

FUTURE AFRICA DIALOGUE SERIES

INFORMAL SETTLEMENTS

*Designing for health
and healthy people*

**ARCHITECTS AS COLLABORATIVE
PARTNERS: AN EXPLORATION OF THE
LEVERAGE POTENTIAL OF MAPPING AND
BUILT ENVIRONMENT RESEARCH
UNDERTAKEN IN INFORMAL
SETTLEMENTS.**

*Dr Jan Hugo &
Mr Jason Oberholster*



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ARCHITECTS & INFORMAL SETTLEMENTS





Honours Placemaking studio, 2021



2

MALUSI, PLASTIC VIEW & CEMETERY VIEW

INFORMAL SETTLEMENTS



MALUSI INFORMAL SETTLEMENT

Climate change adaptation studio, 2020
Placemaking and placekeeping studio, 2021



MALUSI INFORMAL SETTLEMENT

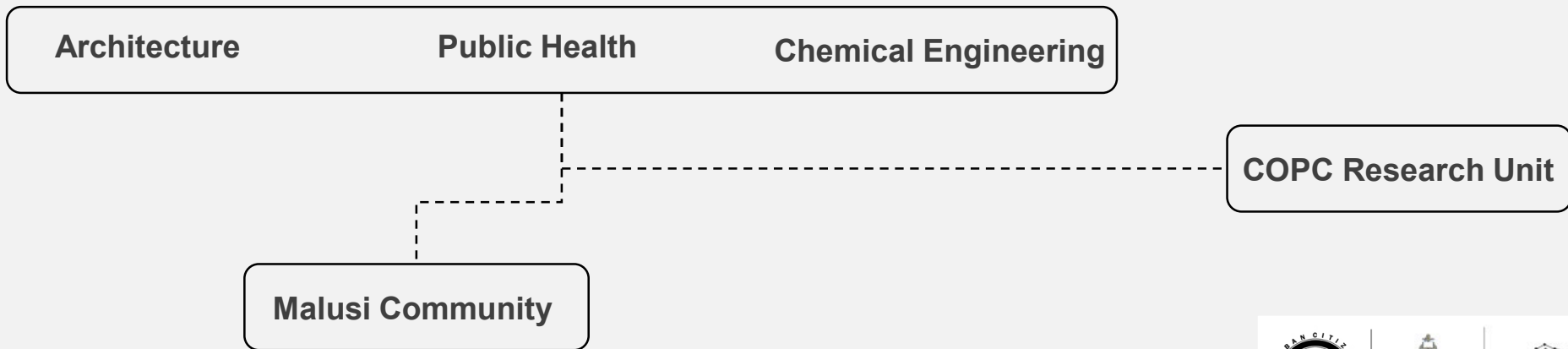
Research project:

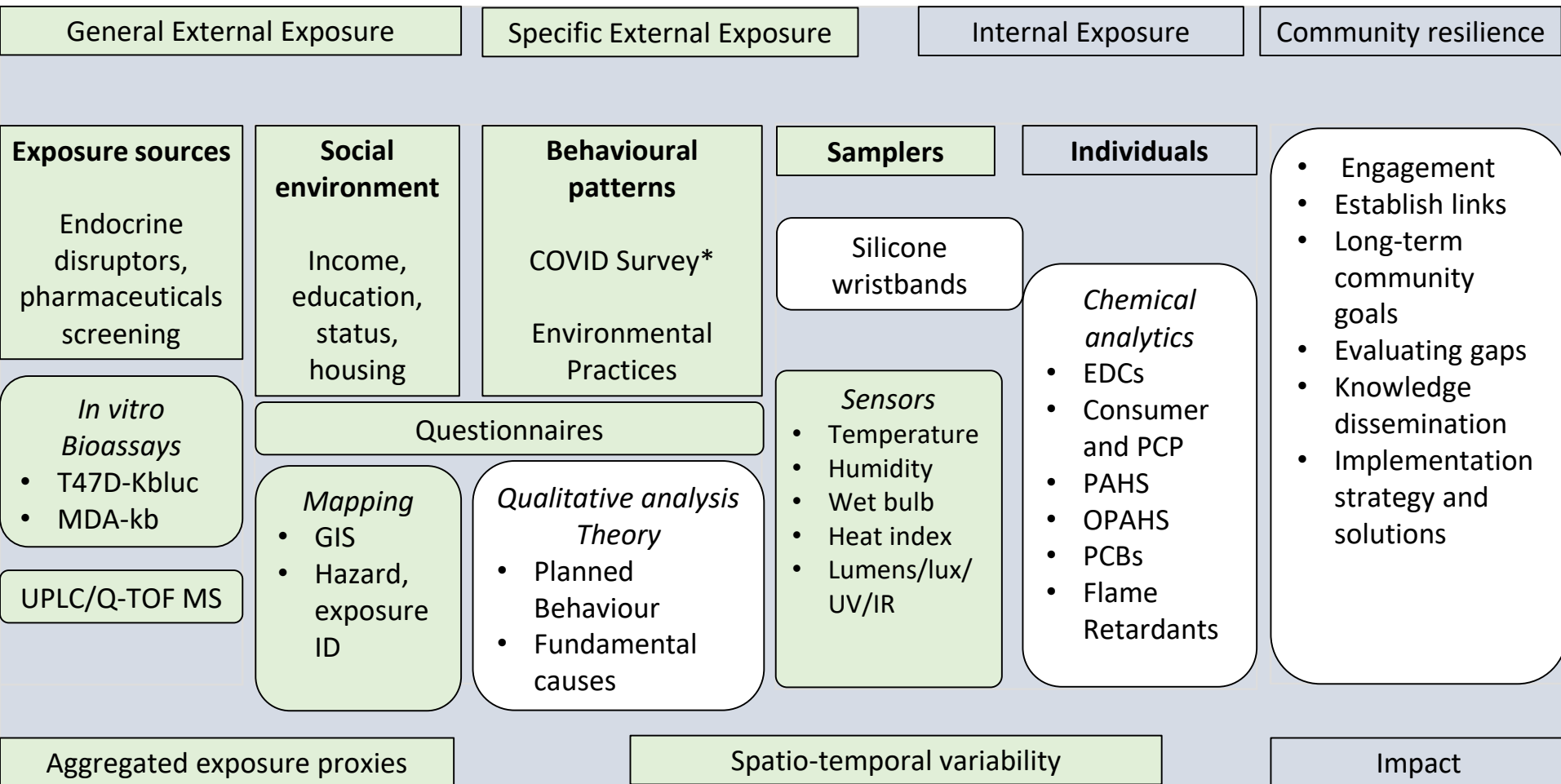
Architecture and Public Health Nexus: An intersectoral approach to health and well-being

Aim:

Dynamic interplay between people and place.

