

02



Fig. 16 Sketch of informal settlement

Fig. 17 Next page: The informal settlement of Phumlong

INFORMAL SETTLEMENTS – ENVIRONMENTS OF FLUX

Architecture and society represent a complex system of parts mutually interdependent on one another in order to function as a single cohesive whole.





Fig. 18 Laundry day in Mumbai's Dharavi slum



Fig. 19 The slum of Kibera, Nairobi, Kenya depicts the recurring nature of high proximities, inferior housing conditions and lack of services within slum settlements



Fig. 20 A slum in el Salvador, Brazil faces similar problems as those experienced in slums worldwide

DEFINING CHARACTERISTICS

“In developing countries, the term ‘slum’...simply refers to lower-quality or informal housing. Large, visible tracts of squatter or informal housing have become intimately connected with perceptions of poverty, lack of access to basic services and insecurity. Terms such as slum, shanty, squatter settlement, informal housing and low income community are used somewhat interchangeably by agencies and authorities” (UN-Habitat, 2003: 9).

THE NEED FOR REMEDY

It is not necessary to emphasise the poor standard of living conditions coupled with the lack of basic services and infrastructure within informal settlements, it is self evident. However, these environments require improved service delivery through immediate solutions to facilitate better living conditions.

Kofi A. Annan, preceding Secretary General of the United Nations, states in the report: *The Challenge of Slums: Global Report on Human Settlements 2003*, that “almost 1 billion people, or 32 per cent of the world’s urban population, live in slums, the majority of them in the developing world. Moreover, the locus of global poverty is moving to the

cities, a process now recognised as the ‘urbanisation of poverty’”, he further states “without concerted action on the part of municipal authorities, national governments, civil society actors and the international community, the number of slum dwellers is likely to increase in most developing countries. And if no serious action is taken, the number of slum dwellers worldwide is projected to rise over the next 30 years to about 2 billion” (UN-Habitat, 2003: vi).

The pandemic of informal settlements throughout the world continues with little sign of rescue. What may be required as an immediate response is an interim held service delivery core. This catalyst, should stimulate growth to improved living conditions.

THE SOUTH AFRICAN INFORMAL SETTLEMENT

Informal settlements are in flux by nature. Even when settlement boundaries serve as constraint, a change in urban fabric continually manifests through altering dwelling configurations. The disassembly and recycling of structures, together with new informal extensions frequently remodels the dwelling units for increased practicality. Existence is treated as temporary by authorities whilst the circumstances of settlement

usually remain for an extended period of time. Most often located on the outer periphery of cities and within industrial areas, the residents are near enough to serve, but not close enough to be served. Various site visits proved the inhabitants of informal settlements throughout Tshwane, as extremely resourceful and innovative. There are wide ranging methods of existence within these fluid environments. Internal policing, construction and trading are all resolved and carried out on a scale suited to the environment.

Deemed unstable by formal criteria, these informal environments disclose schizophrenic characteristics. However, below the smog of condemnation is a functional pragmatic society capable of self-regulation and self-order, responding to the need of the user.

There exists an inherent understanding within the informal setting. Planning of informal settlements within South Africa is usually determined by the density of use coupled with external forces. The user and environment interacts on a direct level. Street grids are established in accordance with the pedestrian scale as main determinant. One of the arguments making slum definition difficult is that “slums change too fast to render any criterion valid for a reasonably long period of time” (UN-Habitat, 2003: 11).

This is further supported by the changing settlement patterns within the study area of Mamelodi, Tshwane, South Africa. Any proposal attempting to address the situation should have an impermanent character, allowing for relocation once it has served its purpose. Alternatively, it could be adopt a new programme that is capable of merging into the new fabric.

The lyrics of the late musician Bob Marley sing out “some people have hopes and dreams, some people have ways and means” (Bob Marley with Chuck D, 1999). Although the informal resident may foster certain hopes and dreams, the reality of his or her context is that of basic survival.

Informal settlements establish roots: cultural, social and individual while the occupants conceive of methods for survival which need a degree of permanence (stability). This forms the supporting basis for the greater structure, the community. Life is uncertain for the inhabitants of these unstable environments yet most survival and planning strategies are based on the ideal of a constance.

