MSc Building and Urban Design in Development Student Report

Collaborative Infrastructure Upgrading

In partnership with WFW, ACHR, CAN, YTU and AMA
Acknowledgements

Our time in Yangon, though just a snapshot of the local realities of life, was deeply special and thought-provoking. The pre-field trip moments of preparation and the final stage of the collaborative authorship of this report have all filled our hearts and minds with priceless experiences. For such an opportunity, we are forever grateful to the partners, organisations, academics, communities and individuals who made it all possible.

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Fig. 0.1 - Ugradation Team photograph
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0.1 Executive Summary

This report is a result of a collaborative exploration of Yangon’s city making practices. Students in DPU’s BUDD program, along with local students at YTU and Bithukar, and local community members of Ward 67, worked together in an effort to unveil some of the current practices of space production in Yangon. This was done with the help of AMA collaborators, and partners from WFW, ACHR, and CAN. An in-depth critical reflection on the multiple urban dynamics of contemporary Yangon, this study navigates through complex political social and economic networks of the city, township and ward in an effort to frame spatial strategies for city-wide upgrading within existing governance structures and processes.

The report begins by looking at Yangon’s urban transitions and transformation, guided by Myanmar’s political, physical, social and economic transitions. It then aims to shed light on the insufficient model of state-led provision of services and the disregard of alternative housing processes in informal settlements, in order to highlight Yangon’s housing crisis as a key issue to address.

In our theoretical and analytical framework we narrowed our focus towards upgrading of infrastructure, understanding infrastructure as physical, social, and economic. Re-framing our understanding of informality and formality as non-binary and interconnected practices, we looked at the opportunities that arise as a result of social and institutional collaboration. Our main research question asks how collaborative upgrading of infrastructure can contribute to alternative housing processes.

The findings presented in this report are a result of diverse methods of engagement that took place in and Pyait Taing Taung and Ward 67. Looking specifically at housing, roads and water, we were able to reveal the physical, social, and economic potentials for upgradation. The narratives portrayed in this report come from daily individual stories, as well as longer-term collective achievements.

The vision culminated was upgradation through communal and institutional collaboration guided by several principles of community resilience, optimizing on existing symptoms, promoting economic development, and utilizing existing knowledges and skill-sets.
The report then presents strategies aiming at enhancing small-scale community upgrading, and scaling up previous approaches to township and citywide plans. The strategies shared in this report explore different scales and dimensions of the city are based on existing practices. They are: collaborative distribution of water, public network connections, and finally, land leasing. From the model of the savings group as social infrastructure, to collaborative investments in physical infrastructure, settlements as Ward 67 can become sources of contribution to city wide development. Upgrading of infrastructure through communal and institutional collaboration can hence contribute to the recognition of alternative housing processes within informal settlements.
0.2 The Upgradation Team
0.3 List of Acronyms and Abbreviations

ACCA - Asian Coalition for Community Action
ACHR - Asian Coalition for Housing Rights
AMA - Association of Myanmar Architects
Bithukar – Myanmar Community Architects Network
BSPP - Burma Socialist Programme Party
BUDD – Building and Urban Design in Development
CAN - Community Architects Network
CBM – Central Bank of Myanmar
CC – Community Centre
CHDB – Construction and Housing Development Bank
DEPP – Department of Electric Power and Planning
DHSHD - Department of Human Settlement and Housing Development
DPTSC – Department of Electric Power Transmission and System Control
DUHD - Department of Urban and Housing Development - former DHSHD (MOC)
GAD – General Administration Department (MOHA)
GOV – Government
HH - Household
IDP - Internally Displaced People
INFRA - Infrastructure
JICA - Japan International Cooperation Agency
Kyats– Myanmar Currency
MOC - Ministry of Construction, Department of Urban and Housing Development
MOEE – Ministry of Electricity and Energy
MOHA – Ministry of Home Affairs
MOPF – Ministry of Planning and Finance
Mit Zu Pala – Funerary Services institution at ward level
NLD - National League for Democracy
SG – Savings Groups
SPDC - State Peace and Development Council
SLORC - State Law and Order Restoration Council
UCL – University College London
W67 – Ward 67 in Yangon
WFW - Women for the World
Yami Yapa – informal ward level steering committee
YCBD - Yangon Central Business District
YCDC - Yangon City Development Committee
YESC - Yangon Electricity Supply Corporation
YHT - Yangon Heritage Trust
YTU - Yangon Technological University
0.4 Introduction

Framed in the context of Myanmar in a time of transition, our research was guided through three specific modes of transition - the physical, social and economic - with political transition as a cross-cutting concept throughout. This allowed us to better contextualize Yangon’s urban transformations in transition’. Looking at the city’s growing population and rapid urbanization, we dove deeper into understanding some of the more pressing, consequent issues: the state’s ineffective mechanism response to urbanization and the growth of informal settlements in the city. Both recognizing the insufficient model of state-led provision of services, and that alternative housing processes in informal settlements are not acknowledged by the state, it became apparent that looking at Yangon’s housing crisis was key to future, multi-scalar upgrading strategies.

This formed the basis of our analytical and theoretical framework, where we looked into how alternative housing processes are being overlooked. Lack of institutional support for existing conditions and recognition of existing processes, highlighted the lack of collaboration needed for upgrading. Understanding living in a collective urban environment as a system supported by diverse networks we realized the role of infrastructure as vital. This consisted of physical, social and economic infrastructures. Reframing formality-informality as non-binary and interconnected processes, we understood this as a major contribution to an overall lack of recognition that affects the marginalized urban population of Yangon. We attempted to unpack the possibilities of a grey area where diverse formal-informal practices can co-exist; a room for manoeuvre. We identified this social and institutional collaboration. From this, we were able to reach our question: How can collaborative upgrading of infrastructure contribute to alternative housing processes?

This was more carefully explored during our fieldwork, where Ward 67 was used as our entry point. While housing was used as the general context, roads were used as a tool to understand current methods of upgrading. Water, a priority highlighted by community members, WFW reports, and our on-site research, was used as our analytical lens in understanding specific infrastructure provision.

From the fieldwork findings, a set of community strategies emerged that aimed at tackling some of the constraints related to water provision and quality at a ward scale. Together with information on citywide plans and government projects, new strategies were developed aiming to scale up previous approaches to a township and citywide plans. The strategies shared in this report are the result of this process as a whole, having explored the different scales and dimensions of the city and taking the existing practices, by many actors at different levels, as a foundation.
Fig. 0.4 - Final Mapping Exercise in Ward 67
Fig. 0.5 - Process Diagram
0.5 Transformation and Transition

**Transformation** is the point or period in time where a subject has reached a new transformative state, evolving into a new form, shape, or identity. This is influenced by elements in its previous state of being, as well as external factors new to its normative state of being.

**Transition** is a process most visible between certain milestones of change. It can be defined as the culmination of all milestones as they occur in time, including the processes between the milestones. Transition is what relates and connects the moments of change together.

**Transformation in transition** can be defined as a period in which a subject changes from its previous state to a new state whilst constantly being in a transitory process that never culminates into an end state, continuously birthing a new period of transition for another level of transformation. Transformation always takes place in-between periods caused by a series of internal or external events and factors over a period of transition that holds it all together.

![Fig. 0.7 - Transformation in Transition Diagram](image)

STATE 1.  
STATE 2.  
STATE 3.  
STATE 4.
1.0 Context
Myanmar has a complex history, characterized by political unrest, and ethnic and armed conflicts. From 1962 to 2011, the country was under a military regime and a socialist single-party governance system. A point of transition began in 2010, when the first multi-party elections took place which helped pave the way for institutional and economic reforms that are still underway. The 2008 Constitution built the foundations for a multi-party political system and market economy. It allowed for the introduction of liberalising reforms such as the privatization of state companies and new foreign investment policies. With a gradually growing economy and efforts to implement reforms towards national reconciliation in an ongoing attempt to solve ethnic conflicts, Yangon continues to transform politically, physically, economically, and socially.
1.2 The Urban Peripheries

With over five million people, Yangon is the most populated city in Myanmar. The city area covers 33 townships of 4 districts in the Yangon Region and has its own City Development Committee (YCDC). In big cities like Yangon, the peripheral areas around the consolidated centre play an important role in the city’s expansion and development. In Yangon, some of these areas were agricultural land far from the centre. As the city developed, however, they became attractive locations for industrial development and an entry way for migrant workers. Historically, rural-urban migration in Myanmar was driven by a series of socioeconomic push and pull factors and had a major role in shaping the main urban centres where gradually new peripheral informal settlements with no service provision started to grow. In Yangon, since the 1950’s there were waves of government imposed forced evictions and relocations to new townships or satellite towns in the periphery with no basic infrastructure and services, the growth of these settlements was caused by the increasing flow of people moving in as a result of many factors like Cyclone Nargis that hit the country in 2008, and more recently the rapid economic growth and fast pace industrialization.

