

**Influence of dynamic capabilities on
sustainability performance of SMEs within the
construction industry in South Africa**

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ABSTRACT

The research examines the use of dynamic capabilities to achieve sustainability of businesses, in the context of Small and Medium-sized Enterprises (SMEs) operating in the construction industry of South Africa. It is found that the integration of the two theoretical concepts has not been sufficiently discussed in relation to SMEs, particularly in the context of the construction industry, which is an important sector for the discussion of sustainability in business.

The study is significant because it considers the increasing pressure on businesses to deliver on the social, environmental, and economic dimensions of sustainability, as well as the struggle by SMEs for survival. Most SMEs face this challenge leading to their winding up within the first few years. The study finds that the struggle for survival creates the tendency to focus exclusively on the economic dimension of sustainability, thereby missing the point that the triple bottom-line of sustainability is interlinked with longevity and profitability, especially in the modern-day business world. Thus, the study focuses on sensing, seizing and transformation, as dynamic capabilities necessary for SMEs to tackle the challenges.

The study relies on evidence from empirical research and semi-structured one-on-one interviews with those individuals who are responsible for the sustainable performance of their SMEs in the construction sector of South Africa. In gathering the evidence, the research adopted a combination of methodologies involving interpretivism paradigm, qualitative inductive approach, mono methods, and exploratory design. The number of participants interviewed was 16 using the instrument of interview guide. The interviews of participants revealed findings that most SMEs share similar sentiments in sustainability practices by predominantly focusing on the economic aspect of business sustainability despite being aware of the social and environmental dimensions.

Subscription in sustainability practices has a positive impact on the social, environmental, and economic performance of SMEs. The results and findings further revealed that commitment to sustainability affects company performance in a positive way; internal resources of SMEs must be equipped with the necessary competencies to achieve sustainability goals; SMEs in the construction industry must be externally and internally focused to ensure sustainability; must always focus on understanding and addressing the needs of their clients and must be service delivery focused to ensure sustainability in the company. Additionally, it was found that SMEs' performance on sustainability was positively correlated with their use of sustainable supply management strategies, and that effective leadership supports sustainability inside the organisation.

Finally, the study's findings and conclusions showed that the performance of SMEs in terms of sustainability is strongly influenced by all three of the dynamic capabilities, namely sensing, seizing, and transforming.

KEYWORDS

Dynamic capabilities, sustainability performance, sensing, seizing, transforming, small and medium-sized enterprise, construction industry, South Africa.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Philosophy in Corporate Strategy at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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LIST OF ABBREVIATIONS

BSF	:	Born Sustainable Firm
CESA	:	Consulting Engineers South Africa
COP 18	:	18 th Conference of Parties
DCS	:	Dynamic Capabilities for Sustainability
IEA	:	International Energy Agency
KPI	:	Key Performance Indicator
POPI Act	:	Protection of Personal Information Act 4 of 2013
RBV	:	Resource-based View
SDG	:	Sustainable Development Goal
SME	:	Small and Medium-sized Enterprise
UNCCC	:	United Nations Convention on Climate Change
VRIN	:	Valuable, Rare, Inimitable, and Non-substitutable
VUCA	:	Volatility, Uncertainty, Complexity, and Ambiguity

CHAPTER 1: INTRODUCTION

1.1 Relevance of research from a business perspective

The study explores the precise dynamic capabilities needed by small and medium-sized businesses (SMEs) to perform sustainably in the construction sector, particularly in South Africa. According to Simone Cooper, Head of Business Clients at Standard Bank South Africa, SMEs are the lifeline of employment by providing opportunity for the country to positively leverage its demographic dividend for growth and sustainability. It is further stated that SMEs are deeply rooted in communities and are effective in solving social and other challenges within communities (Standard Bank, 2022). However, in a proper context, SMEs significantly contribute to pollution and social impacts of businesses, and they are also crucial in achieving sustainability (Hsu, Chang & Luo, 2017).

Sustainability has become an important factor in business over the past few years. Many SMEs have sustainability policies and practices in place. It is particularly significant in view of the need to achieve the sustainable development goals (SDGs). The question is whether there is any business case for sustainability performance of SMEs, which are not non-profit organizations. There is evidence that the perception of business owner-managers of SMEs about sustainability dimensions, especially the environmental aspect, tends to be negative (Revell & Balckburn, 2007). The misconception may be that sustainability is at discord with profitability of the firms (Revell & Balckburn, 2007). So, if business perspective is based on this misconception, there is no business case for sustainability to be properly viewed from the triple bottom-line idea of economic, environmental, and social dimensions. Rather, a business will see itself as being sustainable if it can achieve financial sustainability and steady profit growth. However, the misconception is debunked by the concerted effort in research which shows that sustainability is cost-efficient and profitable (Hillary, 2000). There are many benefits of implementing sustainability practices in SMEs. The most obvious benefit is a reduction in the ecological footprint of the business. This can be achieved in several ways, such as reducing energy consumption, waste production, and water usage. Not only is this beneficial for the environment, but it can also lead to cost savings for the business.

With sustainability being in the spotlight in recent times, has necessitated global leaders to look for solutions to guide sustainable business operations worldwide. Insights coming from the 2022 Sustainability Leaders Survey, by GlobeScan and The SustainAbility Institute by ERM, reveal that “sustainability leadership is increasingly being measured by evidence of action, impact, and above all the integration of sustainability into business strategy”.

It has been underlined how crucial the construction industry is to the conversation about sustainability. The construction industry's overall contribution to climate change, air pollution and water pollution is significant (Procure Partnership, 2021; & GoContractor, 2017). The 18th Conference of Parties (COP 18), under the aegis of the United Nations Convention on Climate Change (UNCCC) acknowledge the significance of the sustainability of the construction industry in achieving the climate change objectives of the UNCCC (Ololade & Rametse, 2018). The International Energy Agency (IEA) also estimates that the building and construction industry is responsible for 40% of global energy use, such that decarbonisation and the achievement of the SDGs cannot be realised without the decarbonisation and sustainability of the industry (IEA, 2019). The relevance of this research in the business perspective is understood from the perspective that none of the steps required to achieve sustainability and gain competitive advantage in the modern business world can be achieved without dynamic capabilities.

1.2 Grounding of research from a theoretical perspective

It has been reported that about 70% to 80% of SMEs fail within the first 1 year of their existence in general, while the same is true for SMEs in the construction industry in South Africa (Wentzel, Fapohunda & Haldenwang, 2022). The business environment within which SMEs operate is compared in the literature with what the US military termed VUCA in the late 1990s, which referred to volatility, uncertainty, complexity, and ambiguity (Schoemaker, Heaton & Teece, 2018). This development has questioned the sustainability of SMEs in general and in respect of the construction industry.

Although the sustainability of SMEs in this context might suggest the lack of longevity, it implies a stronger indication for the triple bottom line of economic, social, and environmental components. This is because SMEs that are in dire need for survival, may feel bound to make choices that ignore the social and environmental factors, thereby focusing on only the economic factor. Thus, sustainability issues and longevity of the firms in the modern business have been found to be interlinked (Freese, 2007; & Higgins, 2014). For example, it has been shown that companies with stronger sustainability strategies are likely to make higher margins compared to the companies of lower thresholds of environmental, social, and economic focus (Haanaes & Olync, 2022). The current business climate demands that businesses must incorporate the three dimensions of sustainability in their operations (Ololade & Rametse, 2018).

It is noted that VUCA can disrupt any corporate strategy, or it can serve to drive corporate strategies and innovation (Millar, Groth & Mahon, 2018). The same is true of sustainability which can constitute threat or opportunity, but to make it an opportunity, a

firm needs to use its capability to turn sustainability into assets (Amui, Jabbour, Jabbour & Kannan, 2017). What leaders need to do in the spheres of business, public administration and education is likened to picking “a path through the fog”, under which they need “organisational capabilities that cope with insufficient insight, foresight, and understanding broadly” (Schoemaker et al., 2018, p.15). In the same vein, the standard of sustainability has changed overtime from “do-less-harm” to “do-no-harm” and the change is manifested even more forcefully in the “do-good” requirements of doing business nowadays (Knoppen & Knight, 2022, p.1789). This shows the dynamic nature of economic, environmental, and social goals that must be pursued by businesses, including SMEs.

Amui et al. (2017) conducted a literature review looking at 33 journal articles published between 2005 and 2015. The literature review focused on sustainability of businesses in relation to their dynamic capabilities to address the relevant challenges. The authors stated that dynamic capabilities have a substantial effect on corporate sustainability as a theoretical foundation. The study focused mainly on the manufacturing and services sectors in Europe, America, and Asia.

The work done by Amui et al. (2017) inspired Maphalla (2020) to further explore the dynamic capabilities needed in the African mining industry to achieve business sustainability. It can be argued from a thorough review of the literature that SMEs in South Africa's construction sector need to explore dynamic capabilities as a fundamental competency for sustainable performance. It is a good time now to look at the theoretical need of the constructs of dynamic capabilities and sustainability performance, due to the increasing pressure on businesses to report on their performance in working towards the achievement of the 17 SDGs.

The study will help SMEs operating within the construction industry in South Africa to align with sustainability issues utilising their dynamic capabilities, despite the current poor and turbulent economic outlook.

Amui et al. (2017) observed that several studies on dynamic capabilities and organisational sustainability performance have already been done. However, not enough research has been done so far to integrate these two concepts, and this is especially true for emerging countries, such as South Africa.

The three management activities that make a capability dynamic, being considered in the study, are:

- **sensing** (identifying and evaluating prospects outside of the organisation);
- **seizing** (capturing opportunities by mobilising company resources to take advantage of them); and
- **transforming** (continuous renewal of the organisation).

1.3 Research aims

This study aims to expand on recent literature by examining how SMEs can utilise their dynamic capabilities to achieve sustainability performance, when implementing their corporate strategies. The findings are intended to add to the body of knowledge currently available on the integration of dynamic capabilities and sustainability performance for SMEs in South Africa's construction industry through the triple bottom line sustainability dimensions.

1.4 Research questions

The research question that the project intends answering is how SMEs use their dynamic capabilities to achieve sustainability performance. The three sub-research questions focus on how SMEs use “sensing”, “seizing”, and “transforming” in dynamic capabilities to achieve sustainability performance.

The key constructs are therefore: Dynamic capabilities, sustainability performance, SMEs, sensing, seizing, and transforming.

1.5 Research contribution

Amui et al. (2017) observed that several studies on dynamic capabilities and organisational sustainability performance have already been done. However, not enough research has been done so far to integrate these two concepts, and this is especially true for emerging countries, such as South Africa, which is the subject of the current study.

The research explores the emerging literature on the integration between sustainability performance and dynamic capabilities and it makes contributions to advance knowledge from the review of the literature in Chapter 2. This is carried out in the context of SMEs in the construction industry in South Africa.

It fills the gap left by the lack of research attention given to the discussion of SMEs in this field of knowledge and the lack of consideration given to the theories discussed in relation to the South African construction industry. The research offers new insights based on the semi-structured interviews to further expand on the three management activities that make a capability dynamic, namely sensing, seizing, and transformation and their corresponding impact on sustainability.

1.6 Research scope

The concept of dynamic capacities, sustainable performance in SMEs, and an industry-focused analysis based on a thorough literature search are the boundaries within which the research study is conducted. To better understand how SMEs use their dynamic capabilities to achieve sustainability performance, common themes are discovered during one-on-one semi-structured interviews with identified respondents who have a strong obligation for dynamic capabilities and sustainability performance in the construction industry in South Africa.

1.7 Chapter overview

Following the previously stated objectives and scope of the study, the research document is organised as follows:

- **Chapter 1** describes the research question, the research aims, the research contribution, and the research scope along with how the research is theoretically grounded and how it relates to business.
- **Chapter 2** presents an analysis of literature relating to dynamic capabilities, sustainability performance in SMEs, and an industry-focused analysis.
- **Chapter 3** defines the academic focus of the research through the presentation of the research question and sub-questions.
- **Chapter 4** outlines the research methodology and design used for this study.
- **Chapter 5** presents the findings of the research study based on input obtained from conducting the interviews.
- **Chapter 6** links the study's findings from Chapter 5 back to the literature from Chapter 2 to compare the new findings with what other researchers have said. This is done to highlight the findings' parallels and differences from the literature.

- **Chapter 7** includes the research project's conclusion, implications for business managers, research limitations, and recommendations for further study.
- The report concludes with a systematic list of all the references cited in the research report.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Arguments based on academic literature are introduced in the literature review. To frame the theoretical justification for the research and to construct a theoretical argument, the study draws on literature. The literature that is pertinent to the study topics is the focus. The literature study looks at SMEs' sustainable performance, dynamic capacities (sensing, seizing, and transforming), and industry-specific analysis.

Figure 2-1 contains a graphical illustration of the layout of this chapter that connects to the study's purpose and research questions.

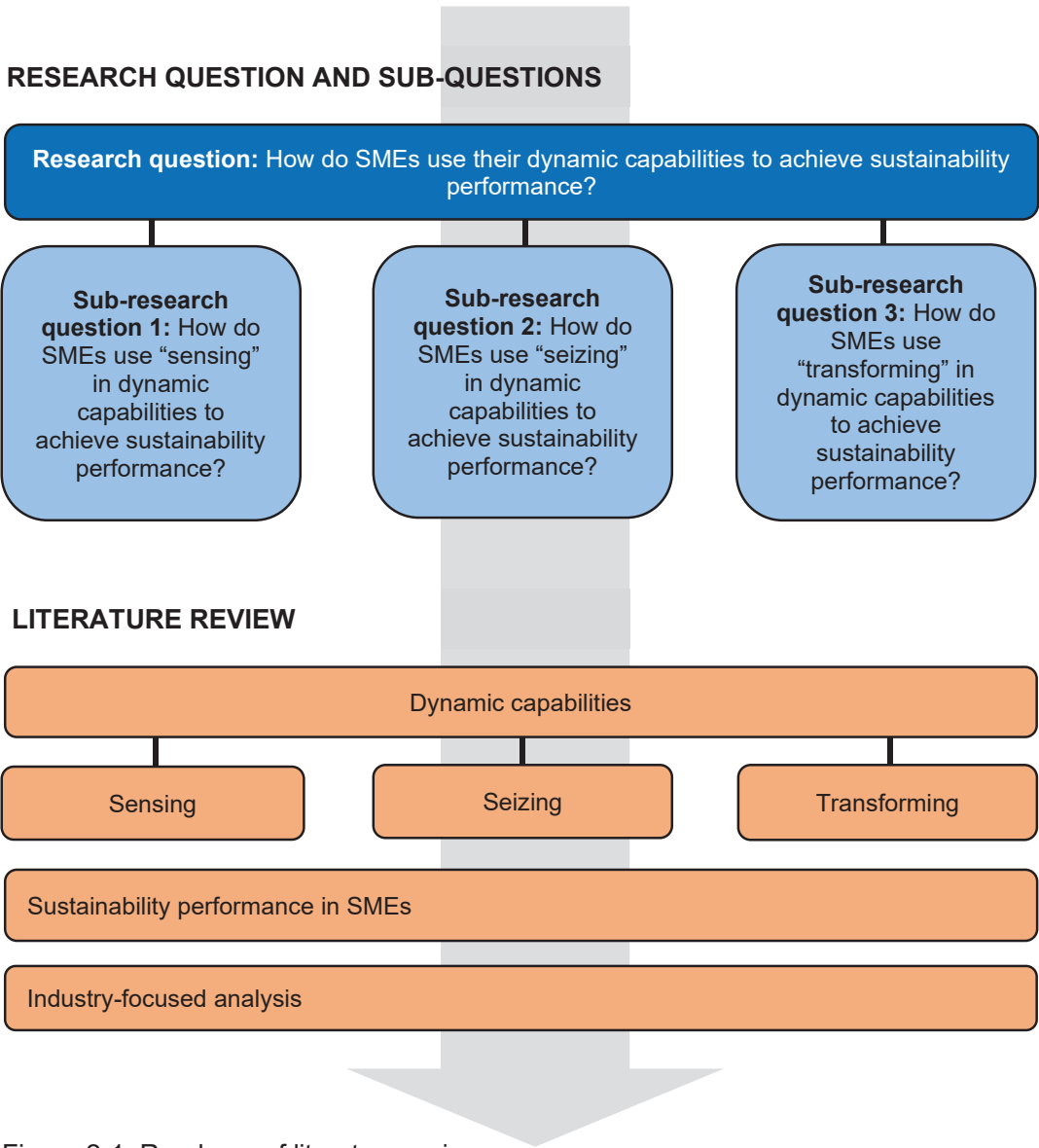


Figure 2-1: Roadmap of literature review

2.2 Dynamic capabilities

The beginning of the examination of the concept of dynamic capabilities in the literature necessarily must be the meaning of the concept itself, to understand what it is and distinguish it from what it is not. It has been simply defined by Pisano (2017, p. 748) as what companies possess where they have “capacity to reconfigure and extend their competencies”. However, there have been more extensive discussion of what the concept really means. In particular, the definition of dynamic capabilities has been a subject of investigation by many researchers (Helfat & Peteraf, 2009), with the central idea focusing on the capacity of a company to “purposefully create, extend, and modify its resource base” (Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece & Winter, 2007, p.4). The definition that informs us about the focus of the concept on resource base is broader in context, compared to the narrow focus on competence and capacity. The concept is concerned with not only creating new valuable and rare resources but also refreshing the existing ones for the changing business environment and challenges (Ambrosini & Bowman, 2009).

It has been observed that dynamic capabilities are difficult to develop, or sustain, but once it has been successfully sustained, it provides competitive advantage, since it is difficult to replicate or imitate (Schoemaker et al., 2018). The connection of the concept with resources base invites a consideration of its relationship with the resource base view, which has also been explored in the literature. This is further explained by the observation of Mousavi, Bossink and Vliet (2019, p.368) that dynamic capabilities are traceable to the resource-based view (RBV), by which it is established that the resources and competencies that can give a firm competitive advantage must be valuable, rare, inimitable, and non-substitutable (VRIN). Otherwise, if the competencies and resources are readily available to competitors, and they have not been reconfigured in a unique way, they will be incapable of conferring any competitive advantage.

Some studies have framed dynamic capability in single dimension, while others have framed it in multi-dimensions that include sensing capability, seizing capability, and reconfiguring capability (Lin, Su & Higgins, 2016).

Sensing focuses on a company's capacity to identify changes in the market and the business environment even before its rivals do. Seizing on the other hand involves the use of innovation and technology to take advantage of the external changes while addressing the threats. Further, transforming entails the firm reshaping itself and its ecosystem, beyond merely adapting to the external changes (Schoemaker et al., 2018). The multi-dimension approach to dynamic capabilities unpacks the concept better and it has been favoured by the present research. In the existing literature, the elements of

sensing, seizing, and transforming are further examined in sections 2.2.1 to 2.2.3 below, with a view to considering their utilitarian value as tools for driving sustainability performance.

Separately, Laaksonen and Peltoniemi (2018) propounded the measurement of dynamic capabilities using operationalisation, which implies the quantitative measurement of the phenomenon which is ordinarily not amenable to measurement. They distinguished between dynamic capabilities and ordinary capabilities. The former confers competitive advantages, while the latter is necessary only for the survival of the company. The view is useful to show the difference between SMEs that focus on developing capability to merely survive the storm of challenges in the business environment, as distinguished from the SMEs with long-term driven objective of sustainability performance based all its dimensions.

Literature has shown that dynamic capabilities are mainly of four types, which are reconfiguring, leveraging, learning, and integrating (Eikelenboom & Jong, 2019). Each of these types is examined succinctly below, based on evidence of the literature from the previous studies that have been conducted by researchers:

- **Reconfiguring**, which transforms and recombines assets and resources. It is said that this reconfiguration may involve interfirm collaboration and intrafirm collaboration (Hawass, 2010). Companies can also make use of individual, group, and organisational level of learning to recombine and transform assets and resources in the company, as a way of building dynamic capabilities. Recent studies have also demonstrated the significance of reorganising a company's resources to pursue efficiencies and strategies for successful outcomes (Muneeb et al., 2022). It is also regarded as a tool of innovation in the business process, with reference to the examples of creative marketing tools and innovative product developments (Elgammal et al., 2022).
- **Leveraging**, which involves transferring a system or process from one business unit to another. The work of Eikelenboom and Jong (2019) in identifying this tool built on the seminar study conducted by Teece, Pisano and Shuen (1997). They had identified that the resources which are the focus are not limited to the external resources but also internal ones. For example, they cited financial assets in the use of balance sheet for short cash flow needs, compared to seeking external funds that will expose significant information to investors (Teece et al., 1997). Thus, this tool looks more inward into other business units of a firm rather than outward, to external resources.

- **Learning**, which experiments and reflects on failures and successes. Eikelenboom and Jong (2019) referred to the seminar work of Teece et al. (1997), where they emphasised the importance of learning as an organisational tool. They propounded that learning is individual, social, and collective, as it often involves more than imitation and emulation but also individual contributions to building collective pattern of activities in an organisational setting. It therefore requires efficient coordination, for it to lead to better activities and productive opportunities (Teece et al., 1997). The question is then what to be learnt through the learning dimension? Literature suggests that a wide range of things are required to be learning at individual and organisational levels including acquiring new knowledge about the business environment and the technologies used in the conduct of business (Ilmudeen, 2022).
- **Integrating**, which combines resources and assets to create a new resource configuration. This tool was formulated by Teece et al. (1997) as both internally and externally focused, as they compared the control of the larger economy with the coordination of international resources of the firm, while balancing it with the external factors. This aligns with their proposition that the relevant resources are both internal and external. However, Ilmudeen (2022) indicated that part of the things to be integrated into the firm's operations to reconfigure its assets and resources include the new knowledge that have been acquired under the learning dimension. Thus, where new knowledge has been acquired, especially by individuals but they are not integrated into the firm's operation, the new knowledge will not be useful to build capabilities. This relates back to the proposition by Teece et al. (1997) that leaning can occur at individual, social and organisational level but the focus in on how learning occurs or is integrated into organisational settings of the firm.

The integrative dynamic capabilities have been examined in connection with how it is used to achieve sustainability (Bianchi, Testa, Tessitore & Iraldo, 2022). It calls for dynamic integrative internal and external capabilities that are positively correlated with SMEs' social, environmental, and economic performance (Eikelenboom & Jong, 2019). Additionally, it requires transformational leadership, which has a positive relationship with internal integrative dynamic capabilities, and the owner's or manager's perception of sustainability as a threat, which has a negative relationship with external integrative dynamic capabilities (Eikelenboom & Jong, 2019). This represents a fresh perspective to the discussion of dynamic capabilities from what is known in the extant literature.

Pitelis and Wagner (2019) referred to the role of key individual leaders in the human resource base forming the dynamic capabilities of a firm and they stated that the significance of the role has not been sufficiently discussed. These key individual leaders are mentioned to be entrepreneurs and entrepreneurial managers (Pitelis et al., 2019). However, in the context of this research focusing on SMEs, the key individual leaders will often double as managers and owners of the firms.

The existing literature has shown that dynamic capabilities are concerned with the ability of a firm to develop and sustain competitive advantages that go beyond merely surviving in the volatile business environment. Even though these involve different ways of creating and sustaining resource base, including reconfiguring, leveraging, learning, and integrating, the integrative type of dynamic capabilities has been considered in the literature in connection with sustainability. It has also been shown in the existing studies that the focus of the resources and assets to be integrated is both internal and external, within the business environment, organisational settings of firms and technologies used in their operations. The specific context in which the competitive advantage is developed and the threats in the business environment addressed are to be found in sensing, seizing, and reforming, which are interrogated further withing the literature in the next sub-sections.

2.2.1 Sensing

Sensing refers to the collective capacity of a company to identify opportunities and threats, well in advance before the competitors can identify or make complete sense of them (Schoemaker et al., 2018). An example referenced include the imaginative thinking of today's phone call features, such as call forwarding, voicemail and conference calls, decades before the features became standard. What makes this possible are tools such as the 'idealized design' (Ackoff, Magidson & Addison, 2006) that help organisations to imaginatively think of the ideal future point of an opportunity beyond technological, legal, market and socio-political constraints of the present time. The challenge is that employees can be easily fixated with routine tasks that banish the peripheral vision to the blind spots, unless conscious effort is made to create internal processes and dashboards that make thorough scanning of the future possible (Day & Schoemaker, 2006). The process may involve the critical observation of the present events to generate hypotheses, which are further tested to create new data (Dong, Garbuio & Lovallo, 2016).

Investments in research and development are necessary for sensing opportunities and threats in the contemporary business world, where understanding the business environment and new technologies is essential. This goes beyond thinking creatively and innovatively (Ilmudeen, 2022). The study contended that sensing entails “investing in research activities, exploring customer needs, evaluating supplier and competitor responses” (Ilmudeen, 2022, p 2345).

The interpretation of the evidence in the existing literature is that the knowledge of trends and the pieces of information or data is available to most companies in the industry but the capacity to see beyond the short-term implications of same is the basis of dynamic capabilities. It has been shown that this capacity involves imaginative thinking about the ideal future of the present opportunities and thorough scanning of the future implication of the present and developing threats. It has also been shown that the relevant point of consideration in sensing is both the business environment and the technologies, including the new and emerging ones. Thus, what is required in sensing is not only the innovative thinking but also the necessary investments in activities that can enable the firm to learn and critically scan the environment and technologies.

2.2.2 Seizing

Seizing is the capacity of a company to mobilise its resources to capture value from the identified opportunities and to adequately address the threats (Schoemaker et al., 2018). Failure to take appropriate action in good time may mean that the pace of the threat will render the capacity of the business irrelevant too quick to adjust. An example is found in how Kodak’s otherwise competitive advantages in chemical technology for analogue photography got quickly caught up by the rapid advent of digital cameras that flushed the company into bankruptcy in 2012. In 1999, when the first digital camera appeared, the company took actions that got it prepared for a scenario where digital cameras would occupy 5% of the market share in 10 years but the digital cameras did take 95% of the market in 2009, by a high degree of unpleasant surprise (Schoemaker et al., 2018).

Seizing requires making adequate investment into neutralizing the threats and improving the chances of gaining competitive advantages from opportunities (Matysiak, Rugman & Bausch, 2018). Kodak sensed the opportunity coming its way about a decade back but did not take adequate action to mobilize its resources towards deriving value from the advent of digital cameras. Conversely, IBM sensed the opportunity in the future of computing and took decisive step to capture a large portion of the market for nearly 30 years with its IBM 360 system (Schoemaker et al., 2018).

Thus, it is not enough to accurately perceive opportunities and threats in the business environment without taking adequate steps to mobilize the resources and investment towards taking advantage of the opportunities and addressing the threats.

2.2.3 Transforming

Transforming is the continuous renewal of the company beyond simply adapting to the changes in the external environment. It is a process of reshaping the company itself (Schoemaker et al., 2018). A tendency of 'competency trap' or 'strategic inertia' has been noted in the literature, where a company continues to build competencies and capabilities in aspects that no longer matter, which emphasises the need for organisational design that enables the company to continuously evolve (Felin & Powell, 2016). Reference is made to the example of how Apple transformed from a product-driven company into an ecosystem business model in the tech world and how bridging differences and aligning interests in an industry can evolve a business into a platform of bigger rewards (Schoemaker et al., 2018).

However, transforming is a complex dimension because of the burden that comes with change. Teece, Pisano and Shuen (1997) in framing the challenges associated with transforming identified the need to implement the reduction of low pay-off changes which can make the investment into the change marginal. They argued that the process of transforming can leverage on decentralization and local autonomy and it can address the challenges where a firm is able to achieve transformation ahead of the competition.

It has been shown that dynamic capabilities have three major pillars namely sensing, seizing, and transforming, the absence of either of which spells doom. Without sensing the opportunities or threats, they cannot be harnessed or addressed and even if the opportunities or threats have been discovered, failure to take decisive action impels the collapse of the business model. Seizing involves mobilising the company's resources to capture value from those opportunities that have been identified and assessed outside the company. The third pillar namely transformation shows the need for the constant evolution of the company itself around what has been sensed and seized. Reference to the example of Kodak illustrates the points.

2.3 Sustainability performance in SMEs

The National Small Business Act 102 of 1996 uses the number of employees in the enterprise size category along with the annual turnover categories, gross assets, excluding fixed property, as the basis for its definition of a SME. Small enterprises have

a maximum number of 50 employees. Medium enterprises have a maximum number of 100 employees, but 200 employees in the case of the mining, electricity, manufacturing, and construction sectors. The SMEs are generally established and exhibit some form of complex business practices.

SME definition by Consulting Engineers South Africa (CESA) are based only on total annual turnover. A small consulting engineering firm has a yearly turnover of R11.5 million or less. The annual turnover of a medium sized consulting engineering firm is more than R11.5 million but not more than R35 million (Consulting Engineers South Africa, 2017).

Buzzao and Rizzi (2020) reviewed literature on the debate about the use of dynamic capabilities for sustainability for the past 23 years and they established a unifying framework for dynamic capabilities for sustainability (DCS). It is different from the previous literature review conducted by Amui et al. (2017) on same subject, because the subsequent review by Buzzao et al. (2020) explains 'unexplored idiosyncrasies' in framing the existing knowledge on measurement models. The review focuses on the theoretical analysis of the issues in general and not sector-specific or region-specific.

