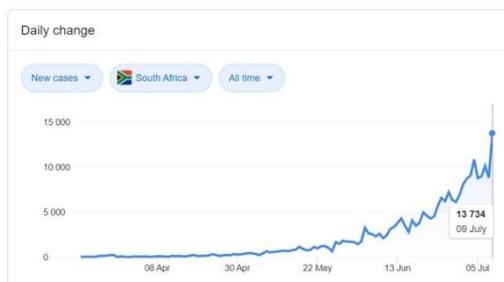


COVID-19: The South African Context



South Africa, and most of Africa, was late in world terms to be affected by the COVID-19 epidemic.

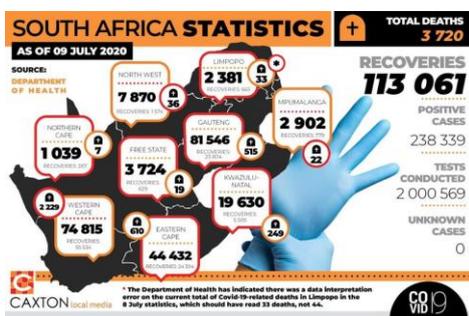
With a population of around 60 million, South Africa recognised the threat of the epidemic from the experiences in Europe and opted for an early 3 week lockdown from 27 March to 16 April, and then extended to 30 April.



Some essential services returned to work from, what was termed 'Level 4', from 1 May, steepening the curve and the daily recorded infection rate.

Level 3 was implemented in June, and saw Building Contractors return to their construction sites.

The graph clearly shows the resultant increases related to the relaxation of lockdown measures, with a recent peak of 13,734 new cases on 9 July.



Over 2 million tests have been carried out and there are 238 thousand confirmed cases with just under 4000 deaths in total. The recovery rate is approx. 47%, and deaths at 1,5%. This could be attributed to South Africa's youthful median age 27,6 years.



Countries fondly reference New Zealand as the success in the current pandemic. And so it is. We must however remind ourselves that New Zealand has 19 people per square kilometer, while South Africa has 50. We must also consider that the population of one city, Johannesburg, is over 5½ million, close to New Zealand’s entire population of 5 million, and has a population density of 3,400 per square kilometre.

More importantly New Zealand has a gross national income per capita of 42,670 USD while South Africa’s figure is 6,040 USD.



2016 data shows that approximately 1 in 7 households in South Africa lived in informal dwellings, with this figure being higher in metropolitan areas, where 1 in every 5 households live in an informal dwelling.

Khayelitsha is the largest township in South Africa covering 43.51 square kilometres, with close to 2 million people all located in informal settlements. The density is 46,000 per square kilometre



So the question is asked, “What is the “Architects’ response to reshaping our cities that are resilient to pandemic situations”?”



What the current pandemic has done is highlight the disparity between the wealthy and the poor. I've mentioned space, and I have also mentioned income. The epidemic has for the most part removed the daily subsistence income from the poor, and space that was ordinarily limited to sleeping for a part of the day, became the impossible lockdown isolation units for now over 100 days.



The reshaping of cities has largely been the prerogative of the wealthy, while the poor have incrementally created their own planning on the fringes. While academia well intentionally provides a balanced curriculum, its focus on the generalist produces graduates best suited for first world employment, or foreign shores, with a handful remaining to address the city, but not necessarily the areas where a pandemic is most likely to spread. In fact, in South Africa only around 7% of building plans submitted to the local authorities are by Professional Architects. The bulk are submitted by Technologists or Draughtspersons.

So my response to the question on the Architect's response to the pandemic is arguably, "not enough" or, "very little thus far".

So how do we address this?



As Architects, schooled in the making of space, it is our duty to address this question. Private space can remain largely unchanged, but it is the public space that requires addressing. What is public space? This includes inter alia public buildings, hospitals and clinics, schools, market-places, community centres, and the public space of the street.



These spaces of public interface and circulation become the breeding grounds for illness, and their management and control, offering safety and security to their inhabitants, must become the focus for the majority of South African Architects.



Current COVID interventions for the homeless include secured tent towns, with little consideration of social distancing.



Empower Shack, addressing shack spatial densities, have recently constructed these intervention projects, nominated for a RIBA award, on the outskirts of Cape Town.



The benefits of natural light and ventilation in any respiratory epidemic are well known and may need to be reviewed in these examples.



The mistakes made in South Africa in regard the 1918 Spanish Flu, and the Fever Hospitals of the time, are being addressed.



One example is the re-purposing of the Cape Town International Convention Centre as a quarantine centre.



Further care in the separation of movement, circulation, and divisional areas is being reviewed in medical facilities, and the lessons learned will translate into all public spaces.



I have recently been involved in a study of the increased risk of contracting air-borne diseases in medical facilities, through the US based Fogarty Fellowship. The study records the build-up of carbon dioxide in spaces as a marker for risk. One sample was the Khayelitsha District Hospital in Cape Town. Designed by ACG Architects, this is a good example the use of courtyards, with a mix of natural ventilation and selected air-conditioned spaces. All areas studied fell well below the recognized risk levels, with the greatest readings being in the Staff Rooms.



Public outdoor spaces in Khayelitsha are being studied with community participation for upgrading.



I will elaborate further on public open spaces under the second session.

Thank you.

<https://www.ohchr.org/Documents/Issues/Housing/InformalSettlements/SERI.pdf>

<https://www.71point4.com/is-the-south-african-lockdown-effective-for-townships-like-khayelitsha/>

<https://www.sasdialliance.org.za/projects/khayelitsha-open-space-upgrading-cape-town/>