Today, Yangon is still a centre for commercial and economic activity attracting migrants looking for jobs. Finding an affordable place to live is challenging, and many new settlements lack basic services and infrastructure. These settlements might include squatters, owners and renters organized in different modalities and the market is supported by a network of informal brokers and local governance. In many cases renters live in insecure conditions, at risk of eviction as the city expands, land speculation rises, and new big scale developments take place in peri-urban areas following new plans.

The government and local and international planners are looking at peripheric areas and townships around the centre to expand the city and create new business districts and industrial zones. Social enclaves are starting to increase in these areas with informal settlements neighbouring industrial areas, gated communities and high-end condominiums.
Yangon currently has around 270 informal settlements (UN-Habitat, 2017). Most are located around the urban periphery areas and lack basic service provision. This map illustrates some of the settlements identified by WFW.
1.3 Current Challenges And Opportunities

Governance, development, planning and housing

In Myanmar there is no official policy targeting informal settlements and, in many places, people are still living in precarious conditions.

The governance system is complex, not only analysing from a historical perspective, but also looking into the transitional institutional structure changes that are currently in place. Governmental attempts to develop a better city include Urban Development Plans, large infrastructure projects and guidelines and directives for housing provision. Many of the big scale developments and infrastructure plans are supported by foreign investment and planning consultancy and are focused on developing the economy while taking advantage of the country's favourable position in South East Asia. These efforts have been ineffective to the overall lower income population, specifically regarding housing and services provision.

In 2016, the government released its National Economic Policy with 12 steps that included guidelines for more sustainable cities and improvement of public services. MOC and YCDC are working with JICA to develop an Urban Development Plan and a Transportation Plan for Yangon. These plans are unclear as to who they target. Similarly, there is an ambitious program aiming to develop one million houses by 2030, intentions to establish a National Housing Policy, create a new state Housing Department and develop new legal and financial mechanisms. While in the past the government developed site and service approaches and upgrading strategies, currently, only low-cost and affordable housing are being developed. The housing provision strategies are not effective and there seems to be an absence of representation of some of the existing urban practices and processes.
Fig. 1.5 - Governance Structure, Actors Involved in Planning Housing and Infrastructure
Fig. 1.6 - Housing Planning in Yangon Statistics

Fig. 1.7 - Location of Housing Developments in Dagon Seikkan
1.4 Dagon Seikkan

Townships play an important role in the administrative structure of the country and they can include both urban and rural areas and currently some of the administrative roles are performed by elected members of the community. Dagon Seikkan is included in the new preliminary JICA plans a target area of strategic urban development planning, it is an industrial area along Bago River. In 1991, DHSHD (now DUHD), appropriated the land from farmers. Following that, satellite communities and industries started moving to the area that gradually expanded. Displacement caused by the civil war, natural disasters, rural-urban migration, land redevelopment for industrial purposes and increasing land costs, all contributed to the increase in population and density. Many informal settlements lack adequate drainage systems and are under risk of flooding and eminent eviction as land is mostly owned by state departments. The state values the land as it can be used for industrial expansion and new housing developments as well as to implement key infrastructure and increase the accessibility to the city centre.

Fig. 1.9 - Planing Visions Based on JICA Plan
1.5 Ward 67

Ward 67 is located in the southwest part of Dagon Seikkan Township and was composed by migrants that arrived mostly as a result of economic pressures or disaster including many that left the Ayeyarwady region after Cyclone Nargis hit in 2008. Many of the first inhabitants were employed in construction projects close to the area and stayed there. The ward faces issues like no sewage systems, no electricity, no water provision or waste management systems. A majority of people in the ward work in informal activities, the most popular being shop keeping, service provision, selling water and electricity, construction work, or driving. With many residents having previously acquired building knowledge and skills, most houses are self-built. Residents have faced eviction notices in the past and the risk is still eminent as the government still labels them as squatters. One of the most important aspirations to them is securing tenure.
2.0 Theoretical and Analytical Framework
2.1 Theoretical & Analytical Framework

Like most slum settlements worldwide, Ward 67 and similar areas in Yangon are deemed informal, in contrast to their more urban and ‘formal’ counterparts recognized and supported by institutions and government bodies. It is however, difficult to place these clear boundaries of informal-formal. Based on Colin McFarlane’s notions of the ‘informal’, informality and formality are interconnected practices and process, a “meshwork”, rather than existing geographies (McFarlane, 2012). These practices are ongoing and habitual actions within the unfolding of everyday life.

It can be argued that the political, social, and economic transformations and transitions that people experience do not exist only in formalized institutions. They also take place in households, negotiations, concepts of cooperation and understanding, daily practices, conflict and trust. Informality here, is seen as a type of negotiation and valuation, in which informal agreements and forms of valuation/negotiation (what we came to understand as ‘Nalehmu’ in Burmese) drive urban development and urban life. Informality, therefore is not outside formal systems, but is produced by formal systems and always connected with them. As mentioned in McFarlane’s article “Rethinking Informality: Politics, Crisis, and the City”:

“Across different cities, and within cities, the informality-formality regime varies. Notions of “formal” and “informal” are rarely neutral, and reflect dominant forms of state, corporate, legal, residential, and activist power, and debates about the sorts of urbanism that should be valued, promoted, avoided, or removed” (McFarlane, 2012).

From research, it is evident that alternative housing processes in informal settlements are not acknowledged by the state. Here, housing is looked at as an ongoing activity that penetrates the lives of those who are housed as opposed to a physical commodity that is provided. It concentrates on the role of housing within the context of the household’s broader life practices (Turner, 1972). Currently, the state is not providing support to improve existing conditions in the informal settlements as they lack basic services and physical infrastructure. This is perpetuated by the continuous cycle of precarious living conditions: no tenure security, poor basic physical structures, and public service provision continue to reinforce each other driving a wider gap between informal settlements and the potential for institutional support. Simultaneously, there is a lack of recognition for some of the existing social practices and systems such as self and collective building, the presence of social and economic networks, and community governance administration.
“As practices, informality and formality exist as a kind of "meshwork" (Ingold, 2011), an entanglement between different "bundles of lines", representing the different flows and practices of the urban world. The meshwork stresses the fact that the urban is not ready-made, but always in formation. From this perspective, rather than viewing informality and formality as fixed categories, or as mutually exclusive, the two appear as lines of changing practice and movement, taking place not above or in advance of urban life, but within its unfolding”

McFarlane
These socio-economic practices can be seen as unrecognised strengths that can be used as assets for upgrading existing physical structures, granted there is a form of social and institutional collaboration. Here, collaboration refers to the process of working together towards a common goal through fair and equitable relations. Two conclusions can be drawn from this analysis: there is a lack of collaboration between the state and the community within existing housing processes, and that there is need for infrastructure upgrading. This said, How can collaborative upgrading of infrastructure contribute to alternative housing processes?

Based on our notions of informality, our focus is on the room for manoeuvre between informality and formality. This is not to say that upgrading takes place in the gap between the formal and informal, but rather through collaborations within an informalized co-production of space.

The processes of urban transformation are more complex, interwoven, incremental and consisting of diverse set of practices. It’s impossibly solely dependent on the formal.

REFRAMING THE BINARIES

Meshwork - Collaboration

COPRODUCTION OF EXISTING SOCIAL SYSTEMS & INSTITUTIONAL SUPPORT

Physical social and economic improvements undertaken cooperatively, to ensure sustained improvements in the quality of life.

