





**TITLE:** Indexicality & Interiority: addressing the role of interior architecture in informal settlements.

**PROGRAMME:** "Disassemblable" Community Office with Deployable Interfaces and Objects.

SITE: Moreleta Park and Woodlane Village (referred to as Plastic View)

LOCATION: 25.8295° S, 28.3079° E

RESEARCH FIELD: Urban Citizenship & Inhabitation

**CLIENT: SA Cares for Life NGO** 

THEORETICAL PREMISE: Semiotics, Meaning-making, multi-scalar spatial agency and

Participatory Action Research

**KEYWORDS**: Indexicality, Linguistics, Interiority, Cultural Production, Semiotics, Meaning-Making, Collaborative Design, Spatial Agency, Informal Settlements **PROJECT INTENTION**: Establishing a role for interior architecture in informal

settlements as an agent of meaning-making.

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#### Declaration

- 1. I understand what plagiarism is and am aware of the University's policy in this regard.
- I declare that this essay is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.



Dhané Herbst 2021-11-15



## abstract

The research project is focused on the notion of indexicality and interiority to address the role of interior architecture in informal settlements through a semiotic approach to meaning-making. The notion of semiotics is the common denominator between indexicality and interiority as it refers to the idiosyncratic interpretation of meaning in both language and spaces. A community office in Plastic View - a known space of mediation, knowledge transferal and expression – serves as an intrinsic case study for this research. Through a collaborative process and on-site prototyping, the project aspires to evoke the subjective phenomena of meaning-making through a series of objects, interfaces and spatial compositions.

This dissertation unpacks the inductive process and results thereof that unfold throughout the duration of the project. Through a constantly adapting methodology, due to unforeseen site circumstances, the pandemic and questioning assumptions, the importance of a collaborative process in the journey towards meaning-making became clear. The semiotic nature of the *lingua franca* S'pitori is used to generate a method of design that develops spatial responses based off very specific phenomena translated into generic design interventions that allow more scenarios of appropriation.

The methodology focused on prototyping as main spatial informant. The process of the prototyping was altered and readapted to either imitate the on-site prototyping process through individual prototyping or to cater for the unforeseen circumstances by including the collaborative prototyping in the technification stage of the project.

The role of interior architecture as a facilitator of meaning-making in informal settlements remains an obscure title but serves as a mediator between debated research practices of 'top-down' and 'bottom-up' approaches. The exploratory process embodies the notion of spatial agency which resulted in a proposed hand-made, self-constructed spatial structure for the community of Plastic View by the community of Plastic View.



## LIST OF TERMINOLOGY DEFINING KEY CONCEPTS

## →» - disassemblable

/dɪsəˈsɛmb(ə)l/

adjective

- a composition that can be taken apart or broken down into smaller pieces that assemble the larger composition (Dictionary, 2006).
   in this project it refers to the spat
- 2. in this project it refers to the spatial composition that can be broken down into a series of interfaces and deployable objects (Author, 2021).

## → - ethnography

/εθ 'n**ogrə**fi/

noun

- 1. a branch of anthropology and the systematic study of individual cultures from the point of view of the subject of the study (Dictionary, 2006).
- 2. the scientific description of peoples and cultures with their customs, habits, and mutual differences (Muratovski, 2016).

## → - indexicality

/In 'd&ksIk(ə)l/

noun

- 1. the phenomenon of a sign pointing to some object in the context in which it occurs
- 2. relating to or denoting a word or expression whose meaning is dependent on the context in which it is used (such as here, you, me, that one there, or next Tuesday (Dictionary, 2006).
- 3. Intersubjective associations of phenomena strongly influenced by space and context (Author, 2021).

## → - informal settlement

/In 'fɔːm(ə)l/ / 'sɛt(ə)lm(ə)nt/

noun

- 1. a place, typically one which has previously been uninhabited, where people establish a community carried on by self-employed or independent people on a small scale, especially unofficially or illegally (Dictionary, 2006).
- 2. an approach to spontaneous urban strategy (Moreleta Integration Project, 2021).

## → - interior architecture

/In 'tɪərɪə/ - / 'aːkɪtɛktʃə/

noun

- 1. "interior architecture is the art and science of the design of designated spaces. It focuses on the needs of the user and the harmony between architectural spaces and the detailed design of spaces and life-style products." (University of Pretoria, 2017).
- 2. a human-centered approach to space making that enhances the rituals and phenomena that it responds to (Author, 2021).

## → - interiority

/In tiəri briti/

noun

- 1. the quality of being interior or inward.
- 2. subjectivity in space in terms of the connotations, denotations and appropriations of its inhabitants (McCarthy, 2005).
- 3. inner life or substance : psychological existence (Dictionary, 2006).



# LIST OF TERMINOLOGY DEFINING KEY CONCEPTS

## **(**(

#### - interface

/ˈɪntəfeɪs/

noun

- 1. a point where two systems, subjects, organizations, etc. meet and interact (Dictionary, 2006).
- 2. a spatial device that enables an interaction between users, rituals, systems, and appropriations. In the project it serves as a mediator or touchpoint between concepts, people and phenomena (Author, 2021).

#### **(**(

## - meaning-making

/ˈmiːnɪŋ/-/ˈmeɪkɪŋ/

noun

- 1. the process of making or producing something significant that is not directly expressed, an object of importance or a worthwhile quality; purpose
- 2. the essential qualities needed for something to put parts together or combine substances (Dictionary, 2006).
- 3. The act of encoding and decoding by designers and inhabitants (Konigk, 2015).

#### **(**(

## - prototype

/ prəʊtətʌɪp/

noun

- 1. a first or preliminary version of a product or design from which other forms are developed (Dictionary, 2006).
- 2. a method of bridging the gap between user and designer through a collaborative methodology (Author, 2021).
- 3. a approach to mediate 'top-down' and 'bottom-up' research methodologies (Author, 2021).

## **(**(

## - sit-thing

/s**ɪ**t/ - /θ**ɪ**η/

noun

1. a mechanism that can be used as a sitting device. Building on the notion of a chair, a sit-thing becomes an adaptable element that can be used in various scenarios as an element of comfort (Author, 2021).

#### (r

## - s'pitori

/s-pie-tawr-ee/

lingua franca

- 1. a linguistic composition of lexical items from multiple recognised languages
- 2. an appropriation of terms, words and phrases that an agent of amalgamation where conflict arose between the various cultures and languages (Bornman et al, 2018:30).
- 3. Lingo present throughout the city of Tshwane and potential method of cultural mediation (Urban Citizen Studio Mamelodi, 2020).



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## INTRODUCTION

The current discipline of interior architecture, and the relevance thereof, is widely debated by various institutions and professionals. At this time, it is widely recognised within the residential, commercial and retail sectors, but it does not often feature within urban development frameworks or what is defined as 'Global South' or developing communities. McCarthy (2005: 118) defines interiority as an interaction between body and space and how the body associates and conflates within spatial experiences. This places interiority, and the field of interior architecture, at a very intimate level of engagement where the intimacy "is a shared but not a geographically coincident experience" (McCarthy, 2005: 118). This becomes extremely relevant in a context like South Africa where there is a prominent disconnect between design intention, user interpretation and ultimately user appropriation- as is showcased in the current RDP-housing discussion. This raises the question of the importance of cultural production, defined by Konigk (2015: 75-83) as a method of meaning-making in developing communities to bridge the gap between design intention and physical manifestation. Local lingo and indexicality, defined as the varying meanings of language depending on the context it is used in (Swiggers, 1985:919), becomes an intermediate platform for investigating hermeneutics as a study of interpretation and association (Konigk, 2015). The above mentioned becomes extensions of cultural production in such environments. The intention of this project is to integrate the abstract concepts of interiority and indexicality with a tangible, spatial application in an attempt to provide an opportunity for meaning-making. The proposal focuses on indexicality as an incarnation of interiority, cultural production and semiotics (the physical manifestation), the spatial application (the need for meaning that resonates in developing communities) as well as the methodological approach to making these abstract theories palpable.

## CONTEXTUAL ISSUES

Woodlane Village, known to the residents as Plastic View, in Moreleta Park, Pretoria East will serve as a case study for this investigation. Plastic View is an informal settlement that developed due to various complex systemic injustices. The settlement is currently home to various local and foreign inhabitants that rely on the settlement for shelter, jobs, basic resources and opportunities of all kinds (The Moreleta Park Integration Project, 2021). The settlement showcases permanent, temporary, solution and preferred inhabitation.

## urban issue

The diversity within Plastic View sets the stage for various tensions, such as cultural and socio-economic tensions, that seeps through people's behaviour and takes form in acts of violence, exclusion, demolition, looting and contributes to the overarching social imbalance (The Moreleta Park Integration Project, 2021). The large disconnect between the settlement and the surrounding area, which booms with estates and lavish new developments, creates a schism between the rich and layered constitution that the inhabitants sought refuge from and the reality that they were presented with (The Moreleta Park Integration Project, 2021).





## GENERAL ISSUE

The Apartheid regime's spatial planning of exclusion still holds various cultures and geographically placed groups on the outskirts of Pretoria's metropolis (The Moreleta Park Integration Project, 2020). This is a contributing factor to the establishment of informal settlements in Pretoria as inhabitants need to be closer to work and opportunities for work. This cumulates to the general issue as a large component of people living in Plastic View are only doing so as a solution or means to an end. The dwellings are not initially intended as home but merely a space to survive (The Moreleta Park Integration Project, 2021). This issue gradually evolves into a more complex scenario during the inhabitation of the settlement as their lives become more engrained into the energy and agency that the settlement offers.

#### SPATIAL (INTERIOR ARCHITECTURAL) ISSUE

The spatial issue links directly to both the urban- and the general issue that stems from the generalisation of informal settlements as a whole. Not only is there a lack of human-centered spatial development within these settlements but the interventions become barred from the inhabitants and represent a distant 'saviourism' approach to development. The recognition of ethnography becomes a crucial aspect of spatial development and speaks to the evident lack of cultural production, as a semiotic manifestation of existing and potentially extrapolated meaning woven through the inhabitation of settlement. This also touches on the notion of responsive design (Atchen, 2019) that discerns existing structures and agencies that demonstrates intelligence despite informality.



Figure 2: Diagrammatic representation of the contextual issues, highlighting the overlaps and possibilities of intervention (Author, 2021).



## THE NEXUS OF THE ISSUES: OPPORTUNITIES FOR INTERVENTION

Figure 2 shows the distinct overlaps between the various issues presented in the informal settlement as language and communication skills that serve as vessels of job opportunities as well as an acknowledgement of the humane (linking to semiotics as a response to generalisation) and the lack of thresholds spaces that enable transformation. The common denominator between all the contextual issues is the lingua franca S'pitori.

#### PROBLEM STATEMENT

"We ran out here to make a life. I mean there is no place like home. But if home no longer feels like home, we are lost. We are a lost generation." (De Vos & Banda, 2019).

Plastic View is a reflection of many complex systemic injustices found in South Africa and the overarching, brazenly blatant, challenge is viewing the case as more than just a statistically relevant or legally breached scenario but acknowledging the very humane aspects of inhabiting a space in such circumstances. The personal histories and collective narratives found in Plastic View display a vast amount of perseverance and competence that is in need of recognition and exploration.

The aim of this research is to identify what value interiority and local lingo can contribute to the manifestation of meaning in developing communities. By interrogating the correlation between sociolinguistics and cultural production in space, meaning-making gains focus and becomes an integral part of the development process. The urban lingua franca S'pitori offers the opportunity of a semiotic approach to communication compositions and will be used as a model to develop a spatial semiotic approach to meaning-making. Bornman et al. (2018:30) define S'pitori as a linguistic composition of lexical items from multiple recognised languages found in the South African constitution. A study conducted by the honours Urban Citizenship Studio in February 2020 brought to light the rich foundation for language within Mamelodi's educational landscape (Urban Citizen Studio Mamelodi, 2020). S'pitori acted as an agent of amalgamation where conflict arose between the various cultures and languages found in the school. The scenario at Tsako Thabo Secondary School (Mamelodi) becomes a precedent of small-scale intervention tackling larger-scale complex social truths. In this way, the research proposal intends to tackle a contextual issue through a semiotic approach and provides an opportunity for interiority to manifest through indexicality by doing so.

## RESEARCH QUESTIONS

The investigation consists of 3 research questions that address the various scales of spatial intervention targeted in this project. These research questions all relate to the main investigation focus of the project but targets different aspects that will take place in different stages of the project.

## RESEARCH QUESTION:

What is the role of interior architecture, as an agent of meaning-making, in an informal settlement that is host to both temporal and permanent inhabitants of ethnographic variety?





## DESIGN QUESTION:

How can the semiotic/indexical nature of S'pitori inform the physical manifestation of meaning-making through a collaborative exploration of spatial agency in an informal settlement with ethnographic variety?

## TECHNICAL QUESTION:

How can an iterative technification process through prototyping and analysis serve as an agent of semiotic cultural production by including the users as continuous core informants and collaborators?

The interrelation of these concepts and their possible physical manifestations can if proven pertinent, serve as a confirmation for the need for interior architecture as a discipline within developing communities.

## RESEARCH METHODOLOGY

The project is situated within a larger ongoing research project conducted by the University of Pretoria's Department of Architecture, Unit of Urban Citizenship called The Moreleta Park Integration Project. This project has the privilege of being part of the annual Reality Studio as hosted by the Chalmers University of Technology in Sweden. The theme for this year's Reality Studio projects is 'Designing for Dignity' and encourages a collaborative design process to generate human-centered, responsive design outcomes.

Together with students from the Chalmers University of Technology, honours students from the University of Pretoria who take part in the Unit of Urban Citizenship and fellow masters students we will undertake a vigorous mapping with the intention of conducting a process of prototyping. All the work done as a larger unit contributes to the individual project and provides a valuable platform for communal growth that stems from the participatory action research methodology.

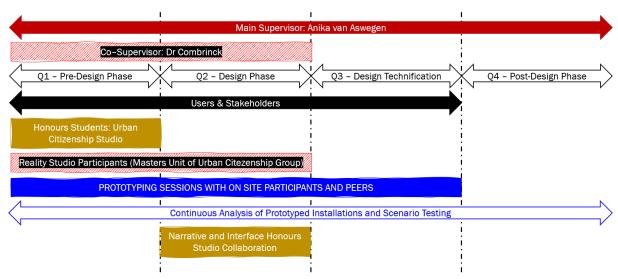


Figure 3: Diagrammatic representation of collaborators' involvement during the year (Author, 2021).





Along with the group methodology, the individual project methodology is based on work done by Teo Yi Siang & The Interaction Foundation (2020) that structures the design process as outlined in Figure 4. This process becomes more rhizomatic than linear and allows an iterative design and technification process. The project requires a deep immersion into site and context throughout and thus the research methodology might adapt based on the needs of the project.

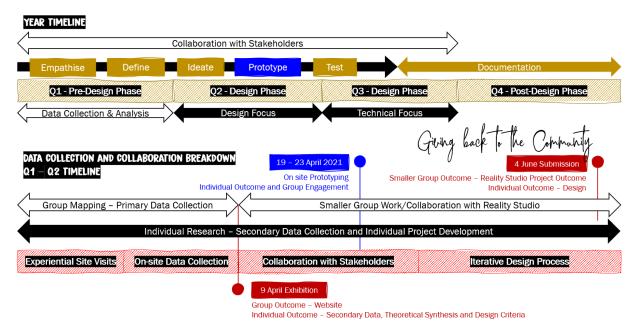


Figure 4: Diagrammatic representation of individual project methodology, timeline and key dates for Q1 & Q2 (Author, 2021).

#### RESEARCH PARADIGM

The research will take place in the constructivist paradigm that by its nature promotes qualitative data collection (Adom et al, 2016). The paradigm stems from the interpretivist paradigm that is more concentrated on the uniqueness of a distinct context and the circumstances that contribute to the underlying depth of the idiosyncratic characteristics (Kaplan & Maxwell, 1994).

There are various methods of executing a qualitative research methodology. A case study (Stake, 1995) is proposed to ensure that the importance of the individualistic core of the research does not go unchecked.

Honebein (1996) defined the constructivism paradigm as a research credo by which one recognises individual understandings and knowledge of phenomena and experiences as constructed by the people that experience it. This is based on the notion that people experience phenomena based on their experiences and what they have learnt (or still carry with them) from it (Cashman et al, 2008; Hein, 1991).

## RESEARCH DESIGN

The research questions are aimed directly at the impact the field of interior architecture could have within a developing community. In an attempt to demonstrate this on a tangible level an intrinsic case study will be used as well as a process of collaboration with willing participants from Plastic View.



Stake (1995) stated that an intrinsic case study is relevant when the investigation is dependent on a better understanding of a specific case as is the scenario in this research project (Yin, 2014). The process of collaboration is based on Howard and Somerville's (2014) model of participatory action research as outlined in Figure 5. The research conducted and collaborative sessions will serve as informants for an end-design that aims to illustrate a semiotic approach to space-making.

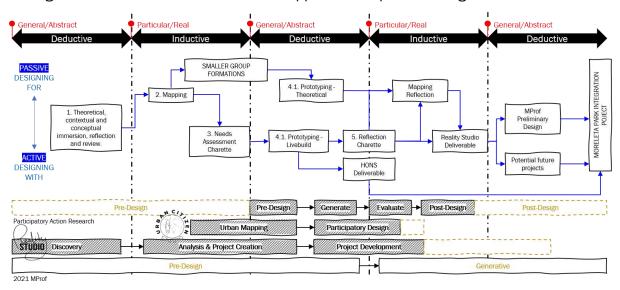


Figure 5: Visual representation of group methodology (Adapted from Howard and Somerville 2014, Sanders and Stapers 2014, Saldana 2013).

## ETHICAL CONSIDERATION

The research falls within the Urban Citizenship Studio's ethical clearance as an extension of the Department of Architecture of the University of Pretoria (Reference number: EBIT/259/2020). The research conducted was done so in compliance with the University of Pretoria's code of ethics. All information gathered is stored safely and all published information was done so with the permission of the collaborators and participants. When conducting the research on site participants were given a clear choice to participate and could terminate the conversation at any point during the process. The intent of the research was declared upfront and the researcher tried to sustain a transparent relationship about the use of information and implications of participation. All sensitive imagery used are published and in the public domain. Images taken on site were done so with permission and used to depict the realities of life in the settlement. The intention is not to romanticise these scenarios, but the aim of the project is to respond to these realities.

#### DATA COLLECTION AND ANALYSIS

The use of qualitative data capturing, a method closely corresponding to the constructivist paradigm, will enable the investigation in a humane and benevolent manner. This becomes the medium in which the research will be conducted to demonstrate the relevance of the field of interior architecture in developing communities. Proposed data collection methods include personal interviews, direct observations, explorative scenarios, charettes and interactive participation with the willing participants in Plastic View. Please refer to Figure 6 for a detailed diagram demonstrating the data collection and analysis methods.





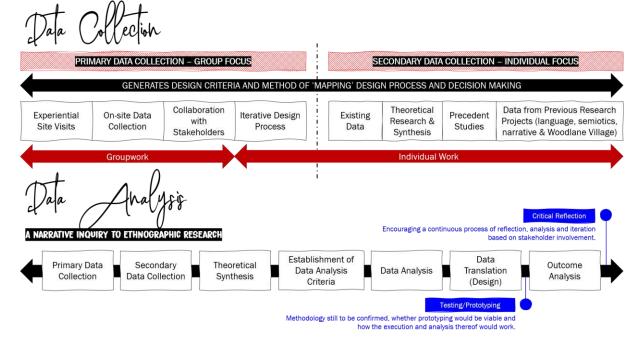


Figure 6: Visual representation of data collection and analysis (Author, 2021).

#### THEORETICAL FRAMEWORK

Literature pertaining to indexicality and linguistics with relevance to interiority will be considered and analysed as well as literature from interior sources that relates directly to cultural production and semiotics. These will be critically assessed through the lens of interior architecture in the context of developing communities and will serve as the theoretical framework for the research. Figure 7 shows the critical sources that serve as a base for the theoretical framework.

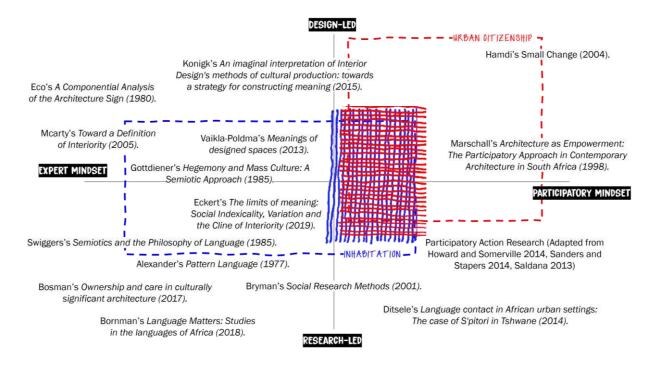


Figure 7: Diagrammatic representation to situate project theoretically within current discourse as well as the University of Pretoria's Department of Architecture's research fields (Author, 2021).



## INDEXICALITY AS AN INCARNATION OF INTERIORITY

According to Vitruvius' myth, the conjoined origin of architecture and language stems from the universal narrative of man discovering fire (Vitruvius, Cesariano and Bruschi, 1981). There is profound harmony between language and space as can be derived from the "prehistoric production of structure and meaning" that also introduces the act of interpretation (Parry, 2017: 125). This notion transcends western boundaries and becomes relevant across various cultures as it speaks about the interpretation and association of ubiquitous phenomena. Eckert (2019: 751-776) justifies language as a social practice by stating that it is a conversation between structure and agency. In her writings it becomes evident that the current structural focus on linguistics leads to static conducts of meaning and by emphasising sociolinguistics and indexicality, with a specific eye on lingo, the concept of creating meaning becomes fluid and responsive. This directly translates into an interaction and touches on indexicality as 'associativeness' (Eckert, 2019: 776). The user of the language, or space as an extension of the argument, becomes the core driver in the interaction and interpretation or internalisation thereof which becomes a first-hand manifestation of interiority.

## CULTURAL PRODUCTION AND SEMIOTICS: THE PHYSICAL MANIFESTATION

The importance of constructing meaning in space cannot be emphasised enough as it becomes the dialect between space and end-user. Hermeneutics in terms of interiority refers to the visual- and spatial encoding and decoding by both designer and inhabitant (Janz, 2017). Vaikla-Poldma (2013: 103), to demonstrate a post-structural stance, states that spaces are experienced through time and within our personal and social lived contexts, thus each individual moving through a space will experience it differently than the next. It can therefore be said that each person interprets the space according to their idiosyncratic associations. With this perspective on design, the physical manifestation of meaning in an interior truly becomes a 'geometry of intimacy' (McCarthy, 2005: 114). A semiotic approach to constructing meaning recognises that meaning is an idiosyncratic concept and that different objects resonate differently within varying social groups (Gottdiener, 1985: 979). When semiotics is made evident in the design process it becomes a binding element for the informing narratives, design intention, physical manifestation thereof and the user's interpretation. In an aim to elicit meaningful experiences Sebeok (1974) argues that semiotics can be used as the ontological approach to tackle mass cultural production. The end goal of this would be to encourage projects that truly resonate with the user and transforms into long-term sustainable implementations.

#### SPATIAL APPLICATION: INTERIOR ARCHITECTURE AS AN AGENT OF MEANING-MAKING

The need for an architecture that is responsive and relatable cannot be emphasised enough as clarified by Marschall (1998) as a resource of association. She continues to state the importance thereof in a developing country like South Africa where the Apartheid regime left quite a discouraged and detached residue (Marschall, 1998). Sanders (2000) also states that South African architecture should aim to be responsive not just to its physical context, but the cultural landscape and metaphysical domain.



Returning to Marschall's (1998) publication she continues to elaborate on the possibilities of this 'resonating agency' through collaborative participation. This creates miscellaneous opportunities for the development of meaning-making on a scale that will be accessible to the people it aims to reach. Hamdi (2004) elaborates on the possibilities of small-scale intervention in his critically acclaimed Small Change that establishes an initial foundation for small-scale interventions that have multiscalar implications. If this is combined with Bronfenbrenner's (2005) scales of human engagement a spatial implementation of interior scale has the potential to address cultural production that stems from a human-scale and grows to a community-scale. Bosman (2017) strongly builds on this argument by concluding that user's value of space harmonises with its ability to evoke cultural relevance. This ties back into Konigk's (2015) semiotic approach to cultural production and meaning-making in the field of interior architecture. Figure 8 elaborates on the various concepts across the scales, as defined by Bronfenbrenner (2005), as a method of using the semiotic nature of language as a method of meaning-making. This approach combined with a participatory action research methodology sets up the journey towards meaningmaking.

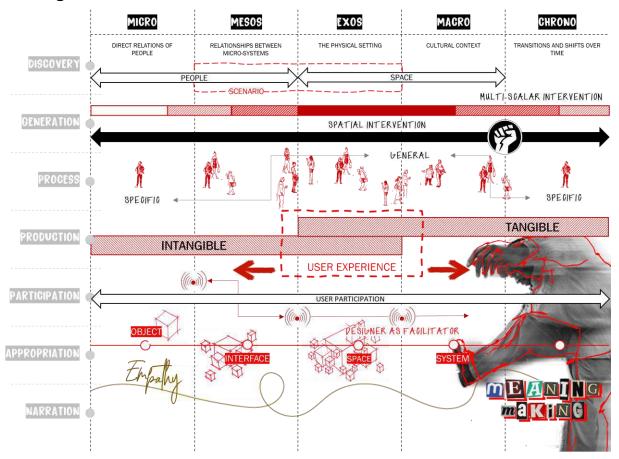


Figure 8: Diagrammatic representation of the theoretical framework mapped out across the various scales of human engagement as defined by Bronfenbrenner (2015) as a method of using the notions of indexicality and interiority as a point of departure for meaning-making. The various scales allows for an interpretation of both indexicality and interiority as a process of generalising specific inputs that allow specific interpretations and appropriations. Diagram based on theories by Bronfenbrenner (2005), Castells (2011), Cronje (2020) and Murray Gell-Mann (2014).



