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## Summary

The importance of strengthening the resilience of cities has never been more urgent. Faced with competing and intersecting challenges of rapid urbanisation, inequity and injustice, poverty, urban degradation and climate change, the intensification of risks for cities urges a transformative developmental approach to resilience building that acknowledges the complex vulnerability profiles facing many communities today. Alongside the criticality of other parallel developmental challenges, resilience building in developing regions like Africa often has to tackle deeper systemic causes of vulnerability that require a focus on building the capacity of urban systems, considering an approach that acknowledges local needs and priorities, whilst also, unlocking potential for social transformation. This research explores the impact that human agency may have on strengthening a community beyond their immediate developmental demands, to enable them to act, self-organise and thrive within their local, personal environment and lives. It aims to explain the relationship between having an ability to act, and the capacity to continue, and the possible influence on marginalised communities with complex vulnerability profiles. This relationship is examined within a context of a particular set of institutional conditions implemented as part of a case study in Noordgesig, Johannesburg, South Africa. Through an analysis of the process, the study traces which elements, and how human agency was built, what correlative impact was established on the community's resilience, and the opportunities presented in establishing a human-centred approach to building resilience.

The research adopts a single case study strategy informed by both primary and secondary data. Thirteen semi-structured interviews were carried out with citizens who participated in the project. Three experts who formed part of the project team were also interviewed. In addition secondary data was gathered from local and social media sources and project records.

The data analysis reveals rich insights into the relationship between human agency and community resilience, showing the correlative impacts of developing an ability to act in the community and their transformative, self-development of capacity to not only continue, but proactively change the course of their lives. It was found that once enabled, the community significantly increased independent action to improve their lives and livelihoods.

The findings suggest a transformative and integrated approach to building resilient cities and holds enticing proposals for future policy making in the domain, integrating strands of knowledge from both urban, and human development.

## Keywords

Human agency, resilience, community resilience, resilience thinking, vulnerability, institutions, institutional conditions, adaptive capacity, sustainable development

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# Chapter 1: Introduction

## 1.1. Background information and problem statement

Cities around the world are faced with increasing drivers of risk as global urban populations rise. In addition to rapid urbanisation, challenges around migration, inequality, poverty, infrastructure provision and climate change are exposing the vulnerability of cities worldwide (United Nations, 2020). Faced with competing challenges, strengthening the resilience of cities has become a priority for many local governments in order to cope with change and its effects, and as such, has been incorporated into many strategies, plans and policies (United Nations, 2020). The evolution of resilience has been diverse and explored across fields, resulting in a variation of definitions and applications (Meerow et al., 2016). It has been applied in equally diverse ways in city processes and urban strategies. However, one commonality across, seems to be the focus on resilience as a response to a vulnerability, whether existing, or predicted (Tyler and Moench, 2012).

Pasteur (2011) offers a definition of resilience that addresses key tensions around the topic, and brings together both a theoretical, and more practical understanding of the concept. She defines resilience as:

*'The ability of a system, community or society to resist, absorb, cope with, and recover from the effects of hazards and to adapt to longer term changes in a timely and efficient manner without undermining food security or well-being.'* (Pasteur, 2011, p.13)

Whilst this enables planning for unforeseen shocks or disasters, it fails to recognise the indirect and underlying systemic causes of vulnerability. These underlying causes underpin the fragility of vulnerable communities, who, in addition to being most at risk to effects of longer term stresses such as climate change or sudden disasters, also experience severe multiplicity of stress on a daily basis due to socio-economic conditions that further aggravate their vulnerability (Taylor and Peter, 2014). Pasteur (2011) defines vulnerability as *'the degree to which a population or system is susceptible to, and unable to cope with, hazards and stresses, including the effects of climate change.'* (Pasteur, 2011, p.11) and recognises that these vulnerabilities are often multi-dimensional and underlying, navigating a complex urban environment, which bears impact on the resilience sought to strengthen these systems (Pasteur, 2011). This is particularly the case in African cities, where the complexity of the urban system requires a resilience that is more than a *'powerful state-of-being'*, but also supports development for equitable, sustainable futures. (GCRO, 2013, p.24).

In Africa, where rapid urbanisation is recorded to be the highest, addressing systemic causes of vulnerability is particularly important for strengthening resilience, where the challenge of enhancing resilience is one of many interconnected urban development challenges that need to be tackled alongside each other (Taylor and Peter, 2014). In the city of Johannesburg, South Africa, this reality of complexity is no different. With over 45% of its 5.05 million people confronting poverty, and the general unemployment rate and youth unemployment listed at 31.5% and 41.2% respectively, a large majority of Johannesburg's population are exposed to multiple and continuous stressors on a daily basis, increasing their perceived vulnerability (City of Johannesburg Metropolitan Municipality, 2019; GGLN, 2014). This largest metropolitan area in South Africa grapples with compounding challenges of inequality, high crime, drug abuse and violence, high unemployment, poor health systems, high poverty, fragmentation and poor services and infrastructure (City of Johannesburg Metropolitan Municipality, 2019),

placing a large percentage of its people under severe and perpetual stress and living in *'an existing state of generalised precariousness'* (GGLN, 2014, p.9). In recognition of the complexity of the challenges it faces, the City has incorporated resilience as a key theme in its Growth and Development Strategy 2040. This cross-City long-term strategy drives its development by defining the society and city it aspires to achieve by 2040 (City of Johannesburg Metropolitan Municipality, 2011). Of the four major outcomes that guide the vision for the city, three include aspects of resilience thinking. Resilience is thematically framed within goals for 1) improved quality of life, 2) liveable, sustainable urban environments and, 3) an economy that harnesses the potential of its citizens, referring to social, economic and environmental resilience. (City of Johannesburg Metropolitan Municipality, 2011). Here, in application, resilience is defined as *'the capacity of a system to continually change and adapt, yet remain within critical thresholds- even when confronted with the unexpected.'* and the strategy considers building resilience as critical as *'a lens for understanding and addressing complex systems.'* (City of Johannesburg Metropolitan Municipality, 2011, p.25-26). Although this acknowledges the diversity of resilience that is needed in the city across systems, it still remains abstracted and devoid of particularity of place- what does this resilience look like in practice for contexts of intertwined and multifaceted vulnerability profiles? And, how can this complex profile be better addressed in the objectives of policy making for resilience, so that the process of building resilience relates to the localised state of continual susceptibility?

In order to answer these questions, Taylor and Peter (2014) argue that it is crucial for resilience to be considered as a long term goal alongside more immediate development priorities, and to be contextualised at community scale to ensure that it addresses the systemic causes of the vulnerability within these communities, so as to not further intensify social inequity (GGLN,2014; Taylor and Peter, 2014). This requires a deeper focus on building the capacity of urban systems to be able to adapt continuously, and proactively, and to be able to adjust and self-organise in relation to any changes (Taylor and Peter, 2014); capacity that can be built by optimising on the skills, capacities and opportunities of the community (Pasteur, 2011).

This research explores the impact that human agency could have on the capacity for communities to act, self-organise, and have access and influence over the institutions, processes and decision-making processes that contribute to the underlying causes of their vulnerability (Pasteur, 2011), and thus, the resultant impact on the community's resilience. It seeks to explain the relationship between the ability to act and the capacity to continue, and its possible influence on marginalised communities facing multiple stressors as a means to achieve resilience as a long term development goal addressing systemic causes and offering co-opportunities that emerge at the intersection of sustainable development and resilience. The case of Noordgesig in Johannesburg is chosen in this research for its specific processes that were designed to enable the development of human agency, and is examined as a way of addressing community resilience when faced with intersecting developmental and sustainable priorities.

## 1.2. Relevance of the research topic

Rapid, increased urbanisation has led to an intensification of risks for cities that require transformative developmental approaches that would enable '*continual adaptation to never-ending disturbances*.' (GCRO, 2013, p.23). In African cities, this is aggravated by intersecting challenges of inequity, injustice, poverty and urban degradation, and thus, addressing resilience requires a considered approach that acknowledges local needs and priorities, whilst also, unlocking potential for social transformation (Taylor and Peter, 2014). Building resilience has the potential to not only save lives, but also enhance preparedness, maintain socio-economic systems, preserve culture and protect the natural environment (UN-Habitat, 2017).

Johannesburg accounts for 15% of South Africa's GDP (City of Johannesburg Metropolitan Municipality, 2019). Not only is it the country's most populous metropolitan area, it also draws large migration numbers due to its economic opportunities. Its current intersecting challenges threaten the future sustainability of this economic heart of South Africa and exposes nearly half of its population who are the most vulnerable and marginalised. Understanding how a practical application of resilience in this context can be applied in an integrated and sustainable manner at community scale offers opportunities to save lives and to build a more resilient city at large.

Further, the relationship between resilience and human agency, though discussed through literature, has been restricted to the empirical testing in the psychology and disaster planning domains, and has not been tested for its opportunities in communities facing multiple, continual stressors. Its application in the literature is also restricted to resilience building as a specific focus, and has not been explored in the context of parallel developmental priorities. This research seeks to address this gap.

## 1.3. Research Objectives

The purpose of this research is to explore and explain the opportunities for improving community resilience in vulnerable communities, through the development of human agency as an ability to act, and seeks to assess the effects of this relationship on a community's ability to transform their lives despite facing multiple stressors. It examines this relationship within a context of a particular set of institutional conditions implemented as part of an urban development project in Noordgesig, Johannesburg, South Africa.

Using a case study, and through a process analysis, the research will assess which elements of, and how human agency was built through the project developments, what impact was established on community resilience post-implementation of the project, and whether a relationship can be established between agency and community resilience.

The project is chosen because of its specific approach to building agency through participatory urban development processes and did not include the goal of resilience as an intended outcome. It will thus:

- 1) Describe conditions that enable building human agency
- 2) Identify characteristics of human agency built through the process of the project
- 3) Identify characteristics of community that combine to produce resilience
- 4) Examine the impact of building agency on improving community resilience

## 1.4. Main research question and research sub-questions

The research objectives inform the research questions which frame the delineation of this research.

### **Main research question:**

The main research inquiry seeks to investigate whether a relationship can be established between human agency developed in a community, and its resilience, and in so doing, to explain the extent to which these phenomena may influence each other. The main research question is thus captured as:

*To what extent does the development of human agency influence a community's resilience?*

### **Research sub-questions:**

The research sub-questions contribute to answering the main question, by sub-categorising components of the inquiry in order to provide a more detailed explanation of how the relationship between human agency and community resilience exists and unfolds. They provide crucial linkages to the context, characteristics and effects of the relationships under study, and enable a richer explanation to the answers sought by the research objectives.

In order to understand human agency and its effect on community resilience, an understanding of how human agency is enabled is first required. An explanation of the context within which the development of human agency is made possible will provide an understanding of how agency is harnessed, and what conditions enable its activation. Thus, this is captured in the first sub-question as:

*1) How is human agency within vulnerable communities enabled?*

An understanding of the characteristics of human agency are then required to explain the distinguished qualities that emerge from its development in communities. This contributes to a deeper understanding of what the integral parts are within the concept that may have an impact on the community's capacity to act and respond, and thus, build resilience. It is captured in the second sub-question as:

*2) What are the characteristics of enabled agency?*

Finally, context and characteristic converge into an understanding of what effect the development of human agency in vulnerable communities has on the community's resilience, in order to explain possible opportunities in this relationship. It is captured in the third sub-question as:

*3) What is the effect of enabling human agency on community resilience?*

## Chapter 2: Literature review/theory

### 2.1. Introduction

Resilience as a concept has evolved over decades and across fields, resulting in a rich and layered discourse. From ecological, socio-ecological, engineering and human development domains, the definitions of resilience are broad and varied (Meerow et al., 2016). As such, the concept has often been referred to as being ‘*malleable*’ and ubiquitous (Meerow et al., 2016, p.2), lacking determinate characteristics and appropriate measurement tools and units (Leichenko, 2011) and, lacking a multi-disciplinary approach to address the complexity of its related systems (Leichenko, 2011). When applied to cities and the urban environment, resilience thinking is equally varied and diverse. Following a deep scoping of resilience literature across four decades, Meerow et al. (2016) highlight some key tensions around the topic that reoccur concerning aspects of state (equilibrium or non-equilibrium), conceptualisation (positive or negative), process of change (persist, adapt, transform), adaptability and adaptation, and timescale (Meerow et al., 2016). These tensions highlight the many pathways to resilience, and emphasise the need for a definition that is dynamic (Meerow et al., 2016). Further, with the deep development of the concept of resilience having stemmed from ecology (Holling, 1973), an application of the concept for urban, social systems requires an understanding of resilience in relation to a system that may have similar complexity as ecological systems (Batty, 2008), but whose feedback mechanisms fundamentally differ, and are largely individualised through human ability (Davidson, 2010). There is thus a need to understand resilience contextually, wherein a strong consideration of the nature of the social system which it seeks to support is included in its delineation.

This research aims to understand this application of resilience within the context of cities and communities as strong social systems (Davidson, 2010). It explores human agency at the intersection of that discussion as an enabler of resilience development within communities and seeks to draw conclusions on 1) what resilience for communities means, 2) how this is related to the concept of vulnerability, 3) the role that human agency plays in defining a response to complex, adaptive social systems (Davidson, 2010), and, 4) what opportunities exist within this examination for future application of resilience thinking for policy and practice. The literature review will examine concepts of community resilience as an extracted type of resilience, as well as concepts of human development and agency, its variations in expression, and the opportunities for including it as an enabler for increased resilience of vulnerable social systems. The literature scoping undertaken for this study is noted as being focused and selective, and does not attempt to cover all definitions, applications or discussions on the topic. The chapter is organised according to the key concepts covered. Section 2.2. starts with a scoping of resilience literature in its broad applications and drawing an understanding from various domains, and includes a review of community resilience within the literature. Section 2.3 discusses the context of vulnerability and the implications for resilience thinking. Section 2.4. introduces the concept of human agency and its relation to resilience building. Section 2.5 highlights the concept of institutional conditions as a means to enable agency. The chapter concludes with a conceptual framework outlining the relationships between concepts under Section 2.5.

## 2.2. Resilience and Community Resilience

Tracing the origins of the concept of resilience and its usage, the standard approach has been one of *'predict and prevent'* (Tyler and Moench, 2012, p.3), typically adopting a reactive and persistent attitude to potential disturbances and shocks. However, these insular adoptions have been critiqued for not addressing the unforeseen, for neglecting indirect and underlying effects, for not being operationalizable, as well as, underemphasising the opportunity for learning and innovation toward a more transformative model (Carl Folke et al., 2010; Jabareen, 2013; Leichenko, 2011; Tyler and Moench, 2012). The elements of flexibility, diversity, and capacity for innovation and learning, have, in more recent literatures, emerged as key considerations for building resilience beyond *'strength and resistance'* (Tyler and Moench, 2012, p.3) to a multidimensional concept that acknowledges the complexity of systems and the interdependencies that exist between them (Leichenko, 2011; Tyler and Moench, 2012).

The multiplicity in definition and application of resilience can be traced along both type of systems assessed, as well as a temporal scale of development of the concept. Holling's (1973) work on resilience of ecosystems and ecological systems is the starting point for much resilience thinking, with its definition of resilience as the *'measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationship between populations or state variables.'* (Holling, 1973, p.14). This early understanding of resilience is primarily focused on a system and its abilities, and is said to be approached as *"system management"* (Tyler and Moench, 2012, p.312). The exploration of resilience in relation to socio-ecological systems is grounded by contributions by Adger (2000) who first introduced the discussion of the importance of the nature of a system when examining resilience. He argued that a simple translation of resilience from the field of ecology and ecological systems to the social sciences ignores the inherent structural and behavioural differences between these systems and further positions the influence of humans as agents in a social system as important in the discussion of resilience (Adger, 2000). The development of resilience literature concerned with socio-ecological systems from thereon, in considering the complexity of such systems, highlight the importance of including social agents or actors and institutions in a framework of resilience, and reemphasises the approach to resilience as a process of resilience building, rather than management of a system. (Tyler and Moench, 2012).

Within the disaster management domain, resilience is focused as a desired or achieved outcome. It introduces the aspect of *adaptation* as a means of developing the capacity to adapt to changes or disturbances and their after-effects. This domain further draws a discussion on *"resource diversity"* as a means to build this capacity, rather than *"resource dependency"* (Skerratt, 2013, p.2). Here, Pasteur (2011) offers a definition of resilience which encompasses both a theoretical, and more practical understanding of the concept as follows:

*'The ability of a system, community or society to resist, absorb, cope with and recover from the effects of hazards and to adapt to longer term changes in a timely and efficient manner without undermining food security or well-being.'* (Pasteur, 2011, p.26)

It is at this intersection that research around resilience for social systems, such as communities, agree on the shift in focus from 'lack' and 'vulnerabilities' to 'assets' and resources (Skerratt, 2013; Pasteur, 2011; Tyler and Moench, 2012). The human development domain further contributes to this understanding of building adaptive capacity, emphasising the social components of adaptation such as connections, relationships, behaviours and networks, that

increase an individual's, or collective's capacity to adapt to change (Berkes and Ross, 2013; Davidson, 2010).

The concept of community resilience is equally debated across literature and broad in its varied definitions and operationalization (Heckelman, 2018). Here, at the local level, is where the intensification of interactions between people and institutions that constitute society is most pronounced, attesting to the complexity of cities and its communities at the intersectionality of systems (Lerch, 2017). Communities not only represent a physical aspect of a spatially-grouped number of people within a settlement, but also represents ideas of identity, culture, interpersonal, social relationships, governance structures and connections through memory and shared history (Lerch, 2017). It is thus limiting to consider community resilience as an isolated, normative concept (Pasteur, 2011; Berkes and Ross, 2013; Heckelman, 2018).

Berkes and Ross (2013) propose that a more integrated approach is required; one that approaches resilience from two strands, namely the socio-ecological and psychology/human development strands (Berkes and Ross, 2013). This integrated approach recognises both the complexity of the system, with its adaptive relationships, feedback mechanisms, non-linearity and unpredictability, as well as the opportunities for building on a community's strengths and assets, enabled through values and beliefs, connections to place, social networks, courage, and leadership (Berkes and Ross, 2013). These interdependent and multi-scalar characteristics of communities is also emphasised by Heckelman (2018), who further highlights that the development of community resilience is an ongoing process. Emphasis is thus placed on *building* resilience, rather than *achieving* resilience (Heckelman, 2018, p.6).

Drawing from literature within the human development strand of resilience also reveals this shared understanding of resilience as being more than just a set of characteristics combining to create a desired state, wherein a focus is placed on a more proactive response to change and adaptation (Brown and Westaway, 2011). Following a scoping of literature, Magis (2010) offers the following definition of 'community resilience':-

*"Community resilience is the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise."*(Magis, 2010, p.3)

Further relevant definitions drawn from literature and adopted for the sake of this study are:

'resilient community':-

*"...takes intentional action to enhance the personal and collective capacity of its citizens and institutions to respond to and influence the course of social and economic change."*(Heckelman, 2018, p.6)

'community capacity':-

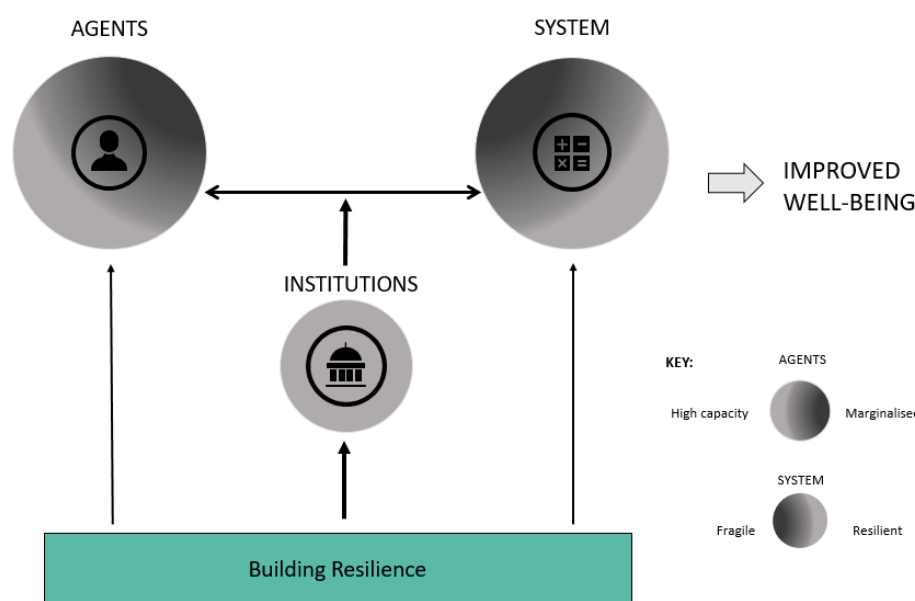
*"...refers to the interaction of human capital, organized resources, and social capital existing/available to a given community that can be leveraged to solve collective problems and improve the well-being of a given community."* (Heckelman, 2018, p.6)

These definitions are adopted for this sake of this research.

### 2.3. Vulnerability

If resilience relates to the ability of a system to absorb a shock or disturbance whilst retaining functionality and structure, vulnerability would be the extent of, and condition of exposure of the system to a possible shock or stress. Equally concerned with a complex system, vulnerability can be said to be multi-dimensional as well (GGLN, 2014). Apart from natural or sudden risks, vulnerability in urban communities can also often be characterised by unstable conditions of a socio-economic, political, or physical nature, and an inadequacy of coping skills which constitute to a multi-faceted and continuous susceptibility to risks (GGLN, 2014). This is typically characteristic in many developing countries, and particularly African cities, which require the task of addressing vulnerabilities, and building resilience to be considered side-by-side with other developmental priorities (Taylor and Peter, 2014). This compounded state of vulnerability, with multiple stressors poses high threats to the livelihoods, well-being and sustainability of communities succumbed to these conditions, and as such, requires an approach to resilience building that requires a deeper focus on building the capacity of urban systems to be able to adapt continuously, and proactively, and to be able to adjust and self-organise in relation to any changes (Taylor and Peter, 2014); capacity that can be built by optimising on the skills, capacities and opportunities of the community (Pasteur, 2011).

A differing perspective and understanding of vulnerability is offered from research that links vulnerability not with the lack of resilience, but rather, as a concept that exists in relation to resilience (Gallopín, 2006; Tyler and Moench, 2012). This perspective defines high resilience as one wherein the systems are “robust and flexible”, accessed by highly-capacitated agents and enabled by institutions that are supportive (Tyler and Moench, 2012, p.9). Vulnerability, in this view, is thus the condition wherein systems are fragile, capacity of agents is low and support from institutions is low, and thus by increasing resilience, vulnerability is reduced and well-being is improved (Tyler and Moench, 2012, p. 318). This conceptualisation contributes to the understanding of vulnerability as a multi-dimensional concept that requires an examination side-by-side with resilience, most especially in marginalised communities. The relationship between vulnerability, resilience and its components is depicted in the diagram below:



**Figure 1: Concepts of resilience building through systems, agents and institutions, and showing where vulnerability occurs; adopted from Tyler and Moech (2012).**



According to the Centre for Community Enterprise, there are four components to community resilience, namely, '1) *people*, 2) *organisations*, 3) *resources*, and, 4) *community processes*' (GGLN, 2014, p.24). Across these four components are opportunities to reduce aspects of vulnerability by building resilient communities that, given access to knowledge, resources and assets, are able to respond proactively to change and make choices around their urban environments and livelihood strategies (GGLN, 2014). Magis (2010) offers an expanded understanding of the dimensions of community resilience, framed by the perspective of enabling communities to have the capacity to respond to change, rather than controlling the occurrence of change. These include, '1) *community resources*, 2) *development of community resources*, 3) *engagement of community resources*, 4) *active agents*, 5) *collective action*, 6) *strategic action*, 7) *impact*, and 8) *equity*' (Magis, 2010, p.402). Through her research, Magis (2010) highlights the importance of capacity building, taking action with this increased capacitation, and the importance of transformation for communities within contexts of continual change. This emphasis on the need to address the underlying causes of vulnerability and exposure is supported by Pasteur (2011) who cites improving the diversity and security of livelihoods, improving preparedness for disasters or stresses, improving an understanding of longer term effects, trends and threats, and enabling a more participatory and transparent governance structure that allows people opportunity to influence decision making as opportunity pathways for improved community resilience (Pasteur, 2011).

From the human development domain, the concept of vulnerability relates to the discussion of communities as dynamic and evolving systems that undergo constant change. Here, community resilience in the context of challenges and adversity is defined as "*the ability of communities to cope and adapt in the context of challenge and adversity in ways that promote the successful achievement of desired community results.*" (Mancini and Bowen, 2009, p.248). If change is an inevitable constant in a social system (Mancini and Bowen, 2009) by nature of their self-organization and unpredictable behaviour (Batty, 2008), then, the measure of a community's resilience would be in their ability to cope and adapt in such a changing environment. Contrary to Pasteur (2011) and Taylor and Peter (2014), Mancini and Bowen (2009), position resilience as a desired outcome, rather than a process-building. They cite three determinants of community resilience namely, 1) social organisations, both formal and informal that support and are mobilized within a community in the face of change, 2) '*relationships and connections*' as the foundation of a community's strength, and 3) community capacity comprised of a '*shared responsibility for the welfare of the community*' and collective competence as an proactive expression or action to address the needs and challenges of the community (Mancini and Bowen, 2009, p.252, 256). This perspective of capacity varies from that offered by socio-ecological and environmental domains from a focus on capacity as available resources, but rather the belief of being able to produce an effect or achieving a (community) goal, or, *collective efficacy* (Mancini and Bowen, 2009, p.256).

