SIDEWALK CITY
SELF PORTRAIT
INTRODUCTION

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With approximately 7 to 8 million motorbikes joining the roads daily and 750 new motorbikes are registered everyday, the streets of Saigon are getting busier than ever before (Saigoneer 2016). Waves of motorbikes roaming the streets during rush hours has become a familiar sight and participating in the heavy traffic is an inevitable activity to everyone living and working in Ho Chi Minh City (Martin 2013, p. 30). Unsurprisingly, the situation has been causing inconveniences to the movability of not only motorbike and automobile owners, but also people who use public transportations and especially pedestrians. The main problem addressed in this article is tied to pedestrians and their everyday difficulties while navigating around the city. Being a pedestrian in Saigon is not easy, according to hundreds of people who occupy the sidewalks everyday while having a phobia of getting hit by a fast running motorcycle (Martin 2013, p. 30). A majority of the people owning motorbikes have such poor sense of traffic participation that, during congestion, red lights and signs are often ignored and motorbikes are often seen running on the sidewalk as a means of cutting the line and getting out of the traffic jam faster, while the safety of pedestrians are not of concern (ibid). In addition to this undesirable reality, motorcyclists are to be accused for the mass disfiguration of sidewalks in Ho Chi Minh City as sidewalks are not designed to sustain the amount of pressure caused by such a significant number of motorbikes (Nguyen 2017). It is reported that sidewalk plates along the streets are severely broken or separated from the ground, resulting in the appearance of uneven pathways and dangerous potholes, which heavily affect the mobility and safety of innocent pedestrians (As seen in Figure 3) (ibid). Another noteworthy problem associated with Saigon’s sidewalks are street vendors: food stalls and vending carts that serve appetizing take-away meals and delightful beverages (See Figure 2) (Kim 2015, p. 13). Although it remains as a vital part of the city’s tradition, the sidewalk culture can occasionally interfere with the space of the pavements, which is originally reserved for the pedestrians (Kim 2015, p. 295). There have been reports showing sidewalk appropriation causing traffic accidents to pedestrians, particularly to whom navigating off the sidewalk to dodge vendors (Kim 2015, p. 271). Moreover, street vendors are also to be blamed for contributing to traffic congestions since commuters are required to stop by the road in order to transact with them (ibid).
Figure 1. Nguyen, H 2019, ‘Saigon sidewalk’, District 1, Ho Chi Minh City, photo by author.
Figure 2. Sung, C 2015, ‘Women vendors on the sidewalk’, University of Chicago Press, Chicago, US.

Figure 3. n.d. 2017, ‘Motorbikes run during congestion on the sidewalk’, Pham Van Dong, Ho Chi Minh City, Vietnam, viewed 22 June 2019.
In order to prevent these on-going issues involving motorcyclist's unsophisticated interaction with the sidewalks, the local authorities have managed to come up with a viable solution. From mid 2016 to early 2017, a system of barriers have been installed by the government on the sidewalks around the center areas of Ho Chi Minh City, including District 5 and District 1 (Tran 2017). The main idea of designing these barriers was to simply create a fortification for the sidewalks to block the motorbikes from jumping the curb. Various archetypes and models were applied on different locations for distinctive functions. A standard design are long iron rods running along the sidewalks, which were installed at a sufficient height to prohibit the access of two wheeled vehicles. Another common model that can be seen in District 1 are short iron bars installed parallel to each other, the positioning of these iron bars are adjusted so that there are only small gaps between each bars for pedestrians to maneuver through (Figure 4). In some cases the authorities took a more simple approach by fortifying the sidewalks with chains or ropes, connected together with iron poles. When it comes to small and narrow pavements, installing iron fences is also an act from the government to prevent street vendors from setting up their shops.

Figure 4. Tran, Q 2017, ‘The sidewalk barriers of Saigon’, Ho Chi Minh City, Vietnam, viewed 22 June 2019.
Figure 5. Nguyen, H 2019, ‘Sidewalk barriers sketches’, RMIT University, Vietnam, photo by author.

