



Design report title: A Design toolkit for safe and compliant early childhood development centres - A case study of Samora informal settlement in Philippi, Cape Town

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Abstract

This research addresses the urgent challenge of unsafe and non-compliant Early Childhood Development (ECD) centres in South Africa's informal settlements, with a focus on the Samora Machel informal settlement in Philippi, Cape Town. Many of these centres operate without registration, often in makeshift structures that lack adequate space, ventilation, and sanitation, posing serious risks to children's development and educator wellbeing. Despite national policies promoting quality ECD services, systemic barriers such as misinformation, disinformation, inaccessible regulations, limited funding, and infrastructural constraints persist. To respond to this, the study employed a qualitative, practice-based methodology grounded in the Double Diamond design process. This iterative framework enabled me to explore, define, develop, and deliver a co-designed solution in collaboration with ECD practitioners. Data was collected through interviews, observations, and feedback from the stakeholders, ensuring that ECD practitioner voices shaped the outcome.

Findings revealed that new and unregistered ECD practitioners face misinformation, spatial issues, and access to correct information barriers in achieving compliance. In response, the study developed a comprehensive design toolkit, "Isikhukhukazi". That consolidates regulatory guidance, spatial layout templates, and visual aids into an accessible, modular resource. This toolkit empowers new and unregistered ECD practitioners to create safe and compliant regulation-aligned learning environments. The research contributes a scalable, context-sensitive design intervention that bridges policy and practice, offering a pathway toward dignified, child-centred ECD infrastructure in under-resourced communities.

Keywords: Safety and Compliance, Early Childhood Development, Centre and infrastructure, prototypes, design toolkit.

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Glossary

Key term	Definition
ECD Centres	Madyibi and Bayat (2021) explains that an early childhood development (ECD) facility is a partial care facility that provides an early childhood program that encompasses early learning and the development of children before they start formal schooling.
Caregiver	Any person providing care to children in a registered or unregistered ECD centre irrespective of their training or lack thereof.
Partial care	Section 76 of the Children’s Act, No. 38 of 2005 (as amended) defines partial care as follows: “partial care is provided when a person, whether for or without reward, takes care of more than six children on behalf of their parents or care givers during specific hours of the day or night, or for a temporary period, by agreement between the parent and care givers and the provider of the service, but excludes the care of a child
ECD Practitioners	An ECD Practitioner in South Africa is a trained professional who works in the field of Early Childhood Development (ECD), focusing on the care and education of children from birth to around age five or Grade R.

Abbreviations

HEI	Higher Education Institutions
SACAP	South African Council for the Architectural Profession
NBR	National building regulations
ECD	Early childhood development
CoCT	City of Cape Town
DSD	Department of Social Development
NPO Act	Non-profit Organisations Act No. 71 of 1997
DBE	Department of Basic Education

Introduction

This design report, I to explore a pressing challenge in South Africa's informal settlements. The lack of safe and compliant Early Childhood Development (ECD) facilities. An early childhood development (ECD) facility is a partial care facility that provides an early childhood programme that encompasses early learning and the development of children before they start formal schooling (Bayat and Madyibi, 2021).

Many informal settlements in South Africa rely on community based ECD centres, often established in private residences, which sometimes resulting in non-compliance, structural deficiencies, and in severe cases, demolitions carried out by local building authorities. While these facilities provide a vital service, they frequently face limitations, Project Preparation Trust of KZN (PPT). Dawes and Bierstekers (2011) points out, Infrastructure in ECD can be looked at across three distinct facility types: in public schools, in registered community based ECD facilities, and in unregistered community based ECD facilities. The unregistered ones, often struggling with non-compliance, structural deficiencies, and even demolition by authorities. This creates a precarious situation for both caregivers and children, Project Preparation Trust of KZN (PPT) (, 2014).

The built environment profoundly influences how we live, learn, and interact, and within this context, architecture plays a pivotal role in shaping spaces that are not only functional but also nurturing. Architects, often regarded as “super creatives” (Florida, 2002), are increasingly called upon to confront society's “wicked problems” by stepping beyond corporate service as “changemakers” and engaging directly with the average individuals (Combrinck, 2021). In this study, architecture is positioned as a transformative tool. One that can empower new and unregistered ECD practitioners in co-designing a toolkit to assist ECD centres to be safe, compliant, and conducive for early learning.

This research seeks to exploring innovative solutions for safe and compliant ECD centres specifically within the context of informal settlements. Through a case study of ECD centres in Samora Machel, an informal settlement in Philippi, Cape Town. I will investigate the needs and challenges faced by the ECD practitioners. By applying design thinking principles and leveraging the expertise of architects as “changemakers”.

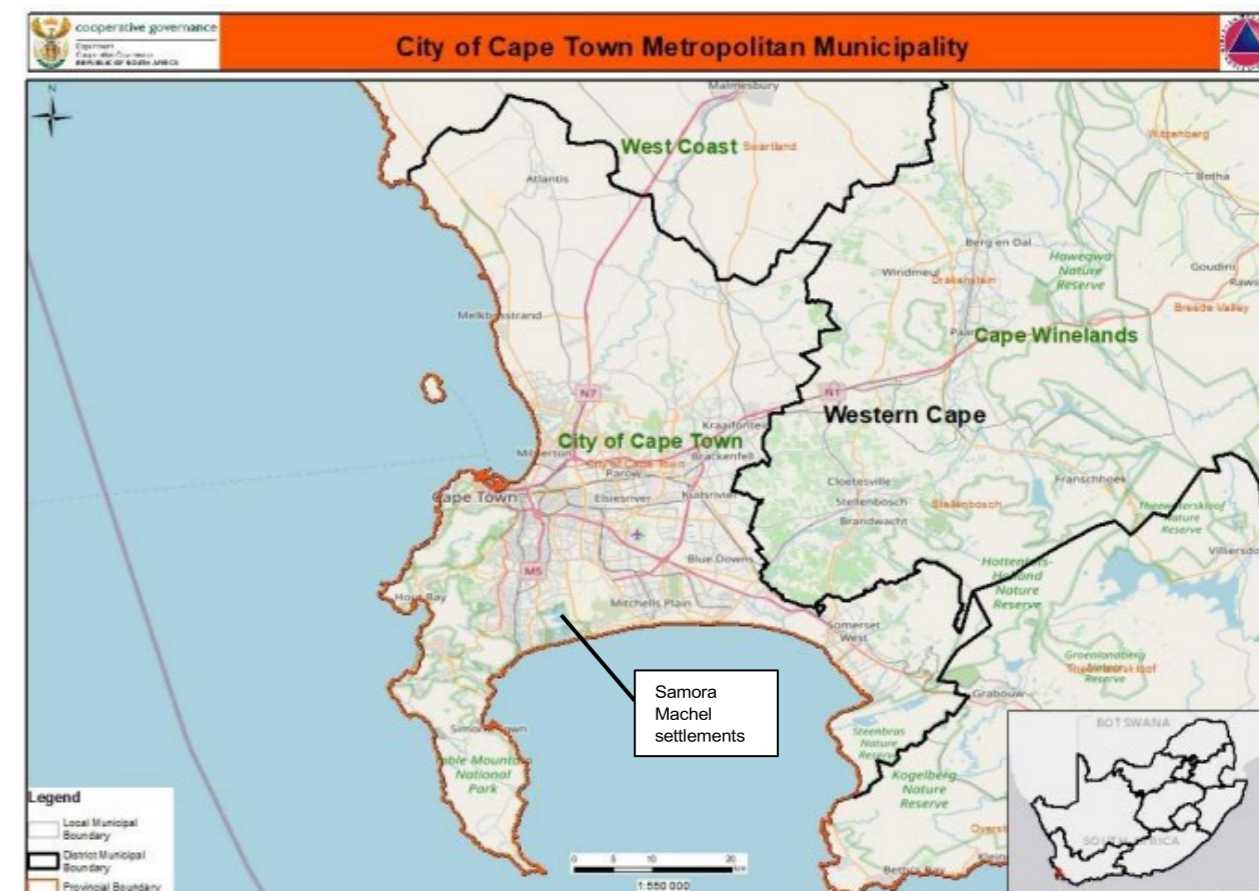


Figure 1: Map of Cape Town, showing Samora Machel settlement (City of Cape Town Metro, n.d.).

1.2 Background to the research

Early Childhood Development (ECD) facilities are the foundation for a child's cognitive, social, and emotional growth. However, the current state of ECD facilities in many informal settlements raises concerns that have a significant impact on a child's overall development and potentially creates hazards for future generations (Mbarathi and Diga, 2016).

A study by Sotuku, Okeke, Mathwasa . (2016) emphasizes the critical role of ECD centres design. Architects should not design spaces that merely enable children to meet minimum requirements in their developmental milestone A stimulating learning environment with adequate space, proper ventilation, and age-appropriate furniture fosters a child's curiosity and supports their developmental journey (Smith et al. 2007)

Early learning provision in South Africa is primarily provided in the home and in privately owned facilities that range from registered to unregistered ECD centres (Grow ECD. (n.d.), 2025). It is therefore concerning that a series of nationwide and provincial ECD audits of facilities have consistently described the physical infrastructure of many facilities as inadequate and called for urgent improvement (DSD, 2014).

This lack of adequate ECD centres infrastructure can be viewed as a national crisis within the ECD sector that has been fuelled by state legislation that prohibits public finance from being utilised to upgrade privately owned facilities (Financial and Fiscal Commission, 2015). Current legislation prohibits public funding for upgrades to privately owned facilities, leaving many ECD centres struggling to meet basic safety and health standards (Madyibi and Bayat, 2021). The consequences of inadequate infrastructure extend beyond the children themselves. Unsafe and unhygienic work environments demotivate teachers and negatively impact their ability to effectively care for and educate children (Rahardjo, 2014). This ultimately creates a “wicked” cycle, hindering both the quality of care and the overall learning experience. While the importance of ECD centre infrastructure is recognized, there remains a gap in knowledge regarding the development of safe, compliant, specifically within the context of informal settlements.

1.2.1 The Importance of ECD Facility Infrastructure

Early Childhood Development centres play a critical role in shaping the lives of children, particularly in informal settlements where many children spend significant portions of their day (Madyibi and Bayat, 2021). The infrastructure of these facilities is paramount, both indoor and outdoor to ensuring the health, safety, and overall well-being of children. ECD facilities play a crucial role in fostering children's cognitive, social, and emotional growth (Adebunmi . Aina; Keshni Bipath, 2022). Figure 2. shows a desired outdoor learning environment. However, ECDs in informal settlements like Samora Machel struggle to provide adequate play area. Most of them operate on small, private properties within informal settlements. These centres, are often the most accessible option for vulnerable communities, frequently struggle to meet basic infrastructural standards, particularly concerning space.

1.2.2 Physical Environment and Child Development

The physical structure of ECD facilities significantly influences children's development. Research indicates that adequate space, both indoors and outdoors, is essential for play, learning, and exploration, which are critical for cognitive and social development (Berris and Miller, 2011). Informal settlements such as Samora Machel, are often characterized by limited land availability and overcrowding. This makes it difficult to allocate sufficient space for ECD centres, especially those serving many children.



Figure 2: Image of a desired outdoor learning environment (Platform Architects, 2024).



Figure 3: Image showing a very small outdoor play area, with no play equipment (Author, 2024).

Early learning centres should be 'homely', inviting, bright, linked to the outdoors, and designed so the space 'welcomes the child, makes them feel safe, and encourages learning' (Berris and Miller, 2011). A lack of space can restrict the types of activities and learning experiences that children can engage in. For example, outdoor play, which is essential for physical and cognitive development, may be limited due to a lack of space in areas like Samora Machel. Figure 3. An example of a very small outdoor play area can be seen in figure 3, (shown in yellow) at an ECD in Samora Machel.

Factors such as lighting, noise levels, and temperature also contribute to children's comfort and ability to concentrate (Satterlee et al., 2015). For instance, studies have shown that natural lighting and appropriate acoustics can enhance children's learning experiences and emotional well-being (Satterlee et al., 2015). However, ECD facilities in informal settlements often struggle to provide these optimal conditions. Most of these facilities are housed in informal structures, such as makeshift classrooms or converted dwellings, as seen in figure 4. These structures may not have adequate natural lighting, proper ventilation, or insulation to regulate temperature and noise levels.

The National Integrated Early Childhood Development outlines the commitment to improving the quality of ECD service framework for the provision of ECD services, guiding the roles and responsibilities of various stakeholders (Department of Social Development, 2016). In practice it is difficult for new and unregistered practitioners to meet these requirements in informal settlements, without any formal guidance (Project Preparation Trust of KZN (PPT), 2014). Since early learning provision in informal settlement of South Africa are primarily provided in the home and in privately owned facilities that range from registered to unregistered ECD facilities. Therefore, this could be why a series of nationwide and provincial ECD audits of facilities have consistently described the physical infrastructure of many facilities as inadequate and called for urgent improvement, (Madyibi and Bayat, 2021).

This means inadequate facilities can create unsafe and unhygienic work conditions for educators and children alike, affecting their ability to provide quality care and education. This, in turn, can lead to decreased motivation among teachers, (Madyibi and Bayat, 2021). potentially impacting the quality of education. This issue now becomes an opportunity for me to explore innovative design toolkits for ECD practitioners to guide them in achieving facilities that are safe and compliant, that are situated in informal settlements, particular the chosen case study of my research, the case study of Samora Machel in Philippi, Cape Town. Figure 5. shows the current unsafe and unhygienic state of ablutions in one of the ECD centres in Samora township.



Figure 4: Shows a state of an undesirable indoor learning environment (Sullian, 2024).



Figure 5: Shows unsafe and unhygienic working conditions for educators and children (Author, 2024).

1.3 Problem Statement

Early Childhood Development (ECD) centres play a critical role in shaping the lives of young children, particularly in informal settlements where they often serve as the primary space for early learning and care. Many children in these communities spend extended hours sometimes from as early as 6 a.m. to 5 p.m. in ECD centres (Bayat and Madyibi, 2021), making the safety, functionality, and developmental quality of these environments vitally important.

However, the current state of ECD centres in informal settlements raises serious concerns. A substantial number of these facilities are unregistered and operate outside the bounds of regulatory compliance (Project Preparation Trust of KZN (PPT), 2014). They are often operated by newly established or unregistered ECD practitioners who, despite their commitment to providing care, face numerous barriers to formal registration and infrastructure development. These barriers include limited access to funding, lack of awareness of regulatory requirements, and inadequate support from municipal and national authorities. As a result, many centres suffer from structural deficiencies, poor ventilation, overcrowding, and a lack of age-appropriate resources all of which pose risks to children's health, safety, and overall development (Cabello and Savec, 2018; Sotuku et al., 2016).

This increase of unregistered and non-compliant ECD facilities represents a systemic challenge that demands innovative and context-sensitive solutions. The physical infrastructure of these centres directly influences learning outcomes, emotional well-being, and the ability of educators to provide quality care (Rahardjo, 2014). Without safe and compliant environments, children are exposed to hazards that undermine their developmental potential, while educators are left demotivated and unsupported, (Marieta Visser, 2021).

This design report seeks to explore the underlying reasons behind the high prevalence of unregistered ECD centres, and the operational challenges faced by practitioners. Through a case study of Samora Machel informal settlement in Philippi, Cape Town, the research aims to develop a design toolkit that offers practical, scalable, and regulation-aligned solutions. The goal is to empower communities and practitioners to co-create ECD facilities that are safe, compliant, and nurturing ultimately mitigating the risks associated with unsafe and non-compliant centres and contributing to a stronger foundation for early childhood development in South Africa's informal settlements.

1.4 Research questions

What are the key challenges and opportunities in developing a design toolkit for safe and compliant Early Childhood Development centres within the context like Samora Machel Informal Settlement in Philippi, Cape Town?

1.4.1 Sub-questions

1.4.1a What are the primary safety risks and compliance gaps observed in existing Early Childhood Development centres within Samora Machel Informal Settlement?

1.4.1b How can ECD practitioners in the informal communities contribute to the co-design of a toolkit to promote quality care in safe and compliant ECD centres ?

1.5 Research aims and objectives.

The overarching objective of this research is to develop a comprehensive design toolkit that empowers new and unregistered Early Childhood Development (ECD) practitioners in informal settlements to establish safe, compliant, and nurturing learning environments for children. This toolkit will serve as a practical and accessible resource to guide the development, registration, and approval of ECD facilities, particularly in under-resourced contexts like Samora Machel informal settlement in Philippi, Cape Town.

To achieve this, the research will pursue the following specific objectives:

1. Investigate the key safety risks and compliance gaps currently present in ECD centres within informal settlements, with a focus on understanding the structural, regulatory, and operational challenges that hinder registration and safe operation.
2. Explore innovative design solutions that can streamline the ECD registration process. This includes identifying ways to centralize and simplify access to critical information, such as municipal bylaws, building regulations, and the requirements outlined in the Children's Act.
3. Develop a one-stop shop design toolkit that consolidates all necessary documentation, guidelines, and resources required for registration and compliance. This toolkit will include templates, checklists, visual guides, and contact directories to support ECD practitioners especially those with limited formal training in establishing centres that meet safety and infrastructure standards.