Another analysis has shown the relevance of dynamic capabilities to sustainability, but the context of the literature has been about how environmentally sustainable innovation can be driven by dynamic capabilities (Mousavi et al., 2019). Part of the criticisms that have been levelled against the RBV is its failure to consider the question of where the resources come from (micro-dynamics of resources development), and why businesses do not address issues related to environmental sustainability (Mousavi et al., 2019). The advantages of the dynamic capabilities include seeking to address these questions in view of the emerging theoretical analysis of its connection with sustainability (Mousavi et al., 2019).

Dangelico, Pujari and Pontrandolfo (2017) examined how innovations can be developed to address sustainability using dynamic capabilities. However, the point their work did not interrogate, which Mousavi et al. (2019) further examined, concerns the micro foundation questions. Hristov and Chirico (2019) discussed the need to integrate sustainability dimensions with company strategies, while pointing out the Key Performance Indicators (KPIs) that are relevant for the integration. They conducted a survey of Italian business managers showing the relationship between the environmental, social, and economic dimensions of sustainability and the KPIs in achieving strategic sustainability in the firms.

Demirel and Kesidou (2019) engaged more with the question of how dynamic capabilities help to develop eco-innovations in response to regulatory, technology and market demands for sustainability.

Existing literature in this area of knowledge has shown that sustainability driven by dynamic capabilities would need to consider the dynamic requirements of each organisation, in what is termed as organisational-level and individual-level approach to achieving sustainability (Strauss, Lepoutre & Wood, 2017). An example of such focusing on the nature of the organisation is found in the work of Knoppen et al. (2022), where they argued that the status of born sustainable firms (BSFs) has a positive impact on how those organisations can achieve sustainability. The BSFs are the firms which have been established with the strategic focus of long-term sustainability from the outset.

Some organisations also have the sustainability DNA ingrained in their mission and vision statements thereby forming a corporate vision of sustainability (Kantabutra, 2020). Corporate vision theory suggests that for the mission and vision statement to be effective, they need to possess clarity, brevity, future orientation, and the ability to inspire (Kantabutra & Vongariyajit, 2021).

One challenge is that the use of dynamic capabilities in general has been focused on medium to large corporations, with little or no attention paid to SMEs (Elf, Werner & Black, 2022). Thus, existing literature is also showing that sustainability discussions have focused on how large corporations can fulfil and improve on sustainability performance, while much has not been said about how SMEs can achieve the three components of sustainability (Eikelenboom & Jong, 2019). The question arising from this situation is whether it is of any significance that the issue of sustainability is considered in relation to SMEs.

Research has shown that SMEs have peculiar circumstances which need to be considered in any sustainability strategy, rather than simply transferring the principles from large corporations, which is often considered a complex and costly approach (Hsu, et al., 2017). For example, constraints exist for the SMEs in terms of shortage of resources that are available at their disposal (Hsu et al., 2017). The constraint of shortage of resources brings more difficulties to SMEs in managing risks compared to large corporations (Lima, Crema & Verbano, 2020). While the peculiar circumstances of the SMEs show how they are distinguished from medium to large corporations, it also underscores the point that the principles applicable to the medium to large corporations may not be useful in framing the challenges of the SMEs. This further begs the question of whether the SMEs needs tailored approach to the issue of sustainability in their operations, beyond its consideration in relation to large firms. This will be necessary only

if SMEs are of any material significance to sustainability, in justification of the theoretical need for a unique and tailored approach.

Shields and Shelleman (2020) emphasised the importance of SMEs in the discussion of sustainability, referring to their dominance in the economies of many countries and their significant contributions to the impact of business operations on the environmental, social, and economic dimensions of sustainability. Reference is made to the points that SMEs constitute 99.9% of American businesses, they employ over 47% of the American work force and they are responsible for 64% of industrial pollution in Europe. The study identified that even though SMEs are under increased pressure to address sustainability questions, they are constrained by lack of resources and critical information. It recommends a 'sustainability dashboard' technology to help managers and decision makers in SMEs identify the status of their sustainability performance using key performance metrics.

According to Jansson et al. (2017), SMEs are pivotal to sustainability at a macro level. Although, individual SME companies in their smaller size compared to bigger companies contribute less pollution to the environment, when grouped together, wherein they dominate the business sphere in most countries, they cause significant proportion of pollution that impacts the environment (Jansson et al., 2017). It is a case of isolated units of impact which makes huge significance on the aggregate of the units, which is aggravated by the quantitative mass of the individual units in dominance of the economy. Thus, it has been propounded that SMEs that have not started addressing environmental and social performance issues must begin gradually with simple actions such as renewable energy procurement, recycling, procuring less hazardous materials and energy efficiency, which all provide substantial benefits to sustainability on the aggregate (Shields & Shelleman, 2017).

The study by Lawrence et al. (2006) demonstrated that the economic, social, and environmental effects of a single SME are reportedly marginal and seemingly insignificant using data from New Zealand, where SMEs account for 98% of the businesses. However, the collective impacts of the SMEs show their significance more visibly. This paradox may explain better why SMEs have not received much attention on the topic of research. For example, literature has documented the perception of individual SMEs that they have little or marginal impact, as a barrier to developing or implementing sound environmental practices (Ammenberg & Hjelm, 2003). This perception problem is in addition to, and it exacerbates the constraints of lack of capabilities and resources to address the components of sustainability. It has been suggested that the companies that have capabilities and internal technical capacity are more likely to be keen on embracing sustainability performance in their operations and use of technologies (Pinkse & Domnisse, 2009).

In their work, Zahoor and Lew (2022) emphasised the significance of dynamic capabilities on the strategic orientation of SMEs that aim to compete with large corporations by taking part in international entrepreneurial space. The analysis is based on environmentally concerned SMEs using entrepreneurial orientation and alliance orientation. However, sustainability has three components and are not limited to just the environmental component, but also include social and economic components. The three elements include actions that SMEs must take to address sustainability considering the following factors (Hsu, et al., 2017):

- **economic component**

- reducing the costs of production and operation;
- improving quality of product and services;
- improving delivery performance; and
- enhancing economic potentials.

- **environmental component**

- reducing harmful substances and pollution;
- reducing land and water usage;
- using or producing products that are recyclable, or products with recyclable wastes; and
- complying with relevant environmental policies and laws.

- **social component**

- reducing and addressing impacts of operations on the community;
- reducing and addressing health and safety risks; and
- and assisting employee career development.

When the question of sustainability arises, SMEs are far more important than they are often perceived to be. This is not because of the degree of the environmental, social, and economic impacts of individual SMEs, but the collective impacts of the SMEs in any given region. The prevailing tendency of not considering the issue from this perspective has resulted into dearth of research on the sustainability performance of the SMEs with the implication that the models from large corporations get transposed and applied to SMEs. This is problematic because of the peculiar situations of the SMEs, particularly with respect to lack of resources and the fragmented number of the organisations.

2.4 Industry-focused analysis

It is noted that the work by Dangelico, et al. (2017) focuses on manufacturing firms, which is different from the construction industry, with its nuances that are examined in the current research with the use of qualitative surveys and empirical knowledge. Giau, Foss and Vinelli (2019) covered similar research in the fashion industry, pointing out the industry-specific approach to sustainability driven by dynamic capabilities. Elf et al. (2022) also focused on the fashion industry in the context of circular economy while Dias, Rodrigues and Ferreira (2021) examined the agricultural industry in light of small farms in Portugal with high environmental impacts on the spectrums of sustainability. Santa-Maria, Vermeulen and Baumgartner (2022) interrogated similar questions in respect of the circular economy.

Raza, et al. (2021) discussed sustainability from supply chain management perspectives, contending that a positive relationship exists between sustainable supply management practices of firms and their sustainability performances. They conducted empirical research into the sustainability performance of companies, gathering data of 436 professionals from manufacturing and logistics companies in China. It measured the sustainability dimensions using the sustainable supply management practices in the companies. The research also found disparity in the firms based on their size as small enterprises, SMEs, or large corporations. According to research by Ololade and Rametse (2018), which focused on the construction industry with a case study from Johannesburg, the scale of the business studied is larger than the scale of SMEs with more peculiar challenges.

There has been industry-focused analysis of the topic which has reflected specific features in the industries considered, although the construction industry has not been the concentration. The industry-focus analysis has also shown the disparity between companies based on their sizes, as SMEs or large corporations.

2.5 Conceptual framework based on literature review

The conceptual framework in **Figure 2-2** illustrates the relationship between key concepts for the research question and sub-questions, and maps how these come together to draw coherent conclusions from the review of existing literature.

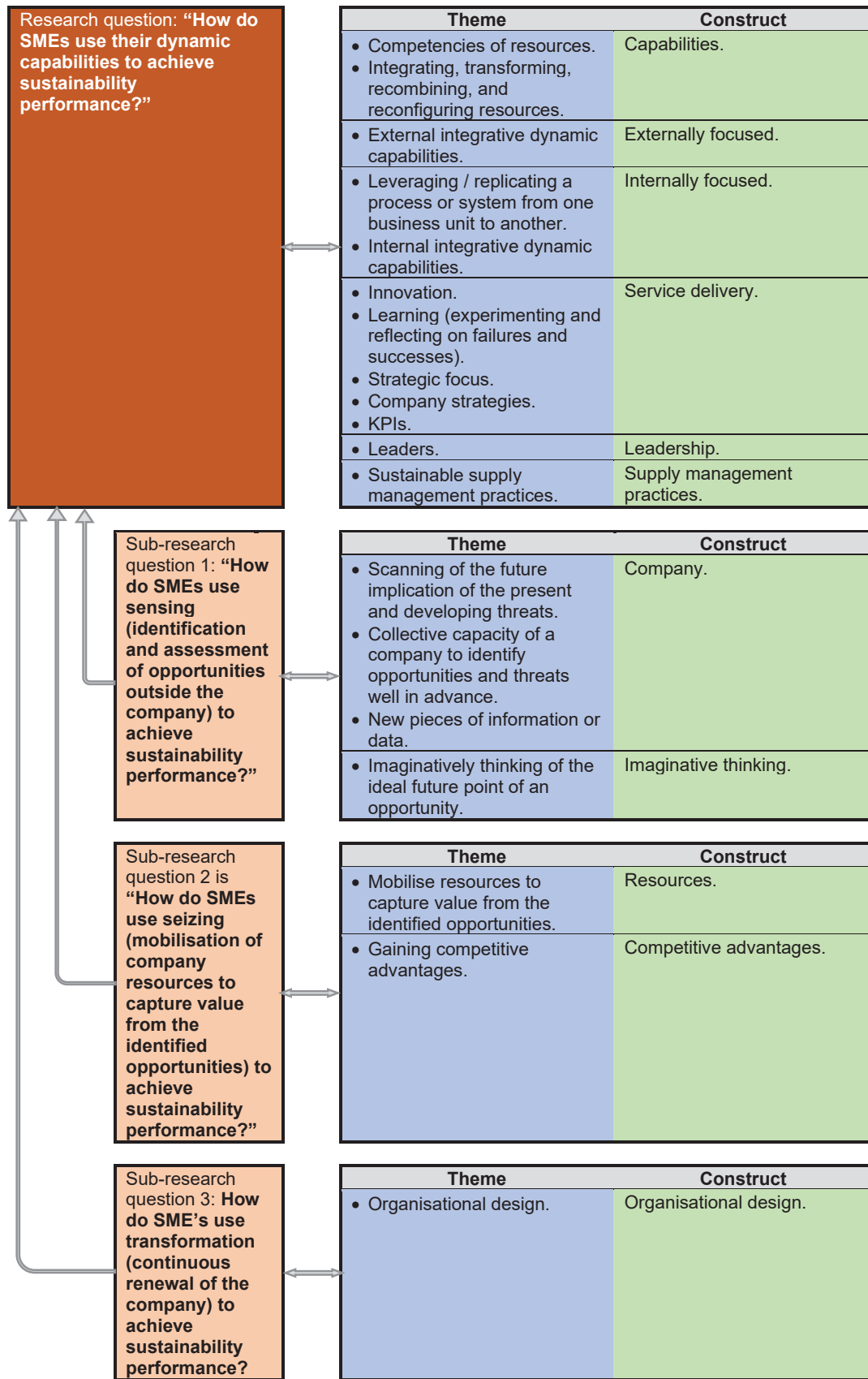


Figure 2-2: Conceptual framework based on reviewing existing literature

2.6 Conclusion

Research has shown that dynamic capabilities are crucial for a company's sustainability performance, but the literature, particularly regarding SMEs, has not sufficiently examined how the two concepts integrate. This gap is not unconnected with the tendency to transfer the analysis relevant for large corporations to SMEs. With regards to sustainability issues, this approach has been shown to be flawed in view of the peculiar challenges of SMEs, such as fragmentation, resource constraints and the necessity for survival in the turbulent business environment. The literature shows the tendency to underrate the social, economic, and environmental impacts of SMEs because such impacts are marginal when individual SMEs are considered but it is the collective impacts of the SMEs that really show the problem of sustainability.

The importance of this research is underscored by data showing the need of SMEs performance on sustainability and the increasing pressure on businesses and all concerned to implement the SDGs.

After confirming the theoretical relevance of the research questions in Chapter 2, the research questions follow in the next Chapter 3.

CHAPTER 3: RESEARCH QUESTION AND SUB-QUESTIONS

3.1 Introduction

The presentation of the research questions establishes the academic focus of the study. Based on the study objectives and the questions the research is intended to address, the research topic and its three sub-questions were created. The research is clearly focused by the research questions. The research first responds to three sub-research questions to unpack the main research question.

3.2 Research question

The primary research question that the research project wants to answer is: *"How do SMEs use their **dynamic capabilities** to achieve sustainability performance?"*

To handle quickly changing surroundings and achieve sustainability performance, the research topic seeks to better understand how SMEs in the construction sector use their capacity to integrate, build, and reconfigure internal and external skills. To create long-term value for the company, sustainability considers economic, environmental, and social concerns.

The three sub-research questions to be answered first for the researcher to adequately answer the research question are listed below.

3.3 Sub-research question 1

Sub-research question 1 is: *"How do SMEs use **sensing** in dynamic capabilities to achieve sustainability performance?"*

Research question one aims to gain insight into how SMEs in the construction industry use the identification and assessment of opportunities outside the company to achieve sustainability performance.

3.4 Sub-research question 2

Sub-research question 2 is: *“How do SMEs use **seizing** in dynamic capabilities to achieve sustainability performance?”*

Research question two aims to gain insight into how SMEs in the construction industry use the mobilisation and transformation of company resources to capture value from the identified opportunities to achieve sustainability performance.

3.5 Sub-research question 3

Sub-research question 3 is: *“How do SMEs use **transforming** in dynamic capabilities to achieve sustainability performance?”*

Research question three aims to gain insight into how SMEs in the construction industry use the continuous renewal of the company to achieve sustainability performance.

The research methodology and design, which will be applied to answer the research questions that the research project seeks to answer, is described in the next Chapter 4.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

Research methodology refers to the formulation of the research methods, and the study of the research methods used (Bell, Bryman, & Harley, 2019).

To answer the research question, which is how a SME in the construction industry might leverage its dynamic capabilities within the South African business setting to attain sustainability performance, this chapter discusses the study technique that was used. The research approach, which involved gathering data via a questionnaire and conducting virtual interviews with respondents, was informed by the literature evaluation in Chapter 2. When data was gathered and analysed, the study technique took into consideration the validity and reliability of the data. The research design also guaranteed adherence to the ethical standards of the University of Pretoria during data collection, processing, and presentation.

4.2 Research methodology

The research methodology was chosen with the intention of effectively and practically addressing the gaps in the body of existing knowledge as well as responding to the research objectives and research question.

A research methodology consistent with the assumptions of the **interpretivism paradigm** was used. The interpretivism paradigm is relevant when the research applies to a social phenomenon that is examined in its natural environment (Bell et al., 2019) and which shows the peculiarities that individuals experience in their normal everyday life (Phoenix, Osborne, Redshaw, Moran, Stahl-Timmins, Depledge, Fleming, Benedict & Wheeler, 2013). This aligns with the two types of research foundations, namely ontology and epistemology (Bell et al., 2019). According to Bell et al. (2019), ontology addresses the formation of conducting research by showing various realities, which collectively creates the realities. Epistemology, which is after ontology enables creating knowledge from reality and helps with improvement to comprehend reality (Bell et al., 2019).

The **interpretivist methodology** made it possible to determine how the performance of SMEs' sustainability relates to their dynamic capabilities. The opinions of construction industry experts were gathered and analysed about the usage of dynamic capabilities to achieve sustainability performance.

A **qualitative inductive approach** was undertaken. This process helps to obtain insight into the meaning an individual attaches to an event, after which theoretical themes are developed that reflect individual encounters within a particular perspective (Saunders & Lewis, 2012). When it's necessary to gather, summarise, and combine data to create a framework based on the data, the inductive technique is typically used (Thomas, 2006).

4.3 Research design

A **qualitative research design** strategy was adopted for this study as the appropriate choice. Data was collected within a certain period and insights from the interview participants with their experiences were narrated in descriptive words. The responses from the interview participants were very crucial as the results were used to align with the research problem. The researcher went into more details from exploratory perspective to link the problems to respondents understanding on the subject matter in the interviews (Bell et al., 2019).

The research used **mono methods**, which is a research design that uses only one data collection technique, and it also used **exploratory design** as the research seeks to understand a specific subject that calls for clarity (Saunders et al., 2012).

4.4 Population

Population choice for this research was determined by experience and knowledge level that individuals in the construction industry had regarding dynamic capabilities and sustainable performance of the business. The population was made up of senior level managers in the construction sector, whose job it is to assess the business environment and make tactical choices that will affect the success of those SMEs over the long term.

4.5 Level of analysis

The level of analysis is the SME construction firms where the individual interview participants were selected.

4.6 Unit of analysis

The most crucial component of the study is the unit of analysis, which can be either humans, people in groups, businesses, institutions, human goods, or events (Welman et al., 2005). Senior level managers and executives who agreed to be interviewed for this study and oversee decision-making and business performance for SMEs in the construction industry served as the unit of analysis for the study. The people who were chosen made it possible for the researcher to compile meaningful information about their lives, which helped the dataset be analysed to answer the main study issue and its sub-questions.

4.7 Sampling method and sample size

A sample was selected, which is a sub-group that represents the population (Saunders et al., 2012).

Probability and non-probability sampling techniques may be utilised in qualitative research. When using **probability sampling**, the researcher might determine the likelihood of each population member selected. The chance of any population member being included in the probability sample cannot be computed in **non-probability sampling** (Welman et al., 2005).

Purposive sampling, a non-probability sampling method, was used in the investigation. This indicates that the researcher used his own judgment to select a sample that would provide the most accurate answers to the research questions (Saunders et al., 2012). Participants' experience and understanding of how dynamic capabilities could be applied to the construction sector for sustainable performance served as the key guiding principle for the sample selection process.

The senior level managers, who were involved in the research, had to be employed by SMEs that met the following criteria:

- the company must be SME as defined by CESA;
- the company must be active in the construction sector; and
- the company should have been established in South Africa.

A **homogenous population** was used in this research. Even though all participants worked in the construction sector, they varied in age, race, and gender. They also held top management positions for varying lengths of time.

Saunders and Townsend (2016) maintain that a credible **sample size** should provide sufficient depth to answer the research objective, as well as have enough breadth to enable integration within the responses.

A sample size of between 16 and 30 participants was considered adequate to answer the survey questions in this research (Saunders et al., 2012). The number of interviews that was held continued to the point where saturation, or informal redundancy was achieved, provided an envisaged **16 respondents** were approached.

As a member of CESA a formal request was made to the administration of CESA to provide the list of current members following the process of the Protection of Personal Information Act 4 of 2013 (POPI Act). Companies that met the SMEs criteria were selected as participants for interviews.

Purposive sampling has the drawback of having a small sample size, which prevents the research findings from being generalised to the entire population (Welman et al., 2005). Qualitative research is also prone to subjectivity and bias of the researcher, when the data is analysed and findings formulated (Saunders et al., 2012).

4.8 Research instrument

The study project seeks to provide a solution to the question: “How do SMEs use their dynamic capabilities to achieve sustainability performance?” as was previously discussed in Chapter 3. Three sub-research questions must be addressed for the research to respond to the main question. The three sub-research questions and the interview questions that made up the **interview guide** that was used to guide the interviews are related in **Appendix A**.

The **interview guide** attached in **Appendix B** was used to guide the discussion with research participants. Questions, which are associated to themes on which the research is based, were asked to respondents in no specific order. Interviews were conducted through one-on-one sessions with participants and followed the process of qualitative research standard tool of interviewing (Rubin & Rubin, 2015). The researcher decided not to ask certain questions if he felt that they were not relevant to a particular respondent.

In this study, the researcher developed fresh insights by using a semi-structured interviewing technique to collect information from participants (Bell et al., 2019). Additionally, to acquire a deeper understanding of some topics the respondent touched on throughout the interview, the researcher posed extra questions that were not listed in the question guide (Saunders et al., 2012).

4.9 Data collection

The questioning guide was discussed, and common themes identified during **semi-structured one-on-one interviews** with identified respondents, who have a clear appreciation for dynamic capabilities and sustainability performance in the construction industry. These qualitative interviews enabled greater validity and provided in-depth insights, while allowing the researcher to better understand some of the complex realities experienced by the SMEs (Saunders et al., 2016).

Before conducting any interview, the researcher obtained written ethical clearance approval from the GIBS, University of Pretoria's Ethics Committee (see **Appendix C**). This was done to guarantee that interviews were conducted ethically.

One semi-structured pilot interview was held to determine whether the response met the purpose of the research and whether the interview questions yielded the expected results. Questions could then be reworded, removed or additional questions added.

Potential participants were listed after which an invitation to participate in the research was emailed to them. This email provided the background to the research. Reference was made to the fact that all inputs in the research were treated confidentially. Once the invitation to participate in an interview was accepted, an appropriate date and time were set. An interview guideline and the generic questions were emailed to participants to get a feel for what can be expected in the interview. Each participant was asked to sign a consent form, confirming that they had freely chosen to take part in the study (see **Appendix D**). The interviews were conducted in a hybrid, both online through video calling platforms such as Microsoft Teams Meeting, and face-to-face depending on the preference of the participants.

Once the interview began, the researcher confirmed the background and objectives of the research. Participants were allowed to ask questions for clarification. All participants were guaranteed anonymity and confidentiality. The interview started once all the formalities were completed. An interview lasted about an hour.

Interviews were recorded so that it could be transcribed and properly analysed. The respondent's consent to record the interview was obtained.

4.10 Data analysis

Data analysis, according to Bell et al. (2019) and Mouton and Marais (1991), is the process of dissecting a phenomenon into its component elements to comprehend it better.

There are two typical methods of data analysis for qualitative research: content analysis and thematic analysis. In **content analysis**, a vast volume of word-processed data is methodically coded and categorised into word patterns that display their frequencies and structures (Vaismoradi, Turunen & Bondas, 2013). **Thematic analysis** is the most popular method for analysing qualitative data, and it aims to spot and record the patterns of meaning in the data (Guest et al., 2012). Braun and Clarke (2006) add that themes from the gathered textual material should be identified, analysed, and reported on using thematic analysis.

Thematic analysis was utilised to both enrich the data in the research study and analyse data based on the research questions and obtained through interviews. After the recorded data was well understood, it was coded, and themes pertinent to the study's goal emerged.

4.11 Coding qualitative data

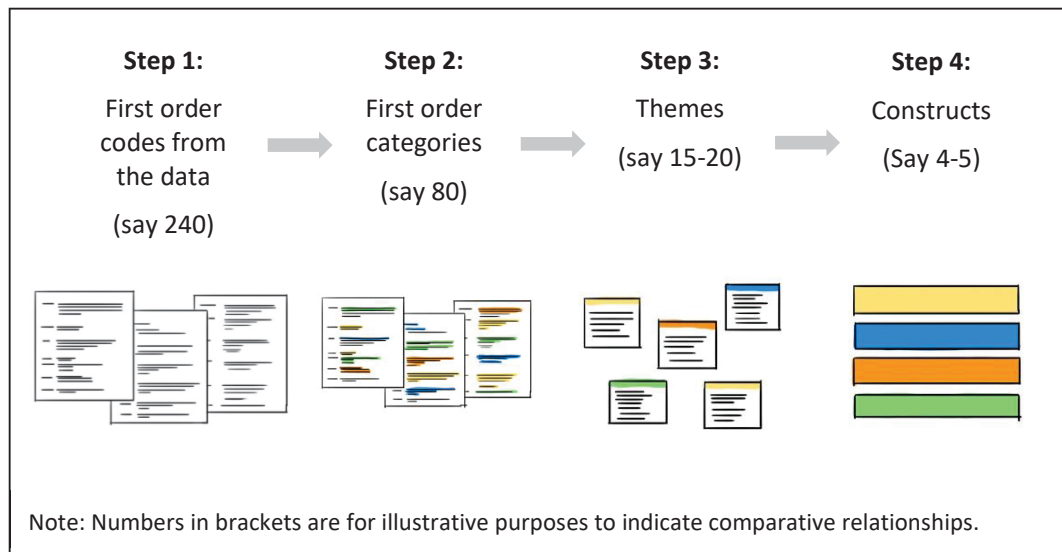
According to Saldana (2009) and Delve (2022), qualitative coding enables the researcher to interpret, organise and structure the semi-structured interviews' resulting data into meaningful theories. This process serves to systematically categorise the qualitative data to find themes and patterns for analysis. Coding the qualitative data allows for increased transparency and validity, while finding insights that are representative of the information collected.

Instead of beginning with preconceived notions about what the constructs should be, the researcher allowed the narrative to emerge directly from the raw data. The researcher followed **inductive coding** which is a bottom-up approach to coding qualitative data (see sketch on next page) (Delve, 2022):

- A **first-round coding** of qualitative data was done which involved reading the data (i.e., words of participants) and assigning codes to various extracts.
- The codes were organised into **first-order categories**. The researcher began to group the codes into categories. Within each category, the researcher grouped together codes that corresponded to each other, or were related to the same

topics or general concept. The researcher moved the codes around until a structure was found that made sense for the analysis.

- The researcher organised the categories into **themes**. The work done so far was reanalysed to find patterns and move closer to developing concepts. The number of codes from the initial round of coding was reduced.
- Themes were organised into **constructs** to develop the final narrative.



Inductive coding

4.12 Research quality and rigour

To assess the **validity** of the themes that developed from the research, the researcher compared the conclusions drawn from the literature with the viewpoints provided in the interviews (Lewis, 2009).

To determine the **credibility** of the research findings, the researcher considered countervailing negative evidence or data that contradicted the themes that arose during the investigation (Cresswell & Miller, 2000).

The research sought to confirm five controls for validity of the research findings, namely (Saunders et al., 2016): a logical flow of findings to conclusions; consistency between summarised findings and data collected; suitability between data collected and methods used; alignment between the research method used and the research strategy employed; and a link between the research strategy, research questions and objectives.

4.13 Consistency matrix

Appendix E contains the consistency matrix that links the data analysis technique, data collection tool, type of data, source of data, research question and three sub-research questions to the appropriate literature review section in the report. This is necessary to verify the logical coherence and alignment in the research method.

4.14 Limitations of the research design and methods

The data collected was based on participants personal experiences and knowledge, which reflects the nature of qualitative research in addressing research problems. According to Bell et al., (2019), interview participants sometimes provide unstructured information which could lead to personal biases. In the sample set, the sample size and individual biases could cause limitations, which affirms suggestions that the subjective nature of qualitative research lends itself to personal biases (Bell et al., 2019). The researcher was undertaking this research exercise of data collection for the first time which created some limitations. However, there were some control measures considered through a pilot interview of a colleague in the office for validity and quality checks, which helped to test the instrument before commencement of the data collection (Creswell & Creswell, 2018).

This study had a sample size of only 16 individuals interviewed, which makes it difficult to generalise within the sector. The research was also limited to SMEs in the construction sector in the context of South Africa only, due to time constraints to consider other countries on the African continent.

There were also limitations in narrowing the SMEs to CESA definition, which caused delays in getting the right participants for the interviews from the sample size.

4.15 Ethical considerations

The researcher acknowledged that ethical approval was required for the study. Consequently, the researcher obtained ethical clearance from GIBS, University of Pretoria before approaching any participant and collecting data.

The following ethical and moral considerations were maintained when information regarding dynamic capabilities on the sustainability performance of SMEs was collected, analysed, and presented in the research report:

- **The right to information sharing:** Each participant signed a consent form attesting to their understanding of the research's purpose, their voluntary involvement in the interview, and their right to withdraw at any moment if the interview made them uncomfortable.
- **No compensation:** No compensation for information provided by participants was provided.
- **Right to privacy:** The researcher made sure that the participants' private information was secure. To ensure anonymity, the participants' names and companies were changed.
- **Right to confidentiality:** The confidentiality of the information provided by participants was respected.
- **The right to fair treatment:** The researcher made sure that participants were chosen for the study based on their expertise and contribution to it. Participants' ethnicities, customs, religions, and beliefs were honoured (Mouton, 2001).
- **Right to transparency:** The researcher was transparent with the participants about the aims and scope of the research study.
- **Consent to release information:** Information was only published in the research report once approval was received from participants.
- **Right to feedback:** The participants received feedback about the research outcome as soon as the study process was completed.
- **Information storage:** The audio recordings and transcripts were stored in an accessible format without any identifiers and include password controls and privacy measures.

