FASTER, HARDER, SMARTER: TOWARDS A VISION FOR SUSTAINABLE HUMAN(E) SETTLEMENTS FOR ALL SOUTH AFRICANS

For the Department of Human Settlements: Social Contract Planning and Development Workstream

By Tsela Tshweu Design Team (SAIA, CSIR, SAICE, SHiFT and partners)

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Abstract:

The South African government has been very successful in delivery in terms of numbers of housing units per year, but has been unsuccessful in creating functional, beautiful environments that provide vital services, facilities and economic opportunities for all (from the very small to the large enterprise). This has further perpetuated the structure of the Apartheid city, characterized by low densities and urban sprawl, fragmentation, strong cultural divides and strict zoning of residential, commercial and public facilities. This existing situation ranks South African cities among the most inefficient and wasteful urban environments globally. This has negative impacts, not only on environmental sustainability, but on social and economic sustainability as well.

However, a new government-led approach to housing delivery emerged in 2009, signalled by the changing of the name 'Department of Housing' to 'Department of Human Settlements'. Subsequently, government has used various platforms to acknowledge that housing is not just about the construction of individual houses or blocks of housing units, but also about the creation of new types of mixed residential environments which stimulate sustainable communities.

In 2010, President Zuma's State of the Nation Address called for faster, harder and smarter government action in respect of service delivery and the achievement of a developmental state. Following the president's call, and being led by the Department of Human Settlements' Social Contract process, a vision titled*: "Faster, Harder, Smarter: Towards a shared vision for human(e) settlements"* was developed by a group of built environment professionals. The vision presents government with a tool to work faster (by delivering more housing opportunities within shorter time frames), harder (by going beyond the conventional in the search of alternative delivery mechanisms) and smarter (by being innovative in the use of subsidies and in the design of settlements).

The paper introduces the vision by giving a background to the process, presenting the ten principles and proposing a way forward. If adopted as a national strategy, the vision presented in this paper would provide the government with a mechanism for delivering inclusionary and sustainable human settlements.

Introduction: how the process was initiated

This process was initiated as an outcome of a meeting of the Department of Human Settlement's Social Contract process. The Planning and Development work stream, under the leadership of William Jiyana, encouraged a group of stakeholders and professionals to present an alternative vision for human settlement. A first draft of the vision was presented at a Social Contract meeting on the 21 September 2010.

The group has come together to actively debate and envision the concept of sustainable human(e) settlements. The vision has been called (quoting President Zuma in his 2010 State of the Nation Address): FASTER, HARDER, SMARTER: WORKING TOWARDS A SHARED VISION FOR HUMAN(E) SETTLEMENTS. The team has also given itself a name: the TSELA TSHWEU DESIGN TEAM and so far has representatives from the Council for Scientific and Industrial Research (CSIR), South African Institute for Architects (SAIA), Social Housing Focus Trust (SHiFT), South African Institute for Civil Engineers (SAICE), and Duro Pressings (Pty) Ltd., a partner from the private sector.

Some of the teams' suggestions are strategic and handle complex topics such as finance and delivery mechanisms. Others are simple in concept, such as activating street edges, but would drastically alter the image of cities if implemented. It is acknowledged that with the enthusiasm received regarding this vision the representatives from community, financial and banking sectors, property and business owners need to be drawn into the further development of the vision.

The vision described in this paper is an expression of opportunities within current policy framework and resources available to government that can be harnessed to unleash our nation's wealth and contribute to the making of sustainable and human(e) settlements that begin to build the Rainbow Nation and the types of environments that empower our children to be proud and responsible citizens of the future.

The vision aims to achieve vibrant, attractive, integrated, natural, environments in which the pedestrian is the priority, and where the built environment embraces and encourages the spirit of *Ubuntu* thereby providing dignified settlements.