2 Introduction

Early Childhood Development (ECD) is recognised acknowledged as a critical foundation for lifelong learning, shaping how they learn, grow, and connect with the world (Centre for Early Childhood Development, 2025). Research shows that nearly 90% of a child's brain development occurs before the age of five, making these early years a golden window for nurturing potential, cognitive, emotional, and physical growth (Mathwasa and Shumba, 2020). In South Africa, national and municipal policies such as the National Integrated ECD Policy (2015), the Children's Act (Act 38 of 2005), and the City of Cape Town's ECD Policy (2013) reflect a growing commitment to improving access to quality ECD services. These policies emphasise the need for safe, inclusive, and developmentally appropriate environments for children from birth until they begin formal schooling.

Despite these policy commitments, many ECD centres, especially those located in informal settlements such as Samora Machel, remain unregistered, under-resourced, and unable to meet regulatory compliance standards. These centres are often started from the passionate community members who lack formal training, infrastructure, and support systems to navigate the complex registration process. The challenges they face are compounded by the fact that many of the guiding policies and compliance frameworks are not easily accessible, nor are they written in a way that is simple to understand or implement without external support (City of Cape Town, 2013; Visser et al., 2021).

To fully grasp the realities these practitioners, we must look beyond the paperwork. Their daily reality includes overcrowded spaces, limited municipal services, and makeshift classrooms in garages or backyard shacks (refer to figure 4). Despite these challenges, they provide care, stimulation, and a sense of belonging to children who might otherwise be left behind (Mathwasa and Shumba, 2020).

However, the academic literature still falls short in fully capturing the lived experiences of these practitioners. While policies outline what should be done, they rarely address how to overcome the real-world barriers these centres face. Few studies offer practical design solutions or support systems tailored to informal contexts. As Visser et al. (2021) point out, professionals like architects could play a transformative role but their involvement at scale is still undefined.

This literature review seeks to address this gap by critically engaging with both academic research and policy documents to highlight the systemic challenges experienced by new and unregistered ECD centres. It also lays the foundation for the design intervention proposed in this report. A centralized toolkit that supports infrastructure compliance, and access to service providers. By doing so, it seeks to empower new and unregistered ECD practitioners in places like Samora Machel to create safe, stimulating, and regulation-aligned environments for the children in their care.

2.1 Safety Issues in Informal ECD Centres

Safety is not optional in Early Childhood Development; it is a fundamental right. Yet for many children growing up in informal settlements like Samora Machel, the spaces meant to nurture and protect them are often the very places where their safety is most compromised. The reality is that many ECD centres in these communities operate in unsafe, makeshift structures that fall far short of the standards required for registration, leaving them excluded from formal support systems and subsidies.

The Policy Study (Mathwasa and Shumba, 2020:10) paints a vivid picture of this reality. Centres were found operating in garages, shacks, and church halls with poor ventilation, broken windows, and no fencing. Some situated dangerously close to busy roads. In one account, a parent expressed deep concern about the lack of secure boundaries, fearing for their child's safety during outdoor play. These are not isolated cases; they reflect a systemic issue where infrastructure and location directly undermine the wellbeing of children and the viability of the centres themselves.

The City of Cape Town's ECD Policy (2013) outlines clear safety requirements for registration, including fire safety certificates, health clearance, and compliance with zoning and building regulations. However, for centres in informal settlements, these requirements are often unattainable. Without formal land rights or approved building plans, many centres cannot even begin the registration process. As a result, they remain invisible to the system unfunded, unsupported, and unprotected (Matshidiso V. Sellol; Nicole De Wet-Billingsl; Khuthala Mabethall; Lerato Makuapanel, 2024).

Visser et al. (2021) further highlight how this safety issues intersect with practitioner stress and burnout. In centres with no teaching assistants and limited space, practitioners are expected to manage large groups of children while simultaneously ensuring their safety. One practitioner described the emotional toll of working in an overcrowded, poorly equipped centre

The lack of safety also affects children with disabilities most acutely. The Eastern Cape study found that many practitioners lacked the skills or resources to identify and support children with special needs (Mathwasa and Shumba, 2020). In unsafe environments, these children are even more vulnerable, and their exclusion from early learning opportunities perpetuates cycles of marginalization. Ultimately, safety is one of the most significant barriers to registration for informal ECD centres. Without secure buildings, proper sanitation, and safe outdoor play areas, centres cannot meet the minimum standards set out in the Children's Act (RSA, 2005) and related policies. Yet these standards, while necessary, must be accompanied by practical support and design solutions that recognize the constraints of informal contexts.

This design report responds to that need by proposing a one stop-shop toolkit that includes safety audit templates, low-cost spatial planning guides, and connections to local service providers. By humanizing compliance and making safety achievable, the toolkit aims to help centres move from survival to sustainability. Creating environments where children are not only protected, but truly free to learn and grow.

2.2 Infrastructure in Informal ECD Centres

Infrastructure is more than bricks and mortar. It is the physical expression of care, safety, and dignity in early childhood development. For children in informal settlements like Samora Machel, the quality of the space they learn and play in can determine whether their early years are filled with stimulation and security or with risk and restriction. Yet, for many ECD centres in these communities, infrastructure remains one of the most persistent and visible barriers to compliance and registration.

The Eastern Cape ECD Policy Study (Mathwasa and Shumba, 2020) found that most ECD centres in the province operated in structures that did not meet the minimum norms and standards required for children aged 0 - 4. These included community halls, garages, shacks, and church buildings spaces never intended for early learning. Many lacked basic features such as proper ventilation, safe flooring, lockable kitchens, or secure fencing. In some cases, children played within metres of busy roads, separated only by makeshift barriers or nothing at all. This lack of compliant infrastructure is not just a technical issue, it is a deeply human one. Practitioners often spoke of their frustration and helplessness (Mathwasa and Shumba, 2020). These stories reflect the commitment of practitioners, but also the systemic neglect that leaves them unsupported.

The City of Cape Town's ECD Policy (2013) outlines clear infrastructure requirements for registration, including compliance with fire safety regulations, environmental health standards, and zoning laws. However, these requirements are often out of reach for centres in informal settlements. Without formal land tenure, building plans, or access to municipal services, many centres cannot even begin the process of upgrading their facilities. As a result, they remain unregistered and excluded from government subsidies and support.

Visser et al. (2021) further highlight how infrastructure challenges intersect with learning quality. In overcrowded classrooms with no partitions, practitioners struggle to group children by age or developmental stage. The lack of storage space means learning materials are often damaged or inaccessible. Outdoor areas, if they exist, are frequently unsafe or underutilized due to broken equipment

or lack of fencing. These conditions not only hinder learning but also compromise children's safety and wellbeing.

The issue of infrastructure is therefore central to the problem of non-compliance. Without safe, functional, and child-friendly spaces, ECD centres cannot meet the standards set out in the Children's Act (RSA, 2005) or the National Integrated ECD Policy (RSA, 2015). Yet, upgrading infrastructure requires resources, technical support, and design guidance. None of which are readily available to most informal centres.

The overarching objective of this research is to develop a comprehensive design toolkit that empowers new and unregistered Early Childhood Development (ECD) practitioners in informal settlements to establish safe, compliant, and nurturing learning environments for young children. This toolkit will serve as a practical and accessible resource to guide the development, registration, and approval of ECD facilities, particularly in under-resourced contexts like Samora Machel informal settlement in Philippi, Cape Town.

2.3 The Design Toolkit

As I engaged more deeply with the lived realities of ECD practitioners in informal settlements of Samora Machel, it became clear that what many of them needed wasn't just funding or infrastructure. It was clarity. A way to navigate the maze of registration, compliance, and safety requirements without feeling overwhelmed or excluded. That's where the idea of a design toolkit began to take shape not as a technical fix, but as a human-centered response to a complex challenge.

2.3.1 What is a design toolkit?

A design toolkit is a curated set of resources like visual guides, templates, checklists, and interactive components that supports users in navigating a design or development process. Toolkits are not just collections of documents, they are structured systems that help users make sense of complex information, take action, and reflect on their progress (Burnette, 2016).

In participatory design, toolkits are especially powerful because they allow users to express tacit knowledge and things they know and feel but may not have the words to articulate (Eliassen and Lykke, 2024). Whether through drawing, mapping, or storytelling, toolkits help surface insights that might otherwise remain hidden. In architectural and industrial design, bespoke toolkits have been shown to increase agency, streamline workflows, and embed intelligence into the design process (Steenblik and

Wang, 2019).

For this design project, the toolkit is envisioned as a one-stop resource to support ECD practitioners, especially those with limited resources in establishing safe and compliant centres. It could include translated policy documents, visual roadmaps, infrastructure templates, and contact directories for service providers. It's designed to be practical, visual, and emotionally resonant.

2.3.2 Why use a toolkit?

The decision to develop a design toolkit for this research project is strongly supported by existing literature across design, architecture, and participatory practice. Toolkits have emerged as powerful instruments for translating complex systems into accessible, actionable formats, and especially for users operating outside formal structures or with limited technical training.

Burnette (2015) argues that design toolkits offer procedural intelligence by enabling users to apply relevant knowledge through structured, flexible tools. Rather than prescribing a fixed sequence, toolkits allow for adaptive orchestration of design processes, making them particularly useful in dynamic, under-resourced environments. This flexibility is echoed by Eliassen and Lykke (2024), who emphasize that participatory design toolkits help surface users' tacit knowledge, insights that are felt and lived but not easily verbalized. Involving users through visual and tactile tools such as mapping, sketching, and storytelling allows for deeper engagement and more meaningful design outcomes.

In architectural contexts, bespoke toolkits have been shown to increase agency and embed intelligence into workflows. Steenblik and Wang (2019) describe how custom toolsets, developed within studio cultures, enable designers to move beyond the limitations of off-the-shelf software and respond more sensitively to contextual challenges. Their work highlights the importance of toolkits that are tailored, iterative, and informed by both data and lived experience. qualities that are essential when designing for informal ECD centres.

The relevance of toolkits in participatory design is further supported by Sanders and Stappers (in Eliassen and Lykke, 2024), who categorize tools into emotional, cognitive, and storyline formats. These tools are not just functional, they are expressive. They help users visualize their challenges, reflect on their experiences, and co-create solutions. This aligns closely with my own fieldwork, where practitioners requested visual roadmaps and simplified guides to help them understand the registration journey.

Toolkits have been used effectively in information architecture and digital systems to engage users in design processes that are typically abstract or technical. Studies show that when tools are concrete, easy to use, and emotionally resonant, participants are more likely to contribute meaningful insights (Eliassen and Lykke, 2024). This is particularly important in the ECD context, where practitioners often feel excluded from formal policy conversations.

The literature strongly supports the use of a design toolkit in this design project. It offers a way to humanize compliance, simplify complexity, and empower practitioners to take ownership of their registration journey. The toolkit becomes not just a product, but a participatory bridge between policy and practice, designed with empathy, grounded in evidence, and shaped by the voices of those who live the challenge every day.

2.4 Policy and Legislation in Informal ECD Centres

Policy and legislation are meant to protect and empower children, but for many Early Childhood Development (ECD) centres in informal settlements like Samora Machel, they often feel like distant, rigid systems that exclude rather than support. While South Africa has a robust legal framework for ECD, including the Children's Act (Act 38 of 2005), the National Integrated ECD Policy (2015), and municipal policies such as the City of Cape Town's ECD Policy (2013), the reality on the ground is that many practitioners struggle to access, interpret, and implement these policies.

The Children's Act (RSA, 2005) sets out clear norms and standards for partial care facilities, including requirements for safety, health, infrastructure, and practitioner qualifications. It mandates registration with the Department of Social Development and outlines the conditions under which subsidies may be granted. However, for centres operating in informal settlements, these requirements are often unattainable. Without formal land rights, approved building plans, or access to municipal services, many centres cannot meet the basic criteria for registration (City of Cape Town, 2013).

The National Integrated ECD Policy (RSA, 2015) takes a more inclusive approach, allowing for conditional registration and emphasizing support for vulnerable communities. It promotes integrated service delivery across health, education, and social development sectors. Yet, despite its progressive intent, implementation remains uneven. Many practitioners are unaware of the policy or find it difficult to navigate. As Visser et al. (2021) noted, "Practitioners were often unaware of existing policies or struggled to interpret them." This lack of access to clear, user-friendly policy guidance is a major contributor to non-compliance.

The City of Cape Town's ECD Policy (2013) attempts to bridge this gap by coordinating municipal

departments and streamlining the registration process. It includes Additional Information on health clearance, fire safety, and building regulations. However, these documents are often technical and inaccessible to practitioners with limited digital access. One practitioner shared that she had never seen the registration forms and didn't know where to begin (Mathwasa and Shumba, 2020). This highlights a critical disconnect between policy design and practitioner reality.

The policy landscape is fragmented. Different departments have different requirements, and there is limited coordination between provincial and local government. The Eastern Cape study found that practitioners were confused about which authority to approach for registration, and many gave up after repeated failed attempts (Mathwasa and Shumba, 2020). This regulatory burden not only delays registration but also demoralizes new and unregistered practitioners who are already stretched thin.

The consequences of non-compliance are severe. Unregistered centres cannot access government subsidies, training programmes, or infrastructure grants. They remain invisible to the system, despite serving hundreds of children daily. This exclusion perpetuates inequality and undermines the very goals that ECD policies aim to achieve.

To address these challenges, policy must be humanized. It must speak the language of the practitioner, not just in words, but in structure, accessibility, and support. This design report proposes a centralized toolkit that consolidates policy documents, registration forms, and compliance guides into a single, user-friendly platform. It should include visual templates, translated materials, and step-by-step walkthroughs tailored to informal contexts. By making policy understandable and actionable, the toolkit aims to assist new and unregistered practitioners in understanding legislation from a barrier into a bridge, connecting practitioners to the resources they need to formalize and flourish.

2.5 Conclusion

The literature reviewed in this chapter paints a sobering yet deeply human portrait of Early Childhood Development (ECD) in South Africa's informal settlements. In communities like Samora Machel, ECD centres are often born out of necessity and compassion started by women who see a need and respond with whatever resources they have. These centres are not just places of learning, they are sanctuaries of care, resilience, and hope. Yet, despite their vital role, they remain on the margins of formal recognition and support.

Across all thematic areas, safety issues, infrastructure, and policy and legislation, non-compliance emerges not as a failure of intent, but as a symptom of systemic exclusion. Practitioners lack access to training (Visser et al., 2021), operate in unsafe and non-zoned structures (Mathwasa and Shumba,

2020), and navigate complex, inaccessible policy frameworks (City of Cape Town, 2013, RSA, 2015). These barriers prevent centres from registering with the Department of Social Development, thereby excluding them from subsidies, infrastructure grants, and professional development opportunities.

The City of Cape Town's ECD Policy (2013) and the National Integrated ECD Policy (RSA, 2015) offer guidance, but they are often written in technical language and distributed through channels that do not reach informal practitioners. As Visser et al. (2021) noted, many practitioners are unaware of these policies or struggle to interpret them. This disconnect between policy and practice reinforces cycles of non-compliance and invisibility.

Yet, the literature also reveals opportunities. Conditional registration, interdepartmental collaboration, and community-based support models offer pathways toward inclusion. What is needed is a design intervention that bridges the gap between policy and practice. One that humanizes compliance and empowers new and unregistered practitioners to create safe, stimulating, and regulation-aligned environments.

In this design project I respond to that need by proposing a toolkit tailored to the realities of informal ECD centres. It would consolidate infrastructure guidelines, registration documents, and navigating the ECD registration process. By doing so, it aims to explore innovative design solutions that can streamline the ECD registration process. This includes identifying ways to centralize and simplify access to critical information, such as municipal bylaws, building regulations, and the requirements outlined in the Children's Act.

To visually present the scope and relevance of the literature reviewed, the following table categorizes sources according to their geographic focus Local (Cape Town), Provisional (Western Cape), National (South Africa), and International (Worldwide). This categorization helps clarify the contextual layers that inform the design response and highlights the gaps in localized research on unregistered ECD centres

Table 1: A table of the literature category and focus points (Author, 2024).