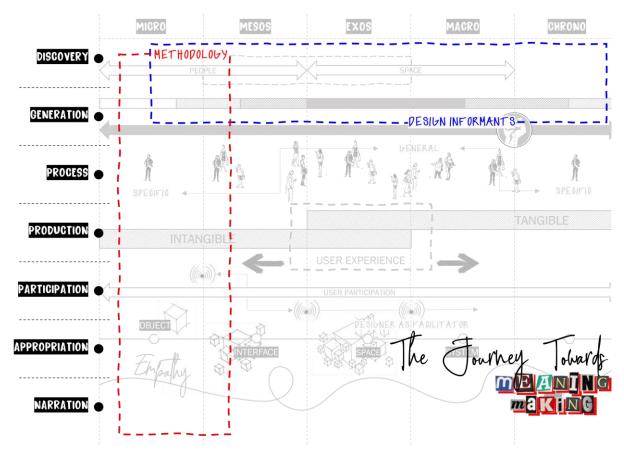


Figure 9: Diagrammatic representation of the combined project methodology that becomes the various stages on this base diagram with the various scales acting as host to the design informants and sets up the dichotomous journey towards meaning-making. The project stages are an amalgamation of the various research methodologies that inform the inductive study. Diagram based on theories by Bronfenbrenner (2005), Castells (2011), Cronje (2020), Howard and Somerville (2014), Murray Gell-Mann (2014), Sanders and Stapers (2014), Saldana (2013).

## CONTEXTUAL ANALYSIS

The contextual issues highlighted the potential of the language model that is present within the settlement and how it can be used to inform a design that addresses the need for meaning-making. An initial analysis of the language model on site brought to light the appropriation and adaptation of various native languages to morph into a 'lingo' that allows various indigenous people to overcome communication barriers. This form of communication enables copious scenarios of interaction and exchange valued by the community. As an extension of the urban issue, the role of communication also becomes a crucial tool of mediation in a context of vast diversity and possible conflict. As a response to the lingering tension in the settlement a leadership structure was developed from long term inhabitants in collaboration with an invested NGO, SACaresForLife. The investigation into the communication model on site surfaced a variety of rituals facilitated by the appropriation of indigenous phenomena. These phenomena became the point of departure for further investigation into key themes identified as knowledge transferal, the community leadership structure, methods of overcoming language barriers and enabling all of the above by simply facilitating a conversation.





Figure 10: Photos from site that showcase the various scenarios used for knowledge exchange: a common phenomena that forma part of the everyday rituals of the inhabitants of the settlement (Moreleta Park Integration Project, 2021).

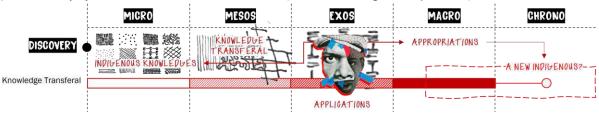


Figure 11: Mapping out these scenarios of knowledge exchange it became evident that indigenous knowledges brought to the settlement from all over the continent were being adapted and appropriated to the needs and desires of the settlement (Author, 2021)



Figure 12: The community office was located on the edge of the informal settlement and is known among the community as a safe space for mediation, knowledge transferal and expression (Moreleta Park Integration Project, 2021).



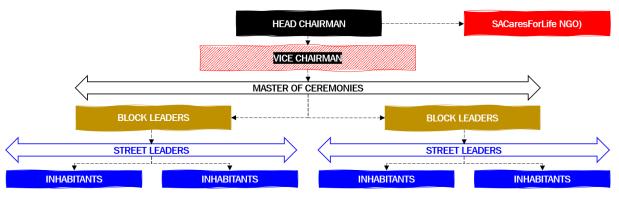


Figure 13: Diagrammatic representation of The Power of the Father community leadership structure (Author, 2021).

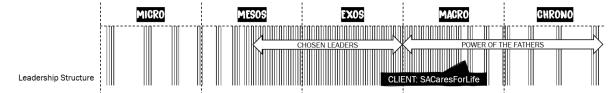


Figure 14: The community leadership becomes a scenario that addresses phenomena in the settlement across the various scales of human engagement (Author, 2021).

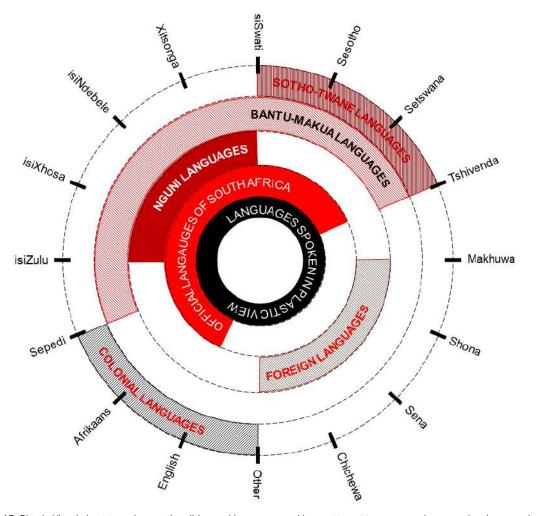


Figure 15: Plastic View is host to various nationalities and languages and in an attempt to overcome language barriers people have started learning words and sounds in an attempt to understand their co-inhabitants. This lead to a language model that is based on appropriation and association. This is enabled by the origins of the various languages that have overlaps and the effort from the community to learn and teach language. The intention is to use this model in the design process as a method of designing for idiosyncratic interpretation (Author, 2021).





Figure 16: Diagrammatic representation of the communication model on site (Author, 2021).



Figure 17: On site communication model mapped across the various scales to highlight language as a model for semiotic meaning-making by developing from specific (individualistic) to a generic interface that allows further specific interpretation and adaptation (Author, 2021).



Figure 18: An investigation into the language of sit-things in the settlement brought to light the layered approach to making a sit-thing that consists from interchangeable existing objects such as beer crates and buckets combined with interchangeable found objects on site that could serve as a seat. These sit things hosts all the above mentioned by simply enabling a conversation (Moreleta Park Integration Project, 2021).



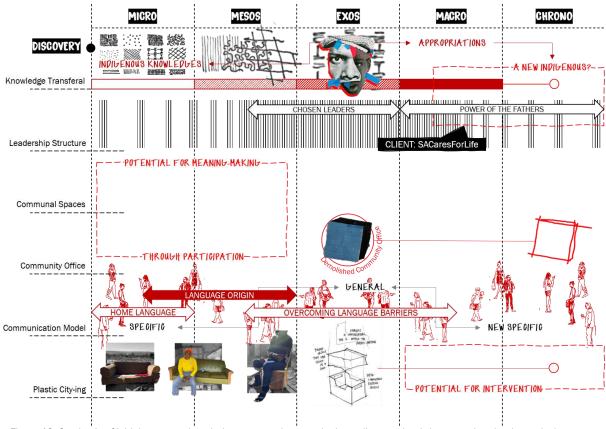


Figure 19: Synthesis of initial contextual analysis as mapped across the base diagram that brings together the theoretical influence, contextual informants and combined project methodology (Author, 2021).

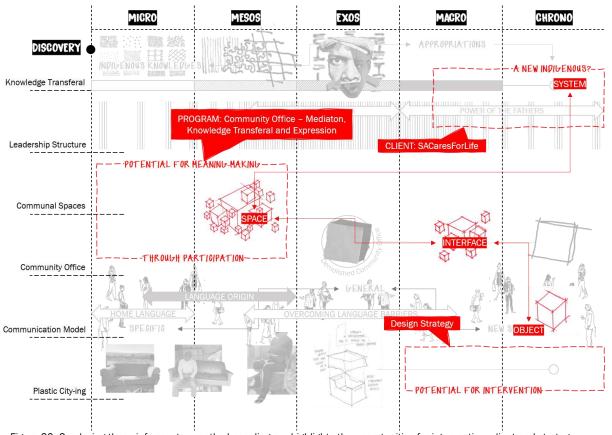


Figure 20: Overlaying these informants over the base diagram highlights the opportunities for intervention, client and strategy. This is supported by the inductive nature of the project (Author, 2021).



## PROGRAMME POSTULATION AND SITE SELECTION

Figures 19 & 20 show the sequence of programme and site selection. Informed by the contextual analysis, the programme stems from existing meaningful rituals and builds on the notion of agency and participation. The client, SACaresForLife, and the inhabitants of Plastic View are the main informants of the programme. Their initiative 'The Power of the Father' is a training programme that serves as a vessel of skills transferal whereby existing leaders of the settlement train possible new leaders who have been voted for by the community. This combined with the existing programme of the community office, being a space of mediation and expression, becomes the main programme of the design intervention. The community office was built and demolished in 2021 and the space still resonates as a beacon of communal mediation and knowledge exchange. The programme becomes a direct response to the contextual issues by addressing mediation of ethnographic diversity by building on the indexical and interior models found on site.



Figure 21: Selected site. Graphic adapted from drone footage taken by the Moreleta Park Integration Project (2021).



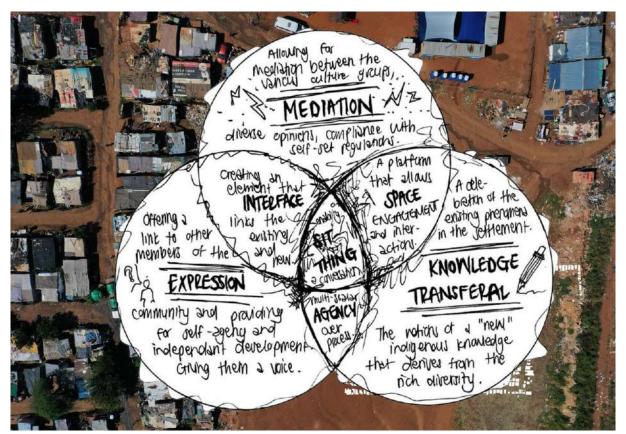


Figure 22: Diagrammatic representation of the main programme of the space that is threefold, consisting of mediation, knowledge transferal and expression. All of the above mentioned are extensions of the existing community office and leadership structure. (Author, 2021).

## DESIGN APPROACH

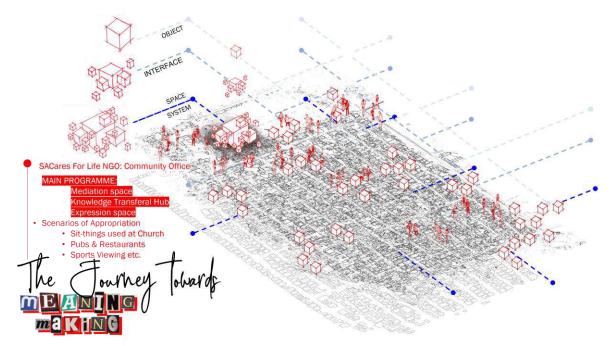


Figure 23: The design takes an object-interface-space-system approach to address multi-scalar spatial agency across the settlement that will host the main programme being the community office as well as enabling various scenarios of appropriation. The intervention will consist of objects that, when compiled, makes up a series of interfaces that create a space that forms part of a larger system. This approach to the design is a response to the multi-scalar agency present in the settlement and will allow for a main programme – being the community office – as well as other scenarios of appropriation and adaptation (Author, 2021).



## CONCLUSION

THIS PROJECT SERVES AS A DELIBERATION OF THE ROLE OF INTERIOR ARCHITECTURE IN INFORMAL SETTLEMENTS BY ADDRESSING CULTURAL PRODUCTION IN AN INTRINSIC CASE STUDY OF AN OBJECT-INTERFACE-SPACE-SYSTEM APPROACH TO KNOWLEDGE TRANSFERAL, MEDIATION AND EXPRESSION.

The inductive nature of the study provided the opportunity for an initial investigation into the context that gave life to project methodology and the theoretical framework. The research project is a direct response to the contextual issues that address an essential semiotic approach to meaning-making. The initial investigation brought to light mutual phenomena of indexicality and interiority as a rich and complex structure of creating meaning. Pretoria's local lingo, S'pitori, provides an opportunity for a vigorous investigation into both these concepts and will serve as the arena for the research. By using a case study, within the constructivist paradigm, the theoretical backing and research can manifest itself in a vibrant, tangible outcome that was formed by the community for the community. The outcome can evoke an intimate relation between user and space and validate indexicality and interiority in a physical, spatial realm. It is through this that the role of interior architecture can be justified in developing communities as a method of cultural production.

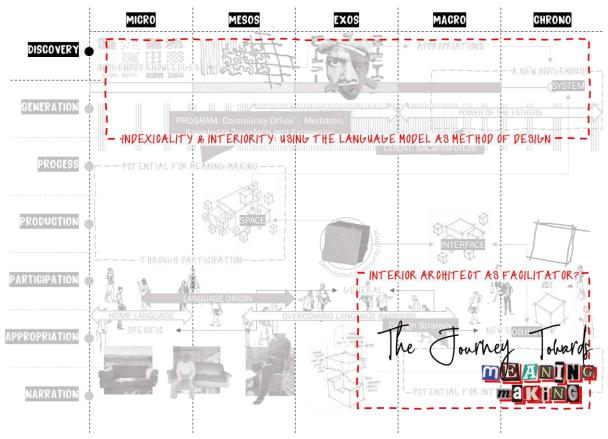
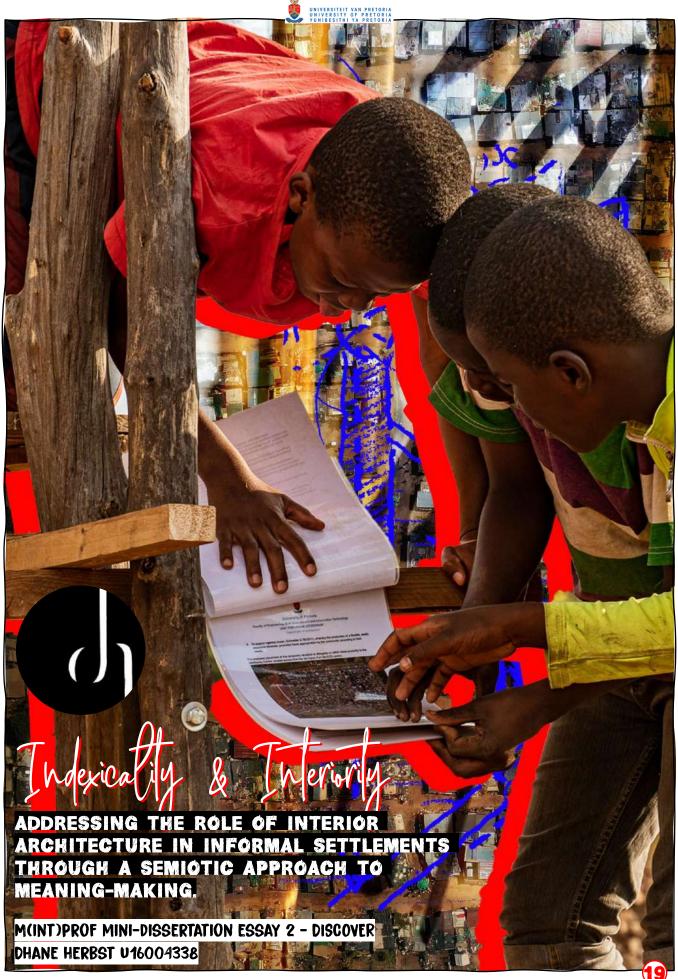


Figure 24: The language model serves as a design informant that enables specific backgrounds to be combined into generic responses that allows idiosyncratic interpretation and thus reflects the common denominator between indexicality and interiority. It also sets up this journey towards meaning making as the role of the interior architect in informal settlements as facilitator of this process. (Author, 2021).





## INTRODUCTION

The research focus of the project is towards the possible role that interior architecture can play in informal settlements as an agent of meaning-making. With an intrinsic case study set in Plastic View, the project makes use of a collaborative process for the research-, design- and technification phases. Essay 2 serves as a speculative design inquiry as a response to a vigorous investigation of the site and introduces the design process as a series of iterative charettes. In this essay the inductive procession from contextual informants, theoretical overlay, design argument and precedent analysis to the initial physical manifestation thereof will be unpacked. The first two phases of prototyping will be discussed as well as the unfortunate impact of the pandemic and site conditions on the process. This essay will serve as an intuitive exploration that builds on the information that surfaced in essay 1 and focus on the applied aspects of the research project in the design phase.

## DEVELOPED ARGUMENT DESIGN BRIEF

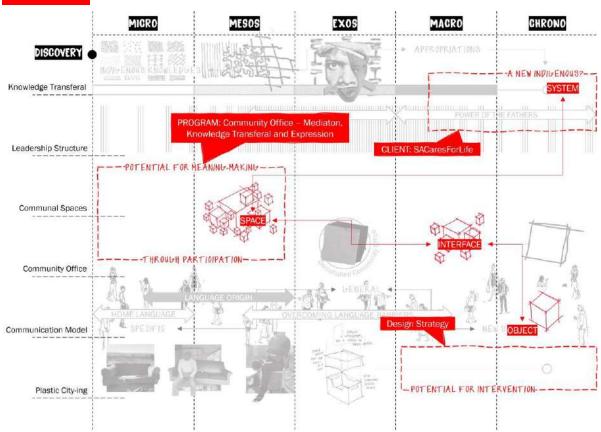


Figure 26: Visual representation of design brief as developed in essay 1, mapped across the base diagram. The brief was derived from an initial contextual analysis and combined with the theoretical premise (Author, 2021).

The first essay outlined the research intentions and initial contextual informants that set the scene for the research and shaped the project parameters as illustrated in Figure 1. The brief is derived from an initial immersion into the context and related phenomena that brought to light the rich and layered nature of the settlement. This project serves as a deliberation of the role of interior architecture in informal settlements by addressing cultural production as a case study of an object-space-system approach to mediation, knowledge transferal and expression.



The project aims to bridge design intention and user interpretation by including the inhabitants as constant collaborators and core informants. Informed by existing narratives and rituals on site the project design aims to enable 'a new indigenous' that speaks to the transformative nature of Plastic View and uses the language model of appropriation as a method of semiotic meaning-making. This allows generic interventions to evoke idiosyncratic experiences and associations through adaptation and expansion. This directly addresses the role of the interior architect as it speaks to a very human-scaled intervention that strives to enable multi-scalar spatial agency. To achieve this a main spatial composition is proposed that becomes 'disassemblable' in its use as it can be taken apart into individual interfaces and deployable objects that can be used in various other scenarios of appropriation. As meaning-making is a highly subjective phenomena the design thinking will be based on informed assumptions and the true analysis thereof comes with the analysis of scaled prototypes and scenario testing.

The project aims to investigate, analyse and spatially translate the unique phenomena of Plastic View through prototyping and collaborative efforts in an attempt to generate meaning through a proposed community office space. Through workshops conducted with community members (inhabitants of the site) an iterative design approach will be the main driver of the design strategy. Using the semiotic nature of the language model on site as a method of induction (making the generic specific to each user) the design strategy also enables the deconstruction and appropriated use of the intervention. The spatial composition is freestanding in its nature (due to the disassemblable nature thereof) and can be used in various scenarios. To illustrate the intervention in use and appropriation, various scenarios will be used to reflect the natural progression of events.

The client, NGO SACaresForLife, and the inhabitants of Plastic View are the main informants of the programme. Their initiative 'The Power of the Father' is a training programme where existing leaders of the settlement train possible new leaders and serves as a vessel of skills transferal. This combined with the programme of the community office (that was demolished earlier this year by the Tshwane Metro Police) becomes the main programme of the intervention. This integrated with the initial contextual analysis from the research phase of the project creates the base for the rest of the informants. Case studies from site will be used to investigate the physical manifestation of meaning in the settlement as well as a stakeholder- and ritual analysis. These will inform a precedent analysis that will serve as informants to the design development phase of the project.

## DESIGN CRITERIA

The design criteria is a response to both the current theoretical understanding and onsite findings that contribute to an initial approach and serves as a spine for the project to grow from. Going into the design phase, this criteria steers the direction of the design process whilst still allowing for some expansion. Thus far it has been a process of reiteration and reassessing assumptions and therefore the criteria, theoretical synthesis and methodology continues to adapt as the project progresses.





This allows the process to bring to light important concepts, scenarios and informants that contribute to all the above mentioned. The criteria will dictate the contextual analysis and further design investigation that comes after to allow for the authentic intuitive exploration to continue. This will however all play out on the same base-diagram to ensure consistency and enable growth.

The design criteria can be categorised into two sections: firstly, the project criteria that speaks to the contextual, theoretical and spatial requirements that surfaces during the initial inquiry in essay 1. Secondly, the procedural criteria that ensures that the process followed throughout the project encompasses the methodology whilst allowing adaptation where necessary.

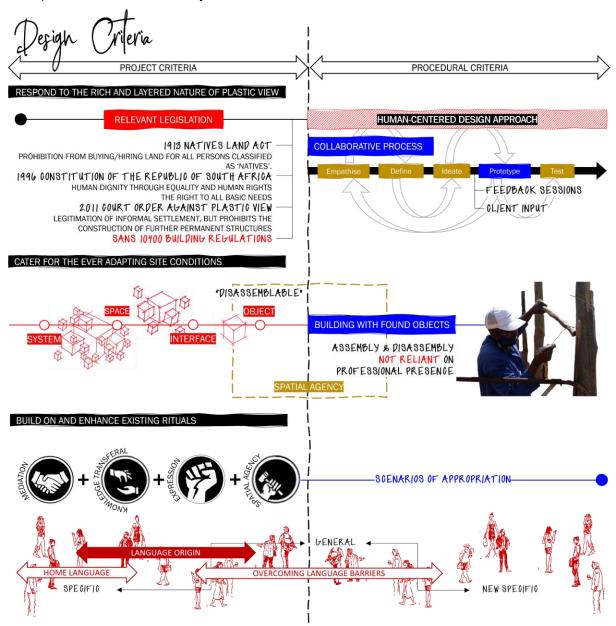


Figure 27: Graphic representation of the two components of the criteria: project criteria and procedural criteria. The criteria was derived from the initial immersion into the context and serves as a base that steers the design development phase without dictating its outcomes (Author, 2021).



## 1. PROJECT CRITERIA

The design needs to comply with all relevant bylaws and restrictions of the settlement as well as the necessary SANS 10400 building requirements relevant to a free-standing structure. Plastic View is a legalised informal settlement but is still restricted in terms of new construction as no new permanent structures are allowed on site. The design intervention will comply with current legislation whilst maintaining structural integrity. The relevant legislations will be discussed as the design progresses but will be constantly consulted to ensure that the design proposals comply therewith.

As a free-standing spatial composition, the design needs to be able to withstand the threats faced by exterior interventions like natural elements and weather conditions. The design needs to enable deconstruction that is accessible wherein the construction and assembly should be reflect the notion of spatial agency and be built with on-site materials and objects. The assembly and disassembly of the design should not be dependent on professional presence but enable user autonomy.

The process and implementation should comply with the existing nature of the settlement's leadership structure as well as their process of mediation and knowledge transferal whilst enabling further adaptation and interpretation thereof. The design should in its process not impose on any aspect of the site, rituals or inhabitants thereof but rather enhance the experiences through spatial experiences.

## 2. PROCEDURAL CRITERIA

Whilst the design needs to comply with large scale restrictions like site legislations and the SANS 10400 regulations the interventions should still reflect a human-centered design approach that places the user at the centre of the design process. As an extension thereof the design should include the inhabitants as core informants and collaborators during research, the iterative design process, construction and analysis. There should be various feedback sessions to ensure the project does not stray from the original intent (feedback from both client, inhabitant and professional). The design needs to showcase a thorough iterative design process informed and analysed by both theoretical influences and contextual influences.

The design should reflect the semiotic nature of the language model on site as a method of idiosyncratic, yet communal, interpretation, association and adaptation. The design must reflect the layered and temporal nature of the settlement. The project sets the scene for a dialogue between a bottom up and top-down approach. As the projects builds on a very specialised field of theory and makes use of a collaborative methodology there is a conversation between the very poetic and the very pragmatic elements of the industry. This duality of bottom-up and top-down approaches are evident throughout the entire project. With the top-down approach "the starting point is the authoritative decision" (Matland, 1995: 146) whereas the bottom-down approach recognises and values the opinions of the local implementers and inhabitants (Berman, 1978: 156). The design should reflect a bottom-up design and construction process whilst still being theoretically grounded in, and building on, current discourse.



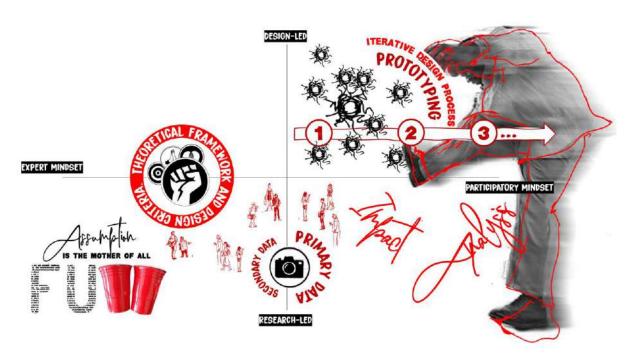


Figure 28: The project makes use of aspect that can be defined as both 'bottom-up' and 'top-down' approaches. This Figure depicts these aspects and where they fit in to enhance the research project (Author, 2021).

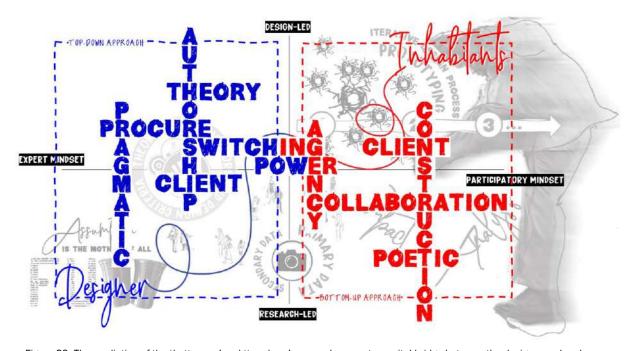


Figure 29: The mediation of the 'bottom-up' and 'top-down' approaches creates a vital bridge between the designer and end-user or inhabitant of the proposed spaces. (Author, 2021).

