THE RELATIONSHIP BETWEEN LEADING WITH INTENT AND DEVELOPING AN AGILE MINDSET AMONG EMPLOYEES TO RESPOND TO CHANGE EFFICIENTLY AND EFFECTIVELY

By

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ABSTRACT

If you want your employees to think, don't give them instructions, give them intent.
(David Marquet)

The employees in many organisations are trained to follow their leader, even though it could be down the wrong path (Marquet, 2013). Traditionally, managers are known for telling people what to do. While this approach may have worked in past years, it is no longer the most suitable approach, considering rapidly changing organisational requirements (Marquet, 2019).

Reflecting on the past few years, certain examples of major challenges are evident. Trials have required that organisations adapt or go out of business. Since employees on the ground have better insight to make decisions that relate to the environments they control, they should be empowered to make decisions that align with the organisational objectives.

The research topic is titled "The relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively". The key themes covered are intent-based leadership, organisational culture, agile transformation, and change management.

Organisations are faced with traditional and rigid leadership approaches that do not enable organisations to swiftly respond to unpredictable challenges.

The study objective is to validate if leading with intent creates an agile-driven organisation to better equip people in the organisation to respond to volatility, uncertainty, complexity, and ambiguity (VUCA) and the Fourth Industrial Revolution, while creating a sustainable and purpose-driven working environment for employees.

The primary research method involved literature reviews and a survey. The first step was to understand what literature existed on this topic and to identify the gap in the literature. The next step was to develop a survey with questions that was distributed electronically on LinkedIn and WhatsApp. The data was stored in a database and Extracted to Excel and the software PSPP was used for further analysis.

The key outcome derived from this study was to validate a relationship between intent-based leadership and developing an agile mindset. However, the study also shows that intent-based leadership does not require the use of agile frameworks to realise benefits. Intent-based leadership is able to develop an agile mindset in other project delivery frameworks where agile is not used.

DECLARATION OF ORIGINAL WORK

I, Christopher Le Bruh, herewith declare that this dissertation for the Regenesys Business School Master of Business Administration degree has not been submitted for degree purposes at this or any other university/institution. The dissertation is my original work in design and execution, and contributions from other sources have been duly acknowledged.

03/05/2022

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Student's Signature Date

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Finally, my thanks also goes all the respondents that completed the survey.

DEDICATION

My praise and glory to the Lord for providing me with this opportunity to further my academic studies.

I thank my wife (Moeida Le Bruh) and daughters (Milah and Bella Le Bruh) for their constant support, motivation, and sacrifices. My wife took over family responsibilities when I slacked, and she spent many hours listening to my thoughts. She was always there to cheer me up when things did not go as expected. She was my pillar of strength.

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ACRONYMS AND ABBREVIATIONS

APM	Agile project management
PBO	Project-based organisation
PM	Project management
PMBOK	Project management body of knowledge
VUCA	Volatility, uncertainty, complexity, and ambiguity
IBL	Intent-based leadership

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

If you want your employees to think, don't give them instructions give them intent (David Marquet)

Many organisations have employees who are trained to follow their leader even though such leader may take them down the wrong path (Marquet, 2013). Traditionally, managers are known for telling people what to do. While this approach may have worked in past years, it is no longer the most suitable approach, considering rapidly changing organisational requirements (Marquet, 2019).

Command and control leadership styles hamper organisations from developing an agile mindset (Rigby, Sutherland, & Noble, 2018). From an organisational perspective, the objective is to be able to adapt quickly to market changes, to get products and services into the market at a faster pace, improve quality, and lower the risks from traditional approaches (Rigby, Sutherland, & Noble, 2018).

Intent-based leadership can be defined as designing an environment where leaders give intent to employees. This allows employees to understand how they fit into the organisation. Furthermore, they can understand the common objective that the people in the organisation have to achieve (Power, 2016). This type of leadership makes employees feel inspired, committed, motivated and allows them to take responsibility for their actions. The reason for this is that a common sense of ownership is created for developing a product or service. Intent-based leadership therefore enables an organisation to create an environment where people want to contribute more, because they feel appreciated and are supported to achieve their full potential (Rieussec, 2019).

This study aims to shed light on the relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively. Acknowledging this relationship will contribute to developing full intellectual capacity for the organisation, and creating happier employees who are inspired and see their purpose and worth in whatever they get involved in. Simultaneously, this

marks the constant development of new leaders (Power, 2016). This study will highlight the differences between agile and traditional waterfall project delivery approaches to better understand leading with intent.

1.2 Study Background

Many organisations struggle to adapt to the Fourth Industrial Revolution and develop sustainable strategies to deal with the VUCA world (Sinha & Sinha, 2020). The term 'VUCA' has become a managerial acronym that stands for volatility, uncertainty, complexity, and ambiguity. This acronym is often used to describe the inability to understand and deal with constant change occurring in the world (Kraaijenbrink, 2018). All organisations should be focused on achieving the triple bottom line which is based on enhancing the lives of people, preserving the environment, and strengthening the organisation financially (Deloitte, 2020). To do this, many organisations have indicated that their current operating models must be reimagined in order to remain, or to achieve a competitive advantage over their competitors. Currently, organisations focus on three key themes, namely organisational performance, business agility, and digital transformation (Saputra, Sasanti, Alamsjah, & Sadeli, 2021). These three themes play a key role in the success of an organisation achieving its triple bottom line. Nevertheless, these themes require the right leadership to be driven. Intent-based leadership contributes to making these themes successful (Scott-Young, Georgy, & Grisinger, 2019).

This study focuses on understanding the relationship between business agility and intent-based leadership. Leadership plays an important role in ensuring that the organisation has the vision to respond to challenges from a VUCA business environment (Sarkar, 2016). Leadership is responsible for setting the strategic landscape for the organisation, which includes both employing competent people and implementing the strategy (Sarkar, 2016). At times leadership may not always have the right level of competence or even the time to implement these themes (Sarkar, 2016). This then becomes the perfect opportunity for leadership to lead with intent and provide employees with the ability to take control and make decisions that would benefit the organisation.

1.3 Problem Statement

The research problem can be identified as:

Traditional leadership approaches are rigid and do not enable employees to swiftly respond to unpredictable challenges that may occur. The use of **intent-based leadership (IBL)** and **agile project management** (APM) **enables employees to** develop an agile mindset so that employees can **respond to change efficiently and effectively**.

The global economy provides all organisations an opportunity to compete on a global scale, however this creates a competitive environment that is increasingly becoming more complex, dynamic, and uncertain (Dzwigol, Dzwigol-Barosz, & Kwilinski, 2020). It is found that employees do not always understand the purpose behind the tasks they have been asked to work on, this indicates a communication gap as well as a lack of transparency that exists in traditional organisation structures (Campbell & Phillips, 2020). Gone are the days where the carrot and stick approach can be used to optimally manage workforces (Landry, Forest, Zigarmi, & Houson, 2017). The transactional leadership (carrot and stick approach) might still be useful in manufacturing environments or where employees consider compensation as the most important motivator for doing their work. However, the millennial generation is less concerned about compensation. Instead, their interest is multi-faceted. They are concerned about compensation, collaborative environments, empowering opportunities, and transformational leadership when selecting an organisation for work purposes (Zuzana & Jana, 2020).

A study focused on understanding how millennials challenge traditional leadership identified that 91% of millennials aspired to be in leadership roles (Brousell, 2015). Respondents (63%) indicated that they wanted to be transformational leaders who can inspire employees with purpose and shared decision-making (Brousell, 2015).

Many common challenges manifest with this problem statement. These challenges can be categorised into three categories based on who are affected: Employees, managers, and the organisation.

Challenges employees face

The challenges that employees face include blindly following managers' instructions without understanding the reason behind instructions or the value of performing certain tasks. Employees are often not being empowered to make decisions because management does not delegate decision-making powers. Employees are also not encouraged to problem solve, which results in employees waiting for managers' approval. Employees are not thinking about, or solving challenges as managers would, because they do not understand the strategic landscape of the organisation and do not work in an optimal working environment that consists of happy and high performing teams.

Challenges that managers face

The challenges that managers face include managers' tendency to believe they are working when they are actually only micromanaging their employees. Managers are not able to work on a strategic level when they are constantly solving issues on an operational level. Likewise, managers are not developing employees who can be leaders. As a result, succession planning is limited.

Challenges that organisations face

The challenges the organisation face includes the fact that products and services are often created with the manager in mind and not with the intent of satisfying a customer's needs. Organisations are stuck in the traditional waterfall project delivery framework, which (due to the long cycle times) is not adequate to create innovative solutions for customers. Projects are delayed because people have to wait for sign-off at each phase in the waterfall project delivery framework. Another reason for delayed projects is that what was originally designed and developed is outdated when compared to the requirements from the market. Organisations are also slow to adapt to changes in the market due to historical internal processes and technology.

The carrot and stick culture is not sustainable for an organisation to deal with the Fourth Industrial Revolution or with the VUCA world because the carrot and stick culture does not motivate employees to perform their best (Kruse, 2017). The carrot

and stick approach can be defined as a system in which people are rewarded for good performance or punished (or faced with negative consequences), if they behave poorly. In this analogy, the reward is the carrot and the stick is the negative consequence (Indeed, 2020). The effects of the carrot and stick approach hamper knowledge transfer (Ding, He, Wu, & Cheng, 2016).

1.4 Research Objectives

For an organisation to successfully implement its mandate, it must start with good leadership that inspires the workforce to want to work towards a common objective. The manner in which organisations manage and deliver projects in an organisation, provides insight into the organisation's leadership and approach to implementing projects.

The aim of this study is to establish the relationship between intent-based leadership and an agile employee mindset.

The following objectives seek to address the aim of this study:

- To determine the extent to which intent-based leadership is used in agile project delivery and traditional waterfall methodology.
- To establish the relationship between intent-based leadership and an agile mindset.
- To determine the ability of intent-based leadership to deliver value to organisations.

1.5 Research Questions

The study seeks to answer these research questions:

- What is the extent to which intent-based leadership is used in agile project delivery and traditional waterfall methodology?
- What is the relationship between intent-based leadership and an agile mindset?
- What is the ability of intent-based leadership to deliver value to organisations?

1.6 Research Hypotheses

The primary hypothesis of this research is that those organisations that have been using agile frameworks for project delivery have a better chance of using intent-based leadership. This means they can deliver projects at a quicker speed, and with better quality and improved customer-centricity. The theory suggests a relationship between intent-based leadership and agile frameworks, because intent-based leadership is embedded in the agile principles and manifesto as described by the creators of the agile framework (Beck, *et al*., 2001).

Figure 1.1 confirms that the elements intent-based leadership, organisational culture and agile project management contribute to competitive advantage.

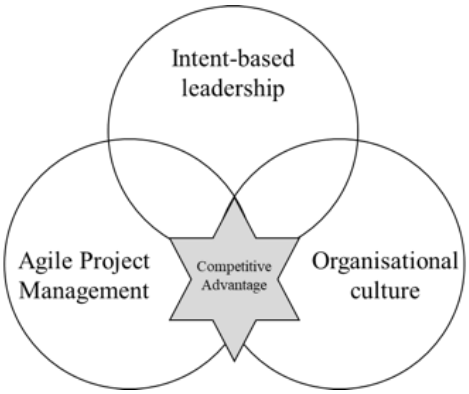


Figure 1.1: Conceptual framework

Source: Own work

Building on this, the research presents the following hypotheses:

- Intent-based leadership is more frequently used in agile project delivery than in traditional waterfall methodology.
- Smaller project teams can make decisions faster and respond to change quicker than larger teams.
- Agile project delivery is more likely to encourage re-distribution of authority in
- Decision-making than traditional waterfall methodology.

1.7 Study Motivation

The motivation for this study is to validate the approach taken by retired US Navy captain David Marquet who used intent-based leadership to operate his submarine. Based on his book, he managed to transform a terribly managed submarine into one of the best-operated submarines (Marquet, 2021). In the current study, this theory is to be tested in project-based organisations, to establish if it is still applicable and creates an agile mindset in the organisation.

1.8 Significance of the Study

The contribution of this study is that it will focus on providing managers (or anyone in the position of leading people), with a detailed analysis of how leading with intent is beneficial for creating agile mindset employees who can better respond to changing environments. The study also seeks to understand which project delivery framework most frequently applies intent-based leadership to achieve successful outcomes.

This subject of intent-based leadership seems to only recently be gaining the attention of the agile professional community. Consequently, an opportunity for new literature is developed between intent-based leadership and an agile mindset. While most viewpoints on this topic are expressed in blogs, limited formal research have been documented in journals. Intent-based leadership has been rarely researched in the context of project delivery (Scott-Young, Georgy, & Grisinger, 2019). When this study was embarked on, there were no journal articles on intent-based leadership on Ebscohost and Emerald databases.

1.9 Assumptions of the Study

The following assumptions are found in the literature: employees feel valued, employees are developed into leaders, decisions are made in a shorter timeframe, employees understand the strategic objectives of the organisation and can act better on objectives set, success is led by all employees (not only the leadership team), agile project delivery and intent based leadership enables organisations to achieve their goals faster (Marquet, 2019).