LITERATURE REVIEW FOCUS												
	LEGISLATION				POLICIES				BUILDING REGULATIONS			
	NAME	MAIN CONCEPT	DESIRED OUTCOME	RELATION TO RESEARCH	NAME	MAIN CONCEPT	DESIRED OUTCOME	RELATION TO RESEARCH	NAME	MAIN CONCEPT	DESIRED OUTCOME	RELATION TO RESEARCH
International (Worldwide)	The IEA International Early Childhood Education Study (ECES).	The purpose of the study is to explore, describe and critically analyze early childhood education (ECE) provision and its role in facilitating growth	Preparing children for the learning and social demands of school and wider society	It aligns with the IEA International Early Childhood Education Study's aim to analyze ECE provision and its impact on children's readiness for school and society	European Early Childhood Education Research Journal (2019) 27(4) 506-519	The physical indoor environment in ECEC settings: children's well-being and physical activity	How the indoor environment in ECEC institutions can influence children's well-being and physical activity	The research paper relates to the European Early Childhood Education Research Journal's emphasis on the importance of the physical indoor environment in ECD settings, as it highlights how inadequate infrastructure, such as limited space and lack of age-appropriate furniture, can hinder children's development and overall well-being (Sotuku et al., 2016)				
National (South Africa)	Children's Act, Act 38 of 2005.	This legislation sets out the requirements for the registration and operation of ECD facilities	To protect the rights and interests of children in South Africa	The research paper directly relates to the Children's Act, Act 38 of 2005, as it emphasizes the need for ECD facilities to meet the safety, health, and infrastructure standards prescribed by the Act to ensure their registration and operation, ultimately aiming to protect the rights and interests of children in South Africa	The National Integrated Early Childhood Development Policy (NIECDP) 2015	The National Integrated Early Childhood Development Policy provides a framework for the provision of ECD services	Outlining the roles and responsibilities of government departments and other stakeholders in supporting ECD facilities.	It emphasizes the need for a comprehensive framework that outlines the roles and responsibilities of various stakeholders in supporting ECD facilities, particularly in addressing the inadequate infrastructure challenges faced by many facilities in South Africa	The national Building Regulations	Provides specific guidelines for the construction of ECD facilities	Requirements for space, lighting, ventilation, sanitation, and safety measures such as fire exits and secure play areas	The research paper is directly related to the National Building Regulations as it emphasizes the need for ECD facilities to adhere to specific guidelines regarding space, lighting, ventilation, sanitation, and safety measures, which are crucial for creating safe and compliant environments for children
Provisional (Western Cape)	The Challenges Experienced by Practitioners from Under-Resourced Early Childhood Development Centres in South Africa: A Single Site Study	The main concept of the document revolves around the challenges faced by practitioners in under-resourced Early Childhood Development (ECD) centres in South Africa. The study identifies four key themes: teaching and learning, management and leadership, ECD environment, and ECD legislation and policies	The desired outcome of the study is to improve the quality of Early Childhood Development (ECD) programs in under-resourced centres in South Africa.	The research paper is closely related to the study on the challenges faced by practitioners in under-resourced ECD centres, as it also identifies critical issues within the ECD environment, such as inadequate infrastructure and non-compliance with safety regulations, which hinder the quality of care and education provided	Early Childhood Development (ECD) Registration of Partial Care Facilities	Assisting ECD practitioners to comply and achieve desired goals	Training and educating partial care givers to structure they're ECDs. Partial care is when an individual, with or without compensation, assumes responsibility for overseeing more than six children on behalf of their parents or caregivers during specific hours of the day or night, or for a temporary period as agreed upon between the parents or caregivers and the service provider.	The research paper is related to the concept of assisting ECD practitioners to comply with regulations and achieve their desired goals, as it emphasizes the need for safe and compliant ECD facilities that meet the standards set forth by the Children's Act, which is crucial for the registration of partial care facilities	Guideline for childcare facilities in the public service	To provide technical assistance to national and provincial departments on how to establish child care facilities for the benefit of Public Servants and their children.	To provide technical assistance to national and provincial departments on how to establish child care facilities for the benefit of Public Servants and their children.	The research paper relates to the "Guideline for childcare facilities in the public service" by emphasizing the need for technical assistance in establishing compliant Early Childhood Development (ECD) facilities, particularly in low-income communities like Samora, where the lack of safe and adequate infrastructure poses significant challenges for ECD practitioners
Local (Cape Town)					Early Childhood Development (ECD) Policy of the City of Cape Town. Revised in 2013	To enhance the provision of ECD services in the region	This policy aims to address the critical developmental needs of children from birth to school-going age (0-6 years) and to ensure that ECD facilities meet safety and health standards (City of Cape Town, 2013)		NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT NO. 103 OF 1977			

3. Introduction

In this chapter, I outline the research methodology that guided the development of the proposed design toolkit for new and unregistered Early Childhood Development (ECD) centres in informal settlements. This study was grounded in practice-based research, shaped by the lived experiences of ECD practitioners who operate in under-resourced environments with limited access to information related to ECD, safety and compliancy, and policy support.

To understand and respond to these challenges, the research adopted a qualitative, and participatory approach. I then used the double diamond method to structure the process, allowing for deep exploration, synthesis, and co-creation with practitioners. Data was collected through interviews, observations, site walk-about. These methods ensured that the voices of practitioners were not only heard but actively shaped the design response.

Systematic literature was applied throughout the study to ground the research in existing policy and academic frameworks. Key sources included the National Integrated ECD Policy (RSA, 2015), the Children’s Act (RSA, 2005), and the (City of Cape Town’s ECD Policy, 2013). These documents were critically analysed to identify gaps between policy intent and practitioner realities, particularly in relation to registration, safety, and compliancy.

This chapter details the research design, sampling techniques, and data collection methods used to uncover the barriers faced by informal ECD centres and to co-create a toolkit that is both practical and empowering. By humanizing the research process and cantering practitioner experience, the study aimed to deliver a solution that is not only policy-aligned but deeply rooted in the everyday realities of those who care for South Africa’s youngest citizens.

3.1 Practice-Based research Approach

In this study, I adopted a practice-based research approach to explore the lived realities of unregistered Early Childhood Development (ECD) centres in informal settlements such as Samora Machel. I chose this approach because it allowed me to engage directly with practitioners, whose knowledge is rooted in daily experience rather than formal systems. These women, often community members responding to urgent needs operate centres with limited resources, minimal infrastructure, and little access to policy support. Their work is deeply personal, and I wanted my research to reflect that.

Practice-based research enabled me to move beyond observation and into collaboration. I wasn’t just

studying these centres, I was learning from them, co-creating with them, and designing alongside them. The double diamond method provided a flexible framework for this process. It guided me through four iterative phases: Discover, Define, Develop, and Deliver. Each phase allowed me to diverge and converge, to explore widely and then focus sharply, always returning to the voices and needs of the practitioners.

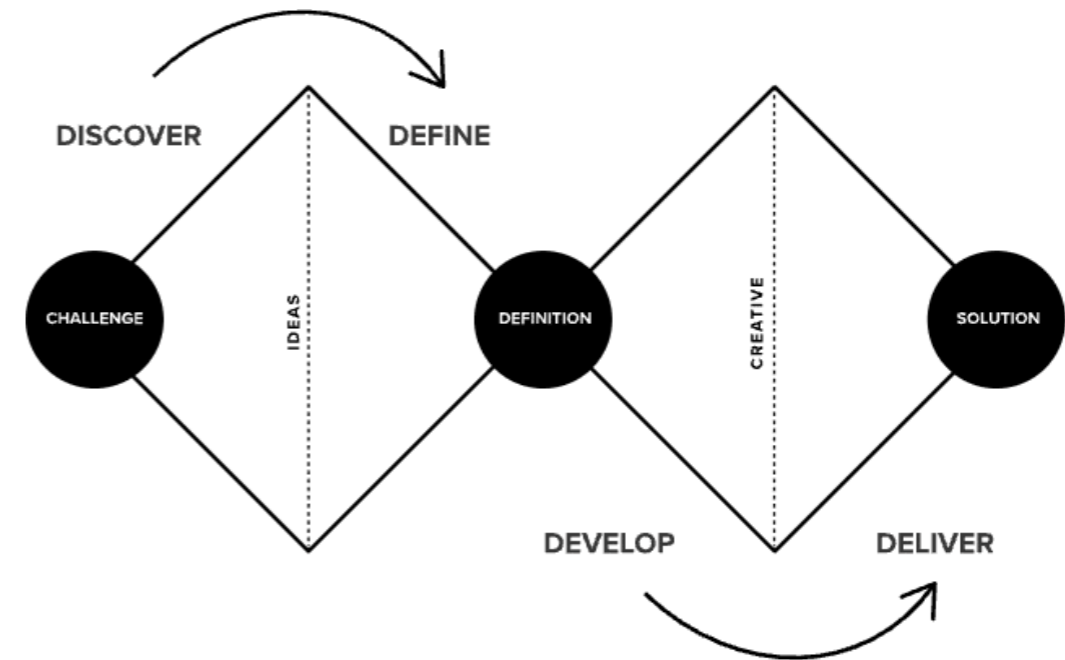


Figure 6: The Double Diamond model illustrating divergent and convergent phases in design (Design Council, 2005).

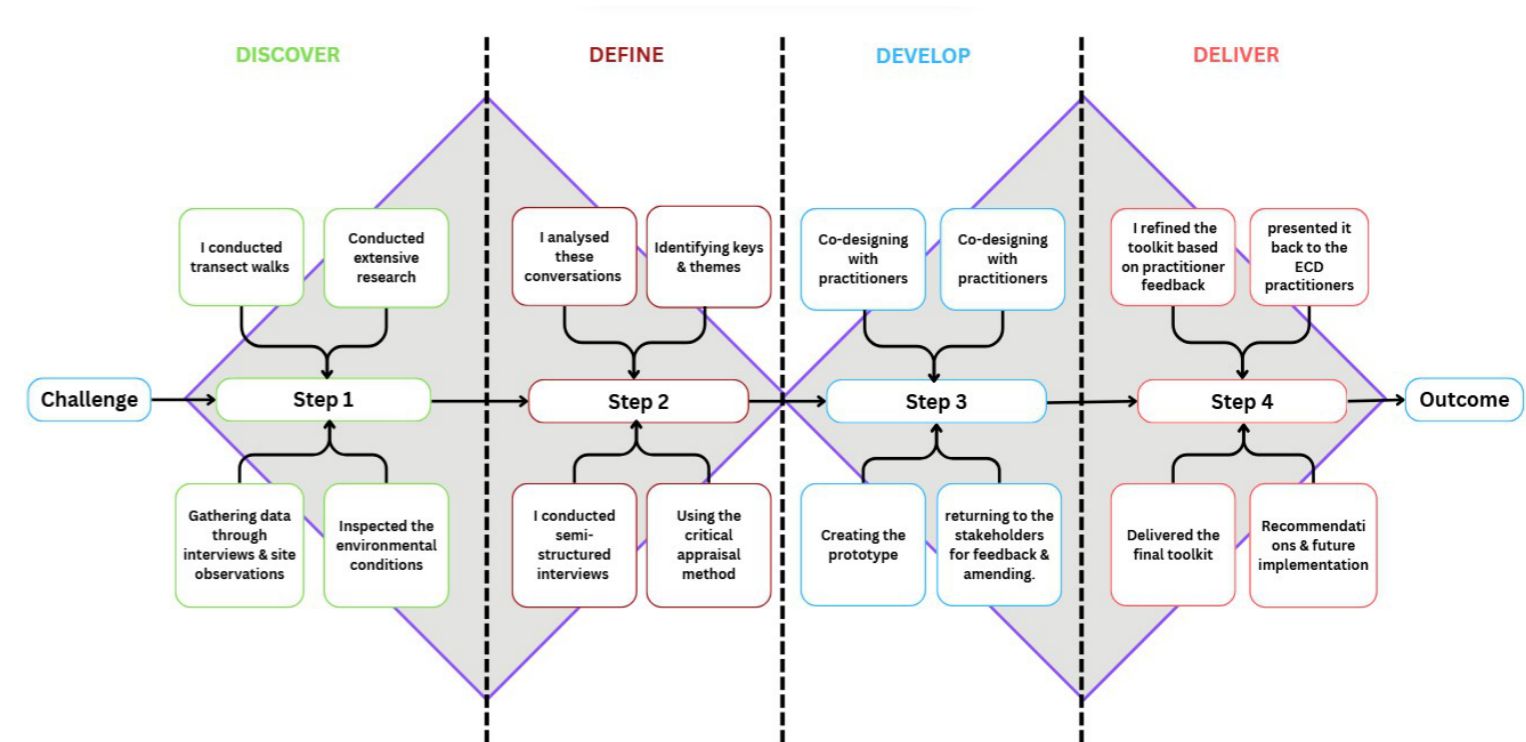


Figure 7: The double diamond method I used to structure the process (Author, 2025).

3.2 Research Design

3.2.1 Discover phase

During the **Discover phase**, as seen in figure 7 (Step 1). I visited ECD centres in Samora Machel settlements. I conducted transect walks to understand the spatial and environmental conditions, and I recorded observations in my notebook. I spoke informally with a registered and unregistered practitioners who shared their frustrations with how difficult, costly, and complicated the council submitting process is for drawing plans approval is for them, and the fear of being shut down due to non-compliance. It reminded me of my literature review in chapter 2 when one woman said she had converted her garage into a classroom because “there was nowhere else for the children to go” (Mathwasa and Shumba, 2020). These stories stayed with me and shaped every step of the research.

3.2.2 Define phase

In the **Define phase**, as seen in figure 7 (step 2). I conducted semi-structured interviews with practitioners, and the Grow ECD representatives. I analysed these conversations in a critically appraising manner, identifying key. What I realised was that most of the barriers were similar to the one I read about in my articles reported in chapter 2: literature review, like barriers to registration such as inaccessible policy documents, lack of infrastructure funding, and limited training (Visser et al., 2021). I also facilitated focus group discussions to validate these findings and prioritize the needs that practitioners felt most urgently like the expensive costs of architectural and land use services. Which are needed to register any ECD centre in South Africa.

3.2.3 Develop phase

The **Develop phase** as seen in figure 7 (step 3), was where co-creation truly came alive. where insights gathered from the field began to take shape as tangible design responses. At this stage, I moved from listening to co-creating, working closely with ECD practitioners and the Grown ECD representatives in co-creating a checklist of what could be needed in this proposed design toolkit that could support new and unregistered ECD centres to be safe and compliant centres in informal settlements like Samora Machel.

I started by speaking to an unregistered ECD practitioner who had been running her centre for several years. When I asked her what she believed was the biggest stumbling block preventing her from registering, her response was immediate and heartfelt. She said, “We don’t have access to the correct

information. We hear things from other people, and sometimes it’s wrong.” Her words stayed with me.

My two key takeaways from that conversation were:

- (1) lack of access to accurate, up-to-date information, and
- (2) reliance on word-of-mouth, which often leads to misinformation.



Figure 9: Reviewing the design toolkit with the ECD practitioners (Author, 2025).

Later, I spoke to a registered ECD practitioner, hoping her experience would offer a clearer path. But even she described the process as frustrating. She explained that regulations and local bylaws are sometimes amended or updated without them knowing, and practitioners only find out when they go to renew their registration. “We could be non-compliant without even knowing it,” she said, “and fixing it costs money we don’t always have.” Her experience highlighted that even those who manage to register face ongoing challenges in staying compliant.

To deepen my understanding, I distributed questionnaires to representatives from Grow ECD, an organization that works closely with centres in informal settlements. Their feedback echoed what I had heard in the field: misinformation, lack of access to correct information, and difficulty understanding the available information were among the biggest issues they encountered. These insights confirmed that the problem wasn’t just about infrastructure or paperwork. It was about clarity, accessibility, and trust.

I began amending and updating the checklist with the practitioners. I asked, what would truly help you register and run a safe, compliant ECD centre? Together, we identified key resources that should be included in the toolkit, translated policy documents, visual guides, simplified registration steps, and contact details for affordable service providers. This collaborative process was the beginning of the design toolkit, tailored specifically to the context of informal settlements like Samora Machel.

Once I had sourced and compiled the relevant documents, forms, and compliance guidelines, I designed the physical prototype of the toolkit. I then returned to the practitioners to present the draft and gather feedback, as seen in figure 7. Their responses were thoughtful and practical. One request stood out: **“Can you include a visual roadmap that shows the journey to becoming compliant?”**, Something that breaks it down step by step.” They wanted a way to understand the process in bite-sized phases, something they could follow without feeling overwhelmed.

They also asked for contact information for affordable service providers, such as architects and land use consultants, who could help them meet infrastructure and zoning requirements. This was a powerful reminder that compliance is not just about knowing what to do, it’s about knowing who can help you do it. This phase of development was deeply collaborative and grounded in empathy. It reaffirmed that the most effective design solutions emerge when we listen closely, respond thoughtfully, and build with the people we aim to serve.

3.2.4 Deliver phase

Finally, in the **Deliver phase**, as seen in figure 7 (step 4), I refined the toolkit based on practitioner feedback and presented it back to the ECD practitioners. I conducted a follow-up meeting with the

practitioners and observed how the toolkit helped them understand the different steps required to begin the registration process. It was clear that when policy is humanized, when it is made accessible, visual, and empathetic. Practitioners feel empowered rather than overwhelmed

This practice-based approach allowed me to centre the voices of those who are often excluded from formal systems. It helped me design a toolkit that is not only policy-aligned but also rooted in the everyday experiences of ECD practitioners. In doing so, I hope to contribute to a more inclusive and supportive ECD landscape, one where every child, regardless of where they live, has access to safe, compliant, and nurturing early learning spaces.

3.3 Sampling techniques

When it came to selecting participants for this study, I wanted to ensure that the voices reflected a diversity of experience and context within the ECD landscape. I deliberately chose two ECD practitioners, one from a registered township-based facility and one from an unregistered centre in the same informal settlement of Samora Machel. My intention was to understand the contrast between those who had successfully navigated the registration process and those who were still trying, often without clear guidance or support.