The current situation of South African cities

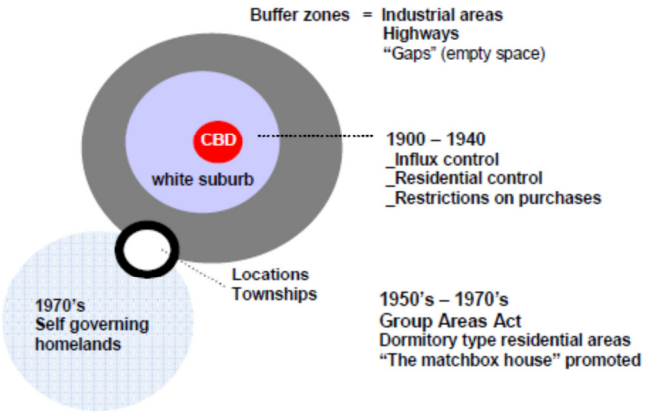

Figure 1: Apartheid legacy: spatial engineering through policy

The morphology, layout and visual and physical qualities of a residential setting are directly affected by methods of delivery which are guided by policy. While housing is generally a complicated issue globally, it has

been further complicated is the South African context due to Apartheid spatial policy (Figure 1). Strict zoning, segregation and fragmentation came about as a result of various policies and acts enforced during the period spanning from 1900 till 1970, when the current spatial patterns became entrenched.

In the optimism after 1994, housing became a major political playing card. Many new laws were passed concerning land reform (Dewar 1998; in Vladislavic et al. 1998) and many subsequent promises were made. Although the old housing systems were rejected in the new political dispensation, yet in terms of implementation new processes and building typologies did not emerge. The government in collaboration with the private sector still largely controls housing (2000). Community involvement, empowerment and capacity building are still not a reality. Although legislative obstacles were removed, operative barriers to the delivery of sustainable housing still remain (Dewar 1998; in Vladislavic et al. 1998; and Osman & Lemmer 2002).

Thus, spatial fragmentation is still perpetuated 17 years into democracy. In addition, it still remains that: "South African cities rank among the most inefficient and wasteful urban environments in the world" (Du Plessis & Landman 2002). The structure of South African cities is inefficient and simply does not make sense. The low densities and the "dis-connect" do not make environmental, social or economic sense. Addressing the speedy turnaround of this reality is this country's largest challenge. This challenge has been highlighted in the recent Diagnostic Report issued by the National Planning Commission: "The spatial legacy of apartheid continues to weigh on the entire country. In general, the poorest people live in remote rural areas. In the cities, the poorest live far from places of work and economic activity" (National Planning Commission 2011). It has also been expressed through the delivery agreements issued by government in terms of the targets aimed for to achieve transformation in the situation (Delivery Agreement 2010).

The vision and the visionaries

To address the inequity of South Africa's current spatial realities, Harrison (2010) calls for a national spatial plan outlining a common spatial narrative which would achieve spatial justice, sustainability, resilience, quality and efficiency. With the renaming of the Department of Housing to the Department of Human Settlements in 2009 and the new focus on sustainable human settlements, as opposed to housing, emerges the need for an envisioning process for what will define the new South African spatial realities.

Du Plessis (2009, p.78) explains that: "...literature yields numerous lists that attempt to define the principles and/or characteristics of the sustainable city. These tend to fall across a spectrum ranging from the specious application of the term 'sustainable' to pre-existing development concerns of urban planning and management, to nostalgic visions of the ideal, liveable and environmentally sustainable city." She proceeds to compare between the specious, the politically pragmatic and the visionary (Hall & Pfeiffer 2002; and United Nations Environment Programme Division of Technology, Industry and Economics 2002; and Rogers & Gumuchdjian 1997).

Du Plessis (2009, p.79) describes Rogers' list as "...somewhat poetic..." and it includes the following concepts: A Just City, A Beautiful City, A Creative City, An Ecological City, A City of Easy Contact, A compact and Polycentric City and A Diverse City; the assumption being that "...the ideal city would also be a sustainable city."