The design criteria will be used throughout the process as a method of analysis and iteration to ensure design responses are relevant to context and inhabitants as well as the larger research questions and theoretical premise.



## CONTEXTUAL INFORMANTS

The project is set up to tackle abstract concepts and intangible experiences and can not be explained at the hand of traditional site analysis. In the first essay phenomena relevant to these abstract concepts were discussed which then informed the design criteria as explained above. This highlighted the gaps in contextual informants that need further exploration to enhance the design responses.

#### STAKEHOLDER ANALYSIS

Plastic View is a legalised, but not yet legitimised informal settlement. This means that the existing structures on the premise may not be removed but no new permanent structures are allowed to be erected. There are also no municipal services like water, electricity or waste removal. This comes under contest by the client, SACaresForLife. The NGO has been active since the early developmental days of the settlement that strives to aid in everyday life aspects for the betterment of the inhabitants' livelihoods (SAcares, 2021). The organisation has since its involvement in the settlement built a school, aided in the development of the community leadership structure and conducted a numerous amount of initiatives throughout the settlement such as vegetable gardens, access to books and cooking courses. The organisation is known among the community members as a helping hand and comes with a strong set of connections in the settlement. Figure 30 indicates all the stakeholders relevant to the project and Figure # shows when the stakeholders will be involved throughout the project.

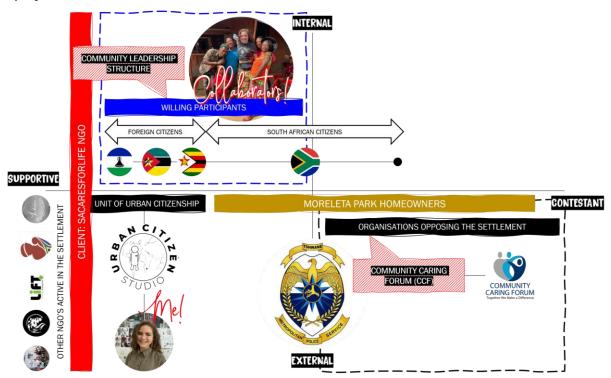


Figure 30: Diagrammatic representation of the complex system of stakeholders and collaborators that are involved in the settlement. The stakeholders are depicted across the spectrum of *internal*, *external*, *supportive and contestant*. (Author, 2021).



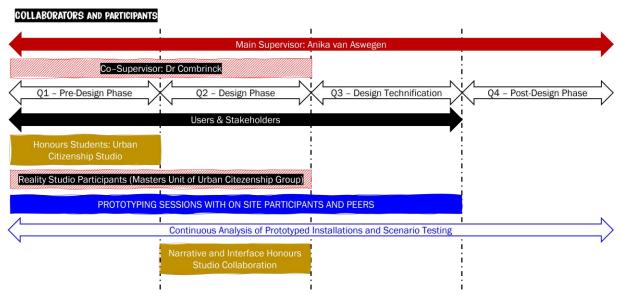


Figure 31: Visual representation of the stakeholders and collaborators' involvement in the research project. (Author, 2021).

#### CASE STUDIES

As the settlement is host to a complex dynamic of the inhabitants and the project targets meaning-making, case studies will be used to analyse the self-made environment at the hand of existing meaning in the settlement. These will serve as key informants in the design process as it will give an insider's peek at how spaces in the settlement are composed and used and appropriated. The case studies were chosen throughout the first phase of the project whilst spending sufficient time on site by taking phenomena that is often repeated or found regularly throughout the settlement. This serves to represent the 'bottom-up' end of the spectrum in the design informants.

## 1. THE COMMUNITY OFFICE



Figure 32: Timeline of the construction, use and demolishment of the community office (Author, 2021).

The community office is situated on the far end of the settlement next to a large open space that is used by the community for large gatherings and events. The structure serves as a base for the community leadership to conduct their business from. The leadership structure in the settlement developed as a response to problems faced by the community and has since become a beacon of familiarity and safety in the community.





Figure 33: The rituals exercised in the existing community office was that of mediation, knowledge transferal and expression. The next series of Figures will unpack each respectively (Author, 2021).

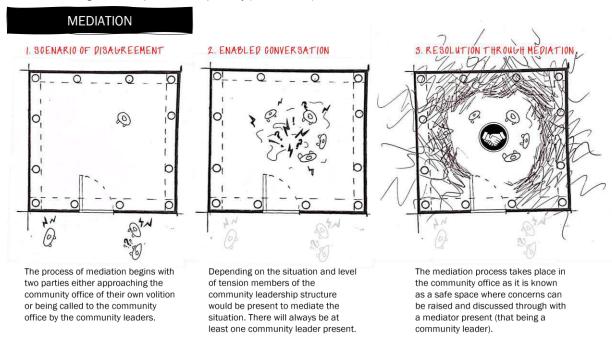


Figure 34: Diagrammatic representation of the mediation process as it took place in the community office (Author, 2021).

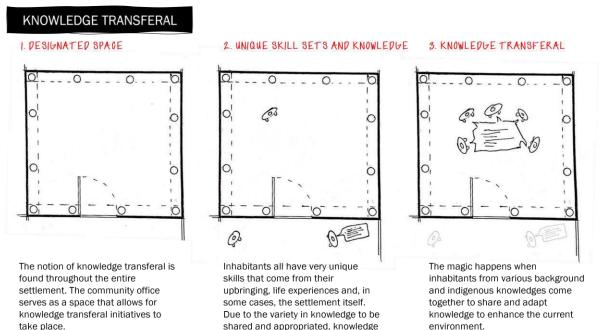


Figure 35: Diagrammatic representation of the knowledge transferal process as it took place in the settlement (Author, 2021).

transferal happens in any form of

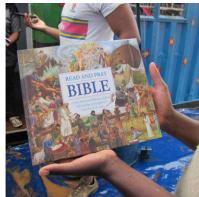
conversation.



# **EXPRESSION**











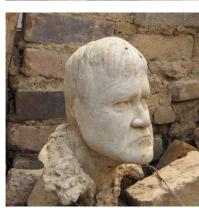














Figure 36: Scenarios of expression found across the settlement (Author, 2021).



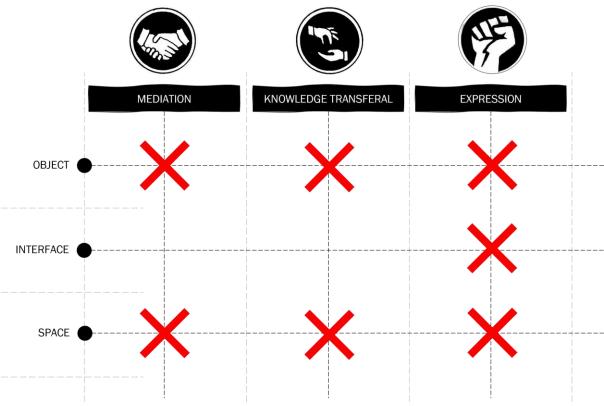


Figure 37: Spatial requirements of the existing community office mapped out across the various programmes and design approach of an object-interface-space approach to space making (Author, 2021).

# THE COMMUNAL FIREPLACE

This spatial composition is present throughout the entire settlement. As there are very limited services in the settlement a fire becomes a key element in the daily domestic activities of the inhabitants such as cooking and heat production. It also demonstrated becoming a universal symbol of communal engagement. Social gatherings, talks, education, gameplay and many key moments in the settlements happens around a fire.







Figure 38: An example from site that shows the typical layout of a communal fireplace. The space is not owned by anyone and cannot be used as a home or rented space. This confirms the value placed in a social gathering space by the community (Author, 2021).





Figure 39: Diagrammatic representation of the typical layout of a communal fire space found throughout the settlement. The spaces are made up of a centralised fire pit with seating and a barrier between the space and its surroundings. This becomes a key informant going into the design phase of the project (Author, 2021).

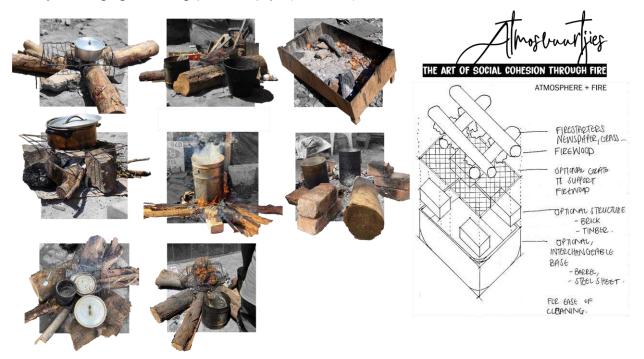


Figure 40: Analysis graphic that shows various scenarios of fire-building found across the settlement. The word, 'atmosvuurtjie' was assigned to the fire-scenarios throughout the project by the author and collaborators. It is a slang that consist of 'atmosphere' and 'fire' combined into 'atmosvuurtjie' (Author, 2021).



Figure 41: Diagrammatic representation of the ritual in the settlement of building a fire (Author, 2021).



# THE HANDMADE SKIRT AND PANTS

Two pieces of clothing were hand made by a member of the community for a wedding and a birthday. This was a gift to the author and partner as a sign of good faith and beginning of a very fruitful relationship. The birthday gift was a pair of pants that unfortunately ripped during the birthday celebration and upon inquiry to fix the pants the community member responded with a new design wherein the pants can rip yet remain wearable. This is a strong nod to the responsive and appropriated agency that seeps through every aspect in the settlement and the compassion that comes with a collaborative exploration.

## THE SIT-THING

The sit-thing is a paramount phenomenon in the settlement that enables all the main programmes that the project strives to address. By simply enabling a conversation the sit-things accommodates the mediation process, knowledge transferal as well as expressive conversations. The notion of Plastic City-ing comes through in this case study as a found object is used as a base for the sit-thing combined with an element that created comfort.



Figure 42: Analysis graphic that shows various scenarios of sitting found across the settlement. The word, 'Plastic City-ing' was assigned to the sitting-scenarios throughout the project by the author and collaborators. It is a slang that consist of 'Plastic City' and 'sitting' combined into 'Plastic City-ing' (Author, 2021).

### PROGRAMME DEVELOPMENT

The case studies gave a pragmatic insight to rituals on site that enable mediation, knowledge transferral and expression. Informed by these rituals, the proposed programme for the design intervention developed as depicted in Figure 43.





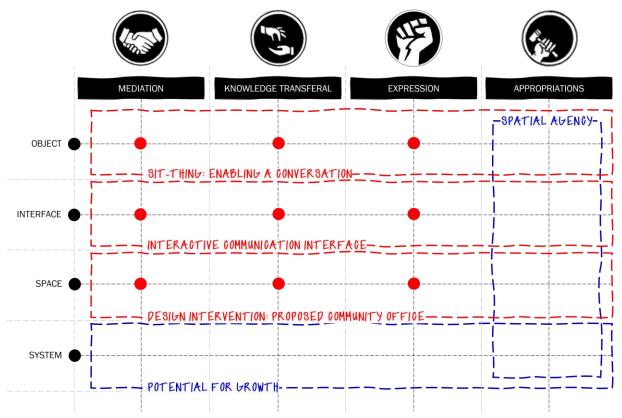


Figure 43: The case studies informed the design intervention's proposed programme as extensions of the existing community office space. This is overlayed with the design approach of an object-interface-space-system approach to space making. The figure depicts the spatial requirements of each and spatial agency and potential for growth become possible expansions of the programme (Author, 2021).

# PRECEDENT ANALYSIS

The precedents serve as the '*top-down*' spectrum of the design informants as both precedents were designed and executed by professionals and students respectively. The precedents will be analysed according to the object-interface-space-system approach to design interventions.

# PLATFORM OF ENGAGEMENT — THE MORELETA PARK INTEGRATION PROJECT

This intervention on site serves as the first round of prototyping in the project. Conducted with The Moreleta Park Integration Project group, the intervention's intention was to serve as a platform of engagement between researchers and members of the community. Although there were sessions for input and feedback from the community, the authorship of the design and execution thereof remained with the students. The design was informed by the site but did not undergo a collaborative process.



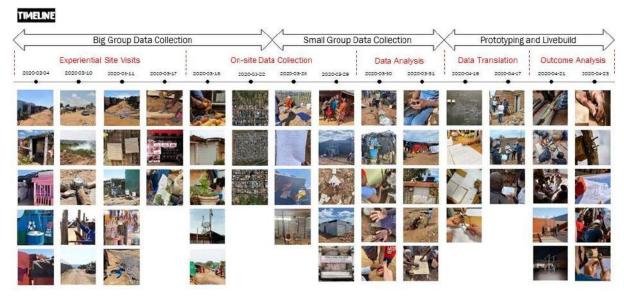


Figure 44: Diagrammatic representation of the design and construction phase that lead up to the construction of the prototype (Author, 2021).

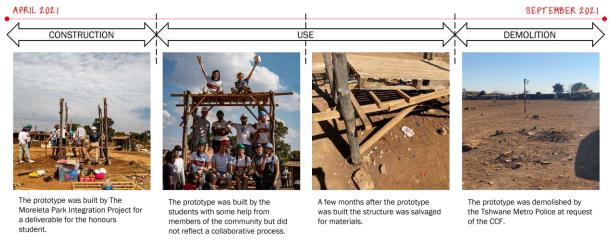


Figure 45: Diagrammatic representation of the construction, use and demolishment timeline for the Platform of Engagement (Author, 2021).

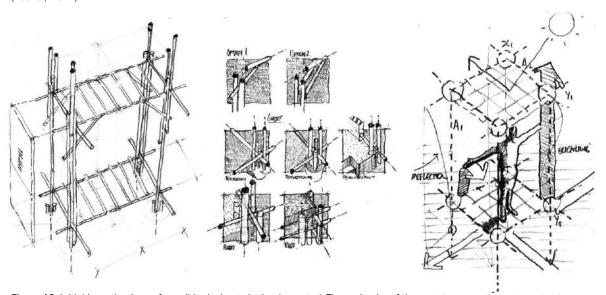


Figure 46: Initial investigations of possible design to be implemented. The main aim of the prototype was to create a structure that can be appropriated and further expanded on (The Moreleta Park Integration Project, 2021).



# INFLUENCE

- PRACTICAL : TRANSPORT
- . MODULARITY / MOBILITY
- 2 CONSTRUCTION RUBBLE FOUND ON SITE
- (3)
- NOT ALLOWED TO BUILD PERMANENT STRUCTURES
- · LACK OF SERVICES
- · FUTURE PLANNING
- · RESIDENTS STORE THINGS ON THEIR ROOFS / IN FRONT / ALLEYS
- · DENSIFIES EACH YEAR
- · URBAN SPRAWL
- · SOLUTIONS ON SITE WITH WHAT THEY HAVE
- · RESILIENCE

# PRINCIPLES

DESIGN FOR DECONSTRUCTION

USE AVIALABLE / AFFORDABLE MATERIALS

ADDRESS TEMPORALITY/MOBILITY

ALCOMMODATE FUTURE SERVICES

ALLOMMODATE NEED FOR STORAGE

ADDRESS DENSIFICATION

DESIGN FOR APPROPRIATION

# EXECUTION

- - DESIGN OF CONNECTIONS MATERIAL CHOICE
- (2)
- · COST ESTIMATE
- · MATERIALS/TOOLS USED
- (3)
  - . NO WET CONSTRUCTION
- · REPLACEABLE MATERIALS
- RAISED PLATFORM
- RAISED PLATFORM
- STRUCTURALLY SOUND SELOND FLOOR
- · MODULAR STRUCTURE
- OPEN FOR INTERPRETATION

Figure 47: Diagrammatic representation of the influences and principles intended with the construction of the prototype. These are measured with the execution thereof and how it responds to the informants (The Moreleta Park Integration Project, 2021).



Coming together as a large group to discuss opportunities and needs within the settlement.



Assembling the pavilion at Boukunde to ensure stability and test full scale implications.



Designing a platform for engagement between community and researchers



Disassembling the structure to test the mobility and accessible deconstruction of the structure.



Sourcing local materials found in the settlement and surrounds to enable accessible construction



SITE ASSEMBLY

Transporting the disassembled members to site and constructing the structure.



Testing various methods of construction to ensure intentions can be materialised



Reflecting on the process as a whole as well as analysing the implications thereof.

Figure 48: Visual explanation of the process followed to ultimately construct the prototype on site. Note that there were feedback sessions with the community but no collaborative process (The Moreleta Park Integration Project, 2021).



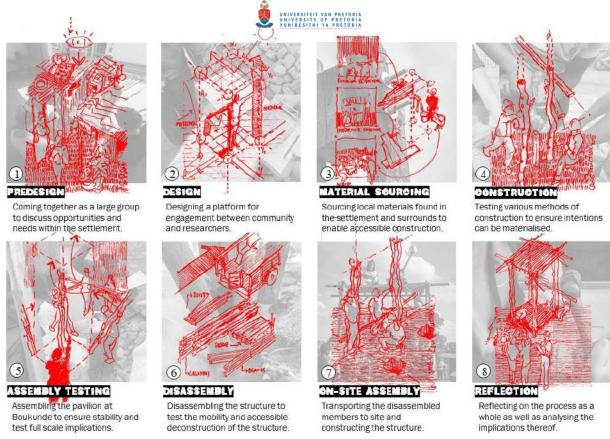


Figure 49: Visual explanation of the considerations of each phase (The Moreleta Park Integration Project, 2021).

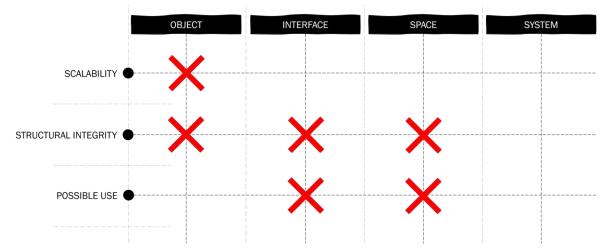


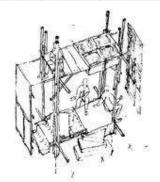
Figure 50: Diagrammatic representation of the precedent analysed according to the object-interface-space-system design approach. The precedent became an informant for scalable objects such as joint details, structural elements and part of the prototype that can be used in the design resolution (Author, 2021).



Figure 51: Fixing method that showcases a bridge between 'bottom-up' and 'top-down' approaches by using materials found on site and applying expert knowledge (the 100mm spacer) to ensure structural integrity (The Moreleta Park Integration Project, 2021).

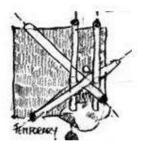


# Prolotyping Process Reflection



### Co-Design vs Spatial Agency

As a large unit the intentions of the prototyping process was to include the community throughout but unfortunately circumstances didn't allow for such collaboration. There was a feedback session with community members that allowed for an iterative design process, but the end product remained a design that allowed for spatial agency. This provides a platform for engagement for us and the community throughout the year.



# Design Intent vs Execution

The intention of the prototype was that is can easily be assembled. disassembled and reassembled but throughout the construction process we learnt saw that the joints were a lot more difficult to disassemble in reality than in theory. This becomes a crucial informant and also justifies the prototyping process to ensure that the human-centered aspect of the project gets pulled through to the execution thereof.



### The story of Jacob's Pants

A member of the community made pants for Jacob as a birthday gift. When learning that the pants ripped at his birthday party the community member smiled and said,

"we will design the next
pants to rip". This serves as
a precedent (and
comparison to our on-site
prototype) of an iterative
design process that
responds to the phenomena
it addresses. It also
highlights the significance of
meaningful objects and the
experiences it elicits.

Figure 52: A reflection on the process brought to light three main informants going forward in the research project. The importance of collaboration is highlighted by the later decay of the prototype (Author, 2021).







Figure 53: The prototype's intention on site was to serve as a precedent of structural interventions that can be built with materials that can be sourced from the settlement. The photograph in the left is a structure that was built after the prototype and used the contrition methods to build a double storey (The Moreleta Park Integration Project, 2021).



# THE CHAPEL OF MANY - SEBASTIAN HICKS

This freestanding design intervention was constructed in 2019 as an expression of local design and autonomy (ArchDaily, 2020). Composed of a framework that hosts deployable seating devices, the intervention responds to the rituals that it enables. The more people present, the more open and accessible the space becomes but can also be used as an enclosed space for more intimate gatherings.











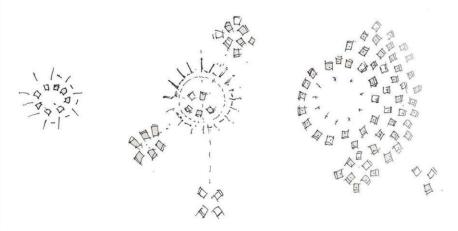


Figure 54: Visual representation of the precedent and diagrammatic explanation of how the space becomes 'disassemblable' (ArchDaily, 2020).



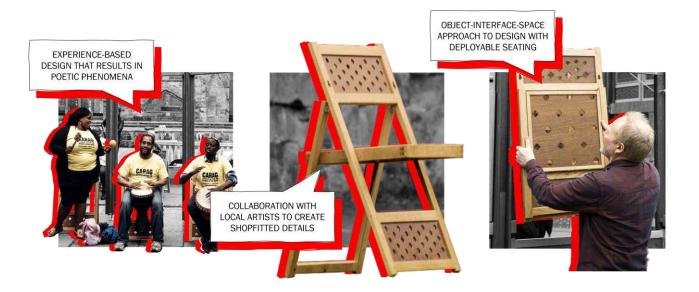


Figure 55: Graphic explanation of the design informants taken from the precedents. These informants will serve as a base concept that will be made contextually and user specific through a collaborative process Adapted from ArchDaily (Author, 2021).

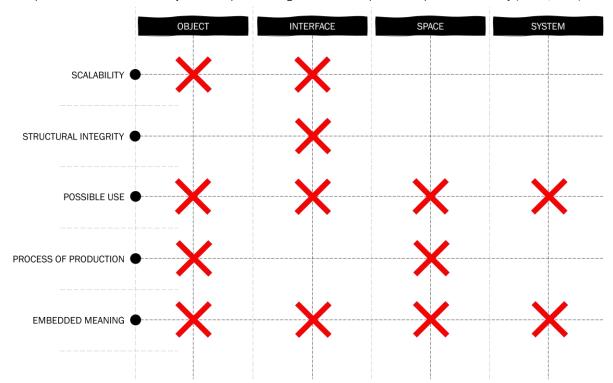


Figure 56: Diagrammatic representation of the informants taken from the precedent. Building on the previous precedent, process of production and embedded meaning are added as informants. The concepts and ideas will be reworked to become site and user specific (Author, 2021).



# DESIGN INVESTIGATION

The design process kicks off with the second round of prototyping as iterations on an initial generic design response. The initial design response is an extension of the object-interface-space-system approach to design combined with the specific rituals and suggested programmes for the intervention. The spatial composition (that makes up the proposed Community Office) would be 'disassemblable' into different elements that make up the larger configuration. This creates the base for the design charette that followed to further develop the spatial application of the research project.

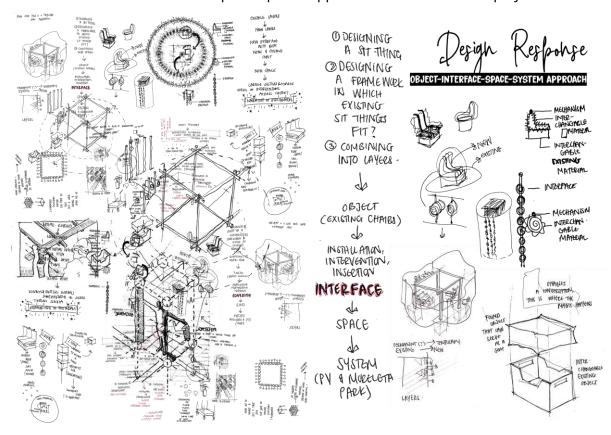


Figure 57: Visual representation of the initial design response as a series of interfaces and deployable objects. The interfaces are constructed from assembled deployable sit-things that work with existing objects on site (Author, 2021).

As a response to the object-interface-space-system approach to the proposed community office as well as the design informants the initial design response was creating a sit-thing that fits into an interface that makes up a pavilion that becomes the community office. The community met the initial response with great enthusiasm and the design process continued with an at home 'mock' prototyping charette (due to the third wave of the pandemic) that serves as the second step in the iterative design process.

# METHODOLOGY

The initial design development methodology focused on the ideate phase to reflect sections of the larger overall methodology in an attempt at an iterative design process through prototyping. The prototyping was intended as collaborative sessions to ensure a continuous conversation between designer and inhabitant. To create a counter argument with this, a design charette with peers was suggested with simultaneous precedent analysis and further prototyping of design elements.



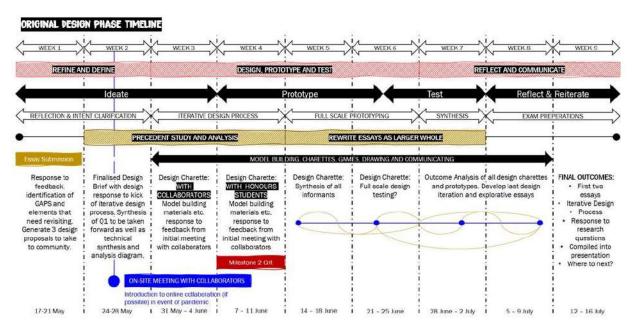


Figure 58: Diagrammatic representation of the intended methodology (Author, 2021).

Unfortunately, the site work had to be terminated during this phase due to the pandemic and site conditions as several students working in the settlement tested positive for the virus. To ensure the safety of the inhabitants as well as the students, it was decided as a unit to suspend site work until it was deemed safe again to do so. Shortly thereafter a devastating fire broke out in the settlement that refocused site work to fire aid and emergency responses. The methodology adapted to remain true to the project intentions and reshaped into an at home exploration of space-making with found objects.