Foci: Water insecurity and heat stress exposure





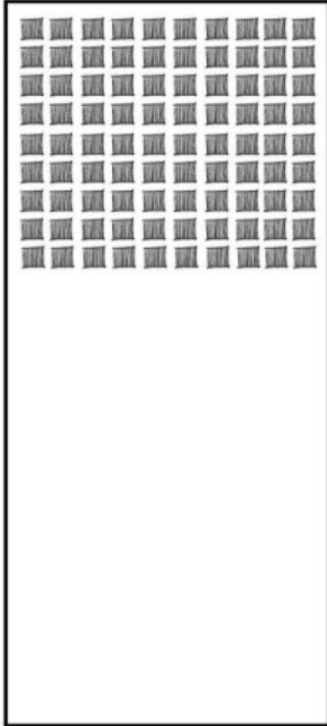
Phase 1: Mapping & Vulnerability

Climate change adaptation studio, 2020

DENSITY

22

Melusi



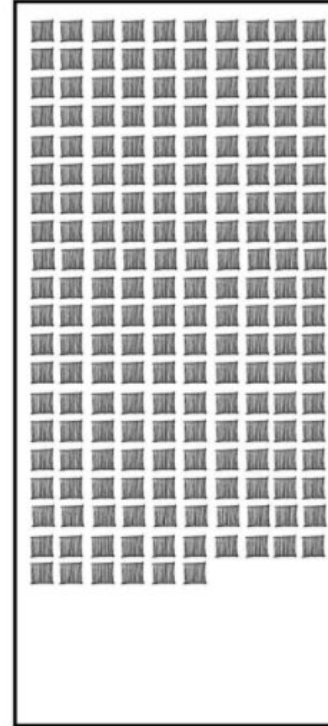
90 Units / Hectare

Atteridgeville



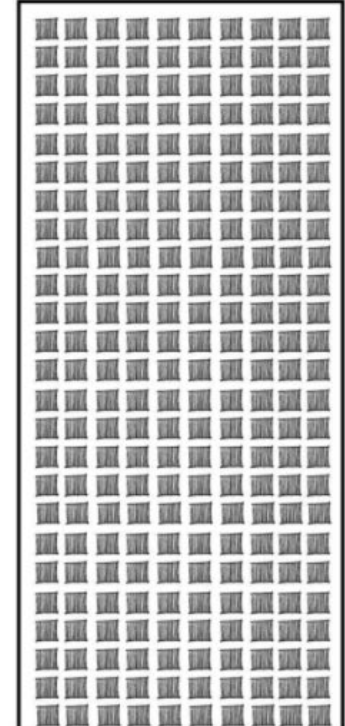
30 Units / Hectare

Plastic View



196 Units / Hectare

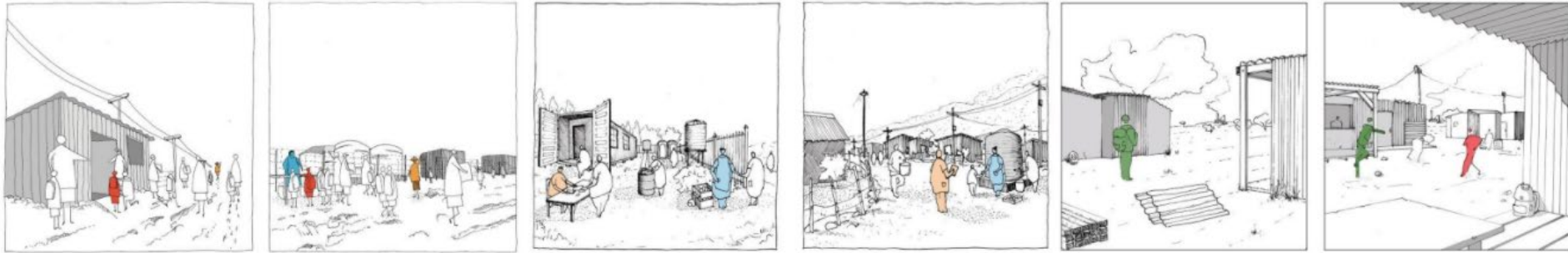
Cemetery View



250 Units / Hectare

Phase 1: Mapping & Vulnerability

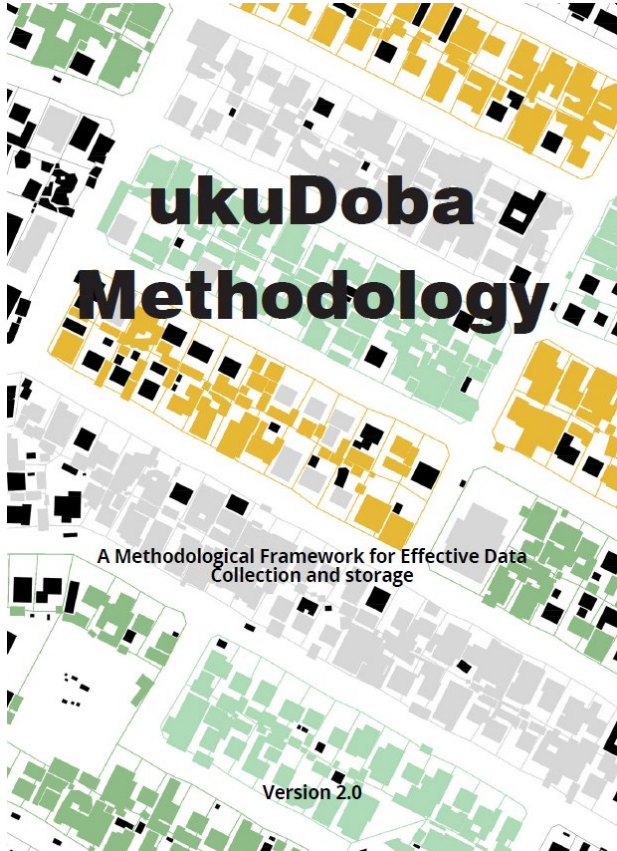
Climate change adaptation studio, 2020



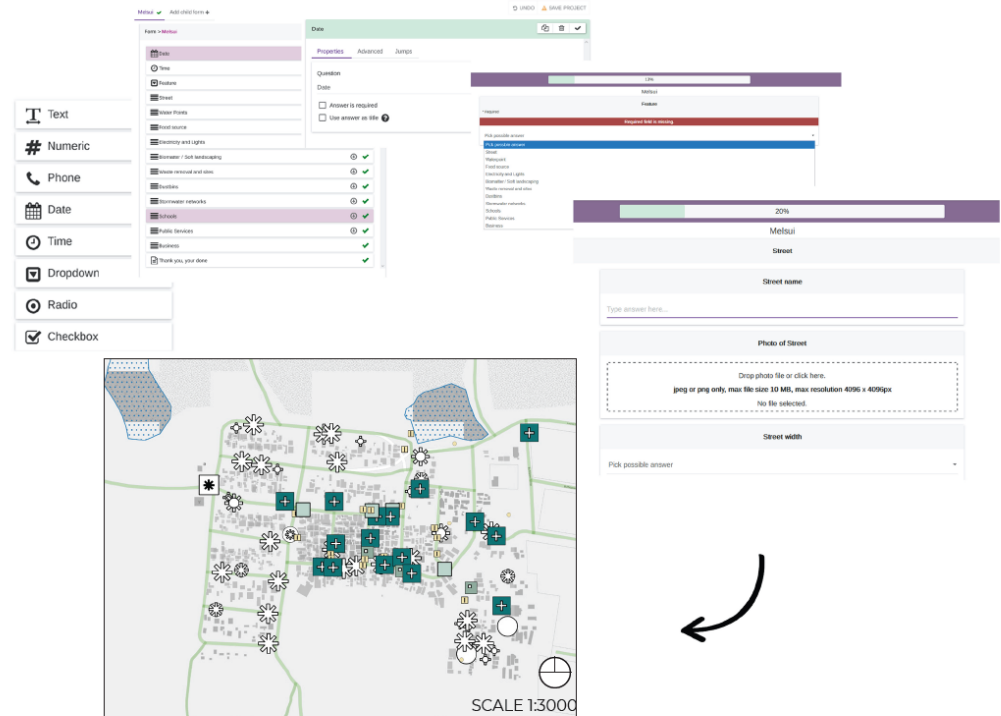
37

Phase 2: Insitu Mapping

Placemaking and Place keeping studio, 2021



9



METHODOLOGY
FROM EPICOLLECT5 INTO QGIS



Phase 2: Insitu Mapping

Placemaking and Place keeping studio, 2021

18



FEATURES



Phase 2: Insitu Mapping

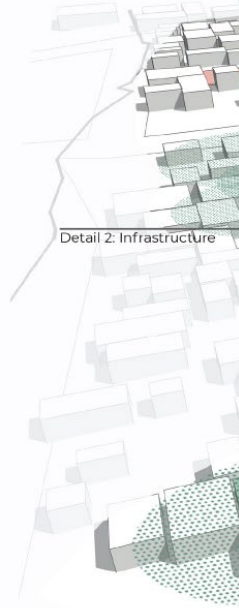
Placemaking and Place keeping studio, 2021



Phase 2: Insitu Mapping

Placemaking and Place keeping studio, 2021

30



INFRASTRUCTURE

31



INFRASTRUCTURE
FINANCIAL HUB TYPOLOGIES

53



02.
FORMING THE NARRATIVE



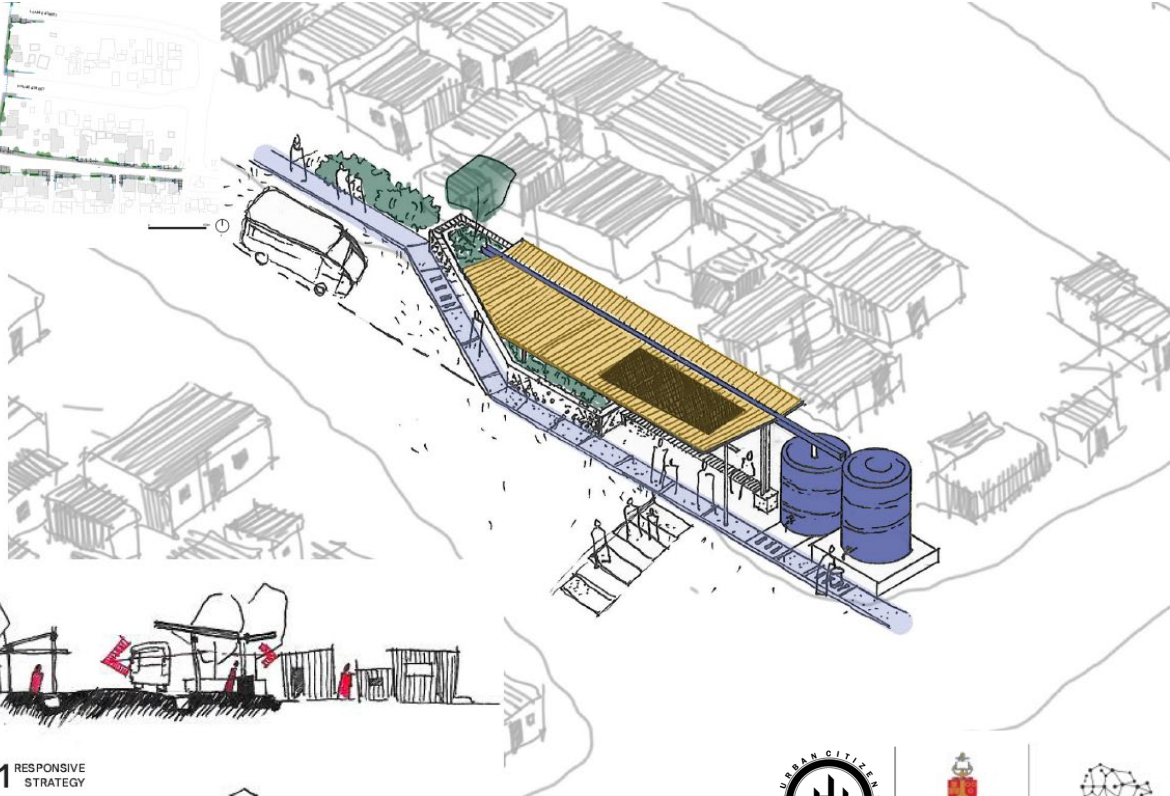
Phase 3: Proposing alternative infrastructure