Figure 6. Nguyen, H 2019, ‘Sidewalk barriers sketches’, RMIT University, Vietnam, photo by author.
The method which the government used to tackle these problems was proving to be rather effective to some extend. Different designs of barriers were showing its specific pros and cons after being analyzed. As an example, it can be noticed from Figure 6 that tall iron fences are useful at preventing motorbikes to enter the sidewalk from the road, but once a motorcyclist found their way onto the pavement, via the entrance for instance, they would not be able to leave the sidewalk until they manage to reach the exit. Meanwhile parallel barriers have much more flexibility than the other archetypes, but are less efficient since motorbikes are still able to slip through the gaps between each bars, as seen in Figure 7. But the major design flaw from these sidewalk barriers is the accessibility of disabled individuals. People in wheelchairs were having serious trouble when navigating around the blocks because of the barriers. For instance, it is nearly impossible for a wheelchair to get pass the tight gaps that created by the barriers in Figure 7. Thus, a companion would be required whenever these people felt the need to go outside for even a little stroll. Unfortunately, adjusting the design of these barriers is proved to be a problematic task for the authorities since if wheelchairs can get access to the pavements, so can the motorbikes.

Figure 7. Tran, Q 2017, 'A motorcyclist slipping through the sidewalk barriers', Ho Chi Minh City, Vietnam, viewed 22 June 2019.
In most cases, these barriers get the job done, but there are still flaws in the design.

Parallel barriers:

Sometimes motorcyclists still manage to slip through the gaps.

Fence barriers:

Exits need to left open for pedestrians to access. Motorbikes can also enter & it's impossible to exit mid road.

Problems from people with disabilities:

Wheelchair & Mobility Scooters can't maneuver through these barriers.

Dangerous towards blind people.
DESIGN PRECEDENT #2
There is no doubt that the sidewalk culture of Ho Chi Minh City represents a controversial topic to the government and the local authorities. In one hand, sidewalk life is a part of Vietnamese culture and an attraction to international tourism. In other hand, street vendors are causing difficulties towards the mobility of the local trafficking and creating concern about food safety and hygiene (Kim 2015, p. 271). In 2017, the vice chairman of District 1 Doan Ngoc Hai commenced his sidewalk clearing campaign with the initial intention of removing everything that obstructs the public walkways of the pavements (Kim 2015, p. 15). The execution of this campaign ranged from ridding of clutter like foam boxes and disposed flower vases to stopping street vendors from setting up shops with forces.

The authorities then provided street stall owners with alternatives called “street food streets”, which are designated zones for vendors to open their shops (Tatarski & Dam 2018). Two of these zones were constructed inside District 1, one of which is located on Nguyen Van Chiem street (Figure 9) and consists of 20 stalls that require permission to use. The food zone functions in shifts, with two groups of vendors taking turns to work, from 6am to 10am and from 11am to 3pm. The morning crew push the vending carts which are kept in a nearby parking lot into position and those in the afternoon shift would put them back when they have finished working for the day.

![Design Precedent: Street Food Streets](image)

Figure 10. Nguyen, H 2019, ‘Street foot street sketches’, RMIT University, Vietnam, photo by author.
It still remains a big question mark how the sidewalk clearing campaign of the authorities in District 1 would effectively provide the pedestrians with extra mobility while simultaneously aid the livelihood of street vendors. In reality, these street vendors did not entirely appreciate the idea of moving their shop to another location due to the risk of losing loyal customers and other inconveniences (Tatarski & Dam 2018). For instance, in order to get a spot in the zone, these vendors are required to provide a certificate of poverty, followed by a long registration process that involves food hygiene trainings and health checks. Being qualified to work in these zones is the only optimal option for street vendors, since the government has made it drastically more problematic to operate a vending shop on the sidewalk (Kim 2015, p. 189). The authorities were having street patrols constantly swatting the areas for street vendors to brought them to the local ward office and confiscated their stalls (as seen from Figure 11). In contrast to the conflict between unregulated street vendors and the law enforcement, shop owners in the recently established street food streets were giving positive feedbacks (Tatarski & Dam 2018). The new setup was believed to be better and more stable, and instead of being chased around by the police, these people were receiving help and protection from the authorities. Additionally, since each vendor was only allowed to sell a specific dish, they did not have to worry about competing with another stall in the same zone.

![Figure 11. Kim, A 2015, ‘Characterizations of sidewalk vendors’ interactions with police, 2010’, University of Chicago Press, Chicago, US.](image)
Figure 12. Nguyen, H 2019, ‘Street food street case study’, RMIT University, Vietnam, photo by author.