4.16 Conclusion

The research's design and the methodology utilised to carry out and collect the required data have been summarised in this chapter. It demonstrates how the researcher came up with the concept for the technique to be followed and how the ethical and legal requirements were met when the procedure was carried out. Additionally, the benefits and drawbacks of the research approach have been described.

The research findings based on the one-on-one semi-structured interviews with identified respondents working in the South African construction industry are presented in Chapter 5 that follows.

CHAPTER 5: PRESENTATION OF THE FINDINGS OF THE RESEARCH

5.1 Introduction

There were a total of 16 semi-structured interviews conducted with experts and contractors from SMEs in the construction sector. The participants have been given numbers for reference in this report to protect their anonymity.

The research's conclusions are presented in this chapter based on the responses from the participants who were interviewed. For the research question and the three sub-questions covered in Chapter 3, findings are given. **Appendices F1 to F4** include the detailed responses, and the sections below provide an overview of them. Only those findings which the researcher considers are important to answering the study question and its sub-questions are published here after a thorough analysis of the replies that were received.

5.2 Research question

5.2.1 Introduction

The research question is: **“How do SMEs use their dynamic capabilities to achieve sustainability performance?”**

Appendix F1 contains the first order codes (i.e., words of participants), first order categories, themes, and constructs based on the responses from participants who were interviewed in relation to the research question.

The number of codes (direct quotes by participants), categories, themes, and constructs recorded for the research question are:



5.2.2 Responses from interviews for each interview question

The findings regarding how participants responded to the interview questions relating to the research question are provided below.

(a) Interview question 1: Do you subscribe to sustainability practices?

Most participants endorse sustainability practices although they are often not considered a key priority. Some efforts such as the installation of solar panels are not driven by environmental considerations, but rather to enable the business to continue with its work obligations during load shedding.

Responses can be categorised as follows:

- subscribe to sustainability practices;
- partially subscribe to sustainability practices;
- am aware of sustainability practices but do not subscribe to it; or
- do not subscribe to sustainability practices.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Subscribe to sustainability practices.	<ul style="list-style-type: none"> • “Yes sir, yes sir, because I think they are specifically geared to, to try and grow the business itself and make sure that it can be self-sustaining ...” (P4) • “Yes, if you are running a business you must make sure that you create practices which will make you sustainable in the long term otherwise one will collapse in no time.” (P14) 	Subscription. (✓)
Partially subscribe to sustainability practices.	<ul style="list-style-type: none"> • “Partially. ... I will give you an example: ... I have installed solar power in the office but it is not about sustainability just because when there is load shedding you can't work, so you lose time, you lose money. So the original idea around it was not to cautiously contribute to sustainability, it was for survival, so that we can be able to service our clientele.” (P3) 	No subscription.
Do not subscribe to sustainability practices.	<ul style="list-style-type: none"> • “it's not something that we outright subscribe to, but it's something that we are aware of and lining up to adopt that approach in our business delivery.” (P1) • “... with myself when I was going through that process I can also say that was not a priority.” (P9) • “Yes, I think we do in our conversations, subscribe to sustainability practices. Maybe I should reverse here - I don't think we do ...” (P11) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(b) Interview question 2: Do your current internal resources have the capabilities to meet sustainability goals?

The current internal resources of most SMEs in the construction industry in South Africa do not have the capabilities and / or time to achieve sustainability goals. Resources of SMEs in the construction industry focus more on financial sustainability and economic objectives, and less on environmental and social sustainability. This is due to limited financial resources and because of smaller companies focusing on economic survival.

Responses can be categorised as follows:

- current internal resources have the capabilities to meet sustainability goals;
- current internal resources only partially have the capacity to achieve sustainability goals; or
- current internal resources do not have the capabilities and / or time to meet sustainability goals.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Current internal resources have the capabilities to meet sustainability goals.	<ul style="list-style-type: none"> • “But I would say yes, my internal resources have the capabilities to meet sustainability goals.” (P11) • “Yeah, yeah, they do. ... So in terms of the capabilities, yes, they do, but under guidance, under strict guidance from senior management.” (P7) 	Capabilities. (✓)
Current internal resources only partially have the capacity to achieve sustainability goals.	<ul style="list-style-type: none"> • “... the majority of the staff complement that we employ are not necessarily ... or do not have the requisite knowledge to operate at a strategic level, and hence it becomes very difficult sometimes to sell these ideas of running business from a sustainability point of view because they battle to understand some of these concepts ...” (P5) 	No capabilities.
Current internal resources do not have the capabilities to meet sustainability goals.	<ul style="list-style-type: none"> • “...no ... we are very constraint in terms of especially financially ... We are very constraint and being able to maintain those sustainability goals, being able to put those structures in place to, to be compliant or to pursue sustainability goals is a; it is quite hectic for a small business like me.” (P6) • “... no. ... when you are worried about the economic survival you pretty much do not have the time to invest in anything except economics ...” (P9) • “No. I don’t think I can even put one cent towards it. ... No, I can’t. I won’t be able to afford it.” (P3) 	No capabilities.

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
	<ul style="list-style-type: none"> <li data-bbox="509 268 1183 497">“We do not. ... and especially considering our industry at the moment, it’s really coming up to survival because it is over-saturated so you try to put most of your team on productive work and then minimal team or when there are gaps, then you start researching on other opportunities to make ourselves sustainable.” “... social and environmental are lower than the economical priority.” (P14) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(c) Interview question 3: How does your commitment towards sustainability influence your performance?

Commitment to sustainability sometimes leads to increased innovation when projects are delivered to clients.

The government often requires companies to meet certain sustainability requirements to demonstrate that the company is committed to sustainability before work is awarded to the company. This requirement set by the market often shape the company.

Some participants believe that the commitment to sustainability does not affect performance. Rather the company is in survival mode to meet certain financial targets.

The commitment of resources to environmental and social sustainability may result in limited resources being available to manage the projects to ensure revenue growth.

Responses can be categorised as follows:

- we innovate more;
- increases likelihood of securing work and growing the business;
- shaped by the market;
- commitment towards sustainability does not influence performance;
- performance decreases when resources are dedicated to sustainability; and
- unable to say with certainty.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Commitment towards sustainability has a positive impact on performance.	<ul style="list-style-type: none"> “... we are able to be innovative when we have an assignment ...” (P2) “... before you can even get a job sometimes from government, they would ask you to ... have certain indicator to show that you are committed to sustainability.” (P6) 	Positive influence. (✓)
Shaped by the market.	<ul style="list-style-type: none"> “So, we are invariably shaped by those processes and what is out there in the market.” (P13) 	
Commitment towards sustainability have no, or a negative, impact on performance.	<ul style="list-style-type: none"> “It has zero, zero impact ... I don’t have any commitment therefore obviously you know it doesn’t impact anything. ... we are really in survival mode, especially after COVID.” (P3) “I wouldn’t say we are driven by sustainability, to be honest. I think for now we are driven by our targets which have been set up by the various projects that we are working on.” (P15) “... if we commit to sustainability as we have it, it also needs time and dedication and resources. And if you were to divert your resources towards that it means that you are taking away resources from high performance areas. So therefore your performance does reduce in terms of delivery, in terms of making revenue ...” (P9) 	No positive influence.
Don’t know whether commitment towards sustainability has a positive or negative impact on performance.	<ul style="list-style-type: none"> “... we are not able to say with certainty because we have not actually put it in force to a point where we are able to measure performance ...” (P1) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(d) Interview question 4: What would you consider to be the attributes needed to ensure the success of your business?

There are several qualities needed to ensure the success of the business, such as fully understanding the business industry, having a customer-centric focus, proper corporate social investment activities, multidisciplinary skill levels, teamwork, being a continuous learner, the need to adapt quickly to a changing business environment, to be financially astute, good leadership skills and ethical work behaviour.

Responses can be categorised as follows:

- marketing and business development;
- focus on the client;
- to have some influence over the client;
- diversified client base;
- corporate social investment activities;
- patience;
- teamwork;
- capability of and ability of competent staff to work across different disciplines;
- working hard / passionate about your work;
- continuous learning;
- understanding market dynamics;
- need to be agile;
- financially astute;
- deliver quality work;
- good leadership skills understanding the resources being managed;
- commitment throughout the company;
- ethical behaviour;
- company structure;
- company culture;
- integrated and automatised systems;
- good administrative and operational support;
- choosing the right business partner; and
- good cash flow.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Focus on clients.	<ul style="list-style-type: none"> “... having a good understanding of the market out there, from a business development point of view we need to be able to see where the business is going, where the opportunities are coming from, what sort of requirements do our clients require.” (P5) “... you need to be about customers. ... customer relations are quite important.” (P3) 	Externally focused. (✓)
Focus on communities.	<ul style="list-style-type: none"> “... corporate social investment activities ...” (P1) 	
Focus on delivery team.	<ul style="list-style-type: none"> “... ability to work across different disciplines ...” (P2) “...the capability of your team is primary ...” (P9) “... retention of good staff.” (P11) “You need to be a continuous learner.” (P3) “It is for you to understand the dynamics in terms of the industry that you are practicing in, or where we are practicing in.” (P13) “You need to adapt quickly ...” (P3) “... you need to be a good financial manager ...” (P3) “...making sure your quality of your work is top notch ...” (P14) “...you need good leadership ...” (P7) “Ethics I think they play a very primary role because they set a tone and a base in terms of how you relate and interact with people around you.” (P13) 	Internally focused. (✓)
Focus on company structure and support systems.	<ul style="list-style-type: none"> “...you need a structure, a professional structure in place, meaning now your systems actually working in a business have to be in place as well so that people cannot really just do as they please, outside of the systems of the business.” (P8) 	
Focus on business partners.	<ul style="list-style-type: none"> “... to choose a right ... partners because that is important whenever you are working on an assignment ...” (P2) 	
Focus on finances.	<ul style="list-style-type: none"> “... proper cash flow for us to be able to ensure the success of our business.” (P11) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(e) Interview question 5: How do you navigate around environmental, social and governance issues in delivering your services?

SMEs navigate environmental issues in the delivery of services by blending infrastructure with the environment and complying with environmental legislation.

SMEs navigate around social issues in the delivery of services by considering the impact of solutions on the local community, giving back to the community by employing local labour on projects, and transferring knowledge and skills.

SMEs navigate around governance issues by providing services in an ethical manner, putting governance structures and systems in place, and incorporating sustainability into the company's strategy and philosophy.

Responses can be categorised as follows:

- efficient designs;
- consider how solutions impact on customers;
- innovation;
- work in an ethical manner;
- compliance with laws and regulations, including laws enforcing environmental sustainability;
- too much politics and entitlement;
- proper governance;
- transparency in work;
- use qualified people;
- knowledge and skills transfer; governance structures and systems
- partnering with companies that are compliant with environmental, social, and governance issues;
- corporate social responsibility;
- understanding the needs of the client / close relationship and engagement with the client;
- growing your client network;
- implement internal systems;
- include sustainability in company strategy and philosophy; and
- consider sustainability if economically possible.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Client-focused.	<ul style="list-style-type: none"> “...understand our client’s needs ...” “... it is just easier for the client to guide you in terms of the approach because of they might be people who have been in those particular areas much longer to understand the mind-set or the needs of the different communities if they work with communities or even individuals in cases whereby we do housing development plans were the client will actually be able to easily guide you into that specific place.” (P4) 	Client. (✓)
Responsible corporate social investment.	<ul style="list-style-type: none"> “... you giving back to the community ...” (P2) 	
Ethical way of doing business.	<ul style="list-style-type: none"> “... doing business in an ethical manner that then fosters continued business relationships ...” (P1) “We align ourselves or our services with environmental legislation that is there in the country ...” (P11) 	
Solutions driven.	<ul style="list-style-type: none"> “... consider how the solutions you offer impact the occupants of the buildings you are then trying to construct or design.” (P1) 	Service delivery. (✓)
Using skilled workforce / resources.	<ul style="list-style-type: none"> “... transfer of knowledge and transfer of skill.” (P2) 	
Ensure proper company strategy and systems.	<ul style="list-style-type: none"> “...we try and put in our strategy ...” (P3) 	
Focus on financial benefits / return.	<ul style="list-style-type: none"> “So we always work trying and it’s only in cases where economically it just does not make sense to reach those targets that we do not.” (P14) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(f) Interview question 6: What do you think of the sustainability performance of a SMEs in the construction industry?

SMEs in the construction industry are currently engaged in a struggle for financial delivery with less focus on environmental and social sustainability. Practitioners are not always appropriately qualified. Limited access to finance and cash flow problems are not unknown among SMEs in the construction industry. The industry is one of the least protected industries in the country. Construction mafias and strikes have a negative impact on the delivery of projects. Competition is fierce and discounts and price cuts are common.

Responses can be categorised as follows:

- focus on survival;
- focus is on generating income and less on sustainability;
- focus is on delivering the work and less on sustainability;
- focus on minimum compliance only;
- sustainability is non-existent;
- compliance with sustainability requirements is challenging;
- comply with sustainability requirements because of legislation, although not a priority;
- competitive approach in sourcing work;
- little focus on innovation / sticking to the old way of doing things;
- diversification of services;
- not enough resources to consider sustainability as well;
- need mentorship and training;
- poor succession planning;
- lack of highly qualified expertise;
- lack of appropriate tools;
- limited access to finance and cash flow constraints;
- unprotected industry;
- construction mafias and strikes;
- fierce competition;

- enforcing empowerment legislation makes it possible for smes to survive in the construction industry; and
- sustainability is driven by existing opportunities / jobs.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Focus is on financial survival.	<ul style="list-style-type: none"> • "... it is survival now, so they forsake some of the things that they are supposed to do, like let's say your social responsibility as well as your environmental, so they just focus more on the economic side of it to be able to pay the workers. So currently as I say it is bad." (P8) • "... that the immediate focus is on the rands and cents ... we find ourselves in the trench not being able to see what's happening above in our environment so to speak ..." (P1) • "... you are so deeply entrenched in delivering the work that the broader vision of business continuity and sustainability may sometimes get second attention..." (P1) 	Survival.
Limited human and financial resources, and equipment.	<ul style="list-style-type: none"> • "... better qualified people might be reluctant to work for an SME ..." (P10) • "You find practitioners that are not qualified ..." (P13) • "And most of the time the issue if you look at small business development is access to finance." (P12) • "So, you would find that the actual cashflow is the most crucial component thereon, because without it, it has got a very negative influence. It cascades to other areas and incapacitates a typical SMME." (P13) 	
Unprotected industry.	<ul style="list-style-type: none"> • "...our industry is one of the least protected industries of all in the country at the moment whereby anyone who feels they can do the construction can ..." (P4) <p>"... we have got these construction mafias and the strikes that we get on projects, and obviously some of those things negatively impacts on the projects, and when that happens it has got a negative knock on effect on the communities within which the project is implemented." (P11)</p>	
Enforcing empowerment legislation makes it possible for SMEs to survive.	<ul style="list-style-type: none"> • "If it is not government which intervenes in this country in order to give jobs to SMEs by force, or by means of legislation in place, SMEs would struggle in the, in the, in the construction industry." (P6) 	Environment shapes business.

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Existing opportunities / jobs dictate focus of sustainability.	<ul style="list-style-type: none"> “... the industry is tough on SMEs and the sustainability more than anything is driven by the opportunities that arise ...” “... the sustainability and the performance of it for me is really dependant on the relations between the SME and those specific clients, existing clients.” (P15) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(g) Interview question 7: How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?

The procurement processes are long, complicated, and cluttered with paperwork. Payments by customers are often late, resulting in SMEs experiencing cash flow problems. Individuals who do not have engineering experience or engineering qualifications can start companies and compete with other companies who are suitably qualified for the construction industry. Corrupt practices make it difficult to secure employment and to compete. Political interference sometimes determines who gets the job. Competition is unimaginably strong. There are various legal / tax compliance requirements that apply to SMEs.

Responses can be categorised as follows:

- drawn-out procurement processes and challenging procurement entry requirements for SMEs;
- lack of transparency in awarding tenders;
- registering on panels;
- limited available skills;
- poor technical competence in client body;
- drawn-out and late payments by clients;
- difficult to obtain access to finance;
- cash flow problems;
- unprotected industry;
- shrinking construction industry;
- construction industry is cyclical;

- corruption;
- political interference;
- fierce competition;
- lack of private sector to fully embrace SMEs;
- legislation enables SMEs to operate in an industry dominated by a few key role players;
- various legal / tax compliance requirements;
- limited tax breaks for SMEs;
- late project delivery; and
- workload should not be dependent on only one major client.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Challenging procurement processes.	<ul style="list-style-type: none"> • "... procurement processes that are long and winded in terms of the paperwork that needs to be put together during the procurement process." (P1) • "... every year there are new rules to make compliance issues more difficult. ... I don't think the environment the way we are going, small business will really thrive; it is becoming more and more complicated." (P14) • "... the red tape that one gets, all the time, in all the aspects of doing business in SA ..." (P11) • "... lack of transparency in the entire award process of the submissions ..." (P1) 	Challenges.
Skills shortage.	<ul style="list-style-type: none"> • "...We do have bit but not big abundance of professional services to tap from." (P2) 	
Financial hardships.	<ul style="list-style-type: none"> • "I think they do not consider it a priority to pay for a service delivered by an entity – the entity can go with three or six months without any payment, and it doesn't trigger any alarm within the system, that that can actually be collapsing other businesses – especially when you have just started, you have got one client and suddenly that client after you have provided the service do not pay. So it is really that. They are actually killing small business." (P14) • "You get to wait over a year for a payment that was supposed to be done in 30 days; time, and you wonder how to survive if you have got resources, or even the warm bodies in your office to sustain your business. ... that the government, if they could just say 30 days turnaround time for payment, it should be 30 days. Not years." (P11) 	

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
	<ul style="list-style-type: none"> “... small enterprises as well, they have got cash flow issues ...” (P8) 	
Unstable industry.	<ul style="list-style-type: none"> “... there is really no control in our industry.” “Our industry is not protected anymore.” (P4) “... that has open up a room for a lot of companies where people who are not experienced within that space, who didn’t study within that space, who don’t have any engineering experience or engineering qualifications are able to start companies and compete with other companies which have the right skills for the work. So maybe from that viewpoint we need to relook at, the government minds need to relook at how the entry levels into these spaces are set out. ... I mean it is easy to enter the engineering industry as compared to other industries. ... entry level and requirements, the government needs to look at those, those need to be relooked at.” (P15) “... The smaller companies find the barriers very high in some cases due to corrupt practices ... in departments.” (P2) “... political, if you are not affiliated to a certain part of a political party sometimes it is difficult to get jobs ...” (P3) “... the competing with others, competition is too high, it's too much.” (P10) 	
Strict tax compliance.	<ul style="list-style-type: none"> “... there is a lot of compliance now that is layers, that is levelled on SMMEs ...” (P2) “... although you know government sees SMMEs as an important sector in the economy but the regulations sometimes are really hard on us.” (P3) “... if you look at the model of the taxation in SA, which the government has employed, whereby let’s say for instance if you put out an invoice then you immediately you must now pay VAT to SARS, irrespective of whether you have been paid that invoice or not.” (P8) 	
Poor project delivery.	<ul style="list-style-type: none"> “A typical project that is meant to be implemented over a 12-month duration may find itself taking three times as long in a sense, ...” (P1) 	
Diversify client base.	<ul style="list-style-type: none"> “There is no sustainability premised on just a sole client to an SME unless if you are supplying over five years, such a contract.” (P1) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(h) Interview question 8: What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?

The tender regulations are becoming too much to comply with. Poor financial assistance from banks and lack of project funding, and cash flow problems are common in SMEs. The government often requests and/or accepts unrealistic discounts on projects. The local construction mafia demands 30% of the work from a local project. The construction industry is over-politicized. Crime and lawlessness also hamper the operations of SMEs. SMEs often cannot afford experienced people. Tax levied on an SMEs can be challenging.

Responses can be categorised as follows:

- unrealistic tender requirements as part of procurement, and regulations;
- poor financial assistance / project start-up funding, and cash-flow problems;
- unrealistic discounts expected by government;
- construction mafias;
- unprotected industry and easy barrier of entry for new entrants;
- too much political interference;
- high levels of crime and lawlessness;
- lack of private sector to fully embrace SMEs;
- the need to survive;
- professional bodies to promote interest of SMEs;
- lack of government support;
- poor client involvement on projects;
- poor skills level and education;
- compliance with SARS; and
- lack of access to equipment.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Challenging procurement processes.	<ul style="list-style-type: none"> “... it is the regulations, they are becoming too many to comply with ...” (P14) “... the manner in which procurement is done, especially when it comes to professional services. I don't think it is really aligned to what is required to be done.” (P11) 	Barriers.
Financial hardship.	<ul style="list-style-type: none"> “... lack of financial support, or the banks; the financial institutions' support for the SMEs in terms of financing.” (P6) “And problems such as not paying the contractors on time, you cannot run business without a positive cashflow.” (P5) “... sometimes the state is looking for a lot of discount, which is quite strange.” (P2) 	
Unstable industry.	<ul style="list-style-type: none"> “...I think lately you would have seen now with the mafia, the guys who actually demand 30% - that is another huge barrier ...” (P8) “...industry is over-politicised ...” (P9) “...crime and lawlessness is also inhibiting on doing business for SMEs.” (P9) 	
Skills shortage.	<ul style="list-style-type: none"> “... barrier would probably be education level.” (P3) “... the issue of not having experienced people to deliver on projects, simply because you are an SME you can't appoint someone who is very experienced to come and work for you because you might not afford him or he might not be comfortable to come and work for you as an SME.” “You depend so much on outsourcing of functions as an SME ...” (P10) 	
Strict tax compliance.	<ul style="list-style-type: none"> “... one of the obstacles as I have said is that I feel it is actually the SARS, they way they have actually structured their business. They need to come up with a model that will actually encourage these guys to be in business, not to necessarily come up with taxes that you are taxing a small SME like you are taxing a big corporate as well ...” (P8) 	
Lack of access to resources.	<ul style="list-style-type: none"> “One is access to the right tools of trade. When you are in the construction sector you need tools, you need machinery to be able to do quality work right? And the key thing for you to be able to access those tools and machinery equipment, you need money, you need to have a huge capital investment in a business.” (P5) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

5.2.3 Conclusion

The research question is: “How do SMEs use their dynamic capabilities to achieve sustainability performance?”

Table 5-1 contains the themes and constructs for each of the interview questions related to the research question. Those constructs that directly contribute to answering the research question and therefore considered for inclusion in the conceptual framework based on the interviews (see Section 5.7) are indicated with a tick (✓):

Table 5-1: Themes and constructs for research question

Interview question 1: Do you subscribe to sustainability practices?	
Theme	Construct
Subscribe to sustainability practices.	Subscription.
Partially subscribe to sustainability practices.	No subscription.
Do not subscribe to sustainability practices.	
Interview question 2: Do your current internal resources have the capabilities to meet sustainability goals?	
Theme	Construct
Current internal resources have the capabilities to meet sustainability goals.	Capabilities. (✓)
Current internal resources only partially have the capacity to achieve sustainability goals.	No capabilities.
Current internal resources do not have the capabilities to meet sustainability goals.	
Interview question 3: How does your commitment towards sustainability influence your performance?	
Theme	Construct
Commitment towards sustainability has a positive impact on performance.	Positive influence.
Shaped by the market.	
Commitment towards sustainability have no, or a negative, impact on performance.	No positive influence.
Don't know whether commitment towards sustainability has a positive or negative impact on performance.	

Interview question 4: What would you consider to be the attributes needed to ensure the success of your business?

Theme	Construct
Focus on clients.	Externally focused. (✓)
Focus on communities.	
Focus on delivery team.	Internally focused. (✓)
Focus on company structure and support systems.	
Focus on business partners.	
Focus on finances.	

Interview question 5: How do you navigate around environmental, social and governance issues in delivering your services?

Theme	Construct
Client-focused.	Client. (✓)
Responsible corporate social investment.	
Ethical way of doing business.	
Solutions driven.	Service delivery. (✓)
Using skilled workforce / resources.	
Ensure proper company strategy and systems.	
Focus on financial benefits / return.	

Interview question 6: What do you think of the sustainability performance of a SMEs in the construction industry?

Theme	Construct
Focus is on financial survival.	Survival.
Limited human and financial resources, and equipment.	
Unprotected industry.	
Enforcing empowerment legislation makes it possible for SMEs to survive.	Environment shapes business.
Existing opportunities / jobs dictate focus of sustainability.	

Interview question 7: How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?

Theme	Construct
Challenging procurement processes.	Challenges.
Skills shortage.	
Financial hardships.	
Unstable industry.	
Strict tax compliance.	
Poor project delivery.	
Diversify client base.	

Interview question 8: What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?

Theme	Construct
Challenging procurement processes.	Barriers.
Financial hardship.	
Unstable industry.	
Skills shortage.	
Strict tax compliance.	
Lack of access to resources.	

Note: Those constructs that directly contribute to answering the research question and therefore considered for inclusion in the conceptual framework based on the interviews are indicated with a tick (✓).

5.3 Sub-research question 1

5.3.1 Introduction

Sub-research question 1 is: **“How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?”**

Appendix F2 contains the first order codes (i.e., words of participants), first order categories, themes, and constructs based on the responses from participants who were interviewed in relation to the research question.

The number of codes (direct quotes by participants), categories, themes, and constructs recorded for the research question are:



5.3.2 Responses from interviews for each interview question

The findings regarding how participants responded to the interview questions relating to the sub-research question 1 are provided below.

(a) Interview question 1: In your opinion, does ‘sensing’ greatly contribute to the performance of the business?

Sensing contributes greatly to the performance and sustainability of the business.

Only one category of response was received, namely that sensing contributes to the performance of the company.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Sensing contributes to the performance of the business.	<ul style="list-style-type: none"> • “...sensing ... is quite critical in the success of business and sustainability ...” (P9) • “Yes.” “... sensing does greatly contribute to the performance of a business because as I said most businesses are driven by what the outside opportunities are.” (P15) 	Positive contribution. (✓)

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(b) Interview question 2: How does ‘sensing’ ensure social, economic, and environmental goals are achieved?

Sensing leads to better networking with industry leaders. The company can better position itself by scanning the market place and identifying potential opportunities. Sensing enables the company to innovate and stay abreast of new technological developments. Sensing helps the company to position its brand. The need for specific types of skills required can be identified in time when the market is scanned. Sensing provides a platform for the transfer of knowledge and skills to new professionals in the company. The identification and implementation of projects allow for community involvement, upliftment, and local job creation.

Responses can be categorised as follows:

- sensing enables better networking;
- sensing enables you to stay informed about technical development and the environment to better position yourself;
- increased opportunities / work load and rewards;
- brand positioning;
- promotes innovation within the company;
- identification of skills competencies / needed;

- sharing knowledge and skills transfer;
- community involvement, upliftment, and job creation;
- project delivery ensures the achievement of social, economic, environment goals;
- green buildings / infrastructure; and
- government contracts dictates compliance with social, economic, and environmental goals.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Improved networking and market intelligence.	<ul style="list-style-type: none"> • “So then with all that network then it actually helps greatly for the company to perform.” “... you are able to network with other people and find out what they are doing and like being aligned with some of the best practices that they are actually doing.” (P10) • “... one has to stay abreast of every technological development, every environmental factor that could impact the business ...” (P1) • “...we were able to position ourselves ...” (P2) • “... we would use that type of an approach in most cases as a way to scan the market as to where the opportunities are sitting.” (P5) • “Sensing ... helps us to position our brand ...” (P6) • “... to seek opportunities outside our normal everyday operation, it actually allows innovation of the business.” “Sensing helps to ensure that we achieve our goals, and it also allows innovation of our business...” (P6) 	Company. (✓)
Knowledge and skills transfer.	<ul style="list-style-type: none"> • “... to help us determine beforehand what additional capabilities we need to acquire ...” “...we are able to identify beforehand if we are lacking any skills as well, we are able to reskill like I said, we are able to acquire skills ...” (P2) • “...providing a platform for the new professionals to work with professionals who have been in the industry for the transfer of knowledge and skills and innovation.” (P12) 	
Project delivery.	<ul style="list-style-type: none"> • “social, economic, environment and all other by products automatically come out in the wash, so they are achieved if you achieve your main goal you know, in terms of delivering on that main task for a client.” (P7) 	
Corporate social investment.	<ul style="list-style-type: none"> • “... upliftment of the community.” “...when you implement the project, make sure that the community in terms of job opportunities must benefit as well ...” (P16) • “... one would do that project without the involvement of the community leaders in terms of a social point of view – community leaders or even the community within which 	Community. (✓)

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
	we implement the project itself, and without even negating the environmental goals or environmental impact.” (P11)	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(c) Interview question 3: In your opinion, what makes ‘sensing’ more effective to achieve sustainability performance?