The registered practitioner brought valuable insight into what it takes to become compliant but also highlighted that registration is not a one-time achievement. She shared how regulations and local bylaws are sometimes amended without notice, and practitioners only discover these changes when they return to renew their registration. Her experience reminded me that even registered centres face ongoing challenges.

The unregistered practitioner, on the other hand, offered a raw and honest perspective. She spoke about how most of her information came through word of mouth, and how difficult it was to know what was accurate. “There’s a lot of misinformation,” she told me, “And we don’t know where to go for the right answers.” Her story underscored the need for clearer, more accessible support systems, especially for those operating in informal contexts.

To complement these practitioner voices, I also included two representatives from Grow ECD in the sampling. Their work with centres across Cape Town and beyond gave them a broad view of the systemic issues facing the sector. In our conversations, they emphasized that misinformation, lack of access to correct information, and difficulty understanding policy documents were among the biggest barriers they encountered when supporting ECD businesses in informal settlements.

Together, these four participants offered a rich and layered understanding of the challenges and

opportunities surrounding infrastructure improvement and registration. Their insights were instrumental in shaping the design toolkit and ensuring it responded to real needs, not just policy expectations.

3.3 Data Collection

For this study, I relied primarily on qualitative data collection methods. I wanted to go beyond surface-level observations and really understand the lived experiences of ECD practitioners, especially those working in informal settlements like Samora Machel. To do this, I conducted interviews, made site visits, and engaged in direct observation. These methods allowed me to gather rich, nuanced insights into the daily realities of running an ECD centre under challenging conditions.

During my site visits, I spent time in both registered and unregistered centres, observing the physical environment, the flow of activities, and the interactions between practitioners and children. I paid close attention to safety features or the lack thereof, such as fencing, fire exits, and sanitation facilities. These observations helped me understand how infrastructure and spatial constraints directly impact compliance and child wellbeing.

Interviews were a key part of my data collection. I sat down with ECD practitioners and representatives from Grow ECD to hear their stories in their own words. These conversations were often emotional and revealing. Practitioners spoke candidly about their frustrations with the registration process, their fears of being shut down, and their desire to provide safe spaces for children despite limited resources. The Grow ECD representatives added another layer of insight, sharing what they had learned from working with dozens of centres across Cape Town. They highlighted recurring issues such as misinformation, lack of access to correct information, and difficulty interpreting policy documents.

To guide these interviews, I developed a set of open-ended questions focused on four key areas:

- What safety measures are currently in place? What challenges do you face in meeting safety standards?
- How do you use your available space? What limitations affect your ability to group children or create learning zones?
- Where do you get your information about registration and compliance? How reliable is it?
- What steps have you taken toward registration? What parts of the process are unclear or difficult?

These questions were designed to elicit detailed, experience-based responses. I wasn't looking for yes-or-no answers, I wanted stories, examples, and reflections. I wanted to understand not just what

practitioners were doing, but why they were doing it, and what was getting in their way.

This approach to data collection helped me build a deep, empathetic understanding of the challenges faced by ECD centres in informal settlements. It also ensured that the design toolkit I was developing would be grounded in real needs, shaped by real voices, and capable of making a meaningful difference.

3.4 Data Analysis

To make sense of the rich qualitative data I collected, I used thematic analysis to identify recurring patterns and concerns raised by ECD practitioners and the Grow ECD organization. I grouped responses into key themes such as misinformation, budget constraints, safety concerns, and access to accurate information.

I also used critical appraisal to assess the broader implications of these findings. I looked at how non-compliance with building standards was not just a matter of negligence, but often a reflection of systemic exclusion. Many centres operated in informal structures without formal land tenure, making it nearly impossible to meet zoning or fire safety requirements.

By combining thematic analysis with critical appraisal, I was able to move beyond surface-level observations and uncover the deeper structural issues affecting ECD centres in informal settlements. This analysis directly informed the design of the toolkit, ensuring that it addressed not only the technical requirements of registration, but also the emotional and logistical realities practitioners face every day.

this phase of the research helped me translate raw data into meaningful insights, insights that could guide the development of a practical, empathetic, and policy-aligned solution for ECD centres striving to become safe and compliant.

4.1 Introduction

This chapter outlines the outcomes of my practice-based research, guided by the double diamond method and grounded in the lived experiences of ECD practitioners in informal settlements like Samora Machel. Through co-design activities, iterative testing, and ongoing reflection, I developed and refined a toolkit intended to assist new and unregistered centres in achieving safety and compliance

. The findings are presented below, alongside insights from relevant literature.

4.1.1 A Framework to Identify Possible Design Solutions.

A key outcome of this research was the creation of a visual framework to guide the design process, a diagrammatic tool that emerged organically through iterative engagement with ECD practitioners, literature, and policy. This framework, is grounded around the double diamond model, became a way to make sense of complexity, navigate uncertainty, and move toward practical, human-centred solutions.

It didn't begin as a diagram. It began as a mess, field notes, practitioner interviews, policy documents, and reflections. But as the research progressed, patterns began to surface. I noticed that every breakthrough followed a rhythm: first, understanding the challenge, then defining the insights, next, developing a prototype, and finally, delivering a solution. This rhythm mirrored the double diamond design process, but with adaptations that are generic.

The framework is divided into four phases: **Discover**, **Define**, **Develop**, and **Deliver**. Each phase is marked by a shift in thinking, from divergent to convergent, from exploration to decision-making. What makes this framework powerful is its intuitive flow and its ability to accommodate both structured policy analysis and deeply human, emotional insights.

- In the **Discover** phase, the process begins with a challenge. This is where I immersed myself in literature, policy, and practitioner narratives to understand what systems already exist and where the gaps lie. It was about asking, "What is really going on here?" and "Who is being left behind?"
- The **Define** phase is where insights are consolidated. It's the foundation phase, where understanding deepens and the problem is reframed. Here, I synthesised findings from the field, policy documents, and cognitive mapping exercises to clarify what needed to be addressed.
- The **Develop** phase is where ideas take form. I created the first prototype here, informed by stakeholder feedback and iterative testing. This phase was messy, but essential, it allowed for trial, error, and refinement.

- Finally, the **Deliver** phase is where the outcome is realised. The final toolkit was shaped, polished, and prepared for implementation. It reflects not just the design process, but the voices and needs of those it was built for.

What makes this framework especially valuable is its **flexible nature**. Although it was developed in response to ECD challenges in Samora Machel, its structure is flexible enough to be applied to other design problems, whether in education, health, urban planning, or social innovation. It doesn't prescribe solutions; it guides the process of discovering them. It allows for reflection, stakeholder involvement, and adaptation at every stage.

This framework is not just a diagram, it's a mindset. It encourages designers and researchers to move beyond assumptions, to listen deeply, and to co-create with those most affected by the problem. It's a tool for navigating complexity with clarity, empathy, and purpose.

In the context of this research, it helped transform a broad challenge into a tangible outcome: a design toolkit that supports ECD practitioners on their journey toward safe and compliant centres. But its potential extends far beyond this project. It offers a replicable, intuitive pathway for anyone seeking to design with not just for communities.

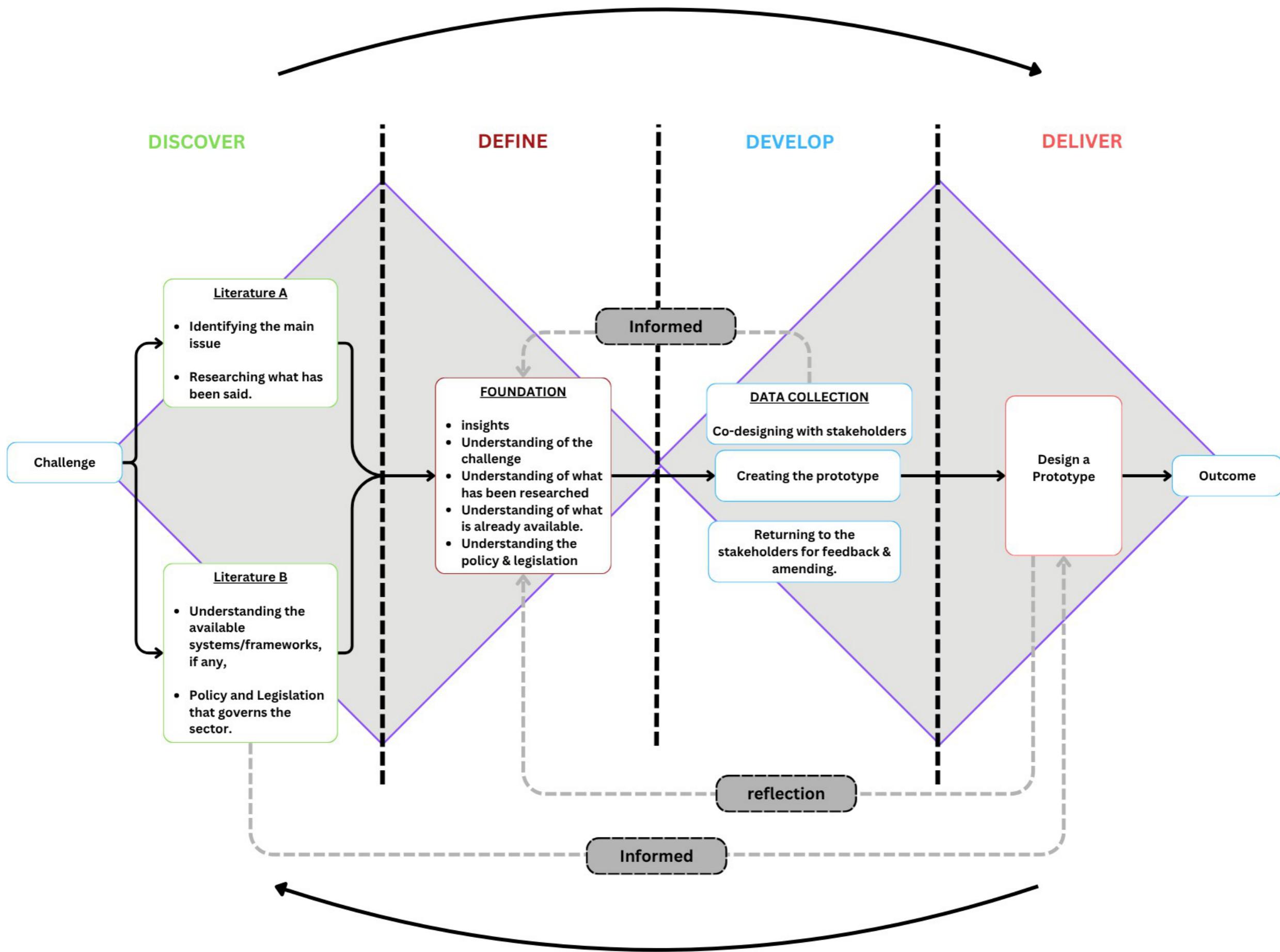


Figure 10: A Framework to Identify Possible Design Solutions (Author, 2025).

4.1.2 Critical appraisal

I spent time critically reflecting on the data collected through questionnaires and site observations at two community-based ECD centres in the Samora Machel informal settlement, one registered and one unregistered. These interactions were eye-opening. I went in expecting that non-compliance might stem from a lack of willingness to follow rules. Instead, what I discovered was a situation far more complex, layered, and deeply human.

Through conversations and close observation, I uncovered challenges I had not expected, particularly the extent of misinformation, disinformation, and the limited access practitioners had to accurate, up-to-date details about legal registration and government subsidies. Many practitioners were doing their best with what they had, relying on word-of-mouth and outdated advice. Their intentions were clear, they wanted to create safe, nurturing spaces for children. But the systems meant to support them often felt out of reach.

To interpret these findings meaningfully, I applied critical appraisal. A process of systematically examining evidence to assess its validity, relevance, and reliability (Barker, 2024). This step was essential. I did not want to merely report what I had observed; I wanted to uncover the deeper issues shaping practitioners' experiences. I looked closely at what participants shared, considered potential biases (like the hope for funding), and cross-referenced their accounts with what I observed on site. This approach helped me move beyond surface-level insights. It allowed me to identify key themes, like regulatory confusion, infrastructure gaps, and emotional fatigue and interpret their significance within the context of designing safe and compliant ECD centres. The appraisal process (illustrated in Figure 8) strengthened the credibility of my conclusions and ensured that the design toolkit I developed was grounded in both empirical evidence and genuine empathy.

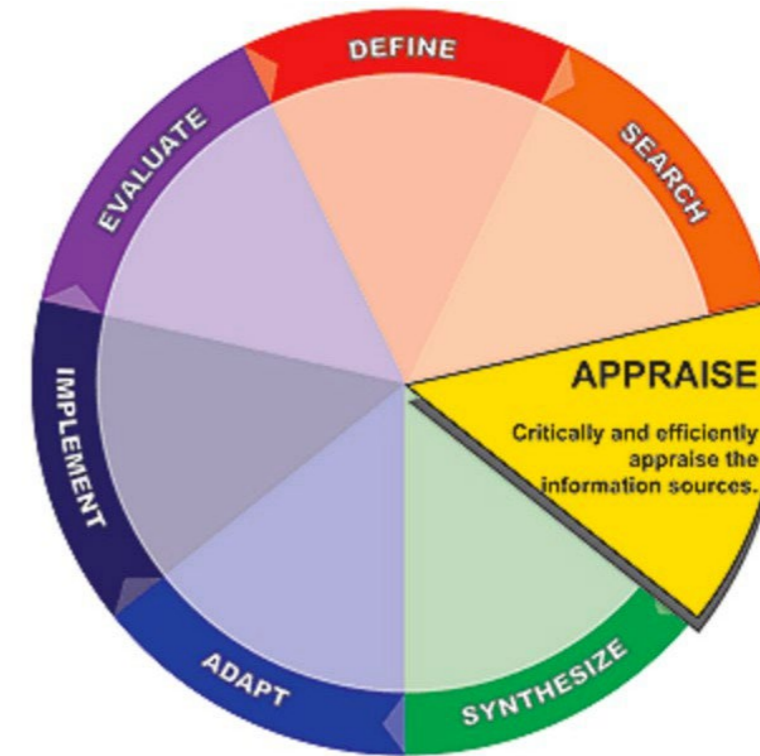


Figure 11: A critical appraisal chart, showing the steps taken to validate information (University of Groningen, 2024).

Thematic analysis table

PARTICIPANTS	ECD PRACTITIONER (NON-REGISTERED)	ECD PRACTITIONER (REGISTERED)	GROW ECD REPRESENTATIVE (HEAD OF PARTNERS)	GROW ECD (REGIONAL MANAGER)
Questions	Q1	Q1	Q1	Q1
Answer	A1	A1	A1	A1
	↓		↓	
	↓		↓	

Figure 12: A thematic analysis chart, showing how the comparison between questions and answers occurs across the horizontal and vertical (Author, 2025).

Table 2: A table of questions and answers, from Q1 to Q5 (Author, 2024).