Brenner (2019) suggests that intent-based leadership supports agile ways of working

as it aligns to agile principles which suggest that a team should be self-organised and take responsibility for what they commit to.

The principles of intent leadership encompass: focusing on achieving greatness where employees learn from errors made, getting people to think, creating an environment where people feel safe, enabling new ways of thinking, fixing the environment and not necessarily the people, and re-allocating the authority to where the information can be found (Brenner, 2019).

Figure 1.2 presents the outcomes that can be achieved from implementing intent-based leadership in an organisation. The outcomes can be summarised as follows: an organisational change mindset is adopted, employees are empowered to ensure they have the competence and clarity to make decisions, employees take ownership of their work, employees are more motivated, customers benefit from better value, the organisation is focused on achieving excellence, a psychologically safe environment is created, and employees are encouraged to share their perspectives and adopt a new way of thinking.

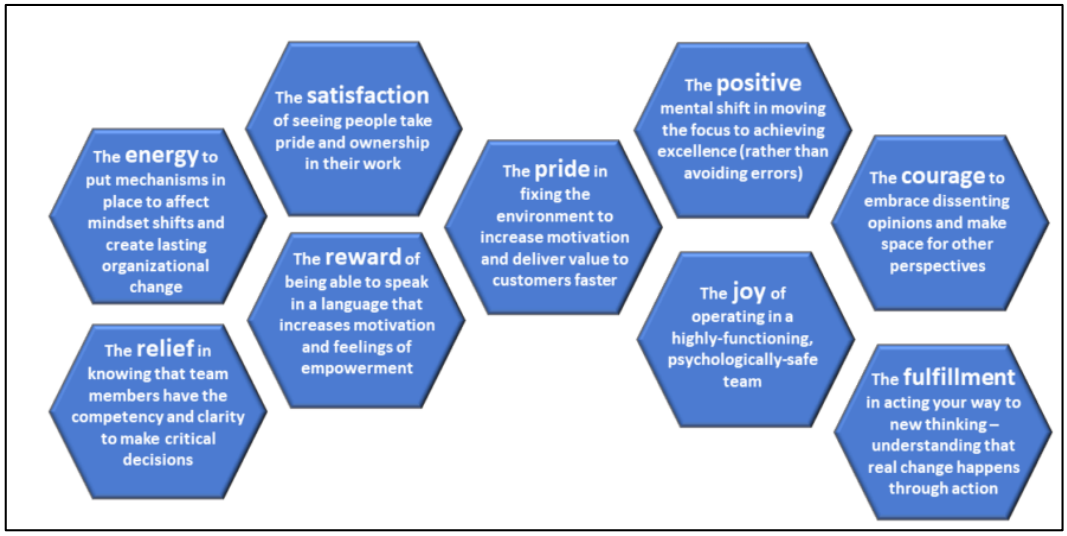


Figure 1.2: Outcomes of intent-based leadership

Source: Brenner (2019)

1.10 Delimitations of the Study

The delimitations of a study refer to the boundaries a researcher has set out for the study (Digital Literacy for St. Cloud State University, 2021). This section sets out the boundaries of this research study. Firstly, the study narrows its focus to people who are exposed to project-based organisations only. As the study aims to establish the relationship between intent-based leadership and agility, the study focused on commonly used project management frameworks in order to provide a clear understanding. This means that organisations that did not use project management frameworks could not contribute useful data and were excluded. Furthermore, considering the size of the broader global agile community, the sample size of this study was relatively small (it consisted of 81 respondents only). The largest agile community survey (referred to as the 2021 state of agile survey) consisted of 4182 respondents (Digital.AI, 2021). The findings of the current study therefore might possibly not reflect the views of the broader population. Given the time and cost implications, a larger sample was not possible for this study. However, future research studies could seek to replicate the study with a larger sample to confirm the emerging findings.

1.11 Theoretical Framework

While the concept of leadership has been well-researched over the years (Sihame & Moyosolu, 2021), intent-based leadership is a relatively new concept; the term has been coined by David Marquet in his 2009 book titled *Turn the ship around* (Marquet, 2021). Many organisations started transitioning to project-based organisations in order to create focus and better adapt to changes demanded by customers and the industry (Miterev, Turner, & Mancini, 2017). This has led the agile community to draw a relationship between intent-based leadership and agile principles for better operations and delivery in project based organisations. Despite great interest in intent–based leadership and agility, there is limited academic research that discusses the relationship. The key themes that will be covered in this literature review are intent-based leadership, organisational culture, agile project delivery and traditional waterfall project delivery. This study will focus on the relationship between intent-based leadership and developing an agile mindset. A case study was found drawing the relationship between shared leadership and agile development (Spiegler, Heinecke,

& Wagner, 2021). Shared leadership is commonly associated with agile frameworks. The challenges faced by organisations is that traditional leadership approaches are rigid and prevent organisations to swiftly respond to unpredictable challenges (Pretorius, Steyn, & Bond-Barnard, 2018).

1.12 Conclusion

In conclusion, this study seeks to understand the relationship between intent-based leadership and developing an agile mindset among employees, so as to respond to change efficiently and effectively. Organisations are faced with the challenge that their rigid traditional leadership approaches do not enable them to swiftly respond to unpredictable challenges. The study aim is to establish the relationship between intent-based leadership and an agile employee mindset. This study narrowed the scope of its research to only collect information from people who were involved in project-based organisations. The reason for this was to establish the relationship between intent-based leadership and project management frameworks used by organisations in order to determine if intent-based leadership was more visible in agile frameworks or in other project delivery frameworks. The assumption made upfront is that intent-based leadership is more frequently used in agile project delivery than in traditional waterfall methodology. This suggests that smaller project teams can make faster decisions and respond to change quicker than larger teams. It further suggests that agile project delivery is more likely to encourage a re-distribution of authority in decision-making than traditional waterfall methodology. These are qualities of intent-based leadership. A similar approach was performed by retired US Navy captain David Marquet who used intent-based leadership to operate his submarine. He managed to transform a poorly managed submarine into one of the best-operated submarines (Marquet, 2021). This theory must be tested in project-based organisations, to establish if it is still applicable and if it creates an agile mindset in the organisation. The next section presents the literature review.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

A literature review is an approach taken by researchers to plan their search strategy, the concept terms they will use, and to determine the scope of what will be included and excluded (Scott-Young, Georgy, & Grisinger, 2019).

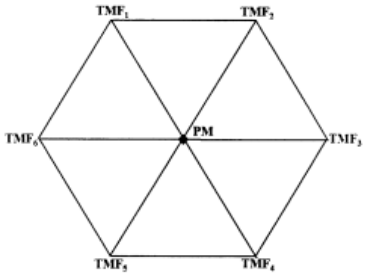
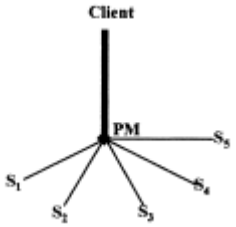
The study includes a literature review to understand the relationships between agile and traditional project management, intent-based leadership and organisational culture, change management, and competitive advantage. Organisations compete in a dynamic environment where customer needs frequently change. Likewise, organisations need project teams to deliver solutions that meet such needs in a faster time, and with the utmost quality (Imama & Zaheer, 2021). It is said that agile team members who are involved in the decision-making process are empowered to feel like they are the leader (Imama & Zaheer, 2021). Organisations realise that intent-based leadership is a powerful mechanism to managing complex projects (Scott-Young, Georgy, & Grisinger, 2019).

The general guideline outlined by Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) consists of identification, screening, eligibility, inclusion and analysis. The two primary academic article databases used by Regenesys Business School are Emerald and Ebscohost. These databases include articles about intent-based leadership. Apart from these, the researcher searched via Google scholar and found journals that indicated that intent-based leadership was inter-changeable with shared leadership. From this academic research it was detected that 34000 titles on Emerald contained the term ‘shared leadership’ while 416 titles on Ebscohost contained the term ‘shared leadership’. Since no titles in the two databases directly matched the terms ‘shared leadership’ with ‘agile’, the researcher also investigated other academic journal articles. For the terms ‘business agility’ and ‘agile project delivery’, and the fact that both refer to a common organisational delivery framework, a significant amount of corresponding literature was found on both databases.

This study will attempt to understand how these relationships can develop an organisation agile mindset that will lead to a competitive advantage.

In traditional hierarchical organisations, a project manager often co-ordinates both the processes and content decisions which makes the project manager the gate keeper. In order for project-based organisations to be sustainable and see long lasting results, organisations must frequently explore new opportunities to enable them to be efficient and adaptable (Imama & Zaheer, 2021). Table 2.1 below illustrates how the ownership of a project is centred in the project manager. This is how traditional project management has been established (Hobday, 2000).

Table 2.1: Internal and external co-ordination project-based organisations

Internal co-ordination		External co-ordination
	**Key:** * FM = Function Manager * TM = Team Manager * PM = Project Manager * TMF = Team member/function * S = Supplier	

Source: Hobday (2000)

In agile organisations, frameworks such as the Scrum and Kanban frameworks divide this ownership of process and content decisions through three roles within the team. These three roles are that of the product owner, scrum master and self-managing team (Schwaber & Sutherland, 2020).

The key concepts that will be investigated in this study are described below:

2.2 Intent-based Leadership

'Leading with intent' and 'strategic intent' are interchangeable terms within intent-based leadership. The concept is focused on developing a working environment where employees are motivated and encouraged to be the best version they can be (Willian, 2019). Strategic intent can be defined as providing clarity of purpose of what we are trying to achieve as an organisation (Brand, 2010). Literature also shows that shared-leadership can be interchanged with intent-based leadership. As such, it is defined as

when two or more people share the roles, functions and responsibility (Scott-Young, Georgy, & Grisinger, 2019). Table 2.2 outlines how other authors define shared leadership.

Table 2.2: Shared leadership defined

Year	Author	Sample	SL Definition
2015	Mathieu et al.	Student teams	Horizontal leadership, wherein members exert influence on each other in order to realise team goals
2016	D'Innocenzo et al.	Meta-analysis	An emergent and dynamic process whereby multiple individuals can take on leadership roles according to the needs of the group
2016	Kozlowski et al.	Meta-analysis	Leadership is distributed across team members rather than being concentrated in a single person and role
2016	Muethel & Hoegl	Theoretical	Dynamic, interactive influence processes among peers to increase team effectiveness (Pearce and Conger, 2003)
2016	Wu & Cormican	Engineering design teams	Leadership that emanates from the members of teams and not simply from the appointed team leader (Pearce & Sims, 2001)
2017	Lord et al.	Systematic review	Different individuals enact leader and follower roles at different points in time
2018	Aubé et al.	Student project teams	Each team member engages in leadership functions and accepts their colleagues' leadership. A dynamic and interactive influence phenomenon, through which members mutually encourage each other to contribute to attaining collective objectives (Pearce and Conger, 2003)
2019	Sweeney et al.	Systematic review	A dynamic interactive influence process among individuals in groups.

Source: (Scott-Young, Georgy, & Grisinger, 2019)

Shared-based leadership is focused on developing an environment where people want to contribute and share ownership, so that they feel valued, inspired and encouraged to reach their potential. Intent-based leadership is where people give intent to each other and feel proud of their contribution. It helps team members understand their role in the whole organisation and its objectives. Intent-based leadership is about giving control and the decision-making power to people who maintain the information (Power, 2016).

During rapidly changing situations it becomes difficult for managers to make every decision. This leads to a waterfall delivery process, also known as traditional project management. By training leaders to lead by intent the leader can provide intent and empower employees to drive the necessary actions. This subject was relevant during

the Covid-19 pandemic or any other crisis that may occur. During the Pandemic, during each day that went by, people were at the risk of dying of Covid-19. This means that healthcare workers need to understand their purpose or intent and what they are trying to achieve, so that they can drive the implementation of any strategy as long as it aligns with the intent provided by their leadership. The people on the ground often have more information than the manager, so the question is why those people are not empowered to make important decisions when they understand the operations better. Literature also reveals that employees deliver better when they feel part of the solution or actually own and implement the solution (McCracken, 2020).

Gone are the days when the project manager or business manager have to provide all the answers to enable people to work optimally. A younger working generation have naturally better ways of achieving more with less time (Willian, 2019). The approach of leading with intent as a leadership style can help managers delegate almost 90% of their duties because the right team members can actually action those duties (Marquet, 2021). The retired US navy captain David Marquet, also a best-selling author of *Turn the ship around*, presents a good example. This captain managed to run his submarine by leading with intent as a leadership style. It took 24 hours to get his employees to start thinking like him and over a year to fully implement the switch (Marquet, 2021). Marquet's approach was simple as he vowed to never give another order unless it was life-threatening. He provided his employees with intent and, in turn, his employees provided intent to him. This took away the employees' need to ask for permission to do something. After some time, when the team approached the captain about what they intended to do to get the job done, the captain would ask an employee what they thought he was concerned about. The team would then highlight their possible concerns. This mindset shift indicated that the captain's employees were starting to think like a captain and were making decisions like a captain would (Marquet, 2013). Marquet (2013) states that it would have been difficult to pinpoint the captain on the submarine because all his employees were making the same decisions that he would make. Marquet (2013) defines such decision-making as psychological ownership transfer to the employees. (Marquet, 2013). This true life story inspires the researcher and prompted him to determine how powerful this approach was in another

environment where people worked under pressure and delivered complex solutions in a difficult situation (like Covid-19).