The introduction of systems enables sustainability of the business. Sensing allows for the identification and assessment of opportunities. Leadership plays a critical role in relation to sensing. Role-players and stakeholders must be involved in the execution of projects right from the start. Many tender documents issued by clients already specify the expected achievement of environmental and social objectives for sustainability.

Responses can be categorised as follows:

- implement systems;
- having access to government publications and the internet;
- intelligent data;
- stakeholder involvement;
- increased opportunities / work load;
- good leadership;
- improved access to skilled individuals;
- government contracts dictate compliance with social, economic, and environmental goals;
- survival mode drives sensing; and
- there is no correlation between sensing and sustainability performance (including achieving environmental goals).

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Proper systems and access to intelligent data.	<ul style="list-style-type: none"> “You have got to also introduce systems that enable sustainability of the business ...” (P1) 	Company. (✓)
Solid pipeline of work.	<ul style="list-style-type: none"> “... you get to get those opportunities that they are not necessarily obvious, you take time to identify and assess them.” (P10) 	
Skilled human resources.	<ul style="list-style-type: none"> “... this is where the leadership of the company comes in.” (P7) 	
Survival mode drives sensing.	<ul style="list-style-type: none"> “... for a typically SMME, it is more or less on a survival mode. On a survival mode you take what is there, what is available ...” (P13) 	
Stakeholder involvement.	<ul style="list-style-type: none"> “... it is the planning right from the onset, where you involve all the role players and stakeholders ...” (P11) 	Community. (✓)
Government contracts dictates compliance with social, economic, and environmental goals.	<ul style="list-style-type: none"> “... those clients who are actually chasing us have to put in to their documentation as part of the requirements, and when you get the work from them it is that you must actually consider the social there as well as the environmental and economic aspect of this thing as well.” (P8) 	
There is no correlation between sensing and sustainability performance.	<ul style="list-style-type: none"> “No, it's non-existent here. No, it's non-existent, in my opinion.” (P3) 	No correlation.

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

5.3.3 Conclusion

Sub-research question 1 is: **“How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?”**

Table 5-2 contains the themes and constructs for each of the interview questions related to sub-research question 1. Those constructs that directly contribute to answering sub-research question 1 and therefore considered for inclusion in the conceptual framework based on the interviews (see Section 5.7) are indicated with a tick (✓):

Table 5-2: Themes and constructs for sub-research question 1

Interview question 1: In your opinion, does 'sensing' greatly contribute to the performance of the business?	
Theme	Construct
Sensing contributes to the performance of the business.	Positive contribution.
Interview question 2: How does 'sensing' ensure social, economic, and environmental goals are achieved?	
Theme	Construct
Improved networking and market intelligence.	Company. (✓)
Knowledge and skills transfer.	
Project delivery.	
Corporate social investment.	Community. (✓)
Interview question 3: In your opinion, what makes 'sensing' more effective to achieve sustainability performance?	
Theme	Construct
Proper systems and access to intelligent data.	Company. (✓)
Solid pipeline of work.	
Skilled human resources.	
Survival mode drives sensing.	
Stakeholder involvement.	Community. (✓)
Government contracts dictates compliance with social, economic, and environmental goals.	
There is no correlation between sensing and sustainability performance.	No correlation.

Note: Those constructs that directly contribute to answering sub-research question 1 and therefore considered for inclusion in the conceptual framework based on the interviews are indicated with a tick (✓).

5.4 Sub-research question 2

5.4.1 Introduction

Sub-research question 2 is “**How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?**”

Appendix F3 contains the first order codes (i.e., words of participants), first order categories, themes, and constructs based on the responses from participants who were interviewed in relation to the sub-research question 2.

The number of codes (direct quotes by participants), categories, themes, and constructs recorded for the sub-research question 2 are:



5.4.2 Responses from interviews for each interview question

The findings regarding how participants responded to the interview questions relating to the sub-research question 2 are provided below.

(a) Interview question 1: In your opinion, does ‘seizing’ greatly contribute to the performance of the business?

Seizing contributes greatly to the performance and sustainability of the business.

Only one category of response was received, namely that seizing contributes to the performance of the business.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Seizing contributes to the performance of the business.	<ul style="list-style-type: none"> • “... we do use seizing for continuous business operations, but in sustainability, I don't think it links to that.” (P3) • “Yeah, it does. ... it does basically contribute to the performance of the business because you put in the right individuals.” (P8) • “So it does greatly assist in achieving sustainability performance but it wouldn't be the core.” (P15) 	Positive contribution. (✓)

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(b) Interview question 2: How does ‘seizing’ ensure social, economic, and environmental goals are achieved?

Seizing enables the company to mobilise appropriate and capable resources. Limited resources are available to drive the performance of SMEs in the construction industry. Sometimes young graduates are used to make service delivery more cost-effective. One of the key drivers of sustainability is to ensure that the leadership and staff promote good values. Trust is key in relationship building. SMEs place great focus on margins and profitability.

Responses can be categorised as follows:

- mobilise competent resources / mobilise resources that understand the social, economic, and environmental aspect of the project;
- employ people with right skills;
- having solid business values;
- mutual trust between SMEs;
- deliver work profitably;
- project delivery ensures the achievement of social, economic, environment goals;
- and

- there is no correlation between seizing and sustainability performance (including achieving environmental goals).

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Mobilise skilled workforce.	<ul style="list-style-type: none"> • "... you've seized the opportunity and you have mobilised competent resources to deliver in line with the as sold margins." (P1) • "... we have found is with most SMEs there is limited resources that are being used to drive the performance of these SMEs needs. And for that most importantly is what critical resources are there, it is not necessarily having all the resources in-house." "... it is tapping into the right resources ... So having the right resources to execute opportunity and that creates value in terms of sustainability." (P15) • "... having resources helps to be able to achieve certain things that will make the company sustainable." (P10) • "One of the things that we do in our organisation is to try and give opportunities to young graduates, so that in a way contributes socially." (P10) 	Company. (✓)
Good values.	<ul style="list-style-type: none"> • "... one of the key drivers of sustainability is to ensure that as a business you have good values for delivering your output." (P4) • "...some of the key things that are needed for SMEs is just to try and trust each other ..." (P4) 	
Profitability.	<ul style="list-style-type: none"> • "Now we are talking as sold margins in terms of profitability." (P1) 	
Project delivery ensures the achievement of social, economic, environment goals.	<ul style="list-style-type: none"> • "... you know if you do mobilize your resources in an efficient way to get the primary task done, these three aspects that you have mentioned, social, economic and environmental, in my opinion, are secondary tasks that automatically gets resolved and achieved provided that you address the primary task." (P7) 	
There is no correlation between seizing and sustainability performance.	<ul style="list-style-type: none"> • "... it's non-existent from a sustainability perspective." (P3) 	No correlation.

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(c) Interview question 3: In your opinion, what makes ‘seizing’ more effective to achieve sustainability performance?

The correct mobilisation of resources leads to the increased capture of employment opportunities. It is more often cost-effective to train junior staff and use such cost-effective resources. The appropriate mobilisation of resources and equipment can lead to the more cost-effective execution of the work. Continuing professional development is encouraged. Staff are often encouraged to be multi-skilled to work on multi-disciplinary projects. Having up-to-date and reliable information is important when it comes to obtaining market intelligence.

Responses can be categorised as follows:

- optimum mobilisation of company resources;
- faster response time;
- train staff to be multi-disciplinary skilled;
- employ staff that appreciates sustainability; and
- reliable up-to-date data / information.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Quick mobilisation of company resources.	<ul style="list-style-type: none"> • “... the way we organise our resources, or we mobilise the company resources to ... capture opportunities.” (P6) • “... to have your business thriving you have to mobilise your resources to exploit opportunities.” (P9) • “... using low income employees [junior staff] and then training them, you are able to get more done for less ...” (P10) • “It [seizing] makes it more effective because you have allocated appropriate tools effectively.” (P13) 	Resources. (✓)
Skilled workforce.	<ul style="list-style-type: none"> • “... we try to acquire multi-disciplinary people and reskill everyone in the organization so that we are more multi-disciplinary, so that we can move across the different centres of excellence depending on the assignment requirements.” (P2) • “... it is getting your own staff or your people you work with, more knowledgeable in terms of training capabilities and for them to gain more experience. ... continuing professional development ...” (P11) 	

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Reliable up-to-date data / information.	<ul style="list-style-type: none"> “... what makes it more efficient is the quality of the information that the company has or those resources within the company should have accurate information, and the organisation should be flexible to review that intelligence from time to time and validate the accuracy of the information.” (P5) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

5.4.3 Conclusion

Sub-research question 2 is “**How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?**”

Table 5-3 contains the themes and constructs for each of the interview questions related to sub-research question 2. Those constructs that directly contribute to answering sub-research question 2 and therefore considered for inclusion in the conceptual framework based on the interviews (see Section 5.7) are indicated with a tick (✓):

Table 5-3: Themes and constructs for sub-research question 2

Interview question 1: In your opinion, does 'seizing' greatly contribute to the performance of the business?	
Theme	Construct
Seizing contributes to the performance of the business.	Positive contribution.
Interview question 2: How does 'seizing' ensure social, economic, and environmental goals are achieved?	
Theme	Construct
Mobilise skilled workforce.	Company. (✓)
Good values.	
Profitability.	
Project delivery ensures the achievement of social, economic, environment goals.	
There is no correlation between seizing and sustainability performance.	No correlation.
Interview question 3: In your opinion, what makes 'seizing' more effective to achieve sustainability performance?	
Theme	Construct
Quick mobilisation of company resources.	Resources. (✓)
Skilled workforce.	
Reliable up-to-date data / information.	

Note: Those constructs that directly contribute to answering sub-research question 1 and therefore considered for inclusion in the conceptual framework based on the interviews are indicated with a tick (✓).

5.5 Sub-research question 3

5.5.1 Introduction

Sub-research question 3: **How do SME’s use transformation (continuous renewal of the company) to achieve sustainability performance?**

Appendix F4 contains the first order codes (i.e., words of participants), first order categories, themes, and constructs based on the responses from participants who were interviewed in relation to the research question.

The number of codes (direct quotes by participants), categories, themes, and constructs recorded for the research question are:



5.5.2 Responses from interviews for each interview question

The findings regarding how participants responded to the interview questions relating to the sub-research question 3 are provided below.

(a) Interview question 1: In your opinion, does ‘transformation’ greatly contribute to the performance of the business?

One participant believes that transformation does not necessarily contribute to the performance of the company if you have the right skills to secure a job.

Responses can be categorised as follows:

- transformation contributes to the performance of the business; and
- transformation partially contributes to the performance of the business.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Transformation contributes to the performance of the business.	<ul style="list-style-type: none"> • “... and I think in so doing transformation certainly does bring about sustainability performance ...” (P1) • “A business has to be able to transform as a function over time.” (P9) • “So, it is greatly, greatly, greatly important and it is a contributor basically you know, for the performance of the business, it is the most critical element I would say. I think most SMMEs myself include run that risk that you get stuck and you get spoiled with this you know, set mindset of how you conduct or do certain things. And there is a risk of a comfort zone, and you lack to see a potential and growth beyond that comfort zone.” (P13) 	Positive contribution. (✓)
Transformation partially contributes to the performance of the business.	<ul style="list-style-type: none"> • “In my opinion does transformation greatly contribute to the performance of the business? No, not necessarily and why I am saying that if the business has core, if you have your core skills set and are able to achieve sustainability within that space there might be little room for you know continuous transformation especially for SMEs.” “... continuous renewal of the company will result in sustainability ... But at the moment ... the key that drives the industry is what is required there outside ... to bring in new work. So you can be sustainable and flexible within your teams but have all the right systems in place but what is key core currently is how are you marketing and getting work in.” (P15) 	Partial contribution.

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(b) Interview question 2: How does ‘transformation’ ensure social, economic, and environmental goals are achieved?

Client feedback leads to sustainable work practices. SMEs must learn new skills and diversify its portfolio of services. Succession planning contributes greatly to sustainability in the company. A changing external environment in terms of, for example, technology, adoption of new legislation, changing supply chain practices creates the need to transform and not becoming stagnant. Transformation creates opportunities to be creative and innovative in the workplace. Often labour from the local community is employed on a local project, which in turn ensures sustainability within the larger community. The community must be able to enjoy the benefits of the completed project. Transformation often leads to increased revenue.

Some participants, although in the minority, believe that sustainability is ensured by the successful award of tenders and not by the transformation, or continuous renewal of the company.

Responses can be categorised as follows:

- provides for increased collaboration and feedback;
- continuous learning / learning new skills;
- proper succession planning;
- employ competencies required on projects;
- SMEs are forced to keep up with changes in the external environment;
- creative processes;
- innovation;
- employing local labour;
- community needs are addressed through implementing projects;
- opening-up new markets and ensure business growth;
- positive financial growth;
- updated workflow processes;
- better employment conditions;
- project delivery ensures the achievement of social, economic, environment goals; and
- there is no correlation between transformation and sustainability performance.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Increasing collaboration and learning.	<ul style="list-style-type: none"> • "... particularly I think what really promotes sustainability is the feedback that you get from clients ..." (P1) • "...transforming ... learning new skills and ... diversifying your portfolio." (P4) • "... if there is no succession planning in your organisation, you are not going to be sustainable." (P7) 	Growing business. (✓)
Keeping up with changes in the external environment.	<ul style="list-style-type: none"> • "...SMMEs ... are forced to transform because the environment around us is transforming. The use of technology, the passing of new legislation, the entrance of new competitors in to the market with us." (P2) • "... many supply chain practices have changed, and if you don't align yourself with those amendments in legislation and policies and procedures, you may find that you are not inline." (P5) • "... you are able to be creative in how you do your processes." (P9) • "I think it gives a different tune of options and what other ways of doing things and getting to the target and how that target will have an influence on the end user ... There is an element of innovation that comes with transformation. You move away from the norm but you find that the principles which are inherent in my engineering are still kept but how it is delivered it is in a very, very creative way." (P13) 	
Growing the business.	<ul style="list-style-type: none"> • "... to sustain growth and ... therefore opening up new markets." (P4) • "... you need to continuously be transforming and not be stagnant, and then that will also help the business to grow." (P10) • "... transformation ... will help you to impact your business in a positive financial manner." (P5) 	
Addressing local needs.	<ul style="list-style-type: none"> • "... we employ local labour; that creates stability within the community, the broader community." (P6) • "... every project is about the community ... The community must never be worse off after you completed the project; the community must be able to enjoy whatever project is being implemented." (P16) 	Project delivery. (✓)
Project delivery ensures the achievement of social, economic, environment goals.	<ul style="list-style-type: none"> • "... and if you tick those boxes and get those right [project implementation], then I think the secondary issues in terms of social, economic and environmental goals, all will automatically be achieved." (P7) 	

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
There is no correlation between transformation and sustainability performance.	<ul style="list-style-type: none"> • “So yes, in my opinion we do use transformation but it is mainly to survive. It has also no correlation in my opinion to sustainability performance.” (P3) • “Currently the only system that keeps SMEs sustainable is the tendering system and how it’s been structured.” “And it is not through transformation or continuous renewal of companies.” (P15) 	No correlation.

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

(c) Interview question 3: In your opinion, what makes ‘transformation’ more effective to achieve sustainability performance?

The company's vision and mission statement must support sustainable work practices. It is important to embrace new technology. Everyone in the company must be committed to sustainability. It is crucial to meet the needs and expectations of clients. The possibility exists for an SME to develop into a large construction and professional consulting engineering company.

Responses can be categorised as follows:

- integrate sustainability into company vision and mission;
- apply new knowledge learned in courses;
- embracing new technology;
- commitment required throughout the company;
- client satisfaction; and
- opportunity to create a ‘one-stop-shop’.

Themes, direct quotes, and constructs are tabulated below:

Theme	Direct quotes to support theme [Note: (Px) refers to the participant who provided the input].	Construct
Embracing new knowledge and technology.	<ul style="list-style-type: none"> “... must be to ensure that you have a sustainable business practice that is in line with your company vision and your mission statement ...” (P7) “... embracing the upcoming technology or emerging technology to enhance our business is very important ...” (P6) “... there must be commitment from everyone in the organisation from the top boss to the junior or entry level employees.” (P5) 	Change. (✓)
Client satisfaction.	<ul style="list-style-type: none"> “... to continually meeting the clients’ expectations which is the ultimate goal ...” (P16) 	Focusing on the client. (✓)
Opportunity to create a ‘one-stop-shop’.	<ul style="list-style-type: none"> “... no one is saying an SME must stay as a professional service provider and not contemplate that one day it can actually match both professionally construction and supplier you know to create a big enterprise that maybe has evolved from one sector of fully construction but to accommodate all of them.” (P12) 	

Note: (✓) = construct contributes to research question and will be included in the conceptual framework based on the interviews (see Section 5.7).

5.5.3 Conclusion

Sub-research question 3: **How do SME’s use transformation (continuous renewal of the company) to achieve sustainability performance?**

Table 5-4 contains the themes and constructs for each of the interview questions related to sub-research question 3. Those constructs that directly contribute to answering sub-research question 3 and therefore considered for inclusion in the conceptual framework based on the interviews (see Section 5.7) are indicated with a tick (✓):

Table 5-4: Themes and constructs for sub-research question 3

Interview question 1: In your opinion, does 'transformation' greatly contribute to the performance of the business?	
Theme	Construct
Transformation contributes to the performance of the business.	Positive contribution.
Transformation partially contributes to the performance of the business.	Partial contribution.
Interview question 2: How does 'transformation' ensure social, economic, and environmental goals are achieved?	
Theme	Construct
Increasing collaboration and learning.	Growing business. (✓)
Keeping up with changes in the external environment.	
Growing the business.	
Addressing local needs.	Project delivery. (✓)
Project delivery ensures the achievement of social, economic, environment goals.	
There is no correlation between transformation and sustainability performance.	No correlation.
Interview question 3: In your opinion, what makes 'transformation' more effective to achieve sustainability performance?	
Theme	Construct
Embracing new knowledge and technology.	Change. (✓)
Client satisfaction.	Client. (✓)
Opportunity to create a 'one-stop-shop'.	

Note: Those constructs that directly contribute to answering sub-research question 1 and therefore considered for inclusion in the conceptual framework based on the interviews are indicated with a tick (✓).

5.6 Data saturation

Saturation is used to determine when there is sufficient data to develop a robust and valid understanding of the study phenomenon. As mentioned earlier in Section 4.7 (Sampling method and sample size), a sample size of between 16 and 30 participants was considered sufficient to answer the survey questions in this research (Saunders et al., 2012). A total of 16 semi-structured interviews were carried out with owners of SMEs in the construction industry in South Africa.

The interviews were conducted in the same way for all participants, and they were treated as a single sample group regarding coding of transcripts. However, the differences in their responses were captured in frequency and the nature of the topics that the participant emphasised. The interviews and analysis thereof revealed a prevalence of certain topics by way of the frequency of appearance. Frequency of appearance was only counted once per participant even if the topic revealed itself multiple times within an interview.

The creation of new codes was recorded with each interview to track the level of data saturation as shown in **Table 5-5** and **Figure 5-1**. Saturation was reached after interviewing participant 14, after which new insights were very limited.

Appendix G contains the frequency of codes in the thematic analysis.

Table 5-5: Summary of data saturation

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for research question	18	20	14	11	4	6	5	6	7	7	3	2	3	2	1	0
Unique codes generated for sub-research question 1	4	1	1	1	3	2	2	2	1	2	2	0	1	0	0	0
Unique codes generated for sub-research question 2	2	3	1	2	1	0	1	2	0	0	0	0	0	0	0	1
Unique codes generated for sub-research question 3	3	1	1	2	5	2	3	1	1	0	0	1	1	0	1	1
Total unique codes generated	27	25	17	16	13	10	11	11	9	9	5	3	5	2	2	2

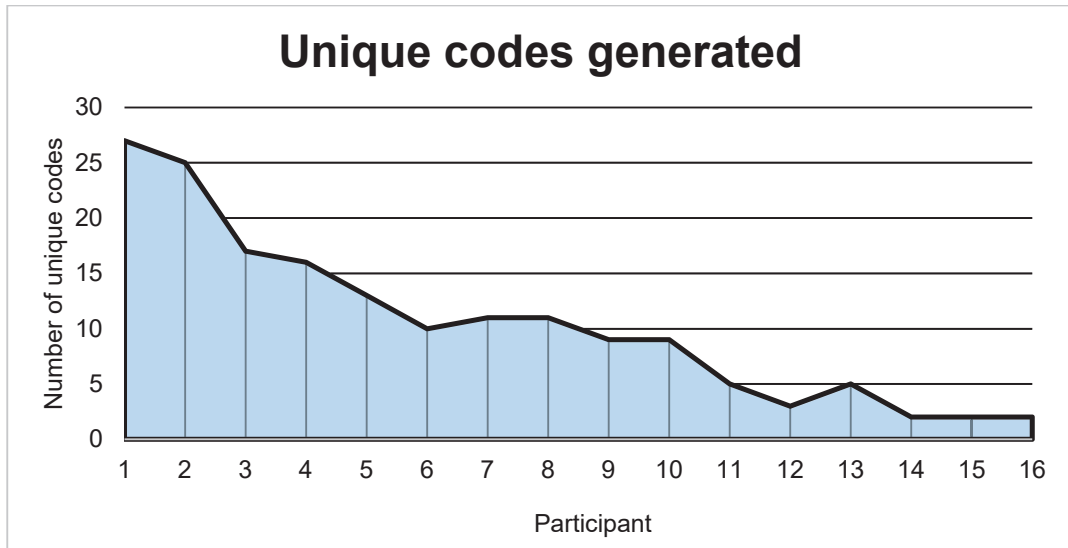


Figure 5-1: Unique codes generated per interview

5.7 Conceptual framework based on interviews

The conceptual framework in **Figure 5-2** illustrates the relationship between the constructs for the research question and sub-questions, and maps how these come together to draw coherent conclusions from the interviews.

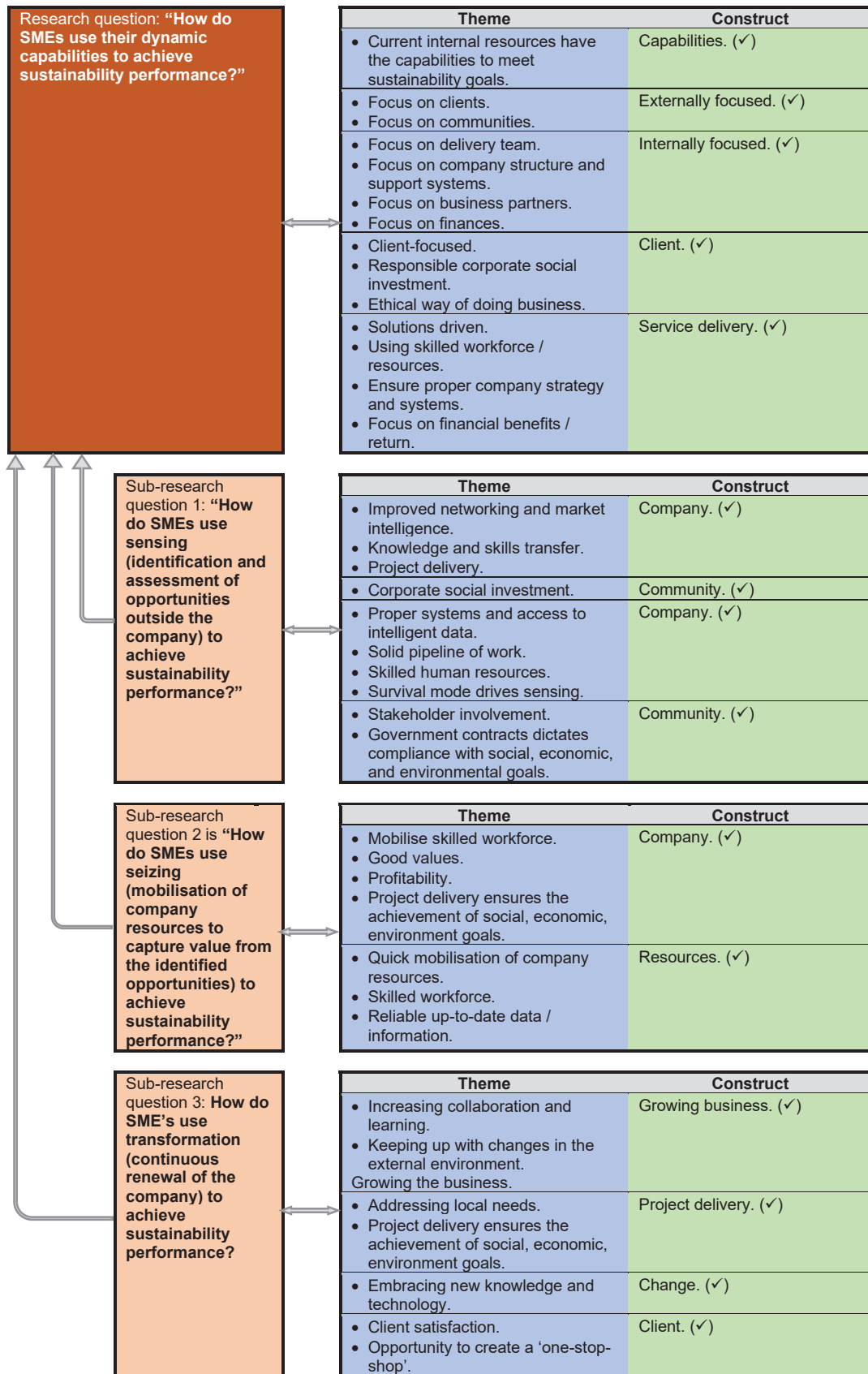


Figure 5-2: Conceptual framework based on interviews

5.8 Conclusion

The conceptual framework in **Figure 5-2** contains constructs based on the interviews for the research question and sub-questions. There is a strong focus throughout on the company, project delivery and the local community.

It is worth mentioning that several responses from the interviews focus on the weak and challenging state of the construction industry in South Africa. Although these points are not included in the conceptual framework, these comments should be considered by decision-makers and professional bodies in the construction industry, as these challenges pose a serious threat to the existence of SMEs in the construction industry in South Africa. Common challenges that consistently emerged when participants were asked the research question and sub-questions are:

- challenging procurement processes (lengthy procurement processes and challenging procurement entry requirements for SMEs; unrealistic tender requirements; and lack of transparency in the awarding of tenders);
- skills shortage (limited available skills; and poor skill level and education);
- financial hardship (extended and late payments by customers; difficult to access financing; cash flow problems; and unrealistic discounts expected by the government.);
- unstable industry (unprotected industry; construction mafias; corruption; political interference; and stiff competition); and
- strict tax compliance (various legal / tax compliance requirements).

Limited and ad-hoc new opinions include:

- commitment towards sustainability does not influence company performance in a positive way;
- there is no correlation between sensing and sustainability performance;
- there is no correlation between seizing and sustainability performance; and
- there is no correlation between transformation and sustainability performance.

In the following Chapter 6, the findings of Chapter 5 are compared with the literature in Chapter 2.