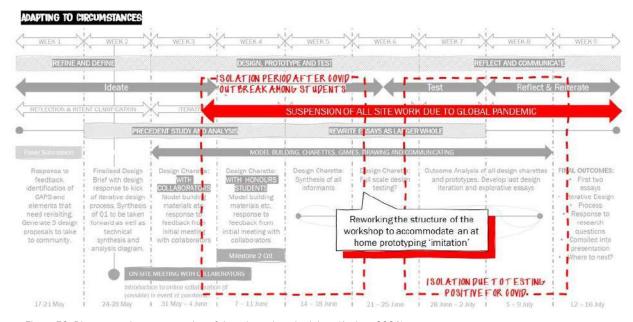


Figure 59: Diagrammatic representation of the adapted methodology (Author, 2021).

# PROTOTYPING PROCESS



The aim of the second round of prototyping was to create a spatial response that stemmed from the design approach and contextual informants. The charette started with gathering materials that represent found materials on site to imitate the intended prototyping process. Then creating a structure that responds to the various layers of the initial design approach as a space composed from a series of interfaces with deployable objects. Experimenting with various 'found objects' towards creating a conceptual response that explored notions of ephemerality, layered interfaces, deployability and expansion. This series of prototypes serve as a very explorative and instinctive response to the design process that had to rapidly adapt to circumstances.



Gathering materials that represent found materials on site to imitate

the prototyping process.



Creating a structure that responds to the various layers of the design.



Playing with various 'found objects' towards creating a conceptual response.



Exploring notions of ephemerality, layered interfaces and expansion.



Investigating the notion of transparency as an inner sleeve



Building on the object-interfacespace-system approach testing



Playing with interchangeable mock interfaces and reiterating due to lack of stability



Applying mock 'objects' into the interface as an extension of the

Figure 60: Visual explanation of the process followed in this intuitive exploration of space making (Author, 2021).



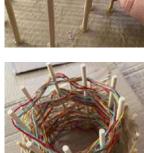














Figure 61: Series of photographs of the first round dedicated to creating a conceptual response. The 'found objects' were configured and reconfigured into various compositions in an attempt to reflect the adaptability and notions of agency that are core concepts in the project (Author, 2021).







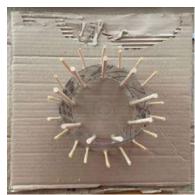










Figure 62: Series of photographs showing the conceptual response: the woven layers speak to the inherit link to indigenous crafts and the flowers of the ephemeral nature of adapting spaces (Author, 2021).

















Figure 63: Series of photographs that show the inner sleeve as a transparent layer with written text. This emphasised the potential of a two-way communication interface with the shadows as a means of projecting ideas. (Author, 2021).













Figure 64: Series of photographs that show the first iteration of the outer sleeve as a woven interface. This was an attempt to replicate an indigenous craft method and the shadows cast created a poetic interior space. The interface lacked structural integrity for the deployable objects (Author, 2021).















Figure 65: Series of photographs that show the second iteration of the outer sleeve as a solid interface with cut-outs for potential deployable objects to be fitted into. This was an iteration on the previous maquette that allowed more structural integrity (Author, 2021).

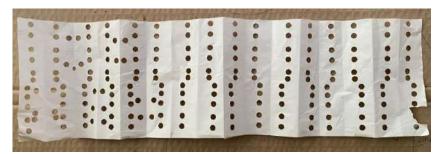






Figure 66: These photographs show the interface and loose objects respectively and in use. The idea was to create an interface that could host objects that when taken out can be 'unrolled' and used (Author, 2021).















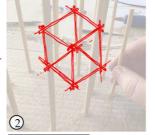


Figure 67: Series of photographs that show the third iteration of the outer sleeve as explained in the previous caption. The interface creates a decorative element and poetic play of light combined with the inner transparent sleeve (Author, 2021).



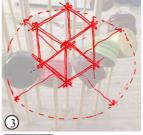
### FOUND OBJECTS

The design development begins with the collection of found objects to build with.



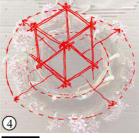
### TRANSPARENCY

The inner mediation layer resembles transparent communication.



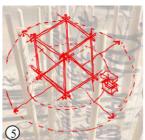
### EQUALITY

From the inner layer the interfaces are set out in a radial sequence to reflect equality.



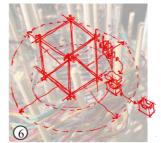
### LAYERS

Exploring notions of ephemerality, layered interfaces and expansion.



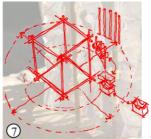
### DEPLOYABLE OBJECTS

The sit-things become deployable objects that can be placed into a storage interface.



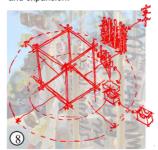
### LINK WITH EXISTING

The deployable sit-things interfaces with existing objects such as beer crates and buckets.



### INTERFACES

The deployable objects all fit into interfaces that become interchangeable.



### AGENCY

The mobility of the elements reflects the notion of spatial agency in the design intervention.

Figure 68: Diagrammatic representation of the second prototyping phase and what each iteration contributed to the final design proposal (Author, 2021).





# DESIGN DEVELOPMENT

This design charette resulted in an initial spatial response with a mediation 'pod' reflecting the original Community Office: a two-way interface with transparent surface to enable open communication. An inner sleeve: interface with deployable objects (Sitthing to interface with existing objects as a response to Plastic City-ing). A mechanism that allows the sit-thing to be placed into the interface or rolled up and unfold for other appropriations and an outer sleeve: interactive exhibition that is still to be explored and developed but would serve as a threshold for parties from the larger context.

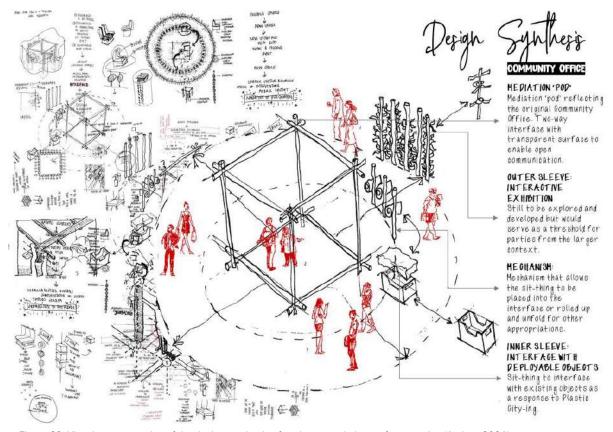


Figure 69: Visual representation of the design synthesis after the second phase of prototyping (Author, 2021).



Figure 70: Conceptual visualisation of design response (Author, 2021).



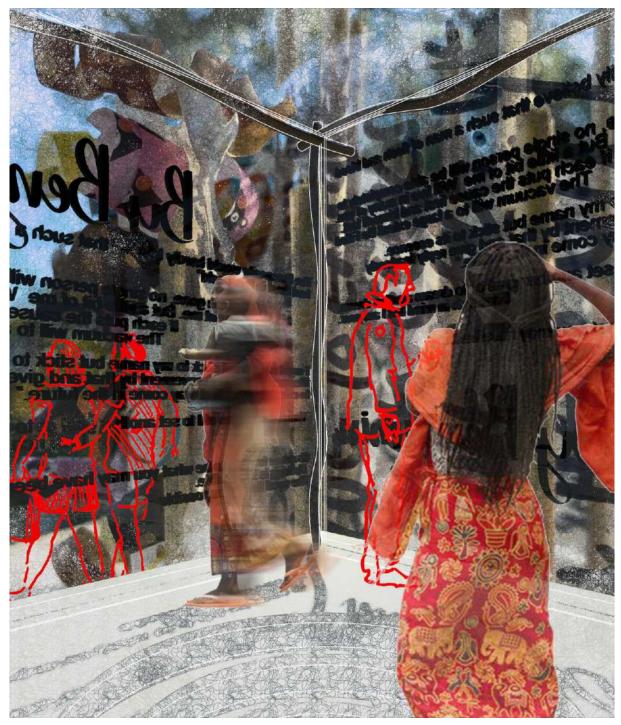


Figure 71: Conceptual visualisation of design response (Author, 2021).



# CONCLUSION

The second phase presented various challenges throughout the process However, through careful reconstruction, the project could progress from theoretical and contextual informants into an initial design response. The theoretical underscore is ever present through the continuous analysis of work produced to ensure the duality between the very contextual and the very theoretical informants. The language model serves as a method of design that enables specific backgrounds to be combined into generic responses that allow idiosyncratic interpretation and thus reflect the common denominator between indexicality and interiority. This process also sets up this journey towards meaning making as the role of the interior architect as facilitator of this process in informal settlements. Reflecting back on the research questions, the initial design response merely created a platform for meaning-making to be embedded into but does not yet address the meaning-making through participatory action. This forms part of the prototyping process and will be further developed in Essay 3.

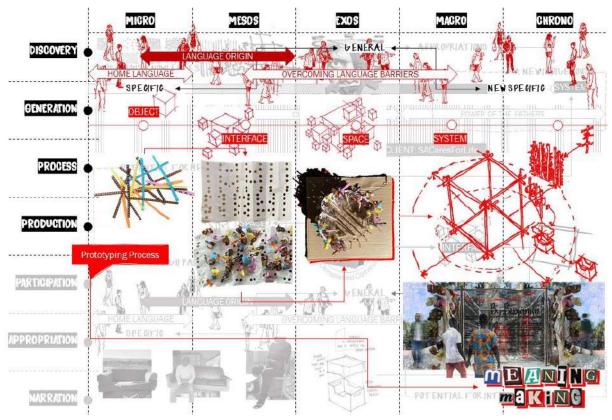
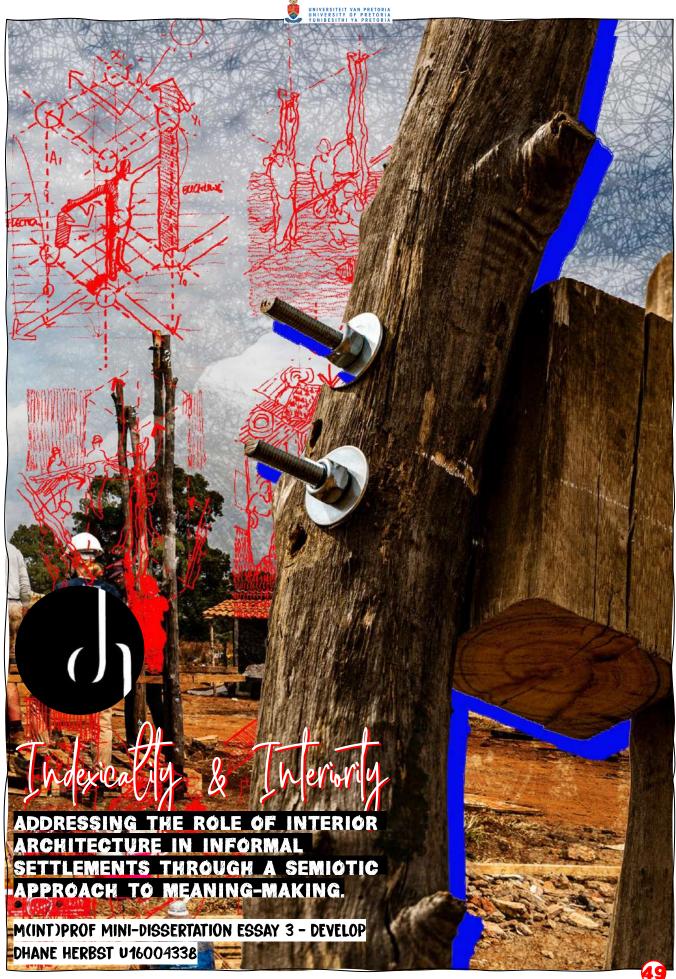


Figure 72: With the language model as a base for design, the process could unfold as an intuitive design response to be further iterated and explored through collaboration and inhabitant feedback in the next phase of the research project. The object-interface-space-system approach to design was translated into a series of sit-things that would be placed into an interface that, when combined wit the other interfaces, would compose a space (Author, 2021).





# INTRODUCTION

The previous essay explored the experimental and intuitive process that unfolded during the design investigation and resulted in a preliminary design response. This design response was the result of an adapted methodology and lacked in process due to limited site engagement. The design refinement is dependent on a parallel process between design iteration and technical resolution through participatory action that could not be achieved in the previous design exploration. In this essay the process from initial design proposal to technical resolution through collaboration will be discussed at the hand of an iterative prototyping process.

# DESIGN COMPONENTS

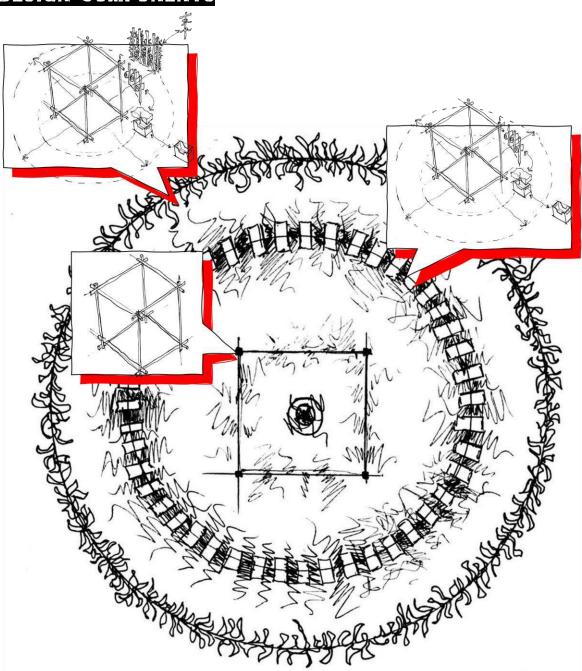


Figure 74: Sketch plan to show the result of the intuitive design exploration from the previous essay (Author, 2021).



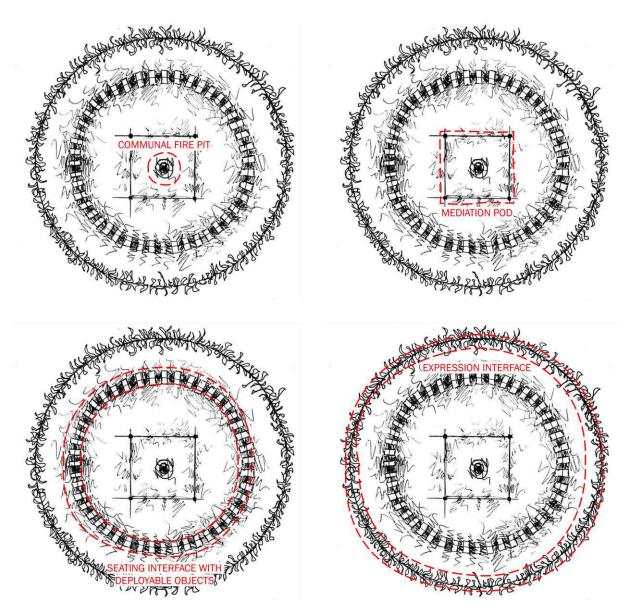


Figure 75: Visual explanation of the individual components that make up the initial spatial composition (Author, 2021).

# TECHNICAL INQUIRY

Technical Question:

HOW CAN AN ITERATIVE TECHNIFICATION PROCESS THROUGH PROTOTYPING AND ANALYSIS SERVE AS AN AGENT OF SEMIOTIC CULTURAL PRODUCTION BY INCLUDING THE USERS AS CONTINUOUS CORE INFORMANTS AND COLLABORATORS?

The main theoretical themes of the project are evident in the technical resolution stage of the project as it walks hand in hand with the design development and larger research question. The technical question highlights the challenges faced in this stage of the project. Firstly, and linking back to the main aim of the project of interior as an agent of meaning-making, is a semiotic approach to cultural production. In current discourse the process of meaning-making entails the encoding of meaning by a designer and the decoding of the meaning by the users. To bridge that gap between encoding and decoding a collaborative methodology is adapted.



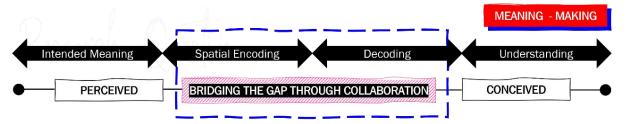


Figure 76: Diagrammatic representation of Konigk's (2015) process of meaning-making as the encoding and decoding of phenomena. To bridge the gap between encoding and decoding, a collaborative process is followed (Author, 2021).

This is to ensure that layers of embedded meaning and opportunity for idiosyncratic interpretation of elements and adaptation of embedded meanings due to relative associations thereof are achieved. The use of a collaborative methodology is justified by the highly subjective phenomena of meaning-making. Especially with a semiotic lens, the inhabitants or end-users become an invaluable resource to both the process and end result thereof. The collaborative process also becomes a core pillar in the second technical issue of achieving multi-scalar spatial agency.

# TECHNICAL CRITERIA

The multi-scalar agency draws from current discourse and touches on agency from initial production all the way through to narration. The multi-scalar agency analysis diagram is partly informed by Emile Cronje's *Theories on Systems* (2020) wherein the original aspects are titled *produce*, *process*, *participate and narrate*. The original tiers of spatial agency aim to enhance agency across the board from initial access to resources through to the appropriation of spaces and intangible connotations made in the process. Both the technical issues address the theoretical premise of the project and intend to respond to the rich and layered nature of the settlement and create a technical criteria to support the iterative process.

The technical criteria that sprouted from the theoretical framework and site engagement is fourfold. Materiality, collaboration, adaptability and appropriation speak to the intricacies of meaning-making and multi-scalar spatial agency. Each translates into a specific criteria that will serve as a method of analysis for the iterative process in this stage of the project.

The technical criteria is a direct response to the design criteria and initial set of prototypes. It focuses on the notion of building with available on-site materials and found objects and relies on a collaborative methodology to ensure layered meaning. To further continue the notion of an object-interface-space-system approach to the design the individual elements that make up the space must be easily adaptable and allow for various scenarios of compositions and appropriations whilst still complying to the legislation of the site.



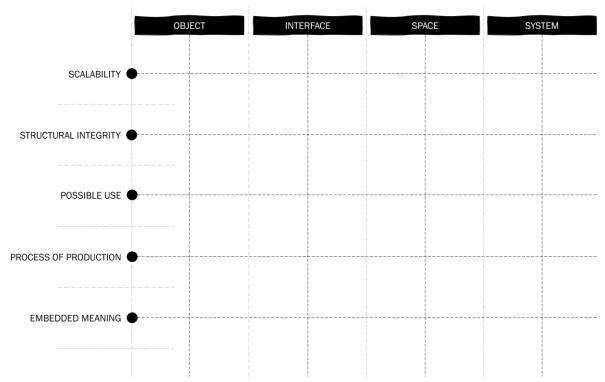


Figure 77: Diagrammatic base of the technical criteria as developed throughout essay 2. (Author, 2021).

# METHODOLOGY

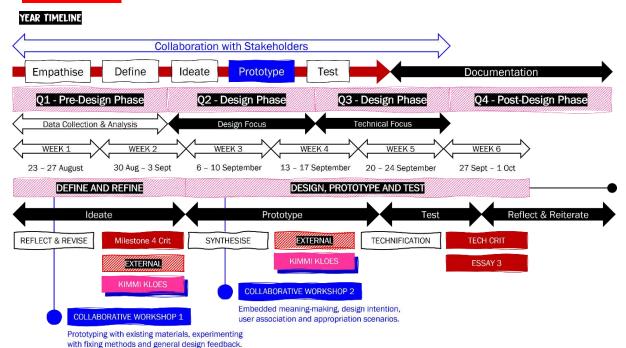


Figure 78: Diagrammatic representation of the technification phase methodology. The workshops were conducted over various days to ensure authentic collaborator input and allow for enough time for collaborators to create meaningful prototypes (Author, 2021).

Throughout the year, the project adapted the emphasise, define, ideate, prototype, test and reiterate methodology across the four phases of the project. The process became rhizomatic in nature and through prototyping allowed an iterative design and technification process. In the technical focus phase, the methodology zooms in and circulates between ideate, prototype, testing and reiterating.



The process also entailed workshops for further prototyping and collaboration. The prototyping process is a continuation of the second phase of the project but the main intent of this phase is the refinement and resolution of the project. This was achieved through collaborative workshops that focused on certain design elements that make up the larger spatial compositions. The realisation of the 'objects' were paramount to the technification of the spatial composition it consists of the various objects and interfaces.

To ensure that the project remained ethically sound the collaborators were briefed on the workshop intentions in advance. Collaborators voluntarily partook in the workshops with no capital loss. All prototypes were made with found objects from site and each workshop produced prototypes that were photographed on site and left for the collaborators. The collaborators will remain anonymous but gave permission to specify certain aspects that are relevant to the project argument, for example, an indigenous trade that the mother taught the collaborator that became evident in the prototyping process. The prototypes were then iterated and developed on through a professional lens but still responding to the initial intention of the prototypes. The collaborators continued to stay involved as the designs were iterated based on the prototype outcomes.

# ITERATIVE PROTOTYPING PROCESS

The iterative prototyping kicked off in the first phase with a group prototype built on site to act as a platform of engagement between inhabitants of the site and researchers from the outside. Another set of prototypes were built in the second phase that relied solely on the designer's response to the project due to site circumstances and the impact of the pandemic. These two series of prototypes set the scene for the technification process and the collaborative prototypes created in the third phase of the project.

There were multiple authors creating prototypes (external prototypes, prototypes created purely out of the lens of a designer and collaborative prototyping) to provide a counter argument for the larger research question of the possible role of interior architecture as an agent of meaning-making in informal settlements. The prototypes were analysed according to materiality, scalability, process of production, structural integrity, possible use and above all; embedded meaning. The prototypes evolved into designs that spoke to the intentions of the project and design criteria and were iterated and technically refined according to the technical criteria as shown above. This process also relied on the collaborators for constant feedback and interpretation of iterations.

Workshop 1 was conducted in the early stages of the third phase to ensure enough time to synthesise and iterate the prototypes created. The workshop did not merely take place on one day but consisted of several site visits that all entailed the same process: creating interfaces and testing connection methods with found objects and on-site materials. Workshop 2 was conducted to surface the various associations and interpretations of the prototypes to define the meaning encoded and decoded in the process. Both these will be explained at the hand of the analysis diagrams.





# The following table shows all the prototypes crested during the project as well as their materiality, embedded meaning, interpreted meaning and possible use.

PROTOTYPE	MATERIALS	MEANING EMBEDDED	MEANING INTERPRETED	POSSIBLE USE
Prototype 1: Built by The Moreleta Park Integration Project (2021) in April. Demolished in July by the Tshwane Municipality.	100mmØ Timber gumpoles, procured on site.  100mm Timber spacer cut from a 228mm x 114mm timber batten  M20 Bolts procured on site	The client, SaCaresForLife, has been involved in various built projects throughout the settlement. All of these are constructed with gumpoles as it is an easily procurable product and a known construction material on site.	Generic: The association of the gumpole construction with client involvement in the settlement as safe spaces of aid and resources.  Specific: Construction that relies on found materials and speaks to indigenous methods of building.	The gumpole construction is very useful as a structural framework in which interfaces can be interchanged. The materials are easily accessible throughout the settlement.
Prototype 2: Built by the author as an athome exploration of space making with found objects as representation of site conditions du to the pandemic.	Cardboard base Timber dowel sticks Different colour yarn and thread basket woven through the dowl sticks Flowers picked from the garden Bottle caps Glue	The intention of the conceptual model was to reflect the layered nature of the settlement by having different layered frameworks with interchangeable interfaces. The interfaces reflect indigenous methods of basket weaving and the flowers represent a temporary element as a celebration of ephemerality.	Generic: The maquette was interpreted by the community as a decorative element that makes use of familiar crafting methods and connected these methods with natural elements.  Specific: This was a reminder of ancestral phenomena with craftmanship and being one with their environments (nature). The notion of transience was picked up after the flowers started to wilt and decay.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The use of the conceptual model becomes the principles of the design project going forward: that of agency and transience.
Prototype 2.1: Built as an iteration on Prototype 2 as layers of interfaces. Starting with the inner sleeve as a layer of transparency with text to create a play on light	Cardboard base Timber dowel sticks Transparency paper Poems and quotes written on the transparency layer	The conceptual model developed into something more practical and with the focus of the first layer representing a possible interface the intended meaning was aimed at equality through transparency. The play on light through the interface manifested itself through the prototyping process and became a poetic outcome of the intended mediation process.	Generic: The concept of transparency was well received and the immediate association with the maquette was that of a spatial representation of a conversation where there are two sides to view from and perceptions change depending from the point of view.  Specific: The specific interpretation lies in the words written and projected by the interface.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The inner layer's transparency can be translated into the project as a metaphor for transparency in communication and leadership. This can be used as a conceptual base for the technification process for the mediation pod.
Prototype 2.2: Built as an iteration on Prototype 2.1 as layers of interfaces. Adding a layer of potential deployability and playing with light.	Cardboard base Timber dowel sticks Transparency paper Poems and quotes written on the transparency layer Different colour yarn and thread basket woven through the dowl sticks	An addition to the inner sleeve of transparency the notion of the basket weave from the conceptual model was reintroduced as a potential interface to host deployable objects. The interfaces reflect indigenous methods of basket weaving.	Generic: The maquette was interpreted as a maze of sorts that needs to be woven through as the threads were woven though the framework.  Specific: The community immediately recognised the basket weave and interpreted the shadows as residue of their link to indigenous inheritance.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The woven yarn can be used as a method of cultural production s there is a clear link between the model and indigenous techniques associated by the users. The structural ability would have to be tested and iterated.
Prototype 2.3: Built as an iteration on Prototype 2.2 as layers of interfaces. Alternating interfaces to adapt to structural and object needs.	Cardboard base Timber dowel sticks Transparency paper Poems and quotes written on the transparency layer Paper interface with holes cut- out to host potential objects	To iterate the initial concept of the outer sleeve as an interface that can host objects the meaning embedded was that of temporal intervention. The paper was intended to mimic an interface that is not structural and permanent but possesses characteristics of transparency in the sunlight.	Generic: The maquette was read as a spatial composition and was associated with an enclosed space. This was interpreted as a safe space.  Specific: The weave of the paper element through the framework was n a clear reference to the indigenous crafting method and the notions of transparency and transience.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The intention of the interface can be used as a holding cell for the deployable objects to come.
Prototype 2.4: Built as an iteration on Prototype 2.3 with objects placed into the interface as representation of interface use.	Paper interface with holes cut- out to host potential objects  Paper cut out rolled up to represent objects that can be folded and placed into the interface	The intention with the deployable object was to convey the notions of semiotics in design interventions: individual elements that are placed into an interface. The intended meaning was how diversity makes up a whole.	Generic: The community interpreted the maquette as a decorative element that could be used in a design intervention. The individual elements were read as one simultaneous element that makes up a whole.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The notion of a structural component that hosts deployable objects becomes useful as the deployable objects also become a decorative element that represents the individual elements that make up the interface.