David Marquet defines the characteristics of intent-based leadership that can be observed in organisations as the following: employees are proud to associated with something that adds value to the greater community, employees know and build towards achieving a common objective, Employees are leaders at various levels in the organisation, employees are inspired because they control and decision-making is passed down to all levels of the organisation and the success of the organisation is carried on all employee shoulders and not just the leadership team (Prikladnicki, Lassenius, & Carver, 2018).

The concept of intent-based leadership closes the potential leadership gaps. The demand for leadership is increasing as a result of digital transformation, rapidly changing expectations from customers and the industry, and the need to keep up with sales trends, this manner of leading is a manner to combat ever changing issues (Miller H. , 2022). Intent-based leadership may not be applicable to all organisations. Organisations which has not yet defined systems and structures may struggle to flatten hierarchies. Legacy organisations that have not adapted over the years may also battle to adopt this type of leadership (Miller H. , 2022). Table 2.3 presents the advantages and disadvantages of intent-based leadership that should be considered by organisations (Miller H. , 2022).

Table 2.3: Advantages and disadvantages of intent-based leadership

Advantages	Disadvantages
There are higher levels of individual participation and collaboration.	Without suitable systems and processes, shared leadership is ineffective.
Individual team members feel more invested in company decisions.	A decision by committee can be a long and gruelling process if all team members aren't aligned.
Employees learn to be more collaborative and share information so everyone can make better-informed decisions.	Productivity and profitability are lower when teams struggle to find solutions to problems they can all agree on.
The team learns to brainstorm ideas and build off of one another to produce innovative ideas.	Differing personalities, when left unmanaged, can produce high levels of conflict.
Leaders naturally emerge rather than being appointed. This makes having a leader feel more authentic since the group isn't "forced" into following this person.	Competing egos often prevent everyone from getting their fair share of power.
The team shares accountability for the choices they make, meaning if things go wrong, there's no one person responsible for the failure.	There's too much room for interpretation when it comes to people making individual decisions. For instance, this might look like an employee making a choice that ultimately hurts the company because they feel their boss gave them the power to do so.
Individuals learn to lean on one another when they need support, rather than facing problems alone.	Many companies such as watchmaker Richemont have tried shared leadership but reverted to hiring a CEO due to a lack of coherent direction.
With the potential elimination of positions like CEO and upper-level executives that usually come with a lofty price tag, the business saves money and can pour these resources back into the company.	People feel inspired and supported by a distinct leader. When there isn't one, employees might struggle to stay engaged and motivated at work.
Employees feel more empowered to serve the business to the best of their abilities.	Team members must rely on one another to ensure work burnout doesn't occur, rather than someone managing everyone's workload.
There's less "red tape" in flat organizations that don't use traditional hierarchies. This means less waiting time when it comes to approving projects or making decisions.	The project completion process gets messy when there isn't someone dividing up work and ensuring projects get completed on time.
People don't have to wait to receive direction from their superiors - instead they have more control to take the initiative and do what's necessary.	
A team of people is more effective at reaching organizational goals than individuals working alone are. This leads to fulfilling more objectives and the likelihood of achieving the company's mission and vision.	

Source: Miller (2022)

Employees who are happier are inspired and see their purpose and worth in whatever they get involved in and where the organisation is constantly developing new leaders (Remarkable Consultancy, 2020).

2.3 Project Management

The concepts 'project delivery', 'traditional waterfall' and 'project management' can be used interchangeably. Project management can be defined as a set of rules, methods, templates, standards used to successfully complete a project (Tereso, Ribeiro, & Fernandes, 2018). The Project Management Institute developed a body of knowledge called the Project Management Body of Knowledge (PMBOK) and identifies five processes. Figure 2.1 identifies the five processes in a project life cycle: initiating, planning, executing, monitoring and control, and closing of a project (Tereso, Ribeiro, & Fernandes, 2018).

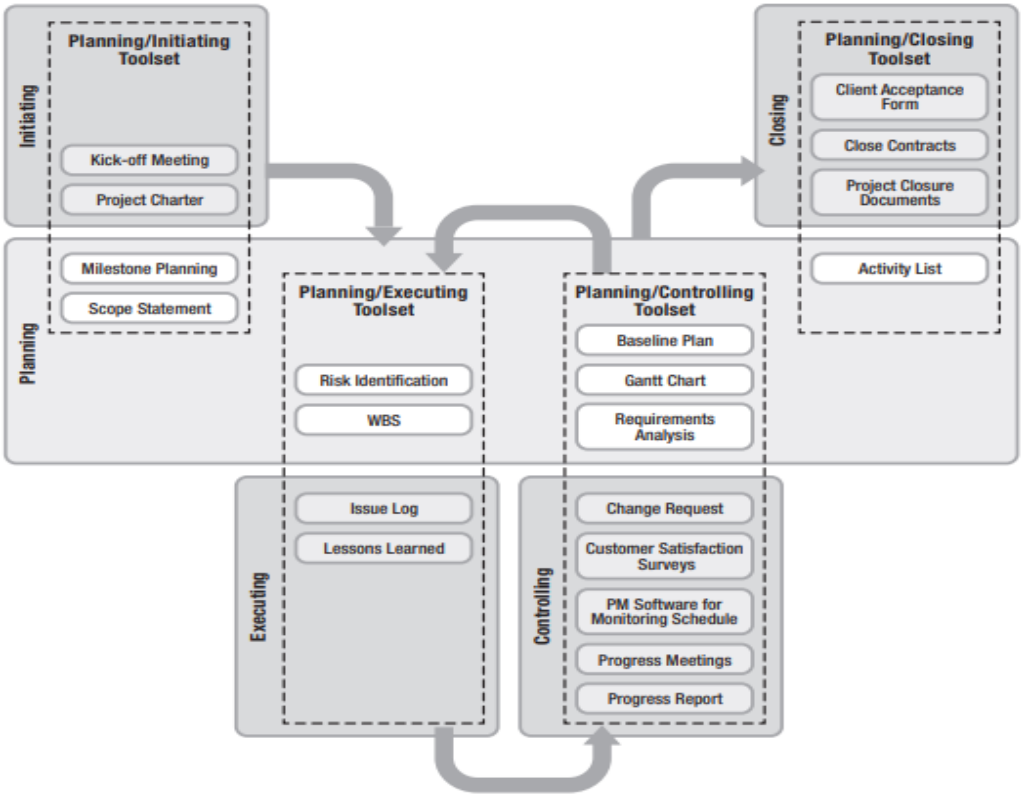


Figure 2.1: PMBOK project management process

Source: (Tereso, Ribeiro, & Fernandes, 2018).

There is a difference between the terms ‘agile project delivery’ and ‘traditional waterfall project delivery’ (Aroral, 2021). In recent years, more organisations have been adopting agile project management over the traditional project management methodology. More organisations have also been finding a hybrid approach using a combination of the two project methodologies. To understand why organisations are adopting an agile or a hybrid approach, the difference between these methodologies must be defined and the relationship between agile and intent-based leadership be investigated.

For this study, it is important to note that both project management methodologies can be used for any type of project and that they are not limited to software development projects. According to Nicholas and Steyn, the following characteristics typify a project (Thesinga, Feldmanna, & Burchardtb, 2021): A project should have a clearly defined objective with deliverables, no two projects are exact, because all projects are unique

with unique conditions, all projects have a start and end date, limited resources are allocated to the project life cycle, the project cycle includes team members, various tasks, stakeholders and other resources to achieve a common goal, and projects will have risks and uncertainty until the project has been delivered. Waterfall Project management is driven by a plan, as presented in Figure 2.2 and is perceived to create stability and predictability in a project (Aroral, 2021).

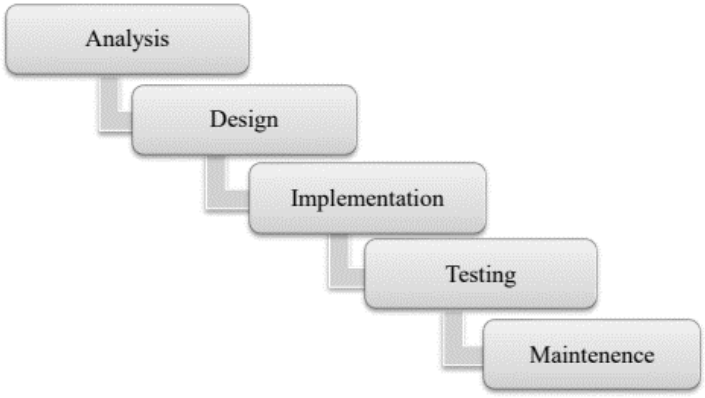


Figure 2.2: Waterfall project management

Source: (Aroral, 2021)

The difference between agile project management and waterfall project management is discussed later in this chapter.

2.4 Agile Framework

The term ‘agility’ first appeared in the manufacturing field in 1991. The term was defined to develop a manufacturing system with capabilities to meet fast-changing requirements of the industry (Abdelilah, El Korchi, & Balambo, 2018). In the global economy, businesses are constantly changing how they operate in order to keep up with customer expectations. The approach that was developed to help businesses adopt changes faster while maintaining competitive advantage, required that large businesses be divided into smaller manageable sizes that continued to work towards one common goal. The approach was termed ‘agile enterprise’ (Routroy, Potdar, & Shankar, 2015).

Over the last decade, the concept of agility has been improved. In 2001, a breakthrough was discovered when a group of software developers convened a conference to brainstorm possible approaches towards achieving better project results. These software developers were frustrated by the limitations in the traditional project management methodology which hindered software developers to respond swiftly to changes (Aroral, 2021). The outcome from the conference was the manifesto of agile (Beck, et al., 2001) as described in its original state. Figure 2.3 below presents the values that are prioritised in the Agile Manifesto.

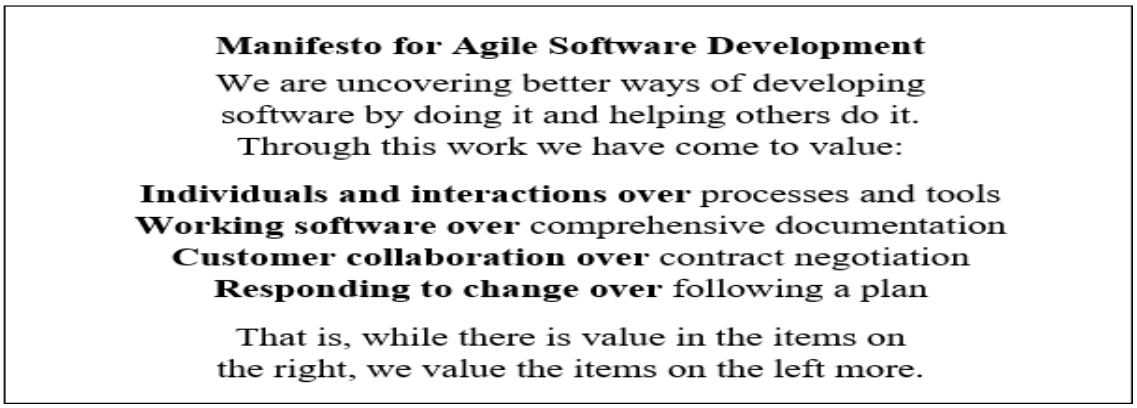


Figure 2.3: Agile manifesto

Source: Beck, et al. (2001)

According to the founders, 12 principles of agile (that create an agile mindset) emerged from the agile manifesto (Beck, et al., 2001). Table 2.4 lists the 12 principles supporting the agile manifesto

Table 2.4: Principles behind the agile manifesto

We follow these principles:	
1 Our highest priority is to satisfy the customer through early and continuous delivery of valuable software. 2 Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage. 3 Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale. 4 Business people and developers must work together daily throughout the project. 5 Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done. 6 The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.	7 Working software is the primary measure of progress. 8 Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely. 9 Continuous attention to technical excellence and good design enhances agility. 10 Simplicity--the art of maximizing the amount of work not done--is essential. 11 The best architectures, requirements, and designs emerge from self-organizing teams. 12 At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly.

Source: Beck, et al. (2001)

The agile manifesto and principles are the foundation of the number of agile frameworks that exist today. Figure 2.4 presents an overview of agile frameworks.