Case Study: Street Food Streets

Sidewalk usage in Saigon (2010)

Vending accounts for ~30% of the sidewalk's public space, while also contributing to parking, occupying more than 40%.

The "street food streets" system are proving to be beneficial for both pedestrians and street vendors.

- Hygienic street food
- Enough space to navigate
- Convenient & Flexible

Pedestrians

- Vendors
- Rental-free
- Less competitive market
- Support from authorities
- Designated working space
Before the idea of a legal street vending was put into use, street vendors occasionally suffer from the harassment from law enforcements.

Interactions & Relationship status between the police & street vendors in Saigon (2010)

- 8% Harassment
- 39% No comment
- 53% No big deal

In contrast, by working in designated zones, street vendors, who mostly come from low-income families, won’t have to worry about rental fees & police’s assault.
STAKEHOLDERS

Figure 13. Nguyen, H 2019, 'Stakeholder map', RMIT University, Vietnam, photo by author.

Figure 14. Nguyen, H 2019, 'Stakeholder map', RMIT University, Vietnam, photo by author.
Figure 15. Nguyen, H 2019, ‘Stakeholder map,’ RMIT University, Vietnam, photo by author.

Figure 16. Nguyen, H 2019, ‘Stakeholder map,’ RMIT University, Vietnam, photo by author.
It can be observed from the stakeholder map that the issues concerning sidewalk public space are affecting an unexpectedly wide range of individuals. Taking from the analysis, pedestrians and street vendors are the key factors in relevance with the stated problem. This is presumably due to the fact that these 2 groups are the predominant elements of the sidewalk society. Thus, if there appears to be an issue about the habitat of the sidewalk ecosystem, pedestrians and vendors will be the first ones to experience difficulties. Additionally, other individuals who use the pavements as a working space to support their livelihoods including beggars, street performers, store owners and moped taxi drivers are also considered direct stakeholders. It is worth mentioning that the living conditions of the local families is another possible victim of the problem regarding life standards and mental well-being. Moreover, international tourists are, from time to time, belong to the sidewalk community, since sight-seeing is commonly a feet activity and sidewalk culture is the most ubiquitous and welcoming Vietnamese traits in regard to foreigner’s point of view. Therefore tourists can be seen as a related group, which leads to the whole tourism industry and national economy becoming stakeholders.
What the analysis is trying to carry out is that in fact, the difficulties regarding sidewalk public space, while being caused directly or indirectly by the members of the sidewalk community, should be handled carefully and reasonably so that no individual would be neglected or negatively affected. The situation demands a solution with the aim of operating a sidewalk society in an organized manner, with schedules, designated spaces and mutual understanding.

Figure 17. Nguyen, H 2019, ‘Saigon sidewalk’, District 1, Ho Chi Minh City, photo by author.
Vendors, Pedestrians and Parking:
https://drive.google.com/file/d/1-ki3Yc_hP8Hx-VCc-sDF6436c4UDNV5Db/view?usp=sharing

Common sights:
https://drive.google.com/file/d/1-oCTon3biw9GVrc-4C5PizhhDQ8BaBLWd/view?usp=sharing

Making a living on the pavement:
https://drive.google.com/file/d/1-nhlmJ1odrze-kqkqNlsUEC_TTx7TLXoa/view?usp=sharing

These videos present the daily appearance of the sidewalk, including vendors, beggars, pedestrians and motorbikes. It is necessary for the designer to make sure the new model could benefits every different groups in the sidewalk society.
Kids playing with sidewalk barriers:  
https://drive.google.com/file/d/1-VBmW1jRjkI_p4CTg-mQVEsUn9J6bmw1u/view?usp=sharing

The video shows children interacting with the barriers on the sidewalks. The footage inspired the experimental design to modify the barriers into a more friendly or familiar iteration.