While the thesis continues to debate the complexities of realising these visions and the assumptions made with regards to people's behaviour – and that alternative urban forms will result in alternative lifestyles, it also acknowledges that "...Rogers' approach builds on a strong visionary tradition in architecture and town planning that produced numerous models and normative prescriptions for design and social organisation of the ideal city... All of these visions shaped the ideal city according to a particular worldview that emerged from the main social concerns and philosophical theories of the day." (Du Plessis 2009)

The debate on new approaches and visions for South African cities is making its way into popular media. Cohen is puzzled by the fact that "South Africans seem to fear their cities rather than embrace them. The way city life is unfolding is disturbing to me, and I don't understand why the problem is not being attacked more directly… the whole philosophy of cities needs to change" (Cohen 2011). Turok explains how "…building productive and inclusive cities in which all citizens can lead useful and fulfilling lives" is key to generating wealth for the whole country (Turok 2011). Oranje is asking: "Where are the architects? We want to see the architect's drawings" (Oranje 2011).

Approach to developing an alternative vision for housing in South Africa

The Tsela Tshweu Design Team vision encapsulates ten key principles which are applicable to green fields projects as well as existing townships, informal areas and wealthy suburbs. They are based on the idea that value

needs to be added to what is already there and to retain what works. The vision also addresses the whole housing "eco-system" reinforcing the idea that there can be no solution to low-cost housing if it is not acknowledged that it is integral to the city – and thus the debate on low-cost housing should be integral to any debate about the city as a whole, including the wealthy suburbs.

The aim is towards achieving mixed residential environments in terms of tenure, typology, income groups, functions and densities. It is believed that this would generate vibrant, attractive, integrated environments in which the pedestrian is the priority.

In seeking possible new approaches for housing design and delivery, the Tsela Tshweu Design Team decided to adopt and adapt a metaphor used in the innovative design and procurement process of a project in Switzerland. The idea of explaining the built environment as "bottles + crate" came from this case study if the INO hospital in Bern (Geiser 2006; and A. Osman & Sebake 2010). The argument is made that currently housing is delivered without taking into consideration people's highly varied needs – by subsidizing and delivering the house unit – represented by the liquid and referred to by Geiser (2006) as the tertiary system. The result is the repetitive mass housing and other developments that are institutional in character. In simple terms "everyone gets coca cola" when they might have preference for another drink. In housing projects, this level of the built environment (residential unit/"liquid") is the most personal and decision-making at that level needs to include the resident/tenant.

By adopting this approach to the built environment, the concept of participation is thus, not only confined to "once-off" consultation in the initial stages of design where in some cases communities participate in decision-making processes, but also as an on-going process where the built environment allows for future adaptations. This is even more relevant when it has been argued that participation is not about asking people what they want as their wants are experientially determined (Dewar & Uytenbogaardt 1991).

It is therefore motivated that funding should rather be directed to the "one hour walk(able)" neighbourhood and the shared domain of public space and amenities, the primary system or "crate", as opposed to the private domain of the individual unit. The diagram below illustrates the suggested change in focus from the current level of delivery focusing on tertiary and secondary systems (3+4) to the primary systems (2) in the built environment. This is best described using the metaphor of a crate with liquid-filled bottles described further as:

- The crate + bottles (1): the holistic outcome – a fully functional human(e) settlement with the infrastructure and housing, business, social amenities that accommodate choice and diversity in housing needs that meet demand.
- The crate (2): the shared public domain (the primary system) - this defines the bulk infrastructure framework including roads, water and energy supply services, and the spaces that encourage social cohesion (i.e. town squares, parks, pavements). This, the most permanent level of the environment and decision-making is collective as it is the shared domain.
- The bottles (3): the groups of building in a housing complex – the clustering of activities often managed by collectives (secondary system) for example social housing projects, community centres, schools and other social facilities.
- The liquid (4): the dwelling and business units of the built environment (tertiary system) which is the most diverse and adaptable level that can, and must, accommodate choice and adapt to the needs of the people over time.