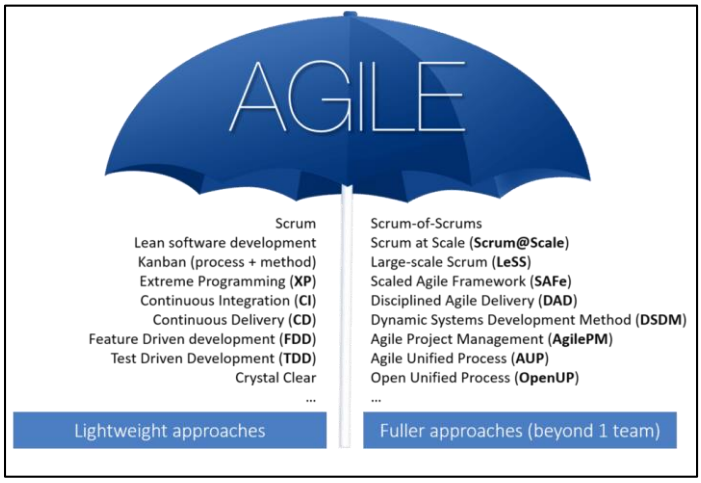


Figure 2.4: Agile frameworks

Source: Misevičiūtė (2020)

The 15th state of agile report surveyed a global agile community in 2021 and identified the scrum framework as the most commonly used (66%) in organisations (Digital.AI,

2021). Figure 2.5 ranks various agile frameworks according to respondents involved in the 15th state of agile report.

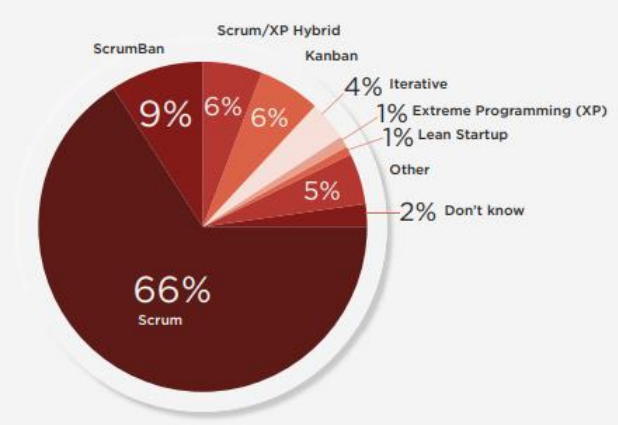


Figure 2.5: Agile framework usage

Source: Digital.AI (2021)

Scrum is one of the many agile frameworks that have been created to address limitations of project management to better deliver on projects. The scrum framework was created by Ken Schwaber and Jeff Sutherland (Scrum.org, 2021). Scrum can be defined as a lightweight framework to help people create value through solutions that address complex problems (Scrum.org, 2021). The scrum framework initially does not have detailed instructions because its focus must be placed on the principles and manifesto instead of complex processes that remove agility (Scrum.org, 2021). Scrum is value-driven, which means it is more focused on people's needs instead of on a plan. Table 2.5 shows the composition of Scrum.

Table 2.5: Scrum roles, events, and artefacts

Roles	Events	Artefacts
Product owner Scrum master Stakeholders Development team (Business analysts, designers, developers, testers)	Sprint planning Daily scrum Sprint review Sprint retrospectives Backlog refinement	Prioritised product backlog Sprint backlog Definition of ready Definition of done Increment (Shippable value)

Source: (Andrei, Casu-Pop, Gheorghe, & Boiangiu, 2019)

Figure 2.6 demonstrates the scrum framework in practice by a team (Sasmito & Fauzan, 2020). The scrum framework requires team work from a backlog that is prioritised according to what delivers the most value with the least amount of effort. From the backlog, the team goes into sprint planning which happens in iterations usually every second week. According to sprint planning, the team refines the backlog and identifies a portion of the backlog that they are confident that they can deliver in that iteration. This portion is known as the sprint backlog because for the duration of the iteration, the team only focuses on the items that are in the sprint goal while they ignore the rest of the work in the backlog. For the duration of the iteration, the team will meet daily for 15 minutes to discuss what they have worked on the previous day, and what they plan on working on the current day, if any issues are hindering them from completing what they are working on. At the end of the iteration there is a sprint review which allows any stakeholder to come and view the progress that has been reached on and to provide feedback to the team. In an effort to continuously improve, the team has a sprint retrospective at the end of the iteration to inspect and adapt their way of working. These improvements are taken into the next iteration where the scrum framework is applied all over again.

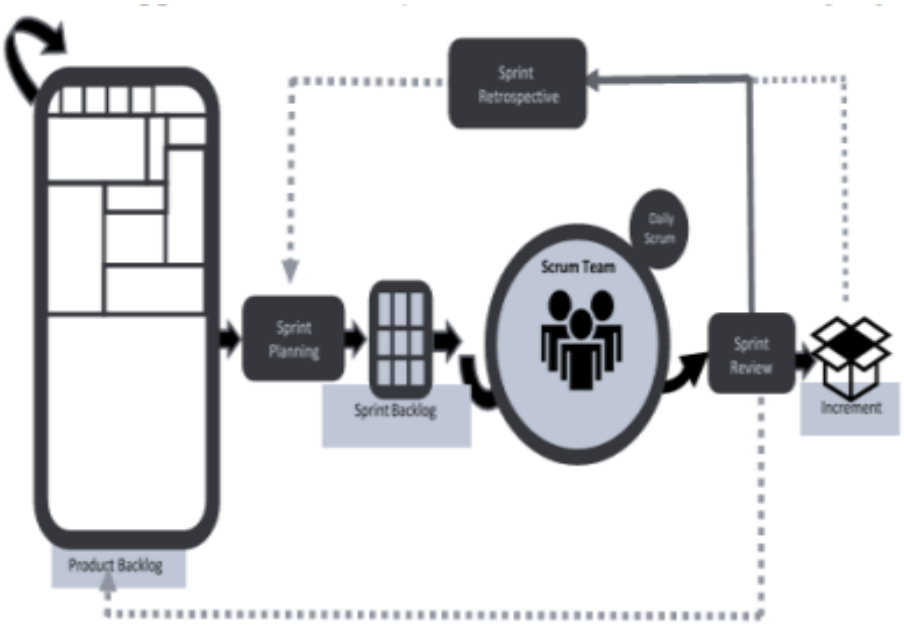


Figure 2.6: Scrum framework

Source: (Sasmito & Fauzan, 2020)

According to the 15th annual state of agile report, the two biggest reasons (64%) why organisations adopt agile practices are to enhance their ability to manage changing priorities and to accelerate software delivery (Digital.AI, 2021). This is closely followed by the need to improve team productivity and create a better alignment between business and IT at 47% (Digital.AI, 2021). Figure 2.7 identifies and ranks the reasons why organisations adopt agile frameworks.

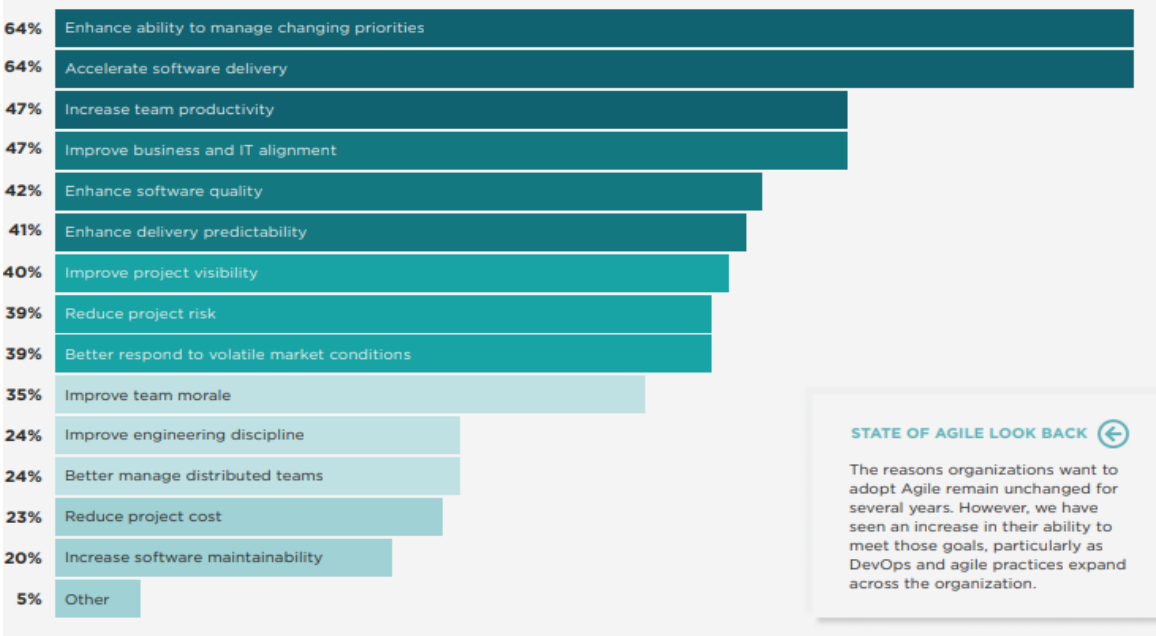


Figure 2.7: Reasons for adopting Agile

Source: Digital.AI (2021)

2.5 The Modern Agile Framework

Literature also suggests that intent-based leadership could make the modern agile framework practical (Cleff, 2018). Many members of the agile community have questioned the future of the agile project delivery framework. Intent-based leadership could build on an already great theory that has been adopted by almost every company in the workplace. One study has identified that 71% of companies are adopting agile practices and 98% of companies have benefited from it (Djurovic, 2020).

Innovative organisations are constantly looking for ways to incorporate agile ways of working into their organisation as streamlined as possible. Modern approaches focus on the culture of the organisation as that determines the success of the organisation. This belief aligns with Peter Drucker who said “culture eats strategy for breakfast” (The Alternative Board, 2020). The modern agile framework is represented in Figure 2.8, which sets out four guiding principles that focus on improving organisational culture and achieving improved outcomes (Modern Agile.org, 2021). This theory states the following: when people feel significant, they tend to contribute more; when an

organisation frequently experiments, they can learn rapidly, which leads to constantly delivery value. The last principle focuses on creating psychological safety in the organisation. This indicates that people are allowed to make mistakes as long as they are learning and growing from it. Likewise, they do not need to fear negative consequences when they fail or share certain information (Modern Agile.org, 2021).

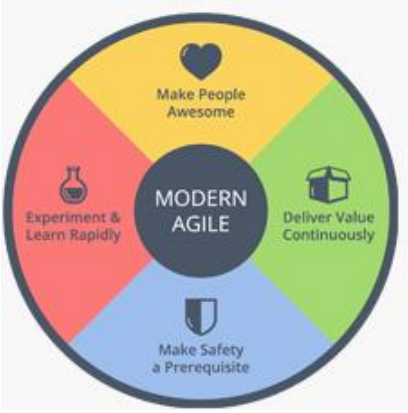


Figure 2.8: Modern agile framework

Source: Modern Agile.org (2021)

2.6 Traditional Waterfall vs. Agile Project Management

Traditional project management follows a linear phased approach to delivering a project (Tereso, Ribeiro, & Fernandes, 2018). For this reason traditional project management is referred to as a waterfall approach. At a high-level project cycle perspective, there are five phases that every project goes through, namely requirements, design, develop, test and deploy / release (Engineering Management, 2021). Figure 2.9 illustrates the different life cycles between the agile and waterfall approaches and identifies when value or outcome can be realised in the process.

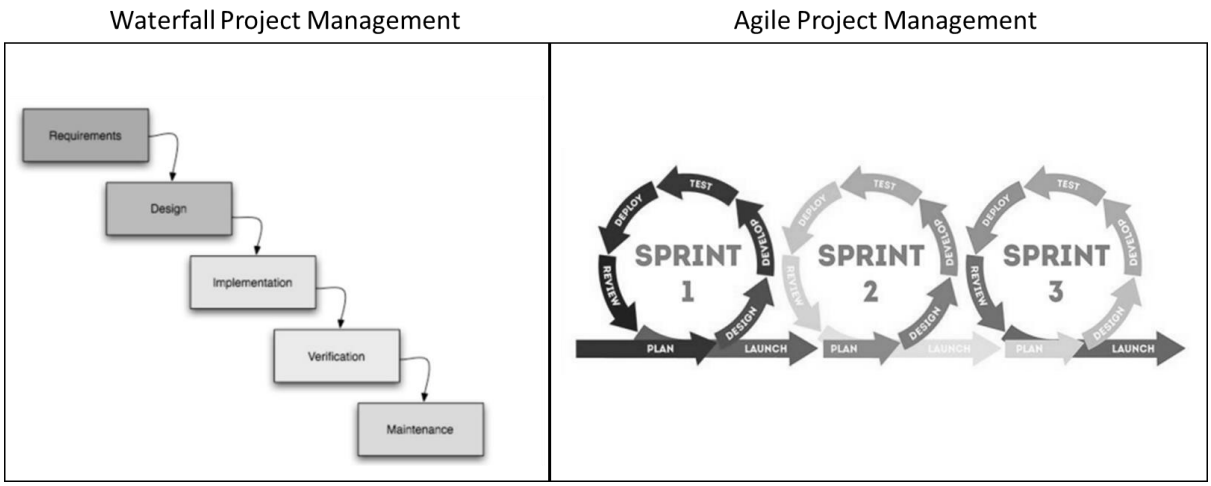


Figure 2.9: Traditional project management vs. agile project cycles

Source: (Făgărășan, Pisla, & Cristea, 2021)

These phases apply to agile and waterfall methodologies. The difference is that traditional project management requires the first phase to be 100% completed before it can progress to the next phase. The value of the project can only be realised at the end of the project once it has been deployed or released. Many organisations have discovered issues only in the testing phase. These issues could have been picked up after each iteration, if an agile framework had been used. This discovery can be very costly because it requires moving back to the planning phase in order to correct the issue (Thummadi & Lyytinen, 2020).