CHAPTER 6: DISCUSSION OF THE RESEARCH FINDINGS

6.1 Introduction

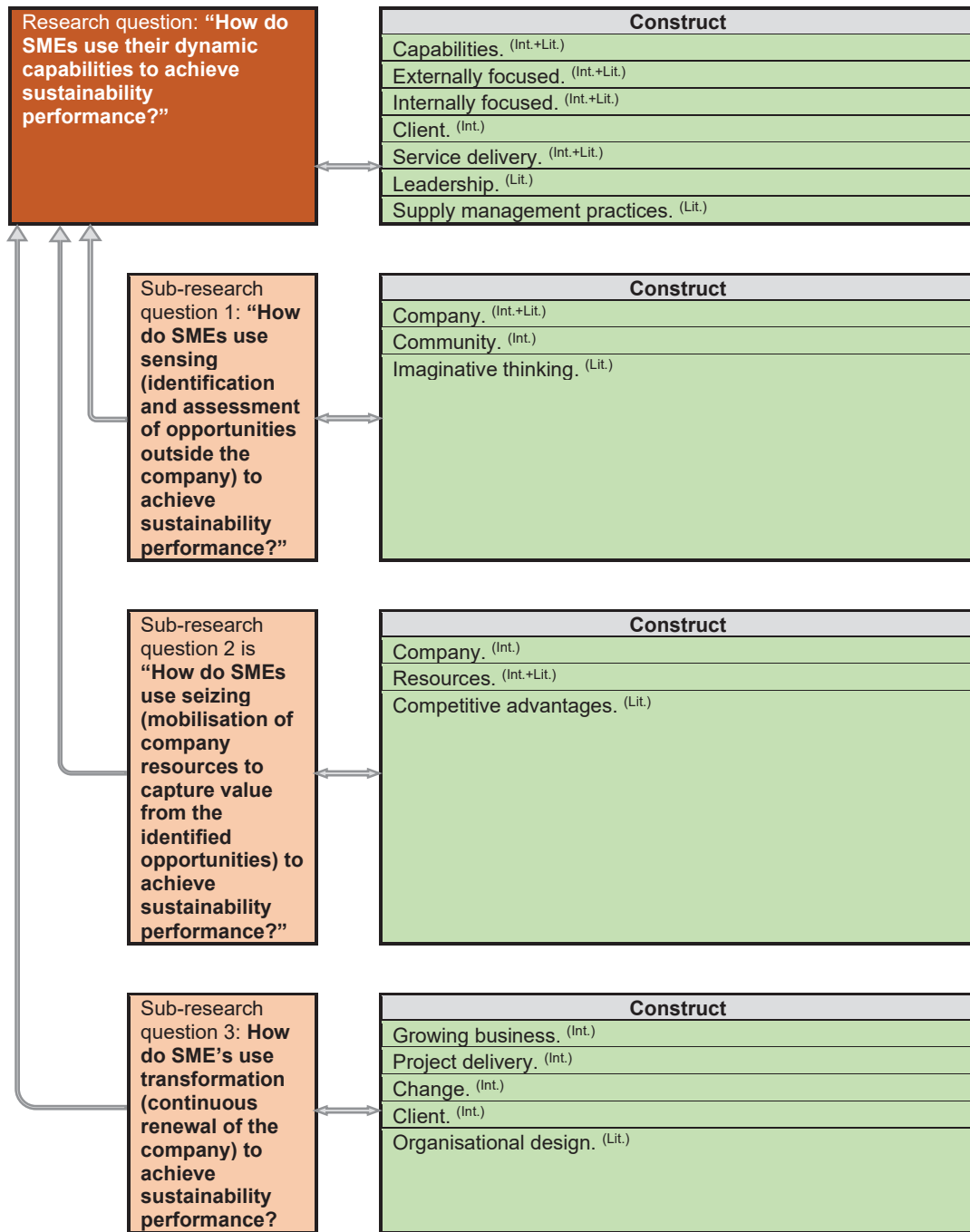
This chapter contains a discussion of the research findings as they relate to the research question and three sub-questions. The findings of this study as contained in Chapter 5 are linked back to the literature contained in Chapter 2 to compare the research findings with what other scholars have said. An analysis is done for each research question to reach a conclusion about each one. The overall conclusion at the end of this chapter brings it all together.

6.2 Updated conceptual framework based on literature review and interviews

The key themes and constructs contained in the conclusion tables in Chapter 5 and the theoretical framework based on the interviews (see **Figure 5-1**) are compared with the literature search in Chapter 2 and the theoretical framework based on the literature search (see **Figure 2-2**). Similarities between the surveyed findings and the literature are identified, as well as new themes that emerged from the surveyed findings, which were not captured as part of the original literature review in Chapter 2.

Figure 6-1 shows the updated conceptual framework based on key findings from the interviews conducted with research participants, and the insights obtained through the literature review. It sets out the key constructs of the main research question and three sub-questions.

Constructs addressed in both interviews and literature concentrated on the capabilities of the company's internal resources; the need for the company to focus externally and internally; and that the company must be centred on service delivery and being solution-driven.



Legend:

- (Int.+Lit.) = Construct addressed in both interviews and literature.
- (Int.) = Construct addressed in interviews only.
- (Lit.) = Construct addressed in literature only.

Figure 6-1: Updated conceptual framework based on interviews and literature review

6.3 Research question

6.3.1 Introduction

The primary research question that the research project wants to answer is: *"How do SMEs use their **dynamic capabilities** to achieve sustainability performance?"*

The following constructs are covered under the research question:

1. Capabilities. (Int.+Lit.)
2. Externally focused. (Int.+Lit.)
3. Internally focused. (Int.+Lit.)
4. Client. (Int.)
5. Service delivery. (Int.+Lit.)
6. Leadership. (Lit.)
7. Supply management practices. (Lit.)

Legend:

- (Int.+Lit.) = Construct addressed in both interviews and literature.
- (Int.) = Construct addressed in interviews only.
- (Lit.) = Construct addressed in literature only.

6.3.2 Construct 1: Capabilities

(a) Recap of key findings from interviews

For the SME to be able to fully capitalise on its dynamic capabilities, it is important for the SME that its internal resources have the necessary capabilities to be able to achieve sustainability goals. P11 responded by saying, "But I would say yes, my internal resources have the capabilities to meet sustainability goals." Nevertheless, most SMEs in the construction sector do not have competent internal resources, which can achieve sustainability goals.

(b) Recap of key insights from literature

The literature has shown the relevance of dynamic capabilities to sustainability (Mousavi et al., 2019). The idea is to focus on the capacity of a company to purposefully create, expand and modify its resource base (Helfat, et al., 2007). The concept is not only concerned with creating new valuable and scarce resources, but also with refreshing the existing resources for the changing business environment and challenges (Ambrosini & Bowman, 2009). The resources and competencies that can give a firm competitive

advantage must be valuable, rare, inimitable, and non-substitutable (VRIN) (Mousavi, et al., 2019).

(c) Comparison of key findings from interviews with insights from literature

Although the literature has shown that it is important to transform and integrate resources, leading to a new resource configuration (Jong, 2019), very few SMEs' internal resources have the capacity to achieve sustainability goals.

(d) Conclusion

Internal resources of SMEs must be equipped with the necessary competencies to achieve sustainability goals.

6.3.3 Construct 2: Externally focused

(a) Recap of key findings from interviews

It is important for the SME to have a good understanding of the market, clients and to focus on the local community. P5 supports this statement by saying: "... having a good understanding of the market out there, from a business development point of view we need to be able to see where the business is going, where the opportunities are coming from, what sort of requirements do our clients require."

(b) Recap of key insights from literature

External integrative dynamic capabilities are positively related to social, environmental, and economic performance of SMEs and achieving sustainability (Jong, 2019).

(c) Comparison of key findings from interviews with insights from literature

Both the participants who were interviewed as well as the literature that was consulted largely promote the view that the SME must be externally focused on the market and clients to ensure sustainability in the business.

(d) Conclusion

SMEs in the construction industry must be externally focussed to ensure sustainability.

6.3.4 Construct 3: Internally focused

(a) Recap of key findings from interviews

The SME needs to focus on its delivery team and support systems to ensure sustainable performance. P9 believes that "...the capability of your team is primary ..." According to P14, the latter is essential to "...making sure your quality of your work is top notch ..."

P8 emphasises the importance of a company structure and systems as he rightly says: "...you need a structure, a professional structure in place, meaning now your systems actually working in a business have to be in place as well so that people cannot really just do as they please, outside of the systems of the business."

(b) Recap of key insights from literature

The internal integrative dynamic capabilities are positively related to social, environmental, and economic performance of SMEs to achieve sustainability (Jong, 2019). (Jong, 2019) also believes that leveraging, which replicates a process or system from one business unit to another; is important for achieving sustainability.

(c) Comparison of key findings from interviews with insights from literature

Both participants being interviewed and the literature support the view that internally focused performance leads to sustainability.

(d) Conclusion

SMEs in the construction industry must be internally focussed to ensure sustainability.

6.3.5 Construct 4: Client

(a) Recap of key findings from interviews

The SME must be client focused as stated by P4: "...understand our client's needs ..."
Doing business ethically with clients is non-negotiable. In this regard, P1 says: "... doing business in an ethical manner that then fosters continued business relationships ..."

(b) Recap of key insights from literature

The literature that was consulted focuses to a lesser extent on the client, but more on the inner workings of the company, such as resources and systems.

(c) Comparison of key findings from interviews with insights from literature

Participants were strongly of the opinion that the SME should focus on the needs of the client, while the literature focuses more on the operations that happen within the company.

(d) Conclusion

SMEs in the construction industry must always focus on understanding and addressing the needs of its clients.

6.3.6 Construct 5: Service delivery

(a) Recap of key findings from interviews

SMEs must be service delivery driven by using skilled workforce / resources. P1 promotes the idea of being solutions driven by saying: "... consider how the solutions you offer impact the occupants of the buildings you are then trying to construct or design."

(b) Recap of key insights from literature

Innovation in project delivery can be developed to address sustainability using dynamic capabilities (Dangelico et al., 2017). Literature has shown that learning, which experiments and reflects on failures and successes; contributes to sustainable service delivery (Jong, 2019).

(c) Comparison of key findings from interviews with insights from literature

The need for the SME in the construction industry to be service delivery focused is supported by both the participants who were interviewed and the literature.

(d) Conclusion

SMEs in the construction industry must be service delivery focused to ensure sustainability in the company.

6.3.7 Construct 6: Leadership

(a) Recap of key findings from interviews

During participants' responses to the research question, there was no explicit mention of leadership's contribution to sustainability. The role of leadership and sustainable performance is, however, highlighted later in the answers to sub-research question 1.

(b) Recap of key insights from literature

Pitelis et al. (2019) refer to the role of individual key leaders in the human resource base that shapes the dynamic capabilities of a company. These key individual leaders are mostly entrepreneurs. Transformational leadership is positively related to internal integrative dynamic capabilities (Jong, 2019).

(c) Comparison of key findings from interviews with insights from literature

Both participants and especially the literature associated with the importance of good leadership in the company to achieve sustainability.

(d) Conclusion

Good leadership in SMEs in the construction industry ensures sustainability in the company.

6.3.8 Construct 7: Supply management practices

(a) Recap of key findings from interviews

Although many participants pointed out challenges and frustrations regarding the supply chain management processes of clients who are responsible for awarding tenders to, among others, SMEs, no mention was made during the interviews of the SME's own internal supply management processes.

(b) Recap of key insights from literature

Raza et al. (2021) discussed sustainability from supply chain management perspectives and asserted that there is a positive relationship between sustainable supply management practices of companies and their sustainability performance.

(c) Comparison of key findings from interviews with insights from literature

Respondents were silent on the impact of their own supply management practices on sustainability, although the literature claims that a positive relationship exists between sustainable supply management practices of companies and their sustainability performance.

(d) Conclusion

There is a positive relationship between sustainable supply management practices of SMEs and their sustainability performance.

6.3.9 Conclusion

The research found that most of the SMEs subscribe to sustainability, but it is not often in the context of prioritizing sustainability but boosting the ability to service the clientele or survive as a business. This aligns with the literature on the trend of failing of most SMEs within the first few years leading to their winding up (Wentzel, Fapohunda & Haldenwang, 2022). The finding of this research therefore highlights the tendency for SMEs to focus on survival based on the interpretation of the existing literature. This is a negative implication for sustainability performance in business. Furthermore, the finding of this research contrasts the view of scholars that sustainability issues and longevity of the firms in the modern business are interlinked (Freese, 2007; & Higgins, 2014) because

the SMEs do not necessarily see sustainability as a question of priority that it necessary for their survival and longevity.

However, the fresh perspective in the finding of this research is that despite the negative implication of the finding for sustainability performance of SMEs, the SMEs unconsciously, pursue sustainability. The danger is that if they find any unsustainable alternative that meets their priority at any point, they may abandon the pursuit of sustainability. In the example of the use of solar equipment in the office to address load shedding, if the business finds another source of energy, it will likely use such source of energy, even if it is based on fossil fuel or have more negative environmental or social impacts.

Furthermore, the research's finding that most of the SMEs in the construction industry do not have sufficient internal resources to pursue sustainability because of limited resources and the struggle for survival is aligned with the literature on the challenges faced by SMEs. Such challenges have been identified as including shortage of resources and the inadequate ability to manage risks compared to their large corporations counterparts (Hsu et al., 2017; Lima, Crema & Verbano, 2020). Nonetheless, the new interlinked challenges identified in the finding of this research which arises in the construction industry of South Africa are the lack of qualification of some industry practitioners and the low entry barrier into the industry where some participants identified that even those without engineering qualifications could easily establish businesses in the industry. These new interlinked challenges question the ability of SMEs in the industry to acquire dynamic capabilities or realize such dynamic capabilities where they have them, for the pursuit of sustainability performance.

Separately, the finding of the research shows that the commitments of SMEs to sustainability leads to innovation and such commitments are driven by the government or market requirements in some contexts. The relationship between sustainability and innovation has been explored by Dangelico, Pujari and Pontrandolfo (2017) where they examined how innovations can be developed to address sustainability, using dynamic capabilities. However, the connection with innovation in the present research is wider, as it includes a reversal of the wheel. It not only shows that innovations can lead to sustainability, but it shows that the reverse is also true that sustainability can lead to more innovation. It is noted that some of the participants believe that the commitments do not influence performance, and some believe that the commitments to environmental and social values reduce the already limited resources that could have been deployed to manage projects and ensure revenue growth. This relates to the literature on the perception of sustainability as costly and the perception of themselves as having too

limited resources for incorporation of sustainability into their operations (Ammenberg & Hjelm, 2003).

Exploring the negative perception about sustainability being costly for the businesses further, it is found that the view of the costs of business operation has been very limited. The businesses have social and environmental externalities which have not been considered. Some scholars have propounded that business become more conscious of these externalities where regulations make them to pay for the environmental and social impacts (Kuik et al. 2019; Heine, Faure & Dominioni, 2020).

6.4 Sub-research question 1

6.4.1 Introduction

Sub-research question 1 is: *“How do SMEs use **sensing** in dynamic capabilities to achieve sustainability performance?”*

The following constructs are covered under the sub-research question 1:

1. Company. ^(Int.+Lit.)
2. Community. ^(Int.)
3. Imaginative thinking. ^(Lit.)

Legend:

- (Int.+Lit.) = Construct addressed in both interviews and literature.
- (Int.) = Construct addressed in interviews only.
- (Lit.) = Construct addressed in literature only.

6.4.2 Construct 1: Company

(a) Recap of key findings from interviews

Focussing on the company is key to achieving sustainability. P10 states: “So then with all that network then it actually helps greatly for the company to perform.” P2 claims that through sensing “...we were able to position ourselves ...” and P6 believes that “Sensing ... helps us to position our brand ...” P1 claims that: “You have got to also introduce systems that enable sustainability of the business ...” P7 maintains that “... this is where the leadership of the company comes in.”

(b) Recap of key insights from literature

Scanning the future implication of the current and developing threats early before the competitors can identify them or make full sense of them is critical (Schoemaker et al., 2018). The process may involve observing the current events to generate hypotheses, which are further tested to create new pieces of information or data (Dong et al., 2016).

(c) Comparison of key findings from interviews with insights from literature

Although the specifics of the themes may differ, both participants and the literature promote the idea of focusing on the company to ensure sustainability.

(d) Conclusion

The SME must focus on identifying risks and opportunities and positioning the company.

6.4.3 Construct 2: Community

(a) Recap of key findings from interviews

P16 cautions that "... upliftment of the community..." Is key for any SME operating in the construction industry. According to P11, "... it is the planning right from the onset, where you involve all the role players and stakeholders ..."

(b) Recap of key insights from literature

The literature in Chapter 2 does not clearly mention the involvement of the local community during the implementation of projects to ensure sustainability.

(c) Comparison of key findings from interviews with insights from literature

Although the literature is silent on the involvement of the local community to ensure sustainability, participants were firmly convinced that the SME can involve the local community in various ways to ensure sustainability, such as through skills transfer and job creation.

(d) Conclusion

SMEs should involve the affected community leaders in all steps of project planning and implementation to ensure sustainability performance.

6.4.4 Construct 3: Imaginative thinking

(a) Recap of key findings from interviews

Respondents did not touch on imaginative thinking when answering sub-research question 1.

(b) Recap of key insights from literature

The company must think imaginatively about the ideal future point of an opportunity beyond technological, legal, market and socio-political constraints of the present time. The challenge is that employees can easily become fixated on routine tasks that banish peripheral vision to the blind spots, unless deliberate efforts are made to stimulate imaginative thinking (Day & Schoemaker, 2006).

(c) Comparison of key findings from interviews with insights from literature

Both participants and the literature support the idea of stimulating imaginative thinking in the company.

(d) Conclusion

Imaginative thinking about the ideal future of the present opportunities is key for SMEs.

6.4.5 Conclusion

The research found that there is a positive relationship between sensing and sustainability performance of the SMEs. The participants show that the capabilities on sensing include the ability of the industry players in the SMEs to use networking with industry leaders and transfer of knowledge to gain insights into the opportunities and threats. This confirms the definition of sensing in the literature (Schoemaker et al., 2018). The research finding also shows that the factors that make sensing more effective in sustainability performance include the focus on the companies and the communities. In terms of the companies, proper systems and access to intelligent data is critical, as well as skilled human resources, although the survival mode may also drive sensing. Other factors in the community focus include stakeholders' involvement and government contracts that require environmental and social standards for compliance.

The outcome here shows mixed perceptions which is noted in the literature that sustainability is either sensed positively or negatively. Some scholars have argued that when it comes to sustainability discussions, businesses are either part of the problem or they are part of the solutions (Adams et al., 2016). They are part of the solution where they have the dynamic capability to sense opportunities and threats accurately and interpret the data correctly.

6.5 Sub-research question 2

6.5.1 Introduction

Sub-research question 2 is: “How do SMEs use **seizing** in dynamic capabilities to achieve sustainability performance?”

The following constructs are covered under the sub-research question 2:

1. Company. ^(Int.)
2. Resources. ^(Int.)
3. Competitive advantages. ^(Lit.)

Legend:

- (Int.+Lit.) = Construct addressed in both interviews and literature.
- (Int.) = Construct addressed in interviews only.
- (Lit.) = Construct addressed in literature only.

6.5.2 Construct 1: Company

(a) Recap of key findings from interviews

Like answering sub-research question 1, participants again mentioned the need to focus on the company when responding to sub-research question 2. P10 says that “... having resources helps to be able to achieve certain things that will make the company sustainable.”, whereas P1 says “... you've seized the opportunity and you have mobilised competent resources to deliver in line with the as sold margins.”

Having solid internal values is key for the SME. P4 mentioned that “... one of the key drivers of sustainability is to ensure that as a business you have good values for delivering your output... “, and “...some of the key things that are needed for SMEs is just to try and trust each other ...”

(b) Recap of key insights from literature

The literature assessed in Chapter 2 does not explicitly indicate that there is a correlation between seizing and sustainability performance.

(c) Comparison of key findings from interviews with insights from literature

Respondents believed that seizing enables the SME to mobilise appropriate and skilled resources, although the literature did not clearly highlight this.

(d) Conclusion

SMEs must have a strong inward focus of the company as part of seizing to ensure sustainable performance.

6.5.3 Construct 2: Resources

(a) Recap of key findings from interviews

It is important to be able to mobilise skilled company resources quickly. This is confirmed by P9 who states that "... to have your business thriving you have to mobilise your resources to exploit opportunities." P2 reveals that "... we try to acquire multi-disciplinary people and reskill everyone in the organization so that we are more multi-disciplinary, so that we can move across the different centres of excellence depending on the assignment requirements."

(b) Recap of key insights from literature

Seizing is key for the company to mobilise its resources to capture value from the identified opportunities and to adequately address the threats (Schoemaker et al., 2018).

(c) Comparison of key findings from interviews with insights from literature

Both participants and the literature maintain the importance of taking adequate steps to mobilise competent resources.

(d) Conclusion

The correct mobilisation of resources in the SME leads to increased sustainability performance.

6.5.4 Construct 3: Competitive advantages

(a) Recap of key findings from interviews

Participants did not refer to competitive advantage when asked to respond to sub-research question 2.

(b) Recap of key insights from literature

Seizing allows for gaining competitive advantages from opportunities (Matysiak et al., 2018).

(c) Comparison of key findings from interviews with insights from literature

Although respondents did not touch on competitive advantage when attending to sub-research question 2, the literature maintains that once dynamic capabilities have been successfully sustained, it provides competitive advantage (Schoemaker et al., 2018).

(d) Conclusion

Dynamic capabilities are concerned with the ability of the SME to develop and sustain competitive advantages that go beyond simply surviving in the volatile business environment.

6.5.5 Conclusion

The research has found that the SMEs generally develop their dynamic capabilities of seizing by blending infrastructure with the business environment and by complying with legislations and regulations. The findings here about what the companies do with seizing is in tandem with the literature on the conceptual understanding of seizing as a dimension of the dynamic capabilities (Schoemaker et al., 2018). However, another aspect is that it is not said to involve only the development but also the investment in things that the company to capture and use the resources effectively. Seizing is said in the literature to require making adequate investment into neutralizing the threats and improving the chances of gaining competitive advantages from opportunities (Matysiak, Rugman & Bausch, 2018). The question remains whether in doing so the SMEs consider the impacts of their operations on the environment, and local communities by complying with ethical requirements and by seizing the identified opportunities for business growth.

Although, the finding shows an indication that sustainability is not really a priority because of qualification of the industry practitioners, limited financial resources and lack of support from government and banks, it finds positive perception of the role of seizing. The participants identified that seizing plays a major role in dynamic capabilities for sustainability. Although limited resources exists, seizing enables the company to mobilise the available resources appropriately and capably. As a result of the limited resources available to drive the performance of SMEs in the construction industry, sometimes young graduates are used to make service delivery more cost-effective. One of the key drivers of sustainability is to ensure that the leadership and staff promote good values. Trust is key in relationship building. SMEs place great focus on margins and profitability. This aspect also confirms the literature on the role of leadership of firms in driving sustainability and in harnessing the resources of the firms towards these objectives (Freese, 2007).

However, the research finds that the sustainability agenda requires the correct mobilisation of resources that leads to the increased capture of employment opportunities. It is more often cost-effective to train junior staff and use such cost-effective resources. The appropriate mobilisation of resources and equipment can lead to the more cost-effective execution of the work. It also identified that the continuing professional development is encouraged. Staff are often encouraged to be multi-skilled to work on multi-disciplinary projects. Having up-to-date and reliable information is important when it comes to obtaining market intelligence. The literature identifies that the construction industry of the sustainable business climate requires resource management, life-cycle design and design for human and environment” (Sev, 2009).

6.6 Sub-research question 3

6.6.1 Introduction

Sub-research question 3 is: *“How do SMEs use **transforming** in dynamic capabilities to achieve sustainability performance?”*

The following constructs are covered under the sub-research question 3:

1. Growing business. ^(Int.)
2. Project delivery. ^(Int.)
3. Change. ^(Int.)
4. Client. ^(Int.)
5. Organisational design. ^(Lit.)

Legend:

- (Int.+Lit.) = Construct addressed in both interviews and literature.
- (Int.) = Construct addressed in interviews only.
- (Lit.) = Construct addressed in literature only.

6.6.2 Construct 1: Growing business

(a) Recap of key findings from interviews

Transformation serves “... to sustain growth and ... therefore opening up new markets.” (P4) P10 agrees with the sentiments of P4 by saying: “... you need to continuously be transforming and not be stagnant, and then that will also help the business to grow.”

(b) Recap of key insights from literature

The literature covered in Chapter 2 does not openly state that the SME must continuously transform and not be stagnant to ensure business growth.

(c) Comparison of key findings from interviews with insights from literature

Although the literature does not explicitly say that the SME must grow, most respondents are of the opinion that the company must grow to keep up with the changing and turbulent business environment.

(d) Conclusion

SMEs need to transform and grow because the environment around them is constantly transforming.

6.6.3 Construct 2: Project delivery

Project delivery ensures the achievement of social, economic, environment goals. Often labour from the local community is employed on a local project, which in turn ensures sustainability within the larger community. According to P6, "... we employ local labour; that creates stability within the community, the broader community." P16 adds to what P6 said by saying: "... every project is about the community ... The community must never be worse off after you completed the project; the community must be able to enjoy whatever project is being implemented."

(a) Recap of key insights from literature

The literature sources do not speak openly about the impact of project delivery and the involvement of the local community on sustainability performance.

(b) Comparison of key findings from interviews with insights from literature

Although the literature sources are silent on the impact of project delivery and the involvement of the local community on sustainability performance, participants who were interviewed placed a great focus on project delivery and the involvement of the local community when it comes to project delivery.

(c) Conclusion

Project delivery is key when it comes to sustainability performance of the SME.

6.6.4 Construct 3: Change

(a) Recap of key findings from interviews

SMEs must embrace new knowledge and technology to ensure sustainability performance. P6 strongly believes that: "... embracing the upcoming technology or emerging technology to enhance our business is very important ..."

(b) Recap of key insights from literature

The available literature in Chapter 2 does not emphasise the need for the SME to embrace change.

(c) Comparison of key findings from interviews with insights from literature

The literature does not underline the need for the SME to embrace change. Nevertheless, many respondents believe that the SME should embrace change, such as new technology.

(d) Conclusion

The acceptance of change is critical when it comes to sustainability performance of the SME.

6.6.5 Construct 4: Client

(a) Recap of key findings from interviews

The SME must ensure client satisfaction. It is important "... to continually meeting the clients' expectations which is the ultimate goal ..." (P16)

(b) Recap of key insights from literature

The literature in Chapter 2 does not emphasise the need for a strong focus on the client.

(c) Comparison of key findings from interviews with insights from literature

Although the literature does not detail the need to focus on the client, many participants referred to focusing on the client and ensuring customer satisfaction.

(d) Conclusion

SMEs in the construction sector in South Africa must constantly focus on the client to ensure client satisfaction.

6.6.6 Construct 5: Organisational design

(a) Recap of key findings from interviews

Participants interviewed did not touch on organisational design of the SME.

(b) Recap of key insights from literature

Transformation is the continuous renewal of the company beyond simply adapting to the changes in the external environment. It is a process of reforming the company itself (Schoemaker et al., 2018).

(c) Comparison of key findings from interviews with insights from literature

Participants did not refer to organisational design when questioned on sub-research question 3. The literature search in Chapter 2 dealt with organisational design.

(d) Conclusion

The need for organisational design enables the company to continuously evolve and achieve sustainability performance (Felin & Powell, 2016).

6.6.7 Conclusion

The scholars view transforming as a process of reshaping the company itself (Schoemaker et al., 2018). The research found that most participants believe that transformation contributes greatly to the sustainable performance of the business. One participant however believes that transformation does not necessarily contribute to the performance of the company, if you have the right skills to secure a job. This implies that the research substantially confirms the conceptual understanding in the literature. As for the view of the one participant, there is an ostensible admission that the right skill is needed. The question is how the right skill is to be acquired and this is the focus of transforming. Transforming implies that a company will continually acquire capabilities as it must be careful not to being trapped in a comfort zone. The existing literature shows that a 'competency trap' or 'strategic inertia' exists where a company continues to build competencies and capabilities in aspects that no longer matter, which emphasises the need for organisational design that enables the company to continuously evolve (Felin & Powell, 2016). Along this line, the research found that customer feedback may lead to sustainable work practices. It shows that SMEs must learn new skills and diversify its portfolio of services. Further, it found that succession planning contributes greatly to sustainability in the company. A changing external environment in terms of, for example, technology, adoption of new legislation, changing supply chain practices creates the need to transform and not becoming stagnant. Transformation creates opportunities to

be creative and innovative in the workplace. Often labour from the local community is employed on a local project, which in turn ensures sustainability within the larger community. The community must be able to enjoy the benefits of the completed project. Transformation often leads to increased revenue.

Some participants, although in the minority, believe that sustainability is ensured by the successful award of tenders and not by the transformation, or continuous renewal of the company. The question remains also how a company can continue to secure award of tenders in changing business environments without the company transforming to meet changing requirements.

Finally, it is found that the company's vision and mission statement must support sustainable work practices. It is important to embrace new technology. Everyone in the company must be committed to sustainability. It is crucial to meet the needs and expectations of clients. The possibility exists for an SME to develop into a large company in the construction industry.

6.7 Conclusion

This chapter provided a summary of key findings from interviews and of key insights from literature by unpacking different key constructs. Key findings from interviews were compared with insights from the literature, followed by a conclusion.

Chapter 7 that follows is derived from the discussion in Chapter 6, where the theoretical analysis of the literature and the results / findings are presented.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter highlights the main conclusions of the research discussion in Chapter 6. Chapter 7 also includes recommendations for management and implications for business, which are derived from the research conclusions. It outlines the limitations of the study as a whole and provides recommendations for future research.

7.2 Summary of findings

Figure 7-1 graphically shows the summary of the research findings. **Figure 7-1** compares the themes and constructs identified from the interviews with those themes and constructs identified from the literature search. Similarities are then identified, as well as those themes and constructs specific to either the interviews or the literature are indicated. Although constructs may be similar for the interviews and literature search, the themes that make up a construct for the interviews may differ when compared to the literature search's themes and vice versa.

From the interviews and the literature regarding how SMEs use their dynamic capabilities (sensing, seizing, and transformation) to ensure sustainability performance, there are some common and unique contributions. A summary follows below.

Constructs that emerged in **both interviews and literature** focus on the capabilities of the internal resources of the company, and more specifically whether they can achieve sustainability goals. The company must drive solutions using a skilled workforce that is innovative and eager to learn from failures and successes. The need to be able to integrate and reconfigure resources with little effort is important. Rapid mobilisation of skilled company resources is key to capturing value from the identified opportunities. Knowledge and skill transfer is key to improving project delivery. The company needs to focus on its delivery team, business partners and finances. The company structure and support systems must be sufficient to ensure service delivery. Reliable up-to-date data / information promotes sustainability. KPIs must be implemented to be able to measure performance of staff and management, as well as financial goals against set targets. The company must also focus externally on clients and communities where projects are implemented. The external environment must be constantly scanned to identify opportunities and threats, and to improve networking and market intelligence.