QUESTIONS & ANSWERS FROM ALL FOUR CHOSEN PARTICIPANTS

CODES	LEGEND	This table presents and critically appraises the data collected through questionnaires and site observations in the two chosen ECDs in the Samora informal settlement and the two Grow ECD representatives.			
	Safety issues				
	Misinformation or disinformation issues				
	Access to information issues				
	Complacency issues				
Participants	ECD practitioner (non-registered)	ECD practitioner (registered)	Grow ECD representative (Head of Partners)	Grow ECD (Regional Manager)	
Q1	What specific safety risks have you identified in your facility, and how do you address them, given the lack of formal registration?	What specific safety assessment protocols do you follow to ensure compliance with the Children's Act?	What specific safety assessment protocols does Grow ECD recommend for ECD facilities to ensure compliance with the Children's Act?	What specific safety assessment protocols does Grow ECD recommend for ECD facilities to ensure compliance with the Children's Act?	
	In our facility, we have identified several safety risks that need to be addressed. Firstly, broken fencing poses a significant risk as it prevents children from playing safely and can lead to accidents. Secondly, unsafe electrical cables and wires are a major concern , as they can cause injuries. To mitigate these risks, we ensure that furniture is stacked properly to eliminate loose objects that could harm the children. We are waiting for the local electrician to come fix our electrical cables, so we can get access to government support.	Safety is our main priority, and we implement several protocols to ensure compliance with the Children's Act. We maintain cleanliness by regularly checking that our floors are free of any objects that could pose a risk to the children. Hygiene is also crucial; we clean toilets frequently to prevent the spread of germs, and we conduct routine checks of the facility to ensure everything is in order	- For the ECDs in our program, we have created our own center assessment checklist. Then a follow-up to monitor and maintain the levels of health and safety. - Grow ECD recommends a comprehensive approach to safety assessments, aligning with the requirements of the Children's Act. - Routine checks of the facility, including playground equipment for safety and cleanliness - Fire extinguishers and emergency exits for	Some of the key safety assessment challenges encountered included the following: 1. Unsecure ceilings and roof structures 2. Unsafe electrical cables and wires 3. Broken windowpanes 4. Sharp zinc edges on infrastructure 5. Sticking out and loose nails on infrastructure 6. Old and loose playground equipment 7. Broken toys and chairs.	
Q2	What guidelines do you follow to inspect your facility to make sure that it is safe and that there are no hazardous objects on-site that could potentially harm the kids?	How do you regularly assess the safety risks associated with your facility?	How does Grow ECD support ECD practitioners in identifying and mitigating safety risks within their facilities?	How did you ensure that ECD practitioners were trained in effective safety assessment practices?	
	I conduct regular inspections of the site every morning and afternoon to check for any hazardous objects that may pose a risk to the children. This includes looking for broken toys, unsafe furniture, and any other items that could cause injury. As a non-registered ECD practitioner, I rely on information shared by other practitioners in my community through word of mouth or WhatsApp groups where people share how they go about inspecting their own facilities.	We utilize a combination of checklists and routine inspections that we got from an ECD training. We have developed a safety assessment checklist that includes key areas such as fencing security, the condition of electrical cables, and the organization of furniture to prevent hazards. This checklist is crucial for ensuring that we identify and address potential risks before they become serious issues. We use non-slippery tiles in our facility for when kids want to run around the space. We also use a community park near our facility for a larger play space, we first make sure the space is clear of danger, At 7am, someone is assigned to go check if the playground is in a safe condition	- Our center assessments include a dedicated section on health and safety - We provide clear, prioritized recommendations based on the assessment findings, outlining the most critical steps the ECD center needs to take to achieve compliance. - We assist practitioners in developing and implementing action plans to address identified safety concerns.	1. Conversations were made to bring consciousness about safety norms and standards required 2. Training on the required safety measures was offered face to face and on an online training platform 3. Compliance checks were made to check on improvements on the safety practices	
Q3	Can you describe any incidents related to safety that have occurred in your facility?	Can you describe any recent improvements made to enhance safety in your facility?	Can you describe any successful initiatives that have improved safety assessments in ECD centers?	How did you ensure that ECD practitioners were trained in effective safety assessment practices?	
	One critical incident involved a child who was nearly injured due to an unlocked gate , which is particularly concerning given our proximity to a busy road. We have since implemented strict protocols to ensure that the gate remains locked at all times, and only authorized adults listed in our registration book are allowed to collect the children.	We have called in local architects to help us comply with the building requirements. We have made several structural improvements, including the installation of toilets specifically designed for toddlers , which were previously lacking in our facility. This enhancement not only improves hygiene but also ensures that our facility meets the necessary safety standards outlined in the Children's Act.	- The development and implementation of standardized safety assessment tools, like the one within the Geruff app, have been instrumental. These tools provide a structured framework, ensuring that the practitioners find the correct information that they need all in one place. This is our major success story.	Specific improvements included breaking down walls to make classrooms bigger, covering outdoor areas with shades to ensure for more activity utilization, renovating ceilings to secure them, taking off unsafe floor coverings to replace with new floor coverings and fixing and replacing broken windowpanes and window fixtures	
Q4	How do you optimize the limited space available in your facility for effective learning and play?	How do you optimize the available space in your facility to create a conducive learning environment?	What strategies does Grow ECD suggest for optimizing space in ECD facilities, particularly in informal settlements?	How did you approach space optimization in ECD facilities, particularly in resource-constrained environments?	
	Due to the limited space in our facility, we have adopted a rotational system for play and learning activities. This ensures that every child has the opportunity to engage in playtime. Sometimes we join with other teachers and go to the community park, as much as it is not safe. I also hear from other teachers on Facebook that kids don't really need to play outside if the classroom is big enough.	We divide the children into age groups and rotate them in small groups to engage in different activities. This approach allows us to maximize the use of our space while ensuring that each child has the opportunity to participate in various learning experiences.	- Grow ECD recognizes that optimizing space is crucial, especially for ECD facilities in informal settlements where space is often limited. - We encourage practitioners to consider the potential of breaking down non-load-bearing walls to create larger, more open-plan spaces. This can significantly improve the flow and usability of the facility. - We suggest designing spaces that can serve multiple purposes. For example, a dining area could also be used for play activities or group learning sessions. - In areas where individual facilities lack sufficient space, we promote collaboration between ECD centers to utilize a nearby community space. In rotation.	1. Where no outside play area is available suggestions were made for centre owners to utilize nearby public parks or open spaces for outside play 2. Suggestions were also made for the owners to ensure that learners are divided into smaller groups that would need to rotate from one activity station to the other rather than them being overcrowded in one space at the same time doing similar activities all at once 3. In some cases where the centre had small classrooms, recommendations were made to break down walls to enlarge the classroom space for better utilization 4. Recommendations were made for owners to cover outside play areas with a shade were made so that the space could still be utilized for other activities that would otherwise be done indoors	
Q5	What challenges do you face in creating a safe play area for children in your facility?	What design features do you believe are essential for a safe and effective play area?	How do you ensure that the space optimization strategies align with the developmental needs of children?	What strategies did you find most effective for maximizing the use of limited space in ECD centers?	

Table 3: A table of questions and answers, from Q6 to Q11 (Author, 2024).

	Creating a safe play area is challenging because of not enough yard space. We are also not really sure about the correct safety standards required for an outdoor play area ; we rely on other teachers who have been doing it for a while to share from their own experiences. We also have a strict policy against toy guns to ensure a safe mental environment	colorful artwork on the walls, educational charts, and a variety of toys for the children to play with. These elements not only enhance the aesthetic appeal of the space but also contribute to the children's learning and development. It is important to create an environment that is tailored to the specific developmental needs of children , ensuring that they feel safe and engaged	- Ensuring that space optimization strategies align with children's developmental needs is paramount. - We emphasize the importance of designing spaces that are tailored to the specific developmental stage of the children they serve	1. Finding alternative spaces to utilize for outside play 2. Rotation of learners for activities to different activity stations in smaller groups 3. Covering outside play areas to utilize for other indoor activities 4. Combining learners into one open space and utilize the rotation technique rather than having smaller rooms that has space taken up by walls and partitions
Q6	Where do you find information to ensure that the play area is engaging and suitable for different age groups, as this is one of the requirements for compliance?	How do you ensure that your play area is accessible and safe for all children?	What role do you believe architects should play in the space optimization of ECD facilities?	How did you engage ECD practitioners in discussions about space optimization?
	I primarily rely on resources shared by other ECD practitioners within my community, particularly through a WhatsApp group dedicated to ECD discussions . This platform allows us to exchange ideas and best practices regarding age-appropriate play equipment and activities, but sometimes the information shared on these social media platforms can be confusing and contradictory.	- Every morning we place our toys around the classrooms - Our kids get to play in our facility only - We have diverse play equipment for our kids. we include a variety of play structures, such as swings with harnesses, and sensory play areas. - We provide as much as we can open space for children to run, play games, and engage in free play. - We conduct regular safety checks of the play equipment to identify and repair any hazards like loose bolts, sharp edges, or broken parts.	- We strongly believe that there should be more affordable ways for ECD practitioners to access building plans. The current costs are often prohibitive, hindering their ability to make necessary improvements. Architects could develop standardized, cost-effective building plans specifically designed for ECD facilities in informal settlements. These plans could incorporate sustainable design principles and be easily adaptable to different site conditions.	A lot of it was in conversation at their sites during compliance checks and site visits. As part of the onboarding process, discussions would be made regarding the best way to utilize the available space for the optimum stimulation of learners.
Q7	What modifications have you made to your facility to enhance safety and compliance, despite being unregistered?	What resources or support have you received from local authorities to maintain compliance with safety regulations?	How does Grow ECD address the challenges of limited space in informal ECD facilities?	What design features do you believe are essential for creating effective play areas in ECD facilities?
	To enhance safety, we have held meetings with parents to gather innovative ideas and suggestions for improving our facility. However, the lack of formal registration means we often operate without the guidance of local authorities , which can lead to uncertainty about compliance with safety regulations . Misinformation about the registration process can be discouraging from pursuing the necessary permits . Because we end up paying people only to find out they are not legit and are just looking for a quick buck.	We have received valuable support from local authorities in the form of regular safety inspections , which help us identify potential hazards and ensure compliance with safety regulations. During these inspections, local officials provide guidance and recommendations for improving safety measures within our facility. we have been able to access training sessions from the Department of Basic Education	- We understand that overcrowding can negatively impact the quality of care and learning. Therefore, we encourage practitioners to consider limiting the number of children they enroll. - To ensure financial sustainability, we advise practitioners to explore the possibility of adjusting study fees accordingly. This allows them to maintain their income while providing a higher quality of care to a smaller group of children.	1. Antislip, secure floor coverings 2. Smaller furniture with no sharp edges 3. Avoid steep embankments and steep steps 4. Create spaces that can make multiple usage possible so as to minimize the risk of utilizing spaces for different activities 5. Child proof everything in the play area
Q8	How do you involve parents and the community in improving the safety and design of your facility?	How do you engage with parents and the community to enhance the quality of care provided at your facility?	What design principles does Grow ECD advocate for when creating play areas in ECD facilities?	How did you assess the impact of play area designs on children's development outcomes?
	We actively engage parents through meetings to discuss innovative ideas for improving our facility. But this is only based on what we think is the best way forward as teachers and parents, not necessary according to the ECD guidelines	- We encourage parents to share innovative ideas for improving the facility that they have seen elsewhere. This could include ideas for new learning activities, play areas, or community outreach programs. - We collaborate with community members to access resources and support . This may include securing donations of books, toys, or other learning materia	- Play areas should be designed to cater to the specific age group of the children, considering their physical, cognitive, social, and emotional needs. Play areas must be designed with safety in mind, including Soft surfacing to prevent injuries from falls. Clear visibility for supervision, and secure fencing and boundaries	The assessment tool that centre owners use to measure the developmental growth of the learners has questions that has responses that can be alluded to the design of the play area. Learner who rarely got chances to do gross motor development due to there not being outdoor playing space would usually score lowly on the assessment for that particular development domain.
Q9	What resources do you wish you had access to for improving the infrastructure of your facility?	What training or professional development opportunities have you pursued to improve your skills as an ECD practitioner?	How do you assess the effectiveness of play area designs in promoting children's development?	Can you share any success stories related to play area enhancements during your time as Regional Manager?
	I wish I had access to a well-designed play area that could effectively utilize our limited space . I heard from our ECD WhatsApp group that children thrive on play, and it is essential for their learning and development. Having access to resources such as funding for equipment, educational materials, and professional development opportunities would significantly enhance our facility's infrastructure and the quality of care we provide	- We actively participate in workshops and seminars on topics such as child development, early literacy, numeracy, and play-based learning. These sessions provide us with new insights, strategies, and resources to enhance my teaching practices. - We also engage in peer learning activities with other ECD practitioners, sharing ideas, challenges, and best practices. This collaborative approach fosters a supportive learning environment and enhances our collective knowledge. we also plan play dates with each other and cleaning our shared play grounds for our kids.	- Our mentors conduct regular monthly site visits, spending a full day at each ECD center. This allows for in-depth observation of how the play area is being utilized. - Mentors actively participate in setting up the learning environment, arranging play materials, and observing how children interact within the space.	There was a complete transformation at a centre after having to bash walls to enlarge classrooms which improved even the ventilation and lighting in then new classroom and created a bigger and more open space where learners could now freely move around and not be squashed in a dark and stuffy small room . The look on the learners faces afterwards can't make way into a spreadsheet but was a clear demonstration of the impact the change had made on them.
Q10	How do you manage the lack of funding for safety upgrades in your facility?	How do you incorporate feedback from parents into the design and operation of your facility?	Can you share examples of play area designs that have successfully enhanced children's learning experiences?	How did you address the unique challenges of play area design in informal settlements?
	We rely on fundraising and donations from parents and the community. This grassroots support is crucial for making necessary improvements to our facility. However, it's an ongoing challenge to secure adequate funding due to their unregistered status , which limits their access to government grants and subsidies	- We established a parent committee to provide input on important decisions, such as program planning and facility improvements. - Normally we communicate with my board members. Which are made up of the community members.	- This design integrates natural elements like sand, water, plants, and textured surfaces into the play area. Enhanced sensory exploration and development, and Improved fine and gross motor skills through activities like digging, pouring, and planting.	By suggesting dividing learners into smaller activity groups that rotate from one station to the other, by recommending the usage of public parks and open spaces and by recommending partner organizations that specialize in infrastructure improvements to construct new classrooms and at times building double story structures to create more space.
Q11	What role do you believe local authorities should play in supporting unregistered ECD facilities like yours?	Can you share any success stories or positive outcomes that have resulted from infrastructure improvements in your facility?	How does Grow ECD engage with local communities to gather input on safety and play area design?	How did you collaborate with local authorities to ensure compliance with safety regulations in ECD facilities?

Table 4: A table of questions and answers, from Q12 to Q15 (Author, 2024).

	They could play a more proactive role in supporting compliance for ECD facilities in informal settlements. Their involvement is critical, especially for unregistered facilities, as many practitioners lack the knowledge of legal requirements and compliance processes	- Renovations have created a more stimulating and engaging learning environment for the children. The positive impact of these improvements was recognized during my recent Teaching Performance Assessment (TPA). As a result of the successful collaboration with the architect and the positive outcomes achieved, I was awarded a 5-year operation contract, while others received only 2 years. This extended contract provides greater stability and security for our program, allowing us to continue serving the community for a longer period.	- We collaborate with CBOs (Community-based organizations) that have established relationships within the communities we serve. These organizations act as intermediaries, facilitating communication and gathering feedback from local residents. - This allows us to leverage existing trust and cultural understanding within the community.	We would engage the officials from the City of Cape Town and request for them to assist where possible with some items that were needed for safety regulations compliance. They would sometimes provide fire safety equipment, first aid kits, in some areas small grants for fixing infrastructure concerns and for the improvement of outside play areas.
Q12	How do you ensure that your facility meets basic hygiene standards, especially in play areas?	How do you address the challenges of limited funding while ensuring compliance with safety and health standards?	What resources does Grow ECD provide to help ECD practitioners create safe and engaging play environments?	What were the most significant barriers to implementing effective safety assessments in ECD centers?
	We conduct regular cleaning and sanitation of all areas, particularly the play areas. We emphasize the importance of maintaining a clean environment to prevent the spread of germs and illness among the children. We participate in workshops and training sessions focused on hygiene practices for ECD settings, which help us stay informed about best practices	- We conduct regular safety assessments to identify and prioritize the most critical safety hazards. This helps allocate resources effectively, focusing on the most pressing needs. We also participate in the community ECD stokvel, a collective savings initiative that pools resources from multiple ECD centers to fund larger projects or unexpected expenses.	- We provide a variety of age-appropriate learning materials, including puzzles, books, educational toys, and art supplies. These resources are designed to stimulate children's cognitive, social, and emotional development.	1. Limited finances 2. Limited space 3. Community dynamics
Q13	What types of play equipment do you provide, and how do they contribute to children's development?	What role do you believe architects and designers should play in improving ECD facilities in your community?	How do you measure the impact of safety assessments on the overall quality of care in ECD facilities?	How did you promote the importance of play in early childhood development among ECD practitioners?
	We provide a variety of play equipment, including toys like Legos and dough, which are essential for enhancing children's learning skills. These types of play equipment encourage creativity, problem-solving, and fine motor skills development. However, the limited space in our facility, especially the outdoor restricts the amount and variety of equipment we can offer, which can impact the overall learning experience for the children	- Creating spaces that are scaled to the size and developmental needs of young children. Incorporating green spaces, such as gardens and courtyards, to provide a connection to nature and designing distinct areas for different activities, such as play, learning, and dining.	- This is a cornerstone of our evaluation process. The checklist covers various aspects of quality care, including safety, hygiene, learning environment, curriculum implementation, and staff interactions.	Play is the core of the work in ECD and play based learning is the philosophy that underpins all the work we did. As a result, this came up all the time in training, mentoring and site visits. Even the way the continuous professional development training was facilitated itself ensured that it highlights the importance of play.
Q14	How do you assess the effectiveness of your play area designs in promoting children's learning?	How do you measure the impact of your facility's environment on children's learning and development?	What challenges do you face in promoting safety and play area design among ECD practitioners?	What recommendations would you give to current ECD practitioners regarding safety and play area design?
	By observing how children interact with the space and the equipment provided. Regular feedback from both children and parents helps us understand what works well and what needs improvement. We don't have a formal assessment tools or checklists, which can be challenging to measure effectiveness accurately	- We regularly assess each child's development based on age-appropriate milestones. This helps us identify areas of strength and areas where children might need additional support and We carefully observe children's interactions with the environment, noting how they engage with different play areas, materials, and activities.	- The most significant hurdle is the cost of implementing safety improvements and creating engaging play areas. Many ECD centers, especially those in informal settlements, operate on tight budgets. Regular upkeep of equipment, repairs, and replacements require sustained financial resources and time, which are often scarce.	When planning to start your centre, always start the way you want to end. It is important to have a clear understanding of the safety norms and standards so that they are incorporated into the designs from the onset rather than having to spend some money again in remedying situations for compliance. Safety is important and should never be overlooked and compromised.
Q15	What are the most significant barriers you face in trying to achieve compliance with safety regulations?	What are the most significant barriers you face in maintaining compliance with local building standards?	How does Grow ECD collaborate with local building standards authorities to improve safety and design standards in ECD facilities?	
	The most significant barriers to achieving compliance with safety regulations include zoning requirements and the lack of financial resources for necessary upgrades, especially for us in informal settlements. We struggle to meet the legal requirements due to the high costs associated with renovations and safety improvements often deter us from pursuing compliance, leaving many facilities operating in uncertain conditions	- Securing adequate funding for necessary upgrades and renovations to meet building standards is a major hurdle. This often includes costs for Fire safety equipment, structural improvements, and Sanitation facilities	- No, we don't, but we strongly advise ECD practitioners to consult with qualified architects for the development of building plans. Architects possess the necessary expertise to ensure that designs comply with local building standards and safety regulations.	