In project management the iron triangle theory identifies three constraints, namely requirements, cost and schedule. The iron triangle is visually represented in Figure 2.10. Quality is located the centre of the triangle, and this factor is not negotiable in any project. Traditionally, leaders tried to fix all three constraints and this has often created disappointment. Project management is plan-driven and stipulates that requirements must be fixed and that cost and schedule can be estimated. However, agile project management allows for any one of the three to be fixed. Even so, it will affect how the other two factors respond. In the event of cost and schedule being fixed or established, then the features or requirements should be flexible (Tam, Jóia da CostaMoura, Oliveira, & Varajão, 2020).

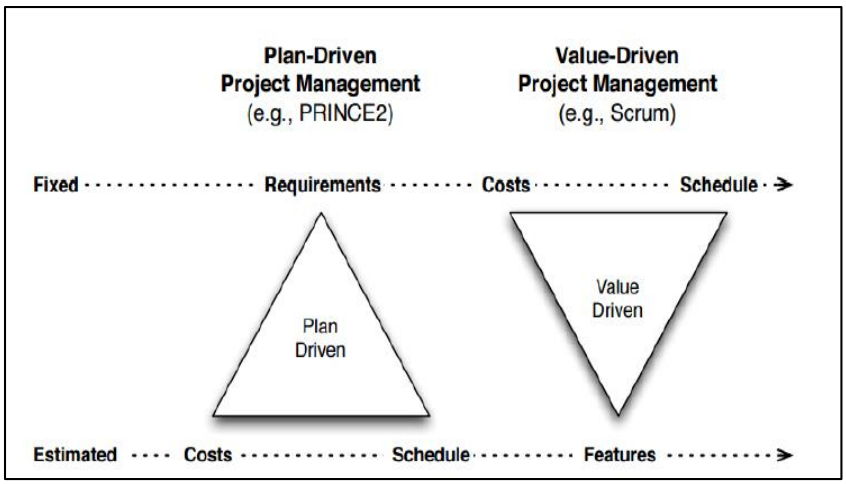


Figure 2.10: Iron triangle: waterfall versus agile

Source: (Făgărășan, Pisla, & Cristea, 2021)

Table 2.6 presents the differences between agile and traditional project management (Făgărășan, Pisla, & Cristea, 2021):

Table 2.6: Differences between agile and traditional project management

Metric	Waterfall methodology	Agile methodology
Time spent on planning the project	Long. Scope and processes need to be defined before starting the actual product development	Short. There is limited time spent on planning before the first iteration is started
Time needed to get the implementation started	Long. The initiating and planning stages are formal and take a lot of time to complete	Short. Agile values customer collaboration over contract negotiation
Development direction	Plan-driven	Change-driven
Built-in flexibility to discover problems	None	Possibility to adapt during and after each iteration
Built-in flexibility to discover problems	None	Possibility to adapt during and after each iteration
Delivery time for a usable product	Long, at the end of the project	Short, at the end of each iteration
Time-to-market and Return of Investment	Fixed, at the end of the project	Adjustable, early increments might start bringing revenue
Project Implementation Cost	Higher due to fixed-price contracts, which can include premium risks	Time and Materials contracts usually offer more flexibility and can be value-dependent
Requirements	They are defined at the beginning of the project. These are unlikely to change during the implementation phase	Likely to change during the implementation phase based on end-user feedback
Scope changes	There is a lengthy process to follow if scope changes are introduced during execution	Scope changes are welcomed
Project delivery	One delivery, at the end of the project	Incremental deliveries, at the end of each iteration
Project Risk	High at the end of the project since this is the point when the product is delivered to the market.	Low at the end of the project because a shippable increment is delivered with each iteration.
Project Focus	Processes	End-user value
Collaboration between the customer and product development teams	Low	High, they can be part of the project team
Communication modes	With the Project Manager	With the product development team
Customer-vendor relationship	Contract negotiation before anything else	Customer collaboration before anything else

Source: (Făgărășan, Pisla, & Cristea, 2021)

While Table 2.6 suggests the success rate of projects with different approaches (Khoza & Marnewick, 2020). Table 2.7 presents four different studies that measure the success rate with agile and traditional project management. In almost all of the scenarios, the use of an agile framework delivered better results. Recent research

shows that agile projects are 28% more successful than those projects that are delivered with a traditional project management methodology (Khoza & Marnewick, 2020). The criteria used was the iron triangle, achieving the business objective, customer experience, and the value added to stakeholders.

Table 2.7: Success rates between waterfall and waterfall project management

Study	Measurement	Success rate
Kisielnicki and Misiak (2017)		
	1. ROI	1. Agile: 50%; Waterfall: 20%
	2. Reducing process cycle time	2. Agile: 93%; Waterfall: 20%
	3. Process improvement	3. Agile: 70%; Waterfall: 10%
	4. BI adding value	4. Agile: 53%; Waterfall: 0%
Ambler (2018)		
	1. Successful	1. Agile: 39%; Waterfall: 11%
	2. Challenged	2. Agile: 52%; Waterfall: 60%
	3. Failed	3. Agile: 9%; Waterfall: 29%
The Standish Group (2014)		
	1. Successful	1. Agile: 39%; Waterfall: 11%
	2. Challenged	2. Agile: 52%; Waterfall: 60%
	3. Failed	3. Agile: 9%; Waterfall: 29%
Serrador and Pinto (2015)		
	1. Project efficiency	1. A direct positive correlation between success and Agile
	2. Stakeholder satisfaction	2. A direct positive correlation between stakeholder satisfaction and Agile

Source: Khoza & Marnewick (2020)

A study by Khoza & Marnewick (2020) identified these limitations of traditional project management: requirements that are not clearly understood, issues that are completely addressed in each phase, but rolled over to the next phase, a project delivery schedule that reveals a project with not enough evidence, incomprehensive and time consuming documentation, slow response to change, project costing that is decided upfront and overestimated, and teams that are limited in creativity and flexibility (Khoza & Marnewick, 2020).

2.7 Intent-based Leadership and Organisational Culture

The definition of intent-based leadership can be recapped as focusing on developing a working environment where employees are motivated and encouraged to be the best version they can be (Willian, 2019). Organisational culture can be defined as a set of behaviours, values and beliefs that has been developed over time in an organisation

(Willcoxson & Millett, 2000). Organisational culture provides employees with a sense of belonging as it is commonly agreed on. Organisational culture is unique to an organisation as it is very difficult to replicate another organisation's culture (Maull, Brown, & Cliffe, 2001). An ineffective orgainsational culture can destorty the organisation, demotivate employees and lead to poor a poor customer experience (SHRM, 2021). So it is important that an organisation carefully defines the core values and beliefs that will govern the organsisation.

The relationship between intent-based leadership and organisational culture is one of those critcal values that must be embedded into the organisation. Intent-based leadership provides the following values that make up the culture of the organisation: Sharing a common objective, building trust amongst employees because of the common objective, transforming people into thinkers, building a psycholoically safe working environment and empowering employees to make decisions (Rieussec, 2019). It is important to note that these values closely align to the agile manifesto, agile principles and the modern agile values. David Marquet stated the formula of giving control or empowering employees to make decisions is to build technical competence and to provide organistainal clarity (Marquet, 2013).

2.8 Agile Transformation and Change Management

During the last 24 months, organisations have seen more disruptions than in the last 20 years, which presents an urgent call for change (Clayton, 2021). Agile transformation can be defined as the process of transforming the complete organisation to have an agile mindset, which is based on the foundation of the agile manifesto and the agile principles (Barroca, Dingsøyr, & Mikalsen, 2019). This huge change can cause many challenges if it is not managed appropriately. This is where the relationship between agile transformation and change management come together. Change management can be defined as a model that is used to facilitate and lead change efforts (Errida & Lotfi, 2021). Table 2.8 identifies 37 change management models that can be used to successful implement change in an organisation (Errida & Lotfi, 2021).

Table 2.8: Various change management models

Processual models	Descriptive models
1. Kotter's[27] 8-Step Change Model	19. Cummings and Worley's[31] change management model
2. Lewin's[26] three step change model	20. Burke and Litwin's[32] model of organizational change
3. Lippitt et al.'s[50] change theory	21. Congruence model[33]
4. Bullock and Batten's[51] change model	22. Change formula of Beckhard and Harris[41]
5. Bridges'[52] model of transition	23. Carnall's[42] change management model
6. Luecke's[30] seven steps	24. Knoster's[44] change model
7. Mento et al.'s[36] change model	25. GE'S change acceleration[38]
8. Jick's[37] 10 steps model	26. Prosci's[59] change management methodology
9. Judson's[53] five-phase model	27. Best practice model for change management[60]
10. The change leader's roadmap[54]	28. Change tracking model[21]
11. ADKAR[55]	29. Change management body of knowledge[61]
12. Accelerating Implementation Methodology (AIM)[29]	30. BCG's change delta[62]
13. ACMP's[40] Standard for Change Management	31. McKinsey's 7-S[63]
14. Whelan-Berry and Somerville[39]	32. Armenakis et al.[64]
15. Kanter et al.[28]	33. Greer and Ford[65]
16. Galpin's[56] wheel of nine wedges	34. Cawsey et al.[66]
17. Model of Fernandez and Rainey[57]	35. CMI's change Management maturity[67]
18. Kickert[58]	36. Fernandez and Rainey[57]
	37. Change first's model[43]

Source: Errida & Lotfi (2021)

Figure 2.11 illustrates the elements of a change management process and shows which activity takes place in three phases: the current state, transition state and the improved state (ASQ, 2022).

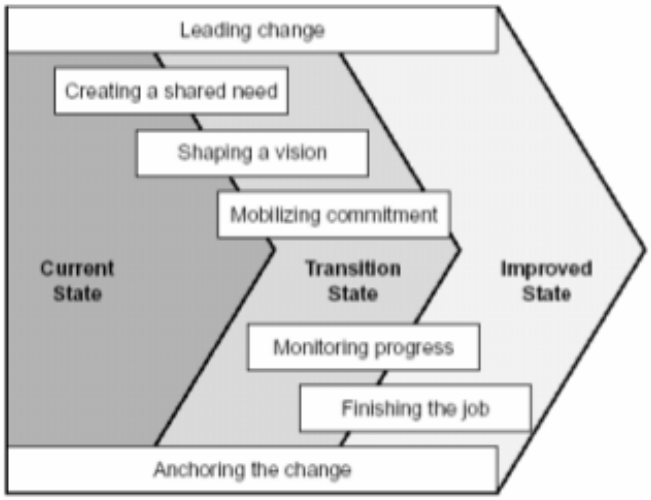


Figure 2.11: Change management elements

Source: ASQ (2022)

When looking at traditional project management the focus on change management only comes into play at the end of the project when the team is ready to release the deliverables. This because traditional change management is lengthy in timelines with

complex processes (Clayton, 2021). This is completely the opposite in agile projects. One of the agile principles state that agility is best achieved when the team frequently collaborates with stakeholders. This indicates that the change management process is enforced from the start of the project. All stakeholders co-create the solution which creates buy in from the start of the project. This alone increases the success rate of projects (Errida & Lotfi, 2021). In Figure 2.12, Melanie Franklin suggests that agile change management partners with traditional change management activities and incremental delivery (Franklin, 2018).

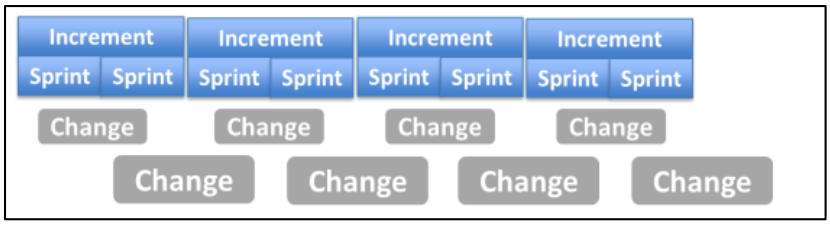


Figure 2.12: Agile change management

Source: Franklin (2018)

The elements that exist within each of these change packages include the following: reviewing the scope, stakeholder analysis, change plan, training or coaching, impact assessment, change message and readiness assessment (Franklin, 2018).

Figure 2.13 identifies and ranks the factors that contribute to hindering the successful of agile transformation in organisations. The top three challenges when implementing agile transformation are: inconsistent practices across teams (46%), misalignment between organisational culture and agile values (43%), and organisational resistance to change (42%) (Digital.AI, 2021).

