The Possibilities of On-Site Upgrading

Turning Informal Settlements into Sustainable Communities

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Introduction

"Achieving a city without slums begins with a shared understanding and acceptance that slums and their residents are an integral part of the city and the urban economy and as such, they have a right to the city and its services."

(HUDCC 2014)

According to UN Habitat one eighth of the the world population live in slums, which makes it nearly one billion in total (UN Habitat 2019). Upgrading existing slums will contribute to a more sustainable urbanisation with reduced social inequalities. Among other things it strengthens urban safety, improves security of tenure conditions and creates better public spaces. One of the guiding principles for dealing with informal settlements in the Philippines described in the National Informal Settlement Upgrading Strategy (NISUS) is "maximize retention and minimize relocation of Informal Settler Families" (HUDCC 2014). Instead of focusing on relocating the families the method of on-site upgrading of the settlements could be a prioritised option.

New roads and houses in Bistekville 4, Quezon City. (Photo: Wiberg)

During the study trip to Manila, Philippines with the Urban Shelter course I had the opportunity to visit an informal settlement area that was an ongoing upgrading project, Bistekville 4 in Quezon City. The informal structures were being replaced with two storey row houses. Sufficient water and electricity lines were put in together with paved roads.

Temporary and permanent structures in Bistekville 4. (Photo: Wiberg)

During the time of the visit some buildings on the site had been erected and people had already moved in. On the site there were also people still living in small shelters of less permanent structures. Many of these people were waiting to move in to the new buildings. Seeing part of the old settlement just next to the new made the importance of upgrading apparent. But what makes an on-site upgrading project successful?

In this paper two completed on-site upgrading projects will be presented and reviewed for the purpose of identifying key factors and stages that are central in an on-site upgrading project. Where the outcome includes not only a rehabilitated

settlement with permanent structures but also an improved and strengthened community.

Literature Review

On-site upgrading is defined as "Improving the physical, social and economic environment of an existing informal settlement without displacing the people who live there" (Raju, et al, 2016). Improvements of physical environment often include technical programs such as infrastructure, electricity, water supply and sanitation. Other improvements such as tenure security and community empowerment affect the social and economical environment. On-site upgrading allows the affected people to stay in the area where they have livelihood opportunities, go to school, or perform other day-to-day activities. It can also strengthen the social cohesion within the community as people are kept together.

I have looked at two completed upgrading projects that have had different approaches. They are both considerable old examples, carried out during the 1970s and 1980s. However, the projects contain much information and can still be considered valuable references.

Old Naledi, Gaborone, Botswana

In the book *Old Naledi – The Village Becomes a Town* author John van Nostrand describes the on-site upgrading process and result taken place in Gaborone, Botswana during 1976-1980s which involved around 10 000 people. Following the independence growth rates increased in Gaborone and new sources of employment attracted more people to the city. The intensified need for low income housing cause informal settlements to form. Old Naledi was one settlement area which self-developed and was seen as dirty and dangerous, with 4 water taps serving the whole population of 10 019 persons, no electricity and inadequate sanitation (pp. 27-29, van Nostrand, 1982). The upgrading project of Old Naledi started in 1976 with a planning document outlining the major objectives. Among these were to achieve affordable urban standards in the community thorough basic infrastructure and facilities, acknowledging that the community itself can play a significant role in improving the conditions and also to provide monetary compensation to residents who might be displaced (p.18, ibid).

The project team consisted of representatives of the local government, Self-Help Housing Agency (SHHA) and groups of elected residents. In depth surveys were conducted and the project staff met with residents face to face which allowed the project staff to get to know the residents and vice versa (pp. 21-24, ibid). When adding the new layer of infrastructure, the implementation was divided into two stages. Firstly, provide the primary services that would serve all residents (such as main roads and water supply along with drainage channels) and then provide the services that would reach every individual plot. The new main roads were placed so that they aligned with the old routes as much as possible to minimize the number families being displaced and removing the costs of compensating them (p. 37, ibid). Plots were defined using existing hedges and fences and instead of applying plot size standards, that would create a large number of displacements, the minimum plot size was reduced from 400 to 200 square meters (pp. 40-41, ibid). A preliminary road plan for showing the locations for second and tertiary roads was presented to the all residents who together with the project staff walked the suggested routes, allowing opinions and concerns to be voiced. The residents would rather displace residents than remove certain trees. Ward labour units were created to assist the new road work.

When plot plans had been finalized Certificates of Rights were issued making plot-holders eligible to apply for building and material loans. It was determined that the owners would build their own houses and they were also allowed to plan them. But they had to receive technical assistance from SHHA, which also provided supervision and inspection later on. Materials were chosen after desire of the residents as long as they were of permanent quality (pp.45-46, ibid).

In the book van Nostrand presents interviews with the residents of old Naledi, which were carried out after the project was finalised. One resident, Joseph Maoba, were able to find permanent employment after he signed the Certificate of Rights. The new improved house was large enough to be partially rented out to generate more income. Another resident, Ruth Chiwawa, was also able to rent out rooms in her new house and was grateful for the opportunities that that the upgrading meant for people in the community (pp. 62-63, ibid). To summarize,

the project community participation, cohesion and continuous evaluation were the main factors.