Thus, in seeking a multidimensional framework of resilience that goes beyond persistence and adaptation, and noting that resilience is context dependent and sensitive to the nature of systems, establishing a framework for building resilience is a challenging task. Drawing from the perspectives of the literatures outlined, a connection is made between the described components of community resilience that may be used to describe qualities of a community that adapts and responds to its vulnerabilities and challenges, and adopted in this research to operationalize an understanding of resilience in practice. The table below captures this

operationalization by linking these perspectives to create an empirical framework of community resilience:

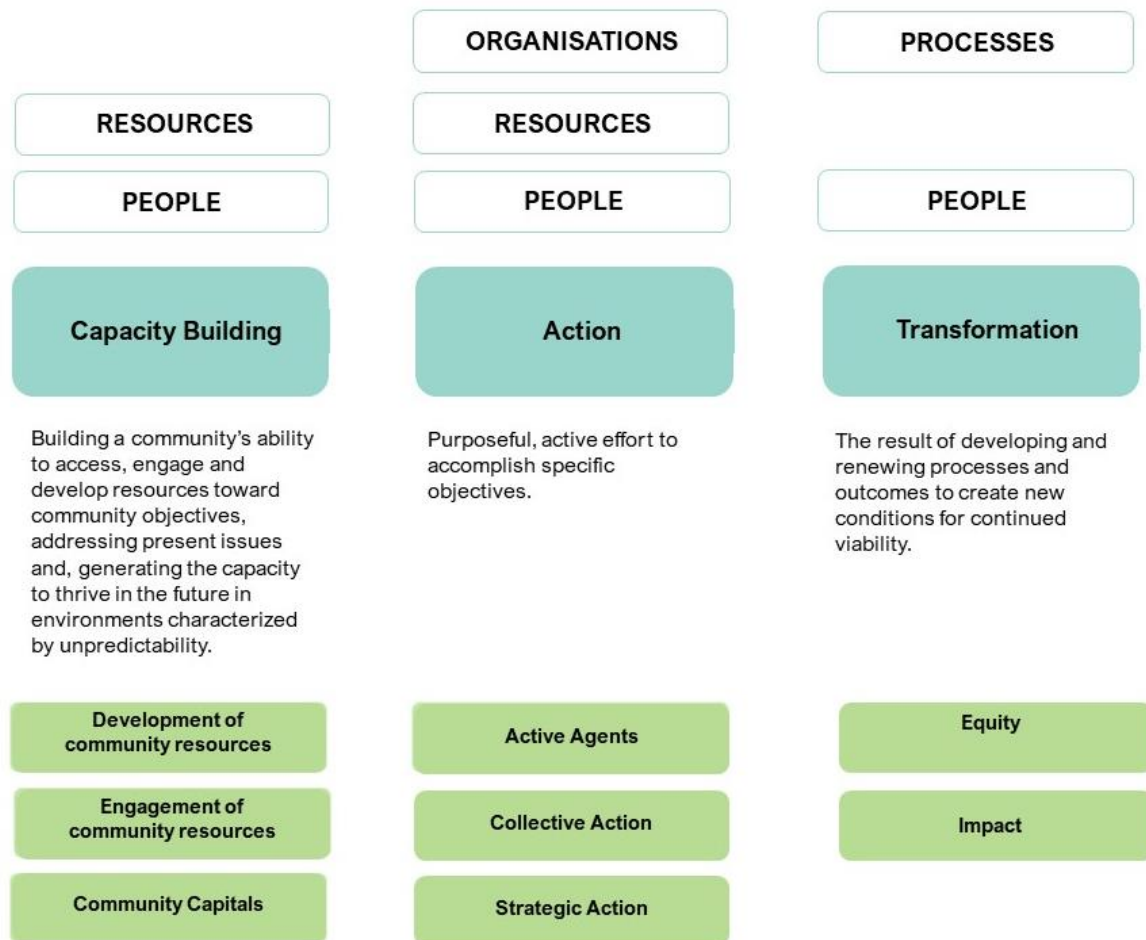


Figure 2: Components and features of community resilience; adopted from Magis (2010), Mancini and Bowen (2009), GGLN (2014) and Heckelman (2018)

## 2.4. Human development and agency

Agency is generally understood as the ability of an individual to make choices from free will and to act. Sage Encyclopaedia offers the following definition:

*'... the term human agency signals the capacity of individuals to perceive their situation, reason about it, consciously monitor their action, form motives, and so on.'*  
 ( The SAGE Dictionary of Qualitative Inquiry, 2007, p.2)

Brown and Westaway (2011) include an elaborated definition by Mclaughlin & Dietz of *'the capacity of individuals and corporate actors, with the diverse cultural meanings that they espouse to play an independent causal role in history.'* which expands beyond the individual to include *'collective action'* (Brown and Westaway, 2011, p.322). The inclusion of agency within the discussion to improve resilience development is supported by the recognition of the dynamic of power at play within cities, the importance of understanding cause and effect, and the recognition of humans at every scale, risk and change that presents itself (Brown and Westaway, 2011; Jerneck & Olsson, 2011; Berkes & Ross, 2013; Brown, 2014). Agency and

human development is also important to transcend the temporal dimensions of resilience and develop a strategy that is multi-disciplinary, active, responsive and sustainable.

When considering the unique nature of resilience for cities, the most distinguishing feature is the dynamic social system at play with its complexities of overlapping, and non-deterministic feedback mechanisms (Davidson, 2010; Berkes and Ross, 2013; Taylor and Peter, 2014). This is due to the nature of humans and social systems where feedback is individualised and personalised, largely captured in the concept of human agency (Davidson, 2010). Skerratt (2013) defines human agency as *'the realm within which humans deliberately and consciously act, network, behave, imagine futures and make decisions between perceived options'* (Skerratt, 2013, p. 38). She adds to the dispute of the adoption of resilience as a singular concept that is focused on the ability to *bounce-back* from a disturbance, by tracing the development of the concept from *'reactive bounce-back'* approaches to *'proactive human agency'* emerging from 2008 onward which places human agency as central in the discussion of resilience (Skerratt, 2013, p.1). Using empirical findings, she further concludes that such proactive change provides opportunities for a more transformative trajectory, rather than just a response to an external disturbance or stressor. In this view, human agency is attributed to being central to building resilience, as well as contributing to the definition of a *type* of resilience. This is supported by the argument that the application of resilience to social systems cannot ignore the distinct presence of human nature or risk being *'woefully insufficient'* (Davidson, 2010, p1145). This consideration of human agency acknowledges the impact of people and the non-linearity of a social system in the context of change.

By definition, the nature of the concept across the literature is connected to ideas on action, equity, capacity/ability, influence and innovation. Skerratt (2013) lists *'1) human imagination and ability to anticipate, 2) collective action, 3) ability to create learning pathways and creativity, 4) foresight and creativity as characteristics of agency'* (Skerratt, 2013, p. 38), whilst Davidson (2010) echoes these classifications with his description of the nature of agency as 1) conscious action, 2) not equal in distribution or inequality, 3) an ability to imagine, 4) an ability to anticipate, and 5) advanced with collective action (Davidson, 2010). In the case of vulnerable communities outlined above, where the extent of exposure is layered and multi-faceted, the state of the system is not one that is desirable or appealing, and a resilience approach is not framed by wanting to necessarily retain functionality or the inherent nature of system, but to adapt and transform toward a more progressive response (Davidson, 2010). The cultivation, and presence of human agency is positioned as an opportunity to achieve this. Davidson (2010) argues that the expression of agency should be varied and occupy a focal place, both at the individual level and collective level. Agency at the individual level is defined as a level of *'confidence among autonomous and able citizens'* that transformation is possible. At the collective level, agency is defined as *'cultural, infrastructural and communicative resources'* to enable action (Davidson, 2010, p. 1145). This relationship between individual/personal and collective agency is highlighted by various authors and across domains of literature who argue that a blend of modes of agency yields optimum functioning. Bandura (2018) notes three different modes namely, individual (personally controllable), proxy (socially mediated proxy agency, influence others who have resources) and collective (pool knowledge, skills and resources act together to shape their future) (Bandura, 2018).

Although drawn from different disciplines of environmental, disaster, human development and socio-ecological disciplines, the concept of human agency shares some analysis across the domains and systems. Through these strands of literature, agency is related to concepts of

adaptive capacity and resilience, where adaptive capacity is seen as the link between literature (Brown and Westaway, 2011). Whilst many policies and research highlight the importance of acknowledging subjective dimensions of this capacity, the lack of integration of socio-cognitive aspects has resulted in an analysis that lacks a more integrated and human-centred approach to understanding, managing and responding to change (Brown and Westaway, 2011). Research that place human agency at a central point in the discussion of resilience, share the argument that resources, processes, change as a constant and proactive action leading to transformative trajectories are key components to the discussion, especially to enable a community resilience that goes beyond preparing for a disaster, but establishes strengths within a community that will facilitate resilience as, and when it is needed (Skerratt, 2013; Davidson, 2010; Magis, 2010; Brown and Westaway, 2011). This perspective is shared by research emerging from the human development and psychology domains.

The human development discourse offers a shared understanding of agency that enables a subjective measurement or interrogation to aid this integrated understanding of resilience and enable a deeper, sociological unpacking of resilience in a changing environment. According to Brown and Westaway (2011), human agency, and the ability of a person to act is influenced by 1) motivation, 2) cognitive beliefs, 3) perceptions, and 4) structural or environmental conditions. When acted upon, agency is characterised by features of '*self-efficacy, empowerment, optimism, self-esteem, innovative thinking, decision-making and perception*' (Brown and Westaway, 2011, p.6). These are important determinants of how a person may respond to change and/or disturbance, and represent dimensions conceptualised at different scales, both individual and collective (Brown and Westaway, 2011). Introducing human agency, and including an understanding of the concept from the human development domain, enriches the discussion of the relationship with resilience offered by the perspectives from environmental and socio-ecological domains. Here too, the importance of introducing inter-related concepts of 'adaptive capacity' and 'well-being' as a convergent point, aiding an understanding of subjective, relational dimensions, introducing a cross-scale and cross-sectoral approach for a complex, dynamic system, and allowing for a shift in focus from vulnerability-based to strength-based assessments is highlighted (Brown and Westaway, 2011).

The opportunity for positioning agency as an important component of resilience is further emphasised in the context of vulnerable communities and the discussion on community resilience thereof, where strengthening agency is seen as a pathway to building resilience (Pain and Levine, 2012).

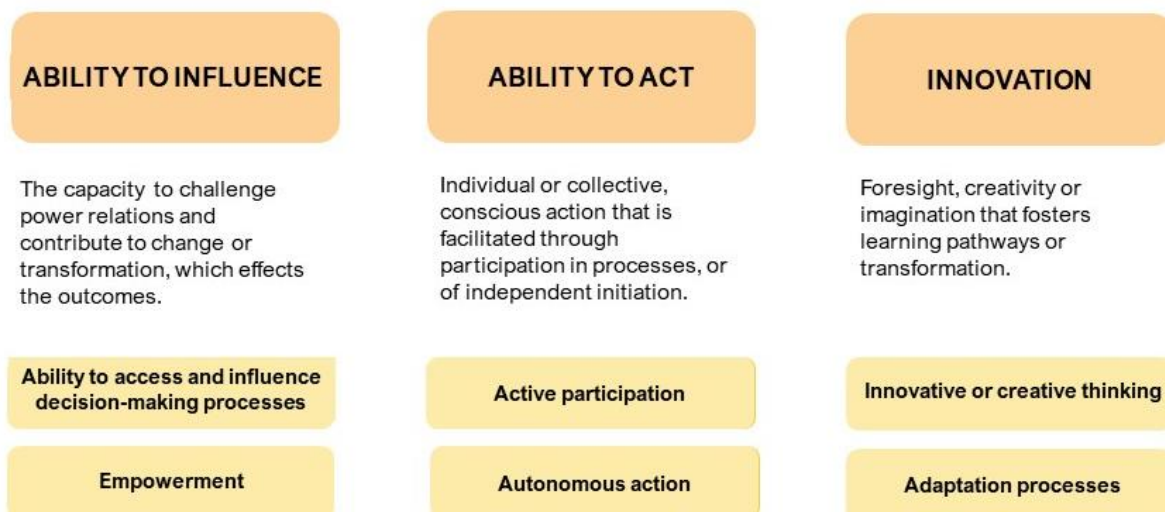


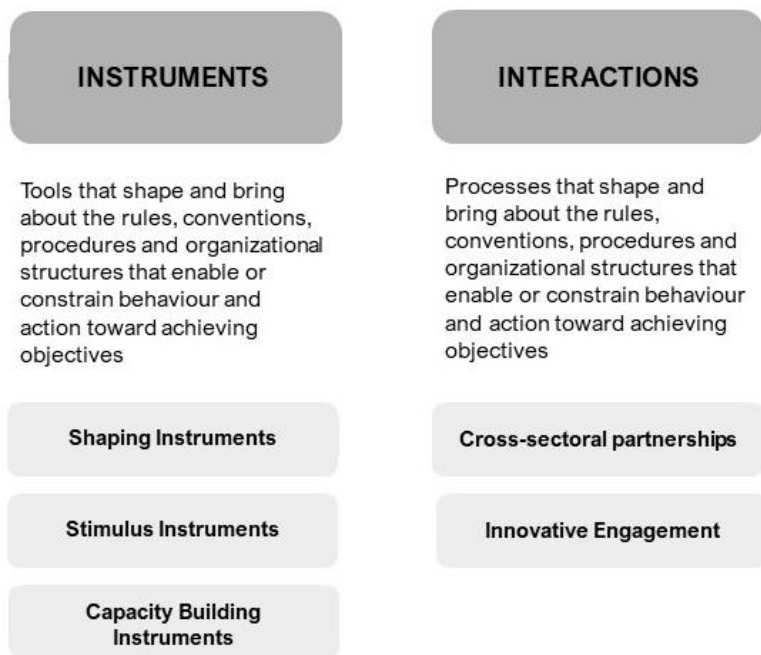
Figure 3: Components and characteristics of human agency; adopted from Davidson (2010), Brown and Westaway (2011), Skerratt (2013) and Bandura (2018).

## 2.5. Institutional conditions

Within the resilience literature, we see a development of the concept from more than a system management approach, to a more strategic approach of building resilience. This approach recognises the complexity of the systems present in urban environments and communities, and integrates the elements of social agents and institutions into the resilience framework (Tyler and Moench, 2012). Thus, institutions are seen as the third element of resilience, and further, as the link between systems and agents/actors. Heurkens (2016) notes the relationship between actors and institutions as reciprocal, where actors shape institutions, and institutions influence actions taken by actors/agents. Institutions can be understood as the ‘rules of the game’, or the cultured constraints or enablers that structures human interaction (Joseph, 2013; North, 1990; Tyler and Moench, 2012). Scott (2001) offers the following description of institutions as consisting of ‘cultured-cognitive, normative and regulative elements that... provide stability and meaning to social life.’ (Lawrence and Suddae, 2006, p.216) Institutions can be both formal or informal, overt or implicit, and condition the interaction between systems and agents (Tyler and Moench, 2012). North (1990) defines formal institutions as ‘political (and judicial) rules, economic rules and contracts’ and informal institutions as ‘codes of conduct, norms of behaviour and conventions.’ (North, 1990, p. 46, 36). Rather than separate these concepts, this research will look at a ‘set of institutions’ (Bleich, 2006, p.222), which is relevant when looking at conditions where soft, informal institutions and formal, hard institutions are affected by each other, and encourage change by establishing lesson-drawing and learning opportunities as pathways (Bleich, 2006). Institutional conditions are thus defined as, “Formal and informal institutions – more specifically, actor instruments and interactions – that influence policy-making and decision-making.” (Heurkens, 2016, n.p).

Heurkens explains the opportunities for sustainable, resilient cities through institutional conditions through four pathways: 1) creative, integrated visions and plans, 2) partnerships across sectors, 3) effective policy instruments, enabling 4) accelerating innovation. (Heurkens, 2016). These are cited as being complementary to achieving wider benefits in developments and establishing better alignment between public and private interests (Raco and Henderson, 2006), and are used to guide the conceptualisation of the institutional context for this research.

Institutional instruments can be defined as tools and devices that shape and bring about the rules, conventions, procedures and organizational structures that enable or constrain behaviour and action toward achieving objectives, whilst institutional interactions can be understood as the processes that support the same function (Alexander, 2005). Heurkens (2016) describes four institutional instruments that perform different functions of guiding developments, namely 1) shaping instruments, 2) regulatory tools, 3) stimulus instruments, 4) capacity building (Heurkens, 2016). For the purposes of this research, regulatory tools will not be looked at, as it lies outside the focus of the research. Interactions are the supporting processes, that together with instruments, provide the context under which institutions enable or constrict the behaviour and actions of actors within a system. The reciprocal relationship between actor and institutions is particularly impacted by the nature of interaction and engagement, and can be seen as opportunities for establishing accelerated innovation through effective partnerships and network-building (Bleich, 2006; Heurkens, 2016; North, 1991). It also contributes to the understanding of institutions as evolving, where the opportunity to create order and reduce uncertainty can be improved through exchanging, learning, and engaging (Bleich, 2006; North, 1991).



**Figure 4: Components of institutional conditions, adopted from Heurkens (2016), North (1991) and Bleich (2006)**

Due to the limitations and focus of this research, institutional conditions will be confined to a contextual factor, and not as a causal relationship which influences the variables of this study. Institutional conditions is thus not included in the theoretical framework and operationalization thereof, and is retained as a descriptive element.

## 2.6. Conceptual Framework

The theoretical, conceptual framework is built upon the literature scoping undertaken to understand the concepts of resilience, institutional conditions and human agency in the context of vulnerability. Based on the literature it examines the relationships between these concepts.

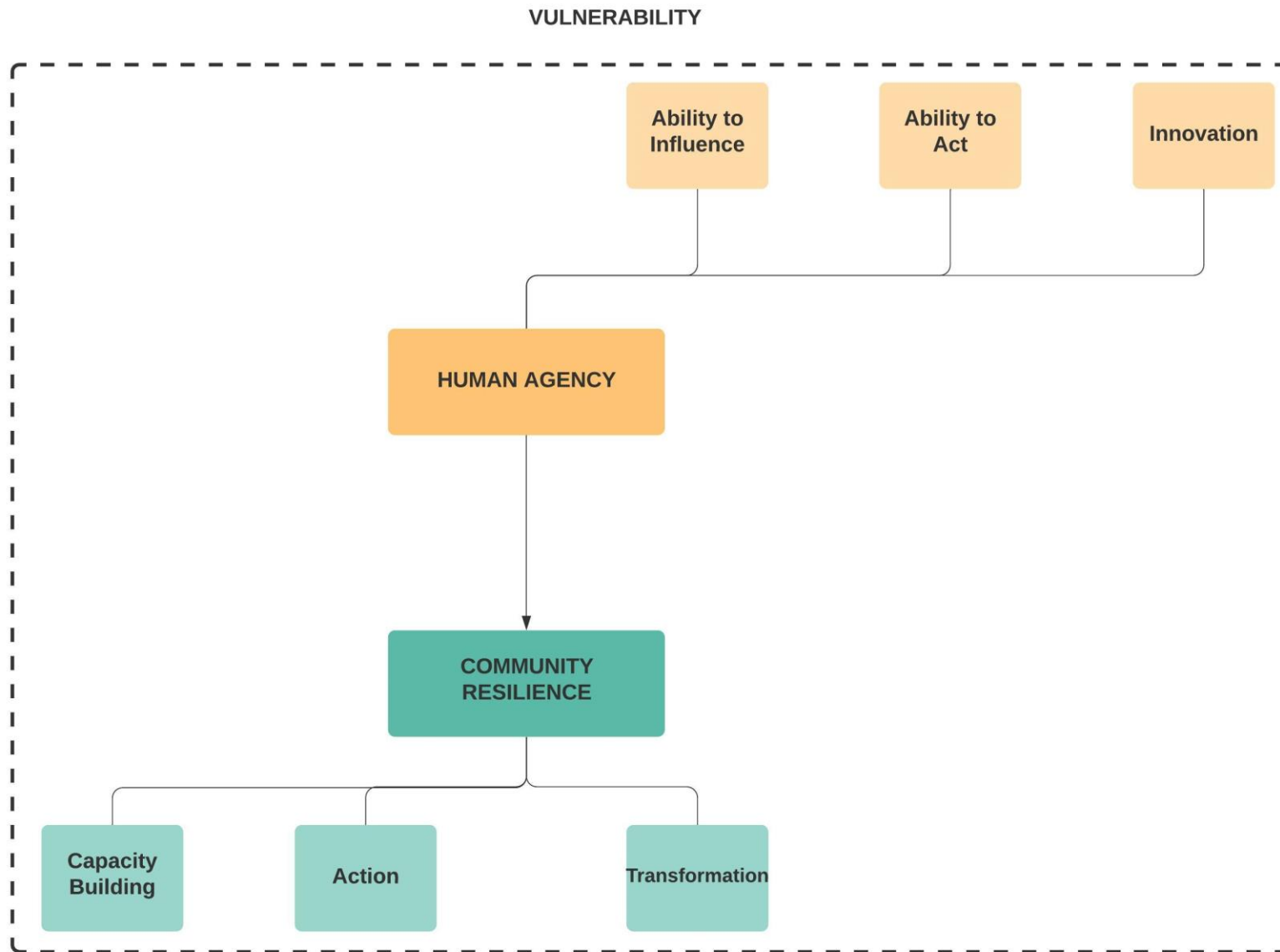
In this study, the researcher seeks to examine the impact of developing human agency (independent variable) in vulnerable communities on community resilience (dependent variable). The framework is presented as a synthesis of the research outlined in the literature review, selected in relation to a collective, or community level. Iterations are clustered for the purpose of focusing the research.

This research conceptualises community resilience in relation to an examination of dynamic, complex social structures, with components of people, processes, organisation and resources. These components relate across the dimensions of community resilience of capacity building, action and transformation.

Capacity building represents the community's ability to access, engage and develop their resources toward achieving objectives. According to the literature, this is enabled by the development of resources, the engagement thereof and the investment of resources into community capitals. Action relates to the active efforts taken, with the relevant capacity built, to accomplish objectives. Action is driven by active agents taking collective and/or strategic action. Transformation relates to the dimension of resilience that emphasises viable continuity and renewable processes. A community's resilience is impacted by their ability to create new conditions that will ensure thriving futures, and is positioned as most conducive to vulnerable communities in order to address underlying systemic causes. Equity and impact, thus relate strongly to transformation as a means to achieve a reduction of vulnerability.

Human agency is conceptualised as an enabler toward community resilience and framed by three key components as drawn from, and concurred across the literature. These are, the ability to influence, ability to act, and innovation. Ability to influence relates to the capacity to challenge power relations and contribute to change and transformation, and thus, effect an outcome. It has impact on the ability to access decision-making processes, and a sense of authority and rights. Ability to act is understood as conscious acts, by an individual or collective, enabled through participation or independent initiation that produces positive effects. Innovation relates to the human ability to imagine, adapt or create new ideas and methods as solutions to meet needs or challenges. It results in an improvement of an outcome, process or condition.

Figure 5: Conceptual Framework; Source: Author, 2020





## **Chapter 3: Research design, methods and limitations**

This chapter presents the operationalization of the research and the research design. It begins with the description of the selected research strategy in Section 3.1, followed by the scope of research (Section 3.2) and the identified challenges and limitations to the research (Section 3.3). Definition of measurement is outlined in Section 3.4 which operationalizes the concepts as discussed in the literature scoping. The chapter concludes with Section 3.5 discussing methods of data collection and analysis.

### **3.1. Research Strategy**

When designing a technical research, the first step is to select an appropriate research strategy (Van Thiel, 2014), guided by three key considerations: 1) extent of understanding of a phenomenon required (depth of understanding versus breadth of understanding), 2) whether findings sought are quantitative or qualitative, and 3) whether the research requires empirical or desk research (Verschuren and Doorewaard, 2010). This research requires a depth of understanding of phenomena on a small group of the population. It does not seek to establish high external validity and generalization of findings, but rather seeks to explain in detail the relationships between phenomena, as observed in a real-life scenario. Detailed, qualitative and empirical data will be required and thus, a case study has been selected as the research strategy.

Case study research is often used for Public Administration and Public Management research, as it allows for an examination of an actual event situated in a real-life setting (Van Thiel, 2014). It is also a useful strategy to observe unique subjects in the field. The case study is further well suited as a strategy for this research due to its applied nature, which enables the research to contribute toward a solution to a social issue (Van Thiel, 2014). By adopting a singular case study strategy, the research will be able to focus on detailed information and rich descriptions of the phenomena under study, suitable to address the research objectives. The implications of this, however, is that the research will achieve a very low external validity. This research, however, does not seek to generalize the findings to a broader population, but rather to gain deep insight into the phenomena of community resilience, human agency and institutional conditions, and their relationships to each other, and in so doing, to contribute to a body of knowledge. In contrast, the case study strategy offers opportunities for high internal validity due to the depth of information acquired. This internal validity can also be increased with triangulation of data and methods (Van Thiel, 2014), which in this research will be achieved through the use of primary and secondary data.

The research will focus on the single case of an urban development project undertaken in Noordgesig, Johannesburg, South Africa. The project was selected due to the opportunities of human agency that was developed through participatory development processes. The details of the project and processes followed will be expanded further in Chapter 4. The research aims to gather depth of information, rather than breadth, in order to answer the research questions. The number of variables are large as outlined in Section 3.4 and the research will be conducted as a single-moment measurement. Measurement is based on a process analysis, rather than a snapshot, in order to show changes in the variables. Since the case study included other project goals in addition to the development of human agency, the value of variables is provided through a descriptive context of the conditions of agency and community resilience prior to

the implementation of the case study project, and then assessed through changes incurred after the completion of the project. This will allow for an interrogation of the relationships between the independent and dependent variables, and seeks to contribute to the legitimacy of claims made through the analysis. Data gathered will be qualitative and both primary and secondary data will be used (see Section 3.5)

## **3.2. Scope of research**

This research will focus on one case study of an urban development project undertaken in Noordgesig (The Noordgesig Social Cluster project), and will draw data from a selected group of citizens and experts. Whilst it may be interesting to include a broad range of voices in the data collection process, due to the limitations of time for the research, focus will be placed only on those citizens and experts who actively participated in the project. Sampling will be further discussed in Section 3.5 below. Measurement is limited to a single-moment, however, as outlined above, the conditions within-case for prior and post implementation of the project are highlighted to ascertain possible relationships between variables.