UPGRADING INFRASTRUCTURE
- Physical: improved physical structures
- Social: strengthened community relationships
- Economic: enhanced business networks

Theoretical Framework
We define upgrading as the physical social and economic organizational and environmental improvements undertaking cooperatively among citizens community groups businesses and local authorities to ensure sustained improvements in the quality of life for individuals and the collective. Hence, our notion of infrastructure extends beyond physical, and includes what Abdoumalique Simone referred to as “people as infrastructure". To us, infrastructure includes the economic collaboration among residents in urban life and their ability to engage complex combinations of objects, spaces, persons, and practices (Simone, 2004). Using this notion of infrastructure, upgradation strategies would ideally include locally-based interventions that can be scaled up by strengthening collaborative systems on a wider scale. Ideally, this would include collaboration in a mutually-beneficial manner, informing the “meshwork” between the formal and informal.

Fig. 2.2 - Diagram of Theoretical and Analytical Framework
3.0 Fieldwork
Fig. 3.1 - Map of Ward 67 Showing Areas Researched in More Detail
3.1 Fieldwork - Introduction

The majority of the research stage of the trip was spent working with community members of Ward 67 in the Dagon Seikkan Township. The members of the community we were working with were invited to participate by WFW, with whom they have been creating a women’s saving group for approximately 2 years. Only three out of the six individuals working with us were part of the savings group. The group included only 2 men, both of whom play an important role within the community in terms of water distribution and infrastructure upgrading.

Based on initial conversations with community members in Ward 67 we focused our main research on two areas of the ward: where our the majority of our group members lived, and the area deemed to be most at risk and in worst condition (See map 3.1 opposite). Through discussions in these two areas, though limited, we also gained an understanding of networks and infrastructure across the ward.

Fig. 3.2 - Illustration Ward 67
Fig. 3.3 - Students Working Together
3.2 Plan of Action

This plan developed throughout our fieldwork as we re-evaluated our methodology to adapt to the new knowledge and direction emerging throughout our work with local students and community members.

One key aspect of our research approach was the need for circular knowledge production, in which at each stage of new information we re-evaluates and adapts our approach based on new understandings.
3.3 Methodology

While working in Ward 67, we adapted our research focus based on the priorities of the community, resulting in us looking at three main themes within ‘Infrastructure Upgrading’:

- Housing -
  Used to explore Context

- Roads -
  Used to explore methods of upgrading

- Water -
  Used as an analytical lens to understand existing infrastructure provision

Diagram 3.5 shows how these three themes were explored through physical, social and economic factors, in relation to our definition of infrastructure. It also shows the different methods used to explore each theme.

Existing collaborative systems set up by WFW were looked at as a model of how ‘Collaborative Upgrading of Infrastructure’ could work.
Fig. 3.5 - Diagram of Methodology
3.4 Methods of Engagement

The initial site visit to Pyit Taing Taung housing project gave us a useful opportunity to test some of our methods with participants who were more familiar with this kind of interaction, and allowed us to explore the methods used by the local students and WFW. It was important at this stage to align our objectives for our research with those of our partners.
Putting ‘Us’ on the map

Locating ourselves alongside community members on a world map, and showing the cities we all come from and how we ended up in Yangon, helped us create familiarity and trust. Sharing our stories meant others in the group were more likely to open up and share theirs. It also gave us contextual information about where the community members previously lived, how they came to Ward 67, and where in the ward they lived.
Fig. 3.8 - Mobility Mapping Exercise
Mobility Mapping & Story Telling

In order to understand how physical and social infrastructure affected residents in their day to day lives we worked with them to map daily activities. This included less tangible information such as social gathering spaces and activities that brought the community together, alongside more physical information such as water points and the shops they buy housing materials from.

Determining Priorities

In order to decide which specific issues within infrastructure upgrading we should focus on we, wrote a collective list of the most pressing concerns. From this list the community members each voted on their top three and the two areas with the most votes became our focus. The two topics chosen were Water and Housing.

Home Water Use Map

One activity that enabled us to gain an insight into personal water use was to draw and map water usage within the home. This exercise looked at flows within the home for all types of water, including: Rain water, grey water, washing water, drinking water etc. The main aim was to understand the connections between water use, physical infrastructure and economic impact per household of water use.

Social Connection exploration

In order to get a conversation flowing, this exercise started off with both community members and students listing qualities they look for in a friend. From the ensuing conversation, one common struggle the community members had shared was the difficulty in making close friends they could rely on when they first settled into the Ward. This paved way for the main part of the exercise which looked into the spaces where members of the community came together, or rather, where social networks form. Through conversation and storytelling, we were able to understand the spatial assets and potentials to enhance social networks within the Ward.

For more methods used, see Appendix 8.8, p.136-137
Fig. 3.12 - Fence Line at the Limit of Property near Ward 67
3.5 Limitations

The methods used enabled us to gather varied types of data, however, due to restrictions in both time and access, the data collected is specific only to a few cases. Although we feel they are representative of many, generalisation is still speculative.

One limitation was the lack of diversity within the community members we worked with. Although not all were savings group members, all had prior positive and negative bias towards the model. Alongside this the majority were mothers over 30, which gave a specific focus on childcare and education, a priority not mentioned by the men.

In addition, the majority of the community members we worked with were from the wealthier, north-east, part of the ward. In order to gain a balanced understanding we also wanted to engage with people from the areas in worse condition, whom our community members admitted they did not talk to. This meant we had to adjust our methods and conduct separate interviews with other community members, to avoid getting biased answers based on their presence.
3.6 Our Positionality

Being mindful of our positionality, we were cautious in the participatory methods and tools we chose to approach our work, adding responsibility accountability and acknowledged subjectivity and hence more ethical terms of engagement. Before approaching the strategies, we acknowledged our position of privilege and agency within our partners and the community in Ward 67, and hence the extent of our role and abilities while devising strategies. Taking advantage of our different backgrounds, we were able to continuously negotiate and understand different viewpoints, using conflicting ideas to produce creative ways of moving forward. Moreover, we ensured that the strategies we devised were informed by two particular things; building upon local knowledge and existing practices, and building on our own educational background and professional expertise. As our group consists of diverse backgrounds in community architecture, engineering, and water resource management, we strived to keep our strategies relevant to the areas that we felt we could most effectively contribute.
4.0 Field Findings
4.1 Women for the World in Ward 67

WFW in Ward 67:

Since 2015, WFW have been working in Ward 67 alongside community members. In that time, they have set up saving groups with over 30 members. These savings groups have been successful in improving financial security amongst its members. This year, a community centre was built using their savings, providing a safe and comfortable space for their weekly meetings and gatherings.

Other Social support systems:
The saving groups are among various other institutions within the ward which support the social infrastructure within the community, like the funeral services and the monastery. The funeral services play an important role in the community providing support and mobilizing volunteers.

For more social findings, see Appendix 8.9, p.138-141
Fig. 4.1b - Community Centre in Ward 67
Weaknesses

Fig. 4.2 - Diagram Weaknesses of WFW Model
Opportunities

**Social**
- Community building processes strengthen network of support
- Knowledge sharing between groups creates incremental capacity building
- Female leadership model creates confidence with family and political actors
- Collective building with the community for new homes

**Economic**
- Low interest loans available for those in most needs
- Nalemu agreement allows sale from land owners
- Loans available for small business development
- Presence of WFW in Ward 67 could be utilised for collective upgrading
- Interest from loans used for upgrading

**Physical**

Fig. 4.3 - Diagram Opportunities of WFW Model
4.2 Housing as Context

Our previous understanding of housing as a process was made evident on the ground in Ward 67. The typologies and the state of the homes were incrementally built and inhabited simultaneously whilst pursuing relationships for social infrastructure and physical infrastructures like water, electricity, and waste disposal, showing housing as multidimensional, consisting of much more than the physical structure of a ‘house’.

Many people interviewed who had upgraded their houses explained that they saved half of the money needed and took a high interest (20%) loan to pay for this rest. This was often a full process of around 10 years; half spent saving and half repaying the loan. Many residents are not willing to personally invest in upgrading because of the threat of eviction, however some are willing to invest in their houses for improved quality of life and because they feel it could in fact reduce the threat of eviction.
Fig. 4.7 - Houses in Ward 67 Examples
Daw Tin’s Story

Bamboe Structure without water facility
@ Chindwin Street, Ward 67

Wife & Mother | Husband | 3 children | Accommodating Grandmother, Sister and 2 children

Total 11 residing in 1 room subdivided into 2 living/sleeping spaces, a kitchen at the rear and external toilet.