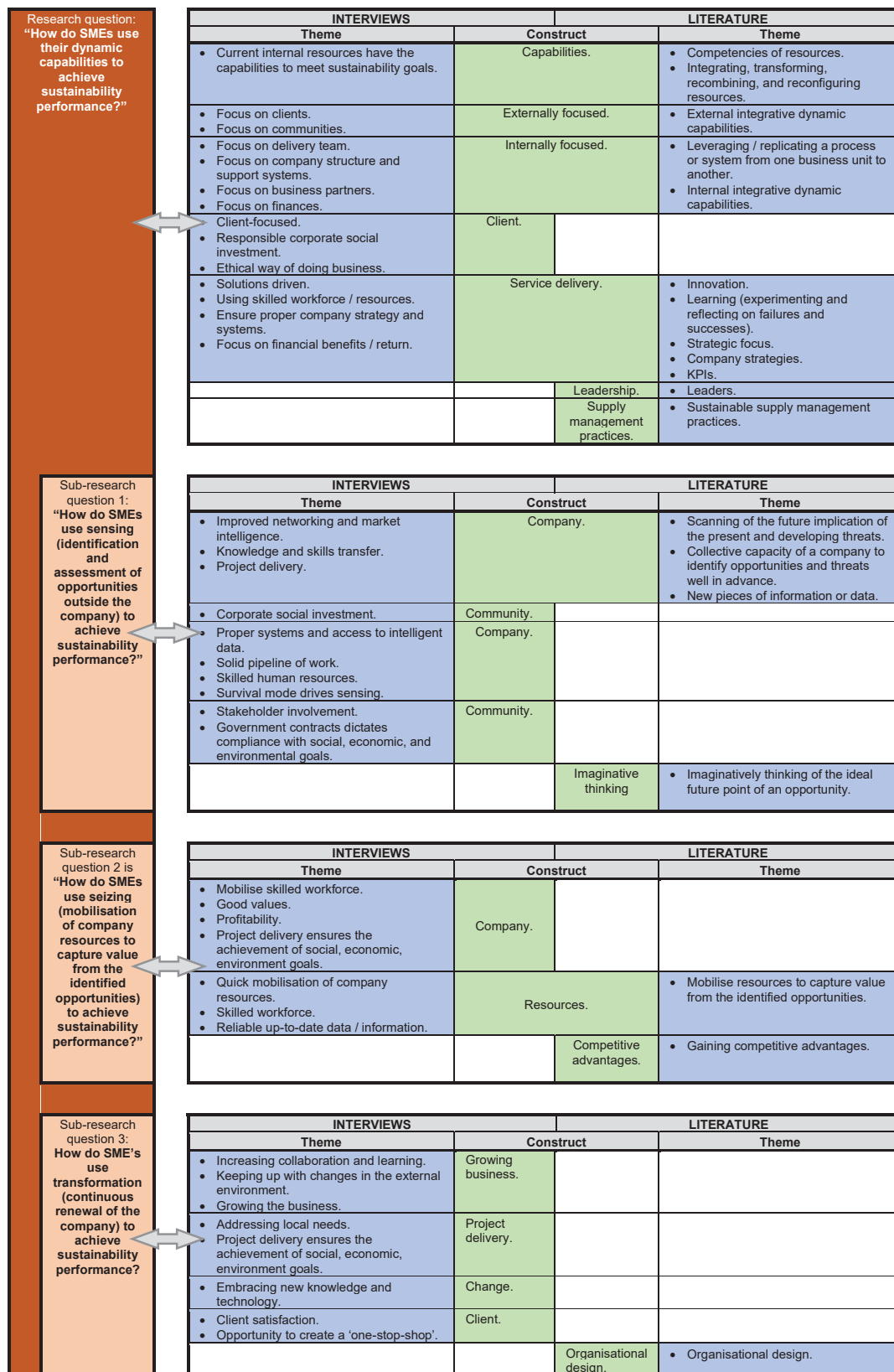


Figure 7-1: Summary of research findings per research question and sub-questions

Constructs that are **only addressed in interviews** mention that the company must conduct its business in an ethical manner according to a good value system to ensure client satisfaction. Corporate social investment contributes to the suitability of the company. Involvement of local stakeholders is important when implementing a project. Increasing collaboration, learning, and keeping up with changes in the external environment makes the business grow. The adoption of new knowledge and technology enables the company to stay abreast of market developments. There is a strong focus on the ongoing profitability of the company. A solid pipeline of work ensures the long-term survival of the company.

Constructs that are **only addressed in literature** emphasise the importance of visionary leadership. Thinking imaginatively about the ideal future opportunity helps to gain a competitive advantage for the company. A resilient organisational structure ensures that the company remains relevant in a changing external environment.

7.3 Principal theoretical conclusions

7.3.1 Research question

Subscription to and commitment to sustainability practices has a positive impact on the performance of SMEs in the construction industry in South Africa. Jong (2019) shows a positive relationship between sustainability and the social, environmental, and economic performance of SMEs.

Internal resources of SMEs must be equipped with the necessary skills to achieve sustainability goals. The resources and competencies that can give a company competitive advantage must be valuable, rare, inimitable, and non-substitutable (VRIN) (Mousavi, et al., 2019).

SMEs in the construction industry must be externally and internally focused to ensure sustainability. External and internal integrative dynamic capabilities are positively related to social, environmental, and economic performance of SMEs to achieve sustainability (Jong, 2019).

SMEs in the construction industry must focus on understanding and addressing the needs of its clients.

SMEs must be service delivery focused to ensure sustainability in the company. Learning, which experiments and reflects on failures and successes; contribute to sustainable service delivery (Jong, 2019).

Moral leadership ensures sustainability in the company. Pitelis et al. (2019) refer to individual key leaders in shaping the dynamic capabilities of the company.

There is a positive relationship between sustainable supply management practices of SMEs and their sustainability performance. Raza et al. (2021) claimed that there is a positive relationship between sustainable supply management practices of companies and their sustainability performance.

7.3.2 Sub-research question 1

Sensing contributes significantly to the performance and sustainability of SMEs in the construction industry.

SMEs should focus on identifying risks and opportunities and positioning the company. Scanning the future implication early before the competitors can identify or make full sense of them is critical (Schoemaker et al., 2018).

SMEs should involve the affected community leaders in all steps of project planning and implementation to ensure sustainability performance.

Imaginative thinking about the ideal future is key for SMEs. The company must think imaginatively about the ideal future point of an opportunity beyond technological, legal, market and socio-political constraints of the present time (Day & Schoemaker, 2006).

7.3.3 Sub-research question 2

Seizing contributes greatly to the performance and sustainability of the business.

SMEs must have a strong inward focus of the company as part of seizing to ensure sustainable performance.

The correct mobilisation of resources in the SME leads to increased sustainability performance. Seizing is the key for the company to mobilise its resources to capture value from the identified opportunities (Schoemaker et al., 2018).

Dynamic capabilities are concerned with the ability of the SME to develop and sustain competitive advantages. Seizing makes it possible to gain competitive advantages from opportunities (Matysiak et al., 2018).

7.3.4 Sub-research question 3

Transformation contributes to the sustainability performance of the SME. SMEs need to transform and grow because the environment around them is constantly changing. The acceptance of change is critical when it comes to sustainability performance of the SME. SMEs in the construction sector in South Africa must constantly focus on the client to ensure client satisfaction.

Transformation is the continuous renewal of the company beyond simply adapting to the changes in the external environment. The need for organisational design enables the company to continuously evolve and achieve sustainability performance (Felin & Powell, 2016).

7.4 Research contribution

Even though several studies on dynamic capabilities and organisational sustainability performance have already been done (Amui et al., 2017), limited research has been done so far to integrate dynamic capabilities and organisational sustainability performance, and this is especially true for emerging countries, such as South -Africa.

The research examines the literature on the integration between dynamic capabilities and sustainability performance in the context of SMEs in the construction industry in South Africa.

The research offers new insights based on the semi-structured interviews to further expand on the three management activities that make a capability dynamic, namely sensing, seizing, and transformation.

7.5 Recommendations for management and/or other stakeholders

The owners of SMEs who were interviewed and who believed that the dynamic capability (namely sensing, seizing, and transformation) of the company do not, or only partially, contribute to the sustainability performance of the company are encouraged to realise the various benefits of maximising the company's dynamic capability as this leads to increased performance of the company.

Several responses from the interviews focused on the challenging conditions in which the construction industry in South Africa must operate, such as challenging procurement processes, skills shortage, financial hardship, unstable industry, and strict tax compliance. Although these points are not directly related to the objectives of this study, it is important that these comments be seriously considered by decision makers and

professional bodies in the construction industry, as these challenges pose a serious threat to the survival of SMEs in the construction industry in South-Africa.

7.6 Limitations of the research

Limitations of the research study are:

- The study investigated how SMEs in the construction sector use their dynamic capabilities (perception, capture and transformation) to achieve sustainability performance, and not in other sectors such as manufacturing or retail.
- The study was carried out in an emerging context, namely South Africa.
- The study focused on SMEs and not on well-established international companies.

7.7 Suggestions for future research

Future research that will contribute to fully explore the dynamic capabilities of SMEs in the construction industry in South Africa includes the influence of **challenging procurement processes** on the sustainability performance of SMEs. Another area for future research may be the influence of the **unstable industry** on the sustainability performance of SMEs.

The above will not only add new insight to the current pool of knowledge but will also be of practical value to SMEs who fight for an existence in the construction sector.

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APPENDIX A:
RELATIONSHIP BETWEEN INTERVIEW
QUESTIONS AND RESEARCH QUESTIONS

Research question	Interview question
<p>Research question: How do SMEs use their dynamic capabilities to achieve sustainability performance?</p>	<p>1.1 Do you subscribe to sustainability practices?</p> <p>1.2 Do your current internal resources have the capabilities to meet sustainability goals?</p> <p>1.3 How does your commitment towards sustainability influence your performance?</p> <p>1.4 What would you consider to be the attributes needed to ensure the success of your business?</p> <p>1.5 How do you navigate around environmental, social and governance issues in delivering your services?</p> <p>1.6 What do you think of the sustainability performance of a SMEs in the construction industry?</p> <p>1.7 How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?</p> <p>1.8 What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?</p>
<p>Sub-research question # 1: How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?</p>	<p>2.1 In your opinion, does 'sensing' (<i>identification and assessment of opportunities outside the company</i>) greatly contribute to the performance of the business?</p> <p>2.2 How does 'sensing' ensure social, economic, and environmental goals are achieved?</p> <p>2.3 In your opinion, what makes 'sensing' more effective to achieve sustainability performance?</p>
<p>Sub-research question # 2: How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?</p>	<p>3.1 In your opinion, does 'seizing' (<i>mobilisation of company resources to capture value from the identified opportunities</i>) greatly contribute to the performance of the business?</p> <p>3.2 How does 'seizing' ensure social, economic, and environmental goals are achieved?</p> <p>3.3 In your opinion, what makes 'seizing' more effective to achieve sustainability performance?</p>

Research question	Interview question
<p>Sub-research question # 3: How do SME's use transformation (continuous renewal of the company) to achieve sustainability performance?</p>	<p>4.1 In your opinion, does 'transformation' (<i>continuous renewal of the company</i>) greatly contribute to the performance of the business?</p> <p>4.2 How does 'transformation' ensure social, economic, and environmental goals are achieved?</p> <p>4.3 In your opinion, what makes 'transformation' more effective to achieve sustainability performance?</p>

APPENDIX B:
COPY OF THE SURVEY QUESTIONNAIRE /
INTERVIEW PROTOCOL

SURVEY QUESTIONNAIRE / INTERVIEW PROTOCOL

FORMALITIES TO BE COMMUNICATED TO A PARTICIPANT BEFORE THE INTERVIEW BEGINS

1. Thank the participant for agreeing to participate in the research.
2. Written ethical clearance approval has been obtained from the University of Pretoria's Ethics Committee to ensure that the interview is conducted in an ethical manner.
3. A participant's anonymity and confidentiality are guaranteed.
4. A participant may leave the interview at any time without giving a reason for it.
5. A participant may at any time ask questions for clarification.
6. Confirm that the participant has signed and submitted his/her consent form before the start of the interview.
7. The template questionnaire below contains open-ended questions so that more questions can follow based on the conversation, if required.

BACKGROUND AND OBJECTIVES OF THE RESEARCH

1. **Title of thesis:** Influence of dynamic capabilities on sustainability performance of SMEs within the construction industry in South Africa.
2. **Degree and institution:** A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfillment of the requirements of the degree of Master of Philosophy in Corporate Strategy.
3. **Aim of study:** The research aims to expand on recent literature by examining how SMEs can utilise their dynamic capabilities to achieve sustainability performance, when implementing their corporate strategies.
4. **Definition of dynamic capabilities:** Literature has shown that dynamic capabilities are mainly of three paradigms:
 - **sensing** – identification and assessment of opportunities outside the company to achieve sustainability performance;
 - **seizing** – mobilisation of company resources to capture value from the identified opportunities to achieve sustainability performance; and
 - **transformation** – continuous renewal of the company to achieve sustainability performance.

PERMISSION TO RECORD INTERVIEW

May I (the researcher) have your (the participant's) permission to record this discussion for transcribing purposes? The recordings will remain confidential. The transcriptionist will maintain full confidentiality of all research data and personal information received.

Participant's response (researcher ticks the correct box):

Yes	
No	

DETAILS OF PARTICIPANT

Name	
Title	
Company name	
Contact email address	
Contact cell phone number	
Date of day on which interview is conducted	
Start time:	
End time:	

INTERVIEW QUESTIONS

PART 1

Research question: How do SMEs use their dynamic capabilities to achieve sustainability performance?

1.1 Do you subscribe to sustainability practices?

1.2 Do your current internal resources have the capabilities to meet sustainability goals?

1.3 How does your commitment towards sustainability influence your performance?

--

1.4 What would you consider to be the attributes needed to ensure the success of your business?

--

1.5 How do you navigate around environmental, social and governance issues in delivering your services?

--

1.6 What do you think of the sustainability performance of a SMEs in the construction industry?

--

1.7 How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?

--

1.8 What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?

--

PART 2

Sub-research question 1: How do SMEs use **sensing** (identification and assessment of opportunities outside the company) to achieve sustainability performance?

2.1 In your opinion, does 'sensing' greatly contribute to the performance of the business?

2.2 How does 'sensing' ensure social, economic, and environmental goals are achieved?

2.3 In your opinion, what makes 'sensing' more effective to achieve sustainability performance?

PART 3

Sub-research question 2: How do SMEs use **seizing** (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?

3.1 In your opinion, does 'seizing' greatly contribute to the performance of the business?

3.2 How does 'seizing' ensure social, economic, and environmental goals are achieved?

3.3 In your opinion, what makes 'seizing' more effective to achieve sustainability performance?

PART 4

Sub-research question 3: How do SME's use **transformation** (continuous renewal of the company) to achieve sustainability performance?

4.1 In your opinion, does 'transformation' greatly contribute to the performance of the business?

4.2 How does 'transformation' ensure social, economic, and environmental goals are achieved?

4.3 In your opinion, what makes 'transformation' more effective to achieve sustainability performance?

CONCLUDING REMARK

1. Copies of the final research report will be made available to participants.

APPENDIX C:
ETHICAL CLEARANCE APPROVAL

Dear Kwaku Koranteng,

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

APPENDIX D:
COPY OF THE CONSENT STATEMENT

Informed consent letter

I am conducting research on [Influence of dynamic capabilities on sustainability performance of SMEs within the construction industry in South Africa]. Our interview is expected to last [One Hour], and will help us understand [How do SMEs use their dynamic capabilities to achieve sustainability performance?]. Your participation is voluntary, and you can withdraw at any time without penalty. By signing this letter, you are indicating that you have given permission for:

- the interview to be recorded;
- the recording to be transcribed by a third-party transcriber, who will be subject to a standard non-disclosure agreement;
- verbatim quotations from the interview to be used in the report, provided they are not identified with your name or that of your organisation;
- the data to be used as part of a report that will be publicly available once the examination process has been completed; and
- all data to be reported and stored without identifiers.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Kwaku Koranteng Research supervisor name: Prof. Kerrin Myres

Email: 04989865@mygibs.co.za Email: myresk@gibs.co.za

Phone: 083-684-9332 Phone: 083-263-4175

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

CONFIDENTIALLY AND NON-DISCLOSURE AGREEMENT

It is a condition of engagement that students will assist in preserving all confidential information, ideas and plans; any confidential information or any information in respect of any data gathered, captured or analysed in respect of the research work they undertake in fulfillment of GIBS masters or doctoral degree programmes, in this case the research project titled *[Influence of dynamic capabilities on sustainability performance of SMEs within the construction industry in South Africa]*. The parties under this agreement agree to the following:

1. To apply their best efforts to keep any information confidential which has been acquired or may acquire pursuant to the research work. For the purposes of this clause, confidential information excludes information which:
 - 1.1 is publicly available or becomes publicly available through no act or default of any Party;
 - 1.2 was in the possession of a Party prior to its disclosure otherwise than as a result of a breach by any party of any obligation of confidentiality to which it is subject;
 - 1.3 is disclosed to the student by a person which did not acquire the information under an obligation of confidentiality; and
 - 1.4 is independently acquired by a student and as a result of work carried out by a person to whom no disclosure of such information has been made;
2. No party shall use or disclose confidential information except with the prior written consent of GIBS or in accordance with an order of a court of competent jurisdiction or in order to comply with any law or governmental regulations by which any Party concerned is bound or as may be lawfully requested in writing by any governmental authority.
3. The party undertakes to permanently delete any electronic copies of confidential information received, and destroy any confidential printed documentation or similar material in their possession promptly once they are no longer required, usually on completion of the service contracted by the student.
4. On completion of the contracted service on behalf of the student, the party is to confirm to the student that they are not in possession of any confidential information.

Signed at Randburg on this 28th day of November 20 22

On behalf of:

Rathbone & Mcwabeni t/a Qualitative Quarter

Name: Julie Rathbone Signature:  not here

duly authorised and warranting such authority

Witness: _____

APPENDIX E:
CONSISTENCY MATRIX

Literature review	Research question	Source of data	Type of data	Data collection tool	Data analysis technique
<p>Section 2.2 (Bianchi, Testa, Tessitore & Iraldo, 2022), (Jong, 2019), (Lin, Su & Higgins, 2016), (Mousavi, Bossink & Vliet, 2019), (Pitelis & Wagner, 2019), (Schoemaker et al., 2018), (Separately, Laaksonen & Peltoniemi, 2018).</p>	<p>Research question: How do SMEs use their dynamic capabilities to achieve sustainability performance?</p>	Textbooks and publishable articles. Participants in semi-structured interviews.	Qualitative data.	Interview guide.	Thematic analysis.
<p>Section 2.2.1 (Dong, Garbujo & Lovallo, 2016), (Schoemaker et al., 2018).</p>	<p>Sub-research question # 1: How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?</p>	Textbooks and publishable articles. Participants in semi-structured interviews.	Qualitative data.	Interview guide.	Thematic analysis.
<p>Section 2.2.2 (Matysiak, Rugman & Bausch, 2018), (Schoemaker et al., 2018).</p>	<p>Sub-research question # 2: How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?</p>	Textbooks and publishable articles. Participants in semi-structured interviews.	Qualitative data.	Interview guide.	Thematic analysis.
<p>Section 2.2.3 (Felín & Powell, 2016), (Schoemaker et al., 2018).</p>	<p>Sub-research question # 3: How do SME's use transformation (continuous renewal of the company) to achieve sustainability performance?</p>	Textbooks and publishable articles. Participants in semi-structured interviews.	Qualitative data.	Interview guide.	Thematic analysis.

**APPENDIX F:
LIST OF CODES USED FOR QUALITATIVE
RESPONSES**

APPENDIX F1: RESPONSES TO RESEARCH QUESTION

The research question is: “How do SMEs use their dynamic capabilities to achieve sustainability performance?”

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
Interview question 1: Do you subscribe to sustainability practices?			
<ul style="list-style-type: none"> • “Yes.” (P2) • “Yes.” (P6) • “Yes.” (P6) • “Yes sir, yes sir, because I think they are specifically geared to, to try and grow the business itself and make sure that it can be self-sustaining ...” (P4) • “We do though I think it might not be set out as one of our key performances driving visions of the company but we do in terms of subscribing especially in line with what industry norms or requirements would be.” (P15) • “Yes, if you are running a business you must make sure that you create practices which will make you sustainable in the long term otherwise one will collapse in no time.” (P14) • “Yes, yes, we definitely do, yeah.” (P7) • “...we do subscribe to it.” (P8) • “Ja, we do, even though it is not like systematic or more of deliberate effort into it.” (P10) • “Yes, I think in today’s competitive landscape it is very important to think about the future of organisations ...” (P5) • “... definitely we do subscribe to sustainability practices, yes.” (P13) 	Yes, I subscribe to sustainability practices.	Subscribe to sustainability practices.	Subscription. (✓)
<ul style="list-style-type: none"> • “Partially. ...I will give you an example: ... I have installed solar power in the office but it is not about sustainability just because when there is load shedding you can’t work, so you lose time, you lose money. So the original idea around it was not to cautiously contribute to sustainability, it was for survival, so that we can be able to service our clientele.” (P3) 	I partially subscribe to sustainability practices.	Partially subscribe to sustainability practices.	No subscription.
<ul style="list-style-type: none"> • “it’s not something that we outright subscribe to, but it’s something that we are aware of and lining up to adopt that approach in our business delivery.” (P1) 	Is aware of sustainability practices but do not subscribe to it.	Do not subscribe to sustainability practices.	
<ul style="list-style-type: none"> • “... with myself when I was going through that process I can also say that was not a priority.” (P9) • “Yes, I think we do in our conversations, subscribe to sustainability practices. Maybe I 	No, I do not subscribe to sustainability practices.		

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should reverse here - I don't think we do ..." (P11)			
Interview question 2: Do your current internal resources have the capabilities to meet sustainability goals?			
<ul style="list-style-type: none"> • "Yes ... we actually are getting more because of the growth trajectory that we are actually focusing on. But so far I think we are able to manage and even develop the output, the initial quality of output." (P4) • "But I would say yes, my internal resources have the capabilities to meet sustainability goals." (P11) • "Yeah, yeah, they do. ... So in terms of the capabilities, yes, they do, but under guidance, under strict guidance from senior management." (P7) • "... I would definitely say we do have that capability yes." (P13) 	Yes, current internal resources have the capabilities to meet sustainability goals.	Current internal resources have the capabilities to meet sustainability goals.	Capabilities. (✓)
<ul style="list-style-type: none"> • "On a scale of 1 to 10, I would say we are about 6." (P1) • "... not exactly where I would like to be but yes, but to an extent ..." (P2) • "Not fully, to some extent because a bigger portion of them is what you call maybe junior or you know middle level; professionals." (P12) • "...yes to some extent but not fully with all the systems within the company because what we are trying to do is setting up new systems overall for the company ..." (P15) • "I will say here partially..." (P8) • "Ja, yes, in terms of the expertise that we have in our organisation we are able to meet some of the goals, but not all of them. For instance like the economic goals, with my experience ... we are able to make sure that the company doesn't go without cash flow, so we are able to manage ourselves in a sustainable manner. But in terms of social and environmental, we are not having so much capabilities to do that ..." (P10) • "... the majority of the staff complement that we employ are not necessarily ... or do not have the requisite knowledge to operate at a strategic level, and hence it becomes very difficult sometimes to sell these ideas of running business from a sustainability point of view because they battle to understand some of these concepts ..." (P5) 	Current internal resources only partially have the capacity to achieve sustainability goals.	Current internal resources only partially have the capacity to achieve sustainability goals.	No capabilities.
<ul style="list-style-type: none"> • "...no ... we are very constraint in terms of especially financially ... We are very constraint and being able to maintain those sustainability goals, being able to put those structures in place to, to be compliant or to pursue sustainability goals is a; it is quite hectic for a small business like me." (P6) • "... no. ... when you are worried about the economic survival you pretty much do not 	No, current internal resources do not have the capabilities and / or time to meet sustainability goals.	Current internal resources do not have the capabilities to meet sustainability goals.	

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<p>have the time to invest in anything except economics ..." (P9)</p> <ul style="list-style-type: none"> • "No. I don't think I can even put one cent towards it. ... No, I can't. I won't be able to afford it." (P3) • "We do not. ... and especially considering our industry at the moment, it's really coming up to survival because it is over-saturated so you try to put most of your team on productive work and then minimal team or when there are gaps, then you start researching on other opportunities to make ourselves sustainable." "... social and environmental are lower than the economical priority." (P14) 			
Interview question 3: How does your commitment towards sustainability influence your performance?			
<ul style="list-style-type: none"> • "... we are able to be innovative when we have an assignment ..." (P2) 	We innovate more.	Commitment towards sustainability has a positive impact on performance.	Positive influence. (✓)
<ul style="list-style-type: none"> • "... before you can even get a job sometimes from government, they would ask you to ... have certain indicator to show that you are committed to sustainability." (P6) • "... offering more, more offering solutions or service offerings that meet or exceed their requirements in adding more value." (P12) • "... it influences the ambition, it always keeps you on your toes because you don't want a situation whereby you just do, your growth pattern will you go down." (P4) • "It actually influences performance in a positive way we are trying to make sure that everyone in the business is able to contribute, meaningfully, for instance being able to run projects from start to finish. So then that makes it possible for the business to be sustainable." (P10) 	Increases likelihood of securing work and growing the business.		
<ul style="list-style-type: none"> • "So, we are invariably shaped by those processes and what is out there in the market." (P13) 	Shaped by the market.	Shaped by the market.	
<ul style="list-style-type: none"> • "It has zero, zero impact ... I don't have any commitment therefore obviously you know it doesn't impact anything. ... we are really in survival mode, especially after COVID." (P3) • "I wouldn't say we are driven by sustainability, to be honest. I think for now we are driven by our targets which have been set up by the various projects that we are working on." (P15) • "... our commitment towards sustainability really is a process, it doesn't really affect that much except when there are these economic conditions because it is a process that we put in place and we have long term goals for us to be able to have that SIM list ... without having issues." (P11) 	Commitment towards sustainability does not influence performance.	Commitment towards sustainability have no, or a negative, impact on performance.	No positive influence.

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<ul style="list-style-type: none"> “... if we commit to sustainability as we have it, it also needs time and dedication and resources. And if you were to divert your resources towards that it means that you are taking away resources from high performance areas. So therefore your performance does reduce in terms of delivery, in terms of making revenue ...” (P9) 	Performance decreases when resources are dedicated to sustainability.		
<ul style="list-style-type: none"> “... we are not able to say with certainty because we have not actually put it in force to a point where we are able to measure performance ...” (P1) 	Unable to say with certainty.	Don't know whether commitment towards sustainability has a positive or negative impact on performance.	
Interview question 4: What would you consider to be the attributes needed to ensure the success of your business?			
<ul style="list-style-type: none"> “... marketing ...” (P1) “...develop good contacts ...” (P14) “... the business development part is functional and able to bring projects.” “... we should be able to go out there and get projects and then possibly to even get repeats from certain clients ...” (P10) “... having a good understanding of the market out there, from a business development point of view we need to be able to see where the business is going, where the opportunities are coming from, what sort of requirements do our clients require.” (P5) 	Marketing and business development.	Focus on clients.	Externally focused. (✓)
<ul style="list-style-type: none"> “... client satisfaction ...” (P1) “... you need to be about customers. ... customer relations are quite important.” (P3) 	Focus on the client.		
<ul style="list-style-type: none"> “Having some sort of powers in the industry as it relates to your clients. If your clients have absolute power you know then that inhibits the ability to be successful.” (P9) 	To have some influence over the client.		
<ul style="list-style-type: none"> “...we have actually diversified our clientele base.” (P4) 	Diversified client base.		
<ul style="list-style-type: none"> “... corporate social investment activities ...” (P1) 	Corporate social investment activities.	Focus on communities.	
<ul style="list-style-type: none"> “... patience ...” (P2) 	Patience.	Focus on delivery team.	Internally focused. (✓)
<ul style="list-style-type: none"> “...teamwork ...” (P2) 	Teamwork.		
<ul style="list-style-type: none"> “... ability to work across different disciplines ...” (P2) “... one team member or teams or delivery teams being able to interface easily with maybe top management or key stakeholders or sponsors on a project.” (P12) 	Capability of and ability of competent staff to work across different disciplines.		