## **3.3. Challenges and limitations**

The main challenge undertaking this research and the selected strategy, was response and access to citizens and experts, given the current global conditions around the COVID-19 pandemic. Face-to-face interviews were not always possible due to the health restrictions placed upon cities around the world, and thus, online modes of conducting these were adapted. Within the context of Noordgesig, access to the internet was restricted or strained. In order to mitigate this, support was extended to the community in the form of access to data to enable online interviews to take place. It was also crucial to consider the digital literacy in this particular context so as to not disadvantage participants. The design of the data collection process considered additional time implications that this may place on the research. Some in-person data collection had to be carried out to avoid limiting access for marginalised, sick or elderly citizens. Adhering to correct health guidelines were crucial when executing this part of the study. Given the current global conditions, as well as the particularity of the status of the COVID-19 pandemic in South Africa, responses, availability and enthusiasm for participation in the research was impacted. In addition, the countrywide lockdown and rolling power cuts impacted the ability to carry out certain interviews for a certain period of the data collection period. Further, responses may be affected by the changing landscape of health, income, movement, sociability and mobility and other factors compared to before the pandemic. Therefore, the correct design of the research tools was important to ensure reliability and validity. This includes consistent measurement, accurate measurement and testing of research instruments to legitimise credibility. Finally, it was important that the respondents understand the questions and content asked of them through the semi-structured interviews. To ensure this, clear, unambiguous and non-technical language was used, clear instructions and transparency was offered to all respondents at the start of the interviews. The design of the interview guides were clear and unambiguous and ensured that no language barriers hindered its usage. The limitations around the selected research strategy of a single-moment, single case study is noted for its implications on the analysis of the variables. Considering the time limitations of the research, the study does not include measurement and analysis of data at the start of, or prior

to the case study project, and is thus limited to a single-moment measurement after the completion of the project. This has bearing on establishing undisputed causal relations between the variables, without a quantifiable value on either side of the equation (independent and dependent variable). In order to address this, the research traced the process and flows of influence between variables, and includes a descriptive analysis of the values of the variables as a means to diagnose changes.

### **3.4. Operationalization**

Operationalization is an important step that gives direction to a study and defines what will be measured to provide answers to the research questions, and begins with defining the applicable concepts . The operationalization of this research can be classified as deductive research and is based on the theories defined and discussed in Chapter 2 on the key concepts of community resilience and human agency. The operationalization is limited to selected dimensions, due to constraints of time on the research, and uses both subjective and objective measurements. The following variables and indicators are adopted for this study:

**Table 1: Variables and Sub-Variables definition; Source: Author, 2020**

Concept	Variable	Definition	Sub-Variable	Definition
Community Resilience  (Dependent Variable)	Capacity Building	Building a community's ability to access, engage and develop resources toward community objectives, addressing present issues and, generating the capacity to thrive in the future in environments characterized by unpredictability. (Magis, 2010)	Development of community resources (Magis, 2010)	To advance individual and collective ability and self-efficacy to respond to conditions, and influence change. A community's resources may include natural, physical, psychological, social, political, cultural, or spiritual assets. (Magis, 2010; Mancini and Bowen, 2009)
			Engagement of community resources	The utilisation of a community's resources through local organisations to address conditions faced by the community (Magis, 2010).
			Community Capitals	"Community resources that are strategically invested in collective endeavours to address shared community objectives." (Magis, 2010, p.406). Resources invested transform into assets that the community may use to develop forward trajectories of change and adaptation. Community capitals may include natural (ecosystem), cultural (values, beliefs language, identity), financial, built (physical assets and infrastructure), political (access to power, regulations) or social (social ties, organisation and networks) (Magis, 2010; Mancini and Bowen, 2009). Note: The operationalization does not include separate indicators for measuring natural, cultural, financial, built and social capitals for this sub-variable, as they are operationalised through other indicators relating to <i>Development of community resources</i> .
	Action	Purposeful, active effort to accomplish specific objectives (Magis, 2010)	Active Agents	Community members who actively and intentionally influence the well-being of the community through their engagement of processes, leadership and participation in community matters. (Magis, 2010)
			Collective Action	Intentional efforts undertaken by the community together to achieve specific community objectives, driven through participation and leadership. (Magis, 2010)
	Transformation	The result of developing and renewing processes and outcomes to create new conditions for continued viability (Magis, 2010)	Equity	Equal and open access to opportunities, resources, information and benefits for all community members and groups, especially minority or marginalised members of the community. (Magis, 2010)
Human Agency  (Independent Variable)	Ability to Influence	The capacity to challenge power relations and contribute to change or transformation, which affects the outcomes (Bandura, 2018; Davidson, 2010)	Ability to access and influence decision-making processes	The capability to access and effect influence on the course of events and play a role in shaping the decisions taken around one's environment and life. (Bandura, 2018)
			Empowerment	The process of gaining power to control what happens to you and do what one wants to improve one's life (Cambridge dictionary).
	Ability to Act	Individual, conscious action that is facilitated through participation in processes, or independent initiation.	Active participation	Act of involvement in a process (Stark and Taylor, 2014), with a capacity to act on opinions and desires for change (Dale and Sparkes, 2010).

			Autonomous action	Action taken independently without outside control to accomplish personal or collective objectives (Cambridge dictionary, n.d).
	Innovation	Foresight, creativity or imagination that fosters learning pathways or transformation.	Innovative or creative thinking	Producing ideas or solutions that offer a fresh perspective. (Business dictionary, n.d)
			Adaptation processes	A process in which people are able to take in new information and adapt to changes, and to adopt new behaviours to improve their lives or condition (Brown and Westaway, 2011; GCRO, 2013).

**Table 2: Operationalization of Variables and Indicators; Source: Author, 2020**

Concept	Variable	Sub-Variable		Indicator	Measurement	Data collection method	Data type	Data source
Community Resilience  (Dependent Variable)	Capacity Building	Development of community resources	1	Number of new businesses or economic opportunities created within the community, from the start of the project to current.	Objective	1) Primary, qualitative data collection: Semi-structured interviews  2) Secondary, qualitative data collection:	Qualitative	1) Noordgesig citizens (primary)  2) Experts (primary)  3) Local and social media (secondary)  4) Official documents (secondary)
			2	Number of new formal and informal networks or groups established within the community and with external partners from the start of the project to current.	Objective			
			3	Number of new physical, built interventions created within the community from the start of the project to current.	Objective			
		4	The perceived effectiveness of community organizations in dealing with issues faced within the community.	Subjective				
		Community Capitals	5	The perceived improvement in interpersonal relationships and shared values in the community since the start of the project.	Subjective			
			6	The perceived improvement in the ability to influence politicians or local government authorities since the start of the project.	Subjective			
	Action	Active Agents	7	The perceived belief in being able to affect change in the community and improve the well-being of the community.	Subjective			
		Collective Action	8	The perceived the level of effectiveness of community leaders in bringing the community together to work on community objectives.	Subjective			
			9	The perceived change in the inclusion of culturally diverse perspectives in decision-making processes.	Subjective			
	Transformation	Equity	10	Number of new accessible services, amenities and community activities created for the community since the start of the project where previously disadvantaged.	Objective			
Human Agency  (Independent Variable)	Ability to Influence	Ability to access and influence decision-making processes	11	The perceived feeling of being able to successfully participate in urban planning and development processes.	Subjective			
		Empowerment	12	The will to successfully shape socio-economic life	Subjective			
	Ability to Act	Active participation	13	The perceived degree of involvement in community events and activities.	Subjective			
		Autonomous action	14	Number of self-initiated interventions created for the benefit of the community since the start of the project	Objective			
	Innovation	Innovative or creative thinking	15	Number of new ideas proposed or developed by community members (since the start of the project) in anticipation of the future.	Objective			
		Adaptation processes	16	The perceived change in behaviour of community members toward a more positive outlook on life.	Subjective			

## **3.5. Data collection and analysis**

### **3.5.1. Type and instruments**

In this study, primary, qualitative data collection was carried out using instruments of semi-structured interviews. These were conducted with both community participants of the project and experts with institutional representation. Secondary, qualitative data sourced from local and social media, and official project documents was used to gather evidence on the project specifics and information around contextual factors of the case study project, as well as to assess any evidence supporting the primary data collected.

Interviews are used as instruments to capture non-factual information and data, and focuses more on the opinions, perceptions, relationships and beliefs around the topic (Van Thiel, 2014). Factual information can be included as a way of checking, but usually does not form the focus of interviews. Semi-structured interviews are often used in case study strategies, and is deemed best suited for this study, as the format allows for a conversation to develop to extract detail in the information provided. In this method, data is able to be collected in a more flexible way, and its non-prescriptive format, allows for unexpected information and data to emerge that may not have been scoped at the outset of the research. This is important to the research as it provides an enriched understanding of the study and enables new details and insights to be discovered.

Interview guides are used to provide a list of topics to be discussed, which are formed through, and based on the operationalization of variables and sub-variables. Without any particular ordering of questions, the semi-structured interview allows the respondent to speak freely and in depth about topics, and allows the researcher to probe further, thus allowing for optimal collection of qualitative data. This enables an enriched discussion, which contributes to the depth of information collected (Van Thiel, 2014). Particularly, for this study, the human perspective and qualitative understanding of the relationships between phenomena within a context is crucial to answer the research questions. The study seeks to understand in detail how concepts impacted each other, how these relationships were perceived by the respondents, and the resultant impact on communities. Thus, the data collection needs to compliment these objectives. The design of the interview guides are important for guiding the conversations, and as such, particular attention was paid to ensure that questions are clear, unambiguous and avoidant of jargon. The researcher should not use suggestive, leading or opinionated questions, and should, instead, focus on questions that relate to the respondent's reality and experiences (Van Thiel, 2014).

In addition to the primary, qualitative data collection, this research also set out to use secondary sources of data from local and social media, and official documents to triangulate data and its findings. Secondary data refers to data that was produced by someone else, other than the researcher, and is valuable for this study to support the primary data collection. Local media (newspapers), social media (Facebook, YouTube, Twitter) content and local government documentation was included in the data collection. The data extracted from secondary sources, provided important information around the case study project, and area of Noordgesig, but had limited data on the

aspects of human agency or community resilience and thus, limited opportunities to triangulate with this particular method.

### **3.5.2. Sampling**

Since it is usually impossible and unfeasible to include all possible study units into a research study, a selection has to be made, called sampling (Van Thiel, 2014). This involves selecting a sample from a total population to be studied, the findings of which may be used to generalise to the broader population. Sampling choice is based on the research question, access to the population, literature or other studies conducted, theoretical framework and the budget, timeline and capacity of a study (Verschuren and Doorewaard, 2010).

This research adopts a purposive sampling method, using specific selection of respondents based on their knowledge on the subject, and participation in the selected case study project. This is important to gain a depth of understanding of the specificities of the project and its impact. This method is suited for qualitative data collection (Van Thiel, 2014). Snowball sampling supplemented this specific selection, by allowing first respondents to lead the researcher to other knowledgeable respondents. Sampling is deemed suitable and complete once saturation has been reached. Saturation is reached when no new information is gleaned from the interviews. This sampling method supports the research focus of gaining rich and deep insights from a selected sample population and is suitable for a research that does not seek to generalise findings.

### **3.5.3. Data analysis**

Primary qualitative data collected from the semi-structured interviews was recorded using voice recording and transcribing application software, Otter. Since the resources dedicated to this research were limited, the efficiency of data collection was crucial. Thus, to allow the researcher to focus fully on the conversation and dialogue with respondents, interviews were recorded and then transcribed. Otter produces a transcript of recorded material, in conjunction to audio recording. However, following the fieldwork, these transcripts were revisited and checked by the researcher to ensure accuracy of content captured and account for any language errors. This further transcribing also included sorting information into topics, themes and codes.

Both primary and secondary qualitative data collected was analysed using Atlas TI software, which is deemed a valuable tool for analysis of qualitative analysis. The software was used to assign codes to the data content, based on the operationalization of variables and indicators. Once coded, analysis on data is carried out through the Atlas TI software and reports, outputs and conclusions can be drawn on the findings. These are then interpreted in relation to addressing the research objectives and answering the research questions. An example of the coding used in Atlas TI is provided below:



Code Groups	Name	Grounded	Density	Groups
◇ CR: Action (2)	● ◇ CR: Active Agents	49	7	[CR: Action]
◇ CR: Capacity Building (3)	● ◇ CR: Collective Action	23	3	[CR: Action]
◇ CR: Transformation (1)	● ◇ CR: Community Capitals	71	5	[CR: Capacity Building]
◇ HA: Ability to Act (2)	● ◇ CR: Development of community resources	148	3	[CR: Capacity Building]
◇ HA: Ability to Influence (2)	● ◇ CR: Engagement of community resources	29	3	[CR: Capacity Building]
◇ HA: Innovation (2)	● ◇ CR: Equity	52	5	[CR: Transformation]
	● ◇ HA: Ability to access and influence decision making processes	62	5	[HA: Ability to Influence]
	● ◇ HA: Active participation	48	6	[HA: Ability to Act]
	● ◇ HA: Adaptation processes	92	0	[HA: Innovation]
	● ◇ HA: Autonomous action	66	4	[HA: Ability to Act]
	● ◇ HA: Empowerment	82	5	[HA: Ability to Influence]
	● ◇ HA: Innovative or creative thinking	23	2	[HA: Innovation]

Figure 5: Coding used in Atlas TI; Author, 2020

## Chapter 4: Presentation of data and analysis

### 4.1. The case study of Noordgesig

#### 4.1.1. The area of Noordgesig and the Corridors of Freedom programme

The Noordgesig Social Cluster (NSC) Project was started in 2015 by the Johannesburg Development Agency, a local government entity, as part of a strategic spatial transformation programme initiated by the City known as the Corridors of Freedom (Johannesburg Development Agency, 2017). The programme is centred around a transit-oriented development concept which envisions a future urban form of the city as one interconnected through transport arteries, known as the Corridors, and connecting to mixed-use, high-density development projects thus drawing people to opportunity in the fragmented spatial landscape of Johannesburg (Johannesburg Development Agency, 2015).

Noordgesig, which is situated in Soweto, was initially established as Noordgesig Coloured Township (C6), a tented camp for ‘Coloured’ people during forced relations in 1939. It then slowly developed into a low-rise, medium density residential area, remaining on the marginalised edges of the serviced and developed city (City of Johannesburg, 2015). The spatial development of Noordgesig was strongly influenced by Apartheid planning, separating its residents from amenities, opportunities and its neighbouring communities that were inhabited by a different race, as classified by the Apartheid regime. The Corridors of Freedom programme was established to address such marginalised communities to connect them back to their surrounding contexts, and the broader city through arterial transport routes (Johannesburg Development Agency, 2015).

Citizens have described the area of Noordgesig and its conditions prior to the case study NSC project, as being ‘dull’ (C7, C15), not ‘taken care of (C8), with a lack of ‘facilities’ and ‘infrastructure’ (C11) and, as an ‘abandoned’ (C11) and ‘dormant and untouched’ (C4) community. The strained socio-economic environment has been noted as being a result of this lack of development and recognition of the area. Citizens listed multiple issues of drug abuse (C1, C4, C12, C13), alcohol abuse (C1, C4, C13), domestic and gender based violence (C1, C4, C13), teenage pregnancies (C5) and a lack of social, safe spaces (C1, C7, C8, C11, C13) facing the community. The biggest challenge, however, according to nine out of thirteen citizens interviewed, is unemployment and

poverty. This unemployment and poverty is explained as a social ‘nightmare’(C5) with compounding issues of poor health, diet and illnesses (C5). It is also described as leading to associated feelings of hopelessness (C1, ), disempowerment (C4), with ‘nothing to look forward to’(C9), ‘lost talent’(C11) and uncertainty around life (C13).

Interestingly, seven out of the eleven citizens interviewed who reside in Noordgesig, included positive aspects of the community, regardless of the physical and socio-economic area conditions. The emphasis on community ‘diversity’ (C1, C4), ‘unity’ (C5, C12) and ‘close-knit’ (C4, C5, C8, C11) nature described a certain level of social capital that was already perceived within the community prior to the implementation of the NSC project, but that, perhaps was not yet engaged or developed across the community. Two of the eleven citizens interviewed who reside in Noordgesig attributed this sense of ‘camaraderie’(C4) to the reason that crime is lower than other deemed ‘Coloured’ townships (C4, C5).

*Noordgesig has got this silent inner strength in the people. They for one another.  
You know you can credit us here, there is such a camaraderie. ’ (C4)*

Across the experts’ perception, one of the biggest challenges facing this community was the large number of needs requiring attention from local government that made it difficult to place priorities (E1, E2, E3). Frustration from the community at having not had their needs properly assessed previously, also led to a large mistrust in ‘authority in government’(E2) and a feeling of ‘not being heard’(E1). The unemployment and poverty rife in the area meant that a further challenge for this context was ‘fierce competition for resources and opportunities’(E2) which led to the further drowning out of vulnerable groups such as women, children and the elderly (E2). Both citizens, and one expert have described the area as being highly politically charged which can lead to division in the community (C2, C3, C8, C11, C12, E2). However, this political influence is also perceived positively when relating about the area’s strong political history and heritage (C4, C11, C12). The citizens mentioned the associated pride that comes with the fact that Nelson Mandela and his former wife, Winnie Mandela hid in shelter in Noordgesig during the struggle for freedom in South Africa (C4, C11, C12)

*“There were a lot of people who were political and influential. This is how far  
the history of Noordgesig went back. But when it comes to development  
Noordgesig was a very slowly developed area.” (C12)*

Conversely, two citizens out of eleven interviewed that reside in Noordgesig, felt that the history and heritage of the area was unknown to them prior to the implementation of the case study project (C8, C13).

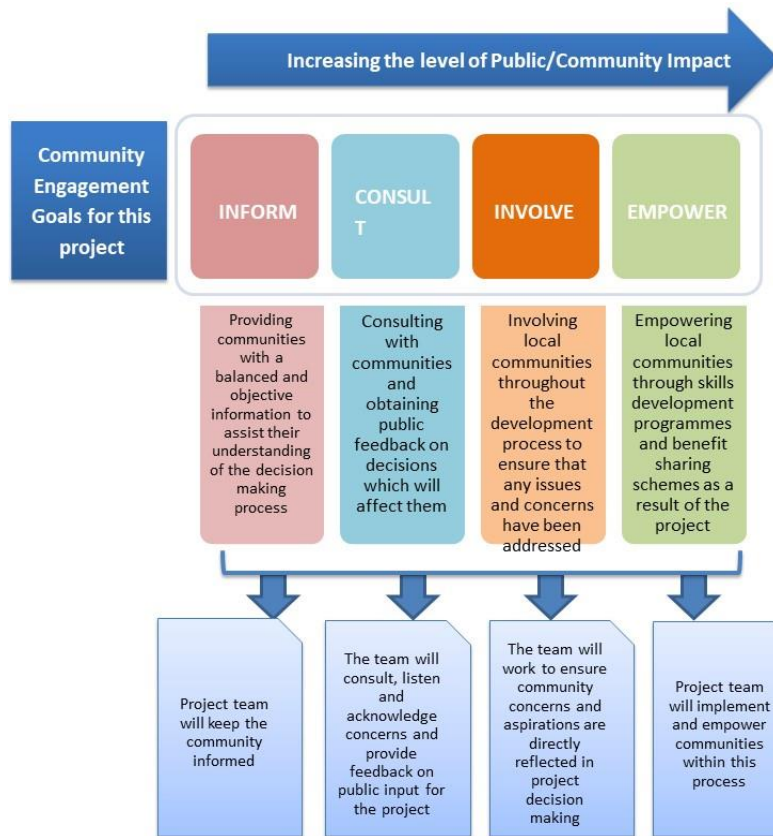
Another positive aspect of the Noordgesig community, mentioned by two citizens, is the heritage of sport that ran through the community, and that was often used as a way of uniting the people further. Sport was a way to bring people together and also kept the youth occupied and engaged, away from drug abuse or other crimes (C4, C12). Lastly, the religious nature of the community was described as an important attribute to their faithfulness, as well as their diversity (C1, C4, C5, C6).

#### 4.1.2. The case study

The Noordgesig Social Cluster Project formed part of the City of Johannesburg's strategic Corridors of Freedom programme and fell within the identified Soweto Corridor. It was identified as an important development area due to its linkages with key arterial routes namely, the Soweto Highway and Mooki Street. The project intention began with a need to define a strong social node, optimise land use and define the identity of the area (Johannesburg Development Agency, 2015). The objectives listed in the project Request for Proposal were to:

- 'Integrate transportation and land use by concentrating development along transport corridors and destinations;
- Improve connections between different destinations within the corridor;
- Support growth of economic and industrial nodes to increase employment opportunities in the area;
- Implementation of the Complete Streets Design Manual to promote the efficient movement of people through the development of environments that encourage people to walk, cycle and use public transport rather than private cars;
- Development of non-motorised transport facilities and networks;
- Develop safe, comfortable and inviting public areas that integrate the unique history, culture and character of the corridor;
- Promotion of densification and mixture of land used along transport arteries' (Johannesburg Development Agency, 2015, p.7).

Typically, for projects that fell into this programme, the project brief and assessment of needs was defined and executed by the professional team appointed, together with the implementing government entity or client (Johannesburg Development Agency, 2016). However, in the case of the Noordgesig Social Cluster project, this process was disrupted and adopted a new, participatory planning approach (E1). Taking the programme objectives into consideration, the case study project process began with an assessment of the needs and concerns of the community that would be collated into the development of a precinct plan for the area. A new project plan was developed that placed community engagement at the centre of the development. Through a range of engagement tools and processes, the community engagement goals of the project were structured along the following principles and strategies showing the placement of the community at the core of each stage, and the aim of empowerment of community:



**Figure 6: Noordgesig Social Cluster community engagement goals and strategies; Source: E2 (secondary data)**

The process followed was described as one of ‘coproduction’(E3) and ‘communicative planning’(E1) that was ‘not seen in practice’(E1), and a ‘big departure’(E2) from other public projects previously implemented or ‘worked on’ (E3). The community shared this sentiment describing the project processes as ‘unusual’ (C1) and ‘very different’ (C1, C2, C3, C12) to any other project they had interacted with prior. According to the citizens, this project ‘stood out’(C6) because of its ‘proper’(C5) consultation that had ‘never happened’ (C13) before.

In addition to the process, the community engagement also sought to broaden the range of stakeholders to be engaged with, compared to previous projects, bringing together actors across sectors. The engagement sessions also adopted various formats so as to optimise input and output.

Event Date	Event Type	Event Venue
11 March 2016	Road show	Noordgesig Community Park
6 May 2016	Business Forum Round Table Discussion and Site Visit	Noordgesig Community Hall
10 May 2016	Education Cluster Focus Group Meeting	Noordgesig Secondary School
16 May 2016	Community Public Meeting	Noordgesig Community Hall
20 May 2016	Focussed Workshops around Draft Precinct Plan	Noordgesig Community Hall
23 May 2016	Presentation by UJ Students	UJ Bunting Road Campus
1 June 2016	Heritage Forum Meeting	Noordgesig Library
3 June 2016	Public Open Day	Noordgesig Community Hall

Figure 8: Community engagement event types; Source: E2 (secondary data)

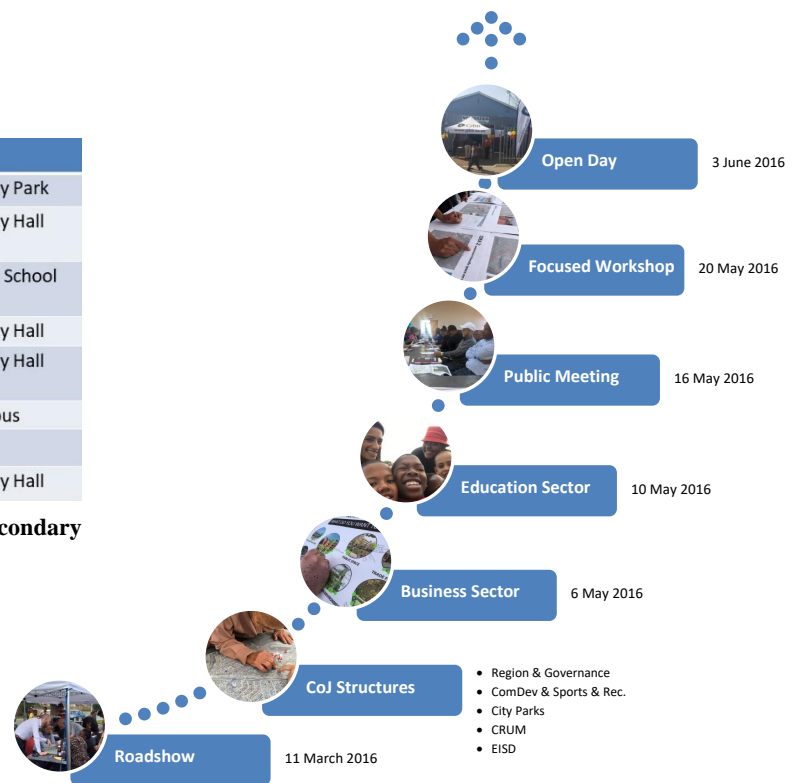


Figure 7: Community engagement stakeholders and sectors; Source: E2 (secondary data)

Collaboration and communication formed an important part of the project strategy, which also included aspects of identity-defining through heritage and art opportunities. The emphasis on the input of the community is highlighted across both citizens’ and experts’ interviews.

*“...all the ideas given -it wasn’t just a one man show with government doing it and they come and say this is how we doing it - There was a lot of input from the community.”(C1)*

*“It was from the beginning that the community was involved in this idea of coproduction.” (E3)*

With regard to the project approach and tools, both citizens and experts describe the approach as impactful on multi-levels and as accessible (C1, C5, C6, C7, C11, C12, C13, E1, E2, E3). Various tools were used to enable a participatory approach such as, an open day, drive-by routes with the community, roadshows, focus group workshops, drawing, mapping, storytelling and meetings, quite different to previous project processes which were described as more “stakeholder identification’ than stakeholder engagement (E1, E2).