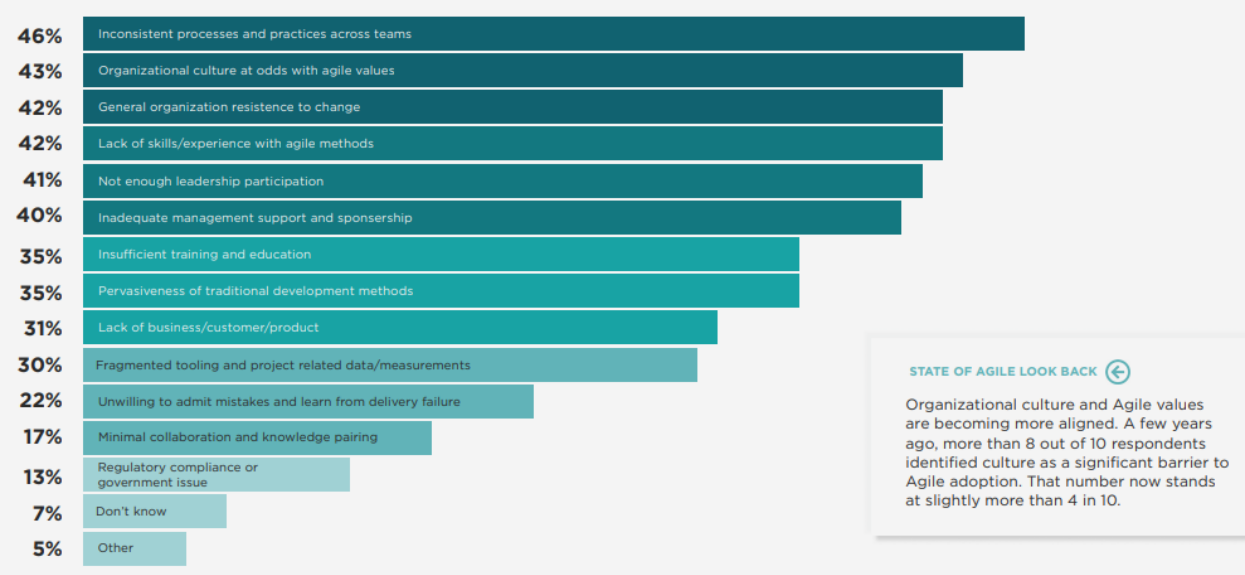


Figure 2.13: Barriers hindering agile transformation

Source: Digital.AI (2021)

2.9 Deriving Value from Delivery Approaches

An agile organisation aims to constantly deliver the highest value to the business and its customers by working through a prioritised backlog and delivering value in iterations. Figure 2.14 measures business value between agile development and waterfall development over a period of time. Figure 2.14 shows delivery comparison against the following factors: visibility, adaptability, value, and risk between agile and waterfall project management. The amount of value is on the Y axis and the duration of time on the X axis (Thornton, 2020). From a visibility perspective, agile project management allows business visibility to what is worked on a daily sustainable pace. However, in waterfall project management, business visibility is often in the planning stage and only at the end, once the work is completed. From an adaptability perspective, agile project management allows business and the team to adapt the work done after each iteration. However, waterfall project management often signs off the requirements before a change request is submitted later in the delivery process. This means that the process would need to move back to requirements to gather and down the process, which is not flexible. From a business value perspective, agile

project management seeks to deliver the right things at the right time through a prioritised backlog and delivering in short iterations. In waterfall project management, the value can only be released at the end of the project as there is only a big bang release of the work. From a risk perspective, agile project management reduces the risks after each iteration because it constantly releases work, getting feedback and adapting to the feedback. However, in waterfall project management, the risk is only reduced towards the end of the project when the users start testing or reviewing if the work was done according to specifications. Based on these four factors, agile project management derives more value compared to waterfall project management (Thornton, 2020).

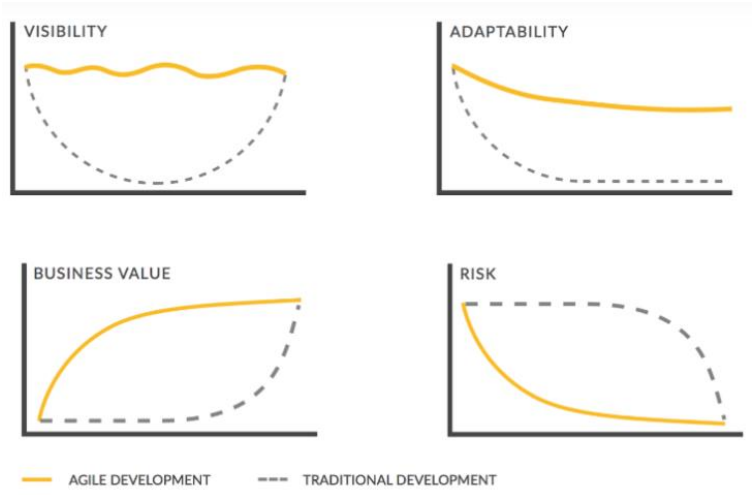


Figure 2.14: Delivery comparison: Visibility, adaptability, value, and risk

Source: (Thornton, 2020)

It is important to note the difference between an organisation that is agile and one that is doing Agile. Agile with a capital refers to agility as a noun which focuses of a process and practices like using a scrum board or following the agile events (Paasivaara & Kruchten, 2020). Lower case agile refers to agility as a verb which focuses on the behaviour, principles and culture (Paasivaara & Kruchten, 2020). Figure 2.15 illustrates the transition from doing agile to being agile. Only doing Agile does indicate that an organisation is agile, so it is important that an agile organisation practices both doing Agile and being agile. It is all about the cultural shift.

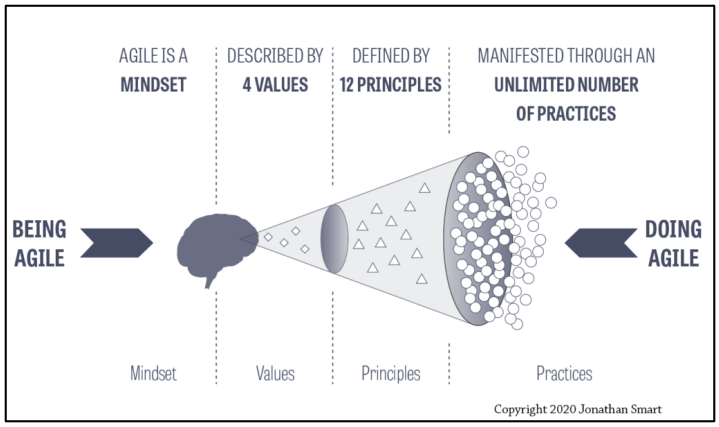


Figure 2.15: Being agile vs. doing Agile

Source: (Smart J. , 2020)

McKinsey surveyed 2500 business leaders to verify the characteristics of an agile organisation. The results identified five characteristics as presented in Table 2.9. These characteristics function towards achieving an agile organisation (Aghina, *et al*., 2018).

Table 2.9: Characteristics of an agile organisation

	Trademark		Organizational-agility practices[1]
Strategy	North Star embodied across the organization		• Shared purpose and vision • Sensing and seizing opportunities • Flexible resource allocation • Actionable strategic guidance
Structure	Network of empowered teams		• Clear, flat structure • Clear accountable roles • Hands-on governance • Robust communities of practice • Active partnerships and ecosystem • Open physical and virtual environment • Fit-for-purpose accountable cells
Process	Rapid decision and learning cycles		• Rapid iteration and experimentation • Standardized ways of working • Performance orientation • Information transparency • Continuous learning • Action-oriented decision making
People	Dynamic people model that ignites passion		• Cohesive community • Shared and servant leadership • Entrepreneurial drive • Role mobility
Technology	Next-generation enabling technology		• Evolving technology architecture, systems, and tools • Next-generation technology development and delivery practices

Source: (Aghina, et al., 2018).

2.10 Intent-based Leadership and Competitive Advantage

Leadership understands the strategic implication of the global economy, data-driven and service-intensive economy (Bartlett & Ghosal, 2002). Leadership also

understands that in order for the organisation to have a competitive advantage, the organisation must have skilled and motivated employees. Porter defines competitive advantage as the heart of an organisation's performance in the competitive market. Competitive advantage is to possess the distinctive capabilities that others lack (James, 2018).

One of the most important distinctive capabilities is an organisation's employees because it is difficult for other organisations to replicate their exact skill and competence. By having the organisation sharing leadership through intent-based leadership allows the organisation to develop a competitive advantage (Kukenberger & D'Innocenzo, 2019). The competitive advantage could result in faster decisions being made, better customer experience, more committed employees (who are dedicated to solving problems) and increased revenue, projects and brand reputation. (Kukenberger & D'Innocenzo, 2019).

2.11 Gaps in the Literature

Many organisations started transitioning to project-based organisations in order to create focus and better adapt to changes demanded by customers and the industry (Hobday, 2000). This has led the agile community to draw a relationship between intent-based leadership and agile principles for improved delivery in project-based organisations. Even with great interest between intent–based leadership and agility, there is limited academic research discussing the relationship.

2.12 Conclusion

The literature review focused on key themes that covered intent-based leadership, shared leadership, organisational culture, agile and waterfall project management, change management, and competitive advantage. This chapter sheds light on literature that exists on the relationship between intent-based leadership and developing an agile mindset. The literature review has identified a relationship between intent-based leadership and shared-leadership as these concepts have the same characteristics. After exploring the difference between traditional project management and agile project management, the literature review identified a relationship with agile project management based on the agile manifesto and principles. The relationship provides evidence that intent-based leadership is one of

the elements that develop an organisation’s mindset to enable it to establish a competitive advantage over its peers. It is competitive advantage that enables employees to carry the success of the organisation on their shoulders. This furthermore allows them to swiftly respond to change. The next section presents the research methodology.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Research is constructed on philosophical assumptions about what may be considered acceptable research and the ideal research method (that best suits the research topic) to collect data. This section will unpack the research methodology, research approach, data collection and data analysis methods, identifying the population and sample size, and the instrument to carry out this study. It is important to ensure that this study adheres to ethical considerations.

3.2 Research Paradigm and Orientation

The concept paradigm originated from the Greek word ‘paradeigma’ which stands for *pattern* and paradigm. It can be defined as a conceptual framework shared by a group of researchers or scientists and provides them with a model for assessing issues and to help find solutions (Janse van Rensburg & Roodt, 2009). Amukugo & Julia (2016) suggest that a paradigm is a pattern, structure, framework, and includes academic ideas, values and assumptions.

Four components constitute a research paradigm, namely ontology, epistemology, methodology, and methods (Rehman & Alharthi, 2016):

Ontology is defined as the social context in which the study is conducted and the interpretation of reality is understood by the respondents of the study. Epistemology is defined as the constructivist approach where knowledge and meaningful reality are based on human practices (Hathcoat, Meixner, & Nicholas, 2019).

Methodology is defined as a logic and scientific approach to investigate a theory or concept (Snyder, 2019). Another author identifies a fourth component namely axiology, which can be defined as how one acts in society (Aliyu Ahmad, Musa, Haruna, & And Mu, 2015).

Methods are the specific ways of collecting and analysing data, for example a survey or interviews (Rehman & Alharthi, 2016).

In summary, the four components can be posed as questions: Ontology asks how to find out if it is true, epistemology asks what values go into it, axiology asks how to write about it, and methodology identifies the process of studying it.

Academic research uses three approaches: 1) positivism 2) interpretivism, and 3) critical theory (Rehman & Alharthi, 2016).

Positivism makes the assumption that reality exists independently in humans as it is controlled by immutable laws (Rehman & Alharthi, 2016). The ontological aspect of positivists is that it is focused on realism. Positivists seek to relate the social world to the natural world. The epistemological aspect of positivists is that it is focused on objectivism (Rehman & Alharthi, 2016). The criticism of positivism is that it is not always successful when applied to social phenomena because of the complexity laws governing people and relationships (Rehman & Alharthi, 2016). Positivism requires experimentation to test a hypothesis.

Interpretivism dismisses the idea that a single, provable reality exists independent of our senses. Interpretivism implies that multiple realities exist, based on our senses as it is subjective. Interpretivism is often used in qualitative research (Alharahsheh & Pius, 2020).

Critical theory from the ontological position of critical theorists is based on historical realism. This implies that reality exists because it has been shaped political, cultural, ethnic, gender or religious theories on a period of time (Rehman & Alharthi, 2016). Critical theory is considered to be subjective because it believes that the researcher can influence the object.

For the purpose of this study a positivism approach will be used because it is objective and scientific methods can be used to analyse quantitative data. Based on the findings, the study seeks to confirm or reject hypotheses (Rehman & Alharthi, 2016).

3.3 Research Approach

This study will use a quantitative method to collect data. There is a clear distinction between quantitative and qualitative methods: quantitative methods are primarily

concerned with figures and statistics, while a qualitative approach focuses on understanding the words used during interviews (Basias & Pollalis, 2018). The quantitative approach aims to measure, quantify or find relationships. This approach is considered to be the structured and a standardised approach (Basias & Pollalis, 2018). The characteristics of the quantitative approach can be outlined as follows (Basias & Pollalis, 2018): The data analysis seeks to look at statistical relationships, the collected data is based upon exact measurement using structured and validated data collection tools that the confirmatory section of the research cycle focused on, the behaviour in the study is seen to be predictable and regular. The aim is to explain and predict the outcomes, and seek to understand general laws which will be applicable to the general population. The study can be repeated by other researchers and the outcome will be agreed upon. The advantages and disadvantages of quantitative research can be distinguished (Gaille, 2019). The advantages include that data collection occurs faster than in qualitative research, the samples are randomised, and repeatable and reliable. Furthermore, the outcome can be generalised, the study is anonymous, the research can be done remotely, and a larger sample is used to improve accuracy. The disadvantages are as follows: the questions cannot be followed up, there is the risk is that respondents may not reflect the general population, one is unable to determine if the answers provided are true or false, and one is unable to gain access to specific feedback information. There is also a possibility to create an unnatural environment as the researcher can manipulate the results (Gaille, 2019).