PROTOTYPE	MATERIALS	MEANING EMBEDDED	MEANING INTERPRETED	POSSIBLE USE
Prototype 2.5: Built as an iteration on Prototype 2.4 as layers of interfaces. Adding the interface with rolled up deployable objects	Cardboard base Timber dowel sticks Transparency paper Poems and quotes written on the transparency layer Paper interface with holes cutout to host potential objects Paper cut out rolled up to represent objects that can be folded and placed into the interface	The maquette intended to convey the first iterative design: a space that reflects the semiotic nature of the language model on site by catering for idiosyncratic contributions.	The maquette was presented as a spatial composition and interpreted as a layered maze or exhibition space made up from different elements.  "This even looks like Plastic View" - Collaborator 2  The only successful interpreted meaning was that of transparency and equality in communication. The notions of indigenous crafting methods were lost in translation.	This series of explorative prototypes was intended to serve as design informants and possible design iterations. The success of the notion of layers as 'spaces' and 'interfaces' that become interchangeable becomes a useful informant for the design process.
Prototype 3: Built by Collaborator 1 in Workshop 1 as an interface made with found objects.	Plastic bags found on site  Filled with found objects like paper, grass, reeds, sponging and newspaper	The intended meaning spoke to the notion of making something beautiful from that which is disposed from everyday life. The author used trash to make something useful.	Generic: The model as is was interpreted as trash, or something that would be thrown away.  Specific: Individuals interpreted the prototype as the beginning of a crafting process from available materials.	The stuffed bags were very spongy and yielding which gave it potential that if structured could serve as a cushioning device.
Prototype 3.1: Built by Collaborator 1 in Workshop 1 as an iteration on prototype 3.	Plastic bags found on site  Filled with found objects like paper, grass, reeds, sponging and newspaper  Old t-shirt used as base to combine loose elements into one interface	With the iteration the intentions remained the notion of making something beautiful from that which is disposed from everyday life. The author used trash to make something useful.	Generic: Once read as a single element the prototype was interpreted as a material to be used in construction of a structure or as an upcycling attempt with an unknown final product.  Specific: The notion of crafting something with found objects was recognised and appreciated.	With a base to combine the individual stuffing elements
Prototype 4: Built by Collaborator 2 in Workshop 1 as an interface made with found objects.	Plastic bags found on site woven together with a basic weave	The prototype is an example of an indigenous craft taught to the author by their mother. The author tried to replicate a complex weave but was unable to remember the intricate details thereof. The intended meaning was a link back to indigenous crafting methods made relevant to the situation by building with found objects.	Generic: The notion of creating elements with found or available materials resonates strongly with the community as the majority of the settlement is self-made.  Specific: The prototype was interpreted as a 'Plastic View' weave: something that developed from indigenous crafting methods made relevant by the materiality and execution.	The plastic weave can be used as a finish or cover. If the weave is left unfixed it is not waterproof but if it is to be fixed (either melted or simply stitched together) it can also be used as a waterproof surface.
Prototype 4.1: Built by Collaborator 2 in Workshop 1 as an iteration on prototype 4.	Decorative paper woven together with a basic weave	In an attempt to iterate the basic weave into something that speaks to the specific weave taught by the authors' mother the prototype was replicated with decorative paper.	Generic: The prototype was not well received as it was associated with an external creation that seemed irrelevant to the project and the context.  Specific: The prototype was associated with a very decorative attempt and seemed distant from the other prototypes presented (intertextuality present here).	The concept of the prototype can be used as a patterned weave as iteration of the previous prototype but paper itself is not a very durable material for external use.
Prototype 5: Built by Collaborator 3 in Workshop 1 as an interface made with found objects.	Key rings found on site  Different colour yarn and thread woven through the key rings	The author of the prototype used the weaving and pattern as a homage to art his grandmother used to produce. It serves as a sentimental homage to his roots and homelands where this technique was a common indicator of craft and value.	Generic: The prototype was interpreted as a meaningful gesture to craft. It was clearly articulated that a lot of time and love went into the construction of the prototype and the community found beauty in the detail.  Specific: The prototype spoke to the notion of self-taught craft and love embedded in the objects people of the settlement make.	The prototype itself does not possess very structural properties but the method in which it was fixed becomes a valuable option for binding methods. The notion of using keyrings also creates opportunities for possible fixing methods.



PROTOTYPE	MATERIALS	MEANING EMBEDDED	MEANING INTERPRETED	POSSIBLE USE
Prototype 6: Built by Collaborator 4 in Workshop 1 as an interface made with found objects.	Cut plastic bottles found on site Industrial cable ties	The prototype was made as an expression of individual elements bound together with a unanimous detail and becomes a pattern.	Generic: The prototype was associated with an upcycling project conducted by the client.  Specific: Inhabitants who have attempted crafting with found objects acknowledged the intuition and creativity behind the prototype and pondered the possible functions thereof.	The prototype was created to demonstrate a possible binding elements between found objects. The binding method becomes an option but is restricted by the nature of the elements that it binds.
Prototype 7: Built by Collaborator 1 in Workshop 1 as an interface made with found objects.	Found objects like timber sticks, broken pens, plastic forks and dowel sticks  Different colour yarn and thread basket woven through the found objects	The prototype was intended to reflect the essence of making in the settlement. The found objects are bound together with a non-conventional knotting device.	Generic: The prototype resonated with the inhabitants as a 'Plastic View Construction' and was associated with the methods used to build structures throughout the settlement.  Specific: The domestic elements featured in the prototype was associated with the process of building from available materials that resonates on a very personal level of home-building and space making.	The prototype had potential with binding methods and if iterated can showcase structural characteristics.  The prototype also needs to be developed to demonstrate scalability to ensure an intervention with found objects is still possible.
Prototype 7.1: Built by Collaborator 1 in Workshop 1 as an iteration on prototype 7.	Found objects like timber sticks, broken pens, plastic forks and dowel sticks  Different colour yarn and thread basket woven through the found objects	The prototype was intended to reflect the essence of making in the settlement. The found objects are bound together with a non-conventional knotting device. After developing from the previous iteration the prototype demonstrates the self-constructed and hand-crafted methods used across the settlement.	Generic: The prototype resonated with the inhabitants as a 'Plastic View Construction' and was associated with the methods used to build structures throughout the settlement.  Specific: The development from the previous iteration was acknowledged and the objects in the prototype were recognised as everyday domestic objects.	After iteration the prototype has more structural abilities and can be used as both binding element and base structure to which other interfaces can be fixed to become a design element.
Prototype 8: Built by Collaborator 3 in Workshop 1 as an interface made with found objects.	Plastic bags found on site  News papers found on site  Magazine papers found on site  Different colour yarn and thread basket woven through the found objects  Old t-shirt used as base to combine loose elements into one interface	The objects commonly associated with waste was interpreted as an attempt to reuse the waste and turn it into something useful in the settlement by incorporating indigenous methods and combining it with more site-specific objects.	Generic: The basket weave as generic crafting method was immediately recognised and associated with the familiar indigenous crafting methods.  Specific: The notion of combining indigenous methods with relevant materials creates an site-specific response to crafting methods.	The interface creates a cushioning element that could be used in the intervention as an element of comfort.
Prototype 9: Built by Collaborator 4 in Workshop 1 as an interface made with found objects.	Plastic bags found on site and cut to pieces Old t-shirt used as base to combine loose elements into one interface: cut plastic pieces tied to base	The prototype was made with upmost care and consideration as an artistic expression of the potential beauty that can stem from what is considered as waste.	Generic: The effort put into creating the prototype was recognised and appreciated as a labour of love. The notion of crafting with available materials was interpreted as an expression of the settlement.  Specific: Inhabitants who have attempted crafting with found objects recognised the method and reflected on the process and outcome thereof.	This prototype doesn't possess very structural characteristics but is rich in meaning. It can be used as a surface treatment or expression of individual collaboration and speak to the notion of the beauty that stems from the mundane.
Prototype 10: Built by Collaborator 2 in Workshop 1 as an interface made with found objects.	Timber dowel sticks found on site  Different colour yarn and thread basket woven through the found objects	The basket weave is a very familiar indigenous crafting method used by many inhabitants of the settlement as a binding method. The meaning embedded in this prototype is a form of unity between various cultures with various backgrounds and methods of construction that all make use of a binding element such as the basket weave.	Generic: Majority of the inhabitants recognise the crafting method as a link to indigenous crafting.  Specific: It exhibits the notion of indigenous traits that have been domesticated and surrounds everyday phenomena. The presence of an intangible link to heritage that is still unanimous amongst the inhabitants of the settlement.	The basket weave is a core binding method that can easily be translated into a structural element. It has been used by many inhabitants as much more that just a binding method but as a structural base for objects.



PROTOTYPE	MATERIALS	MEANING EMBEDDED	MEANING INTERPRETED	POSSIBLE USE
Prototype 10.1: Built by Collaborator 2 in Workshop 1 as an iteration on prototype 10.	Timber sticks, reeds and grass found on site basket woven into a basket for domestic use. Built to show the flexibility and strength of the basket weave	The basket weave is a very familiar indigenous crafting method used by many inhabitants of the settlement as a binding method. The meaning embedded in this prototype is a form of unity between various cultures with various backgrounds and methods of construction that all make use of a binding element such as the basket weave.	Generic: Majority of the inhabitants recognise the crafting method as a link to indigenous crafting.  Specific: It exhibits the notion of indigenous traits that have been domesticated and surrounds everyday phenomena. The presence of an intangible link to heritage that is still unanimous amongst the inhabitants of the settlement.	In this iteration of the basket weave prototype the collaborator demonstrated the very structural potential of the weave if combined with a framework. Depending on the materials used the basket weave can serve as both structure and binding elements in a design intervention.
Prototype 11: Built by Collaborator 2 in Workshop 1 as an interface made with found objects.	Rope found on site made into a netting device	The prototype was built as a demonstration of skills gained through professional experience. The embedded meaning represents the knowledge transferal that is ever present in the settlement and how it can uplift daily life.	Generic:  Specific: The prototype represents a larger system of knowledge transferal in the settlement where inhabitants can use skills learnt to enable themselves.	The rope netting becomes a very valuable construction method that can be used as a fixing device or structural device for more tensile structures. It has potential to act as a binding agent and the technique can be easily adapted to accommodate more project specific needs.
Prototype 12: Built by Emile Cronje (external collaborator) in in movement dedicated to building materials from waste that can be used in the built environment.	Recycled plastic bags woven together to create a 7 strand woven rope	The intended meaning of the prototype is the possibility of self agency through construction with recycled objects and to create accessible resources for the built industry.	Generic: The community interpreted the prototype as a construction mechanism made from accessible materials.  Specific: The prototype was associated with a very familiar method of construction that individuals have used to construct their own homes that speaks to hand-made self sustained construction.	The seven strand woven rope possesses various characteristics that makes it ideal for construction purposes. It is very strong, has tensile abilities, is flexible and adaptable in terms of scalability and can be used in various elements in the design intervention.
Prototype 13: Built by the author to test materials that mimic transparent materials found on site for interface testing.	Gameboard cut-outs Transparent plastic bag	The intended meaning is that of transparency and equality in conversation. By allowing for written text on both sides of the ideal process of mediation becomes a spatial interface that allows two different perspectives to meet and consolidate.	Generic: As with prototype 2.1 the concept of transparency was well received and the immediate association with the maquette was that of a spatial representation of a conversation where there are two sides to view from and perceptions change depending from the point of view.  Specific: The specific interpretation lies in the words written and projected by the interface.	This prototype was built to test the viability of material choice to serve a specific purpose in the design intervention.  The surface is writable as intended but distorts the cast shadow of the words.
Prototype 13.1: Built by the author to test materials that mimic transparent materials found on site for interface testing.	Gameboard cut-outs  Transparent plastic sheet (to mimic Perspex sheeting)	The intended meaning is that of transparency and equality in conversation. By allowing for written text on both sides of the ideal process of mediation becomes a spatial interface that allows two different perspectives to meet and consolidate.	Generic: As with prototype 2.1 the concept of transparency was well received and the immediate association with the maquette was that of a spatial representation of a conversation where there are two sides to view from and perceptions change depending from the point of view.  Specific: The specific interpretation lies in the words written and projected by the interface.	This prototype was built to test the viability of material choice to serve a specific purpose in the design intervention.  The surface is writable as intended casts a crisp and clear shadow of written texts.
Prototype 13.2: Built by the author to test materials that mimic transparent materials found on site for interface testing.	Gameboard cut-outs  Transparent lined plastic sheet (to mimic reinforced Perspex sheeting)	The intended meaning is that of transparency and equality in conversation. By allowing for written text on both sides of the ideal process of mediation becomes a spatial interface that allows two different perspectives to meet and consolidate.	Generic: As with prototype 2.1 the concept of transparency was well received and the immediate association with the maquette was that of a spatial representation of a conversation where there are two sides to view from and perceptions change depending from the point of view.  Specific: The specific interpretation lies in the words written and projected by the interface.	This prototype was built to test the viability of material choice to serve a specific purpose in the design intervention.  The surface is writable as intended casts a crisp and clear shadow of written texts.



PROTOTYPE	MATERIALS	MEANING EMBEDDED	MEANING INTERPRETED	POSSIBLE USE
Prototype 13.3: Built by the author to test materials that materials found on site for interface testing.	Gameboard cut-outs  Transparent plastic sheet folded to mimic corrugated plastic sheeting	The intended meaning is that of transparency and equality in conversation. By allowing for written text on both sides of the ideal process of mediation becomes a spatial interface that allows two different perspectives to meet and consolidate.	Generic: As with prototype 2.1 the concept of transparency was well received and the immediate association with the maquette was that of a spatial representation of a conversation where there are two sides to view from and perceptions change depending from the point of view.  Specific: The specific interpretation lies in the words written and projected by the interface.	This prototype was built to test the viability of material choice to serve a specific purpose in the design intervention.  The surface is not writable as intended and distorts the written text but can still serve as a transparent 'window' to view the rituals from the exterior.
Prototype 14: Built by the author to test iterated interface design that hosts deployable objects	Gameboard cut-outs  Yarn fixed between the gameboard cut-outs	The notion of yarn and thread became a prominent feature during the prototyping process and the intention of the prototype was to speak to all the potential meanings that can be interpreted by the members of the community. The storage unit attempts to speak to the notion of indigenous techniques made contextually relevant.	Generic: The prototype was interpreted as an adaptation of prototype 2.2. The maquette was interpreted as a craft of sorts that needs to be woven through though the framework.  Specific: The community still resonated with the notion of the shadows as residue of their link to indigenous inheritance.	This prototype was built to test the viability of design and material choice to serve a specific purpose in the design intervention.  The weave is intended to give spacing and triangular support opportunities for deployable objects of various sizes.
Prototype 14.1: Built by the author as an iteration on prototype 14	Gameboard cut-outs  Yarn fixed between the gameboard cut-outs	The notion of yarn and thread became a prominent feature during the prototyping process and the intention of the prototype was to speak to all the potential meanings that can be interpreted by the members of the community. The storage unit attempts to speak to the notion of indigenous techniques made contextually relevant.	Generic: The prototype was interpreted as an adaptation of prototype 2.2. The maquette was interpreted as a craft of sorts that needs to be woven through though the framework.  Specific: The community still resonated with the notion of the shadows as residue of their link to indigenous inheritance.	This prototype was built to test the viability of design and material choice to serve a specific purpose in the design intervention.  The weave is intended to provide structure and support to host deployable objects.
Prototype 14.2: Built by the author as an iteration on prototype 14.1.	Gameboard cut-outs  Yarn fixed between the gameboard cut-outs	The notion of yarn and thread became a prominent feature during the prototyping process and the intention of the prototype was to speak to all the potential meanings that can be interpreted by the members of the community. The storage unit attempts to speak to the notion of indigenous techniques made contextually relevant.	Generic: The prototype was interpreted as an adaptation of prototype 2.2. The maquette was interpreted as a craft of sorts that needs to be woven through though the framework.  Specific: The community still resonated with the notion of the shadows as residue of their link to indigenous inheritance.	This prototype was built to test the viability of design and material choice to serve a specific purpose in the design intervention.  The weaves are combined and another iteration is needed to test if the interface could host deployable objects.
Prototype 14.3: Built by the author as an iteration on prototype 14.2.	Gameboard cut-outs  Yarn fixed between the gameboard cut-outs	With the addition of the objects into the interface the indigenous aspects hosts the 'new' elements that have developed from the settlement. It serves as a metaphor for the past elements that inform and support the present phenomena in the settlement.	Generic: The storage unit with deployable objects as part of the proposed community office was interpreted as the community leaders catering for the community as the unit caters for the deployable objects.  Specific: The interface host all the individual projections of the members of the community.	This prototype was built to test the viability of design and material choice to serve a specific purpose in the design intervention.  The combined weaves provided enough structure and support to host deployable objects.
Prototype 15: Built by the author as a design response to the sit-things.	Offcuts of swe-swe material given to the author by collaborator 2 Yarn used to bind the weave together	The single author design sitting is intended to represent the unique identity and craftmanship that developed in the settlement. The appropriated indigenous techniques of basket weaving and value in material is combined to create both structure and comfort.	Generic: The prototype was interpreted as a homage to traditional cloths used by a collaborator to make clothing.  Specific: The identity of the material was greatly appreciated as it speaks to traditional African prints and the sentimental associations thereof.	This prototype was built to test the viability of design and material choice to serve a specific purpose in the design intervention.  The sit-thing will be used as informant to the final iteration of the single-authored sit-thing.



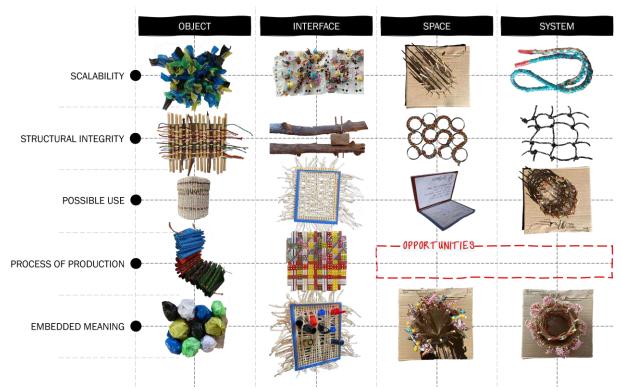


Figure 79: Analysis diagram of the prototypes as per the technical criteria (Author, 2021).

The prototypes all demonstrate the rich process of meaning-making through participation and narrate the extensive levels of interpretation and idiosyncratic associations linked with objects. These initial prototypes serve as informants for certain design elements and set the scene for the iterative design process to kick off.

# ITERATIVE DESIGN PROCESS

The finalisation of the prototypes and their individual uses paved the road for the refinement of the design intervention. The individual elements that make up the spatial composition have each undergone a process of iteration to arrive at a conversion. These iterations were influenced firstly by project intentions and design informants and secondly by the very pragmatic aspects of our industry such as technical resolution and regulations.

# ITERATION 1

The initial design response was a generic investigation to designing for adaptation and disassembly. The programming and specific individual components were more suggestive than design-based and focused on the notion of individual objects and interfaces that make up a larger space. The first iteration focused on the sit-thing as a deployable object and inner sleeve (in a square as a nod to the previous community office) as deployable storage units.



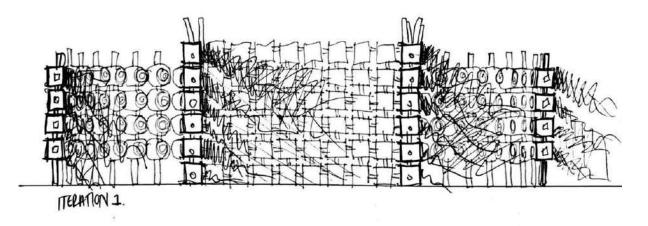


Figure 80: Sketch to show the initial intention of storage units and deployable sit-things to make up the proposed community office (Author, 2021).

# ITERATION 2

The second iteration is a response to the second phase of prototyping and refines the program and rough layout of the proposed design to an inner sleeve that reflects the previous community office and a series of rings that will host various interfaces. The inner sleeve becomes the mediation space that is set around a fire and is enclosed by transparent boundaries. This is all on a raised platform to ensure that the structure is still sufficiently supported with foundations above the ground and allows for a safe fire-pit. The second sleeve consists of an interface with deployable sit-things that interact with existing objects across the settlements as a base for the seating. The outer sleeve is a proposed interactive exhibition unit.



Figure 81: Conceptual render of proposed community office with a transparent cube in the middle and interface with deployable sit-things surrounding the inner sleeve (Author, 2021).



# ITERATION 3

The third iteration continued with the inner sleeve as a transparent mediation pod with seating situated around a fire pit. The seating is circular to speak to the notion of equality around a certain mid-point, the mid-point in this instance being a fire. The transparent interface surrounding this inner mediation space is square shaped as a homage to the previous community office. The surrounding interfaces are in a radial layout around the fire pit to further reflect the notions of equality around a middle ground as well as a continuous promenade where the walkway gradually changes course. This reflects the mediation process as a sequence of gradual change versus a sharp corner where an immediate change of direction is required. With this iteration certain prototypes were combined to create deployable sit-things and test interface viability.

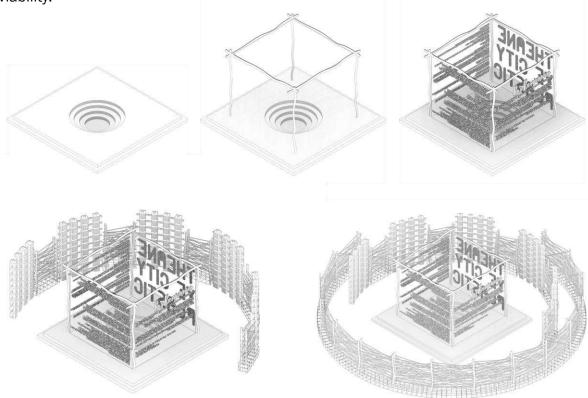


Figure 82: Visual representation of the inner mediation pod surrounded by a series of interfaces that become storage units for deployable sit thing with a raised platform as a homage to the heritage of the previous community office (Author, 2021).

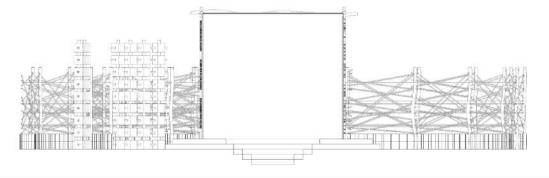


Figure 83: Sectional view of iteration 3 (Author, 2021).



# ITERATION 4

The fourth iteration is based on the further investigation into regulation and the technical requirements. Due to the fire in the middle of the intervention the square surround had to be adapted due to the heat load that will accumulate in the corners. A circular device is proposed without a roof structure to ensure adequate circulation and air movement in the inner sleeve. As a response to the removed roof structure, an overhead framework is proposed to which the interfaces can be attached. This also allows for adaptability and interchangeability of the various interfaces. However, when analysing this according to the base design- and technical criteria, the design no longer complies with the dissasemblable nature that is a core principle of the project. The overhead structure also restricts the ease of mobility and would require a stronger foundation that would not be possible whilst still maintaining the transient interfaces with deployable objects. This iteration also reflected on the need for storage in the space as storing all the important documents in one place could become disastrous. Instead it is proposed that document storage is done externally in collaboration with an institution and the storage units are replaced with a gaming interface that is designed from combined prototypes that are upscaled and iterated to fit the design requirements.

# ITERATION 5

The fifth and final iteration sees the elements in the fourth iteration refined as well as the roof structure completely removes. All the elements are supported with loose-standing elements that are bottom heavy. To ensure that the mobility of the units is preserved and accessible another interface is added that will serve as a method of transport for the interfaces. This proposed mechanism will attach to trolleys that are used all over the settlement for recycling goods and moving larger objects.





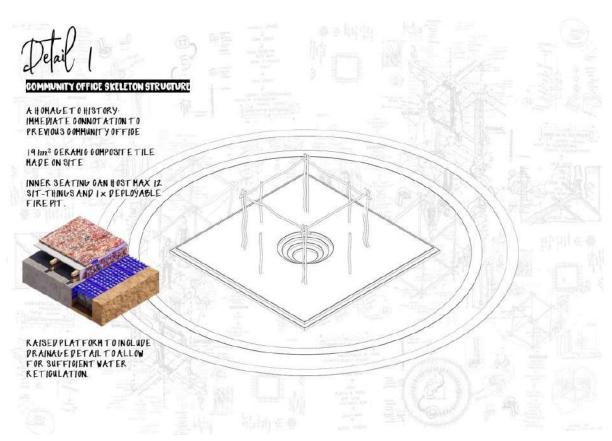


Figure 85: Axonometric diagram showing Detail 1 that creates the base for the design intervention and all the deployable interfaces and objects that make up the spatial composition (Author, 2021).

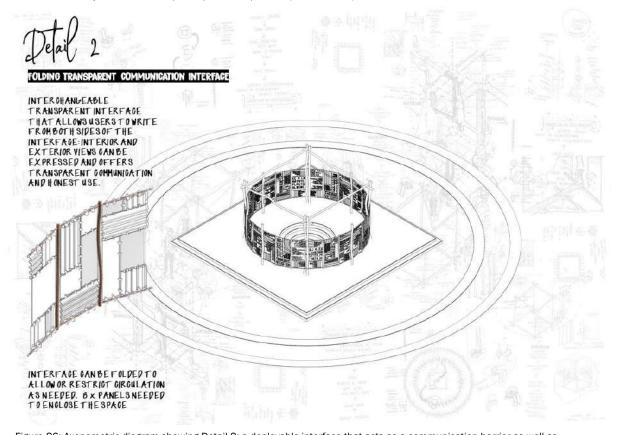


Figure 86: Axonometric diagram showing Detail 2: a deployable interface that acts as a communication barrier as well as circulation control (Author, 2021).