*“...Before this project I think it was just stakeholder identification, and we never went beyond that.’ (E1)*

*“But with the plaza, there was drawings and things, there was this ‘how do you feel’ ‘how does it look’ and there was consultation, there was historical consultation on this project.”(C12)*



Figure 11: Strategies undertaken for community participation in the case study project; Source: E2 (secondary data)



Figure 9: Participation in the Open Day; Source: JDA (Secondary data)



Figure 10: Photo showing community participation at Open Day; Source: JDA (Secondary data)

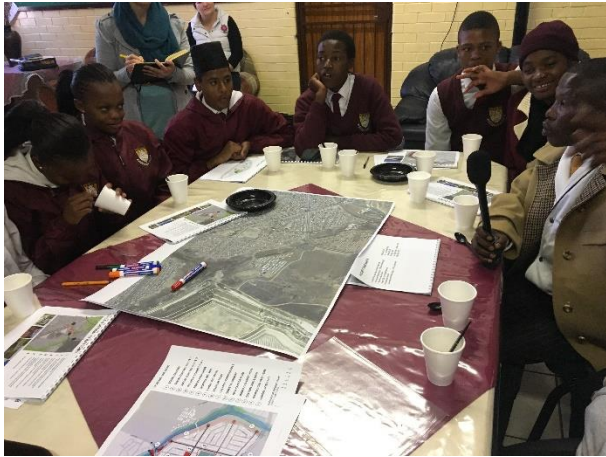


Figure 15: Engagement with schools; Source: JDA (Secondary data)

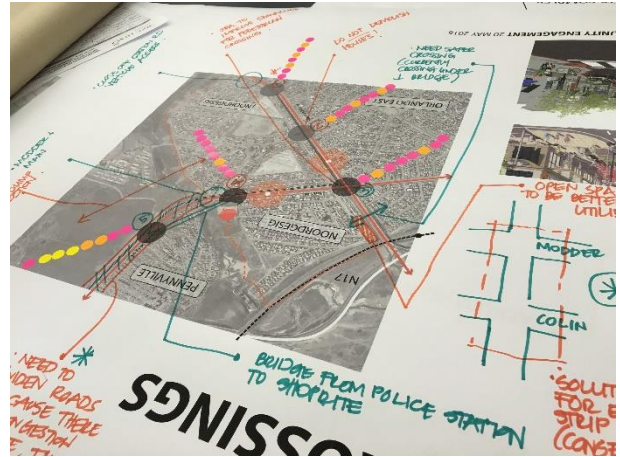


Figure 14: Output of workshop; Source: JDA (Secondary data)



Figure 13: Engagement with Business Forum; Source: JDA (Secondary data)

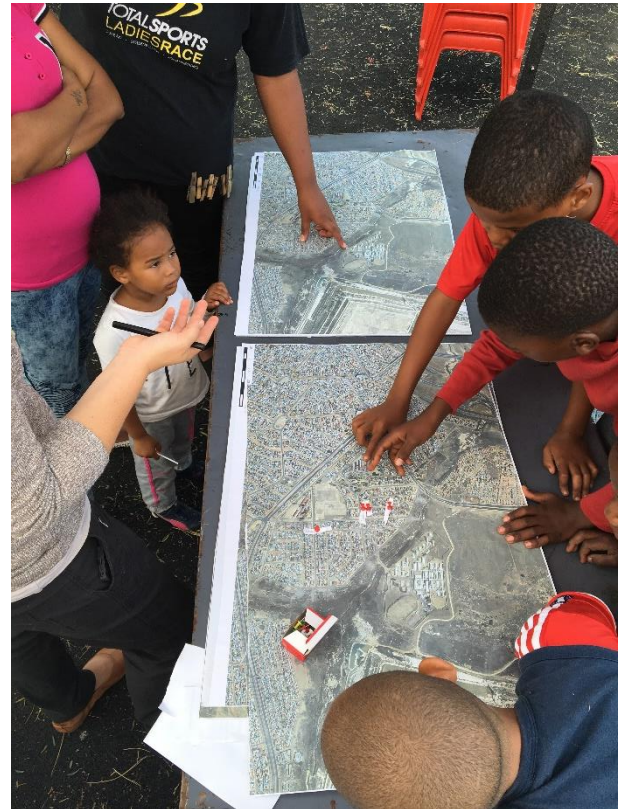


Figure 12: Mapping and storytelling at Open Day; Source: JDA (Secondary data)

This intensive engagement continued throughout the project cycle, into construction phase as well. Besides employment opportunities, this component of the project was highlighted as particularly important to the community, as it related to their ability to improve their financial capital and economic opportunities. The insights gained from interviews with the citizens is that the collaborative approach to selection of SMME's (Small Medium and Micro Enterprises) (for local economic development) was fair and transparent, and that the additional training, mentoring and collaboration and communication flow were key elements of the project that stood out for them for giving them an ability to act by equipping them with knowledge and skills. (C1, C2, C3, C4, C7, C8, C11, C12, C13)

*"...But with this one, the consultation which was there, there was first a consultation with the normal community member... those without the skills. And there was also then consultation with SMMEs and companies, and then from there, during this process is where people get to know."(C12)*

The community was involved in a manner that enabled them to participate from the planning and design phase, through to implementation. During the design phase, following the needs assessment, the community contributed to the development of the overall precinct plan, identified priority projects for implementation based on the allocated project budget, contributed to the heritage impact assessment and identification of heritage in the area, shared stories, photos and other memoirs and helped develop a cultural identity for the area. They also played a key role in determining the programming of the project, explaining what facilities are needed for their user considerations and their lifestyle preferences. During implementation, the community was included as SMME's for construction, and formed part of the project steering committee, also a first of its kind, which is described as being very effective for both communication and information flow, as well as to resolve any issues quickly (C1, C11, E2). Regular weekly and monthly meetings were maintained for project management purposes as well.

*"So it's just like a cradle to grave type of concept which was really nice to see."(E2)*

*"There was a lot of communication! I remember we had workshops every month. If you're not sure about something. Remember you also need a mentor that assisted us through this project. So yeah, with other government projects, there was no skills, the workshops, there was nothing."(C7)*

The variety of stakeholders engaged allowed for a variety of voices to be heard, which is interesting given the context of the area and the issues raised upon arrival of not being 'recognised'.

*"We had workshops with the education facilities, schools which was good. It included both teachers and high school students, which I think that session we got quite a lot of nice ideas from the youth. And then there was another workshop, which was followed by a bit of a drive through with the community, which I think was quite nice to get people's input in terms of the spatial arrangement of the community and feature." (E2)*

*"...having our voices heard you know, like, we want this, we want this, why can't we do this, why can't we do that. You know I was basically involved in the meetings, like planning and that."(C7)*

This was supported with a variety of engagement formats that took place, and the supporting components included in the planning which aimed to reinforce the voice of the community in the project.

*"...we would have open days. And essentially, you know, pin up posters, ideas or concepts around the project and get the community to come in and engage."(E3)*



*"...the multistage way in which co production was undertaken."(E3)*

*'We started with storytelling first about different stories of Noordgesig, The history and so on. And it was a combination of the culture of Noordgesig from way back.'* (C9)

The most important aspect mentioned by citizens around the difference in this process, when compared to other government projects, is that they felt heard, and included. (C1, C4, C5, C6, C7, C8, C9, C11, C12, C13)

*"...with this one, it was really about the information; they made you part of the project, you felt part of the project, and you involve yourself in such a matter that you get all the relevant information that you can share with the rest of the community if they ask you."(C1)*

*"We were heavily involved here as a community."(C7)*

*"From day one. We've been there all along, every step of the way we've been there."(C5)*

The data shows that the impact of this inclusion and collaborative way of working with the community, had only positive effects on them, both during the project and after. The insights gathered from the experts show that they unanimously agree on the impact undertaking such a project has had on their approach to working in similar vulnerable communities, and the impact on the community for a more sustainable approach to development.

*"One of the biggest outcomes of doing communicator, or collaborative planning work design approach, is that communities end up taking ownership of the project...There comes out of it such a sense of pride in a community. (E1)*

*"This approach that has been followed with the Noordgesig project has showed me how that can actually be possible, and how it can actually have benefits for the community going forward. (E2)*

*"So I think that's what we did with Noordgesig. Who are we to say we are giving people power - we are just giving them a platform and a space for them to exercise their own power and be heard." (E1)*

The impact of this process and case study project as described by the citizens themselves as a benefit to them as a community can be summarised in the quotation below:

***"Like, you give a person a fish, you will eat the fish but to sustain rather give the person a fishing rod to go out and fish for themselves so that they can be able to feed, because if you know once a fish is going to eat the fish today done tomorrow. But if the person has a fishing rod, the person can always go out and do whatever the person needs to do. Fish for yourself so you can sustain."(C5)***

## 4.2. Data analysis

As outlined in Chapter 3, the qualitative data collected from both primary and secondary sources were analysed using the software tool, Atlas TI. Primary data collected from semi-structured interviews of citizens of Noordgesig and experts who were involved in the project, was transcribed using the software Otter. Secondary data drawn from project documentation, social media and local newspapers was used to support the analysis, and provided important information about the case study project processes, the sentiment of the community around the conditions prior to the implementation of the NSC project, and the perception of the experience of the project and its benefits after. Whilst these sources were limited, they did assist in triangulating some data and insights into the perception of the project and its potential effects on the community. Data was then coded deductively based on the operationalization of sub-variables and indicators as follows:

	Code Group	Code	No. of Quotations
Community Resilience	Capacity Building	Development of community resources	148
		Engagement of community resources	29
		Community capitals	71
	Action	Active Agents	49
		Collective Action	23
	Transformation	Equity	52
Human Agency	Ability to Influence	Ability to access and influence decision making processes	62
		Empowerment	82
	Ability to Act	Active participation	48
		Autonomous action	66
	Innovation	Innovative or creative thinking	23
		Adaptation processes	92
<b>Total</b>			<b>745</b>

**Table 3: Tables showing coding and quotations in Atlas TI; Source: Author, 2020**

The research findings and analysis are presented per variable and as outlined in the conceptual framework (Chapter 2). One of the most interesting findings from the analysis is that no variable or sub-variable can be discussed in isolation, due to the complex linkages and associations found between them. The discussion is thus structured around answering the research questions and, traces analysis through the process of the project to first explain findings around the concept of human agency so as to understand the conditions that enable the development of human agency, and the characteristics of human agency when enabled. It then explains the findings on the concept of community resilience to understand the relationship between human agency and the community's resilience. Analysis and interpretation is carried out in a systematic way, unpacking the changes perceived by the citizens and experts to illustrate the effects seen in the community after the project was implemented. A short summary of each concept is provided at the end of its section.

Analysis tools used were co-occurrence tables, query tools as well as network diagrams, which presented interesting insights and indicators around relationships between codes. The co-occurrence table below shows all codes and their relations, and is a useful indicator of how concepts of human agency and community resilience are related and around what specific characteristics. The top five most co-occurring codes are highlighted.

	Active Agents	Collective Action	Community Capitals	Development of community resources	Engagement of community resources	Equity	Active participation	Autonomous action	Ability to access and influence decision making processes	Empowerment	Adaptation processes	Innovative or creative thinking
Active Agents	0	2	13	11	9	2	14	16	7	14	7	4
Collective Action	2	0	3	1	2	0	2	2	1	0	0	0
Community Capitals	13	3	0	10	7	3	4	5	7	7	11	1
Development of community resources	11	1	10	0	19	8	16	36	5	27	14	3
Engagement of community resources	9	2	7	19	0	1	5	11	1	2	0	0
Equity	2	0	3	8	1	0	2	9	6	5	5	0
Active participation	14	2	4	16	5	2	0	14	6	15	10	1
Autonomous action	16	2	5	36	11	9	14	0	2	12	3	5
Ability to access and influence decision making processes	7	1	7	5	1	6	6	2	0	9	10	0
Empowerment	14	0	7	27	2	5	15	12	9	0	28	10
Adaptation processes	7	0	11	14	0	5	10	3	10	28	0	3
Innovative or creative thinking	4	0	1	3	0	0	1	5	0	10	3	0

Table 4: Output of Co-Occurrence tool in Atlas TI; Source: Author, 2020.

### 4.2.1. Human Agency

Human agency is researched as an independent variable to explore and explain the impacts of developing an ability to act, in order to build a capacity to continue in multiple stressed vulnerable communities. It acknowledges the human development aspect of social systems (Davidson, 2010), and encompasses an approach that seeks to understand the cause and effect in communities where systemic causes of vulnerability tend to be over-looked when discussing resilience. Most importantly, for communities such as Noordgesig, facing multiple, daily stressors, it includes a human development dimension that transcends temporal assessments of resilience. Human agency includes components of an *ability to influence*, *ability to act* and *innovation*.

#### 4.2.1.1. Ability to Influence

The data on the variable *Ability to Influence* includes two components, the *ability to access and influence decision-making processes* and *empowerment*. Both were measured subjectively, using indicators of *the perceived feeling of being able to successfully participate in urban planning and development processes* and *the will to successfully shape socio-economic life* respectively.

The description given by the citizens of Noordgesig (and the experts) of the conditions of the area prior to the implementation of the NSC project, highlight a particular disconnection for the community from developmental processes and decisions, a lack of trust in government, and a feeling of being unrecognised. As explained in sub-section 4.1 above, this disconnection is attributed to feelings of hopelessness and frustration, and has been described as contributing to the vulnerabilities affecting the community. This is also supported by secondary data sourced from local media which reports around the unprecedented opportunity that the NSC project provided to give the community access to influencing decisions made around their neighbourhood (Soweto Urban, 2016). The findings on the sub-variable of *Ability to Influence* are thus interesting to assess the changes in the perceived vulnerability of the community. The findings for *Ability to Influence* showed positive effects on the community's ability to effect influence on their environment and their life, and their associated feeling of having control over their lives and livelihoods, where before, the description relayed was that the community felt disenfranchised and unable to have control over lives or decisions around them. The data shows that these positive effects were found across 62 and 82 quotations respectively.

Ability to Influence	Ability to access and influence decision making processes	62
	Empowerment	82

**Table 5: Codes and quotations relating to Ability to Influence as extracted from Atlas TI; Source: Author, 2020.**

All of these quotations are extracted from the citizen interviews and thus relay a sense of reliability of the localised effect. The citizens agreed (8 out of 13 interviewed) that being able to contribute to the design and development of the case study project, where previously such access was not available, encouraged them to

start playing a more proactive role in shaping their lives and community, both for the sake of themselves, or individual family, as well as for the collective.

***The perceived feeling of being able to successfully participate in urban planning and development processes:***

The citizens unanimously agreed that they felt they had been wholly and successfully included in the processes and decision-making of the case study, which was noted as unprecedented for any other governmental or other project implemented in the area. Nine out of thirteen citizens interviewed cited previous projects implemented by the same local government agency, as having not allowed this access to decision-making or development processes relating to their environment (C1, C4, C5, C6, C7, C8, C11, C12, C13). It was also explained that this lack of access was largely the reason for major project disruptions and a loss of trust in local government and their ability to meet their needs.

*“In other projects we were not given the chance to give input in design and planning. We were never given that opportunity to say, what do you like to see, what is your view...So with this project, it was much different. At least we are proud to say we got what we wanted; that is our view and that is how WE wanted it.” (C11)*

They explained that this led to a change in them feeling a sense of connection to the project and their redeveloped neighbourhood, and also led to them feeling more equipped to take decisions around their own lives after the project. The data explains the perception of the community as having had access to information, detailed participation opportunities and ample engagement that led to them feeling a sense of ownership. Citizens note a feeling of being ‘a part’ of the processes and development, which emphasises a connection to place that was not previously prevalent in the area. This connection to place is also linked to the sharing of the information (or other) to the rest of the community, thus indicating both an individual and collective endeavour to shape their lives.

*“But with this one, it was really about the information; they made you part of the project, you felt part of the project, and you involve yourself in such a matter that you get all the relevant information that you can share with the rest of the community if they ask you.”(C1)*

*“The wonderful thing about it, they gave people a chance to give input for the people to be able to tell you what they really want and what their needs are. And all of those criteria’s will follow. And I think that is what really makes people happy, you know, when people pass the library.” (C5)*

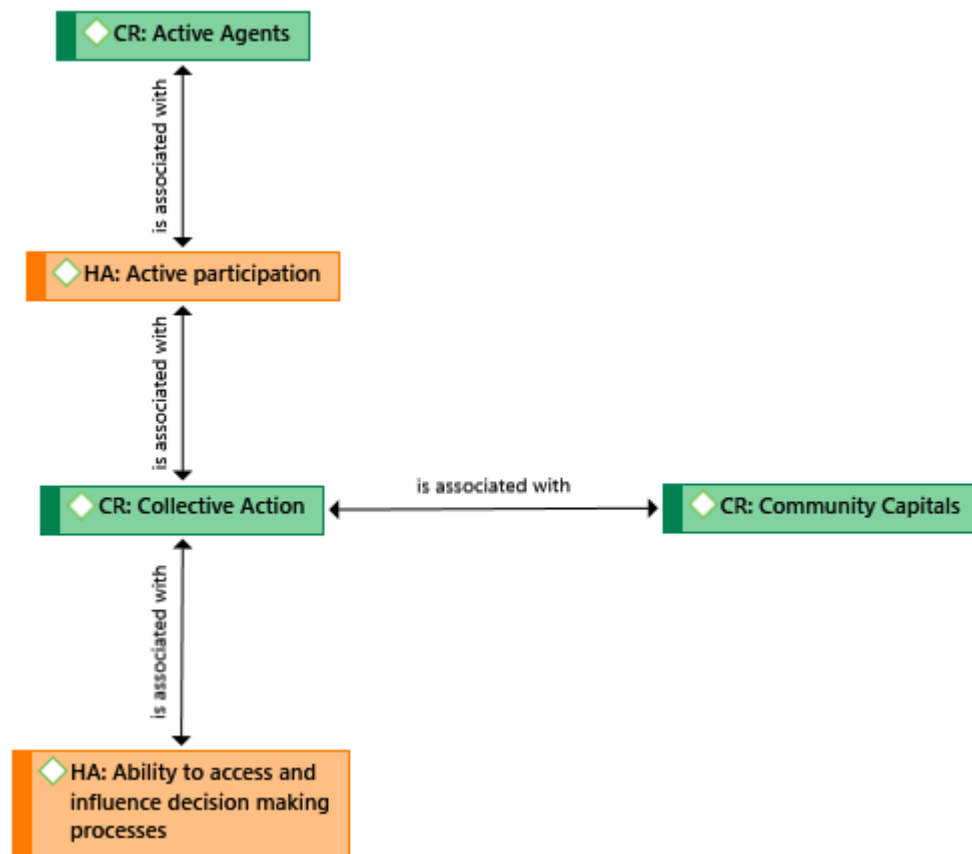
An interesting finding was the citizens’ perception of having being ‘recognised, ‘seen’ and ‘heard’ which is interesting to compare against the way the community felt prior to the case study project.

*“However, we felt great and we felt important. We knew we were considered.”  
(C11)*

This is found in the way the citizens describe their involvement in community activities after the case study project. These activities are geared toward collective good and capacitation, such as the maintenance and surveillance of the newly

constructed public plaza, the community-driven protest for the development of the local primary school and the creation of new community organisations to address community issues. Eight citizens described an improvement in morale of the community (C1, C4, C5, C7, C8, C9, C12, C13).

*“It is our duty as a community to look after what was done for us, for starters, but I must say the morale of our people has been boosted because of that. And I think I am so grateful that we can impact our community in the most smallest, but most tangible ways.” (C4)*



**Figure 16: Network diagram showing relationships between sub-variables, extracted from Atlas TI; Source: Author, 2020.**

The above network diagram extracted from Atlas TI, offers important insight into the relationships that exist between the community having the *ability to access and influence decision making processes* and their collective action which impacts their community capitals. It also shows a relation between this collective action and their role as active agents in their community and lives. This is important for answering the third research sub-question to explain what impact the development of human agency had on the community resilience, and is best captured in the below quotation:

*“When the projects came, it was a reviver for them to say, we want to be involved in this; we want to have our say. We want to do this, and groups are starting to form, let’s go talk to that group and you know, exchanging ideas to let things work.” (C7)*

**Empowerment:**

The findings show that the ability to participate in decision-making around their community, and having the ability to influence what happens in their neighbourhood, resulted in the community’s renewed sense of hope compared to before the project, and a desire to empower themselves and their livelihoods, where previously this was not present. Citizens talked of the opportunity to learn things through the process of participation that they were not exposed to before (C2, C3, C8, C9, C10, C12). These learning opportunities encouraged citizens to become aware of talents and abilities that they had not previously recognised within themselves (C8, C9, C10, C12) which led to new businesses being established around these new skills (C8, C9, C10, C12), the like of which would not have been pursued had it not been for the development gained through the NSC project. Here we see an interesting relation to the sub-variable *development of community resources* measured under the variable *capacity building* as part of community resilience.

*“...but due to this project that was done in Noordgesig it changed many people's lives. It even brought out many people's talents that they weren't aware of. I was one of them that wasn't aware of any artists that were in Noordgesig. But because they took part in this project, they were offered jobs in this project, that could bring out their talent. They were sitting back, not knowing who they are, where to start and I could say, everybody was in the dark. Till such time that this project came.” (C13)*

We find these two sub-variables co-occurring in 27 instances in the data analysis:

	<b>Development of community resources</b>
<b>Empowerment</b>	27

**Figure 17: Co-occurrence table as extracted from Atlas TI; Source: Author, 2020**

According to the data extracted from the citizen interviews, twelve new businesses are known to have been created since the completion of the project in November 2019, whilst at least 4 more are in the process of establishment, showing a will within the community to successfully shape socio-economic life and gain control over their life course and events. This changed from before the project where citizens described a lack of businesses, an unwillingness and disbelief in the ability to change the course of one’s life. The type of businesses or economic opportunities are interesting, especially when relating to the variable and component of human agency of *Innovation*, as it includes new ideas and activities, not previously activated in the community. Examples of this include a new tuk-tuk mobility service, a new tourism and heritage company, an all-female landscaping co-operative, and other artisanal businesses for furniture making and food making. We thus see a change not only in the number of economic opportunities created, but also the diversity of type.

*“Three or four years and five years ago, staying in Noordgesig carried this poverty stricken atmosphere. And unintentionally, you become part of it. I was unemployed, and I fell into a deep depression mode. I was very depressed all the time I didn't even know what to smile before and to enjoy myself. And when works started, I started finding myself all over again. To me personally it changed, because here I have hope, the desperation was taken. It contributed to where I am today. And I am not the only one. I can vouch for a lot of people I've*

*been in contact with people that didn't even know anything about art, but because of their enthusiasm and wanting to learn, they grabbed the opportunity and showed themselves what they can do.”(C9)*

*“These projects were for me, very experiencing and changed the life of a lot of people. At least today SMMEs - people know that they can stand on their own. There are even people that didn't know anything about construction or development.” (C11)*

A very interesting finding was around the youth empowerment that emerged from the case study project. Youth unemployment and associated social ills of substance abuse and teenage pregnancies were noted as a concern for the community prior to the implementation of the NSC project. Whilst the data shows that these social ills still require more effort to eliminate them, being given an opportunity to influence one’s environment and life, saw a change in many youth taking more interest in socio-economic activities and their livelihoods (C1, C10, C12). New youth-led businesses have been created, new community activities have been initiated driven by the youth, and new youth forums have been established to address issues facing them. This is an important finding when considering the future sustainability and resilience of the community and its youth.

*‘...this has also made them aware of their abilities. And they also want to get involved. The young people, when they see something, they have questions now. How can I get involved, what is this about? That's what this project, for me personally, allowed the young people. (C10)*

This will to shape socio-economic lives and effect some control over their futures, is also found in the community as a collective with the formation of organisations and groups created to address specific socio-economic issues faced by the community and to uplift the community. Citizens describe this willingness to shape their lives as having strengthened the community (C1, C4, C5, C7, C10, C12, C13).

*“The community was strengthened actually. They actually looking forward to things for Noordgesig and what's coming to Noordgesig. It's not like the time when they were just sitting and saying, I don't worry about this, it's for them, it's for politicians. Now, with everything that's happening here with this new thing, people eyes are opening, they start to be involved, they want to be involved. There were meetings that people didn't attend. Now they attend.” (C7)*

Findings also show a related improvement in the enthusiasm to get involved in community matters, which interestingly corresponds with the variable of *Ability to Act*. This shows a co-occurrence between variables which is an interesting aspect in understanding how characteristics of enabled human agency relate to each other.

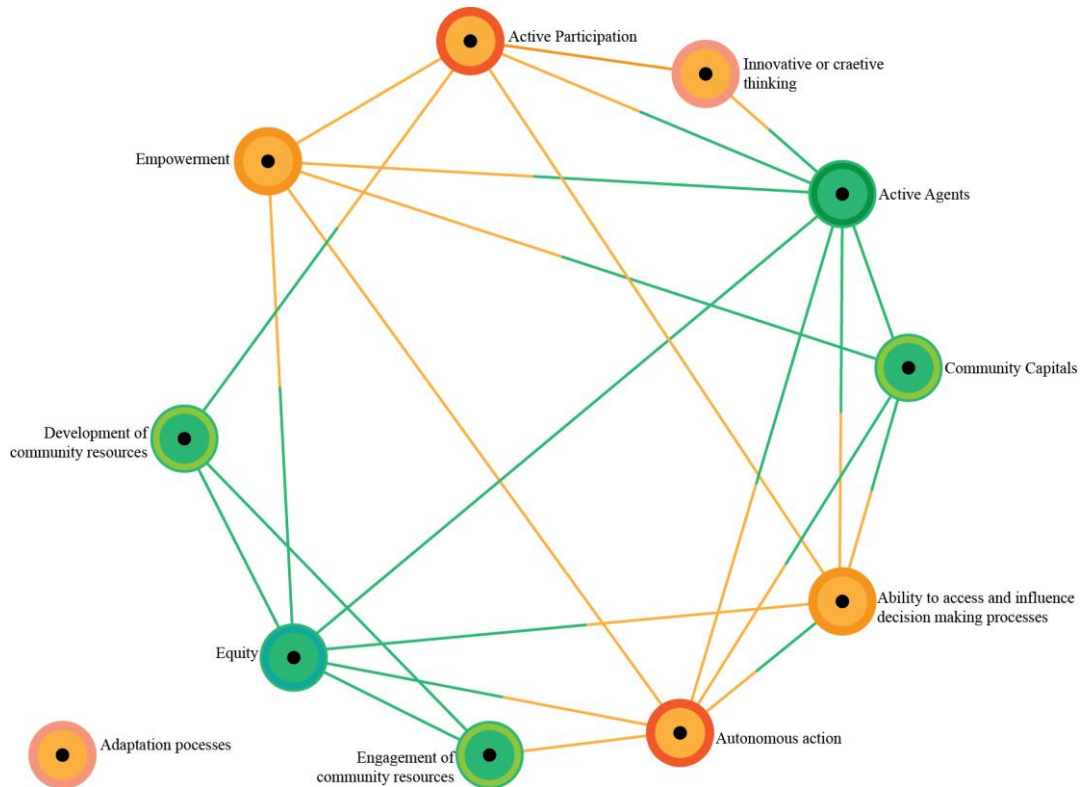
	Active participation	Autonomous action
Ability to access and influence decision making processes	6	2
Empowerment	15	12

**Table 6: Co-occurrence table of Ability to Influence and Ability to Act extracted from Atlas TI; Source: Author, 2020.**

The above table shows a relation between the human agency characteristic of *Ability to Influence* and *Ability to Act*, where, the ability to access and influence decision making processes produced a sense of empowerment within the



community, which then influenced an improvement in active participation and autonomous action. According to the co-occurrences shown, being empowered, or, having a perception of being able to effect control over their lives, is the sub-variable that most enhanced action and participation in the community, visualised in the network diagram below.