The research onion is a useful tool to think holistically about the research methodology. The process works inwards from the outside of the onion. Figure 3.1 illustrates the six layers of the research union, namely research philosophy, research approach, research strategies, choices, time horizon, and the techniques and procedures that make up the research design (Saunders, Thornhill, & Lewis, 2007).

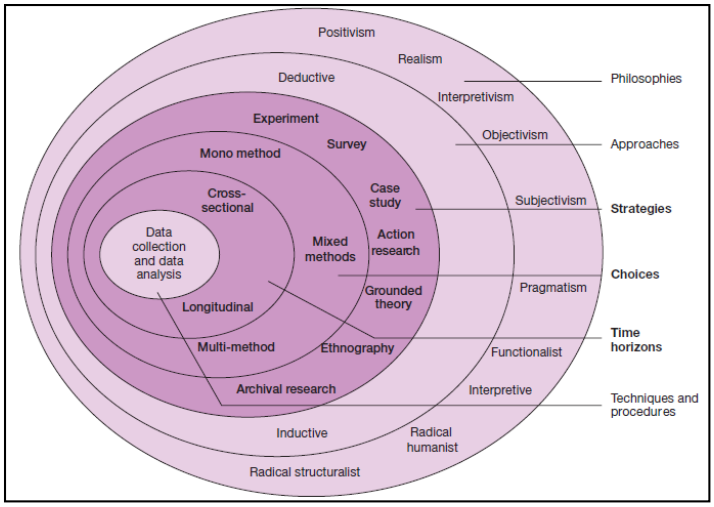


Figure 3.1: The research onion

Source: Saunders, Thornhill, & Lewis (2007)

The layers in Figure 3.1 can be defined as follows: Research philosophy is based on the foundation of the study and describes the set of beliefs that the research is built on. The research approach is the next layer which seeks to decide if the research approach will be inductive or deductive as it will influence the manner that the data is collected and analysed. The research strategy is the next layer, which focuses on the details of how the research will be done. This layer is based on the objectives of the study. Then, choices is the next layer, which focuses on the data types (either quantitative or qualitative data will be used). The time horizon is the next layer, which seeks to answer the points in time that the researcher plans to use (either the cross-sectional or longitudinal time horizon). The last layer is techniques and procedures, which focuses on what data will be collected, what method will be used to collect the data, what the sample will be, and how the data will be analysed (Saunders, Thornhill, & Lewis, 2007).

3.4 Research Approach to Data Collection

There are guiding principles for collecting data with the quantitative approach to ensure that the data derived is independent of expectations and that the data indeed reflects the theory being studied. The data collection is guided by the following objectives: 1) Empiricism, which is defined as the observation that can be repeated by others researchers, 2) Measurement, which identifies the tools like scales and

questionnaires used to measure theory being studied, 3) Replicability is focused on ensuring that the outcome achieved can be repeated in replication research, 4) Objectivity aims to remove any biases on how the data is collected and analysed in order to ensure that the outcome reflects the facts about a theory studied (Torrentira, 2020).

These five quantitative data collection methods must be noted: Document review, probability sampling, observation, interviews, and surveys and questionnaires (Question pro, 2019). The method selected for this study was a digital online survey using software called questionpro.com. The next step was to develop a survey to collect quantitative data which will be compared against the theory.

3.5 Research Approach in Data Analysis

Three methods can be used to analyse quantitative data: descriptive research, correlational research and experimental research (Stangor & Walinga, 2019).

Descriptive research focuses on creating a snapshot of the current state of relationships. The advantage of descriptive research is that it provides a complete view of what is happening at a point in time and allows for development questions in future studies. The disadvantage of descriptive research is that it does not evaluate the relationships between variables and may be considered unethical if respondents are not made aware they are being observed (Stangor & Walinga, 2019).

Correlational research focuses on assessing the relationship between two or more variables. The advantage of correlational research is that it provides an opportunity to test the expected variables in everyday life in order to make predictions. The disadvantage of correlational research is that it cannot identify the inferences between variables (Stangor & Walinga, 2019).

Experimental research focuses on the impact of one or more experimental manipulations on a dependant variable. The advantage of experimental research is that it allows the researcher to extract conclusions about the relationship. The disadvantage of experimental research is that it may be expensive and time consuming to experimentally manipulate variables (Stangor & Walinga, 2019).

Based on the research topic “The relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively,” the implemented research approach in the current study is correlational research as the research aim is to understand if there is a relationship between leading with intent and developing an agile mindset.

In order for quantitative data to be analysed it needs to move through the following process: Checking, editing, coding, assembling and transforming (Kent, 2015). In the checking step, the research reviews what has been captured in the survey to confirm that all fields has been populated, to check if the respondent understood the survey and to confirm that survey is useable. In the editing step, the research validates that the responses are consistent, accurate and that it logically makes sense. If not, the response may be unusable. In the coding step, the researcher ensures that the response values are numerical so that it can be imported into data analytical software. In the data assemble step, the researcher assembles the data in standardised rows and columns before importing the data into the data analysis software. In the last step, transforming, the researcher has the option to transform some of the variables in the dataset, for example regrouping variables (Kent, 2015).

Once the data preparations have been done, the data analysis can be done by using statistics. Statistics can be defined as using a mathematical approach to collecting, analysing, interpreting and presenting large numerical data (Jain, 2020). Figure 3.2 sets out two types of statistics: theoretical statistics and applied statistics. Theoretical statistics can be defined as proving thoroughly that the approaches of applied statistics are reliable and applied statistics can be defined as the root of data analysis which involves defining and determining organisational needs (Zaprešić & Zorić, 2021). For the purpose of this study applied statistics will be used to analyse quantitative data in order to confirm or reject the hypothesis.

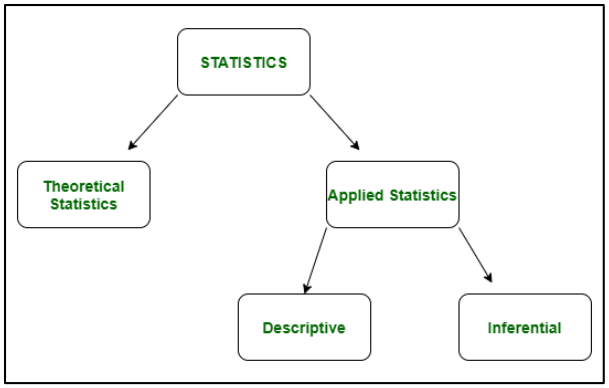


Figure 3.2: Types of statistics

Source: Jain (2020)

Figure 3.2 depicts two types of applied statistics that can be used (Jain, 2020): Descriptive statistics is used to help define, display and summarise data in a meaningful and impactful manner while inferential statistics is used to make predictions about a population by only analysis a sample (Jain, 2020). Table 3.1 outlines the difference between descriptive and inferential statistics.

Table 3.1: Difference between descriptive and inferential statistics

S.No.	Descriptive Statistics	Inferential Statistics
1.	It gives information about raw data which describes the data in some manner.	It makes inference about population using data drawn from the population.
2.	It helps in organizing, analyzing and to present data in a meaningful manner.	It allows us to compare data, make hypothesis and predictions.
3.	It is used to describe a situation.	It is used to explain the chance of occurrence of an event.
4.	It explain already known data and limited to a sample or population having small size.	It attempts to reach the conclusion about the population.
5.	It can be achieved with the help of charts, graphs, tables etc.	It can be achieved by probability.

Source: Jain (2020)

For the purpose of this study a combination of both descriptive and inferential statistics was used to analyse the data. From a descriptive statistics perspective, the mean, mode, medium, range, and standard deviation will be used and from an inferential statistics perspective, the data analysis will enable predictions to be made about the target population using a sample dataset. The inferential statistical application that will be used is called PSPP.

3.6 The Quantitative Strand in the Research Approach

A strand can be defined as a study component that involves the basic process of conducting quantitative research (Tashakkori & Teddlie, 2009). It includes developing a question, collecting data about the question, analysing the data and presenting the findings.

3.7 Coverage of Study

The term ‘coverage’ is used in survey research and indicates how appropriate the sampling units included in the sampling frame accounts for a target population (Lavrakas, 2008). The coverage can also be defined as the target population from which a sample is selected to participate in the research (OECD, 2001). The population consists of various project roles within various industries. The reason for this is that the data can be generalised as a reflection of the general population.

3.8 Target Population

The target population is defined as the group of people that will be approached to conduct the study (Barnsbee, Barnett, Halton, & Nghiem, 2018). The target population is important because it sets the defined scope of the study, defines who will qualify to participate in the study and assists to determine the sample size (Ovation Market Research, 2020).

This study is focused on project-based organisations which are defined as temporary organisations which has been established for a specific purpose. In a project-based organisation, most business functions are organised in projects. These projects have specific objectives that need resources, and must meet time, cost and quality requirements (Shokouhyar, Zarrin , & Shokoohyar, 2020).

The study results will reflect the personal views of a sample of the people that will take part in the study, so it might not be a true reflection of what is actually happening in project-based organisations. Annually, an organisation called Digital AI conducts a global study to assess the state of agile. This survey targets a large agile practitioner community. In 2021, the 15th state of agile report was released. There were 4182

respondents in the study (Digital.AI, 2021). It is unclear how large the agile practitioner community is. For the purpose of this study, the target population was 100 respondents.

3.9 Sample Size Calculation

The population refers to a complete group of people while the target population is a sub-set of the population. In turn, the sample is a sub-set of the target population (Kenton, 2021).

The calculation that can be used to determine the ideal sample size is known as the Cochran formula. The Cochran formula is often used for quantitative research because a larger sample is required to ensure the data is accurate. The sample size is determined by the following factors: population size, margin of error, confidence level and standard deviation.

The calculation below is used as an example to show how to calculate the sample size, if the target population size is 100 people. The margin of error identifies how much error is acceptable. The lower the margin of error, the more reliable the study will be. For this study, the margin of error was 5%. The confidence level indicates how confident the actual mean will be within the margin of error. For this study, the confidence level was 95%. The standard deviation seeks to determine how the responses are spread around the mean. Based on the above variables, the sample size was 81 respondents (Questionpro, 2022). Considering that it was an agile community, and that the researcher had relocated to a new country to work with new employees, a population size in the new organisation was not identified.

Equation 1: Cochran formula

$$n_0 = \frac{Z_{\alpha/2}^2 p(1-p)}{e^2},$$

Source: Ola Ama (2022)

The variables can be substituted by the following: n_0 is the ideal sample size, e is the margin of error, p is the estimated measurement of the population, q is 1 – p. The z-value is found in a Z table based on a given level of significance, α (Qualtrics, 2020).

3.10 Research Design

The research design provides the general plan on how the researcher will go about answering the research questions. Figure 3.3 defines the stages that will be followed to develop the survey, gather the data and derive the final conclusions (Aliyu Ahmad, Musa, Haruna, & And Mu, 2015).

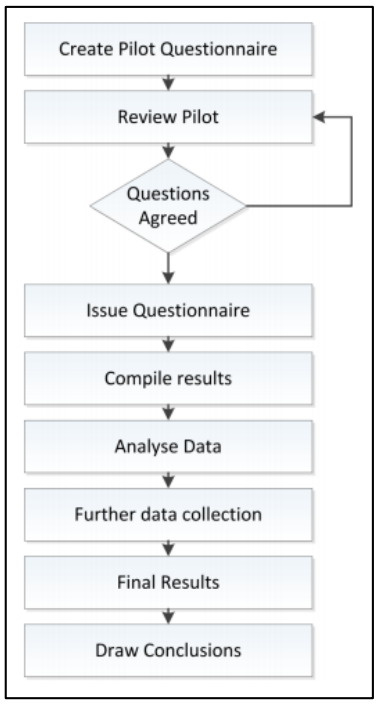


Figure 3.3: Research method

Source: Aliyu Ahmad, Musa, Haruna, & And Mu (2015)

In general, research can be exploratory, descriptive, explanatory, evaluated studies or a mix of these approaches (Saunders, Thornhill, & Lewis, 2007). In exploratory research, the research formulates the research question to be open-ended. It can be used to gain in-depth knowledge of a subject. This type of question is used in qualitative research. Descriptive philosophy is used when a researcher is attempting to find an answer to a specific inquiry that depends on a certain person, event, or scenario (Saunders, Thornhill, & Lewis, 2007). Explanatory research is a type of inquiry that focuses on the relationship between two variables and on how various situations affect those variables (Saunders, Thornhill, & Lewis, 2007). When a researcher wishes to assess the efficiency of a specific sector of the industry's

practices, strategies, policies, cultures, and processes, they undertake evaluated study. The exploratory, descriptive, explanatory, and evaluated research approaches are combined into a mix research method (Saunders, Thornhill, & Lewis, 2007). For the purpose of this study, explanatory research was conducted as it aims to understand the relationship between intent-based leadership and developing an agile mindset.