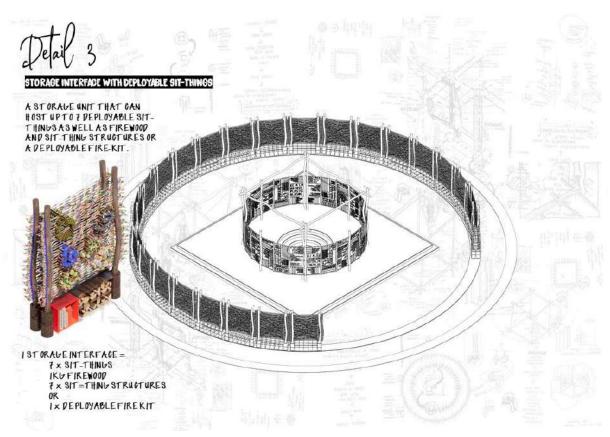


Figure 87: Axonometric diagram showing Detail 3 that hosts deployable sit-things and becomes a spatial device (Author, 2021).

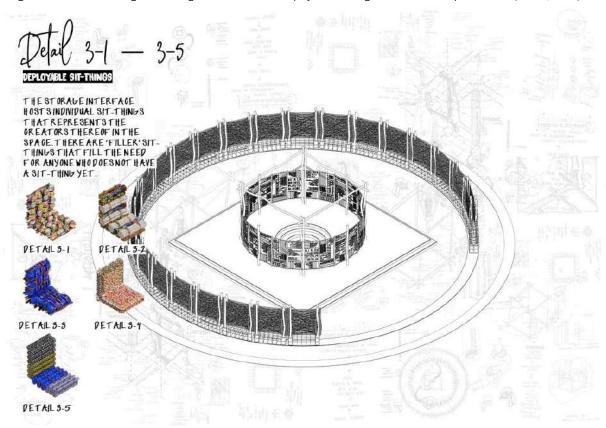


Figure 88: Axonometric diagram showing Detail 3.1 – 3.2: the sit-things that represent the individuals that partook in the prototyping process (Author, 2021).



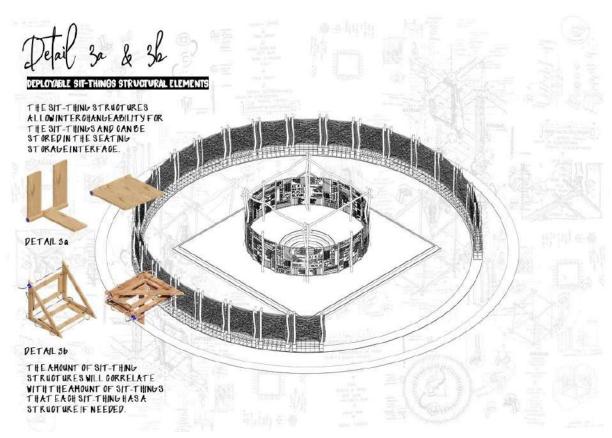


Figure 89: Axonometric diagram showing Detail 3A & 3B: the structural devices that allow the sit-things to interface with existing objects as well as stand independently to reflect the language of sitting in Plastic View (Author, 2021).

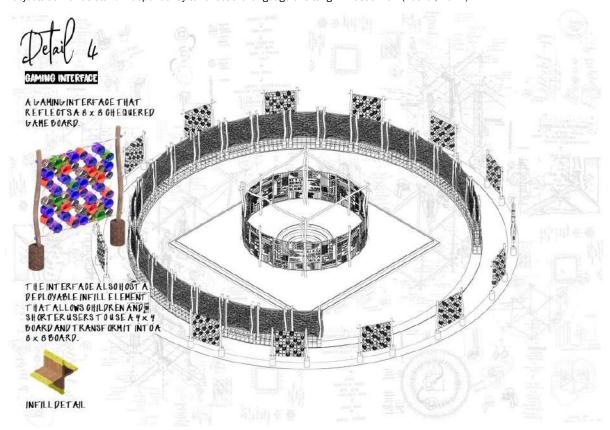


Figure 90: Axonometric diagram showing Detail 4: a mobile gaming interface (Author, 2021).



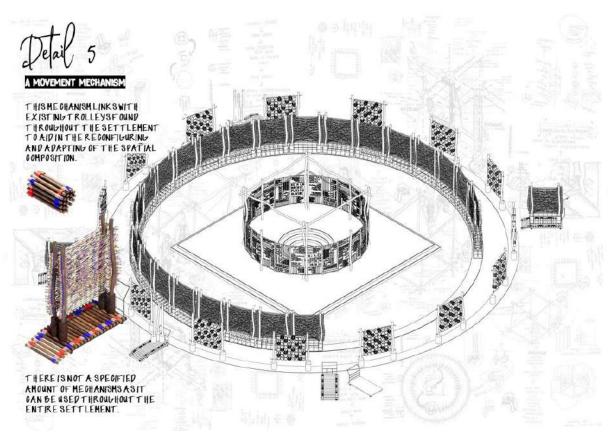


Figure 91: Axonometric diagram showing Detail 5: a mechanism that allows the individual interfaces to be easily moved around to make up spatial compositions (Author, 2021).

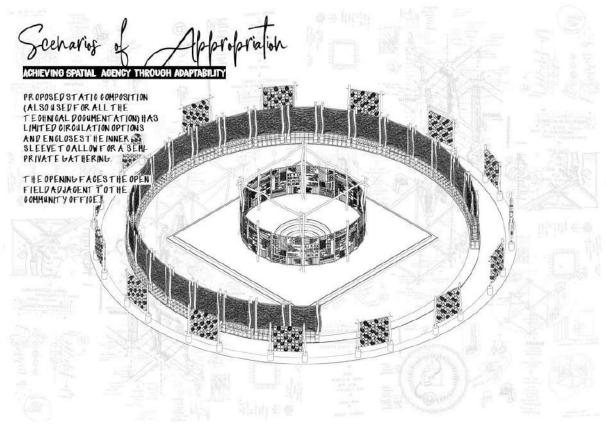


Figure 92: Axonometric diagram showing a spatial composition made up from the individual interfaces (Author, 2021).



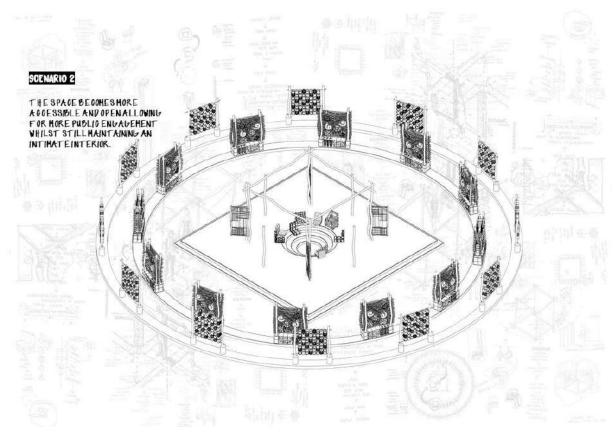


Figure 93: Axonometric diagram showing a spatial composition made up from the individual interfaces (Author, 2021).

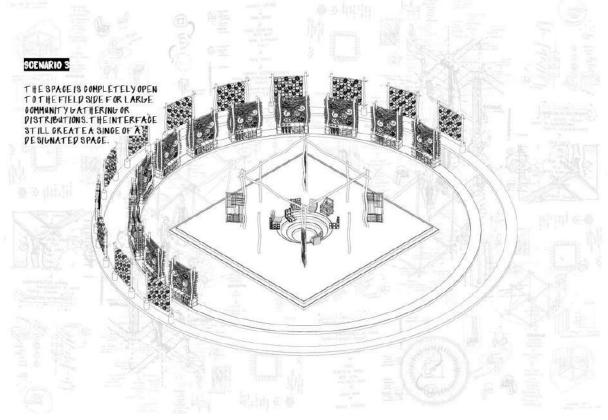


Figure 94: Axonometric diagram showing a spatial composition made up from the individual interfaces (Author, 2021).



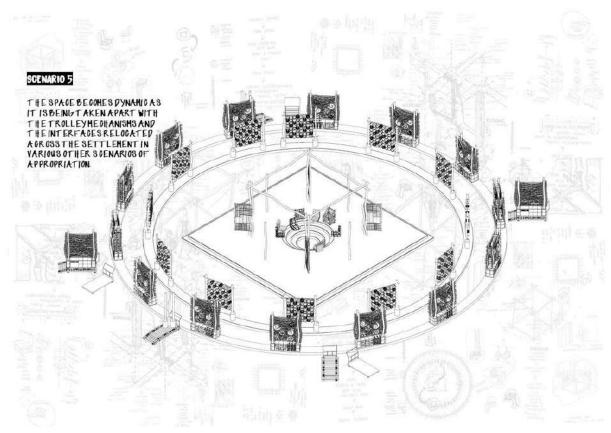


Figure 95: Axonometric diagram showing a spatial composition made up from the individual interfaces (Author, 2021).

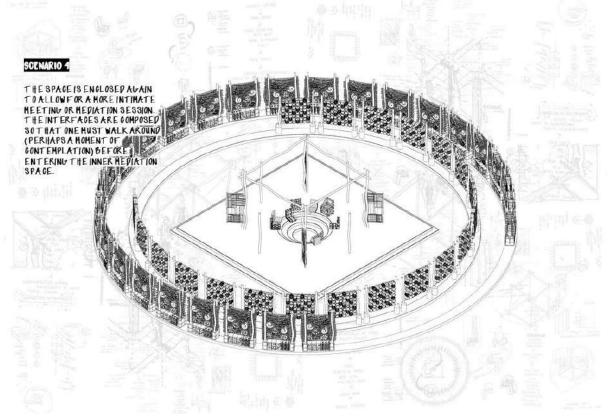


Figure 96: Axonometric diagram showing a spatial composition made up from the individual interfaces (Author, 2021).



## FINAL DESIGN INTERVENTION



Figure 97: 3D View of the final proposed intervention (Author, 2021).

The design intervention is situated where the previous community office was demolished earlier this year. This directly speaks to the notion of generic meaning-making, association and interpretation as the previous community office was a recognised space of comfort, mediation and community expression. The materials used for the skeleton structure that pays homage to the previous community office is also directly associated with projects that the client, SACaresForLife, is involved in. The raised platform and community office skeleton structure becomes a landmark in the settlement and when the mediation ritual is taking place the smoke from the fire will be seen throughout the settlement. The intervention is situated adjacent to an open field often used by the community for large gatherings and the adaptable design of the space allows the intervention to spill out and disperse into the community. The spatial composition caters for the main programs and through its adaptability and ability to deconstruct into objects allows for multiple scenarios of appropriation.

The spatial composition consists of a series of interfaces in a radial layered layout with the inner most space being a raised platform in the square shape of the previous community office as a nod to the existing meaning associated therewith. The outer rings have a fixed floor with interchangeable interfaces that can be composed according to the needs of the community office. The base structure forms a homage to the heritage of the site while the adaptable interfaces forming the different layers of engagement around the inner sleeve. The intervention becomes a celebration of the ephemeral nature of the settlement and establishes a temporal composition with a permanent presence in the community.





Figure 98: Artistic interpretation of an exterior 3D view from the community (Author, 2021).

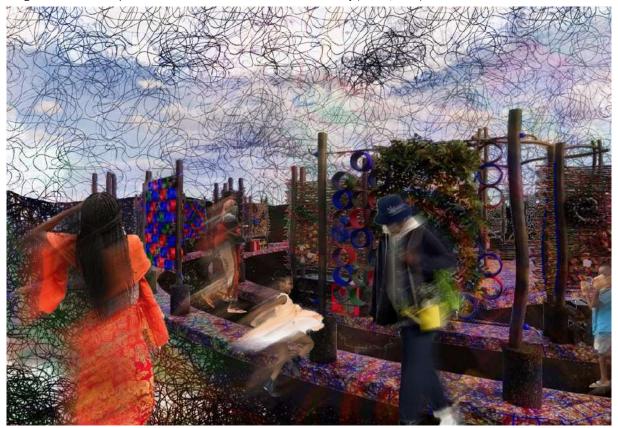


Figure 99: Artistic interpretation of an exterior 3D view of the threshold (Author, 2021).





Figure 100: Artistic interpretation of a 3D view of the inner ring (Author, 2021).



Figure 101: Artistic interpretation of a 3D view of the transparent communication barrier in use (Author, 2021).



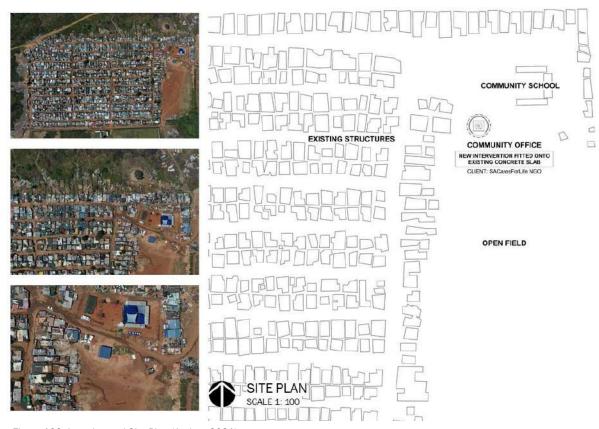


Figure 102: Location and Site Plan (Author, 2021).

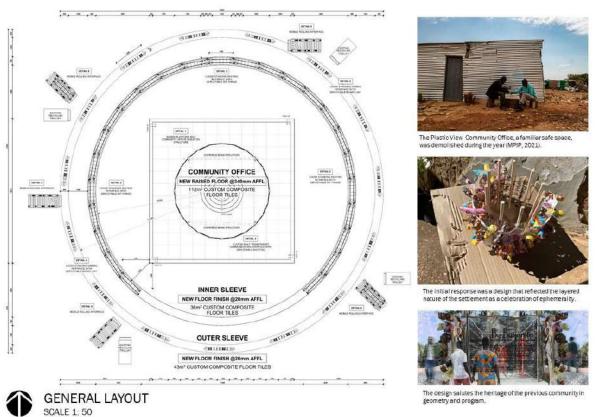


Figure 103: General layout (Author, 2021).









Figure 104: Graphic representation of the site of intervention before and after (Author, 2021).

Looking at the different components that make up the spatial composition. Detail 1 is the raised platform that reflects the legacy of the community office. The smaller gumpoles form the circular surround for a mediation space that focuses on equality and sharing. The second interface is an adaptable sleeve made of transparent panels found on site. This serves as an interface of communication where people can write on the panels, as suggestions, words of expression or just general commentary. The transparent element combined with the written graphics create a play of light and translates the poetic phenomena of the community office into a spatial experience. The third interface serves as a storage unit for deployable elements. The first element is the fire-wood that is used in the mediation rituals and the second deployable element is a sit-thing that is unique to each user.

These sit-things enable the programs of the space (mediation, knowledge transferal and expression) by simply allowing a conversation. The fourth interface is an interactive gaming board that developed on the doorstep of the previous community office. And lastly, the final interface is a deployable mechanism that allows the loose-standing interfaces to be easier moved around with trolleys used all over the settlement for recycling materials.

The final proposed intervention caters for various scenarios that build on and enrich the existing narratives in the settlement. The transient nature of the structure enables a long-term presence albeit it physically manifests through transient settings. The proposed intervention becomes a reflection of the complexities and intricacies found in the everyday lives of the inhabitants of a settlement that was built in the strive for livelihoods.





## TECHNICAL RESOLUTION

The technical resolution walked hand in hand with the refinement of the proposed design intervention and through an iterative process, various technical fixings and methods were tested and iterated to ensure that the technical resolution stays true to the project requirements that speak to the extensive contextual informants and relevant discourse. The fertile indigenous knowledges and their appropriations truly manifest in the human-scaled details that inhabitants engage with whilst interacting with the intervention.

#### A HOMAGE TO THE COMMUNITY OFFICE: RAISED PLATFORM AND SKELETON STRUCTURE

Detail 1 makes use of a detail prototyped in Q1 with the larger Moreleta Park Integration group that dealt with creating viable, structurally stable elements from materials found on site. The 100mm spacer is an example of the dialogue between pre-conceived professional detailing and an impromptu on-site construction with found materials. The foundations of the skeleton structure are set in the raised floor and the entire platform is set on an existing concrete slab on which the previous community office stood. The raised platform is constructed with a concealed timber substructure with a composite tile fixed to the substructure with a bright blue grout. The raised platform is sloped to allow for drainage and the drainage units are constructed from found beer crates that are zip-tied together and filled with rocks and gravel.

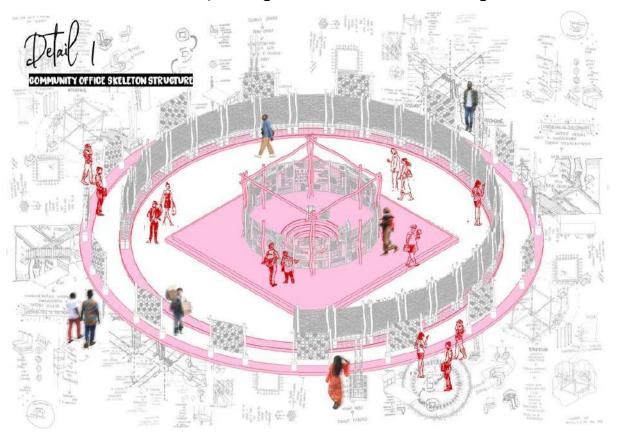
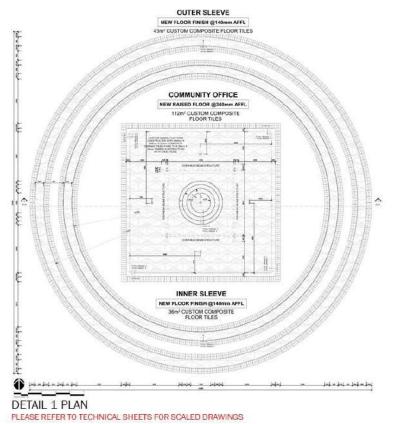


Figure 105: Axonometric highlighting detail 1 in place (Author, 2021).





WOODLANE VILLAGE
COMMUNITY OFFICE
Visitors need to report to the office

Detail 1 represents a skeleton-figure of the old Community
Office to continue the narrative of the meaning of the space.

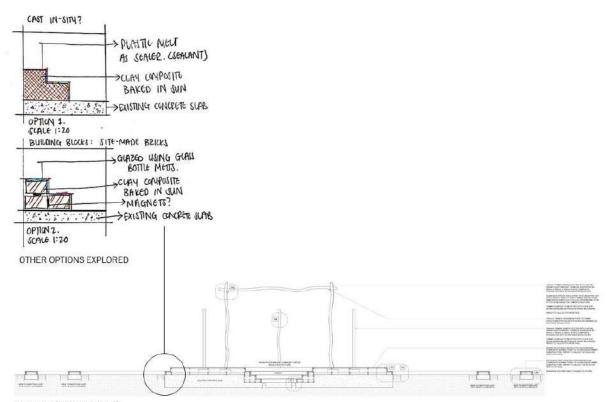


A prototype built by the Moreleta Park Integration Project to develop a method of constructing with uneven elements (MPIP, 2021).



Testing the ease of disassembly to comply with legislation for structures on site (MPIP, 2021).

Figure 106: Detail 1 technical drawings as specified (Author, 2021).



DETAIL 1 SECTION 1
PLEASE REFER TO TECHNICAL SHEETS FOR SCALED DRAWINGS

Figure 107: Detail 1 technical drawings as specified (Author, 2021).





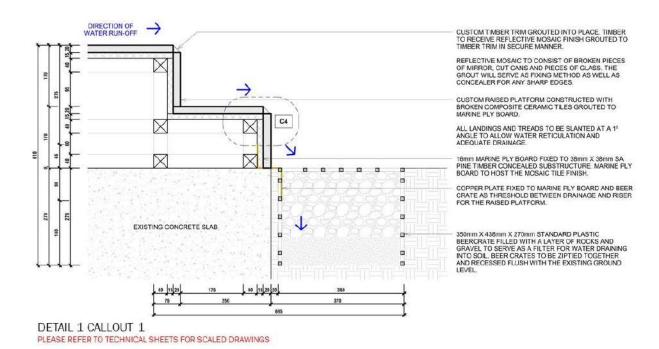


Figure 108: Detail 1 technical drawings as specified (Author, 2021).

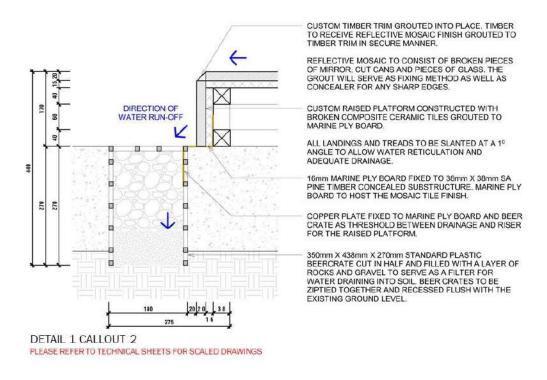


Figure 109: Detail 1 technical drawings as specified (Author, 2021).





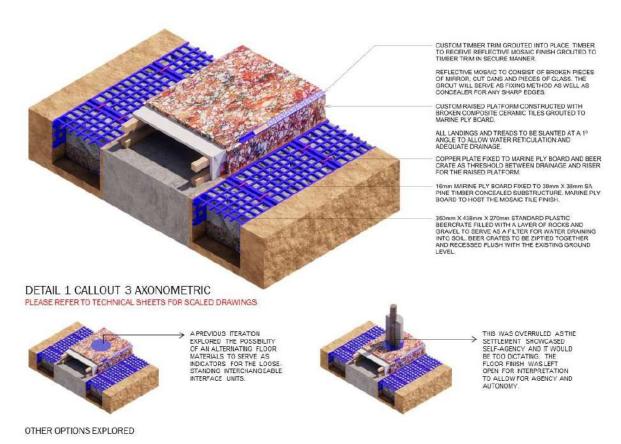


Figure 110: Detail 1 technical drawings as specified (Author, 2021).

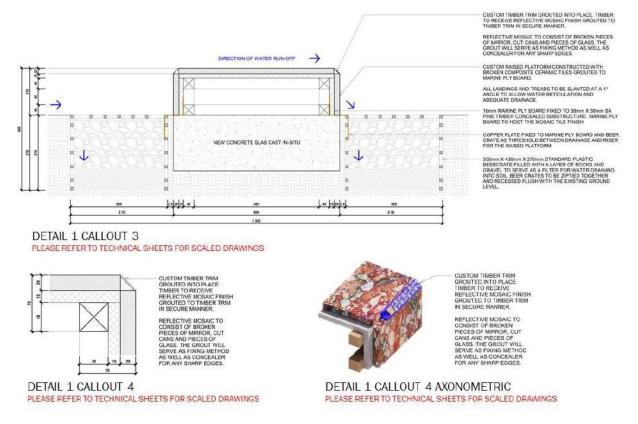


Figure 111: Detail 1 technical drawings as specified (Author, 2021).





#### DETAIL 1 CALLOUT 5

PLEASE REFER TO TECHNICAL SHEETS FOR SCALED DRAWINGS

100mmØ TIMBER GUMPOLE FITTED INTO CUSTOM RAISED PLATFORM UNIT. GUMPOLE SUPPORTED BY 500mm X 500mm X 200mm IN-SITU COMPOSITE FOUNDATION UNIT AS PER SANS REGULATIONS.

GUMPOLES SPACES 100mm APART IN FOUNDATION UNIT WITH 100mm X 100mm X 100mm TIMBER SPACER FIXED INBETWEEN GUMPOLES TO ALLOW CROSSBEAMS TO BE FITTED IN BETWEEN THE TIMBER STRUCTURE.

TIMBER GUMPOLE TO BE FITTED WITH HOOK FOR INTERCHANGEABLE INTERFACE FIXING MECHANISM.

100mm® TIMBER CROSSBEAM FIXED TO TIMBER STRUCTURE WITH M20 BOLTS IN SECURE MANNER AS PER SANS REGULATIONS.

(MPIP, 2021).

Figure 112: Detail 1 technical drawings as specified (Author, 2021).



Figure 113: Possible scenarios of appropriation for detail 1's drainage element (Author, 2021).



### TRANSPARENT ENGAGEMENT: TWO-WAY COMMUNICATION INTERFACE

The second detail is the transparent communication interface that is made up of different transparent materials as can be seen from the prototypes. The prototypes were judged on writability and light. The initial design for the transparent interface was a plain surface and through an iterative process of testing and altering to accommodate found objects the very poetic response became a tangible, responsive interface that reflects the rich and layered nature of the settlement. The panels are connected together with key rings (representation of the found objects) and with the plastic bag 'panels' the cut-out for the key-ring joint is embroidered to avoid the keychain tearing the plastic sheet. This is another example of a key artistic element in the technical resolution of hand-made components that overflow with potential for cultural production.

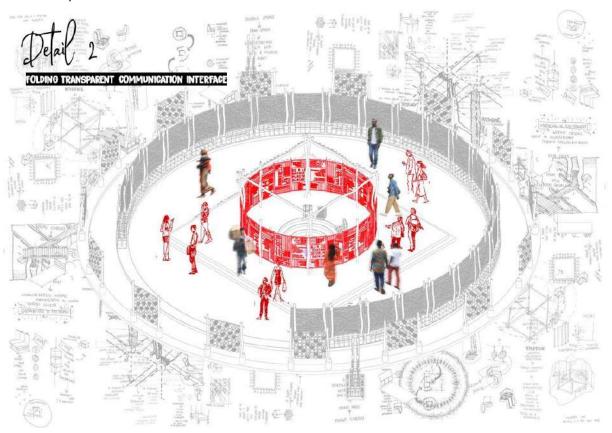


Figure 114: Axonometric highlighting detail 2 in place (Author, 2021).