**Figure 18: Network diagram for Empowerment; Source: Author, 2020.**

This is interesting to note when reflecting back to the perception of hopelessness (C1), disempowerment (C4), and uncertainty around life (C13) that was felt prior to being involved in the case study project. The following quotation, captures the essence of the relationship between the *ability to influence* and the *ability to act* as derived from the data:

*“People have become more self-efficient, that people have become more knowledgeable in things where they were not knowledgeable. And that gives me a lot of sense to say that if, at any given time, if there's another project, I want to be personally involved....The project is there to change the beauty of the area first, to sustain in that community - let the community sustain itself, let them become knowledgeable in whatever the project will give to them. Let them become stable and let the youth become more involved to see the necessity of starting any project at a very young age... we need to look into how you develop your area, how you connect your area to the broader urban management of the inner city, how you can connect all these together. I believe maybe as time goes, these will start.” (C12)*

#### 4.2.1.2. Ability to Act

The data on the variable *Ability to Act* includes two components, *active participation* and *autonomous action*. *Active participation* was measured subjectively, using an indicator of *the perceived degree of involvement in community events and activities*, whilst *autonomous action* was measured objectively using an indicator of *number of self-initiated interventions created for the benefit of the community since the start of the project*.

The first interesting finding within this variable is its relation to the variable, *ability to influence*. It shows a reinforcing relationship between the two according to the data extracted from the citizen interviews. The findings on this variable are significant to assess the ability of the community to take action in relation to their agency, and to see how this might be transformed into capital, whether physical, social, human, financial or other. They show positive effects on the community's conscious involvement following participation in processes and their independent initiation of actions toward personal or collective benefit. These positive effects were found across 48 and 66 quotations respectively.

Ability to Act	Active participation	48
	Autonomous action	66

Table 7: Codes and quotations relating to Ability to Act as extracted from Atlas TI; Source: Author, 2020

The most important finding emerging from this variable, was the sense of 'ownership' that was perceived to be developed within the community after having actively participated in the case study project (C1, C5, C6, C11, E1, E2, E3), which also corresponds to their perceived outcome of having the *ability to influence*. This is linked across four interviews to taking initiative, and actively partaking in activities, events or endeavours for individual or communal benefit.

*"People are taking ownership, I mean if you think of the street down past the robot by the clinic, even Ballen Street... those are streets you would not want to go down because it was just so neglected. As if people are not taking care but if you go there now you will see the difference; people are walking."(C1)*

##### **Active participation:**

The data shows interesting findings around the involvement of the community and its members in activities that respond to a desire for change or improvement, following the NSC project. Eight out of eleven citizens residing in Noordgesig that were interviewed described a change within the community, following the NSC project, in their enthusiasm and efforts to get involved in community matters (C1, C4, C5, C6, C8, C11, C12, C13). These efforts have been linked to a sense of pride (C5), as well as a spirit of 'empowering each other'(C1, C4, C5, C6, C8), an aspect also mentioned when discussing *ability to influence*. Aspects that the community became actively involved in effecting change around include, cleaning and maintenance of the new public plaza and other public areas, like streets, the formulation of a number of community groups and organizations set up to address the needs of the community, the creation of new economic opportunities, participation in other governmental planning processes, sharing the heritage of the

area, other social events for the benefit of the community and an increase in the enthusiasm to get involved in community meetings. This is an insightful change when compared to the perception of the community, before the NSC project, of these aspects of their lives having to be addressed or resolved by government authorities (C1, C5, C13).

It is also interesting that two of the three experts interviewed, noted an improvement in the level of the active participation of the community through the process of the case study project (E1, E2).

A network diagram extracted from Atlas TI reveals the same insight into the relationships that exist between variables of human agency *ability to influence* and *ability to act* and the variables of community resilience *action* and *capacity building*, as seen and discussed under 4.2.1. above.

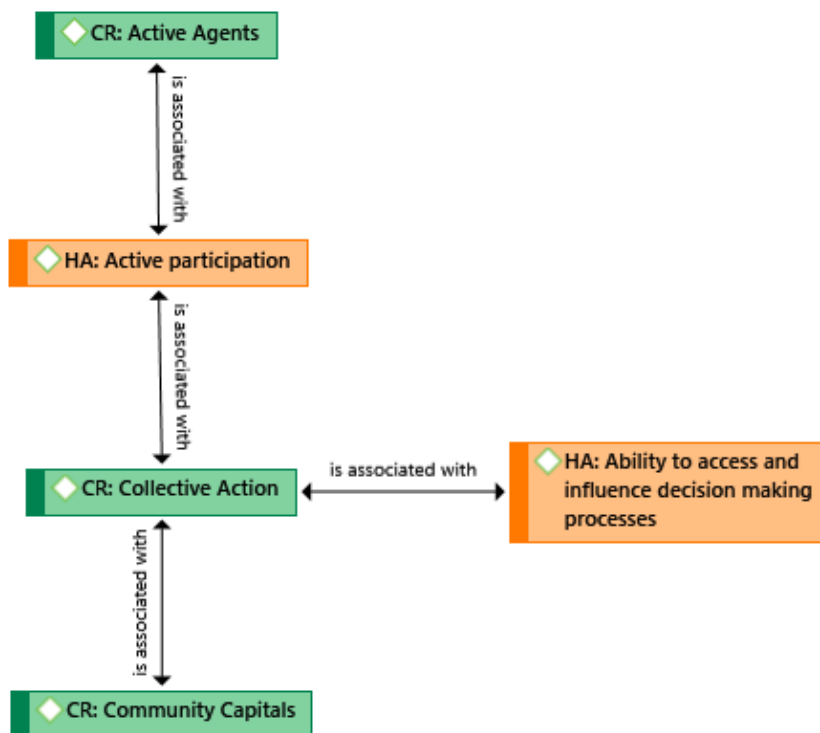


Figure 19: Network diagram showing relationships between sub-variables, extracted from Atlas TI; Source: Author, 2020.

***Autonomous action:***

The data shows that following on from their involvement in the case study project, the community of Noordgesig increased their independent action to accomplish personal or collective objectives. A change is illustrated in the number of created interventions that highlight aspects of agency developed within the community. This sub-variable was measured objectively as follows:

<b>Self-initiated interventions created for the benefit of the community since the start of the project</b>	<b>Number</b>
Voluntary maintenance and upkeep of public space	3 (public plaza, library, streets)
Forum or groups created to address particular need	13 (Community Policing Forum, Street Committees connecting to councillor, Concerned Community Group, Information Sector Group, Information Emergency Group, Community Chat Group, Funeral Group, Senior Citizens Group, Sector One Group, COVID-19 Chat Group, Youth Forum, Business Forum, Service Delivery Task Team)
Action relating to governmental processes or projects	2 (Integrated Development Plan process, Noordgesig Primary School project)
Economic opportunities	28 (Market at the plaza, weekend bake treats, up-scaled businesses around two development nodes, food market at the stadium, landscaping, 12 new construction companies, local tuck-shop expansion, 2 new employment service business, tuk-tuk, tree trunk furniture business, baking business, tree cutting and scaffolding business, art business, tourism business, new shops around park, )
Social events or interventions	10 (Walkathon, poetry show, stand-up comedy show, Jozi Walks initiative, vibrancy of activities, yoga, aerobics, soup kitchen, feeding scheme, youth soccer club, female soccer)
Heritage and tourism initiatives	3 (Blue plaques, tours, remembrance wall)
External partnerships	3 (PRASA, Tears Foundation, NGO)
<b>Total number of self-initiated interventions</b>	<b>62</b>

**Table 8: Self-initiated interventions created; Source: Author, 2020.**

Some further insight found within this sub-variable was around the community's ability to respond to shocks that occurred most recently, and after the case study project was completed. Data shows the community self-initiated emergency responses to the COVID-19 pandemic, without government support, through feeding schemes, a COVID-19 information chat group and a safety protocol roll-out in schools. Another incident mentioned in the interviews related to this response to shock is a house that was burnt in a fire, where the community collectively contributed to the re-build and replenish of the house and its contents.

Finally, whilst data could not objectively be collected for this aspect, citizens and experts also observed self-initiated physical improvements of environment since the NSC project, including house renovations, external façades upliftment, vegetable gardens, driveway upgrades and new mural artworks (C1, C5, C9, C10,

E1, E2). Secondary data analysis of social media groups also show that a number of new interventions are being developed and shared continually, the latest being branded sweaters with the historic nickname of Noordgesig, 'Bulte' across it, highlighting the continued amplification of identity by the community.

The perceived improvement in participation in community events or matters, and the autonomous action taken to create independent interventions shows an enablement of the ability of the community to act independently and to create change. The data reveals sentiments around playing a collective role, having a sense of purpose and a belief in having the ability to, and, desire to create this change without government initiation (C4, C11, C12, C13, C5), a perception that differs from that relayed as prior to the NSC project. It was interesting, however, that citizens still acknowledged the importance of support from government, especially through the form of funding, as a means to further enable effective change (C3, C4, C6, C7, C12), bringing into focus the importance of partnerships.

*"So there's certain things that came out of all that that people now look at themselves and look out for themselves... we have to make things happen, that's the story that goes around now- we have to make things happen for ourselves. We can't always look to government, this is a time where we have to look to ourselves as leaders on what we have to do."(C4)*

*"It gave the people a sense of pride, it gave the people a sense of want, it gave the people a sense of I'm needed as a human being, I also have a part to play."(C5)*

*"I think it affected not only me, but most of the community. It gave us that positive feeling that yes, we are there, and we can do things on our own. We don't always have to ask the government to do things for us. The government can meet us halfway, but from there we can continue."(C13)*

#### **4.2.1.3. Innovation**

The data on the variable *Innovation* includes two components, *innovative or creative thinking* and *adaptation processes*. *Innovative or creative thinking* was measured objectively, using an indicator of *number of new ideas proposed or developed by the community members (since the start of the project) in anticipation of the future*, whilst *adaptation processes* was measured subjectively using an indicator of *the perceived change in behaviour of community members toward a more positive outlook on life*

This variable seeks to measure and assess the opportunities for learning and transformation that is harnessed through creative, unusual solutions to issues facing the community. It relates to an element of sustaining the future of the community using imagination and an ability to anticipate (Skerratt, 2013), adapt and improve their lives.

##### ***Innovative or creative thinking:***

The data shows that following on from involvement in the NSC project, the community of Noordgesig showed a willingness to undertake independent action as outlined in 4.2.1.2, some of which were unprecedented in the community and deemed innovative. This interestingly shows a relationship between variables of

having the *ability to act* and the incorporation of *innovation* into solutions proposed for issues facing the community. A table showing the co-occurrence within these two variables highlights this relationship, and indicates a stronger relationship between actively participating in processes and the resultant positive *adaptation processes*. It also shows the connection that emerges between taking *autonomous action* and thinking creatively.

	Adaptation processes	Innovative or creative thinking
Active participation	10	1
Autonomous action	3	5

**Table 9: Co-occurrence table of Innovation and Ability to Act extracted from Atlas TI; Source: Author, 2020**

This sub-variable was measured objectively as follows:

New ideas proposed or developed by community members (since the start of the project) in anticipation of the future.	Number
Social programs or activities	6 (face painting, art exhibition, walkathon, poetry reading, stand-up comedy shows, Jozi Walks)
Economic ideas and services	5 (tuk-tuk, handmade designer shoes, bead work, plaza market, library coffee shop)
Partnerships	3 (Department of Sport, High School, Department of Tourism)
Environmental or physical ideas and projects	6 (Open spaces development, sports grounds, housing, wetlands restoration, safe social spaces, homeless shelter)
<b>Total number of new ideas</b>	<b>20</b>

**Table 10: New ideas proposed or developed by the community of Noordgesig; Source: Author, 2020.**

### ***Adaptation processes:***

The findings within this sub-variable show that citizens unanimously perceive the change in the behaviour of the community members as positive and an improvement in outlook in life. All experts interviewed also perceive a positive change, however their perception is restricted due to their limited time in the community after completion of the project, as well as the feeling that this sub-variable can be better assessed once the developed library opens (E2, E3). This is supported by secondary data from social media pages which, not only show a diversity of posts and entries compared to before the project, but a change in the language and positivity around life found in the content.

The data shows positive effects around aspects of: perceived ‘state of the art’ facilities ( C1, C4, C5), linking to a sense of pride and connection to place, with a desire to also improve personal property. This was the most emphasised aspect of adaptation that was mentioned. (C1, C4, C5, C6, C9, C10, C11, C12, C13, E1, E2).

*We are prouder than what we have been before. We can with pride, say, we part of the Noordgesig community”(C4)*

The outlook of the community was revived to be more hopeful where, before, there was hopelessness (C9, C10, C13) and their spirit and morale was uplifted, especially with the youth, which is significant given the challenges noted around youth in the area (C1, C4, C6, C8, C9, C10, E1)

*“Never give up. Never give up on anything and don't always wait for the government to do things for you. It's for you to stand up and go out there. It is all there for you. (C13)”*

*“It opened up more doors especially the youngsters. You see there is drive and spirit now - we can also do it! And to me this is what the project brought forward.” (C1)*

*“It should be looked at as a beacon of light towards your future and empowerment for our youth and everybody else within the community.” (C6)*

*“I looked at it and I said, look at where you come from; look at what I have learned and it is just amazing. I tell myself now- I am so positive and I could do anything I put my mind to . It doesn't matter the challenges” (C9)*

The data also shows an increase in collective motivation to do things, start things, and support each other, fostering an increased perception of unity (C1, C4, C5, C7, C8, C9, C10, E1) that was not present before the NSC project.

*“I think we must not stop. We must keep on going on with new ideas. We must look at how we are going to empower our young.”(C12)*

*“One of the things is that they've gotten their voice, and now they know that they can use their voice in a constructive way.” (E1)*

Six out of eleven citizens interviewed that reside in Noordgesig described the impact of the project on their perceived respect for their area. Linking back to the sense of pride, citizens felt that they had finally been recognised and were “not forgotten”, two words now painted across the front façade of the community hall. (C4, C5, C8, C9, C11, C13)

*“So there's a new feeling in Noordgesig - a sense of pride, a sense of upliftment, a sense of recognize we've now been recognized.” (C4)*

Two citizens who currently do not reside in Noordgesig, but who partook in the implementation phase of the project as local SMMEs employed for construction work, described a different view of impact of the project, from a practical perspective. They (C2, C3) felt that not all aspects of the project were positive and that, where improvement was needed was in this construction phase where opportunities to grow small businesses and improve livelihoods exists. According to these participants of the NSC project, further attention needs to be given in the way competitive pricing and the appointment of the main contractor is managed by local government agencies to avoid exploitation of local SMMEs and to economically empower marginalise communities more. Whilst they agreed that there has been an impact on the adaptation processes in respect to unity, motivation, skills development and the provision of world class facilities in the community, further interrogation of the procurement processes of public projects should be established. Issues surrounding outstanding final payment due to

SMMEs from the main contractor was raised as a fundamental hinderance to truly evaluating the success of the project and the impact on their lives.

Emphasised across nine citizen interviews was the desire for growth, economic upliftment and empowerment linking to the vulnerability of poverty in the area. This perceived change was also described in relation to a desire to create generational change and a legacy for the area and its people (C4, C5, C6, C7, C8, C10, C11, C12, C13). Here again, the emphasis on youth re-occurs across all nine interviews.

*“50 years down the line, your grandchildren or your children will say my father was part of that, and the onus is on the community, where you will have left a legacy. You might be 20 years now, but 40 years down the line, you will be 60 years, and if you have been part of a project, with pride you will say, I was part of this.”(C6)*

*“That's my goal. It is time. The community must prosper.” (C7)*

*“I would say the future is where we will have a more empowered youth, more empowered structures, more empowered organisations, more empowered groupings that will make sure that the future of Noordgesig moves on to greater heights and we achieve more, especially for those who are homeless. (C12)*

A restoration of trust in government was noted by one citizen and one expert, who highlighted the project processes and the delivery of promised projects as key to that mended relationship (C4, E2).

One citizen mentioned the desire for a crime free area and attributed the fight for it to a communal effort (C11).

An interesting insight from two citizens was the expectations the community had for future projects to also include participatory processes and enabling community action (C8, C12), which shows the learning pathway that was developed, as well as a sense of power being taken back by the people.

*“And I think that whenever they bring someone else, there will be now a big difference, ... this team have to come with to make sure that this community benefits.”(C12)*

A quotation that captures a summation of the adaptation processes and perception of the community is drawn from a citizen interview that describes:

*“Because when we talk about people's power, we use all our power, hence we would say here in Noordgesig, because of the unity and the proper consultation which people learnt, we can move forward to the future projects.”(C12).*

#### **4.2.1.4. Summary of Human Agency**

Word clouds generated from the data gathered for each sub-variable of human agency show an important distinction that occurs in equal strength and distribution in each component: the placement of ‘people’ and ‘community’. This shows an important aspect of how human agency was developed through the NSC project. It also relays insight into what was regarded as the most important consideration when discussing human agency.





A summary of the findings for human agency is captured in the table below, indicating the descriptive value of the variables and sub-variables before, and after the case study project, and as per measured indicators for each variable. The findings are attributed to the respective variables, and highlight the changes analysed across the process of the project and within the community.

Variable	Sub-Variable	Descriptive Value at start of project	Descriptive value after project
Ability to Influence	Ability to access and influence decision-making processes	<ul style="list-style-type: none"> <li>• Disconnection from developmental processes and decisions</li> <li>• Lack of trust in government</li> <li>• Feeling unrecognised.</li> </ul>	<ul style="list-style-type: none"> <li>• Felt wholly included in the processes and decision-making</li> <li>• Connection to the project and neighbourhood</li> <li>• Renewed trust in authority.</li> <li>• Being '<i>recognised</i>, '<i>seen</i>' and '<i>heard</i>'</li> <li>• Accessible learning opportunities</li> </ul>
	Empowerment	<ul style="list-style-type: none"> <li>• Attributed feelings of hopelessness and frustration</li> <li>• Disenfranchised and unable to have control over lives or decisions around them</li> </ul>	<ul style="list-style-type: none"> <li>• Feeling more equipped to take decisions around own lives.</li> <li>• Sense of ownership</li> <li>• Individual and collective endeavours to shape lives.</li> <li>• Desire to empower themselves and livelihoods</li> <li>• Will to shape socio-economic life and gain control over futures (individual and collective).</li> </ul>
Ability to Act	Active participation	<ul style="list-style-type: none"> <li>• Low enthusiasm to get involved in community matters</li> <li>• Community groups and organisations limited to religious, member-based groupings</li> <li>• Low community participation in events or activities</li> </ul>	<ul style="list-style-type: none"> <li>• Improved enthusiasm and efforts to get involved</li> <li>• Enhanced action and participation in communal efforts</li> <li>• Improvement in collective role to play</li> </ul>
	Autonomous Action	<ul style="list-style-type: none"> <li>• Large reliance on government authority to take action on community's behalf</li> <li>• Action only taken through service delivery protests</li> <li>• Limited number of businesses or economic opportunities created by the community themselves</li> <li>• No presence of shock or emergency response from community – reliance on government.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased independent action around maintenance, social matters, action, governmental processes, economic opportunities and community activities</li> <li>• Improved ability to respond to shocks and emergencies</li> <li>• Perceived positive change in ability to act independently</li> <li>• Increased, self-initiated improvement of physical environment</li> <li>• Belief in the ability to create change without government initiation.</li> </ul>
Innovation	Innovative or creative thinking	<ul style="list-style-type: none"> <li>• Low inspiration to start things, or take creative steps</li> </ul>	<ul style="list-style-type: none"> <li>• New ideas and opportunities created and proposed</li> <li>• Development of learning pathways</li> </ul>
	Adaptation processes	<ul style="list-style-type: none"> <li>• Low motivation toward life and livelihoods</li> </ul>	<ul style="list-style-type: none"> <li>• Positive change in the behaviour of community members</li> <li>• Improved outlook on life</li> <li>• Increased desire for growth, economic upliftment and empowerment.</li> <li>• Sense of power of the community and self.</li> </ul>

**Table 11: Summary of findings for human agency showing changes in descriptive values from the start of the NSC project, to after; Author, 2020**

The above is then translated into an illustration of the changes in the descriptive values of the variable as found in the data through the process, from start, to after the project. These

scales indicate changes from a low presence of human agency, to a described, and measured high value of agency.

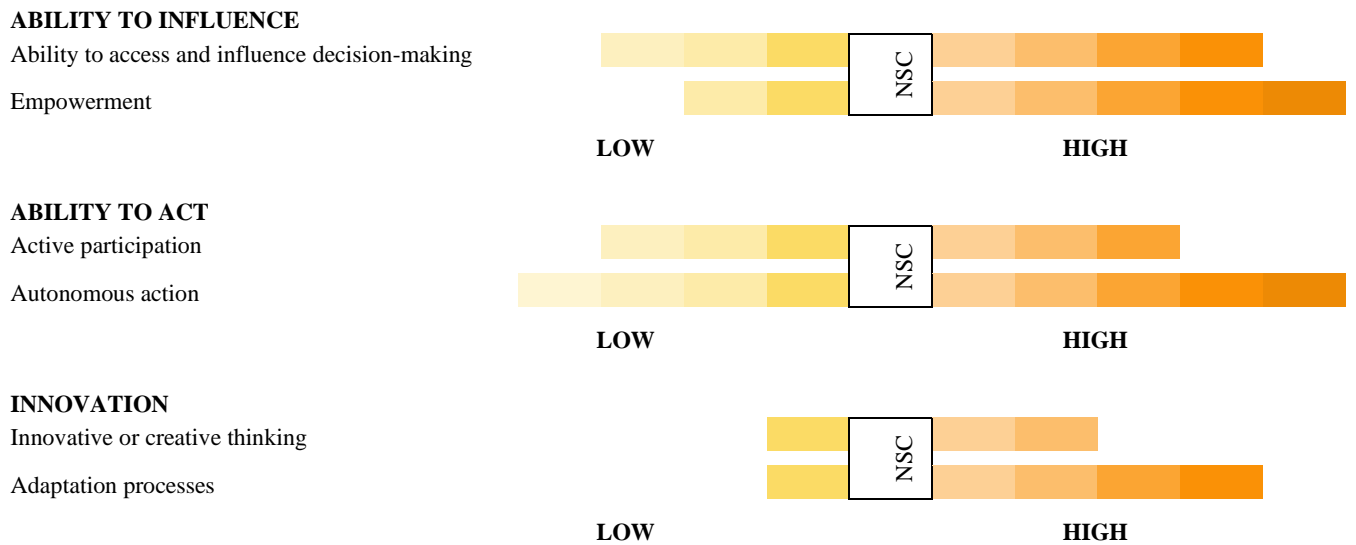


Figure 20: Illustration of changes in human agency from the start of the NSC project, to after; Author, 2020

## 4.2.2. Community Resilience

Community resilience is positioned as the dependent variable in this research, and is discussed as a key pathway to addressing vulnerability in disadvantaged communities. The focus of this research, and the manner in which the concept was measured, is to consider the strengthening of resilience as a long term development goal with the goal of developing a capacity to continue for communities facing multiple, daily stressors. Community resilience includes components of *capacity building*, *action* and *transformation*.

### 4.2.2.1. Capacity Building

The data on the variable *Capacity Building* includes three components, *development of community resources*, *engagement of community resources* and *community capitals*. This is the most important variable for measuring community resilience, as per the definition adopted by this research (see section 2.2), and thus, there are six indicators used to measure it. *Development of community resources* was measured objectively, using three indicators of *number of new businesses or economic opportunities created within the community*, *number of new formal and informal networks or groups established within the community*, and *number of new physical, built interventions created within the community*. *Engagement of community resources* was measured subjectively using an indicator of *the perceived effectiveness of community organisations in dealing with issues facing the community*. *Community capitals* was also measured subjectively using indicators of *the perceived improvement of interpersonal relationships and shared*

*values in the community and the perceived improvement in the ability to influence politicians or local government authorities.*

This variable measures and assesses the capacity built within the community to access, engage and develop resources toward achieving shared objectives, and generating the capacity to thrive (Magis, 2010). The findings show positive impacts on this variable, as well as interesting reinforcing relationships between its sub-variables, suggesting a correlative association between the key dimensions of community resilience.

***Development of community resources:***

Development of community resources builds community resilience by advancing individual and collective ability and self-efficacy to respond to conditions and influence change (Magis, 2010; Mancini and Bowen, 2009). This corresponds to the sub-variable being mentioned in 148 quotations, the largest number of quotations associated with a sub-variable. The data shows that the community's financial, social and physical resources were positively developed, following on from the case study project and was directed to capacitation for both individual and collective. Whilst no objective data on the exact number of businesses or economic opportunities, networks or groups or physical built interventions exists for the community at the start of the project, according to the data gleaned from the citizen's interviews, there was little to no resources developed. Primary data, supported by secondary data from project records and local media reveals that the only attributed resources developed before the NSC project were government led built interventions of a new primary healthcare clinic (completed 2015), Bus Rapid Transit system and station and surrounding public environment upgrade (completed 2010), less than ten businesses started within the community, and three religious organisations that formed the core of social networks in the area. Thus, the objective measurement of this sub-variable (Table 13 below) shows insightful evidence of the development of community resources, and the changes observed in terms of economic, social and physical capacity built by the community to address their specific needs and objectives.