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<ul style="list-style-type: none"> • "...the capability of your team is primary ..." (P9) • "... retention of good staff." (P11) • "It is to have good grounding of your knowledge of you know, the practice that you are doing." (P13) • "It is you as an individual to realize your strengths, your weaknesses and how and where to improve you know, that would also assist in your marketing." (P13) 			
<ul style="list-style-type: none"> • "... you need to really have the tenacity to work hard." "You need to be passionate about what you do." (P3) • "... you need to be able to push and you need to be able to be resilient ..." "... be reliable ..." (P14) 	Working hard / passionate about your work.		
<ul style="list-style-type: none"> • "You need to be a continuous learner." (P3) • "... you need to actually open yourself to failure and making mistakes daily." (P3) • "... personal development of our employees is very critical." "So you need to find a way to increase the pool of the smart people around you or those who are more informed in terms of business management around you." (P5) 	Continuous learning.		
<ul style="list-style-type: none"> • "It is for you to understand the dynamics in terms of the industry that you are practicing in, or where we are practicing in." (P13) 	Understanding market dynamics.		
<ul style="list-style-type: none"> • "You need to adapt quickly ..." (P3) 	Need to be agile.		
<ul style="list-style-type: none"> • "... you need to be a good financial manager ..." (P3) • "And of course sound financial models as well, to actually succeed in a business. ... you need someone who is actually financially savvy to actually understand that part of the business as well." (P8) • "There is an element of how to manage our cashflow you know, good financial sense." (P13) 	Financially astute.		
<ul style="list-style-type: none"> • "...making sure your quality of your work is top notch ..." (P14) • "...to make sure that we deliver on those projects and deliver well." (P10) 	Deliver quality work.		
<ul style="list-style-type: none"> • "...you need good leadership ..." (P7) • "I think for me one is the leadership as well." (P8) • "We need to also have a good understanding of the human capital and the resources that we employ." (P13) 	Good leadership skills understanding the resources being managed.		
<ul style="list-style-type: none"> • "... at every level of staff you need the commitment." (P7) 	Commitment throughout the company.		

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<ul style="list-style-type: none"> “Ethics I think they play a very primary role because they set a tone and a base in terms of how you relate and interact with people around you.” (P13) 	Ethical behaviour.		
<ul style="list-style-type: none"> “...you need a structure, a professional structure in place, meaning now your systems actually working in a business have to be in place as well so that people cannot really just do as they please, outside of the systems of the business.” (P8) 	Company structure.	Focus on company structure and support systems.	
<ul style="list-style-type: none"> “For the success of our business it is more of having a good employee with good culture that is going to make them stay within the business and being able to be well-trained to deliver on their projects.” (P10) 	Company culture.		
<ul style="list-style-type: none"> “We need automated systems, systems that prevent us from working in silos and be automatised but in an integrated fashion.” (P12) 	Integrated and automatised systems.		
<ul style="list-style-type: none"> “... you need first of all to have a very, very good administrative portfolio that manages all your compliance issues and all operational activities within the organisation ...” (P5) 	Good administrative and operational support.		
<ul style="list-style-type: none"> “... to choose a right ... partners because that is important whenever you are working on an assignment ...” (P2) 	Choosing the right business partner.		
<ul style="list-style-type: none"> “... proper cash flow for us to be able to ensure the success of our business.” (P11) 	Good cash flow.	Focus on finances.	
Interview question 5: How do you navigate around environmental, social and governance issues in delivering your services?			
<ul style="list-style-type: none"> “...understand our client’s needs ...” “... it is just easier for the client to guide you in terms of the approach because of they might be people who have been in those particular areas much longer to understand the mindset or the needs of the different communities if they work with communities or even individuals in cases whereby we do housing development plans were the client will actually be able to easily guide you into that specific place.” (P4) “... our clients are very clear in terms of their environmental requirements, or their social requirements in terms of SD&L, skills development you know, and those contributions. So we have modelled our business in such a way that we are able to respond to their exact requirements.” (P5) “On the social aspect, it is keeping the ear on the ground as you interact, as you engage with ... various persons and organizations being out there ... you tend to understand what is happening ...” (P13) 	Understanding the needs of the client / close relationship and engagement with the client.	Client-focused.	Client. (✓)
<ul style="list-style-type: none"> “...grow our network ...” (P4) 	Growing your client network.		

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<ul style="list-style-type: none"> • "... you giving back to the community ..." (P2) • "And then on the social aspect again, there are projects as I said, mostly now the government projects, where most of the SMMEs perform, they actually do have this in place, it is a requirement that you must employ the local labour. ... you try your best to actually empower the locals and uplift the social economic conditions as well, by allocating some of the small contracts as well, in that area." (P8) • "... in terms of reaching out to communities and give them something, we are not doing much on our own, but we do join effort with some organisations that do corporate responsibilities, where they maybe buy food parcels and go and give it to other communities during maybe festive seasons and during winter – blankets outreach – so those kind of initiatives we do support. However we are looking now to try and get our own activities or our own initiatives where we can go and do our own social issues." (P10) 	Corporate social responsibility.	Responsible corporate social investment.	
<ul style="list-style-type: none"> • "... doing business in an ethical manner that then fosters continued business relationships ..." (P1) 	Work in an ethical manner.	Ethical way of doing business.	
<ul style="list-style-type: none"> • "... compliance ..." (P2) • "But environmentally most of our activities there are probably legislated so it is not as if we have a choice. We have to maintain or be conscious of environmental sustainability in our work." (P9) • "We align ourselves or our services with environmental legislation that is there in the country ..." (P11) • "Most of the projects now you cannot necessarily perform them without first getting the approval in terms of environment." (P8) • "In terms of environmental we actually not that green much, other than what is required on our projects. ... when we do a project then we need to make sure this environment, the contractors comply to environmental plan and if there is an environmental impact assessment that needs to be done then we will go through that process. Other than that, we are not much geared as an organisation to contribute much in terms of environmental in what we do." (P10) • "As for environmental, ... Now the pieces of legislation have been, have evolved basically and they are becoming more stringent in terms of how we conduct ourselves." (P13) • "Governance part is more legislative really what is applicable ..." (P13) 	Compliance with laws and regulations, including laws enforcing environmental sustainability.		
<ul style="list-style-type: none"> • "... in our industry they are overshadowed by a lot of politics and a lot of entitlement on the ground." (P4) 	Too much politics and entitlement.		

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<ul style="list-style-type: none"> “... governance discipline ...” (P3) “...we are trying hard to governance structures and systems that will help us to have proper governance within the organisation.” (P10) 	Proper governance.		
<ul style="list-style-type: none"> “... transparency.” (P3) 	Transparency in work.		
<ul style="list-style-type: none"> “... design for efficiency ...” (P1) 	Efficient designs.	Solutions driven.	Service delivery. (✓)
<ul style="list-style-type: none"> “... consider how the solutions you offer impact the occupants of the buildings you are then trying to construct or design.” (P1) “When you provide an infrastructure, it must try to the best to blend within the environment and the people.” (P14) 	Consider how solutions impact on customers.		
<ul style="list-style-type: none"> “... innovative in approaching certain problems ...” (P2) 	Innovation.		
<ul style="list-style-type: none"> “... qualified people ...” (P2) “... I would say we have got various keepers now who are allocated within, call it if we have go to deal with environmental issues we have specifically environmentalists who will deal with those items related to environmental.” (P15) 	Use qualified people.	Using skilled workforce / resources.	
<ul style="list-style-type: none"> “... transfer of knowledge and transfer of skill.” (P2) “... tap into knowledge sources because there are countries far more advanced.” “we engage with international partners ...” (P12) 	Knowledge and skills transfer.		
<ul style="list-style-type: none"> “What we do is to team up ... With businesses that are already compliant in that area, and then we use ... them in areas that we are lacking.” (P6) “... because being an SME that we don't have the financial muscle to actually to actually keep that kind of expertise inhouse, so what we normally do is we go to market and we look for the skills ... we will find the best suit for a particular task.” (P7) 	Partnering with companies that are compliant with environmental, social, and governance issues.		
<ul style="list-style-type: none"> “... to install systems internally within the organisation that are you know suitable for the industry that we are working in.” (P9) 	Implement internal systems.		
<ul style="list-style-type: none"> “...we try and put in our strategy ...” (P3) “... we incorporate them in our philosophy of working in the office. It's just you basically rely on your personnel to understand what are your normal goals on your environmental, how do we achieve our environmental goals, which are minimal, which are generic and vary between different projects.” (P14) 	Include sustainability in company strategy and philosophy.		
<ul style="list-style-type: none"> “So we always work trying and it's only in cases where economically it just does not make sense to reach those targets that we do not.” (P14) 	Consider sustainability if economically possible.	Focus on financial benefits / return.	

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Interview question 6: What do you think of the sustainability performance of a SMEs in the construction industry?			
<ul style="list-style-type: none"> “... it is survival now, so they forsake some of the things that they are supposed to do, like let’s say your social responsibility as well as your environmental, so they just focus more on the economic side of it to be able to pay the workers. So currently as I say it is bad.” (P8) 	Focus on survival.	Focus is on financial survival.	Survival.
<ul style="list-style-type: none"> “... that the immediate focus is on the rands and cents ... we find ourselves in the trench not being able to see what’s happening above in our environment so to speak ...” (P1) 	Focus is on generating income and less on sustainability.		
<ul style="list-style-type: none"> “... you are so deeply entrenched in delivering the work that the broader vision of business continuity and sustainability may sometimes get second attention...” (P1) 	Focus is on delivering the work and less on sustainability.		
<ul style="list-style-type: none"> “... a lot of us still are just at compliance level ...” (P2) 	Focus on minimum compliance only.		
<ul style="list-style-type: none"> “Non-existent.” “...we are not even thinking sustainability.” “... I don’t think any SMEs in the construction industry are bothered by sustainability issues.” “That’s how you make money in construction. Start, finish, quick.” (P3) 	Sustainability is non-existent.		
<ul style="list-style-type: none"> “The construction industry, I would say sustainability is a challenge. It’s a challenge because it’s as we said, first the demands are very high and the factors when one get into the industry they are they are several ...” (P14) 	Compliance with sustainability requirements is challenging.		
<ul style="list-style-type: none"> “... sustainability performance of SMEs in the construction industry, all due is there, but it is not really prominent. It is not their number one priority, but they try to comply as a result of legislation.” (P6) 	Comply with sustainability requirements because of legislation, although not a priority.		
<ul style="list-style-type: none"> “... you have to be actually a bit more competitive in terms of your approach in sourcing work and trying to grow your business.” (P4) 	Competitive approach in sourcing work.		
<ul style="list-style-type: none"> “But there is not many innovative approaches in the industry.” “... people want to see tried and tested ways ...” (P2) 	Little focus on innovation / sticking to the old way of doing things.		
<ul style="list-style-type: none"> “It is about the diversification of your portfolio ...” (P4) 	Diversification of services.		

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<ul style="list-style-type: none"> “... the challenge again with SMEs is that typically you would find that there is only one director. And this particular director's time is spread across all aspects of business processes and that becomes limiting from a sustainability performance of SMEs ...” (P1) 	Not enough resources to consider sustainability as well.	Limited human and financial resources, and equipment.	
<ul style="list-style-type: none"> “... we need industry professionals that would actually assist in improving the quality output and even the performance system that we actually need to grow our industry ...” (P4) 	Need mentorship and training.		
<ul style="list-style-type: none"> “... because they don't have the vision in terms of succession planning ... you know when the leadership or the ownership of the company retires or for other reasons is not available to work in that business, those businesses generally fall ...” (P7) 	Poor succession planning.		
<ul style="list-style-type: none"> “SMEs just come in, they may not have the expertise that an old business may be having.” (P12) “... better qualified people might be reluctant to work for an SME ...” (P10) “You find practitioners that are not qualified ...” (P13) 	Lack of highly qualified expertise.		
<ul style="list-style-type: none"> “... sustainability issues requires one to have specific tools that is intelligence gathering tools and data analytics tools so that you are able to get a meaning of what the information is saying to you. So the majority of the SMMEs do not have those tools and therefore we are not able to extract the required information. ... the lack of the appropriate tools is quite a big challenge for SMMEs to really thrive in these tough economic times.” (P5) 	Lack of appropriate tools.		
<ul style="list-style-type: none"> “And most of the time the issue if you look at small business development is access to finance.” (P12) “So, you would find that the actual cashflow is the most crucial component thereon, because without it, it has got a very negative influence. It cascades to other areas and incapacitates a typical SMME.” (P13) 	Limited access to finance and cash flow constraints.		
<ul style="list-style-type: none"> “...our industry is one of the least protected industries of all in the country at the moment whereby anyone who feels they can do the construction can ...” (P4) “... it is difficult to have guideline or one way or cast in stone method of sustaining the performance of SMMEs in this particular industry ...” (P11) 	Unprotected industry.	Unprotected industry.	
<ul style="list-style-type: none"> “... we have got these construction mafias and the strikes that we get on projects, and obviously some of those things negatively impacts on the projects, and when that happens it has got a negative knock on effect on the communities within which the project is implemented.” (P11) 	Construction mafias and strikes.		

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<ul style="list-style-type: none"> “And then you find the people who are already in the business have got their own sort of support in terms of getting credit, in terms of negotiating better prices, in terms of skills, they are much quicker. Then if you are an SME you are just starting and you don't have all that, then it becomes a little bit difficult to crack it ...” (P10) 	Fierce competition.		
<ul style="list-style-type: none"> “If it is not government which intervenes in this country in order to give jobs to SMEs by force, or by means of legislation in place, SMEs would struggle in the, in the, in the construction industry.” (P6) 	Enforcing empowerment legislation makes it possible for SMEs to survive in the construction industry.	Enforcing empowerment legislation makes it possible for SMEs to survive.	Environment shapes business.
<ul style="list-style-type: none"> “... the industry is tough on SMEs and the sustainability more than anything is driven by the opportunities that arise ...” “... the sustainability and the performance of it for me is really dependant on the relations between the SME and those specific clients, existing clients.” (P15) 	Sustainability is driven by existing opportunities / jobs.	Existing opportunities / jobs dictate focus of sustainability.	
Interview question 7: How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?			
<ul style="list-style-type: none"> “... procurement processes that are long and winded in terms of the paperwork that needs to be put together during the procurement process.” (P1) “The procurement entry requirements at times are counter-productive ...” “The new entrant to meet those entry requirements they need a certain level of capital which guarantees the securities and accreditations that are required for a new entrant to be able to compete with big business.” “... the nice-to-have compliance with the country's policies but they are not really talking to merit that an individual comes in and is unable to offer services in this discipline.” (P12) “... every year there are new rules to make compliance issues more difficult. ... I don't think the environment the way we are going, small business will really thrive; it is becoming more and more complicated.” (P14) “.. the red tape that one gets, all the time, in all the aspects of doing business in SA ...” (P11) 	Drawn-out procurement processes and challenging procurement entry requirements for SMEs.	Challenging procurement processes.	Challenges.
<ul style="list-style-type: none"> “... lack of transparency in the entire award process of the submissions ...” (P1) 	Lack of transparency in awarding tenders.		

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<ul style="list-style-type: none"> “So I think like even the issue of these panels, like currently in our industry, the build environment, you will find most of the projects have panels and then getting into a panel doesn't guarantee you to get the project.” (P10) 	Registering on panels.		
<ul style="list-style-type: none"> “...We do have bit but not big abundance of professional services to tap from.” (P2) 	Limited available skills.	Skills shortage.	
<ul style="list-style-type: none"> “... lot of setbacks or areas of improvement when it comes to the technical competence that is resident within the client environment, ... the lack of understanding of ultimately the solution ...” (P1) 	Poor technical competence in client body.		
<ul style="list-style-type: none"> “... [slow] payment turn around for service providers ...” (P1) “I think they do not consider it a priority to pay for a service delivered by an entity – the entity can go with three or six months without any payment, and it doesn't trigger any alarm within the system, that that can actually be collapsing other businesses – especially when you have just started, you have got one client and suddenly that client after you have provided the service do not pay. So it is really that. They are actually killing small business.” (P14) “You get to wait over a year for a payment that was supposed to be done in 30 days; time, and you wonder how to survive if you have got resources, or even the warm bodies in your office to sustain your business. ... that the government, if they could just say 30 days turnaround time for payment, it should be 30 days. Not years.” (P11) “... there are delays in terms of signing off on work that is already been completed and for me the one thing I have noticed is that there is no one that wants to take full responsibility of the work that has been delivered ... we have had situations where it has taken us more than 12 or 18 months to actually get payments from the initial investments. Now given the small margins that we operate with, the small profit margins we charge our clients, this is not sustainable.” (P5) 	Drawn-out and late payments by clients.	Financial hardships.	
<ul style="list-style-type: none"> “... financial institutions are very risk averse, and they really do not...” (P6) “Even though SA is trying to have some support like in terms of funding, there is the Nation Youth Development Fund or something, but still it is not obvious to say you can get the support from that, you need to have done so much in terms of proving that you can do successful business or successful projects.” (P10) 	Difficult to obtain access to finance.		
<ul style="list-style-type: none"> “... small enterprises as well, they have got cash flow issues ...” (P8) 	Cash flow problems.		
<ul style="list-style-type: none"> “... there is really no control in our industry.” “Our industry is not protected anymore.” (P4) 	Unprotected industry.	Unstable industry.	

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
<ul style="list-style-type: none"> “... that has open up a room for a lot of companies where people who are not experienced within that space, who didn't study within that space, who don't have any engineering experience or engineering qualifications are able to start companies and compete with other companies which have the right skills for the work. So maybe from that viewpoint we need to relook at, the government minds need to relook at how the entry levels into these spaces are set out. ... I mean it is easy to enter the engineering industry as compared to other industries. ... entry level and requirements, the government needs to look at those, those need to be relooked at.” (P15) 			
<ul style="list-style-type: none"> “...over the past 10 years the construction industry locally has been contracting, meaning economic activity has been reduced drastically since World Cup days.” (P9) 	Shrinking construction industry.		
<ul style="list-style-type: none"> “... the construction sector is what I call sort of a cyclical business, it has its downturns and it has its upturns.” (P8) 	Construction industry is cyclical.		
<ul style="list-style-type: none"> “... The smaller companies find the barriers very high in some cases due to corrupt practices ... in departments.” (P2) “And then also the issue of corruption as well, sometimes you get a business and you must know certain people and you must give them something and if you don't give them something they will make your business suffer or make your project fail.” (P10) 	Corruption.		
<ul style="list-style-type: none"> “... political, if you are not affiliated to a certain part of a political party sometimes it is difficult to get jobs ...” (P3) “... it is not an easy industry for SMEs. ... there is a bit of political influence that has driven the business space especially the engineering industry space ... if you are not known and there is no connection between your company and the authorities within that space it is a bit hard to break into the industry.” (P15) 	Political interference.		
<ul style="list-style-type: none"> “... the competing with others, competition is too high, it's too much.” (P10) 	Fierce competition.		
<ul style="list-style-type: none"> “The same with the private, they have got their own people, they work with specific companies and you find that one company has been surviving for the last 20 years maybe working with one or two private clients. They don't have to tender, they don't have to do much; it is contract after contract and then they get sustained in that manner. So that then makes it a little bit difficult as well for emerging SMEs, if they are not into that space.” (P10) 	Lack of private sector to fully embrace SMEs.		

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
<ul style="list-style-type: none"> “... government has done a lot, they have put a lot of strategies in place to allow the SMEs to come to the fore...” (P6) “...there are strict protocols in place to give SMEs a chance. ... I think the processes are in place and it’s just the SME needs to work a bit harder to meet those requirements. It’s not difficult and I think government is doing its bit and they have opened doors ...” (P7) 	Legislation enables SMEs to operate in an industry dominated by a few key role players.		
<ul style="list-style-type: none"> “... there is a lot of compliance now that is layers, that is levelled on SMMEs ...” (P2) “... legislation ... of the government has the constraints or are imposed on the SMEs.” (P6) “We have got good Acts, good laws, good regulations in place, but you know translating it into implementation is just a problem ...” (P3) “The legal, as I said, I think it’s on point, but sometimes I think it works against the SMEs. It’s not as flexible as it should be.” (P3) “... although you know government sees SMMEs as an important sector in the economy but the regulations sometimes are really hard on us.” (P3) “I wouldn’t have thought it was so important that we have so many several different types of taxes and they could have just simplified and make it easy by having one or two taxes simply for business – that a business owner can understand and comply with.” (P14) “... if you look at the model of the taxation in SA, which the government has employed, whereby let’s say for instance if you put out an invoice then you immediately you must now pay VAT to SARS, irrespective of whether you have been paid that invoice or not.” (P8) 	Various legal / tax compliance requirements.	Strict tax compliance.	
<ul style="list-style-type: none"> “... there is not many tax breaks for SMMEs and that is quite heavy ...” (P2) 	Limited tax breaks for SMEs.		
<ul style="list-style-type: none"> “A typical project that is meant to be implemented over a 12-month duration may find itself taking three times as long in a sense, ...” (P1) 	Late project delivery.	Poor project delivery.	
<ul style="list-style-type: none"> “There is no sustainability premised on just a sole client to an SME unless if you are supplying over five years, such a contract.” (P1) 	Workload should not be dependent on only one major client.	Diversify client base.	Solutions.
Interview question 8: What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?			
<ul style="list-style-type: none"> “... sometimes the requirements in the tender if they go out. You are required of certain material, certain equipment; already upfront, you must have those equipment on your assets.” (P2) 	Unrealistic tender requirements as part of procurement,	Challenging procurement processes.	Barriers.

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
<ul style="list-style-type: none"> “... right now most SMEs are driven by the tendering system. ... You could have the best team in terms of skill sets or personnel but still not get one tender or two tenders and within a year or two the company will be closed.” “We see a lot of companies are closing due to not getting tenders or getting new projects. It is not that they don’t have good systems the systems are there it’s just the way the allocation of work ...” (P15) “... it is the regulations, they are becoming too many to comply with ...” (P14) “... the manner in which procurement is done, especially when it comes to professional services. I don’t think it is really aligned to what is required to be done.” (P11) “...it is the criteria and the criteria sometimes or most times becomes very unfair, becomes very restrictive, becomes very constructive relegation for lack of a better word, where it is customized to remove competition and tailor certain contracts or bits in favour of those of a certain type.” (P13) 	and regulations.		
<ul style="list-style-type: none"> “... there is also no financial assistance ...” “Sometimes it requires huge capital outlay, and for you to even get started, ... you might have to put 5-10 million before you even start.” (P2) “... lack of financial support, or the banks; the financial institutions’ support for the SMEs in terms of financing.” (P6) “...mostly it’s cash flow ...” (P4) “...struggle with umm being paid on time ...” (P4) “...the other barriers in construction that are preventing SMEs is the cash flow issue. ... if he has actually done an invoice now is meant to be paid within 30 days, but in reality it will be paid within three months and then that results into the guys running into debt and all of that, the business sort of like closing down as well.” (P8) “And then as well as funding at times; if you don’t have finances you don’t have funding and then it becomes difficult because the government pays late, and if you have to wait 90 to 120 days to get paid then for you to be able to survive, to be able to pay salaries and run operations becomes difficult.” (P10) “And problems such as not paying the contractors on time, you cannot run business without a positive cashflow.” (P5) 	Poor financial assistance / project start-up funding, and cash-flow problems.	Financial hardship.	
<ul style="list-style-type: none"> “... sometimes the state is looking for a lot of discount, which is quite strange.” (P2) 	Unrealistic discounts expected by government.		
<ul style="list-style-type: none"> “...I think lately you would have seen now with the mafia, the guys who actually demand 30% - that is another huge barrier ...” (P8) 	Construction mafias.	Unstable industry.	

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
<ul style="list-style-type: none"> “... there is no restriction in the qualification of people, it is the one industry where everybody is allowed to venture in vs the other professions or industries where it is actually very specific to a certain category of qualification – which has actually resulted in a lot of failures because people who are involved in it just come from different backgrounds. ... but still I would like it to be enforced that it gest limited to people with competencies to reduce the failures in the industry and to promote the people who are in the industry so that the business is also protected.” (P14) “... you look at the professional engineering services consultants, so many players are in this space and count on the market because it is not properly regulated ... The Engineering Council of SA doesn't have prescripts in place where it stipulates that you cannot run a consulting professional engineering firm if you are not registered ... such things are things that also put the profession in disrepute because you have people who are not professionals, that are not engineers, running professional engineering companies.” (P11) 	Unprotected industry and easy barrier of entry for new entrants.		
<ul style="list-style-type: none"> “...industry is over-politicised ...” (P9) 	Too much political interference.		
<ul style="list-style-type: none"> “...crime and lawlessness is also inhibiting on doing business for SMEs.” (P9) 	High levels of crime and lawlessness.		
<ul style="list-style-type: none"> “... the barriers are more with the private sector you know, where I don't think there is enough impetus for them to actually change their procurement processes to include SMEs” (P7) “And the private sector, to break into that is an issue because those guys have long standing relationships with all the guys they have worked with previously ...” (P8) 	Lack of private sector to fully embrace SMEs.		
<ul style="list-style-type: none"> “...the survival mode ...” (P3) 	The need to survive.		
<ul style="list-style-type: none"> “... we should actually have our professional bodies and our voluntary bodies to actually push them [<i>the private sector</i>] and to raise these issues on our behalf.” (P7) 	Professional bodies to promote interest of SMEs.		
<ul style="list-style-type: none"> “... lack of government support to an extent for SMEs ...” (P6) 	Lack of government support.		
<ul style="list-style-type: none"> “The other problem is the clients that are not willing to actively supervise their projects and come on board in time to ensure that the problems are resolved ...” (P5) 	Poor client involvement on projects.		

First order code (204) Note: (Px) refers to the participant who provided the input.	First order category (109)	Theme (41)	Construct (15)
<ul style="list-style-type: none"> “... barrier would probably be education level.” (P3) “... the issue of not having experienced people to deliver on projects, simply because you are an SME you can’t appoint someone who is very experienced to come and work for you because you might not afford him or he might not be comfortable to come and work for you as an SME.” “You depend so much on outsourcing of functions as an SME ...” (P10) 	Poor skills level and education.	Skills shortage.	
<ul style="list-style-type: none"> “... one of the obstacles as I have said is that I feel it is actually the SARS, they way they have actually structured their business. They need to come up with a model that will actually encourage these guys to be in business, not to necessarily come up with taxes that you are taxing a small SME like you are taxing a big corporate as well ...” (P8) 	Compliance with SARS.	Strict tax compliance.	
<ul style="list-style-type: none"> “One is access to the right tools of trade. When you are in the construction sector you need tools, you need machinery to be able to do quality work right? And the key thing for you to be able to access those tools and machinery equipment, you need money, you need to have a huge capital investment in a business.” (P5) 	Lack of access to equipment.	Lack of access to resources.	

APPENDIX F2: RESPONSES TO RESEARCH SUB-QUESTION 1

Sub-research question 1 is: “How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?”

First order code (44) Note: (Px) refers to the participant who provided the input.	First order category (22)	Theme (12)	Construct (6)
Interview question 1: In your opinion, does ‘sensing’ greatly contribute to the performance of the business?			
<ul style="list-style-type: none"> • “Yes, ...” (P1) • “Yes, ...” (P2) • “Yes, ...” (P6) • “...sensing ... is quite critical in the success of business and sustainability ...” (P9) • “Yes, yes, it does.” (P16) • “...identifying opportunities and assessing, it helps a lot in terms of managing your risk and identifying ways and means of sustaining growth trajectory.” (P4) • “Yes, I think it does. ... I think it does but I don’t think we use it for the purposes of sustainability goals.” (P3) • “Yes.” “... sensing does greatly contribute to the performance of a business because as I said most businesses are driven by what the outside opportunities are.” (P15) • “Yes, I think it does.” (P11) • “I would say yes, definitely.” (P7) • “To an extent it does ... in order for us to get work ...” (P8) • “Okay, ja I think sensing really assists...” (P10) • “It is a very, very important tool or insight for any company ...” (P5) • “Okay, sensing as in sensing in influencing the business, yes. ... I would say in a way, I would say in a way it does.” (P13) 	Sensing contributes to the performance of the business.	Sensing contributes to the performance of the business.	Positive contribution. (✓)
Interview question 2: How does ‘sensing’ ensure social, economic, and environmental goals are achieved?			
<ul style="list-style-type: none"> • “I would want to interpret sensing ... it’s networking.” “...network and to be able to get ideas from others in the same sort of space ...” (P1) • “So then with all that network then it actually helps greatly for the company to perform.” “... you are able to network with other people and find out what they are doing and like being aligned with some of the best practices that they are actually doing.” (P10) 	Sensing enables better networking.	Improved networking and market intelligence.	Company. (✓)

First order code (44) Note: (Px) refers to the participant who provided the input.	First order category (22)	Theme (12)	Construct (6)
<ul style="list-style-type: none"> “... one has to stay abreast of every technological development, every environmental factor that could impact the business ...” (P1) “...we were able to position ourselves ...” (P2) 	Sensing enables you to stay informed about technical development and the environment to better position yourself.		
<ul style="list-style-type: none"> “... you need to keep inflow of business coming ... Opportunities, and that can only be done through sensing.” (P16) “... it helps in the sense that you end up getting an opportunity that you wouldn't obviously have gotten into. So then it can come up with the rewards ...” (P10) “... we would use that type of an approach in most cases as a way to scan the market as to where the opportunities are sitting.” (P5) “... getting business intelligence that will help you to obviously be likely to secure future opportunities and by doing that you are likely then to establish a sustainable financial position for the company.” (P5) “... the more work comes through the more you can actually be able to employ. So that has an impact on the social aspect.” (P5) 	Increased opportunities / work load and rewards.		
<ul style="list-style-type: none"> “Sensing ... helps us to position our brand ...” (P6) 	Brand positioning.		
<ul style="list-style-type: none"> “... to seek opportunities outside our normal everyday operation, it actually allows innovation of the business.” “Sensing helps to ensure that we achieve our goals, and it also allows innovation of our business...” (P6) 	Promotes innovation within the company.		
<ul style="list-style-type: none"> “... to help us determine beforehand what additional capabilities we need to acquire ...” “...we are able to identify beforehand if we are lacking any skills as well, we are able to reskill like I said, we are able to acquire skills ...” (P2) 	Identification of skills competencies / needed.		
<ul style="list-style-type: none"> “...providing a platform for the new professionals to work with professionals who have been in the industry for the transfer of knowledge and skills and innovation.” (P12) “... the social, economic, environmental goals how they are achieved is through partnerships and association with other SMEs within similar industries that would actually want to pursue and be able to learn and actually grow in that particular space. ... how they can actually help in terms of sustainability performance is through measures like shared knowledge with other industry key figures peers.” “...sharing skills and build and ensuring that they grow ...” (P4) 	Sharing knowledge and skills transfer.		