Step 1: My housing process started with my family and I renting this property for 40,000kyat/month with the following facts:

Step 2: Then after living here for a year, the house owner who is resident in Ward 53 couldn’t take care of the maintenance anymore. But still owned a vacant land owned in front of the house. To protect the land from being grabbed by other residents of the ward, we were asked by the owner to invest money in building on the vacant land on his behalf and by so doing reducing our rent by 50%.

Step 3: So with the help of money lenders in Ward 67, I was able to borrow 200,000kyat at 10% interest and build an extension of our home on the vacant land owned by the Landlord. We bought second hand materials from within the ward. My husband and his nephew built the house within two months.

Step 3 in housing: At this stage we don’t have any water facility for our home, so we buy fresh and drinking water for our home from external sellers every two days.

Our next step will be fixing our main challenge which is the safety against break ins and protection from wind and rain as the facades are not fully closed.

For another housing story, see Appendix 8.12, p.146-149
Weaknesses

**Social**
- Different parts of the ward don't talk to each other
- Corrupt governance system
- Increasing population means lack of available space

**Economic**
- Income seen as biggest challenge to upgrading
- Most upgrading paid through high interest loans, average 20%
- Lack of savings make larger investment possible despite long-term economic viability

**Physical**
- Some building methods do not have long-term sustainability

Fig. 4.10 - Housing as Context Weaknesses
Opportunities

Fig. 4.11 - Housing as Context Opportunities
4.3 Existing Methods of Infrastructure Upgrading in Ward 67

In order to understand the existing methods of infrastructure upgrading and how they worked, we looked at upgrading of roads. The main findings from this were that in order to attain a good quality upgrade, a benefactor was needed to donate either money or materials.

In the cases where this happens, the community members come together and donate a small amount of money as well as their time to do the physical work required. Through talking to people involved in this process it was clear that this then had a positive impact on the social relations between neighbours.

This positive impact has been labelled on the diagrams as ‘Potential’, since ‘getting to know your neighbours’ reinforces collective action and bypasses the need for a benefactor through collective savings.
Fig. 4.12 - Ward 67 Road
Road Type 1: Community Built

This method was initiated by a wealthy resident in the ward who donated bricks to the local community to facilitate the road building. After this the cement was donated by the NLD political party, enabling the community to come together for the building process.
Road Type 2: 1:10 Leader Managed

This method was shown to be least effective in terms of quality of upgrading. This is because it relies solely on financial donations from residents, who have a low income and in some areas are mainly temporary renters, meaning they are unwilling to invest in upgrading.
Road Type 3: 1:100 Leader Managed

This method showed a clear benefit of the existing governance systems within the Ward.

This upgrading is initiated by the 1:100 leader who assesses need based on his own observation and then calls a meeting with residents on that street.

At this meeting donations by residents are agreed plus 1 person from each household to help with construction.

Additional costs are then funded personally by the 1:100 leader.
In some cases the main roads have been funded and built by local government.

For this process to work need is assessed by the Yami Yapa, a committee of 9 elders, who submit a proposal to the Ward Leader, who in turn presents it to the regional government. If accepted, budget with then be allocated for specific road building.

Builders are contracted by regional government but the processes of building is managed by the Yami Yapa due to a lack of trust in the quality of construction provided.
Weaknesses

Fig. 4.25 - Roads as Method Weaknesses
Opportunities

**SOCIAL**
- Strengthens support between neighbors through collective building
- Use benefits of existing local governance structures
- Some roads managed by families who live there --> collective responsibility
- Cultural ties to upgrading i.e., monks being barefoot
- Positive impact on social factors due to physical upgrading

**ECONOMIC**
- Wealthy benefactors donate money or materials to support upgrading
- Local residents pay only a donation of what they can afford
- Existing collaboration between community, government and private actors
- Collective action for funding and building
- Different systems work together for variety of provision
- Positive impact on local economy due to physical upgrading i.e., shops

**PHYSICAL**
- Increase of flood risk acts as a catalyst for house upgrading

Fig. 4.26 - Roads as Method Opportunities
4.4 Lens of analysis: Water

Water usage and consumption is an integral part of housing infrastructure in Ward 67. In front of most houses, there are buckets and barrels of unfiltered or salty well water, used for bathing and washing. Since most homes are elevated, a physical mechanism that protects against flooding, some households collect water used from bathing and washing, also referred to as grey water. This is done by placing buckets under the bamboo flooring of the bathing area and collecting the water that flows through. In homes where there are latrines, small buckets of grey water are used for flushing. This recycling of water reduces water consumption and costs.

Almost always, water used for drinking and cooking is bottled and bought from outside sources. The water in wells in and around the wards is not potable, which is why it is limited for bathing and washing. Some households have rain-catchment systems over their roofs, to collect water during the rainy seasons. These systems are not very efficient due to the lack of space or high costs of storing this water.
Fig. 4.29 - Ward 67 Illustration
Water Distribution in Ward 67

There are several water resources around ward 67, and distribution depends on the type of water, its use, and household income. As mentioned earlier, drinking water is generally bottled. Vendors on motorbikes, bicycles, or small trucks frequently circle the ward selling bottled water at a fixed price. This is a major cost for households as it is a daily purchase, and there are no alternatives yet. There are several public wells around the ward where people can collect unfiltered water for bathing and washing for free. Since carrying water is physically taxing however, most people buy well water from vendors who also drive around the ward selling from door to door. There is some form of Nalehmu at play here as there is an understanding of which households buy from which neighbors based on trust and neighborly relations. It is rare that different water sellers compete in certain neighborhoods.

Some higher income households have their own wells and sell water to nearby homes. Similarly, some of those who can afford installing pipes get water straight from private well owners, paying for water services on a monthly basis. This does not apply to all who can afford pipes, as many well owners will turn down those they do not trust yet. This is out of fear of installing a long-term fixture in what could be a temporary home. In general, the quality of the pipes is not optimal as they easily break, and it is the water-provider's duty to maintain and fix the pipes. Lastly, a common mode of distributing water is through donations. This includes private well-owners that donate to friends nearby, those who donate during religious festivities, and government parties who donate close to election periods.
Weaknesses

WATER AS A LENS OF ANALYSIS

- Pipe providers unlikely to sell to short-term renters
- Poor distribution
- Flooding during rainy season
- Well water not drinkable
- No space for rain water storage

SOCIAL

- All water for cooking currently bought from private outside sources at a high cost
- Type of water provision based on income
- Pipes require expensive maintenance - often break and water gets contaminated

ECONOMIC

PHYSICAL

Fig. 4.30 - Water as Lens Weaknesses
Opportunities

SOCIAL
- BUDDIST CULTURE ENCOURAGES SHARING --> PEOPLE DONATE WATER
- SHARED PRIORITIES OF WATER UPRADING

ECONOMIC
- EXISTING INVESTMENT IN WATER AS A COMMODITY
- GOVERNMENT PROVIDED WATER COULD BE SIGNIFICANTLY CHEAPER
- BETTER QUALITY WATER EASIER TO SOURCE DURING RAINY SEASON

PHYSICAL
- EXISTING PHYSICAL INFRASTRUCTURE
- DIFFERENT SYSTEMS WORKING TOGETHER
- EXISTING SYSTEMS FOR RAIN WATER COLLECTION
- EXISTING KNOWLEDGE OF FILTRATION TECHNIQUES

Fig. 4.31 - Water as Lens Opportunities

WATER AS A LENS OF ANALYSIS
4.5 Analysis

From our field research we have identified the key issues with existing infrastructure provision in Ward 67 (looked at through water), but more importantly we have seen the main potentials of existing socio-economic infrastructure to be able to upgrade physical infrastructure through collaboration.

The WFW model of collaborative saving, as well as their existing presence in Ward 67, presents a strong opportunity for collective action to be facilitated through the savings group, addressing the current perception of income as the biggest barrier to upgrading. Using housing (in its multiplicity) to understand the context of upgrading we understand that people are willing to invest, especially where they feel that the improvement of the area could lead to less evictions, and eventually recognition of their status as residents.

Looking at methods of upgrading roads we have seen that upgrading through collaboration works best when those collaborating involve actors considered both informal and formal, and across multiple scales, including: community members, ward governance, private investors and regional government.

Due to using water as an analytical lens for understanding existing infrastructure provision, strategies presented will use water as an illustrative tool for suggesting ways of collaborative upgrading.