It is important to understand that “slums are not static; there are ongoing dynamics that, over a period of years, may turn an established urban area into a slum or



Fig. 21 Alexander Township, Johannesburg, South Africa



Fig. 22 Lusaka informal settlement, Pretoria, South Africa



Fig. 23 Informal settlement, Pietermaritzburg, South Africa



Fig. 24 Collage portraying the vibrant life of an informal settlement

that may lead to the redevelopment of an existing slum” (UN-Habitat, 2003: 67). Some informal settlements have been in existence for many years surpassing the lives of various generations inhabiting its realm. Therefore it may be regarded as a permanent entity within the urban fabric. Unfortunately, these slums are still treated as external ailments. Informal settlements provide little more than access to economic opportunities. It is reduced to a transitory environment in which the urban immigrant may temporarily locate themselves until enough capital has been generated to emigrate (yet again). Most of the informal residents’ needs are postponed. These are sacrificed in expectation of the unpredictable opportunity. Different cultures and personalities come together as a result of rural emigration. The search of economic sustenance is the major cause of these migratory patters.

The inhabitants within these settlements depend gravely on the natural environment for support. Nearby rivers are utilised for drinking water and trees for fire wood. With little service infrastructure and a limited municipal grid supply, there is often no proper sanitation or

electricity. Many informal residents within South Africa are waiting to be relocated to government subsidised houses. This lengthy process often takes years to realise, leaving the occupants in a temporary state, not wanting to permanently settle down, but remaining long enough to necessitate the basic services.

Service delivery, a basic need for any individual to be able to perform coherently in society, the lack thereof is coupled with social unrest and deterioration of the physical condition. It is a pre-requisite for any development to take place, acting as catalyst to successive progression.

Section 26 (1) of the constitution states everyone has the right to have 'access to adequate housing', therefore the government has a responsibility to provide housing for the majority of its citizens who are not properly housed. Part of this strategy aims to include the informal resident within contemporary urban society. This however dissuades self-help strategies implemented by the informal dweller. It is further aggravated by conditions of overcrowding, lack of basic services and insufficient public amenities. Together with an insecure tenure, the resident refrains from improving the immediate environment,

whilst hoping for external relief. Government subsidised housing,

The focus of this thesis is the need and right of the informal dweller to be served and serviced during a 'temporary' occupation phase within the informal settlement.

"A lack of public resources is the most cited reason for the deterioration of physical conditions" (UN-Habitat, 2003: 87). The needs of the informal residents are often overlooked by urban society. The informal dweller as a constitutional equal within contemporary South African society, has a right to access of services and public amenities within their environment.

HUMAN RIGHTS

Selective extraction from the South African Bill of Rights:

Section 24: Environment

Everyone has the right-
(a) to an environment that is not harmful to their health or well-being...

Section 26: Housing

(1) Everyone has the right to have access to adequate housing.
(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right...

Section 27: Health care, food, water and social security

(1) Everyone has the right to have access to-
(a) health care services;
(b) sufficient food & water; &
(c) social security.

(Constitution of South Africa, 1996, chapter 2, sections 24, 26 & 27)

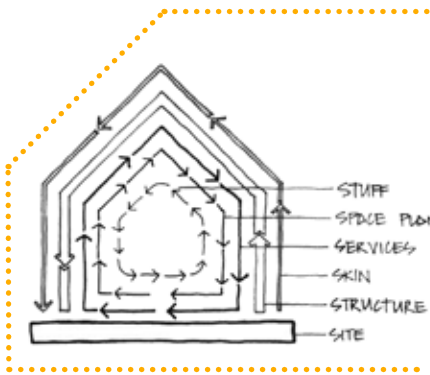


Fig. 25 The shearing layers of change

- what,
- who and
- why .

It should take on the required operation it should and where it should be located. A programme's flexibility and adaptability differs from that of skin and services. It requires an inherent ability to expand and contract depending on economic forces amongst others. Any programmatic choice results in a definite yes or no answer. The timeous nature of architecture unfortunately delays this process. In addition, a host of external factors further complicates the decision making process. The appropriateness (or not) of a programme should be constantly checked during planning phases of a project and may even require change during implementation or post-occupancy.

Through programme, architecture either fails or succeeds its' client. The rate of programme change depends on the programme and its compatibility to the 6 S's. Programme cannot always be designed for. They are often succeeded by programmes believed to be more appropriate and adapted to the surrounding conditions (social, economic, etc.). Future programmes are unpredictable and the building configuration should therefore adapt to its environment.