Being a Saigon pedestrian for 75 seconds:  
https://drive.google.com/open?id=1-exTjltozLbVLz-ZWeMuy3ZyK7PbzYBO

The video demonstrates how different factors on the sidewalk are affecting how you maneuver. In other words, the sidewalk culture always forms a path for the pedestrians, and the different sidewalks create different paths. It is a good idea for the experimental design to make this path more visible and flexible for the pedestrians.
Focused Analysis

Cultural

Ho Chi Minh City’s sidewalk culture includes street foods, leisure activities, vending, and vehicle parking (Kim 2015, p. 27). Saigon pedestrian, which consists of local residents, workers and visitors use the pavements for multiple purposes: walking, breathing the fresh air, socializing and transacting (Nguyen et al 2017, p. 2). It has been pointed out that in Vietnam, the sidewalk is undoubtedly the most used public space for outdoor activities. Moreover, the street life shows different appearances and characteristics when the sun rises and when night falls. Hence, observing the pavements of Saigon is the optimal way to study the daily behavior and living conditions of the local citizens.

The design prototype is promised to preserve the sidewalk culture by creating a space for every different activity occurring on the pavement, but in a more organized system designated spaces and schedules.

Social

Apart from the individuals using the sidewalk for mobility tasks and several leisure activities, the life on the pavement is of the working class with low income and poor livelihood for the most part (Kim 2015, p. 274). For instance, street vendors are one of the primary groups that contribute to the majority of sidewalk ecosystem. Together, these vendors create relationships and connections within their community and with other groups. In Ho Chi Minh City, vendors cooperate with each other and take turns on the sidewalk. They would share working spaces and sell different foods in order to avoid market competition. Additionally, essential investments like plastic chairs and tables were shared to support individuals’ budget. The prototype pavement concentrates on presenting a space of hospitality for the citizens of the sidewalk society. A pedestrian pathway is installed in the center of the pavement, with vending stalls and public seats situated on the sides. The pedestrians are guided through different attractions and activities, which encourage them to engage and participate with.
ECONOMICAL

By definition, sidewalks are often seen as the extended area of a store front or a place for transacting goods and services, therefore sidewalk has its own economic role in the contemporary urban society (Nguyen et al. 2017, p. 2). In the case of Ho Chi Minh City, sidewalk vending is considered a legitimate activity because it is a major means of earning a living for approximately 30 percent of the population (mainly low-income workers) and provides inexpensive foods, household goods, and convenient services (Kim 2015, p. 317). In the era of urbanization with rising cost of living, street vendors, who lack the education and qualification compulsory to seek employment in the formal sector and as such, help establishing a crucial group of workers in the informal sector of Vietnam’s economy (Jensen & Peppard 2013, p. 71).

In order for the new model to function effectively, the local government is required to support workers on the pavements with their livelihood. The prototype system is proposing to the authorities to establish a sidewalk industry by employing street vendors to work legally on the pavement and provide them with stalls or vending carts. However, these equipments should be considered government properties and used under control.

EMOTIONAL

To engage with and become a part of the sidewalk culture is a crucial section in the common neighborhood lifestyle of Saigon. Thus, it is simple to point out that the condition of the streets directly affects the livelihood of the locals emotionally and physically (Nguyen et al. 2017, p. 1). The pavements offer a friendly space for walking and other interactive activities, thus an intimate relationship between the people who occupy the sidewalk in the same period of time is developed. If the street is physically unstable and unsafe, it would leave a negative impression on the people. The more negative feeling the street cause, the fewer people would involve with the sidewalk, eventually making the system collapsed.

Emotion is also an influence in the design of the new system. The prototype model is aiming to make every individual on the sidewalk enjoys other’s company. To put it other words, the design should try to solve the issue concerning people’s personal and mutual spaces. Hence the pedestrian pathway and the designated spaces, which gives people their own space while also connects different spaces together. Additionally, the functionalism of the system is based on colors, which is an ubiquitous factor regarding human’s emotion.
From what has been stated, half of the sidewalk ecosystem functions as an informal economy market, of which the primary workforce are low income workers (and beggars), mostly immigrants, struggling to maintain a livelihood (Turner & Schoenberger 2011 p. 1027). However, due to the inherent informality of the sidewalk vending culture, the local government has already carried out a ban on street vendors in many preserved locales, referring to Article 14. Presumably, in the eyes of the authorities, street vendors are to be blamed for obstructing the sidewalk's aesthetics and hindering the mobility of pedestrians and generally the flow of the traffic. As mentioned previously, the government's main task in the new system is to take street vendors into employment, instead of banning them from the streets.