Placemaking and Place keeping studio, 2021

88



82



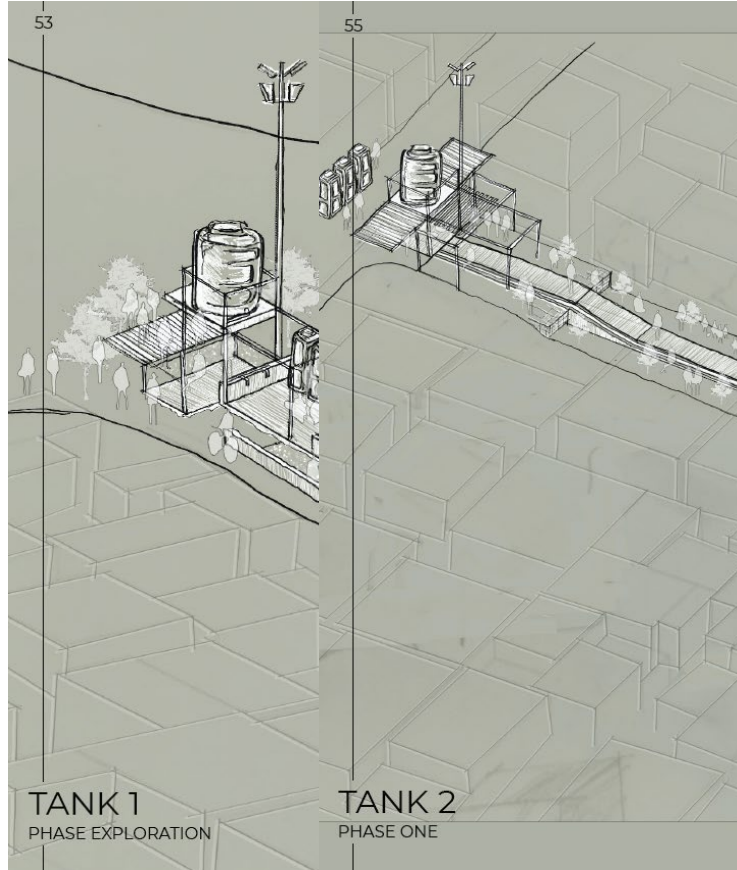
FRAMEWORK RESPONSIVE STRATEGY

TYPOLOGY 01 RESPONSIVE STRATEGY



Phase 3: Proposing alternative infrastructure

Placemaking and Place keeping studio, 2021



67

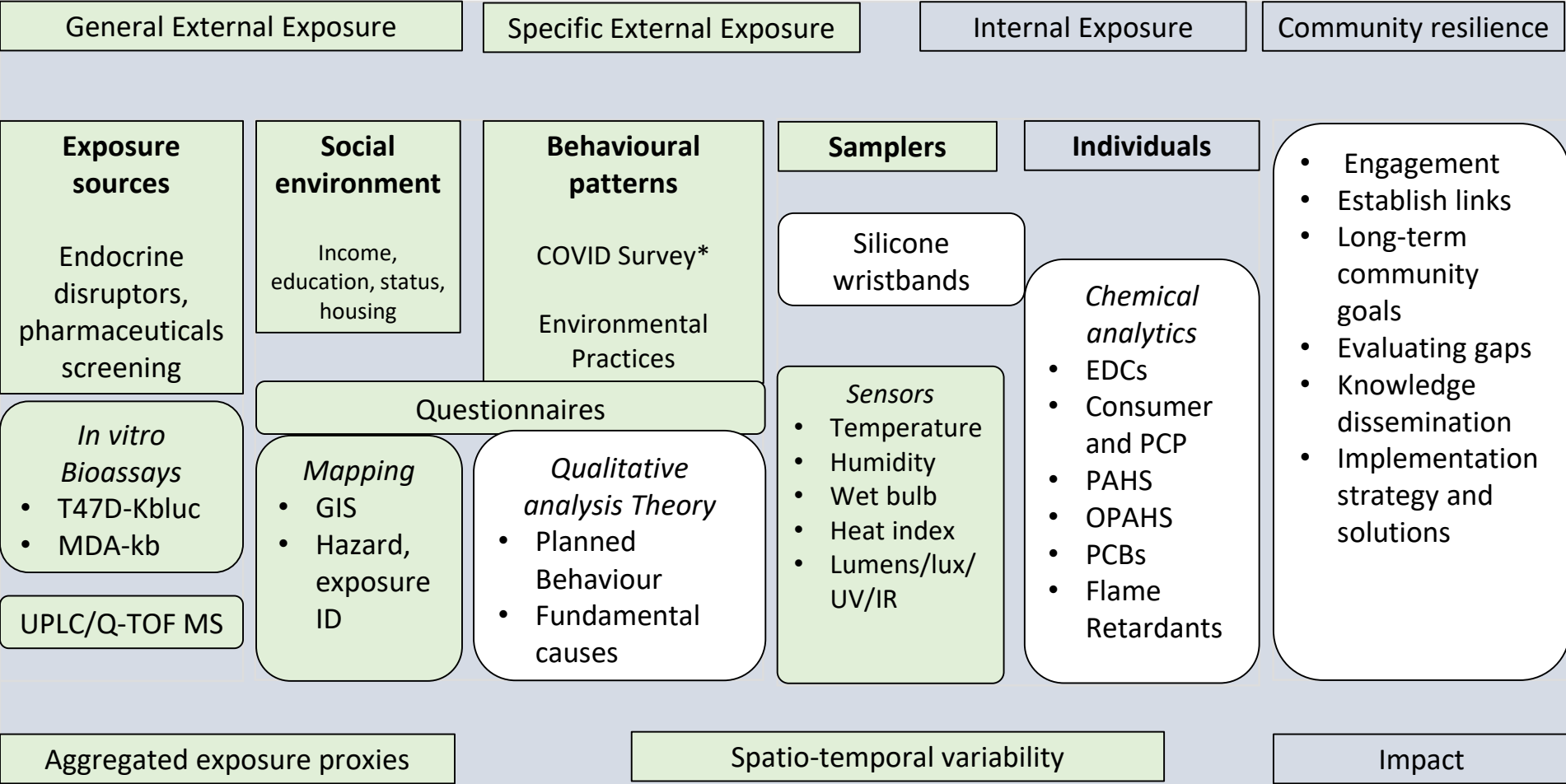
A vulnerability decrease is inversely proportional to social activity through means of ownership, accessibility and intersubjectivity.



INCREASED SOCIAL ACTIVITY



Research project: **Architecture and Public Health Nexus: An intersectoral approach to health and well-being**



Phase 4: Collecting empirical data

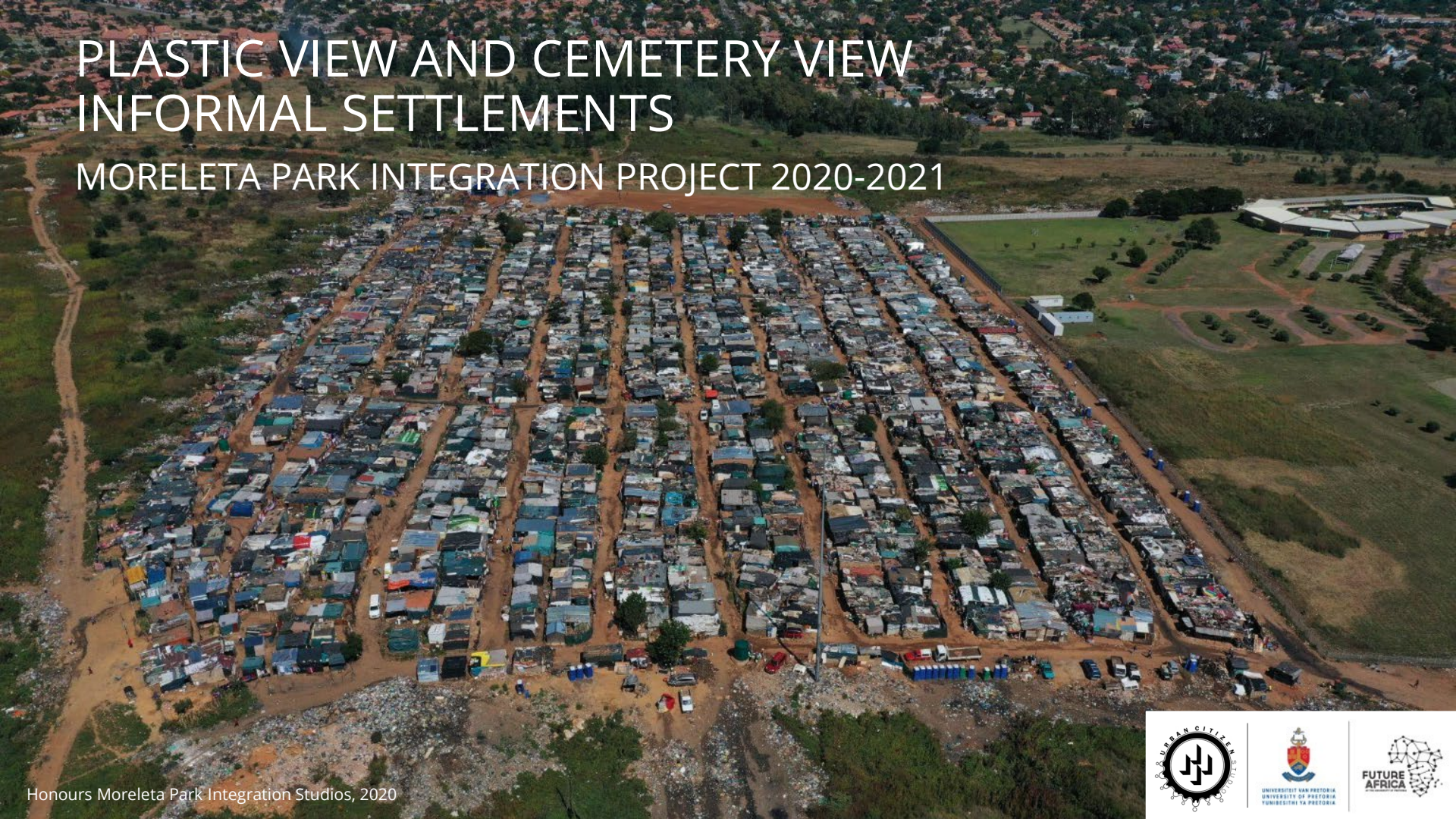
Public Health and Architecture nexus project, 2021

