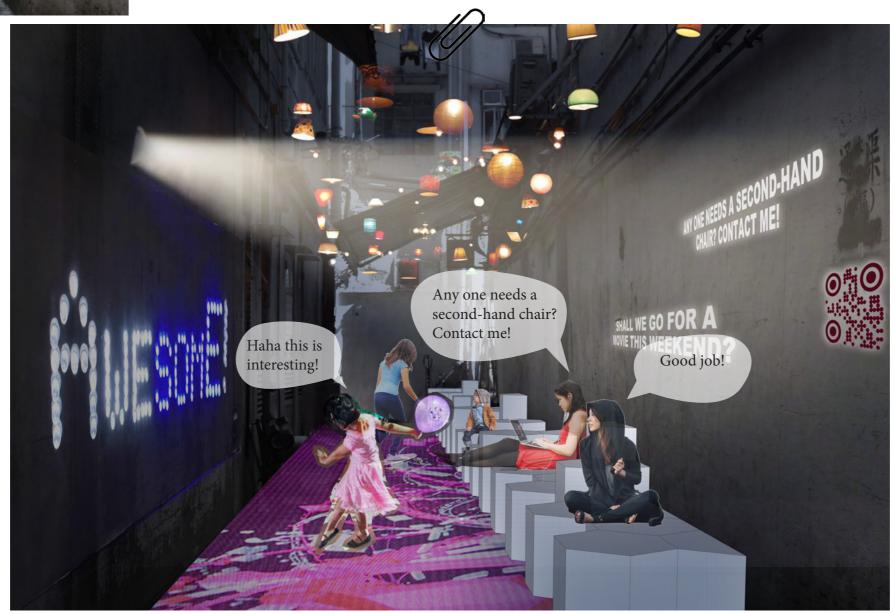






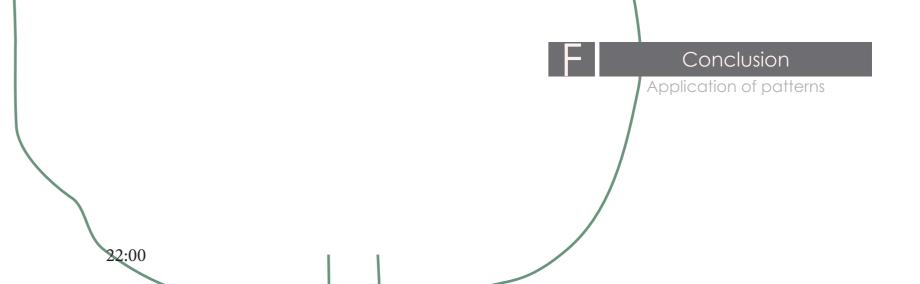


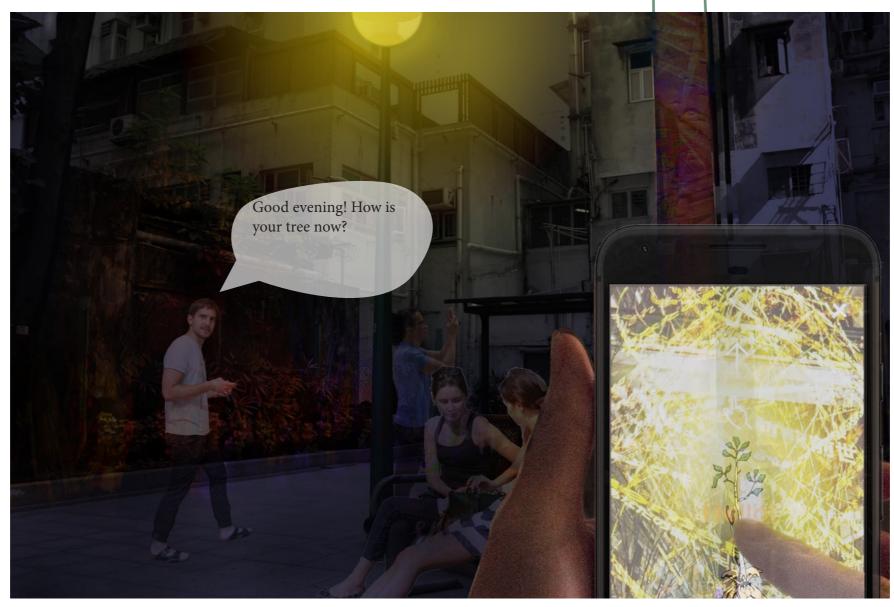
















Application of patterns





Reflection

REFLECTION **FUTURE** Reflection on the applicability COORDINATE of the method TEMPORAL AXIS Reflection on the applied method (Hong Kong) Reflection for the future research Reflection for the future research NOW HONG SIMILAR DIFFERENT KONG SITUATION SITUATION SPATIAL AXIS Reflection on the applied method (Hong Kong) Reflection on the applicability of the method

PAST



Reflection on the applied method (Hong Kong)

The project embraces the appearing of Digital technology without sacrifice the physical urban environment. It is on one hand, respects the trend of the development of our society (bottom-up), but on the other hand, gives guidlines and ristrictions that could avoid the adverse effects (Top-down).

The project gives a new, which allows the physical urban public spaces to become more interesting, attractive and diverse. And the advantage of digital technology could not only help with enlarging our range of visability, but also provides plateform which increases the possibility of interaction and communication with other citizens, neighbors and friends.



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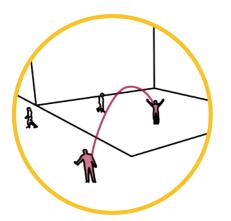
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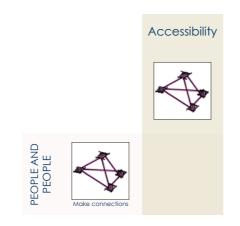
Reflection on the applicability of the method

The project starts an discussing on the role of digital technology and physical public space within the new urban context, and use it as the supportive to explore how public space could be transformed spatially, functionally and technically in responding to the changing demanding and expectation.

Although it uses Hong Kong as the example, the conclusion - pattern library and its user guide could also be used as a reference to the research and implementation of other cases. For instance, for the place where has a lower popularization and demand on digital technology, the patterns with a lower level of digitalization might be suitable. Moreover, the catagorization could also be re-considering in regarding to the specific situation.

01 Friends connecting



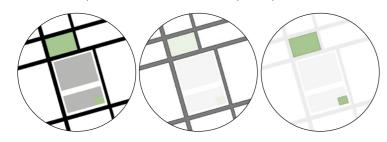


PRINCIPLE:

The friends connecting is mainly based on the personal-mobile devices, it allows users to let personal networks of friends know when they were at a physical public space via their mobile devices without seperately calling or messaging.

LEVEL & SCALE:

Level of implementation or the capacity:



Scale of implementation or the capacity: Household - Street/block - District - Urban scale

Street/block District
Household Urban

PUBLICNESS:

Private	Public
Quiet	Noisy

DEGREE OF DIGITALIZATION OF PHYSICAL SPACE:

Low High

In order to implement the pattern "Friends connecting", it is necessary to first establish and spread a digital social network. The extensive the social network is, the better the pattern could work.

Price:

Low High

FUNCTION AND POSSIBLE BENEFITS:

- ·People could maintain and enlarge their social network in a much more easier way.
- ·Physical public space could be used more frequently.

POSSIBLE COMPOSITION:













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Reflection on the future research

This project starts with a generous consideration, it could be imagined and expected that the project could further lead to the re-consideration of the relationship of our physical and digital world. And the conclusion and evaluation could be somehow seems as a starter for future researches regarding on different urban context and spatial and technical condition.