The following page diagramatises our findings across all themes, showing them through the lenses of physical, social and economic. Statements written in bold represent the findings which are specifically carried forward to inform our strategies, used within a wider understanding of the context.
Fig. 4.33 - Children in Tree at Ward 67
Weaknesses

**ANALYSIS OF COMBINED FINDINGS**

- **SOCIAL**
  - Strict roles can exclude members who need flexibility
  - Different parts of the ward don’t talk to each other
  - Input of 1:100 or 1:10 leader depends on relationship with community members
  - Lack of trust

- **ECONOMIC**
  - All water for cooking from external sources - expensive
  - Income seen as biggest challenge to upgrading
  - Most upgrading paid through high interest loans average 20%
  - Long-term investment needed before initial land purchase can happen

- **PHYSICAL**
  - Poor water distribution
  - Farm land
  - Precarious land
  - Flooding during rainy season
  - Well water not for drinking
  - Some buildings methods do not have long-term sustainability
  - No space for rain water storage

- **QUALITY OF UPGRADE**
  - Dependent on cost covered by benefactor
  - Quality of upgrade

- **LACK OF JOBS**
  - Despite skills

- **NO INVESTMENT IN HIGH RENTAL AREAS**

- **DISTRUST OF SAVINGS GROUP**

- **THREAT OF EVICTION**
  - Reduces willingness to invest in upgrading

- **INCREASING POPULATION MEANS LACK OF AVAILABLE SPACE**

- **INWARD 67 MEETINGS ARE HELD FOR ALWAYS SO MANY CAN NOT AFFORD**

**Fig. 4.34 - Weaknesses Findings**
Opportunities

- **Social**
  - Female Leadership
  - Buddhist Culture encourages sharing
  - Shared Priorities of Water Uplifting
  - People come together against eviction - Solidarity
  - House Numbers Assigned by Ward Leader - beginning of recognition
  - Benefits of existing Local Governance Structures
    - Some roads managed by families who live there - collective responsibility, cultural ties

- **Physical**
  - Physical Building Skills
  - System of Inremental Building
  - Existing Systems for Rainwater Collection
  - Existing Physical Infrastructure for Water that can be developed/improved
  - Different physical system working together

- **Economic**
  - Nalemu Agreement between Water Sellers Sale from Land Owners
  - Formalised System of Ownership through Nalemu Agreement with Ward Governors
  - Wealthy Benefactors donate money or materials to support upgrading
  - Low interest loans available for those in most needs
  - Renters reduced rents
  - Existing Knowledge of Filtration Techniques
  - Renters reduced rents
  - Existing physical infrastructure for water that can be developed/improved
  - Existing system building resilience
  - Increase of flood risk acts as catalyst for change

- **Environmental**
  - BETTER QUALITY WATER EASIER TO SOURCE DURING RAINY SEASON
  - PRESENCE OF WPF
  - BUILDING MATERIALS AVAILABLE
  - STATE PLANS FOR WATER INFRASTRUCTURE DEVELOPMENT

Fig. 4.35 - Opportunities Findings
Fig. 5.0 - Drinking Water Reservoirs in Yangon
5.0 Strategies
5.1 Vision, Principles and Guidelines

VISION

UPGRADATION THROUGH COMMUNAL & INSTITUTIONAL COLLABORATION

PRINCIPLES

- Building community resilience to adapt to past transitions and future transformations
- Optimizing and building upon locally established systems
- Promoting local economic development
- Empowerment through existing individual and collective skill sets and knowledge
GUIDELINES

Unpacking existing systems and seeking potential solutions through locally generated knowledge

Developing a sustainable community-led plan

Promoting community mobilization through strengthened community ties

Introducing and implementing relevant third party mediation

Promoting mutually beneficial communal-insitutional collaboration

Capitalizing on local skills to foster technical feasibility of a strategy

Situating ideas and concepts into the city-wide plans

Fig. 5.1 - Diagram of Vision, Principles and Guidelines
5.2 Interlinking Strategic Development
Fig. 5.2 - Diagram of Strategies

TOWNSHIP
PUBLIC NETWORK CONNECTIONS
COMMUNITY + GOVERNMENT

CITY SCALE
LAND LEASE THROUGH INFRASTRUCTURE
COMMUNITY + GOVERNMENT + PRIVATE SECTOR

Fig. 5.2 - Diagram of Strategies
5.3 Collaborative Water Distribution

EVIDENTIAL OPPORTUNITIES

Physical distribution infrastructure present along certain routes for provision of water from private sellers to multiple households. Despite the poor physical condition of these pipes (fixed and flexible) that probably contribute to major health challenges, there's potential for recalibration of a functioning system.

Social systems in place for the donation and sharing of water amongst communal households in possession of wells and those without. Government donations taking place from time to time. The local culture of sharing, based on Buddhist traditions, can be built upon for more effective Distribution.

High amount of economic investment in homes for individual wells and pumps and private water businesses’ water infrastructure. Potential of reducing the total cost over the ward per person through communal investments.
MINIMUM TOTAL: 46 WATER POINTS IN THE WARD

MINIMUM OF KYAT INVESTED IN WATER SO FAR
EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

Given our previously mentioned accesses to water, the settlement has become a space of unequal distribution of water in quality and economics.

Outside of Ward 67 in areas serviced by YCDC and majority of countries in the world, water is deemed as a basic necessity to which all citizens have a right to access with equal communal contribution according to daily usage. However, within settlements like ward 67, water has become a commodity with poor quality service and high prices.

The lack of state collaboration in terms of services and infrastructure has led to personal and private initiatives and as a result an imbalance and inequality in the usage of water in the housing process of the residents.

STRATEGIC PROPOSAL

Building on the existing initiatives, opportunities, methods and resilience enacted by the community residents, the proposed strategy is a collaborative and balanced redistribution method that will gradually even out the commodification of water.

The strategy entails the use of the existing Savings-Group Community Center Water facility to distribute water for a comparable YCDC price and reinvesting that earned amount into another pump location for the same amount of money. The invested pump location then follows the same cycle of reinvesting all income into another pump location. This is called; “The Expansion Model”.

Based on this strategy, water can be provided at a better rate and form a basis for communal collaboration to save for bigger upgradation plans and security of tenure.

“The person who sells water in the ward is a God”
SG member
Fig. 5.7 - Numbers and Statistics for Water Costs and Investments

Fig. 5.8 - Map and Process for Strategy Implementation
IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

0 - Starting with a the saving group (SG) community center well as the first redistributive source, an agreement needs to be made amongst all SG members to take on this redistributive expansion model and determine the target area.
SG balance 2018: 3 Million Kyat.
SG water redistribution for 200 Kyat/day | 1,400 Kyat/week | 5,600 Kyat/month | 72,800 Kyat/year
5 Households (HH): 364,000 Kyat/year | 10HH: 72,8000 Kyat/year | 20HH: 1,456,000 Kyat/year

In 3 years: the SG’s revolving funds can increase to approximately 1,456,000 Kyat/year, in addition to the continuous savings of the members.
Actors & Tasks: SG members to agree on new endeavour | WFW Technical Support in setting up Project Plan & Financial Model

1 - SG to invest in purchasing a solar pump and heightened storage tank of 1,000 litres to facilitate effective distribution of water and employ a water distributor to carry out the distribution process.
Cost Estimate 2.6 Million Kyat upfront for pump and installation.
Actors & Tasks: SG members to agree on new endeavour | WFW Technical Support in setting up Project Plan & Financial Model | Electrical Engineer to install pump and Builder to erect a new Bamboe tank

2 - SG to invest in pipe work distributing water from the SG well to connected households. Each household to erect a bamboo pole structure to hold each pipe which will also serves as fire risk protection. Collaborative distribution with investments on both ends.

3 - SG to identify next households to locate a well and pump infrastructure. Starting with a manual method, distributing with buckets and kegs by SG members and return of funds to SG balance. This process continues to multiply itself to the point of a more equitable water distribution.
Setting up a system in place for future modifications
BENEFITS & OPPORTUNITIES

WARD
• Better connections and less damage of pipes due to elevated approach to distribution and separation from insecure road infrastructure.
• Multiple sources reducing the water prices and creating a higher savings balance in the community. Each household can save 1500 Kyat by participating in the water distribution network, which then can be saved with the savings group for future investments.
• The water nodes can be combined in the future with governmental infrastructure for agricultural purposes and reduction of required capacity.

TOWNSHIP
• Opens the opportunity for the township as a whole to be recognized due to resilience in having a self-organized water distribution network. This system within the ward can be scaled up to connect with the existing system of the township.