Water and EDC exposure project, 2021



PLASTIC VIEW AND CEMETERY VIEW INFORMAL SETTLEMENTS

MORELETA PARK INTEGRATION PROJECT 2020-2021



STAKEHOLDER COLLABORATION

Focus to facilitate
collaboration
between all
stakeholders

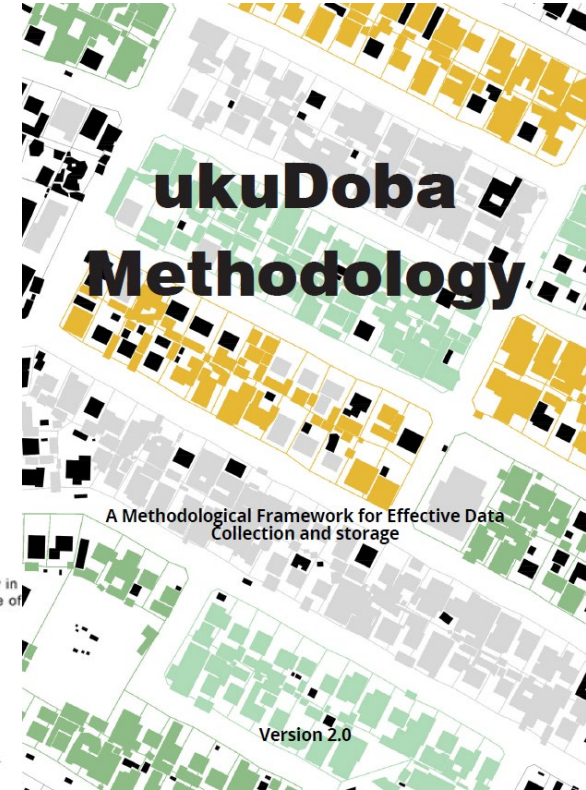
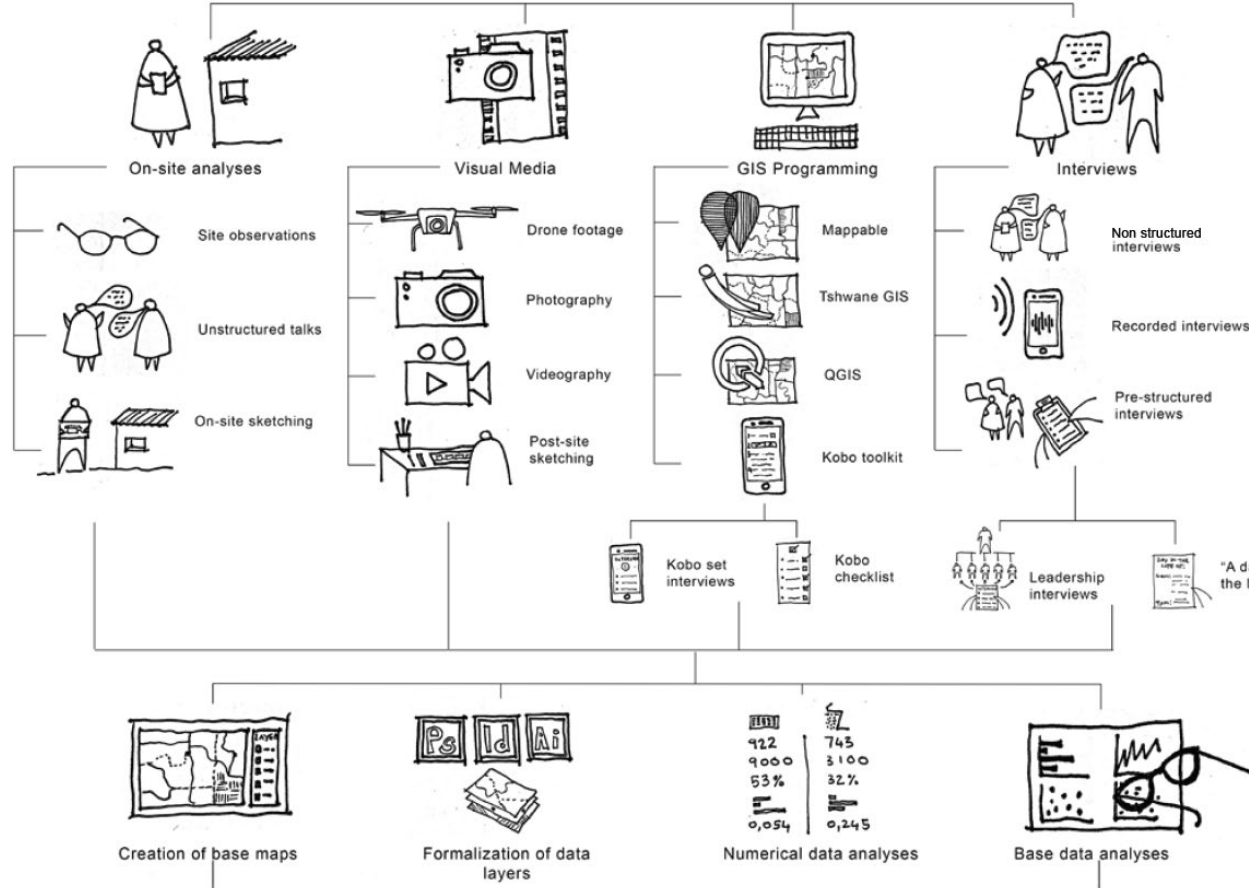
- Unit For Urban Citizenship
- Department of Family Medicine & COPC
- The Centre of Excellence
- The City of Tshwane (CoT)
- Local NGO's
- **The Community**



Phase 1: Urban Mapping

Honours Moreleta Park Integration Studios, 2020

Research Methodology

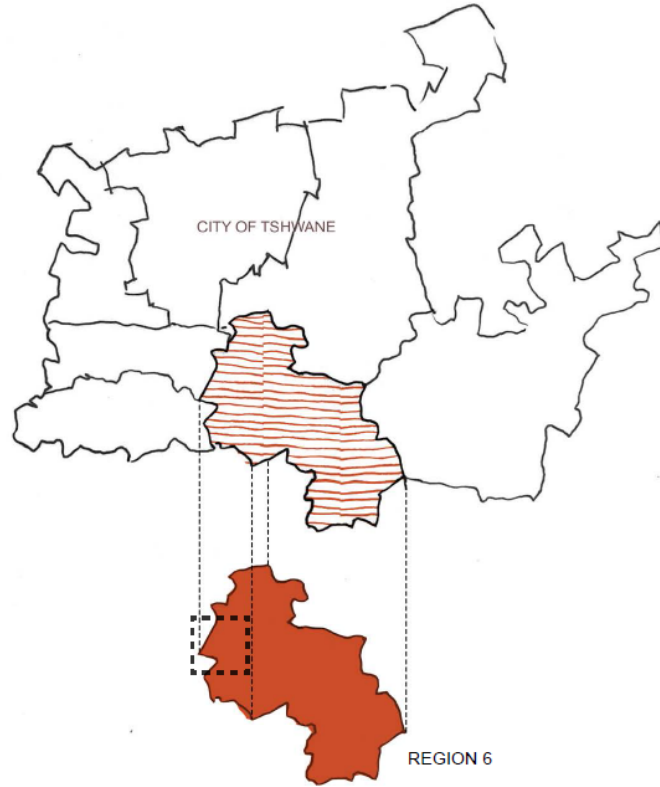


Phase 1: Urban Mapping

Honours Moreleta Park Integration Studios, 2020 & 2021

Macro and Meso Mapping

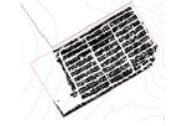
- Demographics
- Population density
- Economic density
- Nodes and transport routes
- Spatial planning
- Regionalised Spatial Development frameworks