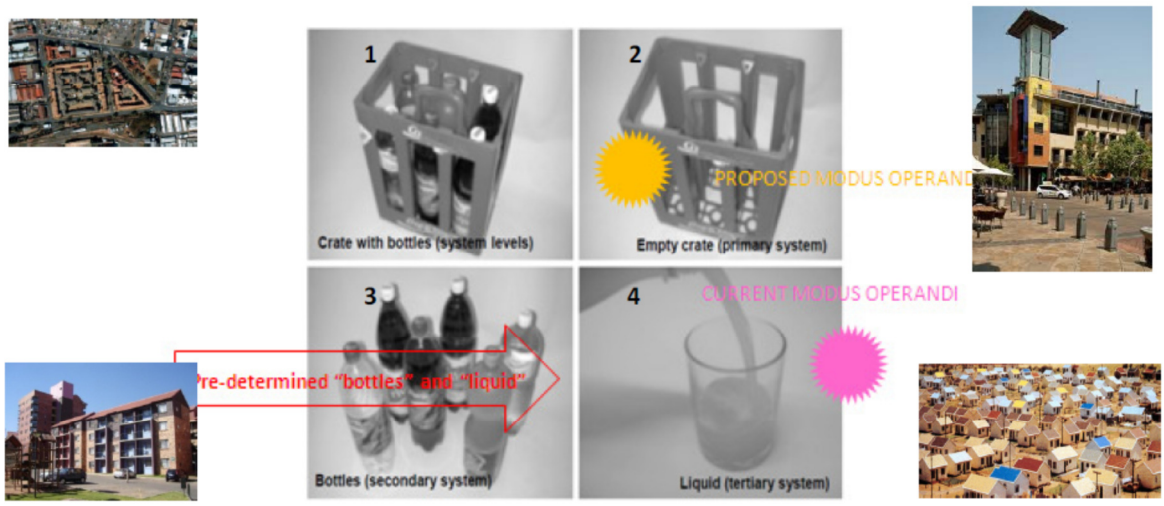

Figure 2: The 'bottles and crate' as a metaphor to describe the built environment

By separating the funding and construction process into multiple components representing different levels of the built environment, a number of scenarios may emerge. Three possible scenarios are presented here as examples:

- Two groups of contractors could be involved – their work being independent of each other. The two levels of the project they are delivering would have to be "dis-entangled" in that they are conceived of and exist in relative independence. However, the second (secondary) level gives way to the constraints/opportunities of the first (primary) level system. Funding and construction processes would respond to these multiple components and various levels.
- Another scenario is that the primary level is built to a high standard and is controlled by groups that share responsibilities, costs and use and benefit from of this robust and permanent structure. Other design professionals and contractors may then be brought in to work closely with inhabitants (individuals or groups) to address their unique needs by designing and constructing, a more differentiated secondary level.
- In another scenario, concerning rental housing, the shared primary structure includes various qualities of infill and fittings at the secondary level allowing for different rentals within the same development. (Dekker 1998)

The scenarios and benefits are numerous. The 'bottle + crate' approach guarantees that the "delivered" product (individual family house or multi-family housing) is complete, i.e. this is opposed to the idea that delivering an empty shell (or a free-standing toilet!) which has been problematic in the past. Also, by allowing different people to intervene and make decisions at the relevant levels, differently skilled contractors may be involved and different types of technology and materials may be permitted without detracting from the quality of the overall development.

In addition to the above benefits it becomes possible, within the limited financial resources available, to prioritising investment into the shared public domain (primary level) to significantly contribute to the government creating an empowering urban framework, encouraging private sector and civil society investment that will enrich and provide the secondary and tertiary levels of investment into the urban framework. This strategy acknowledges that the most vulnerable in our society would benefit from government subsidies in a more appropriate manner.

The vision: ten principles for Sustainable Human(e) Settlements

The key principles

Emerging out of a debate amongst the role players in the team, ten key principles have been identified that will contribute to the building of sustainable, humane and inclusionary settlements (both new and existing). The principles appear in no particular order, and, the number of key principles may require adjustment as the strategy is further developed. The principles have extracted the opportunities that largely exist within current policy and legislation, with the focus on 'quick-win' deliverables that at the most require some revision of by-laws and regulations rather than new or amended policy and are described as follows:

1. Revise zoning to encourage desegregated mixed use

The regulatory framework i.e. town planning and building control instruments, currently used in determining the shape of our built environments have not been adapted from the modernist era to suit the objectives of the new political dispensation. The lack of diversity expressed in our built environment is a direct result of this. For example, aligning the building height, coverage, and land usage regulations with the hierarchy of roads and other transport networks would directly link achievement of diversity to issues of connectivity.