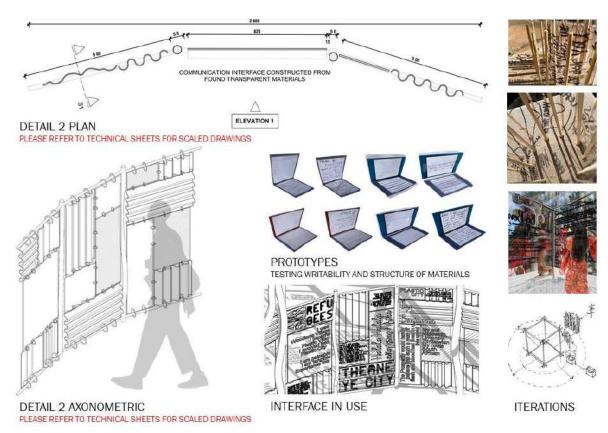


Figure 115: Technical drawings of detail 2 as specified (Author, 2021).

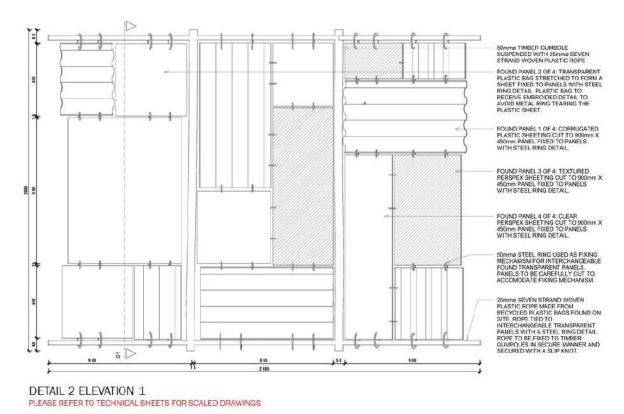


Figure 116: Technical drawings of detail 2 as specified (Author, 2021).



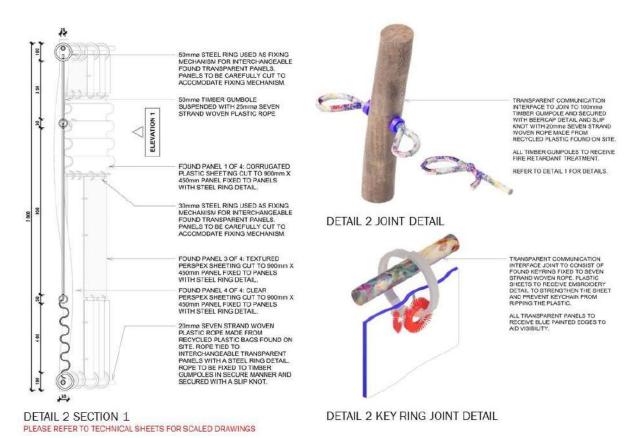


Figure 117: Technical drawings of detail 2 as specified (Author, 2021).

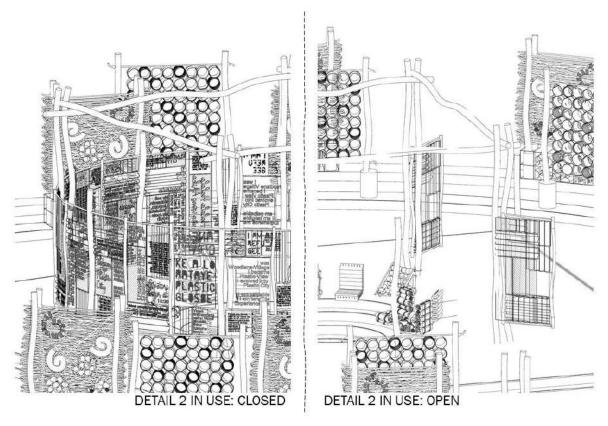


Figure 118: Diagrammatic representation of the communication interface in closed and open positions to allow or block circulation (Author, 2021).



#### WOVEN STORAGE INTERFACE WITH DEPLOYABLE SIT-THINGS

Detail 3 is the storage interface with deployable sit-things and also stores the firewood used in the mediation space. As a response to the legislation restricting foundations on site and to comply with the transitory need of the project the interface uses a heavy base as foundation to support the structure whilst still maintaining mobility. The interface also went through an iterative prototyping process that started with a generic, very poetic response to interchangeable objects and interfaces that were iterated through community feedback and maquettes to test structural integrity and viability. Details from the interface include the seven strand woven rope (Cronje, 2020) made from recycled plastic as well as an iconic bottle-cap detail that serves as a washer to protect the rope from the timber gum pole. The interface also hosts the deployable sit-things that enable the main programmes of the intervention.

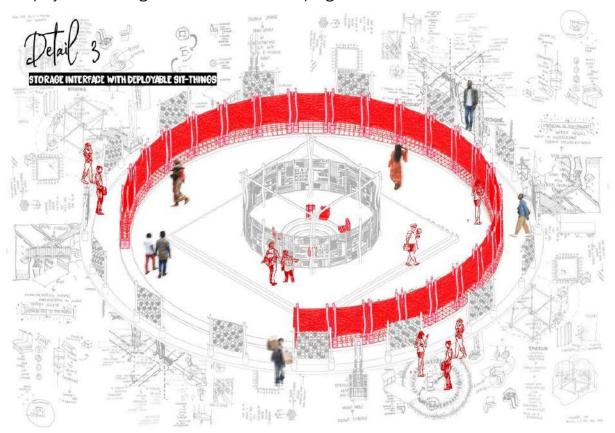


Figure 119: Axonometric highlighting detail 2 in place (Author, 2021).



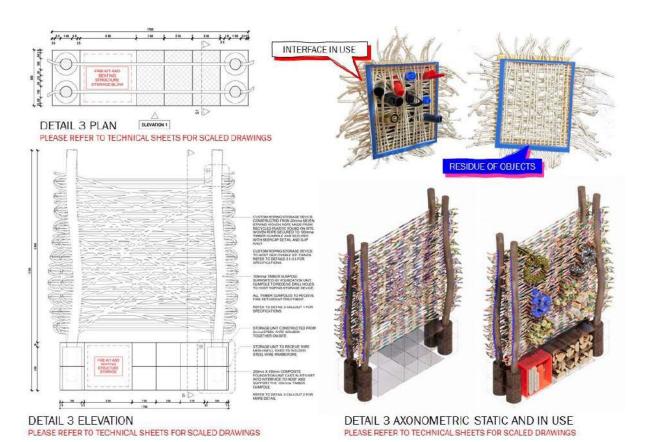


Figure 120: Technical drawings of detail 3 as specified (Author, 2021).

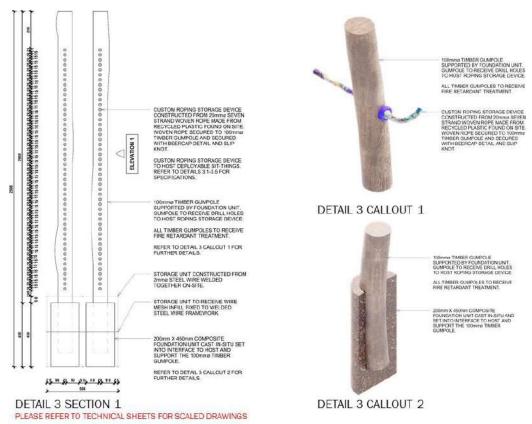


Figure 121: Technical drawings of detail 3 as specified (Author, 2021).



The sit-things are a response to an investigation into the language of sitting in Plastic View. The general narrative of sitting is using an existing found object (like a beer crate or bucket) and use something combined with that as a cushioning element or element of comfort. The approach to the sit-thing designs were collaborative as the sit-things are idealised to represent the individuals in the settlement. Four sit-things were designed collaboratively and one completely out of the perspective of the designer (non-collaborative process) to create a counter-argument for a process with a single author (being the designer) and a process with multiple authors (being all the collaborators) towards meaning-making.

#### 1. COLLABORATIVE SIT-THING 1

The first sit-thing is constructed from two different prototypes where one serves as the structure for the chair and one as cushioning. The prototypes were converted to computerised models to test the practicality of the designs. These 3D models aided in the adaptability testing and technical refinement



Figure 122: Diagrammatic representation of prototypes used for the design of collaborative sit-thing 1 (Author, 2021).



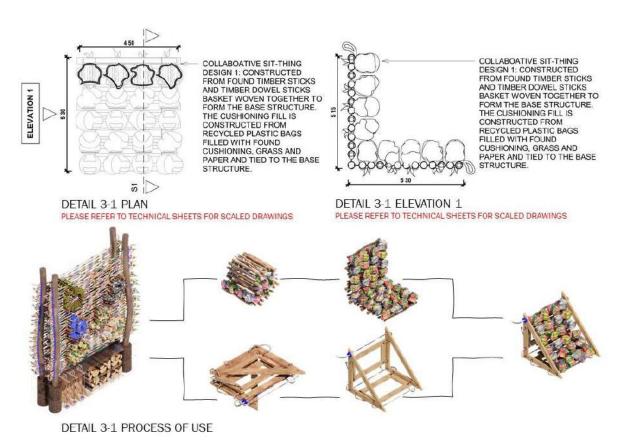


Figure 123: Technical drawings of detail 3.1 as specified (Author, 2021).

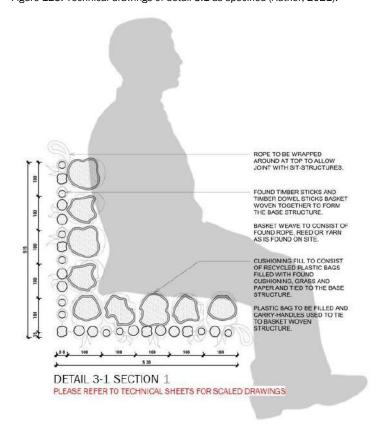


Figure 124: Technical drawings of detail 3.1 as specified (Author, 2021).



### 2. COLLABORATIVE SIT-THING 2

Sit-thing 2 is also a combination of various prototypes to structure and cushion. The structure is fixed with a traditional basket-weave that is a common denominator between various cultures as a connecting agent. The base is constructed from 38 x 76timber battens that were dropped off of site as part of construction waste. The cushioning element that is made up off found objects is also basket woven to the base structure.



Figure 125: Diagrammatic representation of prototypes used for the design of collaborative sit-thing 2 (Author, 2021).



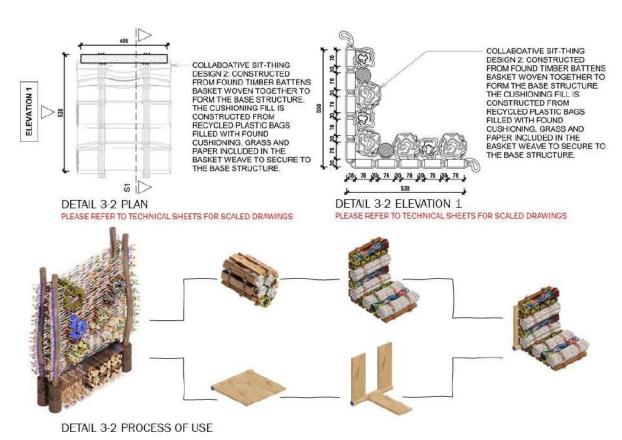


Figure 126: Technical drawings of detail 3.2 as specified (Author, 2021).

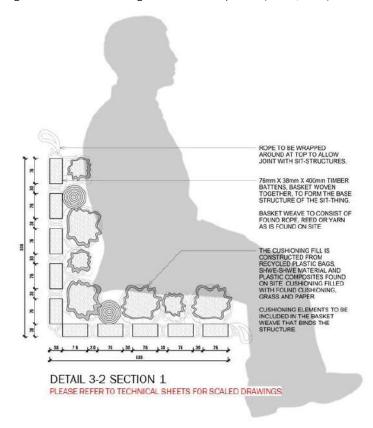


Figure 127: Technical drawings of detail 3.2 as specified (Author, 2021).



### 3. COLLABORATIVE SIT-THING 3

The third collaborative sit-thing is with the same base structure as sit-thing one that is made up from found timber sticks and branches basket woven together. The cushioning is a combination of a basic weave with varying shwe-shwe cut off material. The cushioning is then fixed to the base structure with a rope knot – netting device that the collaborator learnt from a construction worker on site.



Figure 128: Diagrammatic representation of prototypes used for the design of collaborative sit-thing 3 (Author, 2021).



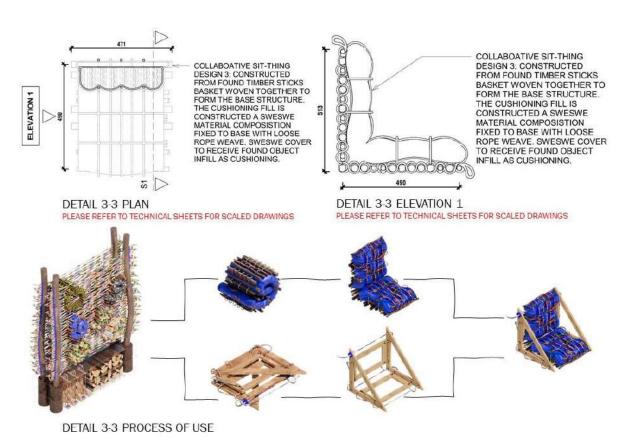


Figure 129: Technical drawings of detail 3.3 as specified (Author, 2021).

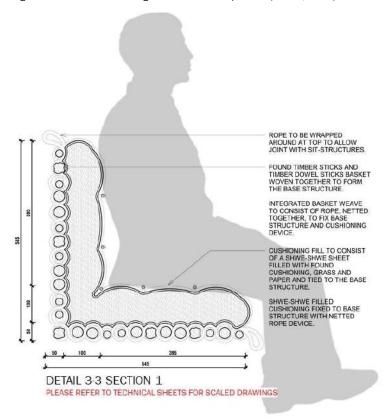


Figure 130: Technical drawings of detail 3.3 as specified (Author, 2021).



### 4. COLLABORATIVE SIT-THING 4

The fourth collaborative sit-thing is the result of combining structure with an artistic flare. The plastic covering will receive a cushioning infill and will be fixed to the base structure with a basket weave and tying the cut plastic bags to the dowel sticks.



Figure 131: Diagrammatic representation of prototypes used for the design of collaborative sit-thing 4 (Author, 2021).



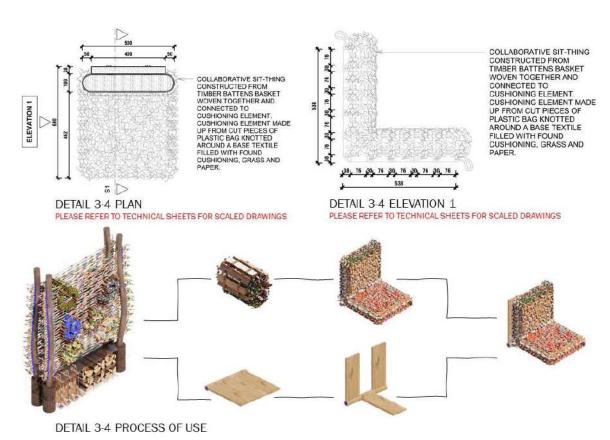


Figure 132: Technical drawings of detail 3.4 as specified (Author, 2021).

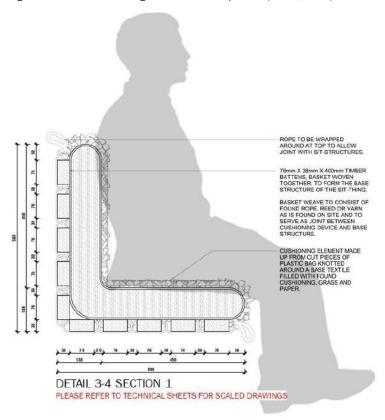


Figure 133: Technical drawings of detail 3.4 as specified (Author, 2021).



# 5. Designer's Sit-Thing 5

The single author designed chair is a response to the indigenous techniques that surfaces in the prototyping sessions and combining the weaves with structure.



Figure 134: Diagrammatic representation of prototypes used for the design sit-thing 5 (Author, 2021).



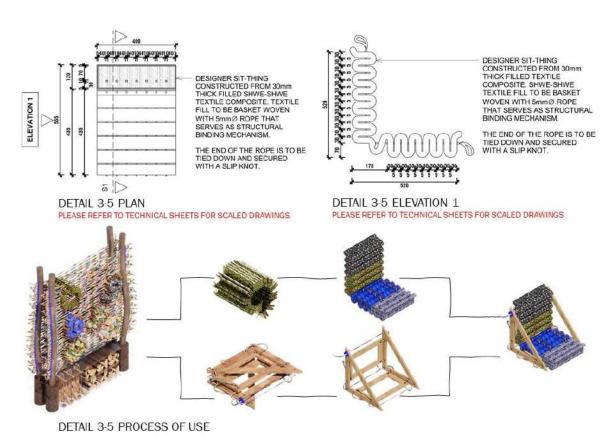


Figure 135: Technical drawings of detail 3.5 as specified (Author, 2021).

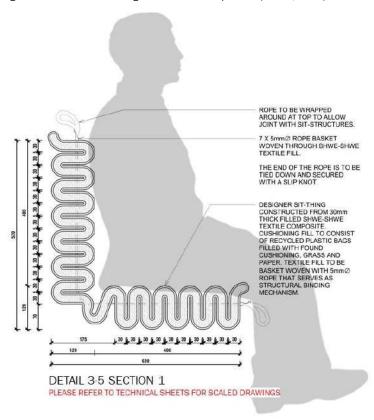


Figure 136: Technical drawings of detail 3.5 as specified (Author, 2021).





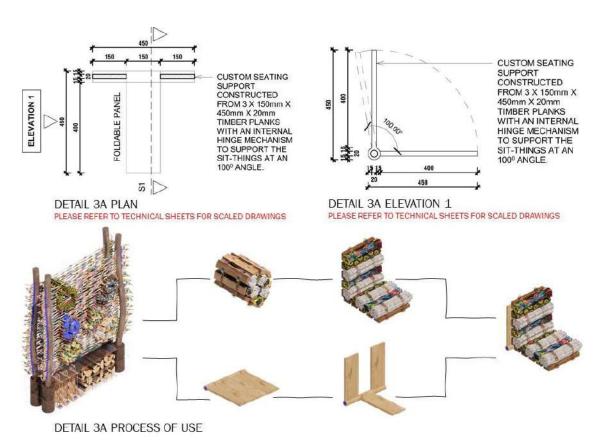


Figure 137: Technical drawings of detail 3A as specified (Author, 2021).

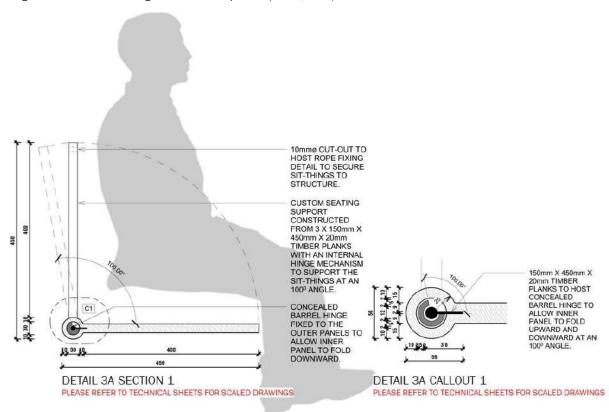


Figure 138: Technical drawings of detail 3A as specified (Author, 2021).



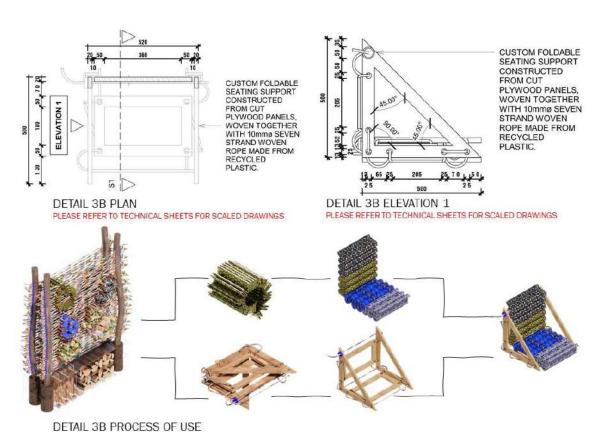


Figure 139: Technical drawings of detail 3B as specified (Author, 2021).

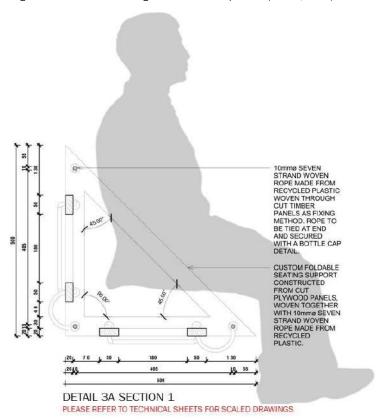


Figure 140: Technical drawings of detail 3B as specified (Author, 2021).





Figure 141: Diagrammatic representation of possible sit-thing scenarios (Author, 2021).



Figure 142: Possible scenarios of appropriation (Author, 2021).



### GAMING INTERFACE

Detail 4 makes use of the same notion of a heavy foundation as structure for the interface. The infill is made up of found plastic bottles and pipes that are zip tied together. The board is a spatial device intended to reflect the game board of a game developed by community members (as an adaptation of both chess and checkers) played on a chequered 8x8 board. Players would use an object representing themselves to play with.

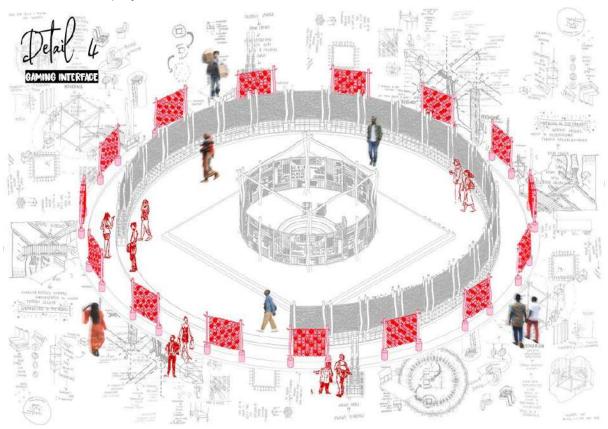


Figure 143: Axonometric highlighting detail 4 in place (Author, 2021).



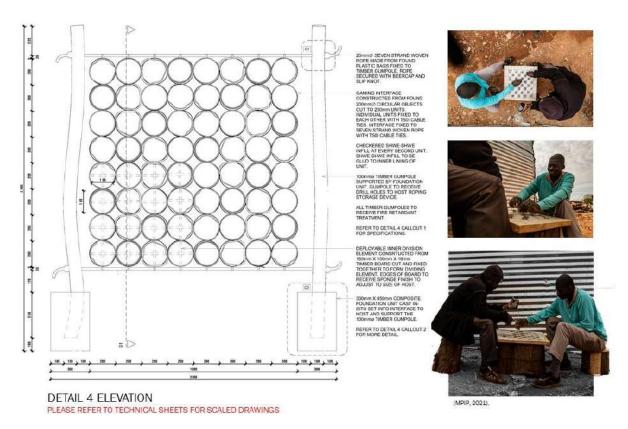


Figure 144: Technical drawings of detail 4 as specified (Author, 2021).

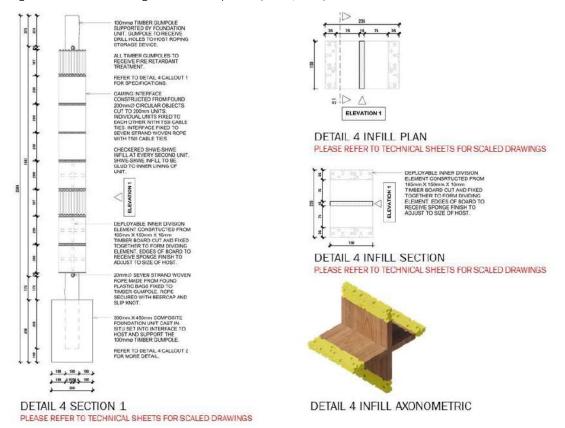


Figure 145: Technical drawings of detail 4 as specified (Author, 2021).



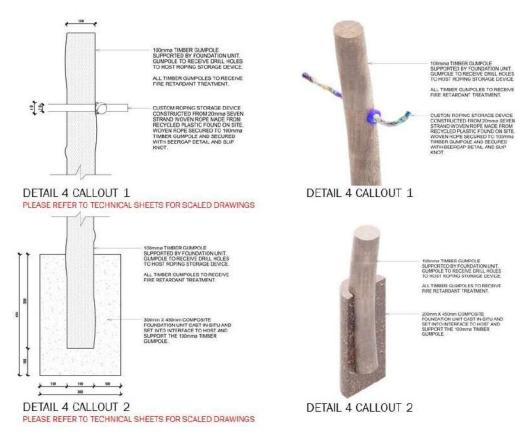


Figure 146: Technical drawings of detail 4 as specified (Author, 2021).



Figure 147: Possible scenarios of appropriation (Author, 2021).



#### A MECHANISM FOR MOVEMENT: ALLOWING FOR AGENCY AND AUTONOMY

The deployable trolley is a response to the need that the individual interfaces should be mobile and the spatial compositions adaptable. The initial design for the trolley was based on a turning mechanism where the individual timber elements would turn around the trolley's axis. The structure of the trolley made it difficult to create an interface from found objects that allows such mechanic intervention. This concept became iterated by turning the timber elements on their own axis. The interface would be lifted onto one element and pulled up and then moved around on the trolley to the desired position. This detail allows the individual interfaces to be spread throughout the settlement and create a larger network of interventions. The interface is constructed from timber gum poles that are fixed to each other with found plastic bottles and pipes that are cut and basket woven together with wire and rope. This allows the timber gum poles to turn on their own axis whilst still remaining one element. There will be magnetic component underneath the plastic bottle and pipe components that will ensure an easy and accessible joining method to existing trolleys in the settlement. The unit will be stores in the storage interface or moved around with the trolleys.