CITY
• The expansion model can co-exist next to the city model as it reduces the delivery load of the formal water network system.
• Knowledge can be shared across Yangon & Myanmar for the further recalibration and support of governance tasks.

Fig. 5.9 - Bamboo in Ward 67
5.4 Institutional Support In Water Supply & Social Distribution

EVIDENTIAL OPPORTUNITIES

- Presence of YCDC water distribution pipe along the boundary road of Ward 67, street name Ayer Wun Setsat Road. With the ward so close to the water infrastructure, the residents find themselves being in close proximity to such key infrastructure.
- Social networks present between the community representatives in the ward and governmental institutions (YCDC).
- With 45% of the city residents being perceived as squatters, the collection of government taxes and revenue leaves out almost half of the citizens. Projecting the amount of households in ward 67 to current water payments in Downtown Yangon, the following uncollected amount provides an opportunity for governmental institutions to supply services.

Inclusion of W67 and other settlements will increase government revenue by another 45 million on a yearly basis which could be reinvested in citywide infrastructure.
Fig. 5.11 - Water Costs of Squatters and City Residents

<table>
<thead>
<tr>
<th>HOUSEHOLD/MONTH</th>
<th>WARD</th>
<th>Gov.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,600</td>
<td>500</td>
<td>45.5 MILLION MMK</td>
</tr>
<tr>
<td>41,000 HOUSEHOLDS/MONTH</td>
<td>47,540,000</td>
<td>2,050,000 MMK</td>
</tr>
</tbody>
</table>

Fig. 5.12 - Map and Process for Strategy Implementation
EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

At this moment, government owned water provision is not available to the residents of Ward 67 except for a handful with governmental affiliations. This lack of access is caused by recognition as being informal. However water distribution still takes place in the ward on individual and communal basis.

Water suppliers, with wells and pumps provide water to homes through fixed, temporary, and flexible pipes. Mobile infrastructure is also often employed and donations of water take place.

So though the ward is recognized as being informal, the same system of demand and supply for water exists, but the transactions are not directed towards regularized water and services delivery.

This self-supporting practice of the ward sets up a catalyst for trust from YCDC, recognizing the will to pay for water provision. Funds which go a long way in the support of government budgets and lead to recognition.
STRATEGIC PROPOSAL

Building on the existing distributional infrastructure of the ward and a pre-arranged mobilisation through equitable water distribution, the proposal of this strategy is for the mobilisation of community representatives like the Yamiyapa and the Funeral Service to jointly apply for water connection to the existing infrastructure.

Achieving this allows feeding and distribution of such services through the existing network to become more affordable.
IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

0. Building on the successful implementation of Strategy 1 and a higher level of community solidarity in decommodification of water, a united front can then be mobilized for the implementation of this strategy.

1. Discussion of collaboration with YCDC for water supply on existing ward infrastructure.
   Actors & Tasks: Community Representatives as Yamiyapa & The Funeral Service to initiate engagement with YCDC in collaboration with the Savings Group members.
   Technical Expertise from WFW required to draw up detailed plan and demarcation of piping.
   YCDC to open 2-3 substations along the road to feed the ward.
   Community pipes to be provided by savings from SG connecting the substations to already existing water nodes for further distribution.

2. Proposal letter & Detailed Engineering Plan to be issued to YCDC for final agreement.
   Payment plan from community of 500 Kyat/ month/ 4100 HH : 2 Million Kyat/month.
   Cost Estimate: 1 Substation Pump for approximately 2 Million Kyat.

3. Agreement on provision of water and steps to be taking till billing to be set up and signed.
   Community to prepare lanes of piping network from substations to existing community tanks.
   3a. Collaboration with Ward Governor and Yangon Admin Leader for support of process in conjunction with preparation of infrastructure.
   Actors & Tasks: YCDC, Ward Representatives and Legal Support from WFW to maintain solidarity and responsibilities.

4. Water connection takes place and the usage of poor quality well water is resolved.

5. Payment of bills with confirmed address.

6. Scaling up possibilities to tackle other infrastructural needs and upgradation of homes.
BENEFITS & OPPORTUNITIES

WARD
• Allowance for more home upgrade initiatives to be taken. With more elements leading to secure tenure, the more households can invest. Nonetheless, the health benefits and 98% reduction in water costs are significant benefits.

TOWNSHIP
• Improved collaboration on a township scale as knowledge can be shared across the township and costs of infrastructure can be reduced whilst sustaining access to the infrastructure.

CITY
• Supporting the cause for access to water eases the governmental challenge of limited land and finance to provide homes and services. Accumulated funds can be reinvested to cater for the housing needs of the city which is currently barely covered by 20%.
5.5 Infrastructure Through Land Lease

EVIDENTIAL OPPORTUNITIES

Based on strategies 1-2, the resilience of the community has been shown including the willingness to contribute to the citywide growth and provision of housing and services.

Ward 67 land, though originally designated for agricultural process is now in relation to surrounding land used for housing. This usage shows the growth of Yangon as the periphery continues to be populated.

Socially and Economically there are systems in place for renting and purchase of land which can be build upon as precedences for obtaining a lease agreement with the Government.

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**HOLDINGS**

**Option 1:** Giving 400,000MMK to the ward governor and community elders to cover cost of land rental. Eventually the land becomes owned by the payee.

**Option 2:** Giving 5,000MMK regularly to the Ward Governor and community elders till land becomes owned.

---

**DIRECT HOUSE OWNERSHIP**

Buying land and houses outright from the holdings by paying between 400,000MMK - 2,000,000MMK

Average price for LAND leasing to ownership: 400,000MMK

Fig. 5.14 - Possibilities of Agreements
EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

The population of households occupying the land of Ward 67 has been increasing from the following figures:
2008: 1007 HH
2014: 3000 HH
2018: 4100 HH

Despite the risk of eviction, citizens marginalised by lack of governmental housing policies end up only being able to afford land and rent in a settlement as Ward 67 and all across Yangon.

Though the land is government-owned, there is a presence of informal landowners renting out and selling out land to residents. These transactions show the willingness of citizens to obtain legal tenure that’s affordable within their means. However these funds never reach the government, for tax purposes and redistribution of finances.
STRATEGIC PROPOSAL

With 410,000 HH, land value is estimated as: 10,640,000,000,000 Kyat

Given the amount saved from the collaborative water supply per household, 11,000 Kyat can be reinvested in the strategy to obtain an official lease agreement from the city government. (See Strategy 2)

1 month savings on water
11,000 Kyat saved
410,000 HH
451 Million Kyat

DURATION OF OBTAINING THE LEASE ON MONTHLY SAVINGS: 24 months.

IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

Fig. 5.16 - Process of Implementation
BENEFITS & OPPORTUNITIES

Fig. 5.17 - Implementation Benefits
5.6 Collaborative Upgrading as a Solution?

The strategies proposed are built on the existing systems in Ward 67 and they exist across all informal settlements in various manners.

These systems lay a physical, social and economical foundation for transformation which need to be recognized for citywide development. In the same way that collaborative water systems can influence recognition, redistribution, upgrading and land tenure, so can other modes of infrastructure upgrading be used across settlements to achieve similar aims.

From the model of the savings group as social infrastructure, to collaborative investments in physical infrastructure, settlements as Ward 67 can become sources of contribution to city wide development as opposed to burdens. Recalibration of direction of social and economical investments is key for upgrading and security to be achieved. As we have shown here, it is through working from the existing ‘informalised’ housing and upgradation processes that we could achieve an integrated and diverse city, that meets the fast growing needs of its population.
Fig. 6.0 - Workshop Participants outside the Monastery in Ward 67
6.0 Conclusion
The omnipresent drive hidden behind this study was the common will to contribute to a relevant discussion around the dynamics taking place in Yangon in this particular moment of transformation in transition. The country still faces some of its biggest challenges while opening its windows and doors and exposing some of its greatest potentials and opportunities. The initiatives to develop new plans can be seen as evidence of the political will that is driving the country through its new pathway. However, a major part of the population is left out of this process. When it comes to planning some of the main economic goals seem to overshadow its social impacts and are disconnected from the multiplicity of housing processes that are shaping the cities. The assumed Housing Crisis is in part the result of the state perspective, discourse, and positionality around alternative housing processes, including the un-acknowledgement of informal settlements. We hope this research brings to light relevant information that might contribute to the discussion around informality and how it is perceived. It is fundamental to listen and plan according to the narratives of the communities living in the urban peripheries, taking into account the issues, as well as understanding the social, political and economic capital they preserve.