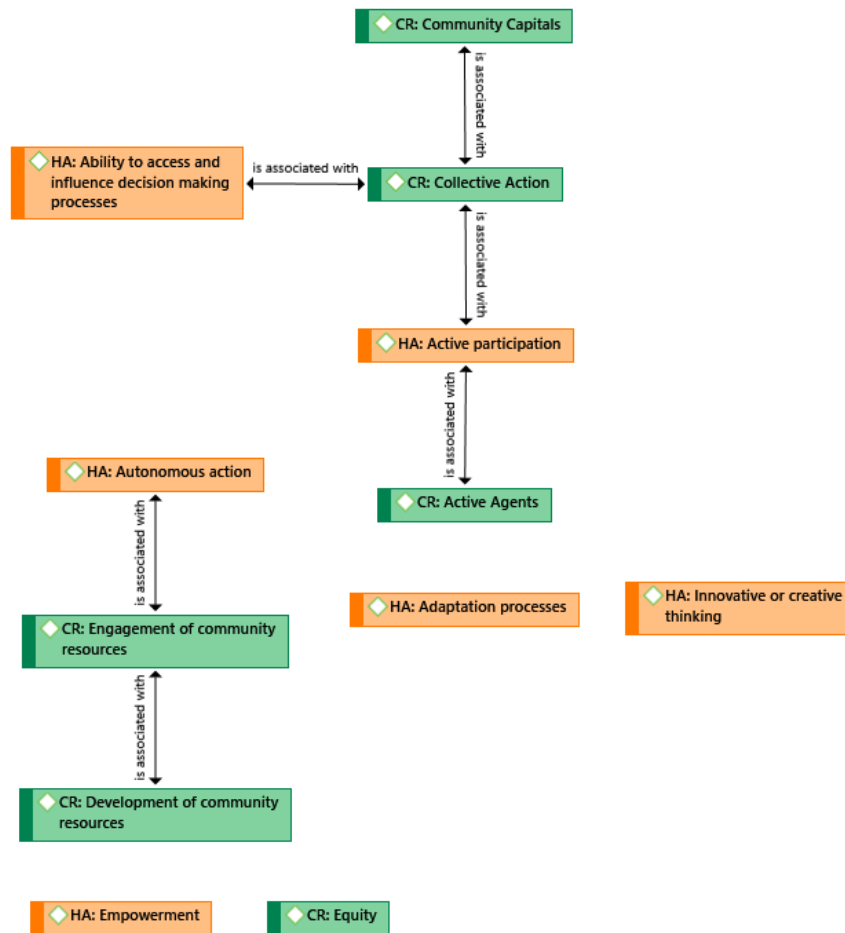
Description	Number
Number of new businesses or economic opportunities created within the community, from the start of the project to current.	32 (Market at the plaza, weekend bake treats, landscaping, 12 new construction companies, up-scaled businesses around two development nodes, local tuck-shop expansion, 2 new employment service business, food market at the stadium, tuk-tuk, tree trunk furniture business, baking business, tree cutting and scaffolding business, art business, tourism business, 2 new supermarkets, new garage, new shops around park, community participation consulting)
Number of new formal and informal networks or groups established within the community and with external partners from the start of the project to current.	27 (Community Policing Forum, Street Committees connecting to councillor, Concerned Community Group, Information Sector Group, Information Emergency Group, Community Chat Group, Funeral Group, Senior Citizens Group, Sector One Group, COVID-19 Chat Group, Youth Forum, Business Forum, Service Delivery Task Team, external contact with concrete company, inter-church collaboration, external contact with waterproofing company, Jozi Walks group, NGO, external contacts with professional artists, external contact with Johannesburg Heritage Foundation, external relationship with JDA, external contact with Tears Foundation, contact with Councillor advisory groups, aerobics, youth soccer club, female soccer, external contact with PRASA)
Number of new physical, built interventions created within the community from the start of the project to current.	48 (Ballen Street upkeep, 30 home renovations, public plaza, library, upgraded intersection, 10 new art murals, primary school, security fence, new vegetable gardens, upgraded park )
<b>Total number of community resources developed</b>	<b>107</b>

**Table 12: Objective measurement of Development of Community Resources; Source: Author, 2020**

According to the data, *development of community resources* co-occurs with all other sub-variables in the operationalisation, highlighting an important relation of this sub-variable. The four most co-occurring codes are highlighted in the table below:

	Development of community resources
Active Agents	11
Collective Action	1
Community Capitals	10
Development of community resources	0
Engagement of community resources	19
Equity	8
Active participation	16
Autonomous action	36
Ability to access and influence decision making processes	5
Empowerment	27
Adaptation processes	14
Innovative or creative thinking	3

**Table 13: Co-occurrence table for Development of Community Resources, extracted from Atlas TI; Source: Author, 2020.**



**Figure 21: Network diagram of Development of Community Resources showing co-occurring codes, extracted from Atlas TI; Source: Author: 2020**

The network diagram for this sub-variable gives us more insight as to the relations between codes. Interestingly, it shows a link between the *development of community resources* and the *engagement of community resources*, which although in this research is limited by its measurements (due to scope), shows that the resources developed by the community, both individually or collectively, is used to address the issues facing the community. This is important to note for the continuity of resilience being assessed, as well as the capacity of the community to build on resources for both the present issues, and the future sustenance of the neighbourhood. The data also shows that the strongest relation between concepts of human agency and community resilience, is found in the association of *development of community resources* and *autonomous action*, drawing attention to the community’s *ability to act* having an impact on the *capacity building of the community*.

*“The community have taken initiative. The effort they have taken to sustain themselves after the project.” (C12)*

It is noted that whilst *development of community resources* co-occurs with *empowerment* 27 times, the network diagram shows no direct link. The association is revealed through data regarding the establishment of new businesses, groups or community activism to influence decisions taken around their neighbourhood and the coming together to achieve common objectives, that has been enhanced through the ability to influence and the act. The development of community resources also relates to *adaptation processes* since the will to successfully shape socio-economic life, supported by the *development of community resources* is described in the

data as resulting in improved *adaptation processes*. Expert data on this variable shows a perceived advance of community resources in the form of physical and social aspects. However, these perspectives are offered only through observations made. (E1, E2, E3). The network diagram below captures the description of the relation between sub-variables.

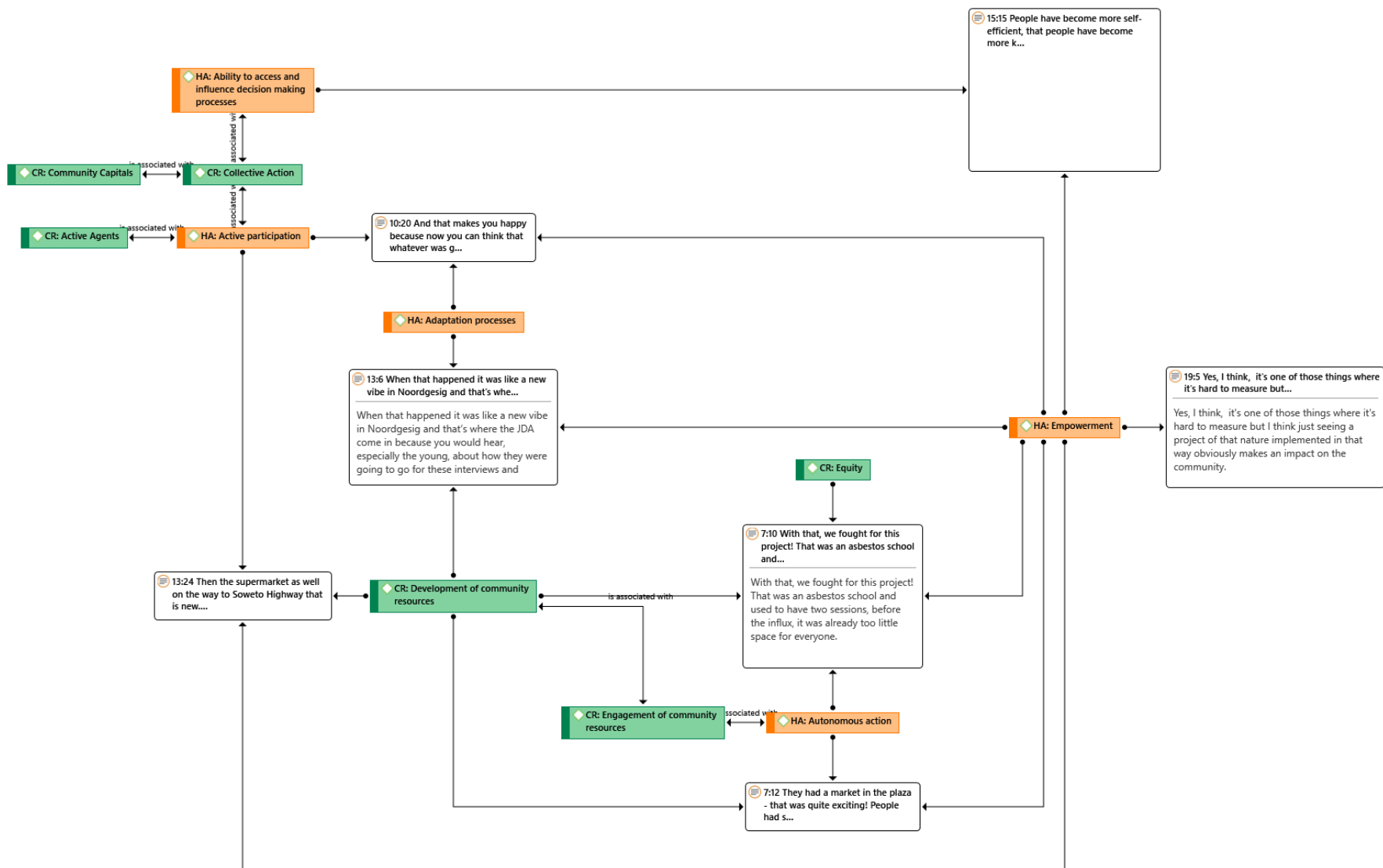


Figure 22: Network diagram showing relationship between Development of Community Resources and Empowerment, extracted from Atlas TI; Source: Author, (2020).



### ***Engagement of community resources:***

The *engagement of community resources* sub-variable measures the utilisation of resources through local organisations to address the issues facing the community (Magis, 2010). It is measured subjectively using an indicator of *the perceived effectiveness of community organisations in dealing with issues faced within the community*.

The data reveals interesting insights about the way the community built its capacity, most effectively through the formation of, and activation of community organisations. As outlined in the section describing *development of community resources*, 27 new formal and informal groups or organisations were created since the start of the project. Not only is this a significant number, the data also reveals a variety of issues and matters which these organisations seek to address. According to the citizen interviews, these organisations have ‘greatly’ (C1) impacted their lives and ability to address their issues. Not only does the data show positive perceptions of the effectiveness of these groupings (C4, C1, C5, C7, C8, C10, C11, C12, C13) but it also reveals important connections to variables of *capacity building* and *action* (within community resilience). Specifically, *engagement of community resources* co-occurs with *development of community resources and community capitals* as the following table shows:

	<b>Engagement of community resources</b>
<b>Active Agents</b>	9
<b>Collective Action</b>	2
<b>Community Capitals</b>	7
<b>Development of community resources</b>	19
<b>Engagement of community resources</b>	0
<b>Equity</b>	1
<b>Active participation</b>	5
<b>Autonomous action</b>	11
<b>Ability to access and influence decision making processes</b>	1
<b>Empowerment</b>	2
<b>Adaptation processes</b>	0
<b>Innovative or creative thinking</b>	0

Table 14: Co-occurrence table, extracted from Atlas TI; Source: Author, 2020

The findings on this sub-variable start to reveal interesting relationships between the dependent and independent variables of this research, as well as the reinforcing relationships between sub-variables within concepts.

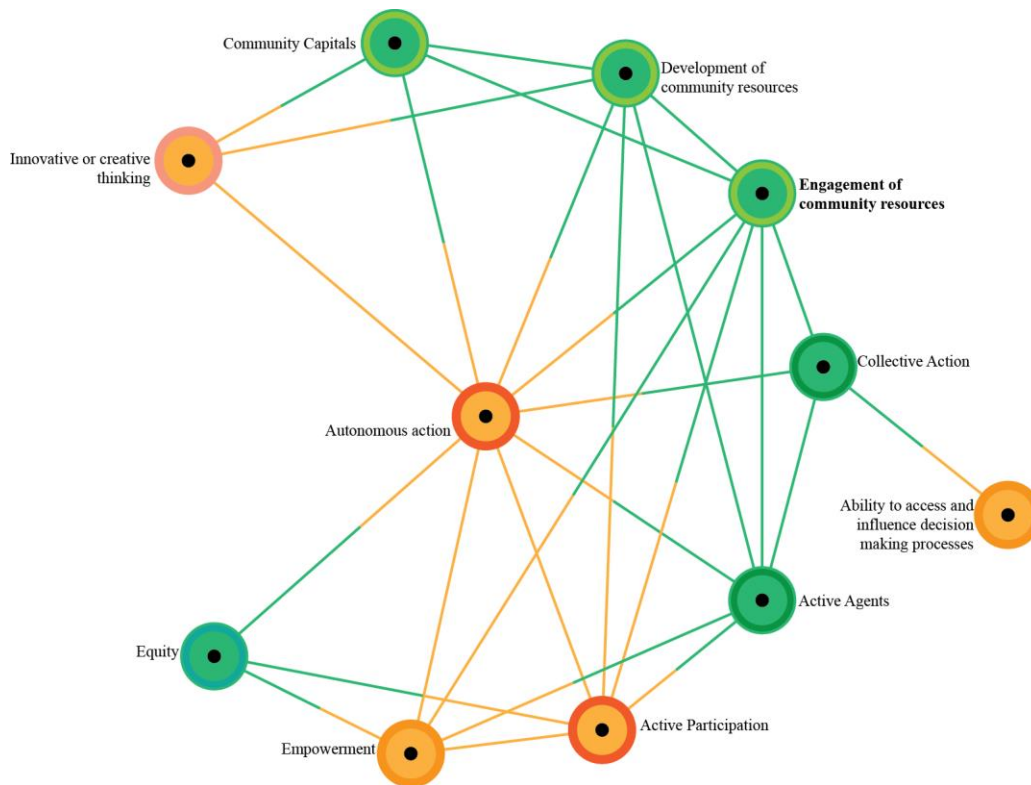


Figure 23: Network diagram for Engagement of Community Resources, Source: Author, 2020

According to the citizens of Noordgesig, the formation of organisations and groups is the ‘best thing that they could have done’(C1). They are described as being ‘outstanding’(C1) and effective in dealing with issues facing the community (C1, C2, C4, C5, C7, C8, C10, C11, C12, C13). They are deemed to have incited more enthusiasm and participation, and also described as improving the community social capital by unity and solidarity as the community now comes together for various matters (C1, C4, C5, C6, C7, C8, C10, C11 C12)

*“Now that we have started these organisations, there is more participation and more order. There is no one person pulling in one direction and another in that direction. Now one thing concerns us and then we work for it.” (C11)*

*Yeah we do, because there were never groups before - there was never business forums before. Now suddenly when the business forum is starting to engage one another, they gain respect and we sit with each other. People are really now coming together. We used to be very divided (C8)*

This reveals the opportunity created by the community for *community capitals*, through the *engagement of community resources*, through the *development of community resources*. It also relates to the *action* taken by *active agents*, since the belief of the community of their ability to effect change was improved, resulting in more initiative being taken (C12, C1, C5, C8, C10, C11).

*“Before these projects, no one had the initiative to say, let’s look into tourism, but after these projects, people have the initiative even to open up tourism companies to make sure that tourists come to the area and they are taken around to see where this place is coming from and where it is going to.” (C12)*

The type of organisations and groupings formed and the issues they seek to address since the start of the project include a business forum to assist each other through opportunity, workers or other, (C2), domestic violence, emergency response connected to ER24, a national, private medical emergency service, chat groups for reporting crime or other, policing, electricity issues, funerals, street committees, external contacts for communal benefit (scholarships), youth groups, and other developments. Interesting was the connections made externally to support these internal groupings. Examples of this include linking street committees to the local ward councillor, developing contacts with external emergency response teams and sponsors for development of the community. The data indicating the community's engagement of resources to deal with shocks or stressors such as their COVID-19 response, response to incidents of crime, or their response to a house that was burnt down has improved since the case study project, and holds important insight into the resilience development taking place (C1, C4, C5, C6, C8, C10, C11). The community described how simple digital tools such as WhatsApp, service their needs for communication and connection well (C1, C8, C9, C10).

*"There's a lot of things happening in Noordgesig, like, this people that come together in policing, the churches came together and there's organisations that want to form something and do something for Noordgesig, for themselves first, but for the community as well." (C7)*

This sense of resourcefulness, is described as both inspiring and strengthening for the community. Many citizens describe taking more initiative for collective good (C12, C1, C5, C8, C10, C11), which is associated with positive feelings of pride, positive role models, support for each other and inspiration for each other, most especially the youth (C1, C3, C5, C7, C8, C10, C9, C12).

*"When they got the history of Noordgesig they heard the good also, you know not only bad things about Noordgesig, and it gives them the courage to say that, hey, I want to be like how that person was, so this is my direction I want to take. Yeah, like local heroes. So they have proper role models not those that just come and smoke here." (C12)*

One aspect raised by the citizens, was that within this renewed sense of solidarity, there still exists some negative, marginal divide along political or religious lines (C4, C8, C10, C11).

The impact on financial and physical community capital was explained in *development of community resources*, and again, shows an important link between these sub-variables. It also reveals impact on cultural and human capital which connects to, and will be discussed under the next sub-variable, *community capitals*.

### ***Community capitals:***

The *community capitals* sub-variable measures the resources that are strategically invested into the community, and supports the previous sub-variable by focusing on the subjective measurements of *the perceived improvement in interpersonal relationships and shared values in the community since the start of the project and the perceived improvement in the ability to influence politicians or local government authorities since the start of the project*.

Like the previous sub-variables, this one cannot be discussed in isolation due to the rich connections found through the data analysis. From the below network diagram, we see important correlations between the community's resilience and human agency, as well as between various sub-variables. It also illustrates a central connective role that *community*

*capitals* play in the explanation of the relationship between community resilience and human agency.

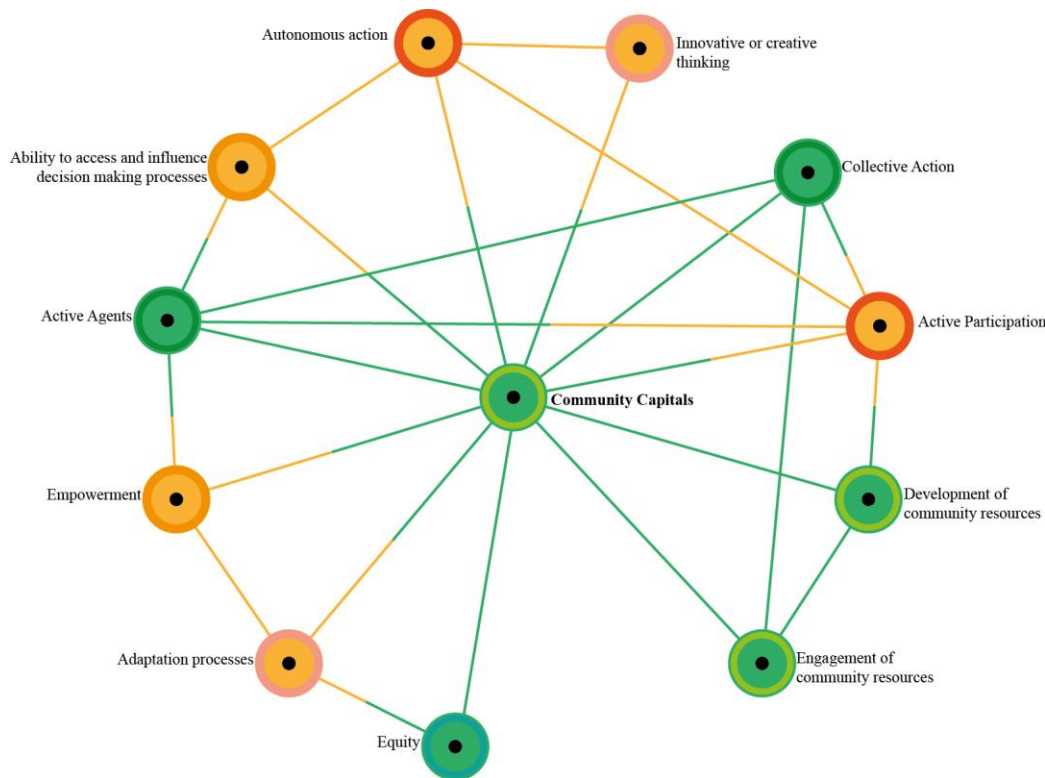


Figure 24: Network diagram for Community Capitals; Source: Author, 2020

The analysis reveals some key insights:

- *Capacity Building (Development of community resources, engagement of community resources and community capitals):*  
The sub-variables of *capacity building* all associate to each other, and according to the data, reinforce one another. This is important to discuss the accumulated capacity that has been built since the start of the case study project.
- *Action:*  
The sub-variables of *action* associate to each other, and are also reinforced through their relationship with *engagement of community resources* and *community capitals*.
- Whilst *equity*, a sub-variable of *transformation*, shows a relation to *community capitals*, it appears to be the least connected component of community resilience within the network. This will be further discussed in section 4.2.2.3.
- *Human Agency:*  
An interesting finding emerging from the data shows that all components of human agency as identified in the network diagram, link to a community resilience component, whether they reinforce another human agency dimension, or not. This is key to the discussion around the impact of human agency on the community's resilience and will be further elaborated in Chapter 5.

Since the start of the project, there is a unanimously perceived improvement in interpersonal relationships and shared values in the community, according to both citizens and experts. The community of Noordgesig now feels stronger together (C1, C2, C3, C7, C9, C10, C11, C12, C13), describing their shared values and interpersonal relationships now as 'beautiful and

great' (C1), and vibrant (C5, C9). It is now defined as a community that is geared toward being more helpful to each other (C1, C2, C3), with 'people excelling' (C1, C11), 'more outspoken' (C12), and with 'togetherness' including marginalised groups (C4, C11, C12). Values are now described as with 'pride'(C4, C9, C13), a 'sense of belonging' (C12, C13), and efforts toward 'mutual benefit'(C12).

*"This project brought us together - from that time of the project up until now and going forward, it's never going to change. Strength together." (C3)*

Citizens describe the nature of relationships between them, as co-beneficial, and characterised now by mentoring, learning, and motivating each other, sharing expertise, and empowering one another (C1, C4, C5, C7, C8, C11).

*"We are mentoring each other, learning every day, like one collective. It is one for all - for all of us." (C1)*

*"We empowered one another.... People are very close now." (C8)*

They also describe this coming together for collective action, geared toward the benefit for all. According to the data, citizens felt that being actively involved in the project, enabled them to interact more, which led to a feeling of being able to serve together following the completion of the project (C5, C7, C8, C10, C11), where previously they were 'very divided'(C8).

*"After these projects, the community were more united more understandable of projects. And they were standing more together to move to other projects in one unity, one diversity to make sure that the community, and not individual was benefitting from these projects, and to uplift those who need to be uplifted." (C12)*

The findings also show positive effects of the project on the perception of improvement in the community's ability to influence politicians or government authorities, by taking collective action. This aspect of collective action differs to the sub-variable *ability to access and influence decision-making processes* in that, this measures the specific perception of being able to influence government authorities for any matter, whilst the sub-variable measuring the *ability to influence* is related to the perception of being able to participate in urban planning and development processes.

According to the data, based on knowing more, and feeling 'more equipped'(C8) following from the case study project, (following the ability to participate in urban planning and development processes), the community of Noordgesig felt more confident about approaching and influencing government authorities around matters related to their community (C1, C4, C5, C6, C7, C8, C11, C12, C13). This is due to understanding processes more, and also about feeling a sense of having 'power now'(C8) to hold government accountable (C7, C8, C6).

Some of the interventions created by the community that illustrate their improvement in their collective action in this regard include the construction of a fence around the library building, which was advocated by the community to the local councillor's office and the urban management sector of the regional government (C1, C12), the demolition of the old, asbestos, and development of new primary school (C4, C5, C6, C11), and budget and development discussions held with the Speaker of the City Council (C6).

*“The primary school was made of asbestos. When they came with the WHO stories about asbestos, we keep quiet but we built our case. So when we took our case to the MEC (Mayoral Electoral Committee) to say we want a new school, the main reason is what the WHO is saying.” (C12)*

*“To me talking is a good thing and what I've seen at the school by approaching the CEO, if we could have achieved that, why can't we achieve by going to government and speaking to them on behalf of our community, with the backing of a lot of other people, because in our area, we have a lot of people, - people know what they want, and people know what they're working towards. So for me, I think when the time comes and the opportunity given for us to speak to whomever in government, I think we will be able to speak to them, make it clear to them and make them understand what we want.” (C5)*

Two out of thirteen citizens interviewed, felt that politicians and government authorities were still inaccessible by the people and that more can be done to better address this to achieve maximum effectiveness (C3, C10).

Interestingly, the data from the expert interviews, show a positive perception of improved cohesion (E1, E2) and an improvement in trust of the experts and government through the project process (E1, E2, E3)

*“The kind of feedback in the beginning was - everyone was kind of like, this is my perspective, my view, this is what I want to protect, but towards the end it was more of them mentioning the spaces, they mentioning how happy the kids are, they mentioning how beautiful OUR library. They mention Noordgesig now - it's like Noordgesig has become the proper noun that it is.”(E1)*

*“I think, having engaged with them so closely on the ground, and for them to actually see something of that standard implemented, really has changed their perception of what government is and what government is capable of.” (E3)*

#### **4.2.2.2. Action**

Action is the purposeful, active efforts taken to accomplish certain objectives. It consists of two sub-variables, *active agents* and *collective action* and is measured subjectively using indicators of *the perceived belief in being able to affect change in the community and improve the well-being of the community, the perceived level of effectiveness of community leaders in bringing the community together to work on community objectives, and the perceived change in the inclusion of culturally diverse perspectives in decision making processes*. It measures the action taken by individuals or as a community. Leadership is included as an important aspect here, as per the definitions of the sub-variables.