First order code (44) Note: (Px) refers to the participant who provided the input.	First order category (22)	Theme (12)	Construct (6)
<ul style="list-style-type: none"> “social, economic, environment and all other by products automatically come out in the wash, so they are achieved if you achieve your main goal you know, in terms of delivering on that main task for a client.” (P7) 	Project delivery ensures the achievement of social, economic, environment goals.	Project delivery.	
<ul style="list-style-type: none"> “... we have an opportunity to redesign and rebuild an infrastructure in a way that it will impact positively on the environmental aspects ...” (P5) 	Green buildings / infrastructure.		
<ul style="list-style-type: none"> “... with the government ... you will find there are sections whereby they have actually written specifications specifically dealing with the social, economic and environmental aspect of it.” (P8) 	Government contracts dictates compliance with social, economic, and environmental goals.		
<ul style="list-style-type: none"> “... upliftment of the community.” “...when you implement the project, make sure that the community in terms of job opportunities must benefit as well ...” (P16) “... one would do that project without the involvement of the community leaders in terms of a social point of view – community leaders or even the community within which we implement the project itself, and without even negating the environmental goals or environmental impact.” (P11) “... the actual end product, how that end product will impact on that local community or area ...” (P13) 	Community involvement, upliftment, and job creation.	Corporate social investment.	Community. (✓)
Interview question 3: In your opinion, what makes ‘sensing’ more effective to achieve sustainability performance?			
<ul style="list-style-type: none"> “You have got to also introduce systems that enable sustainability of the business ...” (P1) 	Implement systems.	Proper systems and access to intelligent data.	Company. (✓)
<ul style="list-style-type: none"> “... government publications or through the internet you can have access to opportunities and information.” (P9) 	Having access to government publications and the Internet.		
<ul style="list-style-type: none"> “... the data extraction element as well as the data processing and interpretation – those I think are the three things that are very, very key to ensure sustainability.” (P5) 	Intelligent data.		
<ul style="list-style-type: none"> “... you get to get those opportunities that they are not necessarily obvious, you take time to identify and assess them.” (P10) 	Increased opportunities / work load.	Solid pipeline of work.	
<ul style="list-style-type: none"> “... this is where the leadership of the company comes in.” (P7) 	Good leadership.	Skilled human resources.	

First order code (44) Note: (Px) refers to the participant who provided the input.	First order category (22)	Theme (12)	Construct (6)
<ul style="list-style-type: none"> “... we go and network and work with people who are very much capable, who are very much stronger than us, so then in that way it becomes more effective because if you are working with more experienced people then you tend to learn from them, and then in that way you become more effective ...” (P10) 	Improved access to skilled individuals.		
<ul style="list-style-type: none"> “... for a typically SMME, it is more or less on a survival mode. On a survival mode you take what is there, what is available ...” (P13) 	Survival mode drives sensing.	Survival mode drives sensing.	
<ul style="list-style-type: none"> “... it is the planning right from the onset, where you involve all the role players and stakeholders ...” (P11) 	Stakeholder involvement.	Stakeholder involvement.	Community. (✓)
<ul style="list-style-type: none"> “... those clients who are actually chasing us have to put in to their documentation as part of the requirements, and when you get the work from them it is that you must actually consider the social there as well as the environmental and economic aspect of this thing as well.” (P8) 	Government contracts dictates compliance with social, economic, and environmental goals.	Government contracts dictate compliance with social, economic, and environmental goals.	
<ul style="list-style-type: none"> “No, it's non-existent here. No, it's non-existent, in my opinion.” (P3) 	There is no correlation between sensing and sustainability performance (including achieving environmental goals).	There is no correlation between sensing and sustainability performance.	No correlation.

APPENDIX F3: RESPONSES TO RESEARCH SUB-QUESTION 2

Sub-research question 2 is “How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?”

First order code (34) Note: (Px) refers to the participant who provided the input.	First order category (14)	Theme (10)	Construct (4)
Interview question 1: In your opinion, does ‘seizing’ greatly contribute to the performance of the business?			
<ul style="list-style-type: none"> • “Yes, ...” (P2) • “Yes, ...” (P6) • “Yes, ...” (P16) • “... we do use seizing for continuous business operations, but in sustainability, I don't think it links to that.” (P3) • “So it does greatly assist in achieving sustainability performance but it wouldn't be the core.” (P15) • “Yes it does, it does ... it does contribute to the sustainability of the business.” (P11) • “Yes, I think it does. Yes, definitely does, yeah.” (P7) • “Yeah, it does. ... it does basically contribute to the performance of the business because you put in the right individuals.” (P8) • “Yes, it does.” (P10) • “Ja...” (P5) • “...I would say seizing is quite a key component for sustainability purposes because without you having the requisite you know, or I would say tools of war, you would not be able to you know, get in to the battle and ultimately win that war.” (P13) 	Seizing contributes to the performance of the business.	Seizing contributes to the performance of the business.	Positive contribution. (✓)
Interview question 2: How does ‘seizing’ ensure social, economic, and environmental goals are achieved?			
<ul style="list-style-type: none"> • “... you've seized the opportunity and you have mobilised competent resources to deliver in line with the as sold margins.” (P1) • “... you must know that people ... you are employing they understand that whenever there is a project, there is a social aspect, there is an economic aspect, and the environmental aspect which need to be protected ...” (P16) • “... we have found is with most SMEs there is limited resources that are being used to drive the performance of these SMEs needs. And for that most importantly is what critical resources are there, it is not necessarily having all the resources in-house.” “... it is tapping into the right resources ... So having the right resources to execute opportunity 	Mobilise competent resources / mobilise resources that understand the social, economic, and environmental aspect of the project.	Mobilise skilled workforce.	Company. (✓)

First order code (34) Note: (Px) refers to the participant who provided the input.	First order category (14)	Theme (10)	Construct (4)
and that creates value in terms of sustainability." (P15) <ul style="list-style-type: none"> • "... having resources helps to be able to achieve certain things that will make the company sustainable." (P10) • "One of the things that we do in our organisation is to try and give opportunities to young graduates, so that in a way contributes socially." (P10) 			
<ul style="list-style-type: none"> • "... I mean do you have the right set of skills to implement what you have actually sensed from this particular client as well." (P8) • "For you to get there, you need to get appropriate skill to certify exactly that with understanding the background." (P13) 	Employ people with right skills.		
<ul style="list-style-type: none"> • "... one of the key drivers of sustainability is to ensure that as a business you have good values for delivering your output." (P4) 	Having solid business values.	Good values.	
<ul style="list-style-type: none"> • "...some of the key things that are needed for SMEs is just to try and trust each other ... " (P4) 	Mutual trust between SMEs.		
<ul style="list-style-type: none"> • "Now we are talking as sold margins in terms of profitability." (P1) 	Deliver work profitably.	Profitability.	
<ul style="list-style-type: none"> • "... you know if you do mobilize your resources in an efficient way to get the primary task done, these three aspects that you have mentioned, social, economic and environmental, in my opinion, are secondary tasks that automatically gets resolved and achieved provided that you address the primary task." (P7) 	Project delivery ensures the achievement of social, economic, environment goals.	Project delivery ensures the achievement of social, economic, environment goals.	
<ul style="list-style-type: none"> • "... it's non-existent from a sustainability perspective." (P3) 	There is no correlation between seizing and sustainability performance (including achieving environmental goals).	There is no correlation between seizing and sustainability performance.	No correlation.
Interview question 3: In your opinion, what makes 'seizing' more effective to achieve sustainability performance?			
<ul style="list-style-type: none"> • "...we form sort of centres of excellence within the organisation so that we have people focussing on one type of opportunity ... and we mobilise the resources in that way" (P2) • "... the way we organise our resources, or we mobilise the company resources to ... capture opportunities." (P6) • "... to have your business thriving you have to mobilise your resources to exploit opportunities." (P9) • "... it's about resourcing a project properly. ... you have got to put the right resource to the right task." (P7) 	Optimum mobilisation of company resources.	Quick mobilisation of company resources.	Resources. (✓)

First order code (34) Note: (Px) refers to the participant who provided the input.	First order category (14)	Theme (10)	Construct (4)
<ul style="list-style-type: none"> “... using low income employees [<i>junior staff</i>] and then training them, you are able to get more done for less ...” (P10) “It [<i>seizing</i>] makes it more effective because you have allocated appropriate tools effectively.” (P13) 			
<ul style="list-style-type: none"> “... prepare the skills and expertise internally and so you can prepare that earlier so that you can actually have that first mover advantage as well, in terms of like be able to react faster, or rather to be proactive in terms of what they are looking for as well.” (P8) 	Faster response time.		
<ul style="list-style-type: none"> “... we try to acquire multi-disciplinary people and reskill everyone in the organization so that we are more multi-disciplinary, so that we can move across the different centres of excellence depending on the assignment requirements.” (P2) “... it is getting your own staff or your people you work with, more knowledgeable in terms of training capabilities and for them to gain more experience. ... continuing professional development ...” (P11) 	Train staff to be multi-disciplinary skilled.	Skilled workforce.	
<ul style="list-style-type: none"> “... you must make sure that the people you are hiring ... understand that sustainability is a new norm in our industry. And then the three aspects; socially, economic, and environmental; you cannot do without them ... they need to be at the forefront of any project to be sustainable and to be accepted by the community.” (P16) 	Employ staff that appreciates sustainability.		
<ul style="list-style-type: none"> “... what makes it more efficient is the quality of the information that the company has or those resources within the company should have accurate information, and the organisation should be flexible to review that intelligence from time to time and validate the accuracy of the information.” (P5) 	Reliable up-to-date data / information.	Reliable up-to-date data / information.	

APPENDIX F4: RESPONSES TO RESEARCH SUB-QUESTION 3

Sub-research question 3: “How do SME’s use transformation (continuous renewal of the company) to achieve sustainability performance?”

First order code (42) Note: (Px) refers to the participant who provided the input.	First order category (23)	Theme (11)	Construct (6)
Interview question 1: In your opinion, does ‘transformation’ greatly contribute to the performance of the business?			
<ul style="list-style-type: none"> “... and I think in so doing transformation certainly does bring about sustainability performance ...” (P1) “Yes, ...” (P6) “A business has to be able to transform as a function over time.” (P9) “Yes, yes.” (P16) “... transformation would assist in identifying different sectors your business is actually exposed to.” (P4) “So yes, in my opinion we do use transformation but it is mainly to survive.” (P3) “I have been calling it research and development, which by applying quite often, has brought us new opportunities and new angles of business that we were not looking at.” (P14) “Ja, I think to a certain extent it does contribute to the performance of the business.” (P11) “Yes, most definitely.” (P7) “Most definitely, this one it does.” (P8) “Yes ...” (P10) “... transformation is very key.” (P5) “So, it is greatly, greatly, greatly important and it is a contributor basically you know, for the performance of the business, it is the most critical element I would say. I think most SMMEs myself include run that risk that you get stuck and you get spoiled with this you know, set mindset of how you conduct or do certain things. And there is a risk of a comfort zone, and you lack to see a potential and growth beyond that comfort zone.” (P13) 	Yes, transformation contributes to the performance of the business.	Transformation contributes to the performance of the business.	Positive contribution. (✓)
<ul style="list-style-type: none"> “In my opinion does transformation greatly contribute to the performance of the business? No, not necessarily and why I am saying that if the business has core, if you have your core skills set and are able to achieve sustainability within that space there might be little room for you know continuous transformation especially for SMEs.” “... continuous renewal of the company will result in sustainability ... But at the moment ... the key that drives the industry is what is required there outside ... to bring in new work. So you can be sustainable and flexible within your 	Transformation partially contributes to the performance of the business.	Transformation partially contributes to the performance of the business.	Transformation partially contributes to the performance of the business.

First order code (42) Note: (Px) refers to the participant who provided the input.	First order category (23)	Theme (11)	Construct (6)
teams but have all the right systems in place but what is key core currently is how are you marketing and getting work in." (P15)			
Interview question 2: How does 'transformation' ensure social, economic, and environmental goals are achieved?			
<ul style="list-style-type: none"> • "... particularly I think what really promotes sustainability is the feedback that you get from clients ..." (P1) • "... collaboration ... really helped sustainability because you are able to get quicker responses and it is saving a lot of time." (P2) 	Provides for increased collaboration and feedback.	Increasing collaboration and learning.	Growing business. (✓)
<ul style="list-style-type: none"> • "...transforming ... learning new skills and ... diversifying your portfolio." (P4) • "So we just use people when they have got a gap and either you send them for continuous training so that they start o be able to perform more at the tasks, so that when those opportunities come in you don't suddenly start looking for a person outside who can do it ..." (P14) • "... you have actually identified courses within the business units you have and then you send the people to actually learn what is happening, what are the new terms, regulations, framework or other things that are actually coming up as well, so that you actually conform and comply with those as well." (P8) 	Continuous learning / learning new skills.		
<ul style="list-style-type: none"> • "... if there is no succession planning in your organisation, you are not going to be sustainable." (P7) 	Proper succession planning.		
<ul style="list-style-type: none"> • "The other important thing to understand is what sort of competencies your clients acquire and that requires you to then readjust yourself as a business to make sure you are offering your clients exactly what they require." (P5) 	Employ competencies required on projects.		
<ul style="list-style-type: none"> • "...SMMes ... are forced to transform because the environment around us is transforming. The use of technology, the passing of new legislation, the entrance of new competitors in to the market with us." (P2) • "... we are continuously changing systems, looking at state of the art, software that are helping us with better and more efficiently." (P2) • "... many supply chain practices have changed, and if you don't align yourself with those amendments in legislation and policies and procedures, you may find that you are not inline." (P5) 	SMEs are forced to keep up with changes in the external environment.		
<ul style="list-style-type: none"> • "... you are able to be creative in how you do your processes." (P9) 	Creative processes.		

First order code (42) Note: (Px) refers to the participant who provided the input.	First order category (23)	Theme (11)	Construct (6)
<ul style="list-style-type: none"> “I think it gives a different tune of options and what other ways of doing things and getting to the target and how that target will have an influence on the end user ... There is an element of innovation that comes with transformation. You move away from the norm but you find that the principles which are inherent in my engineering are still kept but how it is delivered it is in a very, very creative way.” (P13) 	Innovation.		
<ul style="list-style-type: none"> “... to sustain growth and ... therefore opening up new markets.” (P4) “... you need to continuously be transforming and not be stagnant, and then that will also help the business to grow.” (P10) 	Opening-up new markets and ensure business growth.	Growing the business.	
<ul style="list-style-type: none"> “... transformation ... will help you to impact your business in a positive financial manner.” (P5) 	Positive financial growth.		
<ul style="list-style-type: none"> “... your workflow processes, they need to be reviewed and you check whether they are still relevant to the current marketplace.” (P5) 	Updated workflow processes.		
<ul style="list-style-type: none"> “... you will also impact your social, again now because you are performing better it means you can employ more people or you can even improve the employment conditions in a sense of offering them better remuneration benefits ...” (P5) 	Better employment conditions.		
<ul style="list-style-type: none"> “... we employ local labour; that creates stability within the community, the broader community.” (P6) 	Employing local labour.	Addressing local needs.	Project delivery. (✓)
<ul style="list-style-type: none"> “... every project is about the community ... The community must never be worse off after you completed the project; the community must be able to enjoy whatever project is being implemented.” (P16) 	Community needs are addressed through implementing projects.		
<ul style="list-style-type: none"> “... and if you tick those boxes and get those right [project implementation], then I think the secondary issues in terms of social, economic and environmental goals, all will automatically be achieved.” (P7) 	Project delivery ensures the achievement of social, economic, environment goals.	Project delivery ensures the achievement of social, economic, environment goals.	
<ul style="list-style-type: none"> “So yes, in my opinion we do use transformation but it is mainly to survive. It has also no correlation in my opinion to sustainability performance.” (P3) “Currently the only system that keeps SMEs sustainable is the tendering system and how it's been structured.” “And it is not through transformation or continuous renewal of companies.” (P15) 	There is no correlation between transformation and sustainability performance.	There is no correlation between transformation and sustainability performance.	

First order code (42) Note: (Px) refers to the participant who provided the input.	First order category (23)	Theme (11)	Construct (6)
Interview question 3: In your opinion, what makes 'transformation' more effective to achieve sustainability performance?			
<ul style="list-style-type: none"> “... must be to ensure that you have a sustainable business practice that is in line with your company vision and your mission statement ...” (P7) 	Integrate sustainability into company vision and mission.	Embracing new knowledge and technology.	Change. (✓)
<ul style="list-style-type: none"> “... is now once these guys have actually gone into all these courses that have been identified by the business unit heads and the company, is to make sure that when they come back they actually practise these as well ... those guys have to actually practise whatever they have learned in these courses ...” (P8) 	Apply new knowledge learned in courses.		
<ul style="list-style-type: none"> “... embracing the upcoming technology or emerging technology to enhance our business is very important ...” (P6) 	Embracing new technology.		
<ul style="list-style-type: none"> “... there must be commitment from everyone in the organisation from the top boss to the junior or entry level employees.” (P5) 	Commitment required throughout the company.		
<ul style="list-style-type: none"> “... so client satisfaction surveys are quite important so that there can be a self-introspection ...” (P1) “... to continually meeting the clients' expectations which is the ultimate goal ...” (P16) 	Client satisfaction.	Client satisfaction.	Focusing on the client. (✓)
<ul style="list-style-type: none"> “... no one is saying an SME must stay as a professional service provider and not contemplate that one day it can actually match both professionally construction and supplier you know to create a big enterprise that maybe has evolved from one sector of fully construction but to accommodate all of them.” (P12) 	Opportunity to create a 'one-stop-shop'.	Opportunity to create a 'one-stop-shop'.	

**APPENDIX G:
FREQUENCY OF CODES IN THE THEMATIC
ANALYSIS**

Summary of data saturation

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for research question	18	20	14	11	4	6	5	6	7	7	3	2	3	2	1	0
Unique codes generated for sub-research question 1	4	1	1	1	3	2	2	2	1	2	2	0	1	0	0	0
Unique codes generated for sub-research question 2	2	3	1	2	1	0	1	2	0	0	0	0	0	0	0	1
Unique codes generated for sub-research question 3	3	1	1	2	5	2	3	1	1	0	0	1	1	0	1	1
Total unique codes generated	27	25	17	16	13	10	11	11	9	9	5	3	5	2	2	2

The RESEARCH QUESTION is: **“How do SMEs use their dynamic capabilities to achieve sustainability performance?”**

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for research question	18	20	14	11	4	6	5	6	7	7	3	2	3	2	1	0

Interview question	First order category	Total responses
Interview question 1: Do you subscribe to sustainability practices?	Yes, I subscribe to sustainability practices.	10
	I partially subscribe to sustainability practices.	1
	Is aware of sustainability practices but do not subscribe to it.	1
	No, I do not subscribe to sustainability practices.	2
Interview question 2: Do your current internal resources have the capabilities to meet sustainability goals?	Yes, current internal resources have the capabilities to meet sustainability goals.	4
	Current internal resources only partially have the capacity to achieve sustainability goals.	7
	No, current internal resources do not have the capabilities and / or time to meet sustainability goals.	4
Interview question 3: How does your commitment towards sustainability influence your performance?	We innovate more.	1
	Increases likelihood of securing work and growing the business.	4
	Shaped by the market.	1
	Commitment towards sustainability does not influence performance.	3
	Performance decreases when resources are dedicated to sustainability.	1
	Unable to say with certainty.	1
Interview question 4: What would you consider to be the attributes needed to ensure the success of your business?	Marketing and business development.	4
	Focus on the client.	2
	To have some influence over the client.	1
	Diversified client base.	1
	Corporate social investment activities.	1
	Patience.	1
	Teamwork.	1
	Capability of and ability of competent staff to work across different disciplines.	5
	Working hard / passionate about your work.	2
	Continuous learning.	2
	Understanding market dynamics.	1
	Need to be agile.	1
	Financially astute.	3

Interview question	First order category	Total responses
	Deliver quality work.	2
	Good leadership skills understanding the resources being managed.	3
	Commitment throughout the company.	1
	Ethical behaviour.	1
	Company structure.	1
	Company culture.	1
	Integrated and automatised systems.	1
	Good administrative and operational support.	1
	Choosing the right business partner.	1
	Good cash flow.	1
Interview question 5: How do you navigate around environmental, social and governance issues in delivering your services?	Understanding the needs of the client / close relationship and engagement with the client.	3
	Growing your client network.	1
	Corporate social responsibility.	3
	Work in an ethical manner.	1
	Compliance with laws and regulations, including laws enforcing environmental sustainability.	6
	Too much politics and entitlement.	1
	Proper governance.	2
	Transparency in work.	1
	Efficient designs.	1
	Consider how solutions impact on customers.	2
	Innovation.	1
	Use qualified people.	2
	Knowledge and skills transfer.	2
	Partnering with companies that are compliant with environmental, social, and governance issues.	2
	Implement internal systems.	1
	Include sustainability in company strategy and philosophy.	2
Consider sustainability if economically possible.	1	
Interview question 6: What do you think of the sustainability performance of a SMEs in the construction industry?	Focus on survival.	1
	Focus is on generating income and less on sustainability.	1
	Focus is on delivering the work and less on sustainability.	1
	Focus on minimum compliance only.	1
	Sustainability is non-existent.	1
	Compliance with sustainability requirements is challenging.	1
	Comply with sustainability requirements because of legislation, although not a priority.	1
	Competitive approach in sourcing work.	1
	Little focus on innovation / sticking to the old way of doing things.	1
	Diversification of services.	1

Interview question	First order category	Total responses
	Not enough resources to consider sustainability as well.	1
	Need mentorship and training.	1
	Poor succession planning.	1
	Lack of highly qualified expertise.	3
	Lack of appropriate tools.	1
	Limited access to finance and cash flow constraints.	2
	Unprotected industry.	2
	Construction mafias and strikes.	1
	Fierce competition.	1
	Enforcing empowerment legislation makes it possible for SMEs to survive in the construction industry.	1
	Sustainability is driven by existing opportunities / jobs.	1
Interview question 7: How would you describe the macro business environment in South Africa? Is it easy for SMEs to do business in South Africa? If not, what makes it difficult for SMEs to thrive in South Africa, and what are possible solutions that the government may consider?	Drawn-out procurement processes and challenging procurement entry requirements for SMEs.	4
	Lack of transparency in awarding tenders.	1
	Registering on panels.	1
	Limited available skills.	1
	Poor technical competence in client body.	1
	Drawn-out and late payments by clients.	4
	Difficult to obtain access to finance.	2
	Cash flow problems.	1
	Unprotected industry.	2
	Shrinking construction industry.	1
	Construction industry is cyclical.	1
	Corruption.	2
	Political interference.	2
	Fierce competition.	1
	Lack of private sector to fully embrace SMEs.	1
	Legislation enables SMEs to operate in an industry dominated by a few key role players.	2
	Various legal / tax compliance requirements.	5
	Limited tax breaks for SMEs.	1
	Late project delivery.	1
Workload should not be dependent on only one major client.	1	
Interview question 8: What would you see as barriers in the construction industry that prevent SMEs from achieving sustainability performance? How can these obstacles be overcome?	Unrealistic tender requirements as part of procurement, and regulations.	5
	Poor financial assistance / project start-up funding, and cash-flow problems.	6
	Unrealistic discounts expected by government.	1
	Construction mafias.	1
	Unprotected industry and easy barrier of entry for new entrants.	2

Interview question	First order category	Total responses
	Too much political interference.	1
	High levels of crime and lawlessness.	1
	Lack of private sector to fully embrace SMEs.	2
	The need to survive.	1
	Professional bodies to promote interest of SMEs.	1
	Lack of government support.	1
	Poor client involvement on projects.	1
	Poor skills level and education.	2
	Compliance with SARS.	1
	Lack of access to equipment.	1

SUB-RESEARCH QUESTION 1 is: “How do SMEs use sensing (identification and assessment of opportunities outside the company) to achieve sustainability performance?”

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for sub-research question 1	4	1	1	1	3	2	2	2	1	2	2	0	1	0	0	0

Interview question	First order category	Total responses
Interview question 1: In your opinion, does 'sensing' greatly contribute to the performance of the business?	Sensing contributes to the performance of the business.	14
Interview question 2: How does 'sensing' ensure social, economic, and environmental goals are achieved?	Sensing enables better networking.	2
	Sensing enables you to stay informed about technical development and the environment to better position yourself.	2
	Increased opportunities / work load and rewards.	3
	Brand positioning.	1
	Promotes innovation within the company.	1
	Identification of skills competencies / needed.	1
	Sharing knowledge and skills transfer.	2
	Project delivery ensures the achievement of social, economic, environment goals.	1
	Green buildings / infrastructure.	1
	Government contracts dictates compliance with social, economic, and environmental goals.	1
Community involvement, upliftment, and job creation.	3	
Interview question 3: In your opinion, what makes 'sensing' more effective to achieve sustainability performance?	Implement systems.	1
	Having access to government publications and the Internet.	1
	Intelligent data.	1
	Increased opportunities / work load.	1
	Good leadership.	1
	Improved access to skilled individuals.	1
	Survival mode drives sensing.	1
	Stakeholder involvement.	1
	Government contracts dictates compliance with social, economic, and environmental goals.	1
	There is no correlation between sensing and sustainability performance (including achieving environmental goals).	1

SUB-RESEARCH QUESTION 2 is “How do SMEs use seizing (mobilisation of company resources to capture value from the identified opportunities) to achieve sustainability performance?”

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for sub-research question 2	2	3	1	2	1	0	1	2	0	0	0	0	0	0	0	1

Interview question	First order category	Total responses
Interview question 1: In your opinion, does 'seizing' greatly contribute to the performance of the business?	Seizing contributes to the performance of the business.	11
Interview question 2: How does 'seizing' ensure social, economic, and environmental goals are achieved?	Mobilise competent resources / mobilise resources that understand the social, economic, and environmental aspect of the project.	4
	Employ people with right skills.	2
	Having solid business values.	1
	Mutual trust between SMEs.	1
	Deliver work profitably.	1
	Project delivery ensures the achievement of social, economic, environment goals.	1
Interview question 3: In your opinion, what makes 'seizing' more effective to achieve sustainability performance?	There is no correlation between seizing and sustainability performance (including achieving environmental goals).	1
	Optimum mobilisation of company resources.	7
	Faster response time.	1
	Train staff to be multi-disciplinary skilled.	2
	Employ staff that appreciates sustainability.	1
Reliable up-to-date data / information.	1	

SUB-RESEARCH QUESTION 3: “How do SME’s use transformation (continuous renewal of the company) to achieve sustainability performance?”

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unique codes generated for sub-research question 3	3	1	1	2	5	2	3	1	1	0	0	1	1	0	1	1

Interview question	First order category	Total responses
Interview question 1: In your opinion, does ‘transformation’ greatly contribute to the performance of the business?	Yes, transformation contributes to the performance of the business.	13
	Transformation partially contributes to the performance of the business.	1
Interview question 2: How does ‘transformation’ ensure social, economic, and environmental goals are achieved?	Provides for increased collaboration and feedback.	2
	Continuous learning / learning new skills.	3
	Proper succession planning.	1
	Employ competencies required on projects.	1
	SMEs are forced to keep up with changes in the external environment.	2
	Creative processes.	1
	Innovation.	1
	Opening-up new markets and ensure business growth.	2
	Positive financial growth.	1
	Updated workflow processes.	1
	Better employment conditions.	1
	Employing local labour.	1
	Community needs are addressed through implementing projects.	1
Project delivery ensures the achievement of social, economic, environment goals.	1	
There is no correlation between transformation and sustainability performance.	2	
Interview question 3: In your opinion, what makes ‘transformation’ more effective to achieve sustainability performance?	Integrate sustainability into company vision and mission.	1
	Apply new knowledge learned in courses.	1
	Embracing new technology.	1
	Commitment required throughout the company.	1
	Client satisfaction.	2
	Opportunity to create a ‘one-stop-shop’.	1