We actively engaged in constructive community discussions by sharing small scale upgrading strategies at ward scale, while at the same time our aim was looking into larger and longer term plans. Our final strategies are grounded on the intention to improve everyday life through communal action without losing sight of the pathway towards tenure security. Infrastructure interlinks people and places and can be used as an entry-point with small interventions at community scale working as catalysts for bigger initiatives developed in collaboration with the State. We believe that collaboration is vital, especially when all actors are already working separately to achieve the same goals.
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Fig. 5.13 - Section of Distribution System  Source: Authors
Fig. 5.14 - Possibilities of Agreements  Source: Authors
Fig. 5.15 - Land Lease Scheme  Source: Authors
Fig. 5.16 - Process for Strategy Implementation  Source: Authors
Fig. 5.17 - Implementation Benefits  Source: Authors
Fig. 5.18 - Map of Implementation  Source: Authors
Fig. 6.0 - Workshop Participants outside the Monastery in Ward 67  Source: Authors
Fig. 6.1 - Coming Together Exercise  Source: Authors
Fig. 7.0 - Workshop Participants inside Community Centre in Pyit Taing Taung  Source: Authors
7.2 Bibliography


Yangon City Development Committee. (n.d.). Facts about YCDC Yangon City Development Committee.
8.0 Appendix
8.1 Evolution of Analytical Framework

In the pre-fieldtrip stage a surface level attempt was made to understand the Urban transformation of Yangon and identify the core issue at hand through time. Through time as a lens of analysis, Yangon was understood to have continually been in transition since the Toungoo Dynasty in 1500 whilst having different moments of intense transformation due to politics, economies and social influences internally and externally. As a result birthing a nation and a city with a recent shift in political control, perceived political freedom, civil unrest and increased tension within the ethnic groups and external foreign investment that brings rapid change.

Building on the first strike we discovered time to be the container through which the three different modes of transition in Yangon have taken place; Political, Economical and Social. Through these modes of Transitions, a further understanding was discovered as the drivers of transition became more explicit in the spheres of transformation namely; land, citizenship and finance. Theses spheres of transformation were evident in urban challenges of Ward 67 due to lack of tenure, lack of citizen rights to public services, financial limitations to level of jobs attainable, lack of access to public educational and health facilities. It was evident, the core issue at hand was “a lack of recognition of the informal”.

Hence, due to several causes in these modes and spheres of transition and transformation, our proposal was to investigate WHAT EXISTING ‘FORMAL-INFORMAL’ PRACTICES CAN CONTRIBUTE TO RECOGNITION THROUGH THE UPGRADING OF INFRASTRUCTURE? Exploring the grey area between both formal and informal practices as a room for manoeuvre and opportunity to attain recognition.

From the onset of the fieldwork and engagement with the respective partners, this framework transformed from the Political, Economical and Social transitional modes to more grounded human modes of impact identified as Physical, Economical and Social modes within which any form of transformation can take place in land, citizenship and finance. The Political transition was not neglected, but became more refined into governmental policies and institutions binding all the modes of transition and spheres of transformation together.

However, the Political became more vivid through the absence of policies and structures catering to the lower class and poorer levels of society.

Also through the material and discursive practices on ground in Ward 67 pertaining to land, citizenship and finance it became clearer that “NAHLEMU” (which means an understanding) played a major role processes of transformation and recognition. Residents became collaborators without any legal agreements but social agreements.

This led to a further refinement of the framework and perception of existing systems in Yangon.

Building on this, the final strike was the refinement of the entry point that would lead to recognition. What infrastructure? What upgrade? What formal-informal practices?

Through understanding the priorities of the communities to be water and housing, upgrade to be in terms of the quality of and improved access to physical infrastructures and formal-informal practices to be the existing social systems on ground level, the framework of our analysis was then remodelled with consideration of the necessity for institutional collaboration as follows:

WHAT EXISTING SOCIAL SYSTEMS (NAHLEMU) IN COLLABORATION WITH INSTITUTIONAL SUPPORT CAN CONTRIBUTE TO RECOGNITION OF INFORMAL SETTLEMENTS THROUGH THE UPGRADING OF WATER & HOUSING INFRASTRUCTURE?
TRANSITION LINE

TIME

01. YANGON URBAN TRANSFORMATION

02. FORMAL-INFORMAL PRACTICE
   TIME
   POLITICAL
   ECONOMICAL
   SOCIAL
   LAND
   CITIZENSHIP
   FINANCE

LACK OF RECOGNITION

03. TIME

POLITICAL BIND

04. TIME

SOCIAL BIND

COLLABORATION OF SOCIAL + INSTITUTIONAL SYSTEM

YANGON URBAN TRANSFORMATION

WATER
HOUSING

UPGRADE: RECOGNITION

LONDON

YANGON

YANGON - LONDON
POLITICAL STRUCTURES + POLICIES!

YANGON URBAN TRANSFORMATION IN TRANSITION

Modes of Transition

LAND

FINANCE

CITIZENSHIP

ECONOMICAL

PHYSICAL

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WARD 67

Core Causes

VOLATILE POWER RELATIONS
LIMITED FINANCIAL RESOURCES
LACK OF LEGAL ENTITLEMENT (TENURE)
LACK OF TECHNICAL SKILLS

Core Issue

LACK OF RECOGNITION

Core Effects & Impacts

INSECURITY OF LIVELIHOODS
LACK OF ACCESS TO SERVICES & INFRA
DIMINISHING QUALITY OF LIFE
RESTRICTED ACCESS TO PUBLIC EDUCATIONAL & HEALTH FACILITIES
SOCIAL & INSTITUTIONAL EXCLUSION
LACK OF AGENCY & COMMUNAL ACTION
CONTINUOUS DEBT CYCLE
LACK OF IDENTITY CARDS

Top Priorities

HOUSING - WATER - EDUCATION

Conclusion

RISK OF EVICTION
INABILITY TO INVEST IN LONG TERM HOUSING DREAMS
VICIOUS CYCLE OF EMPOWERED HOUSING & WATER CONDITIONS

STRATEGIES TACKLING THE ABOVE

Research Question

What existing social systems (NAHLEMU) in collaboration with institutional support can co-produce recognition of the ward through the upgrading of water & housing infrastructure?
Types of Transitions

**Political Transition**

The interval between one political regime and another. In this sense, political transition is also political transformation. It starts from a given political regime, usually an authoritarian one, which for many reasons becomes inadequate or unable to live up to its institutional tasks, and culminates in another, constituting a break-through in the past political life of a country.

**Economic Transition**

The interval between a more centrally planned socialist economy into a form of market economy that is driven by capital.

**Social Transition**

Social changes are variations from the accepted modes of life; whether due to alteration in geographical conditions, in cultural equipment, composition of the population or ideologies and whether brought about by diffusion or inventions within the group.

Timeline & Level of Impact

2003
National Financial Crisis
ACCA Starts Working in Myanmar

2005
Capital Changes From Yangon To Naypyidaw, 300 Km To The North

2008
Cyclone Nargis Hits Myanmar
New Constitution
Country Is Renamed Republic Of The Union Of Myanmar

2011
Special Economic Zone
New Labor Laws
Allowing Unions And Law Allowing Strikes
Demonstrations Are Passed
Prisoners Are Released
Censorship With Skin State And South

2012
$4.5 Million Population In Myanmar
30% Living In Urban Areas
Yangon - 10% Of The Population
Over 5 Million
National Land Policy
Foreign Banks Re-entering
Telecoms Network
Opened To Foreign Investment

2014
Censorship With Karen Ethnic
Group
Parliamentary By-elections - NLD Wins Seats
Reform Law
Foreign Investment Act
US and EU Case Sanctions
Rakhine State - Armed Conflict
Between Rohingya Muslims And Christian Arakan Buddhists
State Of Emergency Declared
Military Steps Participating In The Administration Of The Region

15,000 IDPs Camps

2016
Htin Kyaw Is Sworn In As President (March)
New Government Takes Office (April) / 1st Civilian Government In 59 Years
Yangon Authorities Demolish Houses In Mingaladon Township
Clashes Between Rakhine Muslims And Ethnic Buddhists
Buddhist956 Starts Again
(October/November)