2. Ensure sustainable densification opportunities for XS,S,M,L and XL

Affordable housing principles can be applied, and are just as relevant, to affordable business opportunities. Equal opportunities for the extra small, small and medium scale entrepreneurs must be accommodated in the same spaces occupied by the large and extra large enterprises. For example, shopping malls must provide small affordable rental units (possibly cross subsidized) and furthermore contribute to the development of taxi/bus drop off areas within their boundaries, and street traders can be accommodated at all taxi and bus stops (informal and formal) in small well designed units that provide affordable structure to house the street traders services and provide a service selling coupons to the bus and taxi industry. However, this cannot be achieved if the densities remain so low. By increasing densities, small and medium business can be supported, on foot, as well as large businesses which are mostly accessed by cars and public transport.

3. Just Add Housing

We argue that housing should be incorporated with other developments and that we can be creative about finding appropriate sites for housing. Mono-functional residential developments must be discouraged. Mixed-use environments promoted that infrastructural investments are used to their maximum potential at all hours of the day or night. Furthermore, perceived land scarcity can be challenged through innovative "injection" of housing into our existing urban landscapes. For example, office parks, set within open parks, can be encouraged to include employer-assisted and market rental/ownership dwelling units between or on top of buildings; shopping malls can include dwelling units above; churches and educational facilities may include residential components. This principle is strongly linked to principles 4 and 8 below.

4. Refocus government subsidies on one hour (+/-3km) wide neighbourhoods

Directing government subsidies to the shared public domain (primary level) implies that the focus of government funds moves beyond the "one house per stand" typology. The vision suggests that a one-hour (walking) wide area be used a determinant for the application of subsidies, thus building the interrelatedness of government departments and providing for a framework for neighbourhood upliftment rather than focusing on individual subsidies.

5. Distributed decision making for mass customization and self-regulation

The focus on neighbourhood (suburb) scale development implies that decision-making is distributed to stakeholders in each community. This allows for communities to "own" the vision for the development of their neighbourhoods, therefore encouraging self-regulation rather than strict regulation and "policing" of the implementation of the vision. The control of the private domain is therefore left to the residents themselves. Building support centers distributed proportionally to building works would provide support services and access to wholesale price materials (for those who qualify). However, the issue of non-qualifiers also needs to be address in these self-regulating communities.

6. Street edge activation as a condition for development approvals

Acknowledging how a development will influence what happens beyond the confines of a site is as important as the residential units themselves. The buildings contribute, define and add value to the surroundings, thus design becomes our most important development tool. Application of this principle only could have immediate positive effects in how we experience our cities by discouraging the use of alienating security walls and creatively making active boundaries to secure properties. This shows respect for our pedestrian traffic. A wall tax, for instance, could be applied for every cubic meter of wall; those taxes could be diverted into contributions to the shared public domain or subsidized housing.

7. Phased and adaptable developments

Differentiated interpretation and context-specific solutions are important in avoiding monotonous and repetitive residential environments. This differentiation becomes apparent through orientation, appropriate facade treatment and service and access strategies. An understanding of what catalyst infrastructure is required to provide just enough to encourage the incremental development of both dwellings and neighbourhoods is important towards the achievement of this goal. Government could provide the appropriate catalyst, allowing for

interventions and diverse interpretations through private sector investment. Special urban frameworks (one-hour wide neighbourhoods) will give local municipalities a tool to take ownership of, and to secure funding against, a tool that demands that private sector investments which are appropriately allocated towards the building of their respective (neighborhood) visions.