5 PILLARS OF THE SPATIAL VISION TOWARDS TSHWANE 2030 (City of Tshwane, 2018)



1.
A city that facilitates economic growth and job creation.



2.
A city that cares for residents and promotes inclusivity.



3.
A city that delivers excellent services and protects the environment.

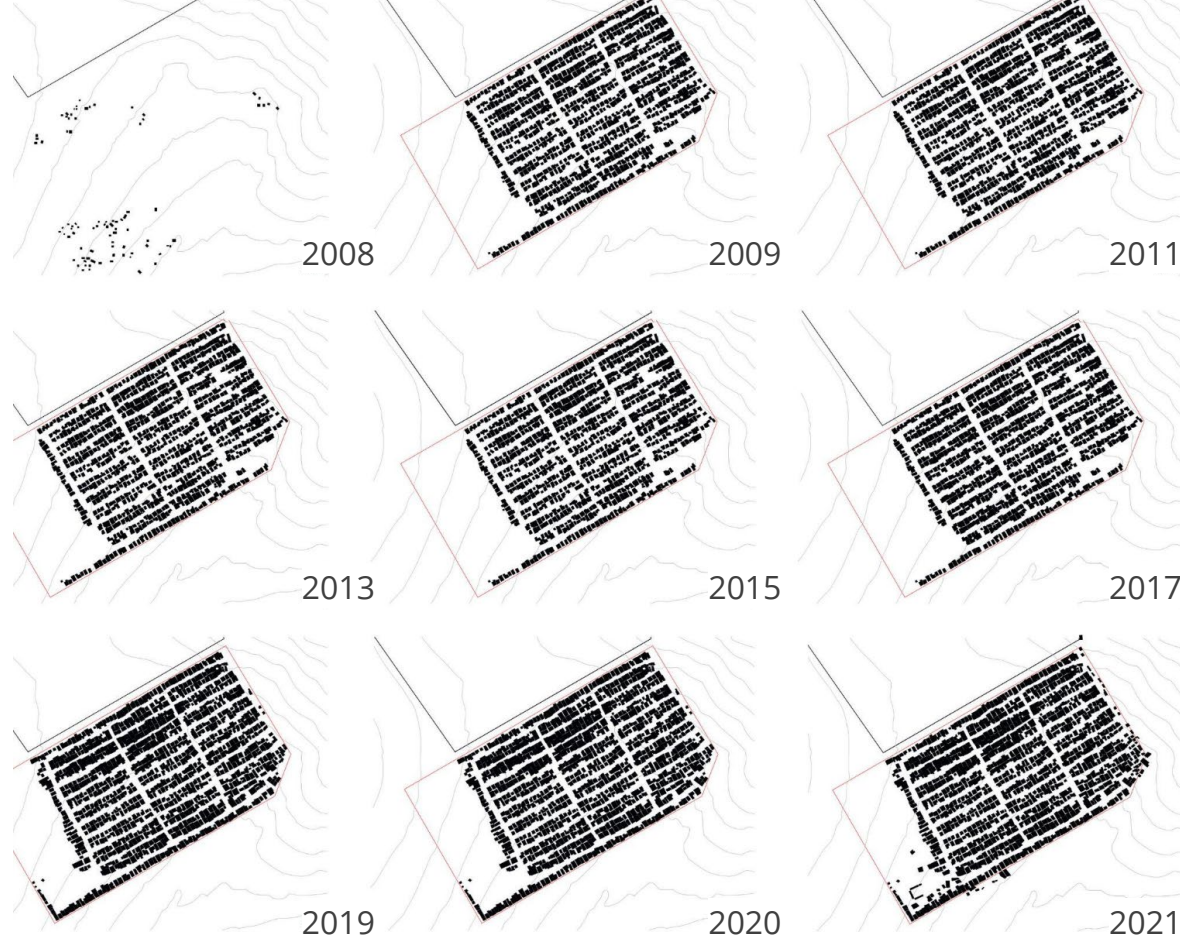


4.
A city that keeps all residents safe.



5.
A city that is open, honest and responsive.





Plastic View Historic Development

Honours Moreleta Park Integration Studio, 2021





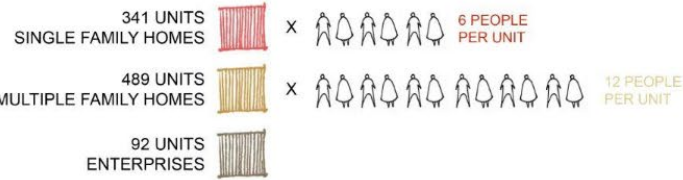
PLASTIC VIEW

922 UNITS

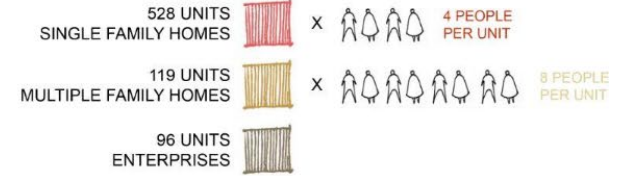


CEMETERY VIEW

743 UNITS



POPULATION = 8000 - 9000



POPULATION = 3000 - 3500

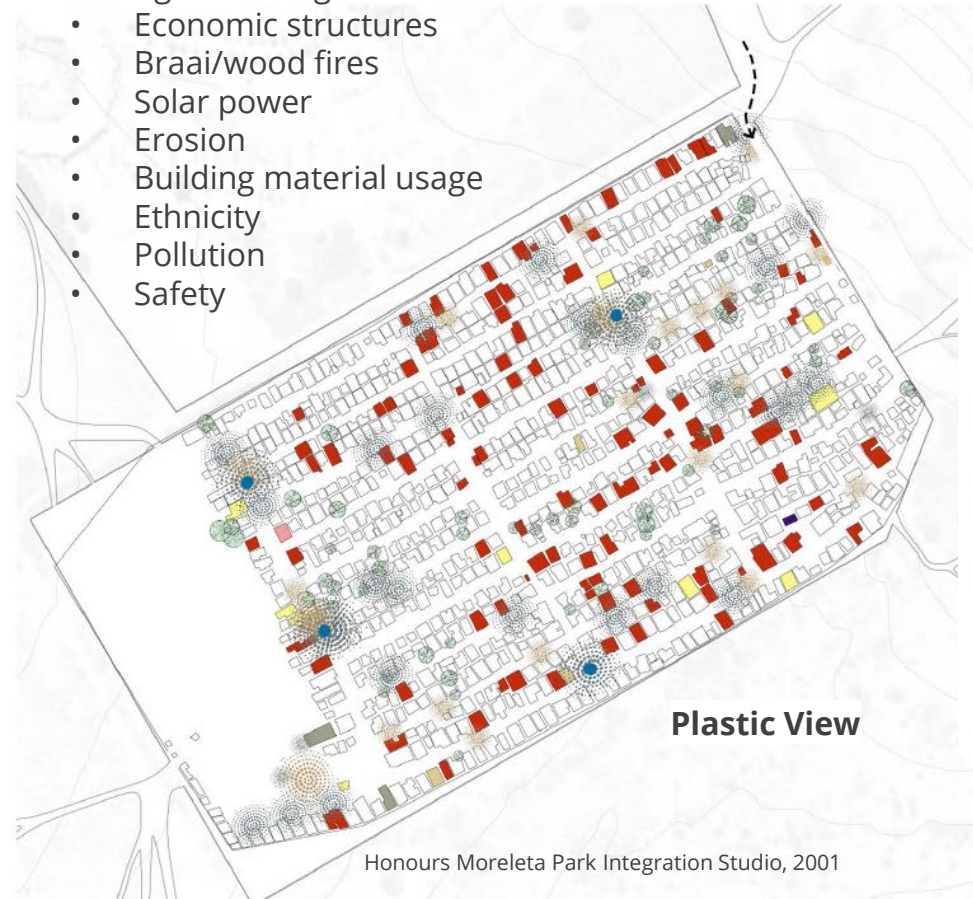
Population and housing data

Honours Moreleta Park Integration Studio, 2020



Micro insitu mapping 2016-2021:

- Water and sanitation data
- Agricultural gardens
- Economic structures
- Braai/wood fires
- Solar power
- Erosion
- Building material usage
- Ethnicity
- Pollution
- Safety

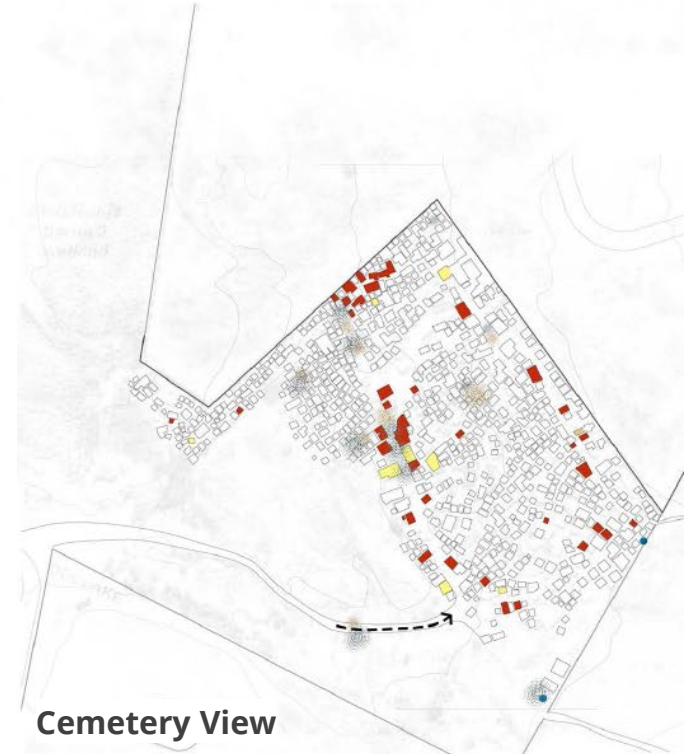


Plastic View

Honours Moreleta Park Integration Studio, 2001

LEGEND

- Water Supply
- Spaza Shops
- Social Lounges
- Hairdresser / Barber
- Chicken Farm
- Scrap Yard
- Coffee Shop
- Gathering Spaces
- Gathering Spaces (Children)
- Trees