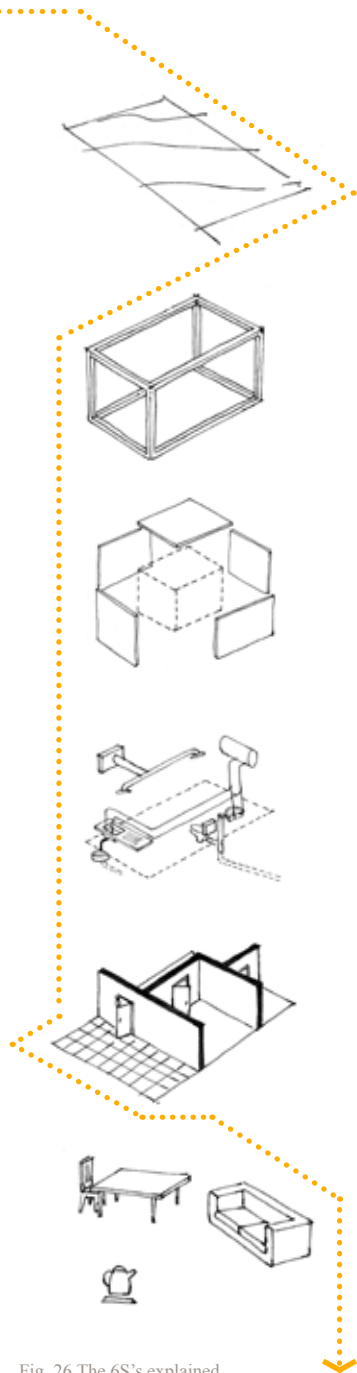
THE 6 S'S

In an attempt to gain insight into (the somewhat obvious) building system the different layered components, all with various rates of change are defined. In the publication entitled *How Buildings Learn*, the author Brand lists six aspects as the shearing layers of change, termed the 6 S's for the built environment, it is compared with its equivalent within the informal settlement.

PROGRAMME

Programme should be added as a seventh layer to the adapted Brand matrix. Programme ultimately influences the choices made for the 6S's. Programme informs the client:

- where,
- when,
- why,



	FORMAL BUILT ENVIRONMENT STEWART BRAND - HOW BUILDINGS LEARN	INFORMAL SETTLEMENT
SITE	<ul style="list-style-type: none"> • The geographical setting • The urban location • The legally defined lot • Boundaries, context outlast generations of ephemeral buildings. • “Site is eternal” 	<ul style="list-style-type: none"> • Site is eternal, an informal settlement is not. • It is temporary for a delayed period of time. • Boundaries shift and context changes fairly rapidly.
STRUCTURE	<ul style="list-style-type: none"> • Foundations • Load-bearing elements • Expensive to change • These are the building • Life expectancy ranges from 30 to 300 years 	<ul style="list-style-type: none"> • Make-shift, reused and recycled • Composed mostly of timber frames • Probability of relocation hinders any incentive for more permanent construction • Temporary and easily demountable • Loss of material kept to a minimum
SKIN	<ul style="list-style-type: none"> • Life expectancy = 20 years • Changes with fashion, technology, or for wholesale repair 	<ul style="list-style-type: none"> • Must endure repeated use on various sites • Often outlasts structure
SERVICES	<ul style="list-style-type: none"> • The working guts of a building: • Communications wiring • Electrical wiring • Plumbing • HVAC • Moving parts like elevators and escalators • Wear out or obsolesce every 7 to 15 years 	<ul style="list-style-type: none"> • Absent • Established on site (pit latrines and borehole water) • Obtained through illegal means from the surrounding area • Site and context specific
SPACE PLAN	<ul style="list-style-type: none"> • The interior layout • Walls • Floors • Doors • Can change every 3 years or so 	<ul style="list-style-type: none"> • Relatively small floor area • Divided into smaller rooms by means of: <ul style="list-style-type: none"> — Self-constructed dry walls — Cupboards — Curtains
STUFF	<ul style="list-style-type: none"> • Chairs • Desks • Phones • Kitchen appliances • Things that twitch around daily to monthly 	<ul style="list-style-type: none"> • Frequency of use determines change in position

Fig. 26 The 6S's explained