8. Public, private and community partnerships led by committed project teams

The balance between public, private and civil society partnerships needs to be addressed. The above-mentioned urban spatial framework would rely on use of committed project teams drawn from municipal officials with departmental representation, professional teams and civil society organisations in developing a vision that will integrate systems and the built environment. The public-private partnership will work toward the common vision where government does not forfeit its assets but rather leverages the value-add by private investment toward incremental development. Furthermore, the resultant strengthening of community participation in neighbourhood management could result in changes to the delivery of support services in the neighbourhood.

9. Culturally adequate, desirable and dignified environments

The desirability of our current township type environments also needs to be addressed. These environments require the insertion of amenities that would attract residents and higher-income businesses and residents to invest and live in such communities. The diversity in cultural rituals and accommodation thereof can be addressed in expanding the type of public shared facilities at the primary level of provision.

10. Technical innovation in the services of a vision (and not vice versa)

Technological innovations cannot, in isolation, solve the urban dysfunctionalities of our current built environment. Technology can only contribute to the development of the built environment if it aims to support a larger vision for how settlements should function and what they should look like. While current housing debates try to focus on innovation in the creation of sustainable human settlements, the discussion always reverts back to "houses"– solutions for individual units with a focus on technical solutions and materials at a very local scale or at building level.

Detailing the aspects relating to the key principles

The key principles presented in this paper may be divided into the following categories; *policy and regulatory aspects*; *design aspects*; and *implementation and financial aspects*. This is presented in the table below.

	Policy and regulatory aspects	**Design aspects**	**Implementation and financial aspects**
1. Revised zoning to encourage desegregated mixed use		■	
2. Ensure sustainable densification opportunities for XS, S, M, L and XL		■	
3. Just Add Housing		■	
4. Refocus Government Subsidies on 1hour (+/-) wide neighbourhoods	■		■
5. Distributed Decision Making for Mass Customisation and Self-Regulation	■		■
6. Street Edge Activation as Condition for Development Approvals		■	
7. Phased and Adaptable Developments		■	■
8. Public, Private and Community Partnerships Led by Committed	■		

Project Teams			
9. Culturally Adequate, Desirable and Dignified Environments		■	
10. Technical innovations in service of a vision (and not vice versa)		■	

Policy and regulatory aspects

In terms of the policy and regulatory aspects, three issues may be raised. Firstly, government-owned land should be managed as an asset to capture the value added to properties by injecting government-funded services, in order to retain wealth and thus benefit city. Secondly, new thinking is required in terms of the consultation and participation processes, in order to achieve distributed decision-making for mass customization, self-regulation and on-going participation (as opposed to once-off participation). Thirdly development approval processes need to strictly adhere to the vision and have dedicated project management teams at local level. These project teams would represented by all design professionals (who would ensure quality and adherence to the design aspects outlined below), representatives from the public sector and the communities being served.

Design aspects

The principles related to the design of neighbourhoods should be based on good urban design principles as a condition for wealth creation. This may also be addressed by achieving an appropriate mix in different settlement types through neighbourhood and regional spatial planning instruments.

Implementation and Financial aspects

By focussing on neighbourhoods instead on individual units, the vision acknowledges that a proportion of the population does require fully subsidised housing. It is intended to achieve phased and adaptable developments aligning with two proposed levels of the construction process, which would have financial implications. In terms of implementation, capacity to monitor and evaluate the design and tendering processes needs to be established, particularly in government funded projects that may be located in the Project Management Unit/s (PMU).

Conclusion

Addressing the call for alternative visions for South African cities, the Tsela Tshweu Design Team started by discussing the link between housing, economy and progress in general. It quickly became evident that the Tsela Tshweu Design Team believed in a link between cohesive form, space, image and architectural language and inclusive and cohesive communities. It was agreed that any new vision should aim to achieve equal access to facilities and should focus on shared space. We believe that this is a process that includes all and that there should be wide-scale buy-in if a new vision is to be realized.

This paper has introduced the vision by giving a background to the process and presenting the ten principles. If adopted as a national strategy, the vision presented in this paper would provide the government with a mechanism for delivering inclusionary and sustainable human settlements.

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