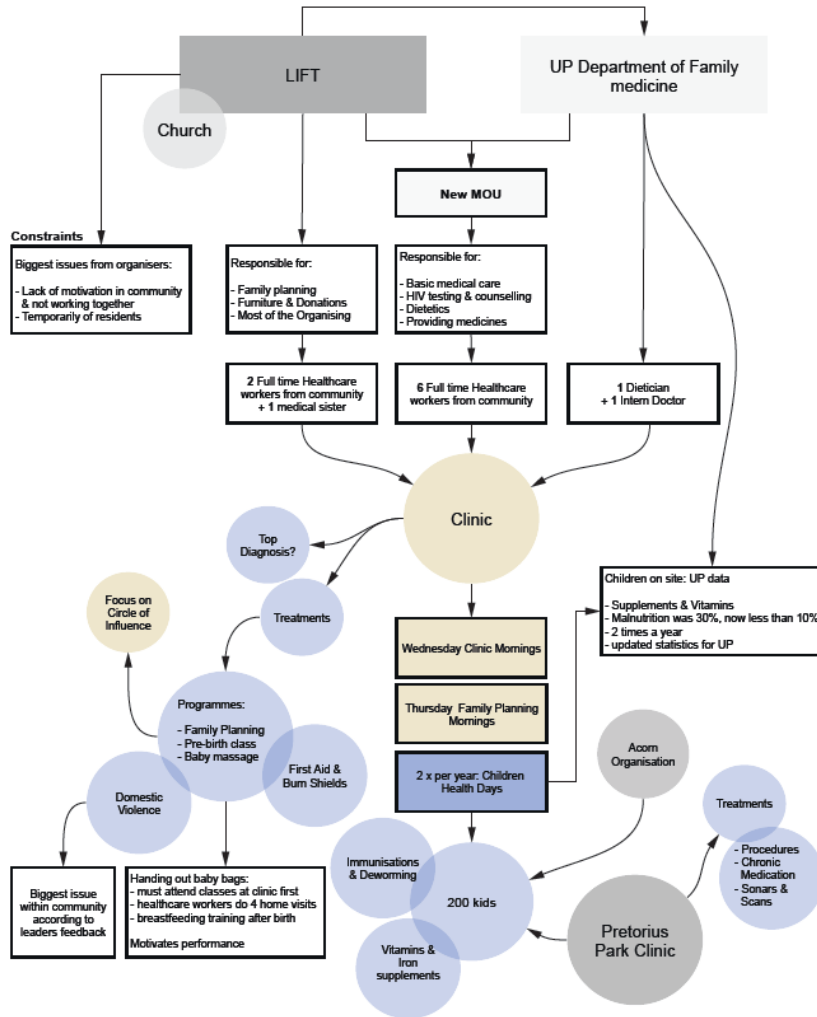
Cemetery View



Phase 1: Urban Mapping

Honours Moreleta Park Integration Studio, 2021

Healthcare and service provisions



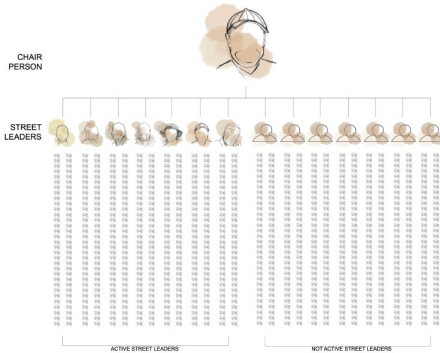
Phase 1: Urban Mapping

Honours Moreleta Park Integration Studio, 2020 & 2021

Leadership systems & Social structures



14
STREET
LEADERS
=
65.8
HOUSES/LEADER



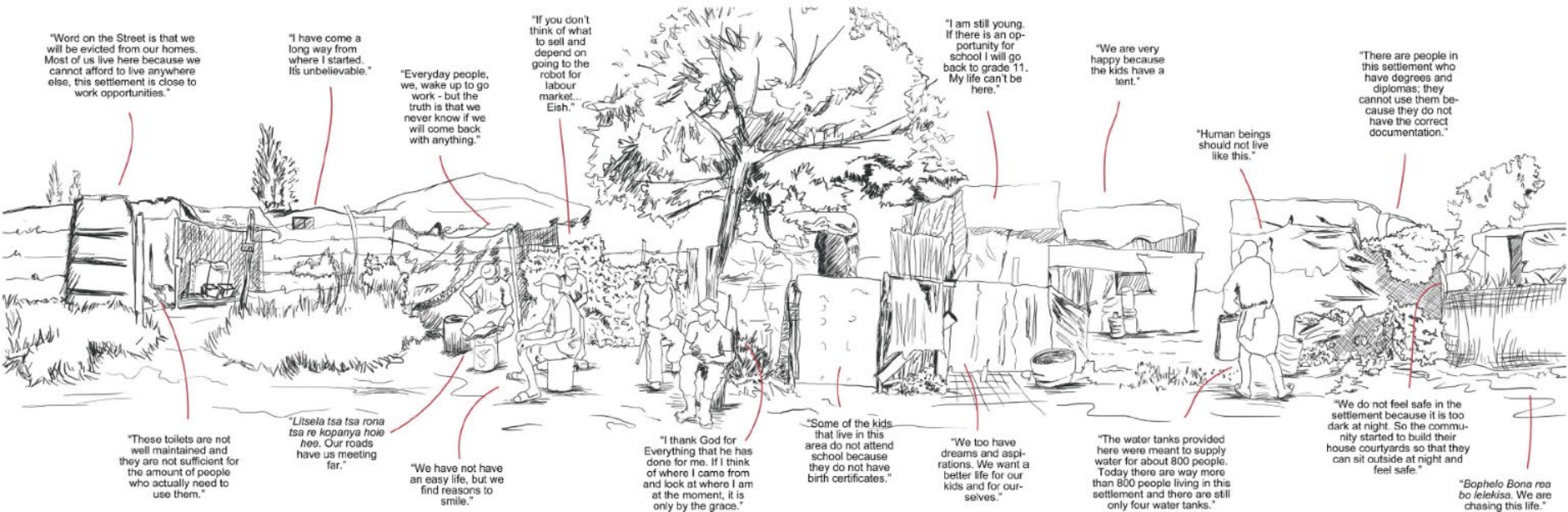
INVESTIGATION PROCESS

- 1 WATER TANK LEADER: PETRUS
- 2 OLD COMMUNITY BUILDING
- 3 CHAIR PERSON: BENJAMIN
- 4 NEW COMMUNITY BUILDING
- 5 VET CHAIRPERSON: CHADRIK



0 10 20 30 40 50 100m





Understanding the community to leverage potential

Honours Moreleta Park Integration Studio, 2020



Potential of the people

We are self-taught
my dream is to design high fashion.

I am a carpenter and was trained
In Zimbabwe, my hope is to own...

our children must be educated.

Most of the people here have dreams and ambitions.