Ouagadougon, Burkina Faso

The case of Ouagadougon in Burkina Faso, is described in *11 Successful Housing Projects* by Bo Johansson and Johnny Åstrand. This low cost project was carried out during the period 1982-1989 and involved 40 000 families. Representatives from local authorities partnered up with advisers from the University of Amsterdam to upgrade an informal settlement area. Economic support was provided by the Dutch government.

The project starting point in this example was identifying improvements that would provide better conditions and help integrate the informal settlement area into the rest of the city (p.26, Johansson, et al, 1990). When asking the occupants about what improvements they wished for, the most important one was land tenure security. Furthermore, they wished to have drinkable water and planned roads. The project group created a plot map with rational road system and more evenly distributed plots, but keeping as many of the existing dwellings as possible. Once permanent plot areas were marked out, families received the legal right to their plot. Dwellings that were wrongly placed according to the plot map had to be moved by the families within one year. From the dwellings that were moved about 80% of the building materials could be reused. And the new dwellings were considered to have better standards. A reason for this was said to be the increased willingness from the occupants to invest in their dwelling when they had received tenure security. Upgrading the families' private areas were prioritized over public areas, like roads and sewage systems. Throughout the project the occupants were being informed about the terms and conditions (pp. 27-29, Johansson, et al, 1990).

This project relied much on the capabilities of the occupants and prioritised provision of tenure security over improvements of infrastructure. Unfortunately, no interviews with the residents involved were available.

Discussion

For the two projects the order in which the different stages are implemented vary but there are things that the all have in common. In both examples a key factor has been tenure security. With this ensured the willingness to improve the private dwelling increases. The dwelling can with tenure security be seen as an asset. One that could give better paying jobs or further be used for income generating activities which are helped by having a legal address. A second key factor is community involvement. Which in both examples has been more or less the driving force.

The Old Naledi project uses a "close" approach with face to face meetings, high level of trust and continuous dialogues. It starts with improvements that serve all residents and later zooms in to focus on details. This approach is perhaps only feasible in smaller settlement areas or when fewer people are involved. However, it creates a sense of ownership that goes beyond the private plot as the decisions made regarding community functions are actually made by the community.

The residents in Old Naledi were allowed to make many decisions themselves, regarding plans and materials, but with support from SHHA. This could be considered a quality, adding to the fact that it is now their permanent homes. It allows for dwelling diversity and individualisation within the area. Although this example is around 40 years old I believe it has high relevance regarding how to work with community participation during planning and implementation. It also shows how important it is to understand the traditions and values of the community before making alterations. In this case it was the high importance of the existing trees which non-residents might not understand.

In Ouagadougon the approach was completely reversed. It started with the private plots and provision of tenure security, based on the wishes of the residents. They chose to keep as many dwellings as possible which also meant that fewer members of the community were negatively affected and possibly helped strengthen the community. The dwelling improvements were financed by the residents who after receiving tenure security could see it as an investment. Whether or not they received any technical assistance is not clear. Technical assistance would however be preferred to ensure that the new dwellings are more

durable and sustainable. Even if the initial project cost would increase it could pay off in the long run. The upgrading project in Ouagadougon concerned a significantly larger amount of people than the one in Old Naledi. A similar process with full community participation would probably be very complex and difficult to manage, even when divided into smaller groups. Still communication was an important part of the project and ensured that the right things were prioritised.

Urban Shelter Design

I have formed a few suggestions that are to be considered during the planning and implementation of an on-site upgrading project. The suggestionas are based on the discoveries from the two case studies and personal experiences from the site visit in Bistekville 4. These should be seen as general suggestions and are not proposed in any order as every upgrading project would be different.

- **Focus on the community as a driving force**

  Within a community there is valuable knowledge to be collected. There can be ideas, community savings, direct labour. Getting the community involved helps create a sense of ownership and will allow the chance for better maintenance and further development of the project. Communication is key to keep them invested in the process and to maintain a level of trust. To keep the community relations strong, I believe achieving "minimum dislocation, maximum retention" is important. So to avoid stressing these relations if people are forced to be displaced. It is also necessary to make sure that the opinions of the community are being voiced, not only from a selected few. Although the opinions can be presented by representatives of the community, these representatives should be selected by the community.

- **Always take on a local approach**

  It is important to acknowledge the site strengths, and understand what is working and what is not. Identify important functions that can be enhanced or improved as a starting point to regenerate the area. This emphasises once again the knowledge that can be gained from involving the community and to do this early in the process.

- **Tenure security**

  The importance of tenure security has been shown in the previously presented examples. In some cases, the occupants have money saved but are not willing to spend it on improving the dwelling if the are not certain that they will be able to stay.

- **Understand the different needs**

  Not every project will be the same and the extent of the upgrading project should be depending on the priorities and the resources of the ones who are part of the community.

Bistekville 4 under construction. (Photo: Wiberg)

The Role of Architects

I believe it is important to understand that on-site upgrading is not only about making buildings out of more permanent materials and providing shelter to individuals, but helping communities build stronger identities. It enables them to be integrated into the city. The role of architects in on-site upgrading is to provide the professional knowledge needed to create spaces that are safe, secure and sustainable. To be able to do this successfully architects must work closely with the users to understand their needs and wishes both within a home and outside it. I believe trust building and continuous communication is very important to maintain a good relationship between architects and users, especially in these situations. Important information and building regulations should be accessible and understandable for the community. Looking at this in a larger sense, encouraged participation could also mean that more people get interested in working with upgrading projects. In which they become representatives that can help strengthen project positivity and increase involvement.

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