In the case of Saigon's sidewalk culture, a major problem regarding human morality are tied to sidewalk vendors. Despite foods and beverages from street vendors are a major part of the sidewalk culture, in reality these vendors have very poor food safety practices and food hygiene knowledge (Samapundo 2016, pp. 79-89). Generally speaking, the street vending market is dominated by poor people from the lower class, who for the most part lack the education and condition required for proper food preparation. In 2016, a food safety survey conducted in Ho Chi Minh City by Samapundo has revealed that 52.5% of the vending sites were exposed to the sun, wind and dust, 47.5% did not have capable hand washing facilities and 30% lacked adequate left over water and food disposal equipment.

In the prototype system, equipments are provided by government to the street vendors. Furthermore, health checks and food safety tests are required on a schedule in order to assure food hygiene for the consumers.
TECHNOLOGICAL

In the modern days, there are still no existing technologically advanced solution carried out to handle the issues concerning sidewalk public spaces. In the past, designers and researchers have proposed ideas of an organized sidewalk system, namely pilot (or permanent) sidewalk extension, temporary street transformation and mixed-use street (Nguyen et al. 2017, pp. 7-8). These design solutions all have the same direction which is adapting to the multi-functioning nature of the sidewalk and providing a more systematic, well-managed vision to the sidewalk culture. While these designs did not require any machinery support, it is believed that a technological approach would expectantly bring the project further.

The prototype sidewalk system utilizes a new technological tile to construct the pavements. These tiles are equipped with lights and sensors for multiple purposes. The lights with different colors are used to define spaces, while the sensors function as a means of controlling and organizing.

FUNCTIONAL

One preceding design applied by the local authorities of District 1 to tackle the sidewalk space issue is the designated vending space (Tatarski & Dam 2018). The space functions as a normal food zone but located along the sidewalk of a street in the center area of Ho Chi Minh City. The vending street has proven to be an effective solution regarding its benefits for street vendors, consumers and pedestrians. It is compulsory to undergo certain health check and food safety training to be qualified to operate a stall in the zone, thus people will not have to concern about hygiene issues like other informal street food locales. Additionally, street vendors are not required to pay any additional fee to work in the space.

The new sidewalk system takes the benefits from the preceding designs including designated vending zones and sidewalk barriers and create a more effective model for the pavement, with more flexible designated zones and flower vases replacing the barriers.
ENVIRONMENTAL

The two most commonly known environmental related issues of the sidewalk are street littering and natural shade (Nguyen et al. 2017, p. 3). Researches have shown that street trees are considered as a vital factor contributing to the attractiveness of streets and sidewalks with the appearance of trees are more enthusiastically perceived by people than the streets without trees (Gold 1977, pp. 84-87). These trees produce the pavements with clean air, noise absorption and shelter from negative weather impacts such as rain and glare. Despite the significant advantages that trees provide for the streets, they are being cut down at a rapid pace by the local authorities for ill-defined reasons (Dan Tri 2018). A whole specific space on the sidewalk is reserved for nature, including flower vases, grass tiles and trees. Trees will be located along the pedestrian path and next to vending stalls to provide shade and clean air. Furthermore, grass vases are used as an alternative to block motorbikes from jumping the curb.

EDUCATIONAL

In the contemporary urban city of Saigon, the sidewalks are undoubtedly more than a passage of movement, a mini society, so to speak. Therefore the cultural state of the sidewalk society is largely depended on the educational level of its inhabitants. For instance, researchers have shown the differences between two distinctive neighborhoods regarding physical and emotional quality of living (Nguyen et al. 2017, p. 3). The sidewalk occupied by ill-behaved vendors and moped taxi drivers and suffered from constant traffic congestions provides worse living standards to the local residents, while the pavements representing friendly and ethical habitants create a stronger sense of advance socialization and a friendly atmosphere.
While ‘sidewalk industry’ is not officially considered as an actual terminology, the sidewalk culture benefits the Vietnamese economy with taxes from street vendors and means of attraction to international tourists. In 2010, tourism occupied 3.9 percent of GDP direct in terms of industry interests and rising up to 12.4 percent if indirect economic impacts are put into consideration (Kim 2015, p. 307). The 2015 online research by Annette Kim, extracted from various travel blogs and websites, showed that the majority of foreigners were having positive impressions towards the street culture of Vietnam and were inclined to return for the same reason.