2017
Violence Escalates In Rakhine State - Major Humanitarian Emergency Declared
According To UNHCR Over 650,000 Refugees Fled To Bangladesh In 4 Months
Influx Of Refugees To Bangladesh Increases
Do Still Ongoing (December)

Transition Impact

- Political Transition
- Economic Transition
- Social Transition

High
Mid
Low

Time
8.2 Diagram of Time-line: Transformation in Transition

**Transformation IN Transition**
8.3 Diagram of Actors in Transition
8.4 Diagram of Actors
8.5 Housing Processes

Informal

- Socially trusted and short process
- Accessible to everyone
- Lower acceptable market prices
- Requires need
- Requires any available land

Moving onto the land

Build a house

Put in infrastructure

Obtain legal tenure of site

Formal

- Bureaucratic and long process
- Not accessible to everyone
- High market prices
- Requires legalized citizenship
- Requires legalized available land
8.6 Maps of City Development
8.7 Governance Structure
8.8 More Methods used

Ice-Breaking activities

Observing the processes used by WFW to create an atmosphere of trust and friendship helped us to frame our interaction with community members. These activities were initiated at the beginning of each day and involved both team-work and physical contact, helping to break down barriers between researchers and community members.

Transect walk

Through the transect walk we were able observe, and talk to residents, about the key issues around infrastructure, as well as gain an understanding of processes of upgrading that are currently being used. From this walk we began to determine our initial list of priorities, within infrastructure, on which we should focus on.

Co-Design for Strategies

On the last day of fieldwork we worked with community members to look at possible solutions to some of the issues around housing and water that they had brought up. We then used these ideas to inform our community level strategies. However, due to time, the ideas from this workshop were not developed enough to take forward on their own.
Youth Exercises

The majority of community members we were working with were middle aged mothers. In order to try and gain a different perspective we worked with children on the ward on various activities to understand how the issues around water and housing effected them. These included drawing their dream house, drawing the different ways they use water and interviews.

Interviews

To understand the specific practices at play we conducted interviews with both residents and Ward Leaders who play an important roles both within service provision and upgrading. Within service upgrading this included the 1:10 and 1:100 leaders and wealthy material benefactors.

Case Studies

When looking at housing upgrading we spoke to residents who had recently upgraded their houses this included Daw Tin and U Ohn Shwe, community members with whom we were working, who had recently upgraded their houses. Alongside this we spoke to Daw Thida & U Thein Lwin, who had re-built their home in brick after 2 years of living in a bamboo hut.
8.9 Social Findings

The Monastery:
The monastery is the main space for school for young children. Alongside this, they play an important cultural role with Buddhism being ingrained within everyday life in the ward.

Funeral Services:
Myint Zu Par La is a funerary service institution based in Ward 67, acting as an important solidarity network. Moreover, they support the community through a voluntary waste collection system. Volunteers collect waste from households and separate the plastic bottles to sell. The money received from this collective voluntary initiative has already allowed them to buy large waste bins that are placed in the streets.

Social Connection exploration
In order to get a conversation flowing, this exercise started off with both community members and students listing qualities they look for in a friend. There were many overlapping words written, the most common being; trusting, loyal, understanding, and sympathetic. From the ensuing conversation, one common struggle the community members had shared was the difficulty in making close friends they could rely on when they first settled into the Ward. This paved way for the main part of the exercise which looked into the spaces where members of the community came together, or rather, where social networks form. Through conversation and storytelling, several frequently mentioned places of social encounter were religious and national festivities, along with sports events for children. One main concern with these spaces was that they were temporary events. The only consistent, non-temporary space was the savings groups, which only a few of the community members present were a part of.

WFW model
In Yangon, WFW as been supporting communities in informal settlements through a collaborative approach, by creating self-managed women’s savings groups and providing training. The savings groups members agree collectively on their own set of rules to guide their operation, defining roles and deciding on how to manage the savings. Some of the results have been the overall improvement of livelihoods through loans for small businesses at low interest rates, or for incremental upgrading of housing conditions. In some cases there is also support to develop new housing communities by providing loans to buy new land collectively and create new neighbourhoods through collective planning and the creation of a housing committee.
Benefits of the Process

- Improves leadership skills
- Improves financial management skills
- Helps end debt cycle
- Builds trust
- Team work
- Transparency
- Accountability
- Literacy
Fig. 4.3 - WFW Savings Groups Process
8.10 Water Statistics

General
100,000 - to build a well - only labour - excluding material
40,000 - to buy an electric 2 inches perimeter water pump
400 - 700 - to fill a 100 L plastic tank with bathing/washing water
30,000 - to buy 100 L plastic tank

A House of 6 people - 2 tanks - pay 800 to fill the 2 tanks - they fill the tanks 3 times a week and pay at the end of the week.
Costs per week (fresh water): 2400kyat/week | 9600kyat/month

Drinking water is delivered in the houses 2 times a day

Rainwater is collected in rainy season but after stored for 2 days starts smelling bad

A house of 11 people - 1400kyat for two days fresh water and 400kyat per 2 days for drinking water
Costs for fresh water): 4200kyat/week | 16800kyat/month
Costs for drinking water): 1200kyat/week | 4800kyat/month

Average fresh water costs for average household of 5 people: 2900kyat/week | 11600kyat/month
Average drinking water costs: 1200kyat/week | 4800kyat/month

Building a normal Bamboo house: 200,000kyat

Sellers:
Electric generator to make pump work and sell electricity - 1 gallon of diesel a day - 3.300 a day for diesel (some sellers have 3 generators and 5 wells)
Sellers distribute water to the fixed pipes in alternate days (monday, wednesday, friday etc.)
Fixed pipes break easily with the movement of cars and cycles and in the rainy season might get contaminated by the dirty waters
Sellers fix the damaged pipes regularly, is part of the service, older pipes break more easily than new ones, new ones are fixed faster by the sellers
8.11 Daw Kyi Thi Kyi’s water story

3 people living in house
Pays rent approx. 35,000 a month (renting for 5 years)

She works in the market selling, brother also sells in the market and niece works in a factory

Spends approx. 15,000 a month on drinking water
Spends approx. 15,000 a month on bathing/washing water -

She has 1 plastic tank 100 L for storage - buys from neighbour /seller through movable hose system

Also collects rain water in the rainy season with metallic sheet gutter
Daw Thida & Thein Lwin's House Process

1. Materials from south dagon packing area
2. 2 months
3. Steel
4. 5 days
5. Finished stage
6. 1 month
8.12 Daw Thida & U Thein Lwin’s Story

Bamboo to Brick Structure with Water & Electricity
© X Street, Ward 67

Husband & Wife | Shop Owners | Brick Donators to Road Construction

Step 1 in housing:
Our housing process started with our move from Tharkayta Township where we paid 130,000 - 180,000 Kyat per month on rent. But because we wanted to own a home which we couldn’t afford on the city market, we chose to move to Ward 67.

Step 2:
Upon arrival in Ward 67 we bought a Bamboo Structure and lived in it for 2 years, whilst we saved money in our shop business to rebuild the house.

Step 3: After saving, we chose to build a long lasting and cost efficient brick house with electricity and water connections including appliances and fittings to run our home properly.

Step 4:
We then started buying our materials from South Dagon Factory Area and demolished our Bamboo structure to ground level.

Step 5:
Together with our nephews who are masons, we built a brick foundation, then erected the load bearing structures to the roof. Whilst doing this, we lived in the house in the incremental process of the build.

Step 6:
For now we finished off the works on the house in a month including the mechanical and electrical appliances. The whole process took 4 months and continues to this day, but with less maintenance as a bamboo structure would require.

In the end, we now see that upgrading had an impact on the Ward as some people in the ward have followed suit in their housing process.
8.13 Water Purification and Recycling Strategy

Scale:
Household

Implementation:
Short-term

Current modes of production:

Drinking Water:
Well water - water is available but is not potable
Bottled water - Sold around the ward but costly

Bathing Water:
Well Water - private wells
Well Water - buying from private
Well Water - Carry from public well
Benefits and Opportunities

Purifying low quality water for drinking:

- Cost Effective
- Sustainable
- Applicable - small size - using available materials

Recycling grey water:

- Cost effective
- Sustainable
- Plants for use
- Insect repelent
- Possibility of expanding on a community scale