4.3 Making sense of the findings.

During my data collection, I picked up a common theme that emerged from the interviews was the significant challenge of **misinformation, disinformation, and access to correct information** among unregistered ECD practitioners. The disinformation part seemed to be for avoiding competition from the registered ECDs in the area. Many practitioners rely on word-of-mouth for information, which often leads to confusion and inaccurate understanding of the registration process and compliance requirements. One practitioner highlighted this, stating:

5. *“It’s difficult because you hear different things from different people. One person says you need this paper, another says something else. We just don’t know who to trust or where to find the correct information.”* (see non-registered ECD practitioner Q6, on figure 13)

The interviews also revealed to me specific, physical safety risks. A non-registered practitioner identified several issues in their facility:

6. *“In our facility, we have identified several safety risks that need to be addressed. Firstly, broken fencing poses a significant risk, as it prevents children from playing safely and can lead to accidents. Secondly, unsafe electrical cables and wires are a major concern, as they can cause injuries. We are waiting for the local electrician to come fix our electrical cables so we can get access to government support.”* (see non-registered ECD practitioner, Q1 on figure 13)

This finding is particularly telling, as it directly links the **lack of correct information** to a tangible physical barrier to compliance. The practitioner believes that simply fixing the electrical cables will unlock government support, a misconception likely stemming from misinformation.

The most significant barriers to achieving compliance were identified as zoning requirements and a general lack of financial resources for necessary upgrades. A practitioner articulated this challenge:

7. *“The most significant barriers to achieving compliance with safety regulations include zoning requirements and the lack of financial resources for necessary upgrades, especially for us in informal settlements. We struggle to meet the legal requirements due to the high costs associated with renovations and safety improvements, which often deter us from pursuing compliance, leaving many facilities operating in uncertain conditions.”* (see non-registered ECD practitioner, Q15 on figure 13)

Furthermore, a representative from Grow ECD revealed that while they prioritize safety, they do not directly collaborate with local building authorities. Instead, they advise practitioners to consult with architects, which can be an **expensive** and prohibitive step for many.

CODES	LEGEND
	Safety issues
	Misinformation or disinformation issues
	Access to information issues
	Complacency issues
Participants	ECD practitioner (non-registered)
Q1	What specific safety risks have you identified in your facility, and how do you address them, given the lack of formal registration?
	In our facility, we have identified several safety risks that need to be addressed. Firstly, broken fencing poses a significant risk as it prevents children from playing safely and can lead to accidents . Secondly, unsafe electrical cables and wires are a major concern , as they can cause injuries. To mitigate these risks, we ensure that furniture is stacked properly to eliminate loose objects that could harm the children. We are waiting for the local electrician to come fix our electrical cables, so we can get access to government support.
Q6	Where do you find information to ensure that the play area is engaging and suitable for different age groups, as this is one of the requirements for compliance?
	I primarily rely on resources shared by other ECD practitioners within my community, particularly through a WhatsApp group dedicated to ECD discussions . This platform allows us to exchange ideas and best practices regarding age-appropriate play equipment and activities, but sometimes the information shared on these social media platforms can be confusing and contradictory.
Q7	What modifications have you made to your facility to enhance safety and compliance, despite being unregistered?
	To enhance safety, we have held meetings with parents to gather innovative ideas and suggestions for improving our facility. However, the lack of formal registration means we often operate without the guidance of local authorities , which can lead to uncertainty about compliance with safety regulations . Misinformation about the registration process can be discouraging from pursuing the necessary permits . Because we end up paying people only to find out they are not legit and are just looking for a quick buck.
Q15	What are the most significant barriers you face in trying to achieve compliance with safety regulations?
	The most significant barriers to achieving compliance with safety regulations include zoning requirements and the lack of financial resources for necessary upgrades, especially for us in informal settlements. We struggle to meet the legal requirements due to the high costs associated with renovations and safety improvements often deter us from pursuing compliance , leaving many facilities operating in uncertain conditions

Figure 13: This table presents and critically appraises the data collected through questionnaires (Author, 2024).

4.4 Analysis of Findings

The thematic analysis of the qualitative data reveals that the lack of accurate information and the reliance on informal networks for guidance are major barriers to compliance. The widespread misinformation about the registration process and the requirements for government funding creates a cycle of non-compliance, as practitioners struggle to meet standards they don't fully understand. The finding that a practitioner is waiting for an electrician in order to get government support is a direct example of this. This analysis directly addresses the second sub-question of the research, which explores how practitioners can contribute to the co-design of a toolkit. The findings suggest that the toolkit must not only provide design solutions but also act as a reliable source of information, demystifying the legal and financial aspects of running a compliant ECD centre.

The analysis also highlighted a key relationship between the lack of registration and the inability to access government subsidies. Many practitioners are aware of the potential for government funding but are unable to apply due to their unregistered status. This financial barrier prevents them from making the necessary improvements to their facilities, perpetuating the cycle of non-compliance and unsafe environments for children. The analysis underscores the need for a holistic solution that addresses both the physical and the informational needs of the practitioners.

4.5 Interpretation of Findings

The findings presented in this chapter are crucial for answering the main research question: "What are the key challenges and opportunities in starting or running safe and compliant Early Childhood Development centres within the context of Samora Informal Settlement in Philippi, Cape Town?". The data clearly indicates that a primary challenge is the general lack of accurate, accessible information, leading to widespread misinformation. This challenge, however, presents a significant opportunity. The development of a design toolkit that not only provides physical design solutions but also serves as an educational resource.

The findings from the site observations, as summarized in Tables 2, 3, and 4, show a direct link between the lack of infrastructure and safety risks. This data supports the hypothesis that a standardized, yet adaptable, design toolkit is necessary to address the physical deficiencies of the centres. When combined with the qualitative data, the interpretation is clear that the toolkit must be a user-friendly resource that empowers practitioners to understand and implement compliance standards. It must also be co-designed with them to ensure it is practical, relevant, and culturally sensitive. By providing a clear roadmap to compliance, the toolkit can break the cycle of non-registration and unlock access to government subsidies, thereby creating a sustainable pathway to safe and nurturing

environments for the children of Samora informal settlement.



Figure 14: Challenges and opportunities in developing a design toolkit for a safe and compliant ECD centre (Author, 2024).

4.4 Engagement Framework: A Step-by-Step journey

As I worked alongside ECD practitioners in Samora Machel informal settlement, one of the most common frustrations I heard was: “We don’t know where to start.” The registration process felt overwhelming, confusing, and inaccessible. Many relied on WhatsApp groups or hearsay, and some had even paid for support that turned out to be illegitimate. It became clear that part of my role was not just to design a toolkit, but to map out the journey in a way that felt achievable.

From the moment practitioners receive their design toolkit, this section outlines the official registration process for Early Childhood Development (ECD) centres in the Western Cape, based on current guidelines. I’ve broken it down into four clear steps, with practical notes to help practitioners understand what’s expected and why it matters.

4.4.1 Step 1: Start with Your Municipal Health Certificate

Before anything else, you’ll need a health certificate permit from your nearest municipal office. This confirms that your facility meets basic health and safety standards. It’s the foundation for everything that follows. In my conversations, I found that many practitioners didn’t know this was the first step. Some had tried to register with the Department of Social Development without it and were turned away. Including this in the toolkit was essential.

4.4.2 Step 2: Engage with the Department of Social Development

Once you have your municipal permit, your next stop is the regional office of the Western Cape Department of Social Development. There, an intake officer will walk you through:

- Registration requirements
- Legislative mandates
- Procedures and timelines
- Norms and standards
- Required documentation
- Monitoring processes

A social worker or authorised official will explain the documents you need to complete, which include:

- Application forms (Form 11 and Form 16)
- Annexure A (staff details and qualifications)
- Annexure B and C (menus for different age groups)
- Form 29 (completed by the centre manager)
- Emergency certificate application (evacuation plan)
- Lease agreement (if applicable)

- Organisational profile
- Approved building plan

This step is where many practitioners feel overwhelmed. The toolkit I developed includes simplified versions of these forms, visual guides, and translated explanations to help practitioners understand what each document is for.

4.4.3 Step 3: Site Visit and Assessment

Once your documents are submitted, a social worker or authorised official will be assigned to your case. They’ll:

- Allocate a file to manage your registration
- Visit your centre to assess childcare, admin systems, and finances
- Complete an inspection form
- Decide on the type of registration certificate to issue

There are two types of certificates:

- **Full registration** (valid for five years)
- **Conditional registration** (valid for six months to one year)

This visit is not just about ticking boxes—it’s about understanding your environment and supporting you to meet the required standards. In the toolkit, I’ve included a checklist to help practitioners prepare for this visit with confidence.

4.4.4 Step 4: Ongoing Monitoring and Support

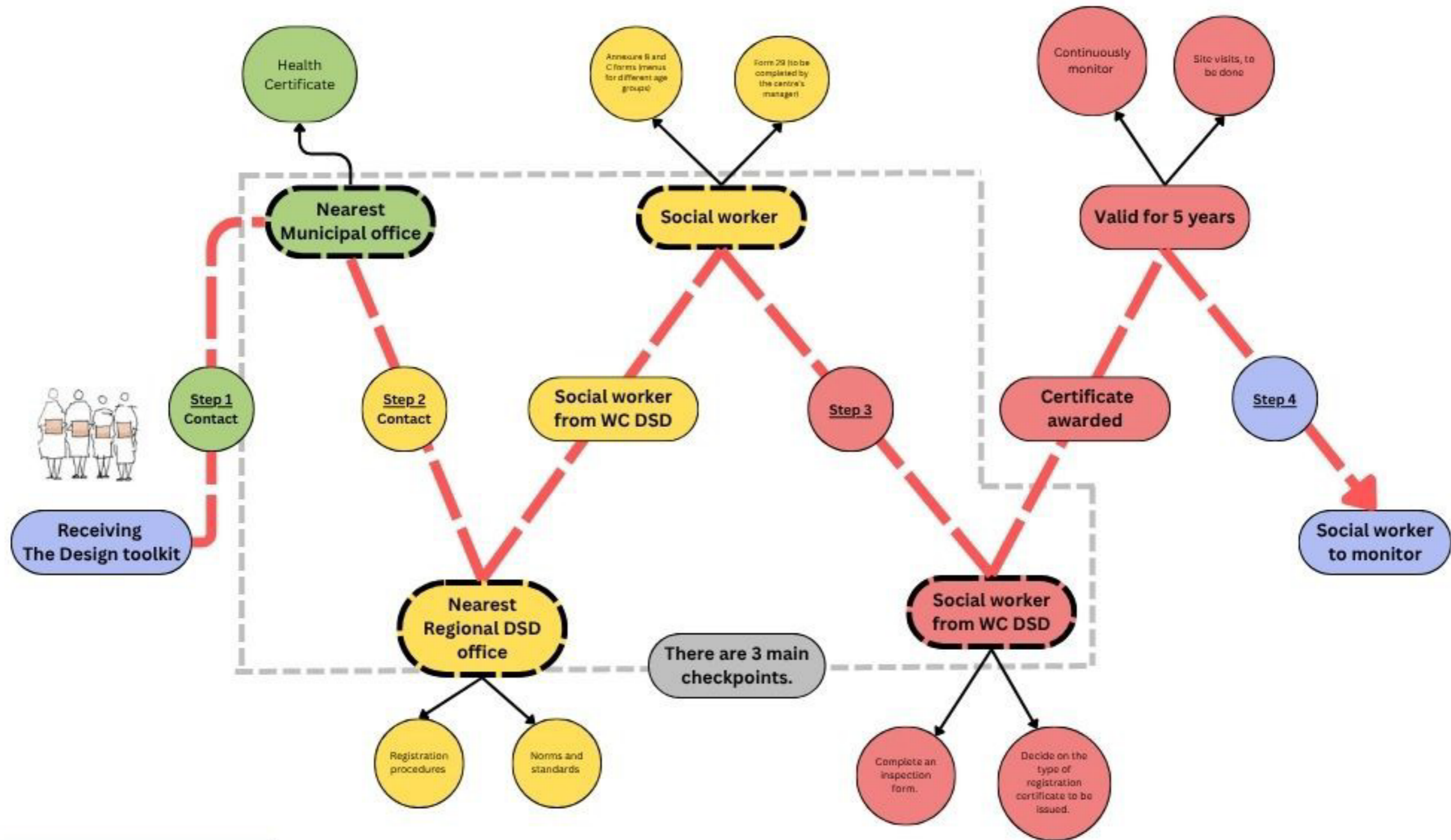
Even after registration, the journey continues. The Department of Social Development will conduct regular site visits to monitor compliance and support your growth. These visits assess whether your centre continues to meet the conditions of registration and the norms and standards outlined in the Children’s Act.

4.4.5 Why Registration Matters

Registration isn’t just a legal requirement; it’s a gateway to support. Once registered, a centre can operate legally and uphold recognised standards, qualify for government subsidies, access free capacity-building programmes, Offer NQF Level 4 training to practitioners through the Western Cape Department of Education

Figure 15 below shows a visual representation of on the engagement framework journey, from start to end. Showing the three main touchpoints of the registration process. Municipal office, regional DSD office, and social worker appointed.

Engagement Framework



Legend
 Western Cape = WC
 Department of social development = DSD

Figure 15: The engagement framework journey (Author, 2025).

4.6 The Proposed Design Toolkit

In this section, I will detail the proposed design toolkit as a direct intervention for the challenges faced by new and unregistered Early Childhood Development (ECD) practitioners in informal settlements like Samora, Cape Town. A design toolkit is a curated collection of resources, such as reusable components, templates, and guidelines, designed to streamline and standardize a process.

In this context, the toolkit acts as a "one-stop shop" to help practitioners achieve a safe and compliant ECD centre fit for registration. Based on the findings from the data analysis in this chapter, this toolkit is strategically designed to address the most significant barriers identified, namely the lack of accurate information and the complexities of compliance. The toolkit's aim is to meet the practitioners' needs by providing a clear, accessible, and affordable pathway to formalize their operations, see example in figure 16.

4.6.1 Addressing Informational Barriers

The research findings clearly indicate that misinformation and a lack of access to correct information are major challenges for new and unregistered practitioners. To counter this, the proposed design toolkit will serve as a one-stop shop of information. It will contain a step-by-step guide, or roadmap, to getting registered, simplifying the paperwork process. This guide will be supplemented by accurate, easy-to-understand explanations of national building regulations in the form of a building model, showing QR codes that lead to different parts of the national building regulations document, making it easy for practitioners to interpret, see figure 17. Making complex legal requirements simple to understand and navigate. The toolkit will also include the most relevant forms required for the registration process, ensuring practitioners have all necessary documents at their fingertips.

4.6.2 spatial layout

Given the limited space for both learning and outdoor play in informal settlement facilities, the toolkit will include resources to optimize spatial layout. A space optimization guide will provide practitioners with practical solutions for making the most of their limited area. To facilitate this, the toolkit will contain physical, hands-on components. These will include magna tiles or Lego-like wall tiles with interlocking block construction pieces, see figure 18. These pieces will allow practitioners to physically demonstrate and test different spatial layout options for their specific facilities, helping them visualize and understand how to best utilize their space. Additionally, a tape measure will be included to help practitioners accurately measure their sites, a fundamental first step in the planning process.



Figure 16: An idea of a design toolkit (Use2Use, 2024).



Figure 17: A model building with NBR QR codes (Author, 2025).



Figure 18: An example of Magna-Tiles (Playing and Learning, 2024).

4.6.3 Bridging Professional Gaps

Another significant challenge identified in the research is the lack of access to and affordability of required service providers like architects and urban planners. The design toolkit aims to bridge this gap by providing essential documents that having some of the specialist in these areas and have experience in working with ECD centres. Butwa Architects and The Urban Planner have been assisting ECD practitioners with rezoning requirements and approval of building plans, which is one of the requirements for registering an ECD centre in South Africa.

The toolkit will also include a safety assessment checklist document, a space optimization document, and a how-to-get-registered document. These resources are designed to provide practitioners with the foundational knowledge and tools needed to begin the compliance process independently. The goal is to empower practitioners to take the initial steps themselves, while also understanding when and how to seek professional help as their centre grows.