Differentiation is made between the sub-variable *collective action*, and *engagement of community resources*, where here, *collective action* is measured through the perceived effectiveness of community leaders and the inclusion of culturally diverse perspectives in collective action taken. *Engagement of community resources* measures the perceived effectiveness of community organisations in dealing with issues facing the community. Further, a differentiation is made between *active agents* and *active participation* and *autonomous action*, where here, *active agents* measures the perceived belief in being able to affect change in the community. *Active participation* measures the perceived degree of involvement of the community in community events, and *autonomous action* measures the number of self-initiated interventions created for the benefit of the community.

The findings on this variable show that, following on from the case study project, there were positive effects on the community as *active agents* believing they could effect change in their neighbourhood, and on their *collective action* through leadership and ‘unity through diversity’(C12).

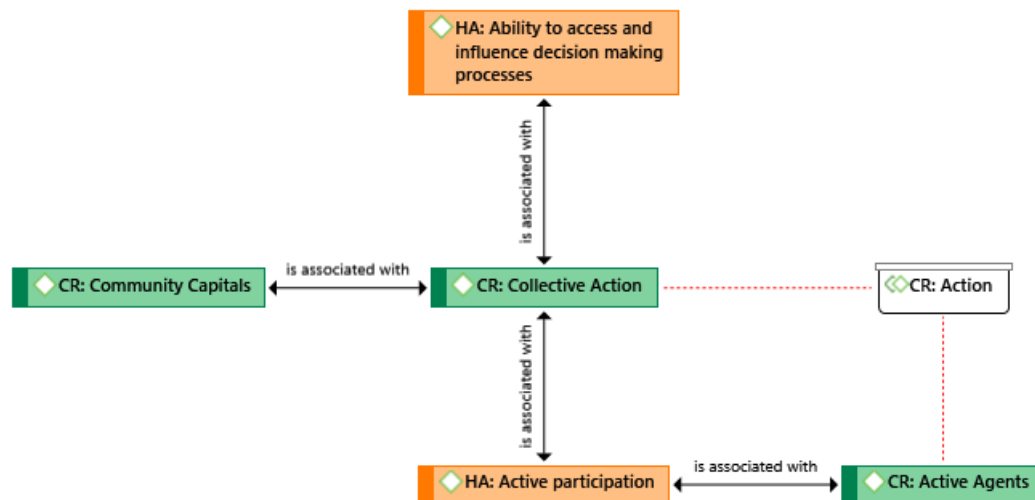


Figure 25: Network diagram for Action, extracted from Atlas TI; Source: Author, 2020

The network diagram for the variable *action*, shows that the two sub-variables are associated to each other through *active participation*. Being involved in more community events and activities after the case study project, has led to community members being *active agents* believing that they could affect more change on their environment and community. *Collective action* is activated through the perceived effectiveness of community leaders, which in the case of Noordgesig, include religious leaders, and the perceived inclusion of culturally diverse voices in their decision-making processes at the community level. The diagram shows an associated relationship with the creation of *community capital* through *collective action*.

### Active agents:

Findings show that the sense of 'ownership' built in the community through the project, had positive effects on a number of the sub-variables and components of human agency and community resilience. Here, this sense encourages, teaches and informs the community to become active agents of change (C1, C5, C6, C10, C11, C12). This is interesting when considering that prior to the NSC project, the community felt that any action or change would need to come from government authorities (C1, C4, C5, C7, C8, C10, C11). Without being acknowledged and recognised by government, there was a perception before the project that they had been neglected, lying 'dormant'(C4). The secondary data extracted from local newspapers confirm this perception and reliance on government authorities and politicians (Soweto Urban, 2016). The data shows the belief held by citizens, following the NSC project, that they are able to, and inspired to affect change and participate in protecting and impacting the community (C1, C4, C5, C7, C8, C9, C10, C11, C13).

*"It gives me a lot of confidence actually in myself and to say like, no man, let's do it like this - this is not going to benefit the community, let's do something that benefits the community." (C7)*

*"When the project came to an end, my main focus right was getting Noorgdesig back on the map, and what can I do, my contribution in guiding that." (C9)*

A network diagram for *active agents*, showing co-occurring codes and relations, illustrates the impact of this underlying sense of ownership and encouragement on its neighbouring codes and reveals a rich network of relationships between the sub-variables of *action*, as well as other components of community resilience and human agency. This bears important information in understanding the impact of human agency on community resilience, through the creation of active agents of change.

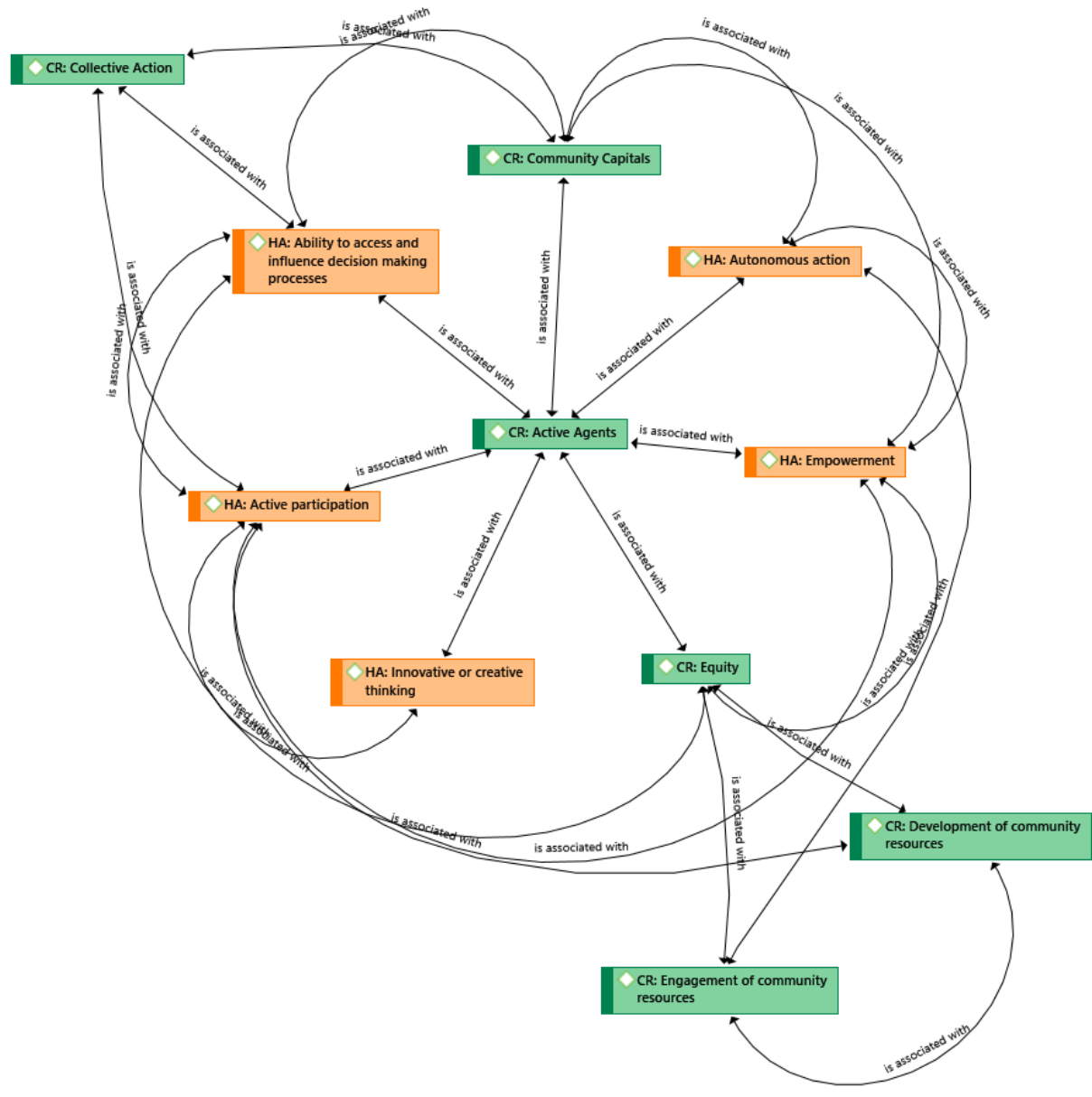


Figure 26: Network diagram for Active Agents, extracted from Atlas TI; Source: Author, 2020



### ***Collective action:***

Findings on this sub-variable show a positive perception of the effectiveness of community leadership to bring together collective action (C4, C5, C7, C11), and was described as working more as ‘a team’ now, referring to previous divisions between religious or political lines. (C11). One citizen perceived only an ‘80%’ effectiveness (C13) of community leadership. Citizens particularly mentioned the effectiveness of leaders during the time of COVID-19 in coming together for feeding schemes for up to 700 people. (C4, C5, C6). Cultural diversity was also perceived as being improved in representation at decision-making forums of the community (C1, C2, C3, C5, C7, C10, C11, C12)

*“Whether you are brown, black or white, we are people. This project brought us together - from that time of the project up until now and going forward, it’s never going to change. Strength together.”*  
(C2)

### **4.2.2.3. Transformation**

Transformation in this research relates specifically to the result of developing outcomes and renewing processes to create new conditions for continued viability (Magis, 2010). It can be said to relate to the aspect of sustainable development, in considering resilience as a long term development goal, as outlined in Chapter 2. This variable is operationalised through one sub-variable, *equity*, and measured objectively with the indicator, *number of new accessible services, amenities and community activities created for the community since the start of the project where previously disadvantaged*. The intent is to measure the number of equal and open access opportunities, resources, benefits or information that were made available to minority or marginalised groups within the community. It is noted that the operationalisation of this variable is limited due to scope. Within the context of Noordgesig as a marginalised community, where there are further nested marginalised groups, this measurement thus aims to explain the change in this marginalisation, as one pathway toward transformation. Further, within the context of South Africa, where huge inequities characterise societies (GCRO, 2013), this measurement holds significance for a sustainable path forward.

Findings show positive improvements in the number of new and accessible services for women, the elderly, children, and the disabled. The involvement of women, children and the elderly in the project planning and implementation is described as having had positive effects on their ability to give their input, their employment opportunities, their safety and the services made available to them where previously there was none (C1, C4, C5, C7, C13). This is relevant when considering the description of the conditions of Noordgesig prior to the NSC project, where voices of vulnerable groups were described as being drowned out. The transformation of the urban environment also allowed for universal access providing access to spaces for disabled persons, where previously none existed in the neighbourhood (C1, C4, C5, C8, C12). The physical built interventions created through the project were also described as something that the community had never seen before in a marginalised community such as theirs, a ‘state-of-the-art’ design that previously you would only see in a place like Sandton, an affluent area in Johannesburg (C1, C2, C4, C5, C12), and spoke about the opportunities it provided for learning and education (C1, C3, C4, C5, C7, C8, C11, C12, C13). Two citizens interviewed, both of whom do not currently reside in Noordgesig, felt that this aspect cannot be fully discussed until the library is opened to the public (C9, C10). They indicated that the assessment of equity from

the perspective of knowledge and service access requires full operation of the library first, in order to draw conclusions.

The data revealed the following objective findings:

New accessible services, amenities and community activities created	Number
New services through built infrastructure	5 (library, public plaza, primary school/education, safe spaces, safe crossings)
New amenities created	3 (Disabled access through universal design across two nodes, public Wi-Fi, construction-related training opportunities)
New activities	5 (women-led activities, feeding poorer groups (backyard dwellers), elderly learning, children study opportunities, senior citizen participation)
New employment opportunities	2 (women, unskilled)
<b>Total new accessible services, amenities and community activities created</b>	<b>15</b>

**Table 15: Number of new, accessible services, amenities and community activities created; Source: Author, 2020**

*“So for me, that was a step in the right direction in terms of trying to hear a marginalized group within the marginalized society. Because, even within those marginalized communities, you find that the male adult voice still rings louder than everybody else’s and then you’ve got the kids that must just live in the spaces that us as adults have created.”(E1)*

*“Especially the women! And because of all this lovely lighting, at the plaza, they can actually walk at five in the morning, six in the morning, which they were scared to do before because their bags used to get snatched right there” (C13)*

*“We also have our disabled people being prioritised with the new systems coming along, now even at the school, they were saying 40% of elderly men, 40% women, and 20% youth and disabled. So yes there has been a huge difference now or change, I must say.” (C11)*

Whilst *equity*, a sub-variable of *transformation*, shows a relation to *community capitals*, it appears to be the least connected component of community resilience within the network.

#### **4.2.2.4. Summary of Community Resilience**

The data reveals complex and rich relationships between community resilience variables, as well as to variables of human agency. Across all dimensions of community resilience, the findings show that every human agency variable was associated to at least one community resilience variable. In addition, from the data analysis we see that components of community resilience reinforce each other to increase the combined capacity and action to continue, and even, innovate, despite daily stressors. Interestingly, no other change occurred in the community, except the NSC project and their involvement thereof, and still, the perceived level of resilience has increased and the perceived vulnerability reduced. Word clouds generated on the three variables of community resilience, also place ‘people’ at the centre of the cloud as the strongest mentioned aspect. The inclusion of the words ‘now’, ‘know’ and ‘can’ reveals an



A summary of the findings for community resilience is captured in the table below, indicating the descriptive value of the variables before, and after the case study project, and as per measured indicators for each. The findings are attributed to the respective variables, and intend to highlight the changes analysed across the process of the project and within the community.

Variable		Descriptive Value at start of project	Descriptive value after project
Capacity building	Development of community resources	<ul style="list-style-type: none"> <li>• Less than 10 local businesses</li> <li>• 3 informal groups (religious)</li> <li>• 3 built interventions implemented by government</li> </ul>	<ul style="list-style-type: none"> <li>• 32 new businesses or economic opportunities created; improvement by 320%</li> <li>• 27 new formal and informal networks and groups established; improvement by 900%</li> <li>• 48 new physical built interventions; improvement by 1200%</li> </ul>
	Engagement of community resources	<ul style="list-style-type: none"> <li>• Ineffective groups for addressing issues</li> <li>• Low participation or enthusiasm in engaging</li> </ul>	<ul style="list-style-type: none"> <li>• 30 groups or networks, both formal and informal, described as hugely impactful</li> <li>• Increased participation and enthusiasm</li> <li>• Improved social capital and solidarity</li> <li>• External connections made to strengthen internal groups.</li> <li>• Improved resourcefulness</li> <li>• Increased initiative for collective good</li> </ul>
	Community capitals	<ul style="list-style-type: none"> <li>• Divided in efforts and as a community</li> <li>• Lack of trust toward politicians and government officials</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement in interpersonal relationships and shared values</li> <li>• Community works toward collective support in a co-beneficial approach.</li> <li>• Improvement in successes</li> <li>• Improvement in expressing needs</li> <li>• Increased unity, pride and sense of belonging</li> <li>• Increased interactions, resulting in more service</li> <li>• Improved belief in ability to influence politicians/government officials</li> <li>• Improved trust in authorities.</li> </ul>
Action	Active agents	<ul style="list-style-type: none"> <li>• Heavy reliance on government and politicians for any action or change in the community.</li> <li>• Perception of dormancy</li> </ul>	<ul style="list-style-type: none"> <li>• Sense of ownership resulting in positive effects toward active agents</li> <li>• Belief in the ability to inspire and effect change</li> <li>• Belief in the ability to protect and impact community</li> <li>• Less reliance on government to effect change or take action</li> </ul>
	Collective action	<ul style="list-style-type: none"> <li>• Lack of community leadership</li> <li>• Division along religious lines</li> <li>• Division along political lines</li> </ul>	<ul style="list-style-type: none"> <li>• Improved effectiveness of community leadership</li> <li>• Improved unity amongst community leaders</li> <li>• Improved cultural diversity</li> <li>• Improved real time effectiveness of leaders in times of emergency or disaster.</li> </ul>
Transformation	Equity	<ul style="list-style-type: none"> <li>• Poor access to educational and safe spaces for vulnerable groups and greater community (only one small underserving library)</li> <li>• No universal access in public environment</li> <li>• No public Wi-Fi</li> <li>• No skills development</li> <li>• Little to no inclusion of women, elderly and children's voices in projects</li> <li>• Little to no employment opportunities, especially for women</li> </ul>	<ul style="list-style-type: none"> <li>• 5 new services made accessible for vulnerable groups and broader community for improved access to knowledge and services (educational, safe spaces); improvement by 500%</li> <li>• Universal access in public environment</li> <li>• Public Wi-Fi provided in all public spaces</li> <li>• Skills development</li> <li>• Positive increase in the inclusion of women, elderly and children in projects and meetings</li> <li>• Positive increase in work opportunities for women</li> </ul>

**Table 16: Summary of findings for community resilience showing changes in descriptive values from the start of the NSC project, to after; Author, 2020**

The above is then translated into an illustration of the changes in the variable as found in the data through the process, from start, to after the project. These scales indicate changes in the descriptive values of the variables, from a low level of community resilience, to a described, and measured high value of community resilience.

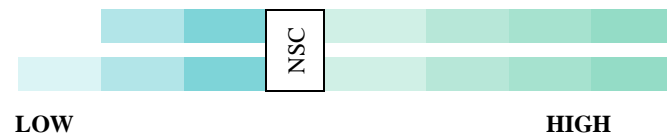
**CAPACITY BUILDING**

- Development of community resources
- Engagement of community resources
- Community Capitals



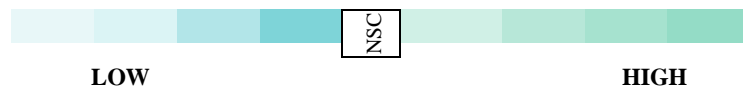
**ACTION**

- Active agents
- Collective action



**TRANSFORMATION**

- Equity



**Table 17: Illustration of changes in community resilience from the start of the NSC project, to after; Author, 2020**

## Chapter 5: Conclusions

In a world facing rapid urbanization and compounding urban challenges, the risks facing cities are growing and, in many contexts, intersecting. In Africa, and other developing regions, many cities face the almost impossible task of having to solve intersecting issues around poverty, urban degradation, inequality and injustice, and climate change. For people living in these contexts, vulnerability is multi-layered, experienced daily, and bears impact on their overall lives in a complex way. When faced with competing, perpetuated stresses, building resilience as a process is deemed to be more important than achieving it as an outcome. The purpose of this research is to understand a human-centered approach to building resilience, by exploring and explaining the effects that the development of human agency within a vulnerable and disenfranchised community may have on their capacity to continue or, their resilience. In so doing, it assesses which elements of human agency were enabled through the case study project, what impact was established after the project in order to draw conclusions on whether, and what relationship can be established between these two cross-disciplinary concepts.

### *To what extent does the development of human agency influence a community's resilience?*

The following sections provide an answer to the research question through a detailed discussion of each sub-question (5.1 – 5.3), outlining the conditions that enabled the development of human agency, the characteristics of human agency built through the NSC project, the characteristics of community that combine to build resilience and the impact thereof. Together, these answers provide the conclusions of this research. A summary discussion is provided in section 5.4, followed by some suggestions for future research and policy-making in section 5.5.

### **5.1. Research Question 1: How is human agency within vulnerable communities enabled?**

The main research finding about the context within which the development of human agency was made possible, is the central role that people (citizens) played in the project processes, which encouraged a feeling of being involved and empowered. Data analysis shows that this aspect of feeling recognised and considered played a pivotal role in establishing a sense of ownership within the community of the process, project, and sustainability of life after the project. It also shows a fundamental impact on the capacitation of the community by encouraging a recognition of ability in community members. Findings show a significant change from a sense of hopelessness within the community, to one of hope, which is found to be catalytic in their determination and action taken to reduce vulnerability following on from the project.

According to the literature, the relationship between actors and institutions are viewed as reciprocal where, the constraints or enablers, put in place through institutions structures human interaction (Heurkens, 2016). The findings of the research drawn from the interviews conducted with both citizens and experts reveal rich insight into this relationship, and highlight the importance of nurturing the relationship further. As a link between the system and actors, the institutional conditions of the case study show that, through a collaborative, co-productive approach, actors were enabled to become more active, and ultimately, resulted in community members becoming agents within their personal and collective lives. The process of collaboration and participation that placed the community, and the human factor, at the centre of the development, also resulted in improved trust relations between the community and the local government representative institution. This shows an interesting dynamic in the context

of South Africa, where the role of public and elected officials is strongly tied to localised urban development and management and service delivery. Through the data, we see a shift in this perspective, where the community was enabled through the NSC project to a point of taking initiative on urban development and management matters in their area, even after the completion of the project. This underpins the basis of human agency that was built through the project conditions, and also attests to the strengthening of self-efficacy in the community. It encourages a decentralised perspective that considers a move from typical urban development to urban sustainability.

The set of institutional conditions that enabled the development of human agency, consisted of both formal and informal institutions that influenced each other. Whilst the NSC project was implemented within a formal, regulated set of constraints related to political and spatial transformation objectives of the City of Johannesburg, the informal codes of conduct, behavioural and conventional tools that were previously established were changed, and custom designed to focus on empowerment and enablement of the community. These conditions thus encouraged a change through the lesson-drawing and learning opportunities that it presented, as the theory suggests (Bleich, 2006). The theory offers four pathways to sustainable, resilient cities through institutional conditions, of which, three are found within the NSC project: 1) creative, integrated visions and plans, 2) partnerships across sectors, and 3) accelerating innovation (Heurkens, 2016). The research findings show that the vision and plans created for (and with) Noordgesig, were creative, regionally-integrated, and thorough in its needs assessment approach. Data from both citizen and expert interviews highlight that the conditions of this project were unusual, unprecedented for those involved, and very different to any other public investment project. This was also the case for the partnerships created across sectors, both, in the planning, and implementation stages, which advanced the ability and enthusiasm for innovative thinking. This is highlighted for both expert and citizen perspectives illustrating an innovation on institution and actor.

The instruments and interactions used to shape, and bring about these institutional conditions, and that enabled, and empowered the community toward a sense of agency, were found to be varied in nature and structure. The key instrument that appears at the centrality of the findings for the discussion on how human agency was developed, is communication, and knowledge share. This relates to the community experience of having felt heard and included. This shaped, stimulated and built capacity that defined the institutional conditions for the project and its interactions. According to the data, this exchange of information, skills, knowledge, and input, facilitated through various interactions between the local government authority and the community was the driving tool through which agency was developed in community members. These interactions included an open day, drive-by routes with the community, roadshows, focus group workshops, drawing, mapping, storytelling and meetings, and art and placemaking initiatives. These findings align well with the theory presented in Chapter 2 which outlines the importance of institutional conditions to enable, or constrain actor, and system performance and behavior (North, 1991). Through a collaborative, enabling institution, actors are capacitated, and supported to create system level impact, which has bearing on their overall improved resilience. The findings also align with the theory by illustrating that the perception of well-being had improved in the community, contributing to a reduced vulnerability in the area (Tyler and Moech, 2012).

## 5.2. Research Question 2: What are the characteristics of enabled agency?

The theoretical review presented in Chapter 2 defines human agency as the realm within which three key characteristics are present: being able to make decisions or to influence, being able to act, and being able to imagine (Skerratt, 2013). This definition supports the conceptual framework presented, and is in alignment with what the data has revealed.

The findings show that the characteristics of human agency that were enabled, were reinforcing, and reciprocal to each other, revealing a new, personalised feedback taking place in the system (community). This contributes well to the theoretical perspective that acknowledges the human development aspect of social systems in cities (Davidson, 2010), and provides interesting new insights about understanding the cause and effect in communities with underlying, systemic causes of vulnerability.

The most enabled characteristic of human agency that emerged from the study, was the ability to influence, which interestingly was strongly associated to, the ability to act. As explained in 5.1 above, the vulnerability of Noordgesig was strongly attributed to causes of feeling unrecognised and disenfranchised. Having the ability to influence and contribute to decision making for, and, around their lives, led to positive feelings of having more control to both take action, and effect change. This in turn had notable impact on the perceived capacitation of the community to deal with immediate matters, and those anticipated for the future. Having such capacity aided the community in their response to changes experienced since the project, and contributed to a proactive approach, both on an individual, and collective level. This aligns with the theory, which also includes qualities of '*empowerment, optimism, self-esteem, innovative thinking, decision-making and perception*' (Brown and Westaway, 2011, p.6) as important determinants of how a person may respond to change (Brown and Westaway, 2011).

The research found that characteristics of human agency did not exist in isolation, and aspects of agency that were developed within the community, had an associative relationship to another human agency quality. This is particularly insightful when it comes to the quality of empowerment. Empowerment occurs across 82 quotations in the data, and upon analysis, reveals a radial connective value to the ability to act, both through more active participation incited in the community, and autonomous action taken, as well as innovation through innovative or creative thinking displayed for problem solving, and imagining a future. Further, empowerment is associated with an improved capacitation of the community resources, the action taken by the community, and their transformation since the start of the project, and for the future. This positioning of empowerment as revealed through the study is particularly interesting when considering that the ultimate goal of the community engagement approach of the project was to empower the community (see Section 4.1.1). The relationship established between empowerment, and the community's development of their resources and capacity building, and their adaptation to improve their lives and make changes is particularly important for discussing the opportunities of '*proactive human agency*' (Skerratt, 2013, p.1) for a more transformative resilience and will be further explained in section 5.3.

The findings show that this reciprocal influence is also found in the way that human agency was developed, at a personal or individual level, and at the collective community level. This is supported by the theory which defines agency at the individual level as a level of '*confidence among autonomous and able citizens*', and, at the collective level, as '*cultural, infrastructural and communicative resources*' to enable action (Davidson, 2010, p. 1145). The findings contribute to the argument that a blend of modes of agency yields optimum functioning



(Davidson, 2010), and certainly shifts the focus from vulnerability to a strength-based assessment of the community (Brown and Westaway, 2011).

### **5.3. Research Question 3: What is the effect of enabling human agency on community resilience?**

The findings of this research show significant improvement in the community's resilience following the process of enabling human agency within them. The results not only confirm a strongly influential relationship between the two concepts, but also illustrates a richer, reciprocal relationship. The feedback mechanisms that occurred between the interaction of the two concepts at play, yielded positive, multi-scalar results for a transformative approach to building resilience. This supports the academic arguments of the importance of considering the influence of humans as agents in a social system when discussing resilience. (Adger, 2000).

The first important conclusion drawn on this research question is that, through the characteristics of empowerment, active participation and autonomous action, there is a shift in the community's resilience from vulnerability-focused to strength-focused. As discussed in detail in Chapter 4, this shift is seen at multiple levels, personal and collective, and also, in different ways- socio-cognitive, as well as through capitals and resources. This connects to the theoretical review which shows an agreement in this shift occurring in research around resilience for social systems (Skerratt, 2013; Pasteur, 2011; Tyler and Moench, 2012).