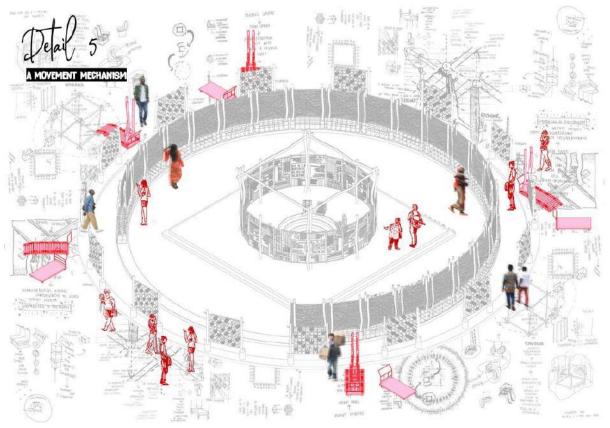


Figure 148: Axonometric highlighting detail 5 in place (Author, 2021).



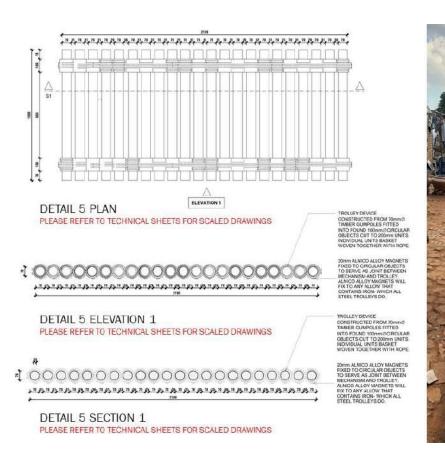


Figure 149: Technical drawings of detail 5 as specified (Author, 2021).

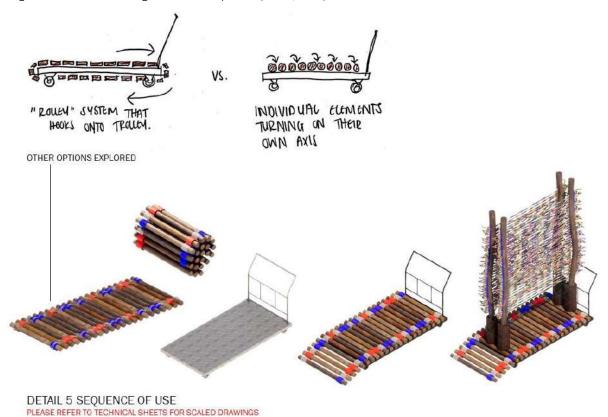


Figure 150: Technical drawings of detail 5 as specified (Author, 2021).



The technical resolution of the project allowed the individual contributions of the collaborators to shine through and enhance the overall proposed experience of the design intervention. The notion of appropriated indigenous knowledges physically manifests through the detailing as iterated prototypes and hand-made constructable elements. This is an extension of the initial design and technical criteria and speaks to the multi-scalar agency that is ever present in the settlement. The fine detailing also allows for the manifestation and exchange of cultural production in a manner that allows familiar association as well as subjective interpretations and adaptations.

## CONCLUSION

The design relied on a collaborative prototyping process to illustrate the meaningful connotations and associations that are made with familiarity in the objects, interfaces and spatial compositions. Through collaborative investigation the project developed from a base proposal that strived towards generating meaning in an intervention that speaks to the tangible aspects of agency. This sets the scene for the most important part of the investigation as the subjective experience through the intervention. The main lens that the project adapted is the semiotic approach to cultural production. The final intervention and prototypes can now be taken back to site in an investigative and reflective session to determine the success of the cultural production though a collaborative methodological process.

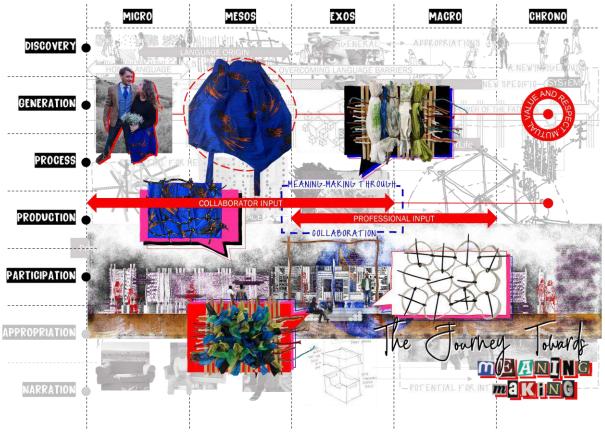
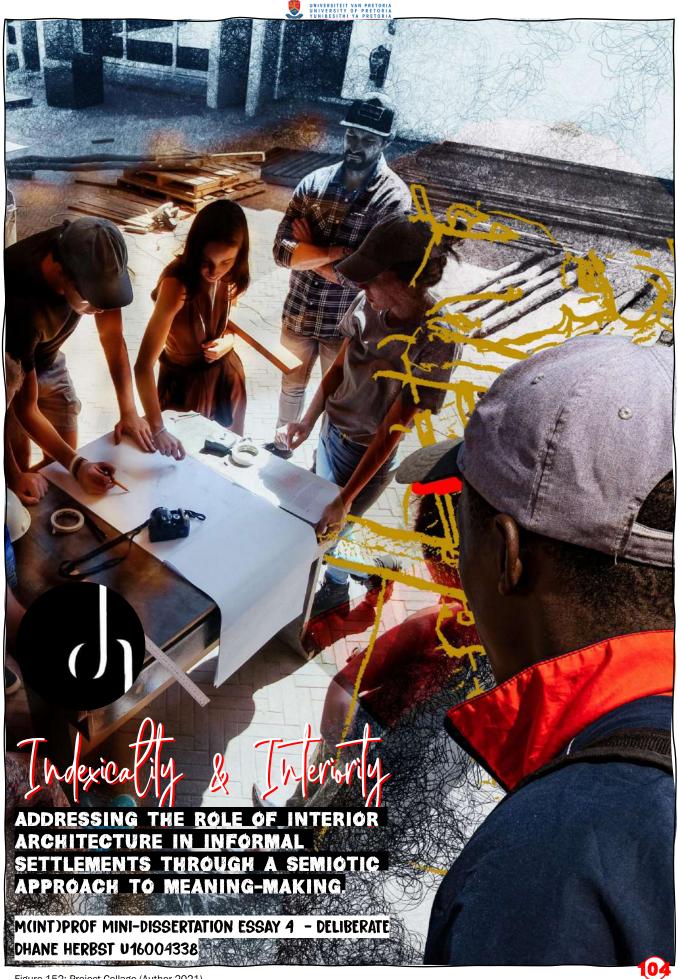


Figure 151: The bridge between author and inhabitant was bridged by use of a collaborative methodology and prototyping. An example is mapped out here to emphasise the multi-scalar spectrum that subjective meaning-making plays out on. (Author, 2021).





## INTRODUCTION

The research project set out to define a role for interior architecture as a vessel of cultural production in informal settlements. Due to the various stages of prototyping and collaboration, the analysis of the meaning embedded and interpreted through the design interventions becomes the conclusive discussion for the argument. In this reflective essay the design project will be analysed according to the base diagram to evaluate the attempted semiotic approach to meaning-making. The findings will be discussed at the hand of a critical reflection of the project and process as a whole, changes in practice as well as contributions to discourse.

# DELIBERATION RESULTS

The individual components that make up the design intervention will be mapped across the base diagram as an evaluation of the meaning embedded and interpreted by the designer, collaborators and inhabitants of the space. The diagrammatic representations of these elements will serve as deliberation of the role of interior architecture in informal settlements.

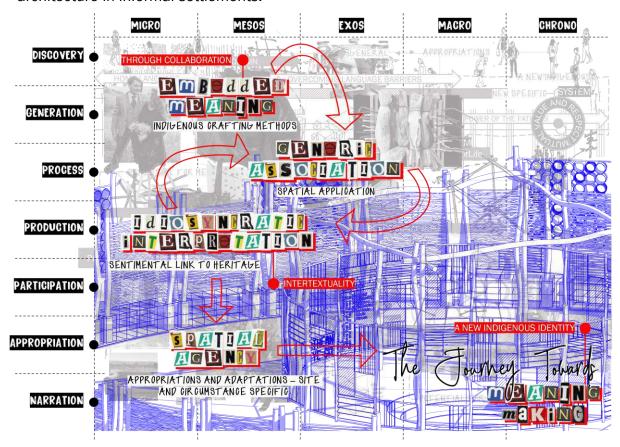


Figure 153: Diagrammatic representation of the process of meaning-making followed in this project. This reflects the language model on-site as it moves from a specific embedded meaning to a generic association (in this case a spatial intervention) that allows idiosyncratic interpretations by the users thereof. The notion of intertextuality becomes evident in the subjective associations of all the inhabitants of the space (Author 2021).



### DISCUSSION

The inductive nature of the project allowed the theoretical premise and semiotic nature of S'petori to translate into a method of spatial design that enables meaning-making through collaboration. This was diagrammatically interpreted and brought to light the notion of intertextuality, defined as the interrelationships between words or phenomena that shape it's meaning (Dictionary, 2006). The meanings interpreted varied according to the surroundings and meanings interpreted for other phenomena. This speaks to the subjective nature of meaning and the relationship between the meaning of an intervention and the context in which it is implemented. The meanings generated throughout the project was amplified by the rich context and participatory action that engaged users in the process and allowed clearer interpretations and associations in the analysis phase. This becomes an exhibition of the potential of interior architecture as a facilitator of meaning-making.

The theoretical premise evolved into a methodology that informed the design investigation and enabled the prototyping process. The collaborative prototypes became touch points for inhabitants to relate to in the spatial composition and embodied the physical manifestation of cultural production through participatory action. The community involvement supported the project and enabled a rich, experimental process to evolve into a design response that speaks to the notion of multi-scalar spatial agency.

The role of interior architecture in informal settlements can not be defined by one project and leaves this question open to debate. The project succeeded on an academic level but the true value can only be determined if the structure were to be built on site and endure and flourish through agency and collaboration. However, this project contributes to the understanding of meaning-making and intertextuality and interior architecture as an agent thereof. Although it is academic in nature, the interactions and participations revealed specific associations and connotations to support the value and contribution of this project.

#### ANSWERING THE RESEARCH QUESTIONS

Research Question:

WHAT IS THE ROLE OF INTERIOR ARCHITECTURE, AS AN AGENT OF MEANING-MAKING, IN AN INFORMAL SETTLEMENT THAT IS HOST TO BOTH TEMPORAL AND PERMANENT INHABITANTS OF ETHNOGRAPHIC VARIETY?

Interior architecture can act as an agent of cultural production by enabling a collaborative process to embed and interpret meaning. As a facilitator, the interior architect can enhance the existing phenomena by filling the gap that the industry provides, which is an intricate skill for human-centered design and agency, whilst still accommodating the local craft and construction methods. The interior architect acts as a bridge between design informants, inhabitants and design interventions and showcases potential for bridging the gap between a top-down and bottom-up research-and design approach.



#### Design Question:

HOW CAN THE SEMIOTIC/INDEXICAL NATURE OF S' PITORI INFORM THE PHYSICAL MANIFESTATION OF MEANING-MAKING THROUGH A COLLABORATIVE EXPLORATION OF SPATIAL AGENCY IN AN INFORMAL SETTLEMENT WITH ETHNOGRAPHIC VARIETY?

By reflecting the semiotic nature of the *lingua franca* S'pitori of specific elements of origin and translating that into something generic for interpretation that allows further specific appropriations, the design became a physical manifestation of the subjective characteristics of language. This embodies both notions of indexicality and interiority as idiosyncratic interpretations and associations of meaning in the project.

#### **Technical Question:**

HOW CAN AN ITERATIVE TECHNIFICATION PROCESS THROUGH PROTOTYPING AND ANALYSIS SERVE AS AN AGENT OF SEMIOTIC CULTURAL PRODUCTION BY INCLUDING THE USERS AS CONTINUOUS CORE INFORMANTS AND COLLABORATORS?

Walking hand in hand with the design refinement, the technical resolution became an agent of meaning-making through participatory action and continuous community engagement. The details and adaptable elements are all iterations on prototypes created by the community and by including the inhabitants in the process they have agency over the spatial compositions as they are familiar with the mechanisms and components that make up these compositions.

# CRITICAL REFLECTION COMMUNITY REFLECTION

"the process made us visible"

"We as a community face many challenges but speaking to (you) is good. It seems good that someone somewhere is interested in our side of the story"

"Throughout the year we have rekindled relationships and I am so happy that we have had the opportunity to do this. We have had weddings, and tea and games and workshops and conversations about difficult things but we talk as humans. Not as researchers and subjects."

"we build and they build and you build but we should build together"

- Quotes received from collaborators

A reflective session amongst the collaborators brought to light the appreciation for a collaborative process. The recognition of the talents and contributions that the collaborators made created a sense of comfort for engaging with research units. The process however did not happen without obstacles but through open communication and transparency all the parties involved were informed on expectations and were able to express concerns.



#### PERSONAL REFLECTION

"Ek het myself leer ken as heldin en as n hond"

- Amanda Strydom & Stef Bos, Die Taal van My Hart

Overall I have thoroughly enjoyed the process as have gained an invaluable amount of knowledge and understanding that has impacted my approach to industry. The process has allowed me to explore and experiment with unconventional methods and practices to see what fruit they might bear.

The project was challenging at various stages and required constant reiteration and adaptation to not stray from the original intentions. At times the clash between what is required for a professional masters degree and what is required on site became a point of tension and made me question the relevance of a project, such as this, in a setting where more pressing matters reign. I was comforted by the sole fact that at this moment in time, this project, and its outcomes, was all I as an individual could contribute to the circumstances. This did blur the lines between research- and personal involvement but in a project aimed at subjective interpretation a touch of personal involvement goes a long way.

Although not everything was smooth sailing, I do not regret any of the engagements as they have translated into lessons that will shape my way forward. I plan on continuing with this alternative approach to the industry and do, from my part, what I can to generate meaningful engagement through spatial interventions.

#### CONTRIBUTION TO DISCOURSE

#### 1. CONTEXTUAL CONTRIBUTION

The project established valuable relationships on site that could be used in future projects to further build the relationship between the research units (of The University of Pretoria) and the inhabitants on site. During the prototyping process new methods of binding and construction came to light that has since been used in the settlement when building structures.

#### 2. THEORETICAL CONTRIBUTION

The project takes on abstract concepts that needed to be synthesised and merged with other complex ideas, both academic and societal, to create a substantial understanding of the theories that informs the design process. This was combined into a base diagram that can be used as a method of analysis for any project that tackles agency, meaning-making, human-centered design and multi-scalar design interventions.

The project methodology shone a light on the potential of meaning-making through collaboration that stems from the theoretical premise of Konigk (2015) that build on the notion of meaning embedded by the designer and interpreted by the inhabitants. Through a collaborative process project intentions and ultimate interpretations are bridged by including the inhabitants as core collaborators and informants. This adds an additional layer of consideration to an already extensive theoretical premise.



#### 3. METHODOLOGICAL CONTRIBUTION

The process followed in this project was rhizomatic in nature and allowed for a very inductive thought process to unfold as needed. The process was also translated into the base diagram and offers an alternative approach to design development. This project is a first iteration of a process that can serve as a mediator between 'top-down' and 'bottom-up' approaches that creates a very important bridge between designer and end-user of projects.

The reflection session with the collaborators also highlighted the value placed, not only in the prototyping process, but in the transformative engagement that took place during the project. The engagement between researcher and inhabitants was reciprocal and manifested with mutual respect and appreciation. The process placed value and care at the core thereof.

#### 4. ETHICAL CONTRIBUTIONS

"Most people ignore most poetry because most poetry ignore most people" - Excerpt from the computer game *Talos Principle* 

"Most people ignore most [research] because most [research] ignore most people" - Adapted from Talos Principle

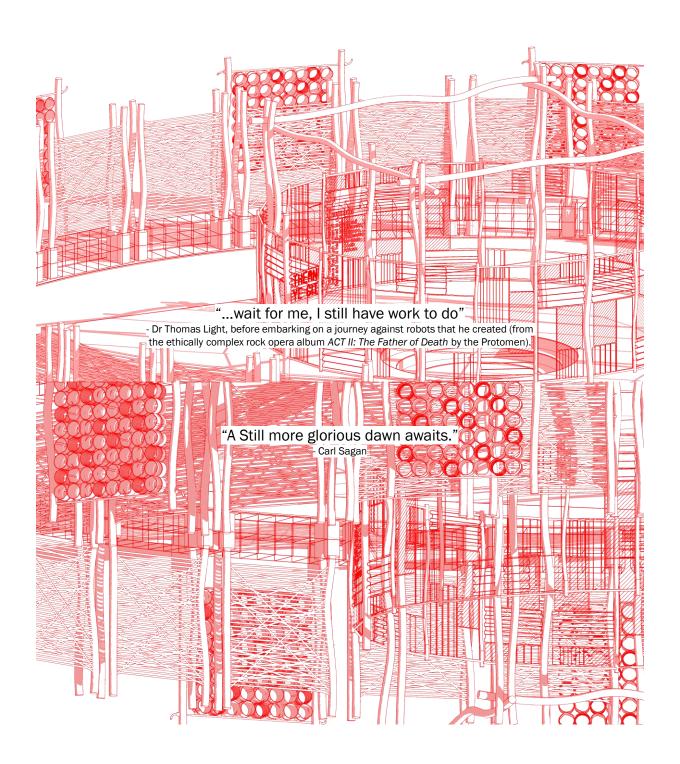
In collaboration with the Reality Studio an ethical roadmap to student engagement with vulnerable communities was created to start the conversation of the viability of sending students into vulnerable communities without the necessary training. The findings were compiled into a website that can be accessed to view stories from students who have dealt with ethically complex scenarios and lessons learn as a lexicon that can aid in future student engagements. Please refer to the addendum for further details regarding this.

## CONCLUSION

This mini-dissertation is a response to the role of interior architecture in our society. It highlights the potential of the field as an agent of enablement for both meaning-making and human-centered processes. The research project addressed the responsibility of designers and provides an incremental step towards transforming the industry. In this intrinsic case study, an interior architectural response translated the rich theoretical and contextual informants into a design proposal that tangibly reflects the notions of spatial agency and meaning-making through collaboration. This project serves as an initial understanding of the complexities that a design project in a vulnerable community embodies and although it can't answer all the questions, it gives a better understanding thereof and creates an important pivoting point for future research projects.

This research project embarked on a journey of experimentation and ambition and leaves the door open for future researchers and designers to partake in this ongoing narrative.







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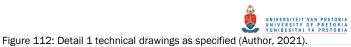


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## REFERENCES

Achten, H. 2019. Interaction Narratives for Responsive Architecture. *Buildings*. 9. 66. Available online at:

https://www.researchgate.net/publication/331785312\_Interaction\_Narratives\_for\_Responsive\_Architecture

Adom, D, Yeboah, A & Ankrah, K. 2016. Constructivism philosophical paradigm: implication for research, teaching and learning. *Global Journal of Arts Humanities and Social Sciences*. 4. 1-9.

ArchDaily. 2021. E Pluribus Unum, The Chapel of Many by Sebastian Hicks. *ArchDaily*. Available online at: https://www.archdaily.com/938195/e-pluribus-unum-the-chapel-of-many-sebastian-hicks.

Berman, P. & McLaughlin, M. W. 1977. Federal Programs Supporting Educational Change. Volume VII: Factors Affecting Implementation and Continuation. Santa Monica, CA: Rand Corporation. Accessed online at: https://essay.utwente.nl/61106/1/BSc\_B\_Liedl.pdf

Bornman, E, Álvarez-Mosquera, P, & Seti, V. 2018. Language, urbanisation and identity: youth black residents from Pretoria in South Africa. *Language Matters:* Studies in the languages of Africa. 49:1. 25–44. Available online at: <a href="https://doi.org/10.1080/10228195.2018.1440318">https://doi.org/10.1080/10228195.2018.1440318</a>

Bosman, G. 2017. Ownership and care in culturally significant architecture: Three case studies. *Acta Structilia*. 24:1.

Bronfenbrenner, U. 2005. *Making human beings human*. Thousand Oaks: Sage Publications.

Cronje, E. 2020. Theory on Systems Lecture. RFP 700 Scenario and Interface Studio. Department of Architecture, EBIT Faculty, University of Pretoria. 25 June 2020.

De Vos, P, & Banda, D. 2019. *Homelands: life on the edge of the South African dream*. Daylight Books.

Dictionary, M. 2006. *The Merriam-Webster Dictionary*. Massachusetts: Merriam-Webster, Inc.

Ditsele, T & Mann, C. C. 2014. Language contact in African urban settings: The case of Sepitori in Tshwane. South African Journal of African Languages. 34:2. 159-165. Available online at: DOI: 10.1080/02572117.2014.997052

Eco, U. 1980. A componential analysis of the architecture sign/column/. New York: Wiley and Sons.

Eckert, P. 2019. The limits of meaning: social indexicality, variation and the cline of interiority. *Language*. 95:4. 751-776. Available online at: : <a href="https://muse.jhu.edu/article/743105">https://muse.jhu.edu/article/743105</a> [Accessed 2020-06-01].



Gell-Mann, M. 2014. The quark and the jaguar. London: Abacus.

Gottdiener, M. 1985. Hegemony and mass culture: A semiotic approach. *American Journal of Sociology.* 90:5. 979-1001.

Hamdi, N. 2004. Small change: art of practice and the limits of planning in cities. London: Earthscan.

Honebein, P. C. 1996. Seven goals for the design of constructivist learning environments. Constructivist learning environments: case studies in instructional design. *Educational Technology Publications*. 17. 135-148. New Jersey: Englewood Cliffs. Available online at: https://www.semanticscholar.org/paper/Seven-goals-for-the-design-of-constructivist-Honebein/ed9339452692b7ea41d184f007bfabc485474b7a

Howard, Z & Somerville, M. M. 2014. A comparative study of two design charrettes: implications for codesign and participatory action research. *CoDesign*. 10:1. 46-62.

Janz, B. 2017. *Place, Space and hermeneutics.* Cham: Springer International Publishing.

Königk, R. 2010. Interior design as architecture's 'other'. Master of Interior Architecture. Pretoria: University of Pretoria.

Königk, R. 2015. An imaginal interpretation of interior design's methods of cultural production: towards a strategy for constructing meaning. PhD Thesis. Pretoria: University of Pretoria.

Mandela, N. 1994. Nelson Mandela's inauguration speech as President of SA | SAnews. Available online at: <a href="https://www.sanews.gov.za/south-africa/read-nelson-mandelas-inauguration-speech-president-sa">https://www.sanews.gov.za/south-africa/read-nelson-mandelas-inauguration-speech-president-sa</a>. [Accessed 14 March 2021].

Matland, R. E. 1995. Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation. *Journal of Public Administration Research and Theory*, pp. 145-174. Accessed online at: <a href="https://essay.utwente.nl/61106/1/BSc\_B\_Liedl.pdf">https://essay.utwente.nl/61106/1/BSc\_B\_Liedl.pdf</a>

Marschall, S. 1998. Architecture as empowerment: the participatory approach in contemporary architecture in South Africa. *Transformation*. 103 - 123. Available online at: <a href="http://transformationjournal.org.za/wp-content/uploads/2017/03/trans035005.pdf">http://transformationjournal.org.za/wp-content/uploads/2017/03/trans035005.pdf</a> [Accessed 2020-06-10].

McCarthy, C. 2005. Toward a definition of interiority. Wellington, New Zealand: Victoria University. Available online at:

https://repository.up.ac.za/bitstream/handle/2263/29775/05chapter5.pdf?sequence=6&isAllowed=y [Accessed 2020-06-03].

Moreleta Park Integration Project. 2020. Moreletapark Integration Project\_ Phase 1 - Community Mapping. Pretoria: University of Pretoria.





Moreleta Park Integration Project. 2021. Moreletapark Integration Project. Pretoria: University of Pretoria.

Muratovski, G. 2016. Ethnographic Research. In: Research For Designers: A guide to methods and practice. New York: SAGE, pp. 56-78.

Parry, J. 2017. Primal Weaving: Structure and Meaning in Language and Architecture. SubStance. 46:3. 125-149.

Ross, J & Watling, C. 2017. Use of empathy in psychiatric practice: constructivist grounded theory study. *BJPscych*. 3. 26-33. Available online at: DOI:10.1192/bjpo.bp.116.004242

SAcares. 2021. SA Cares for Life, NGO. Available online at: https://www.sacares.website/. [Accessed 28 October 2021].

Sanders, S. 2000. Defining a relevant architecture in South Africa. *Architectural Research Quarterly*. 4:1. 67-80.

Sebeok, T. 1974. Semiotics: A survey of the state of the art. *Current Trends in Linguistics*. 12. 211-64.

Shaw, M. 2020. Courting the wild twin. Chelsea Green Publishing.

Swiggers, P & Eco, U. 1985. Semiotics and the philosophy of language. *Language*. 61:4. 919.

University of Pretoria. 2017. 12132020 Yearbooks 2017 University of Pretoria. [ONLINE] Available

at: <a href="https://www.up.ac.za/yearbooks/2017/programmes/view/12132020">https://www.up.ac.za/yearbooks/2017/programmes/view/12132020</a>. [Accessed 09 November 2021].

Urban Citizen Studio Mamelodi. 2020. Epistemic Diversity. Univeristy of Pretoria.

Vaikla-Poldma, T. 2013. Meanings of designed spaces. New York: Fairchild.

Vitruvius, Cesariano, C & Bruschi, A. 1981. De Architectura. Milano: Il Polifilo.

Wagner, V.K, Ditsele, T & Makgato, M.M. 2020. Influence of S'pitori on standard Setswana of its home language learners at three Tshwane townships. *Literator* 41:1. Available online at: https://doi.org/10.4102/lit. v41i1.1653

Walsham, G. 1995. The Emergence of Interpretivism in IS Research. *Information Systems Research*. 6. 376-394. Available online at: http://dx.doi.org/10.1287/isre.6.4.376