4.6.4 Implementation and Contribution

The overarching aim of the proposed design toolkit is to create a one-stop shop that bundles all the necessary resources for new and unregistered ECD practitioners. It will be a practical, physical tool designed for real-world application. To maximize its impact, the distribution of the toolkit should be paired with a series of facilitated ECD community workshops. These hands-on sessions would guide new and unregistered practitioners through the toolkit's components, demonstrating how to use the Magna-Tiles for spatial planning and how to fill out the registration and safety checklists.

This collaborative approach directly addresses the identified lack of professional collaboration and provides a supportive environment for practitioners to ask questions and learn from both facilitators and their peers. The toolkit could be manufactured and produced by local municipalities for distribution within their communities, ensuring that the relevant practitioners receive a tangible resource to assist them on their journey to formal registration. By providing this tangible and informative intervention, the toolkit has the potential to significantly improve the safety and compliance of ECD centres in informal settlements, contributing to the long-term well-being of young children.



Figure 19: Required specialist service provider (Butwa and The Urban Planner, 2024).

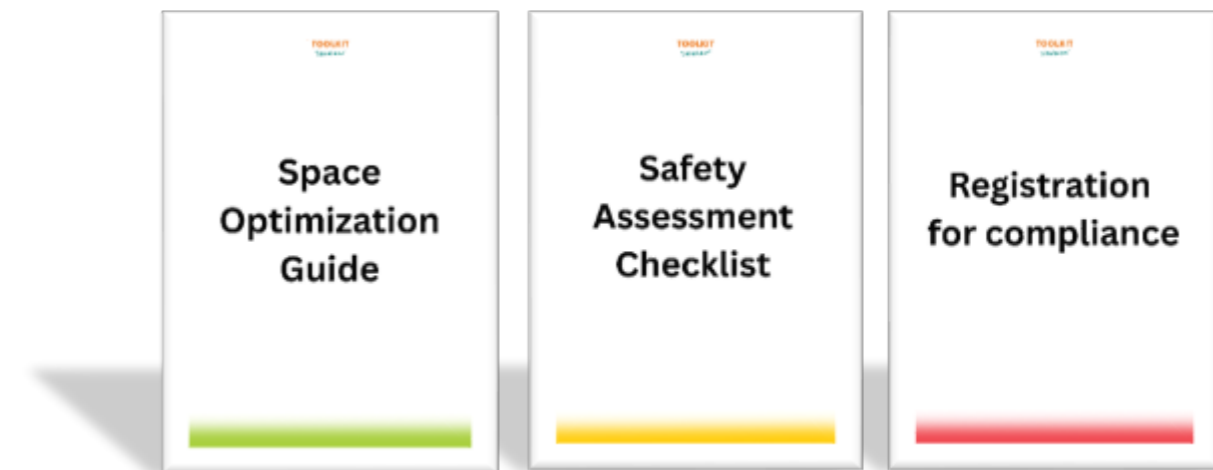


Figure 20: Resource guides documents (Author, 2024).

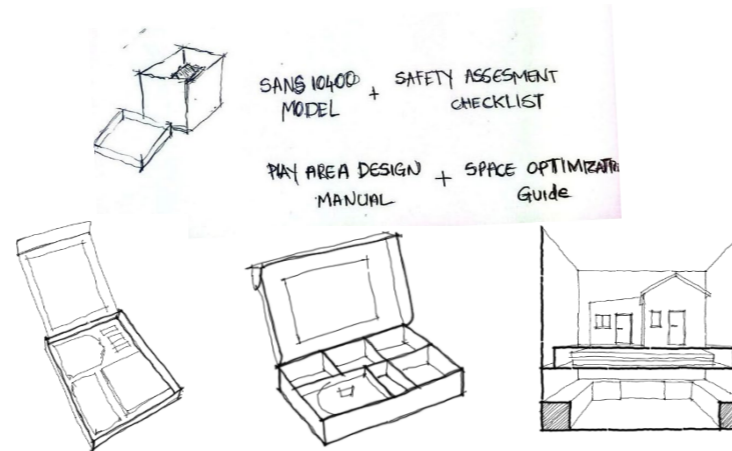


Figure 21: A proposed toolkit design box to fit all the required tools in it (Author, 2025).

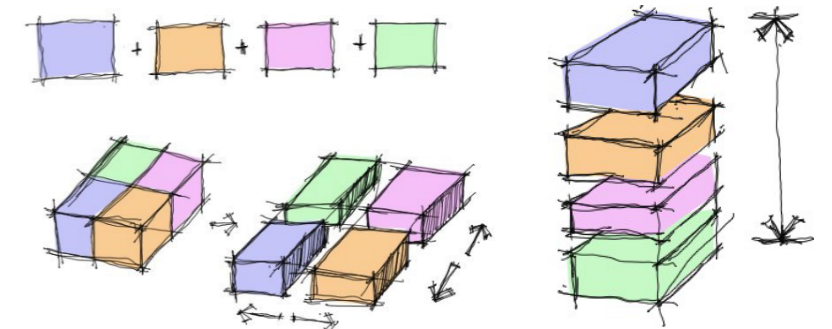
4.7 The Toolkit Design Process



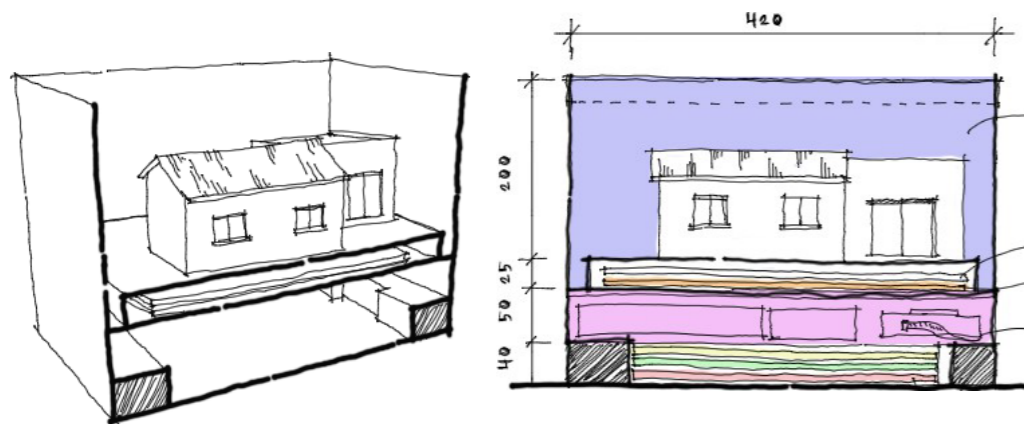
A Design Toolkit, proposed for new and unregistered ECD Practitioners for a safe and compliant ECD centres in Informal settlements



(1) Looking at what needs to go inside the design toolkit, exploring different packaging options to accommodate the most relevant resources.



(2) The Design Toolkit will be sectioned into four parts, arranged in a vertical manner. In order to accommodate the most necessary and relevant resources needed



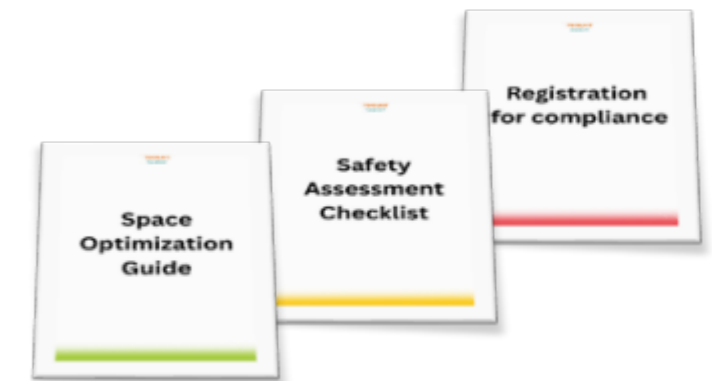
(3) A section drawing showing all the different compartments of the design toolkit, where all the

- Level 1: Model building, for visual representation of the NBR
- Level 2: Registration Road map, showing step-by-step and a manual for navigating the toolkit.
- Level 3: The Spatial optimization section, where you find the Magna Tiles and tape measure
- Level 4: The forms and documents section, where the most relevant are found.



(4) The tape measure will be used to measure the site and its parameters, in order to understand how much space is available in the facility for a ECD space.

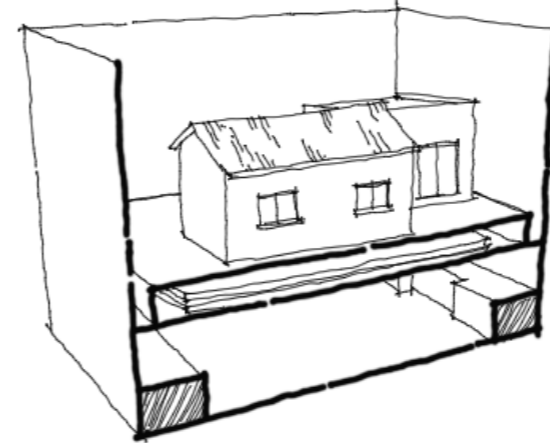
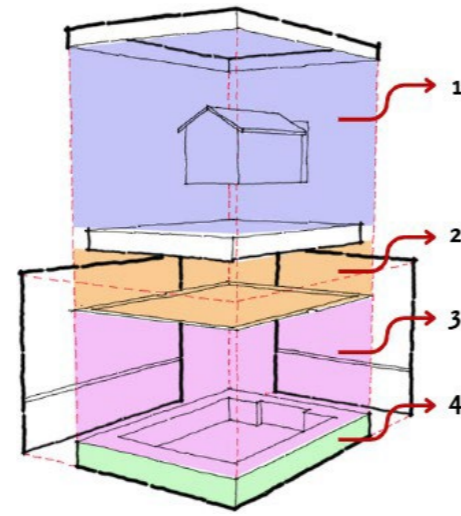
The Magna Tiles will be used to assisted new and unregistered practitioners to organisation their spatial layout, figuring different areas that are required in a ECD facility.



(5) Here you have guide documents to assist the new and unregistered ECD practitioners to understand different requirements need to get an ECD centre registered.

4.7.1 The Toolkit Design Process

1. The model building section.
2. Manual and Map Board section.
3. Space planning and measuring tool section.
4. Guide documents and forms section.



The Building Model:

The 1:50 scale model is a visual representation of parts of the SANS 10400-NBR (SA) regulations, shown in QR codes.

Manual and Map Board section.

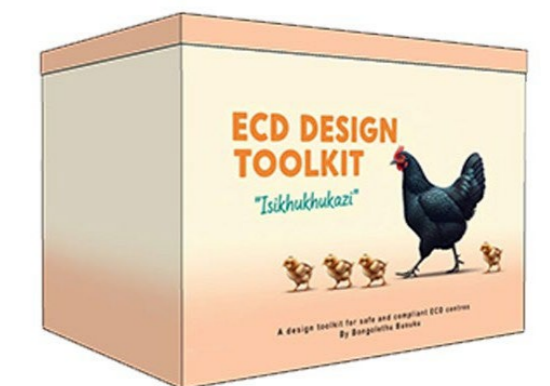
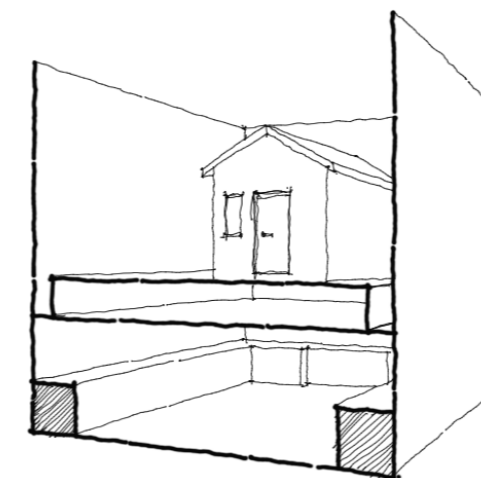
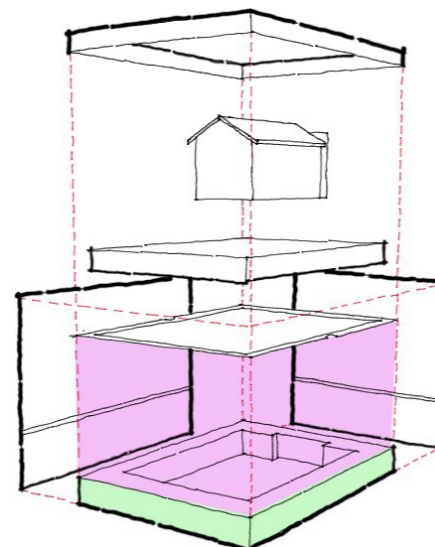
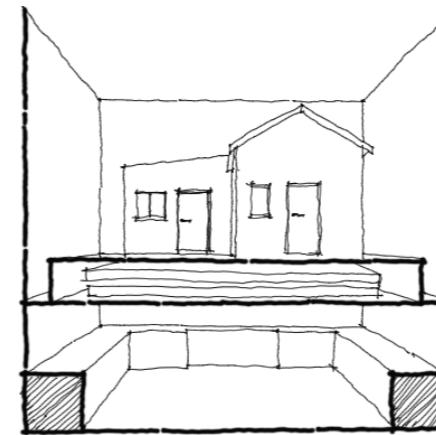
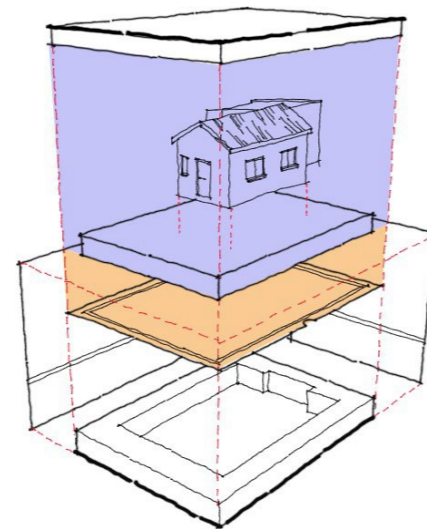
The manual was designed with a clear, step-by-step layout. Visual cues and icons were chosen to make navigation intuitive.

Space Planning:

This section has scaled Magna tiles for space planning and a measuring tape. Created to help practitioners physically plan and visualize their space.

Documents and forms:

Three separate booklets for the Safety Assessment Checklist, Space Optimization Guide, and the Registration for Compliance guide.



ECD DESIGN TOOLKIT
"Isikhukhukazi"

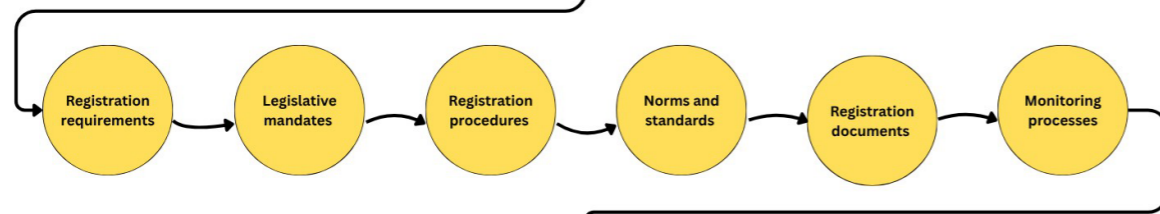
Engagement Process Map

Step 1

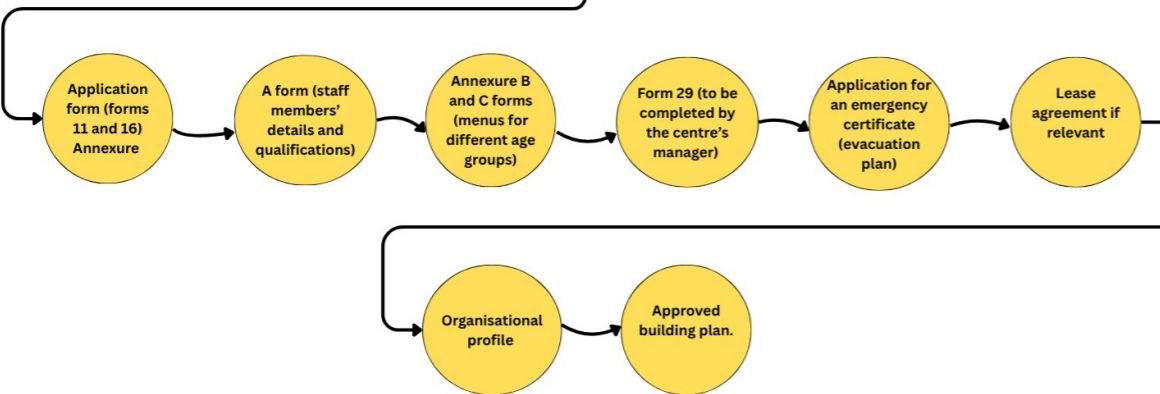
To establish an Early Childhood Development (ECD) centre, a health certificate permit from the nearest municipal office is necessary.
Note: Contact details can be found on page 3 of the manual handbook.