The study shows that given a sense of empowerment and the ability to influence and act within their environment and lives, the community of Noordgesig acted independently, more enthusiastically, and consistently to achieve personal or collective objectives, and to create change by becoming active agents within their neighbourhood and lives. This increased their adaptive capacity and overall capacitation through the development of community resources. As outlined in Chapter 4, the strongest effect on the community's resilience, was on their development of resources, and this emerges due to a number of inter-related reasons:

- Development of community resources co-occurs, and can be said to have a correlative relationship with three human agency components: active participation, autonomous action and empowerment.
- The community's act of involvement in processes related to making a change had an effect on their intentionality to become agents of change themselves and, participate and play leading roles more in their community for the benefit of the community. This formation of active agents ensured a continuity of activity and change in the area even after the project was completed and, when described, is associated with better adaptation processes too, reiterating this reciprocal relationship that emerges.
- The strongest relationship is found with autonomous action which reveals exciting insights about the strength of the agency developed in the community and, the possibilities for building a resilient city through human agency. The findings demonstrate that, being given the ability to act harnesses a strong sense of independence within the vulnerable community. Here, again, a shift from lack to strengths is observed and, this is illustrated through the data that shows 107 new community resources developed, 62 of which were self-initiated. This has significant bearing on the reduction of vulnerability and improvement of resilience led by the community themselves without any governmental intervention.
- The relationship with empowerment emerges in the development of new businesses, groups and relationships, that are described as being strong and effective, and which

have been employed to shape lives and address issues facing the community, thereby building increased resilience.

- A correlative relationship is also established between the development of community resources, and the engagement thereof, which illustrates that, capacitation built within the community, once given the ability to influence and act, was used to further enhance the community through the way that developed resources were used for collective benefit. This relationship reiterates the reciprocal nature of the effects observed.

These findings align strongly with academic theory from both human development and resilience domains, which emphasises the social components of adaptation found in relationships, connections and behaviours that increases one's capacity to adapt to change, whether individual or collective (Berkes and Ross, 2013; Davidson, 2010, Magis, 2010). In the case of Noordgesig, the strengthened individual and collective capacities in turn reinforced each other to motivate further capacitation and action. Aligned to the definition offered by Heckleman (2018), the community capacity evolved into an interaction of human, social, physical, and financial capital that was leveraged to solve collective issues and used to improve the well-being of the community. Given the compounded state of vulnerability that existed in Noordgesig, the research shows the value in deepening a focus on building the capacity of systems to be able to adapt proactively, continuously, independently and, through optimisation of strengths (Taylor and Peter, 2014; Pasteur, 2011).

These interdependent and multi-scalar relationships between human agency and community resilience re-iterate the perspective of community resilience as an ongoing process, focusing on building, rather than achieving (Heckelman, 2018). It also demonstrates the advantages of a proactive approach to resilience building, through proactive human agency, as suggested by Skerratt (2013). These findings support her conclusions that proactive change provides opportunities for a more transformative trajectory, rather than just a response to an external disturbance or stressor (Skerratt, 2013). It further demonstrates that access to knowledge, resources, and assets can result in proactive choices for a community around their urban environments and livelihood strategies, leading to a more progressive response to any stresses or vulnerabilities faced.

## 5.4. Discussions

*To what extent does the development of human agency influence a community's resilience?*

Based on the conclusions drawn, it can be established that a strong relationship of influence exists between human agency and community resilience. Furthermore, additional, connective relationships were identified through the findings, which contributes to a deeper understanding of the extent of this influencing relationship.

The conceptual framework presented in Chapter 2 was developed deductively through the theoretical review. However, an analysis of the findings, explains the presence of reinforcing and reciprocal relationships between the concepts, which was not identified through the literature. Thus, a new, inductive conceptual framework is presented here as an illustration of the variations found in the empirical testing of the theory.

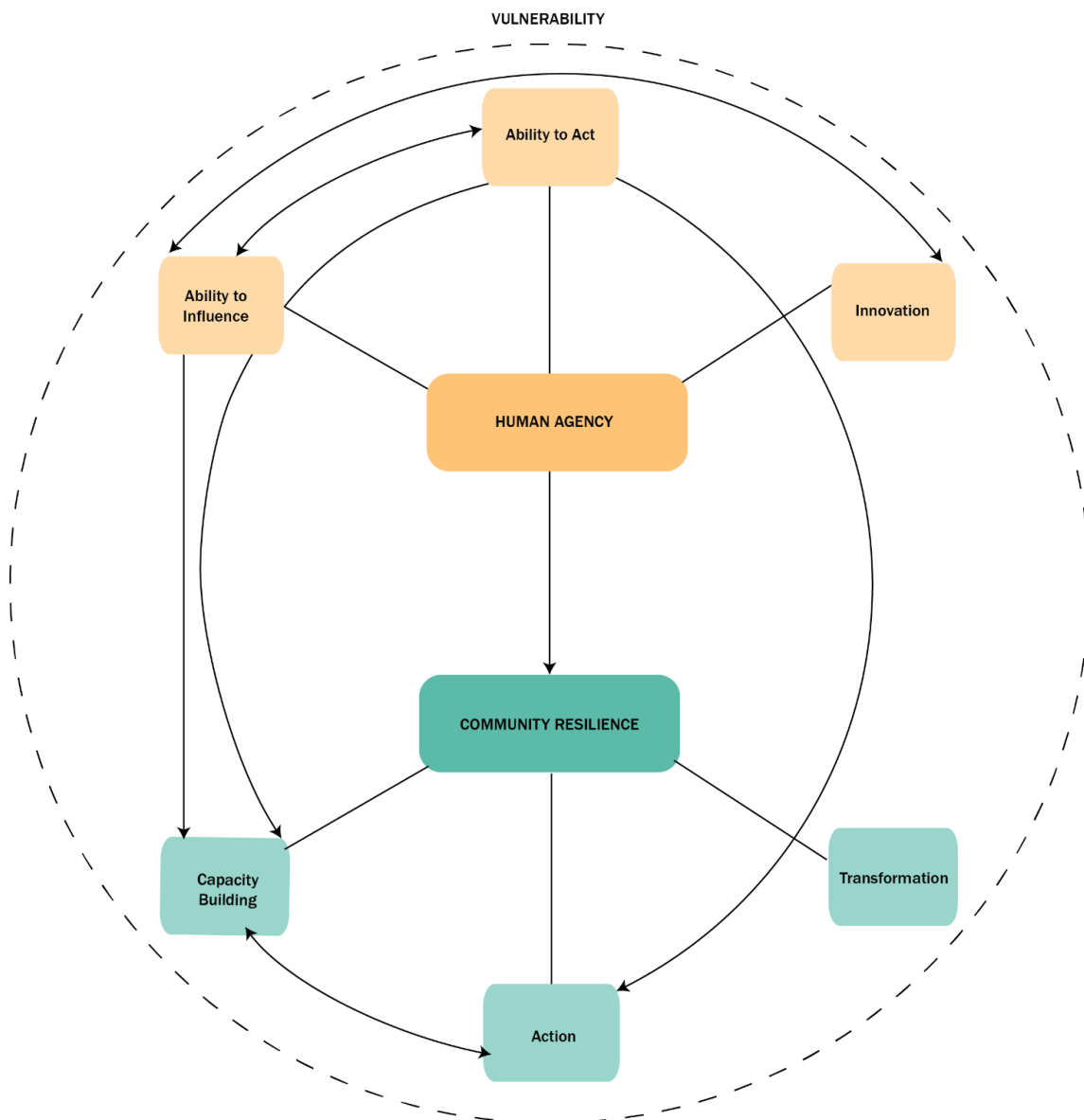


Figure 30: Inductive Conceptual Framework; Source: Author, 2020

In this new theoretical framework, the first distinction is that, a correlational relationship does not only exist between human agency and community resilience, but also, that influential relationships between sub-variables of human agency and community resilience are also at play. Thus, the conceptualisation of community resilience as related to dynamic, complex, social structures is enlivened through components of people, processes, organisation and resources (as discussed in Chapter 2).

Capacity building as described in Chapter 2, concerns the community's ability to access, engage and develop their resources toward achieving objectives. When drawing from the literature, it is enabled by the development of resources, the engagement thereof, and the investment of resources into community capitals. However, the findings show that capacity building is also enabled through having an ability to influence and an ability to act. Further, it illustrates that an ability to act, encourages action which, then, reinforces capacity building, creating a dynamic symbiosis between sub variables. In this new framework, action is not only driven by active agents taking collective and/or strategic action, but also enhanced through capacity building drawing from having the ability to act.

Transformation relates to the dimension of resilience that emphasises viable continuity and renewable processes. A community's resilience is impacted by their ability to create new conditions that will ensure thriving futures, and is positioned as most conducive to vulnerable communities in order to address underlying systemic causes. The findings show that transformation through equity and impact does relate strongly to a means to achieve reduced vulnerability, but, has not been fully established through the development of human agency or improved capacity and action. It is noted that this relationship may be particular to the context of Noordgesig and South Africa, with its historic inequities.

Human agency was conceptualised as an enabler toward community resilience and the inductive framework illustrates the endorsement of this relationship supported by the findings of the research. Being given an ability or, agency, allowed for power relations to be challenged and impacted the ability to influence, organise, and act with conscious, independent, and mutually reinforcing capacities.

This study positioned human agency as an opportunity to building a resilient city and, the inductive conceptual framework presented, shows the pathways through which this can be achieved. The relationship between concepts, as emerged from the research, can be explained as an influential, synergistic relationship, where the result is greater than the sum of what these concepts can do individually. This presents an opportunity for a more integrated and human-centred approach to understanding, managing and responding to change, one which enables a community resilience that goes beyond preparing for disaster, but builds strength from within a system that facilitates resilience as, and when it is needed (Skerratt, 2013; Davidson, 2010; Magis, 2010; Brown and Westaway, 2011). For vulnerable communities facing multiple stressors and underlying systemic causes of vulnerability, this can prove to be vital to their ability to maintain, sustain, and thrive in their lives. The practical value for developing such an approach to community resilience is reiterated through a quote by a community member of Noordgesig which explained:

*“Like, you give a person a fish, you will eat the fish but to sustain rather give the person a fishing rod to go out and fish for themselves so that they can be able to feed, because if you know once a fish is going to eat the fish today done tomorrow. But if the person has a fishing rod, the person can always go out and do whatever the person needs to do. Fish for yourself so you can sustain.”(C5)*

## **5.5. Suggestions for future research**

By examining the case study, this research has revealed deep, rich qualitative insights around the relationship between establishing human agency within a vulnerable community, and their ensuing community resilience built bottom-up. This offers an alternate approach to resilience building, from a human-centered approach, and can be valuable to support and compliment the scientific-laden solutions for resilience. The opportunities presented to extend this study are useful to interrogate further insights. Firstly, it would be beneficial to further examine the case study and its effects across more than one moment, to incur variance and assess stronger models of causality. It would also be interesting to follow this research with a quantitative study of the process, in order to extract further empirical data to help explain the relationships between these concepts. Findings can be used to investigate the possibilities of generalizing the conclusions to a broader population, which could serve as a valuable tool for resilience discussions going forward. A quantitative study, or, mixed methods approach could provide an intriguing narrative assessment of both behavioral, social science, as well as a structured, numerical understanding. It would also be beneficial to extend this study and approach to the topic of climate resilience, the urgency of which is growing rapidly for vulnerable communities, especially in the Global South. Since the completion of this research, citizen participants have been contacting the researcher with new ideas that are still being generated by the community. These, interestingly, all have a thread of climate adaptation strategies and innovation included, and thus, highlights the opportunity to extend this study and approach further.

## **5.6. Suggestions for policy-making**

This research started with a review of the diversity of resilience applications, and the importance placed on its prioritisation for cities around the world facing increasing risks and drivers of change. However, the acknowledgement of the ineffectiveness of a one-size-fits-all approach to this topic, and the profile of at-risk communities placed an important focus on how resilience may look in practice, especially in contexts with multifaceted vulnerability profiles. The findings of the study yield interesting suggestions for how this can be better addressed in policy-making.

The first important emergent consideration is for the incorporation of a human-centred approach into the institutional environment. By adopting a focus on the development of community, and citizen, beyond, and in parallel to the development of urban environments, a synthesis of technical brilliance and social, proactive transformation is sparked, and then, recharged through its dynamic feedback systems. This has bearing on a community's ability to sustain, capacitate and engage itself toward a more stable, and considered present, and a more optimistic future. In order to be functionally adept, a multi-level, and cross-sectoral investigation of possibilities for human development would be beneficial, and may require a cross-departmental commitment to ensure consistency between City objectives and trajectories. A key aspect of a human-centred approach to policy-making would be the possibilities of integrating domains of knowledge, at the intersection of complex social systems. Further, when addressing vulnerability at the convergence of challenges, systemic, as well as, specific causes need to be addressed in order to apply a practical and sustainable understanding to community scale resilience, and then toward a more resilient city at large.

This study has expanded the evidence around the reciprocal relationship between actors and institutions, and has highlighted the opportunities for enabling actors more in a way that supports the development of agency within communities, regardless of scale. If developed further, what could come forth is an intriguing weaving of roles between government and citizen, thereby decentralising urban governance, management and development in a transformative way that supports long term sustainability of places. Here, the role of, and power of local level policy-making is positioned advantageously to drive contextual, municipal change. In South Africa, where local government has the legislative and executive jurisdiction to develop and implement policies, the emphasis will need to be focused on developing the institutional capacity, skills and expertise to drive such a transformative approach. The study highlights the importance of the nature of interaction and engagement between actor and institution for opportunities to accelerate innovation through partnerships and network-building.

An important aspect emerging is that resilience can be grown. Tying back into the existing Growth and Development Strategy 2040 of the City of Johannesburg, resilience thinking should deepen the focus of building the capacity of urban systems by optimising on the skills, capacities and opportunities of the community, as supported by theory presented (Pasteur, 2011). This is valuable for the large majority of Johannesburg's vulnerable communities to be able to transform their lives despite facing perpetual, multiple stressors. The study also highlights the importance of including social components such as connections, relationships, behaviours and networks to increase individual and collective adaptive capacity into resilience thinking.

The information gleaned from this study also show that, in the particular case of South Africa, an integrated approach, and more work is required in refining the way economic development, procurement and post-implementation operations are managed and developed. These were the only negative aspects that were extracted from the research in terms of the process and hence, validates specific attention. Finally, the findings show that transformation through equity and impact does relate strongly to a means to achieve reduced vulnerability, but, has not been fully established through the development of human agency or improved capacity and action. It is noted that this relationship may be particular to the context of Noordgesig and South Africa, with its historic inequities, but is substantial to address alongside South African cities' spatial transformation agendas.

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## **Annex 1: Research Instruments**

**ERASMUS UNIVERSITY, THE NETHERLANDS**  
**INSTITUTE FOR HOUSING AND DEVELOPMENT STUDIES (HIS)**  
**MSc URBAN MANAGEMENT AND DEVELOPMENT – UMD 16**

**June / July 2020**

**RESEARCH TOPIC: Power to the People: The opportunities of human agency for building a resilient city**

**INTERVIEW GUIDE: CITIZENS**

My name is Shaakira Chohan, from Johannesburg, South Africa. I am currently undertaking this research as part of my Masters studies at the Institute for Housing and Development Studies in Rotterdam, The Netherlands. The aim of this research is to understand how the Noordgesig Social Cluster project impacted the community of Noordgesig in the development of human agency, and how this impacted the resilience of the community. You have been selected to be interviewed due to your participation in the project. The purpose of this interview is to collect information and data that will be used for academic purposes. It should take about one hour. With your permission, I would like to record our conversation which will make it easier for me to capture the data after. All information shared with me will be held as strictly confidential.

**Part 1: Introduction**

- Q1. How long have you lived in Noordgesig and can you tell me more about the area?
- Q2. What is it like to be a member of this community?
- Q3. What was it like in Noordgesig before the Noordgesig Social Cluster project? Can you describe the area and conditions?

**Part 2: Project processes and conditions**

*The Noordgesig Social Cluster project was started in 2016 by the Johannesburg Development Agency...*

- Q4. Can you tell me a bit more about the project? How did you first hear about it and how was it started?
- Q5. How would you describe the project in comparison to other government projects implemented in Noordgesig? Were there any differences that stood out for you?
- Q6. What were some of the direct initiatives that local government undertook that stood out for you?
- Q7. What lessons about the way this project was carried out do you think can be shared from this project that will benefit communities similar to Noordgesig?

**Part 3: Agency**

*Let's go back to the Social Cluster project, and particularly to the way the community was included in the planning and development...*

- Q8. Can you tell me a bit more about this? How were you included in the process and how were you able to participate?
- Q9. This participation – was it something that you were used to?
- Q10. Would you say that this had an impact on your feelings to improve life here in Noordgesig? In what ways?

*If we then look at the community after the project was developed and these processes were completed...*

- Q11. Has there been any change in the enthusiasm to get involved community events or activities?
- Q12. Following on from the Social Cluster project, can you tell me about the community's action to start things accomplish beneficial to the community on their own, without support from government?

Q13. Following on from the project, were there any new ideas or projects that were developed? Can you tell me about them?

Q14. How did the project and the way it was executed affect your behaviour and attitude to life in Noordgesig and the future for the community?

#### **Part 4: Resilience**

*I want to go back to the community as a collective, and what happened after this project was brought here...*

Q15. I noticed that there seems to be more activity, businesses, landscaping and buildings, and community groups – can you tell me more about this? How many have been created?

Q16. What about community organizations and involvement in community efforts- do you perceive any changes in how you feel these are helping address issues the community faces?

Q17. How would you describe being a member of this community now compared to before the project? Do you feel stronger together?

Q18. Do you feel, following on from this project that you have more power to influence what politicians and government officials around what you want for your neighbourhood?

Q19. Tell me about your opinion about bringing about change in a community? Has it changed since being involved in this project? Do you feel differently about your role in the community now?

Q20. Do you feel that your community leaders work together and are doing well in bringing the community together to work on issues?

Q21. Tell me about your opinion on diversity and culture in Noordgesig, compared to before the project, how would you describe the representation of culture, diversity of race, language, etc in decision-making?

*Let's talk about the future of Noordgesig a bit...*

Q22. What is your opinion on how this project impacted equality in Noordgesig? Can you tell me about the new services or activities that was not available to marginalised groups before the project? What are these?

Q23. What is your opinion about the impact of the project? What changes have you observed in terms of community participation, contacts made and the community action?

#### **Part 5: Conclusion**

*To conclude our interview, I want to go back to the question I asked earlier...*

Q24. What is it like in Noordgesig now, after the Noordgesig Social Cluster project? Can you describe the area and conditions?

Q25. How do you imagine the future of Noordgesig?

Thank you so much for your time to talk to me. Is there anything else you would like to add? Is there anyone that you think I should speak to that you can refer me to so I can interview them as well? After I collect all this data, I will be doing an analysis of it. If there is any clarification that I require, I will get in touch. Again, a reassurance that everything we have discussed today will be used for academic purposes and will be kept strictly confidential. Thank you for helping me to learn new insights about this important work and I hope to use the knowledge gained beneficially for developing our cities.

**ERASMUS UNIVERSITY, THE NETHERLANDS**  
**INSTITUTE FOR HOUSING AND DEVELOPMENT STUDIES (HIS)**  
**MSc URBAN MANAGEMENT AND DEVELOPMENT – UMD 16**

**June / July 2020**

**RESEARCH TOPIC: Power to the People: The opportunities of human agency for building a resilient city**

**INTERVIEW GUIDE: EXPERTS**

My name is Shaakira Chohan, from Johannesburg, South Africa. I am currently undertaking this research as part of my Masters studies at the Institute for Housing and Development Studies in Rotterdam, The Netherlands. The aim of this research is to understand how the Noordgesig Social Cluster project impacted the community of Noordgesig in the development of human agency, and how this impacted the resilience of the community. You have been selected to be interviewed due to your expertise on the project and topic. The purpose of this interview is to collect information and data that will be used for academic purposes. It should take about one hour. With your permission, I would like to record our conversation which will make it easier for me to capture the data after. All information shared with me will be held as strictly confidential.

**Part 1: Introduction**

- Q1. How long have you worked within your role and can you describe what you do?
- Q2. Can you tell me more about the Noordgesig Social Cluster project? What were some of its aims and objectives and how did it come about?
- Q3. Can you situate the context of your work with vulnerable communities – what are some of your key challenges, visions and objectives when addressing development in these areas? Can you help me understand the nature of vulnerable communities in Johannesburg?

**Part 2: Project processes and conditions**

*The Noordgesig Social Cluster project was started in 2016 by the Johannesburg Development Agency...*

- Q4. Compared to other government projects implemented in Noordgesig, were there any differences that stood out for you?
- Q5.
- Q6.
- Q7.
- Q8.
- Q9. What lessons about the way this project was carried out do you think can be shared from this project that will benefit communities similar to Noordgesig?

**Part 3: Agency**

*Let's go back to way the community was included in the planning and development...*

- Q10. Can you tell me a bit more about this? How was participation enabled and facilitated?
- Q11. Was this participation something that you were used to?
- Q12. Would you say that these participatory processes had an impact on the lives of the citizens? In what ways?
- Q13. Would you say that these participatory processes had an impact on the community's will to get involved in community events and activities and to create self-initiated interventions? What are some of these that you have observed?

- Q14. In your opinion, has there been any change in the way you approach development in similar communities?
- Q15. In your opinion, what are the effects of undertaking a process as followed in this project?
- Q16. In your opinion, how would you describe the impacts of this project on the reduction of the level of vulnerability of the Noordgesig community?

#### **Part 4: Resilience**

*I want to go back to the community as a collective and what happened after the project was implemented...*

- Q17. How was the relationship between community and government nurtured in this project – tell me about the processes, tools or possible collaboration that was established?
- Q18. Do you perceive any changes in the relationship between community and government? Do you perceive any changes in the expectations of the community after this project?
- Q19. Do you observe any changes in community activity, businesses, building works, landscaping or community events– can you tell me more about this? What are they and how many?
- Q20. How would you describe the impact of the project on the sustainability and resilience of the community? Do you perceive the project to have had an impact on these aspects?
- Q21. In your opinion, how did the project contribute to enabling the community?
- Q22. In your opinion, what impact did the project have on the community's collective capital and capacity?
- Q23. Tell me about your opinion on diversity and culture in Noordgesig, compared to before the project, how would you describe the representation of culture, diversity of race, language, etc in the community at large?
- Q24. Can you describe what are the new services or amenities made available through this project to marginalised groups?
- Let's talk about the future of Noordgesig a bit...*
- Q25. What is your opinion on how this project impacted equality in Noordgesig? Can you describe any changes that have taken place that have made things more fair, equal, inclusive? Or the opposite?
- Q26. What key lessons have you drawn from this project that can be used to inform future action in vulnerable communities?

#### **Part 5: Conclusion**

*To conclude our interview, I want to go back to the question I asked earlier...*

- Q27. Has your understanding and approach to development in vulnerable communities changed since this project?

Thank you so much for your time to talk to me. Is there anything else you would like to add? Is there anyone that you think I should speak to that you can refer me to so I can interview them as well? After I collect all this data, I will be doing an analysis of it. If there is any clarification that I require, I will get in touch. Again, a reassurance that everything we have discussed today will be used for academic purposes and will be kept strictly confidential. Thank you for helping me to learn new insights about this important work and I hope to use the knowledge gained beneficially for developing our cities.

## Annex 2: List of Respondents

Code	Quota	Respondent's Description	Source	Interview duration
C1	Citizen	Born in Noordgesig and living in the area for 53 years. Participated in implementation of project as the appointed Community Liaison Officer	Secondary data (project records)	1hr 52min
C2	Citizen	Construction businessowner who participated in the construction of a component of the case study project.	Snowball sampling	59min (with C3)
C3	Citizen	Construction businessowner who participated in the construction of a component of the case study project.	Snowball sampling	59min (with C2)
C4	Citizen	Living in the area for 20 years. A community leader, local businessman, and participant of all government projects implemented in the area to date.	Secondary data (project records)	1hr 29 min
C5	Citizen	Born and raised in Noordgesig, the third generation now living in Noordgesig. A community leader who has also been involved in ward committee matters, SMME development and outreach work. He participated in both the planning, design and construction of the case study and has been involved in all projects implemented in the area to date.	Secondary data (project records)	1hr 27min (with C6)
C6	Citizen	Living in Noordgesig since 6 years old and active community leader, involved in outreach and other community activities. Participated in both the planning, design and construction of the case study and has been involved in other projects implemented in the area to date as well.	Secondary data (project records)	1hr 27min (with C5)
C7	Citizen	Born in Noordgesig and living in the area. Participant in all government projects implemented in the area and forms part of leadership forums and groups.	Snowball sampling	49min
C8	Citizen	Born in Noordgesig and living in the area for 42 years. Participated in local government projects implemented in the area including in the case study as part of the engagement and construction phases.	Secondary data (project records)	54min
C9	Citizen	Born in Noordgesig and living in the area for 35 years. Participated in the co-produced art component of the case study, including engagement and implementation.	Snowball sampling	80min (with C10)
C10	Citizen	Living in Noordgesig for 18 years and actively involved in community activities and development of community.	Snowball sampling	80min (with C9)
C11	Citizen	Living in the area for 20 years. Participant of all government projects implemented in the area, including the case study project.	Snowball sampling	45min
C12	Citizen	Living in the area for 40 years and participated in the case study project as a community member representative on the project steering committee as well as the engagement and planning. Active member of the community and member of many community organisations.	Snowball sampling	1hr



C13	Citizen	Living in the area for 18 years. Participated in implementation of project as the appointed Community Liaison Officer	Secondary data (project records)	
E1	Expert	Construct Project Manager working as head of department for the company appointed as Project Managers of the case study who has 10 years of experience working in vulnerable communities and the Soweto area.	Secondary data (project records)	1hr 15min
E2	Expert	Community Participation Consultant who led the community participation and stakeholder engagement in the case study.	Secondary data (project records)	66min
E3	Expert	Architect and Urban Designer with over 8 years' experience working on public projects and with vulnerable communities in South Africa.	Secondary data (project records)	1hr

### Annex 3: IHS copyright form

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