Honours Moreleta Park Integration Studio, 2020

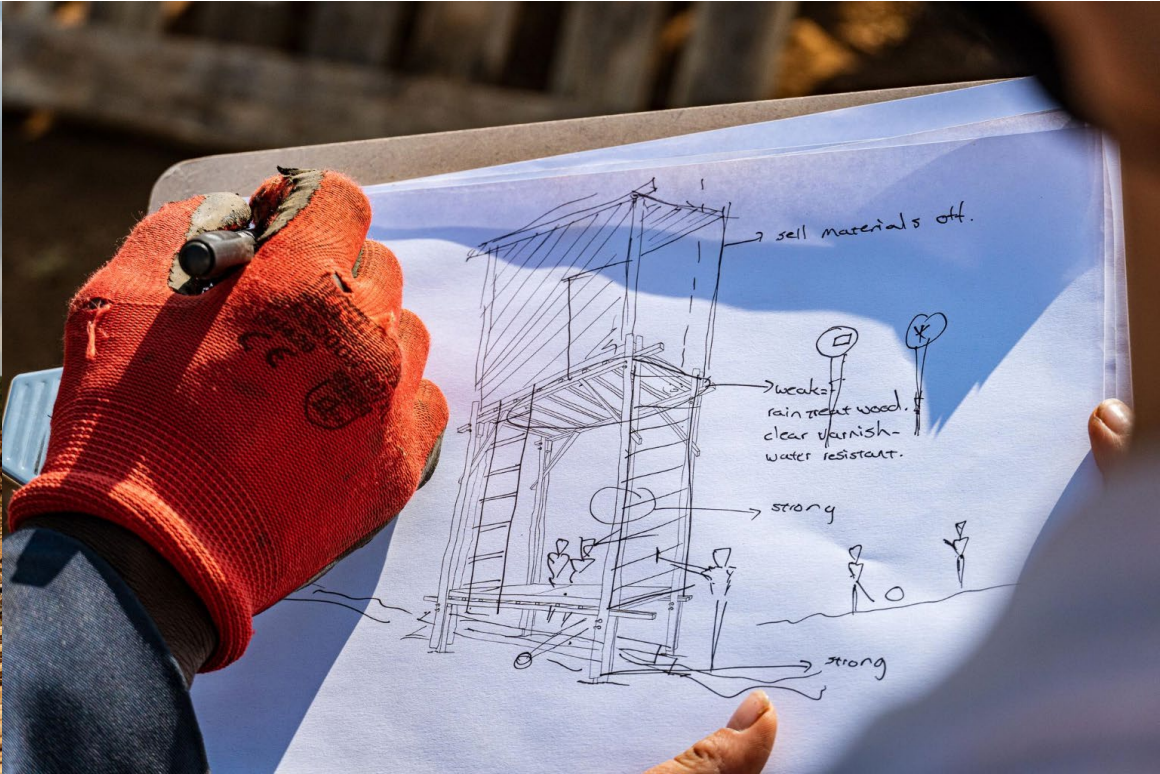
Phase 2: Community Action Planning (CAP)