The new sidewalk model provides foreigners and international tourists with a more warm and welcoming atmosphere, having tourists participating on the pedestrian pathway would by no doubt increase the positive vibe that Vietnamese’s sidewalks are creating towards international guests. The establishment of a sidewalk industry (as stated above) is also worth to mention.
CHECK LISTS

- The sidewalk culture is preserved
- People making a living on sidewalks won’t lose their livelihood
- The flow of traffic won’t be affected
- Enough space for every activity
- Clean & Hygienic
- Natural elements
- Ethical & Welcoming
- Familiar to international tourists
- Utilizing technology
- Mobility of pedestrians should be a priority
- Organized

Figure 18. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.
Figure 19. Nguyen, H 2019, ‘Design experiments’, RMIT University, Vietnam, photo by author.

Figure 20. Nguyen, H 2019, ‘Design experiments’, RMIT University, Vietnam, photo by author.
Figure 21. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.

- Sidewalks are divided in different zones
- Each zone is used for different purpose
- Using the zone for inaccurate purpose is prohibited

- A timetable system can be applied for more order
A more detailed & flexible set up:

- Barbers
- Cafes
- Laundry
- Parking
- Moped Taxi Parking
- Food Vendors
- Walkway Merchandise
- Sports
- Performance
- Outdoor Games
- Storefronts
- Food Vending

Pedestrians & Tourist

- Engage to street culture in a more mannered way
- Easier to maneuver

Workers
- Vendors
- Barbers
- Street performers

- Require registration to operate in zones
- Easier to supervise
- Food hygiene
- Taxes
- Legibility
- Receive protection from the local law enforcement
Figure 21. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.

**CHANGING THE ORIGINAL FORMAT**

**IDEA:** Sidewalk / Public Space

Road

Sidewalk = Pedestrians & Others

Road = Vehicles

**Reality**

Motorbikes jumping the curb

Pedestrians walk on the road

⇒ Not enough space on the roads

⇒ Not enough space on the pavements

**Original Format:**

**Precedent solutions:**

- Sidewalk extension
  + Pilot
  + Permanent
- Shared street
  + Used on streets with low volume of vehicles and higher rates of pedestrians
  + Vehicles have to maneuver at a low pace.
Figure 22. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.

Figure 23. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.
Sidewalk culture has always been one of Vietnam’s unique traits. In Ho Chi Minh City, in particular, pavements are always filled with not only pedestrians, but food vendors, barbers, people playing sports and doing exercises. The sidewalks are considered a public place for people to interact, exchange and communicate, thus these scenes have become common in the present urban society and regarded as a friendly character of Saigon’s streets. However in reality, the sidewalk society are occasionally having various issues concerning space, mobility and human’s safety: pedestrians getting into accidents for avoiding vendors, motorbikes running on the pavements, consumers having food poisoning, street vendors getting harassed by the local police. The sidewalks are in need of a new and innovative solution in order to settle every problems. Therefore, this research is proposing an advanced sidewalk system, which aims to introduce a more organized and welcoming environment to the preceding model. In short, the prototype uses a new technological slab to manufacture the sidewalk. These tiles would displayed in different colors to indicate different designated zones, including walkways for pedestrians, vending zones, leisure zones and natural grounds for trees and flowers. The sensors are used to recognize the working equipments which the government provided for the sidewalk workers, making it easier for the authorities to manage the newly established industry. Additionally, there are flower vases that function as barriers to block motorbikes and white zones for parking or setting up vending stalls.

In conclusion, the new system of pavement is believed to be capable of being a viable answer for the sidewalk society and moreover, a social design solution. The design has put most stakeholders into consideration and carried out a method to benefit the majority of related individuals, namely pedestrians and street vendors.
LIST OF REFERENCES


Kim, A 2015, Sidewalk city: remapping public space in Ho Chi Minh City, University of Chicago Press, Chicago, US.


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Figure 13–16. Nguyen, H 2019, ‘Stakeholder map’, RMIT University, Vietnam, photo by author.

Figure 17. Nguyen, H 2019, ‘Saigon sidewalk’, District 1, Ho Chi Minh City, photo by author.

Figure 18–23. Nguyen, H 2019, ‘Design experimentations’, RMIT University, Vietnam, photo by author.