Step 2

When you have your municipal permit you should contact your nearest regional Department of Social Development office, where the intake officer will discuss the following with you:

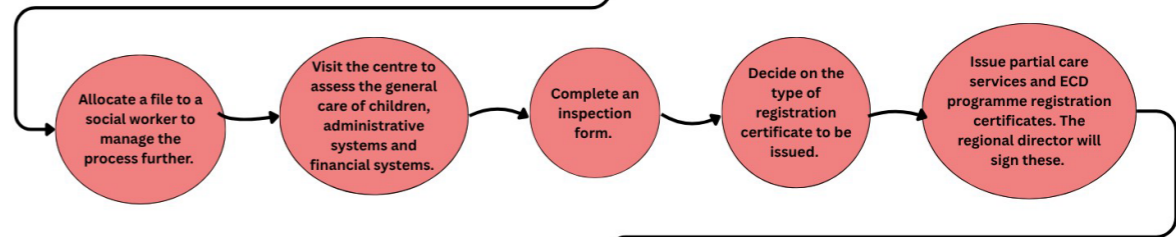


The social worker or a person authorised by the Western Cape Department of Social Development will explain the registration requirements and the documents to be completed. These include:



Step 3

When all the required documents have been submitted, a social worker or any person employed and authorised by the Western Cape Department of Social Development will:



A full registration certificate will be valid for five years. A conditional registration certificate will be valid for anything from six months to a year.

Step 4

A social worker or person employed and authorised by the Western Cape Department of Social Development will continuously monitor the centre and the programme. Site visits will be done to assess compliance with conditions for registration and norms and standards.

The benefits of registration:

- It allows an ECD centre to operate legally while upholding required norms and standards.
- The ECD centre may qualify for a subsidy.
- The ECD centre can benefit from free capacity building and other programmes offered by the Gauteng Department of Social Development.
- Practitioners employed in registered ECD centres can be trained on NQF level 4 free of charge through the Gauteng Department of Education.

What if the ECD centre is not registered?

- Failure to register an ECD centre is a contravention of the Children's Act of 2005, which means the centre would be operating illegally. Notice of enforcement can be issued to such ECD centres. The Department of Social Development may approach the High Court to enforce the operator to stop operating.

How to identify a suitable ECD centre

- Parents and caregivers should verify if the ECD centre is registered with the Department of Social Development (registration certificate with Gauteng logo is displayed).
- It is also to ensure that the curriculum offered by the ECD centre is recognised by the Department of Education, that teachers or practitioners hold relevant qualifications, and that children are provided with suitable nutrition.

Figure 22: A visual engagement framework — a step-by-step journey that will be included in the design toolkit (Author, 2025).

5. Conclusion

This design report started with a challenge, how to assist new and unregistered Early Childhood Development (ECD) centres in informal settlements like Samora Machel to create safe, compliant, and nurturing learning environments, good enough for registration. What emerged through practice-based inquiry was not just a toolkit, but also a framework: a visual and intuitive design process that helped uncover, shape, and deliver meaningful solutions.

The structural outline adopts the pattern of the double diamond, but it is deeply rooted in the lived realities of the people it serves. It begins with the **Discover** phase, where the challenge is explored through literature review, policy analysis, and contextual understanding. My approach to this phase was about listening, to the voices of practitioners, to the gaps in existing systems, and to the barriers that prevent registration. It was also about mapping what frameworks, regulations, and support structures already exist, and identifying where they fall short.

The **Define** phase was where ideas began to form. I collected insights from the field, from interviews, from the context itself. I started to notice trends, misinformation, emotional fatigue, and a hunger for clarity. This phase helped me grasp not only what the issue was, but why it persisted. It became the foundation for the toolkit: a resource that could simplify, visualise, and humanise the registration process.

During the **Develop** phase, I created the initial model. This was not a direct path, it was iterative, messy, and collaborative. I visited the Stakeholders again to give feedback, and their voices shaped every revision. The toolkit evolved through rounds of trials, reflection, and refinement. It was important that the design didn't just look good, it had to feel usable, trustworthy, and relevant to those who would rely on it.

Lastly, the **Deliver** phase brought the outcome to life. A thorough design toolkit tailored for new and unregistered ECD practitioners in informal settlements. It contains graphic manuals, checklists, translated documents, and a step-by-step journey to registration. Yet beyond that, it offers hope. It states, "You are not alone. You are competent. And here's a tool to help you move forward."

This instinctive create method, shaped by insight, and refined through collaboration, now stands as a model for how design can respond to complex social issues. It doesn't just solve a problem. It honours the people behind it. And it offers a pathway for others to follow, adapt, and build upon. In the end, this research produced a process. A mode of reasoning, designing, and delivering that is grounded in empathy, evidence, and action.

5.1 Tracking Back to The Research Questions

This design report set out to explore the question: ***What are the key challenges and opportunities in developing a design toolkit for safe and compliant Early Childhood Development (ECD) centres within a context like Samora Machel Informal Settlement in Philippi, Cape Town?***

Using practice-based research, I worked closely with ECD practitioners, Grow ECD representatives, and the physical realities of informal centres. The results showed that the challenges are not simply technical they are deeply human. Misinformation, limited access to accurate resources, infrastructure constraints, and emotional fatigue were recurring themes. However, the opportunities were equally as potent. the willingness of practitioners to collaborate, the richness of community knowledge, and the potential of design to simplify and humanize complex processes.

The sub-questions guided the structure of my inquiry:

What are the primary safety risks and compliance gaps observed in existing ECD centres within Samora Machel Informal Settlement?

Site visits and interviews revealed consistent safety risks, broken fencing, unsafe electrical wiring, overcrowded classrooms, and lack of evacuation plans. Compliance gaps were often linked to confusion around registration requirements and limited access to formal support.

How can ECD practitioners in informal communities contribute to the co-design of a toolkit to promote quality care in safe and compliant ECD centres?

Their contributions were central. Through interviews, informal chats, and feedback sessions, practitioners shaped the toolkit's content, tone, and format. Their lived experiences informed the visual roadmap, simplified checklists, and relevant policy guides that now form the core of the toolkit.

In terms of the research aims and objectives, I believe they have been fully met:

- I investigated key safety risks and compliance gaps through site visits, interviews, and thematic analysis.
- I explored innovative design solutions by applying the double diamond method and integrating participatory design principles (Burnette, 2015).
- I developed a comprehensive, one-stop-shop design toolkit that consolidates all necessary documentation, guidelines, and resources. It is tailored for practitioners with limited formal training

and grounded in their realities.

The toolkit is not just a product, it's a response. It reflects the voices of those who are often excluded from policy conversations and offers a practical path toward transformation.

This chapter serves as the conclusion of the research, synthesising the findings from the data I've collected

5.2 Personal Reflection on the Research Journey

When I first began this investigation, I truly believed it would be simple. I assumed it would be straightforward, gather the data, design the toolkit, and wrap it all up neatly. However, the reality proved to be far more complex and far more meaningful than I had anticipated.

From the very beginning, I was met with uncertainty. The more I heard from the ECD practitioners, the more I realised that this wasn't just about forms and checklists. It was about people. About communities. About children whose futures are shaped by what happens in these early years. And about the women, mostly women who show up every day to nurture, protect, and teach, often with very little support.

I had to let go of my assumption. I needed to pause and endure the awkwardness of not understanding. I had to learn to listen, and not just to what was said, but to what was felt. The stories practitioners shared were honest and unfiltered. Practitioners spoke about being misled, about paying for help that never came, about feeling invisible in systems that were supposed to serve them. And yet, despite all of that, they remained hopeful. They kept showing up.

There were times when I questioned whether a toolkit could truly create meaningful change. But then came the moments that reminded me why this work matters. One practitioner looked at the visual roadmap and said, "This makes me feel like I can actually do it." That one sentence carried the weight of everything I hoped this project could be. This journey transformed me. It reminded me that design is not just about solving problems, it's about honouring people's lived experiences. It's about co-creating something that feels useful, respectful, and empowering. It is about walking alongside people, not ahead of them.

I have come to understand ECD centres in informal settlements as far more than learning spaces, but as places of healing, of hope, and of transformation. And I see the practitioners not just as educators, but as community builders, caregivers, and quiet revolutionaries. This research has been one of the most humbling and inspiring journeys I've taken so far. And I will carry it with me, not just in the pages of this report, but in the way I think about design, about impact, and about what it means to truly serve.

5.3 The Importance of ECDs in Informal Settlements

If this research has revealed anything, it's that Early Childhood Development (ECD) centres in informal settlements are not just places where children learn, they are places where communities breathe. In areas like Samora Machel, where families face daily struggles to survive, ECD centres offer more than education. They provide safety, stability, nourishment, and emotional support. They are often the only structured environment a child experiences in their early years. And during those years, when the brain develops at its fastest rate, the environments children are exposed to can shape the entire trajectory of their lives. In these contexts, early learning isn't just important. It's urgent. It can make or break a child's future.

But the influence of ECD centres extends well beyond the children who attend them. These centres support entire families. While parents leave early in the morning to work long hours, and often in unstable jobs, ECD practitioners step in to care for their children. They provide meals, teach, protect, and create a sense of belonging. In many cases, they are the only consistent adult presence in a child's life.

What touched me most throughout this research was witnessing how deeply these practitioners extend themselves beyond their formal responsibilities. They don't just teach ABCs and numbers. They go out of their way to mentor young parents, many of whom are still growing up themselves. They offer workshops on hygiene, nutrition, and parenting. They listen. They guide. Some of these teenage parents were raised without stable parental figures, and through the ECD centre, they begin to experience and understand what genuine care looks and feels like.

This is what makes ECD centres in informal settlements so profoundly impactful. They are not just educational spaces. They are spaces of rehabilitation, of restoration, of hope. They are quietly rebuilding society from the ground up. One child, one parent, one day at a time. And yet, despite their importance, many of these centres remain unregistered and unsupported. Practitioners operate with limited infrastructure, unclear guidance, and little formal recognition. They are doing life-changing work, often in survival mode.

This is why change in this sector is not just necessary, it's non-negotiable. We need to support new and unregistered practitioners with tools that help them create safe, compliant, and nurturing environments. Because when we invest in ECDs, we're not just investing in education. We're investing in the emotional, social, and economic health of entire communities. The design toolkit developed through this research is one step toward that change. It's not a perfect solution, but it's a practical one. It recognises the complexity of the registration process and translates it into something visual, accessible, and empowering. It honours the work of practitioners who have been doing so much with so little. And it says, "We see you. We value

you. And we're here to help.”

5.4 Gleaned from the Interviews

The interviews were the heart of this research. They weren't just data collection exercises, they were moments of connection, of listening, of learning. Sitting with ECD practitioners in Samora Machel and hearing their stories was both humbling and eye-opening. These conversations reminded me that behind every centre, every registration form, and every compliance checklist is a person trying to make a difference with very limited means.

One of the most striking things I learned was how deeply committed these practitioners are to becoming registered. There's a misconception that unregistered centres are uninterested or unwilling, but that couldn't be further from the truth. Many of the women I spoke to understand the benefits of registration, access to subsidies, formal recognition, training opportunities, and the ability to offer better care. They want to be compliant. They want to do things the right way. But the path to registration is often unclear, confusing, and filled with misinformation.

In fact, misinformation came up in almost every conversation. Practitioners shared stories of being told different things by different people, some were misled by unofficial “consultants” who charged them money for outdated or incorrect advice. Others relied on WhatsApp groups or word-of-mouth, which, while helpful in some cases, often spread incomplete or inaccurate information. This lack of clarity creates fear and hesitation. It makes the registration process feel like a maze with no map.

Access to correct information was another major barrier. Many practitioners simply didn't know where to begin. They didn't have access to the Children's Act, municipal bylaws, or infrastructure guidelines. And even when they did, the language was often too technical, too dense, or not translated into their home language. One practitioner told me, “I just want someone to show me what to do, step by step.” Words stayed with me too. It became a guiding principle for the toolkit's design.

What also stood out was the emotional toll. These practitioners are not just running centres, they're raising children, supporting families, and holding their communities together. They're doing all of this while navigating poverty, trauma, and systemic neglect. And yet, they remain hopeful. They remain committed. They show up every day. These interviews taught me that the solution isn't just about providing information, it's about how that information is delivered. It needs to be clear, visual, kind, and empowering. It needs to meet practitioners where they are, not where policy assumes they should be.

5.5 Why the Design Toolkit Will Be of Benefit to ECD Practitioners

Throughout this journey, one truth became increasingly clear. ECD practitioners in informal settlements are doing some of the most important work in our society, often with the fewest resources. They are not only caregivers and educators, but they are also community leaders, mentors, and protectors. And yet, when it comes to navigating the formal systems of registration and compliance, they are often left to figure it out alone.

This is where the design toolkit steps in, not as a replacement existing processes and knowledge, but as a companion to it. The toolkit was created to respond directly to the needs, frustrations, and hopes that practitioners shared with me. It is not a top-down manual filled with jargon and legalese. It is a practical, visual, and user-friendly guide that speaks their language, literally and figuratively. It simplifies the complex. It breaks down the overwhelming process of registration into manageable, visual steps. It says, “Here's where you are. Here's what's next. And here's how to get there.”

For many practitioners, the idea of registration feels like a distant goal, something reserved for centres with more money, more space, or more formal training. But the toolkit challenges that narrative. It shows that with the right support; registration is not only possible but it's within reach. It helps practitioners see themselves as capable, as worthy, and as part of a larger system that they have every right to belong to. One of the most powerful features of the toolkit is the **visual journey to registration**. This was developed in response to a common theme in the interviews: “We just want to see what it looks like.” Many practitioners are visual learners. They don't want to read through 50-page policy documents. They want to see the steps, the forms, the spaces, the outcomes. The visual journey maps out the process in a way that is intuitive, accessible, and encouraging.

Beyond the visuals, the toolkit includes translated documents, checklists, templates, and contact directories, all in one place. It acts as a “one-stop shop” for everything a practitioner needs to begin or continue their registration journey. For those who have been operating in isolation, this kind of consolidation is a game-changer. But perhaps most importantly, the toolkit is a symbol of recognition. It says to practitioners: *We see you. We hear you. And we believe in the work you're doing.* It validates their efforts and offers them a tool that was built with them, not just for them.

In a sector where so much is asked and so little is given, this toolkit is a small but meaningful step toward equity. It's a tool that empowers practitioners to create safer, more compliant, and more nurturing spaces for children. And in doing so, it contributes to something much bigger, the transformation of communities through early care, education, and dignity.

5.6 Recommendations of the Design Project

While this toolkit supports new and unregistered ECD centres on their journey toward compliance, the research revealed a critical gap beyond initial registration. Once centres are registered, they often operate for up to five years without structured support to stay updated with changing bylaws, safety standards, or policy amendments.

I recommend the development of a complementary system or tool, perhaps a digital platform, printed update pack, or community-based alert system that helps registered ECD practitioners stay informed throughout their five-year registration period. This could include:

- Quarterly updates on municipal bylaws and Children’s Act amendments
- Visual guides for new infrastructure standards
- Access to affordable service providers for ongoing compliance
- Peer-to-peer learning forums or WhatsApp groups moderated by trained facilitators

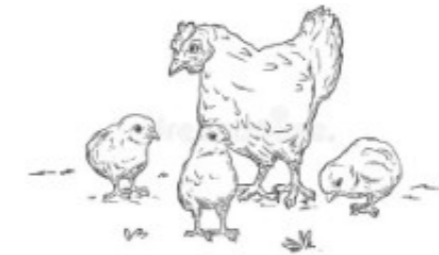
This recommendation aligns with findings from participatory design literature, which emphasise the importance of continuous engagement and adaptive support systems (Burnette, 2015; Eliassen and Lykke, 2024:). Without such a system, centres risk falling out of compliance, despite their initial efforts to meet registration standards.

5.7 Further Research Suggested

This design report focused on the journey toward initial registration, but several areas emerged that warrant deeper exploration:

- Post-registration support systems that would assist registered ECD centres, In how can registered ECD centres be supported to maintain compliance and adapt to evolving regulations over a five-year period?
- Also, scalability of the toolkit to see if this toolkit be adapted for other informal settlements across the Western Cape or nationally? What contextual modifications would be needed?
- What role can mobile platforms or offline digital tools play in improving access to registration resources, especially for practitioners with limited connectivity?
- How do emotional and psychological stressors affect compliance efforts, and what design interventions can support practitioner resilience?

These questions point to the need for continued collaboration between designers, policymakers, and practitioners. The toolkit is a starting point, but the journey toward safe, compliant, and nurturing ECD environments is ongoing.



Biomimicry concept of a hen or “*Isikhukhukazi*”

The design intervention toolkit, kick named “*Isikhukhukazi*” (a hen in isiXhosa), draws directly from the protective and nurturing behavior of a mother hen. Just as the hen protects, cares for, and guides her young chicks

This toolkit is designed to protect practitioners from **misinformation** and **disinformation** while giving **access** and guiding them in their journey to register their ECDs. This symbolic relationship between the hen and the toolkit became the core metaphor for the design.

Figure 22: *Isikhukhukazi*, a design toolkit for ECD centres (Author, 2025).

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