Honours Moreleta Park Integration Studio, 2020



Phase 3: Live Build



Honours Moreleta Park Integration Studio, 2021

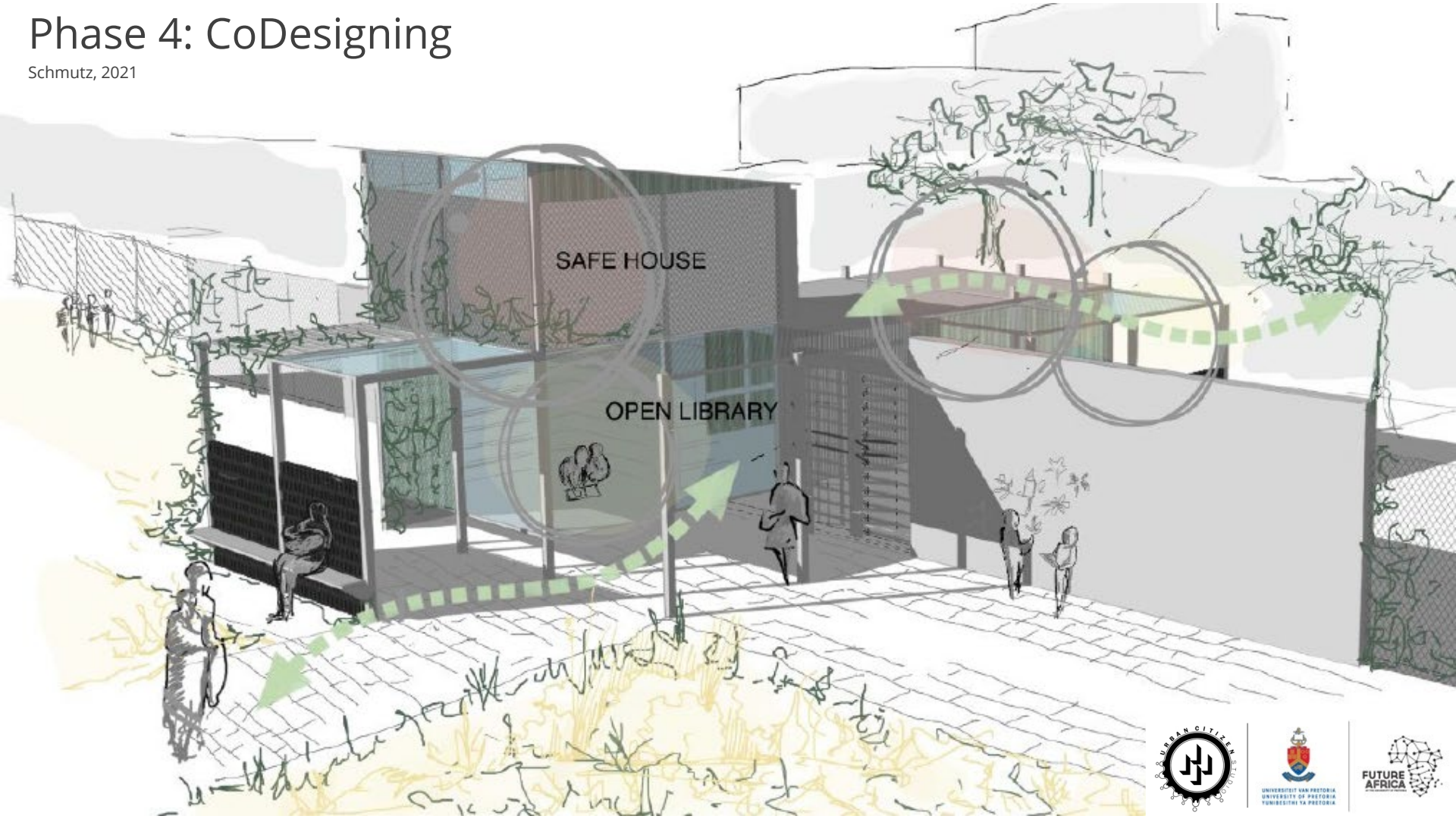
Phase 4: CoDesigning

Honours Moreleta Park Integration studio, 2021



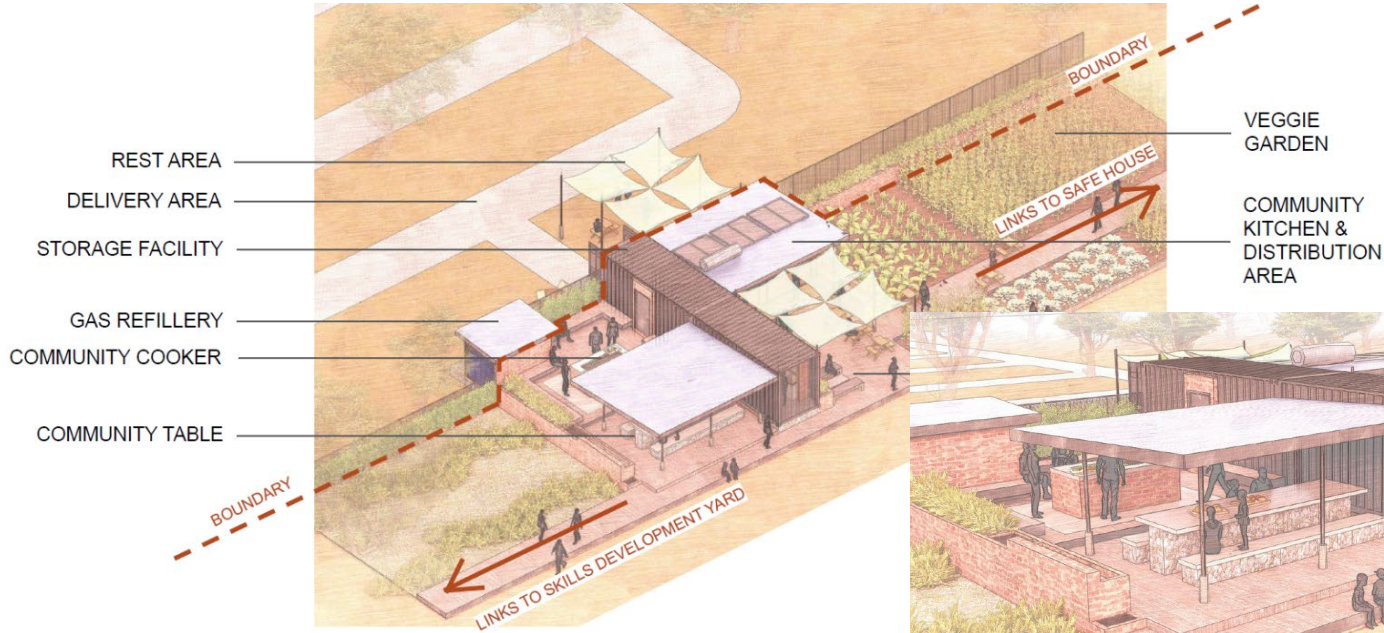
Phase 4: CoDesigning

Schmutz, 2021



Phase 4: CoDesigning

Haese, 2021



Phase 4: CoDesigning

Van Loggerenberg, 2021

SANS 10400-A: 2010 EDITION 3

A23 temporary buildings

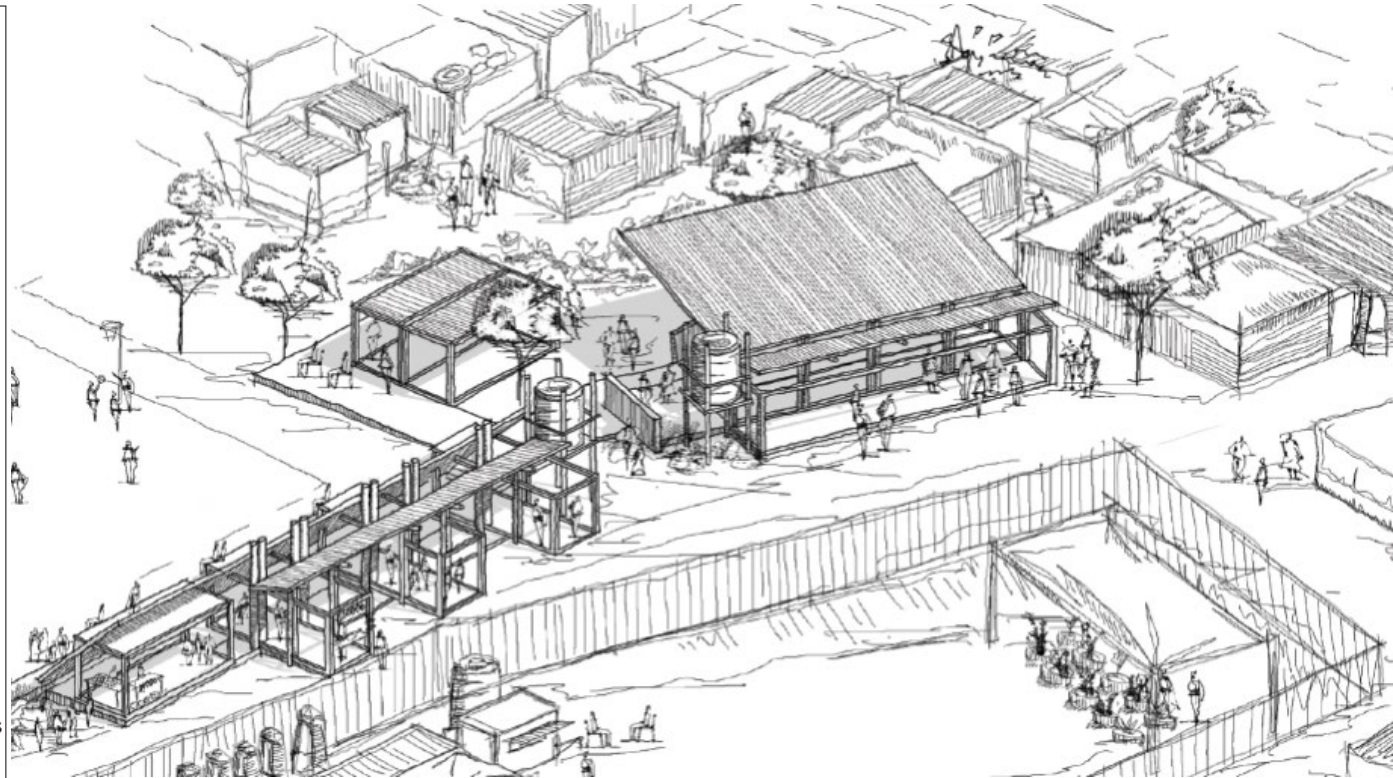
SANS 10400-A:2010 Edition 3

drainage installation until such installation has been inspected, tested and approved by the local authority. Provided that this requirement shall not apply if such inspection and testing has not been carried out by the end of the working day which has the first date mentioned in subregulation (2).

(4) Any owner who fails to comply with the requirements of this Regulation shall be guilty of an offence.

A23 Temporary Buildings

- (1) On receipt of any application to erect a building which the applicant has declared to be a temporary building, the local authority may, subject to the provisions of subregulations (2), (3) and (4), grant provisional authorisation to the applicant to proceed with the erection of such building in accordance with any conditions or directions specified in such authorisation.
- (2) Before granting such authorisation the local authority may require the submission of –
 - (a) a statement of the period for which authorisation is required;
 - (b) a site plan;
 - (c) layout drawings in sufficient detail to enable the local authority to determine the general size, form, materials of construction and use of the proposed building; and
 - (d) any structural detail required by the local authority to determine the structural safety of the proposed building.
- (3) The local authority shall grant the authorisation contemplated in subregulation (1) for a limited period, to be determined with regard to the period specified by the applicant.
- (4) The local authority may at the request of the owner grant approval for one or more extensions of the period contemplated in subregulation (3). Provided that where it is intended that the public should have access to such building such request shall be accompanied by a certificate signed by an approved competent person, indicating that the condition of the structural system is satisfactory.
- (5) The owner of such building may, not later than the last day of the period contemplated in subregulation (3), submit to the local authority such additional plans and details as required by the local authority in order to consider an application in terms of section 4 of the Act.
- (6) Where such local authority has granted approval in respect of an application contemplated in subregulation (5), the owner shall submit to the local authority an affidavit stating that any part of such building erected in terms of this provisional authorisation has been erected in accordance with the plans and details contemplated in subregulation (5).
- (7) If any plans and details contemplated in subregulation (6) have not been submitted to such local authority or if such local authority has refused to grant approval in respect thereof, the owner shall forthwith remove or demolish such building.



"Any building that is so declared by the owner and that is being used or is to be used for a specified purpose for a specified **limited period of time**, but does not include a **builder's shed**."



3



IN SITU UPGRADE





“The kind of upgrading we speak of is not about land and services alone. This is about realising real citizenship and equality in our cities”

Patrick Magebhula Hunsley
Late ISN coordinator and co founder of the
Federation of the Urban Poor (FEDUP)

"We must produce spaces that counter exploitation, control and alienation, whether in urban or rural landscapes. With all our expertise, creativity and power, we need to contribute more dynamically and consequentially to the global quest for equality."

Laufen Manifesto for a Humane Design Culture



CORRUGATED IRON

Corrugated iron is the primary building material in this dwelling and can be observed on all facades.

TIMBER

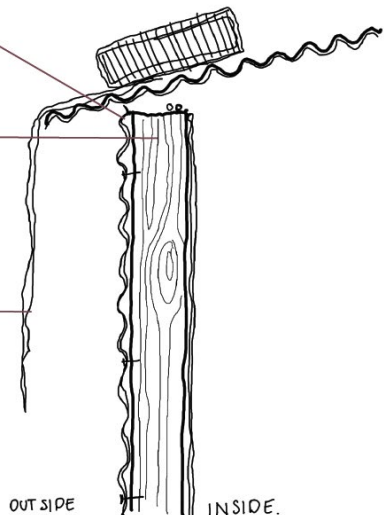
A timber framing system carries the corrugated panels and supports electrical systems as well as methods of cloth insulation in the interior spaces.

PLASTIC SHADE NET

The plastic shade net blocks the sun on the Western and Northern facade. This shading keeps the restaurant at a moderate temperature during the day. The net is anchored on the roof with heavy objects.

CONCRETE

Concrete has been used to construct the a plint and solid floor finish for the house



H5 MATERIAL AND ASSEMBLY



Van Loggerenberg 2021

Hugo 2021



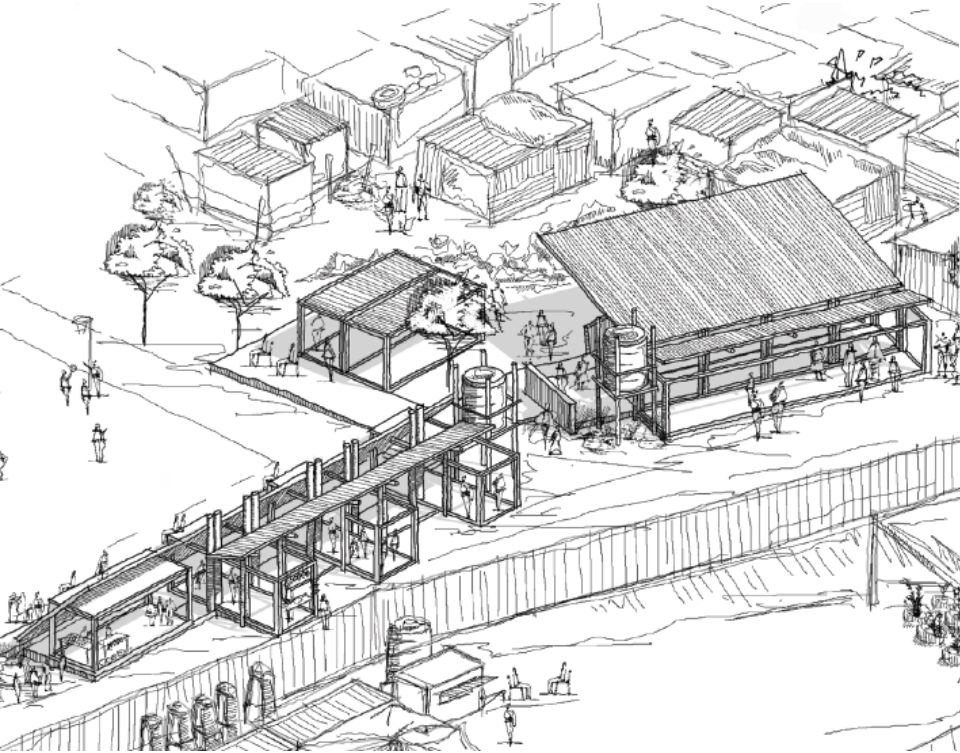
4



CONTRIBUTION TO INTERDISCIPLINARY & TRANSDISCIPLINARY APPROACHES



The future:



Van Loggerenberg, 2021



Honours Placemaking studio, 2021



5



HOW CAN WE COLLABORATE?





Thank you

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Unit of urban citizenship

University of Pretoria

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