3.11 Sampling Methods

Two types of sampling methods can be distinguished, namely 1) probability sampling, which includes a random selection and 2) non-probability sampling, which involves non-random selection (based on convenience in order to easily collect data) (McCombes, 2019). The characteristics of probability sampling are that the sample is selected at random, there is an equal opportunity for everyone in the population to be selected, this approach is used to reduce sampling bias, it is useful when the population is diverse, it is used to create an accurate sample, and finding the right respondents is not easy (Terceros, 2021). The characteristics of non-probability sampling include that the sample selection is based on subjective judgment from the researcher. Furthermore, not everyone in the population has an equal chance of being selected, sampling bias is not considered, the population might have similar traits, the sample is not a true reflection of the population, and finding respondents is easy (Terceros, 2021). For the purpose of this study, probability sampling was used.

There are four types of probability sampling, namely simple random sampling; stratified random sampling; random cluster sampling; and systematic sampling. 1) Simple random sampling can be defined as being completely random and is often used around a large population with a share of the advantages and disadvantages. 2) Stratified random sampling can be defined as dividing the population into smaller groups that do not overlap and still represent the entire population. 3) Random cluster sampling can be defined as selecting a sample randomly. This sample is spread out geographically for example by city or industry. 4) Systematic sampling can be defined as selecting a sample using a systematic and repeatable process, for example, choosing every “nth” person (QuestionPro, 2022).

This study used stratified random sampling. The target population was anyone involved in project-based organisations.

3.12 Data Collection Instrument

The survey was sent via a digital platform called LinkedIn, which is a global professional platform. The platform represented a closed community as the survey was sent to the people in the researcher's network. The advantages of using a survey was that it allowed for large amounts of data to be collected from a bigger sample size in a short period of time, the data collection could be done by anyone from the target population so that it would not impact on the validity and reliability of the study, the results from the survey could be quickly analysed through computer software, the data could be quantified for comparative analysis and to measure changes, and quantitative data could be used to create new theories or test existing theories (Kabir, 2016).

The disadvantages of using a survey include that the data may be limited to other forms of information (like the respondents' emotions and behaviour), the data collected may be artificially created, and due to the lack of explanations as to why a question was answered that way, one is unable to measure if respondents are truthful, if respondents have thought before answering. The respondents may also be discouraged to complete the survey if there are too many questions, and each respondent may read and understand a question differently (Kabir, 2016). The purpose of this study is to understand the general relationship between intent-based leadership and developing an agile mindset, so a survey was used to enable the researcher to collect a large amount of data and so create a generalised outcome. See Appendix 2 for the draft survey.

The use of rating questions is to collect data about respondents' opinions. Rating questions often use of Likert-style rating scale because this technique aims to understand the extent that the respondent agrees or disagrees to a series of statements (Saunders, Thornhill, & Lewis, 2007). The scoring was done on a five-point scale. Table 3.2 represents the Likert-style rating scales that were used in the survey. In an effort to create a good user experience for the respondents, questions were grouped according to the rating scale. By doing so, the respondent was only presented

with four screens (compared to using multiple screens where each screen has a question).

Table 3.2: Likert-style rating scale

Scale type: Agreement					
Options given to respondents	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Scale type: Frequency					
Options given to respondents	Always	Often	Occasionally	Rarely	Never
Scale type: Satisfaction					
Options given to respondents	A great deal	Considerably	Moderately	Slightly	Not at all

Source: Bhandari (2020)

Figure 3.4 is an example of how the questions were displayed on the questionnaire.

Figure 3.4: Example of a survey using a scale

Source: Extracted from the survey used

3.13 Pilot Study

A pilot study was done to validate the study and the time required to complete the survey, and to determine how the questions were understood by different people.

Saunders et al. (2007) defined a pilot study as an opportunity to refine the questionnaire so that respondents do not have any issues and so that the data collected is reliable. It is advised that a minimum of 10 people is required for a pilot study in quantitative research (Saunders, Thornhill, & Lewis, 2007).

3.14 Validity and Reliability

For the research study to be credible, it is important to focus on validity and reliability. The term 'validity' can be defined as confirming if the findings between variables are really what they appear to be (Saunders, Thornhill, & Lewis, 2007). The term 'reliability' can be defined as understanding the extent to which the data collection technique and data analysis approach will be able to produce consistent outcomes (Easterby-Smith, Thorpe, & Lowe, 2002).

Four types of reliability exist: test-retest is when the researcher administrates the same test twice after different intervals, internal consistency uses a single instrument to measure how well a task measures what it is expected to measure, parallel forms measure the reliability of identical tasks and inter-rater reliability measures the degree of agreement between people measuring the same thing (Rangas, 2021). The calculation called the reliability coefficient is used to quantify the degree of consistency (Zhou & Levitas, 2021).

For quantitative research, statistical methods such as a combination of both descriptive and/or inferential statistics is used when establishing validity and reliability of the research findings. Statistical methods are objective as it analyses a large amount of data without bias from the researcher.

3.15 Ethical Considerations

Ethical considerations are vital to the success of any research. Failure to adhere to ethical considerations can prevent the researcher from conducting the study. These 10 principles apply for ethical considerations: respondents involved in the study should not be subjected to harm in any manner, respondents' dignity should be prioritised and respected, respondents should provide full consent before the study is conducted, respondents' privacy must be ensured, the confidentiality of the research data should

adhere to the Protection of Personal Information (POPI) Act, the anonymity of people and organisations involved in the study should be ensured, the researcher should be truthful about the aims and objectives of the study, potential conflicts of interests have to be declared upfront, honesty and transparency communication needs should be ensured, and the data should not be represented in a biased way (Fleming & Zegwaard, 2018).

This study ensured that the respondents in the study were protected by confidentiality and anonymity. The following ethical considerations were considered:

3.15.1 Ensuring informed consent

Appendix 2 contains a letter of informed consent that will be shared with respondents. The survey also included a disclaimer notifying participates that by completing the survey they consented.

3.15.2 Ensuring no harm to respondents

This study did not expose respondents to any harm or sensitive topics.

3.15.3 Ensuring confidentiality and anonymity

Participation in this study was completely voluntary and respondents had the right to withdraw their participation at any time. All responses were anonymous and was treated confidentially. No personal or organisation data was collected and there was no way to link participates to the data collected.

3.15.4 Ensuring that permission is obtained

For this study, the general population was involved, so no data was collected about any organisation. No organisational constant was required for this study. The only permission that was required was that from Regenesys' research committee. See Appendix 4 for the approved ethical clearance.

3.16 Study Scope

The below structure briefly outlines each chapter of the study:

3.16.1 Chapter 1 - Introduction and background

Chapter 1 introduces the study and provides insight into the background of the study. This study aims to understand the relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively.

3.16.2 Chapter 2 – Literature review

Chapter 2 focuses on existing literature regarding the study. The literature review focuses on project-based organisations in order to establish the relationships between intent-based leadership, organisational culture, agile transformation and change management. In addition to the relations, an attempt is made to understand how these relationships can develop an agile organisational mindset that will lead to competitive advantage.

3.16.3 Chapter 3 – Research methodology

Research is constructed on philosophical assumptions about what may be considered acceptable research and what is the ideal research method that will best suit the research topic to collect data. Chapter 3 unpacks the research methodology, research approach, and methods for data collection and data analysis. This chapter further contains the population and sample size, and instrument that was used to carry out the study.

3.16.4 Chapter 4 – Data analysis

Once the research methodology was defined, the data collection and data analysis process could proceed. Since this study is quantitative in nature, descriptive and inferential statistics were combined to analyse, understand and present the data.

3.16.5 Chapter 5 – Discussion of findings

This chapter reflects on the study objectives while reviewing the outcome from the data analysis in order to determine if the study confirms or rejects the hypothesis.

3.16.6 Chapter 6 – Summary and recommendations

A summary of the findings from the data analysis is provided and recommendations are made. These recommendations are based solely on the findings and discussions. Based on some of the results, areas for further investigation are identified. This chapter also indicates the main contributions of the study to the body of knowledge.

3.17 Conclusion

This chapter outlined the research methodology, research paradigm, and study design, including the process that will be followed. To ensure that the collected data was credible, the study population, data collection tool and data analysis method were outlined. The need for research arose from the global Covid-19 pandemic. Since organisations had to rapidly adapt to digital transformation, the need for intent-based leadership emerged, so that employees could respond quicker to changes while sharing the ownership of achieving organisational objectives. This chapter furthermore discussed the advantages and disadvantages of quantitative and qualitative methods, and based on the nature of the topic of this study, the quantitative method was selected. Data collection was guided by the following objectives: 1) Empiricism, which is defined as the observation that can be repeated by others researchers, 2) Measurement, which identifies tools like scales and questionnaires used to measure theory being studied, 3) Replicability is focused on ensuring that the outcome achieved can be repeated in replication research, 4) Objectivity aims to remove any bias in terms of how the data is collected and analysed, in order to ensure the outcome reflects the facts about a theory studied. (Torrentira, 2020). Based on the research topic “The relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively,” the research approach in was correlational research. The aim of the research was to determine a link between leading with intent and developing an agile mindset. This study focus was on project-based organisations. A project-based organisation is defined as a temporary organisation which has been established for a specific purpose. The population consisted of various project roles within various industries. The population size for this study was 100 people. For this study the margin of error was 5% and the confidence level was 95% confident. Based on the above variables, the sample size was 81 people. The research design applied a “roadmap” of how the research intended to

collect data for this study. The instrument that was used for this research was a digital survey with closed-ended questions to collect data. The survey was shared on the digital platform LinkedIn, which is a global professional platform. The survey tool QuestionPro was used. Given that the platform represents a closed community the survey was only shared with the people within the researcher's network. All ethical considerations were analysed and the respondents were asked to consent to contributing to the study. There were no concerns of harm towards those involved in the study. All respondents were treated with confidentially and anonymity. The next chapter focuses on the data analysis following the data collection from the respondents.

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

This section presents the quantitative analysis of the survey data. The purpose of data analysis is for the researcher to be able to extract information from the data that has been collected in order to validate the theory developed and to aid the conclusion of the research paper. Descriptive and inferential statistics was used to analyse and interpret the data collected with the purpose of investigating the research questions and hypotheses. Descriptive statistics aims to describe the data and includes the use of the mean, median, mode, standard deviation, and variance (Narkhede, 2018). Inferential statistics enables the researcher to identify inferences or predictions from the data collected. Inferential statistics requires a sample to be able to make generalisations about the population (Narkhede, 2018).

The software used for descriptive analysis in this study was Microsoft Excel and the software used for inferential analysis was PSPP.

The data was collected through a digital survey with 37 questions. The survey was distributed on two social media platforms, namely LinkedIn and WhatsApp and was accessible for a month. The survey was based on the key objectives of the study, namely:

- To determine the extent to which intent-based leadership is used in agile project delivery and traditional waterfall methodology.
- To establish the relationship between intent-based leadership and an agile mindset.
- To determine the ability of intent-based leadership to deliver value to organisations.

4.2 Data Cleaning

The first step in the data analysis phase was to clean the data. The data was scanned to ensure that it was complete before the analysis could commence. The survey was terminated when a respondent stated that they were not involved in a project-based

organisation. Each question in the survey was mandatory to stop respondents from submitting incomplete questions. The data analysis was only conducted in terms of respondents who had completed all the survey questions. Data that did not meet these criteria was filtered out of the analysis.

4.3 Outliers

The values provided by respondents were assessed to identify extreme data values and can be considered as outliers. The termination rule assisted to avoid outliers and the data values were within the expected range.

4.4 Sample and Response Rate

Figure 4.1 presents the overall status of respondents who were exposed to the study. In order to protect the privacy of respondents, no personal information such as names or contact details were collected.

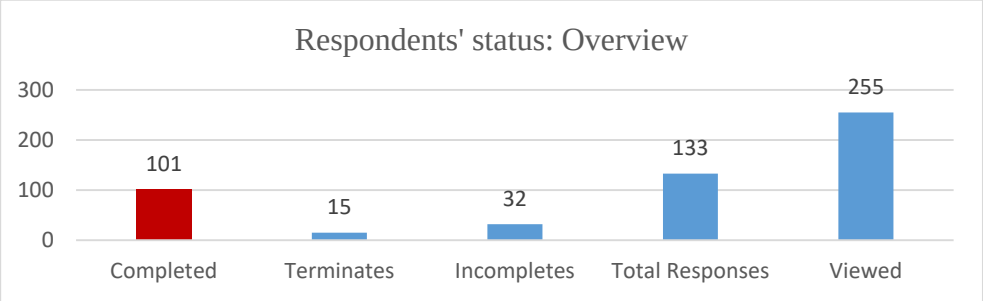


Figure 4.1: Respondents' status: Overview (n=255)

While 255 people viewed the survey, only 101 people completed the survey. Fifteen (15) people who started the survey were terminated due to not meeting the set criteria of working in a project-based organisation.

4.5 Demographic description of the sample

Figure 4.2 presents the location of the respondents. The majority of respondents (84.16%) where located in South Africa.

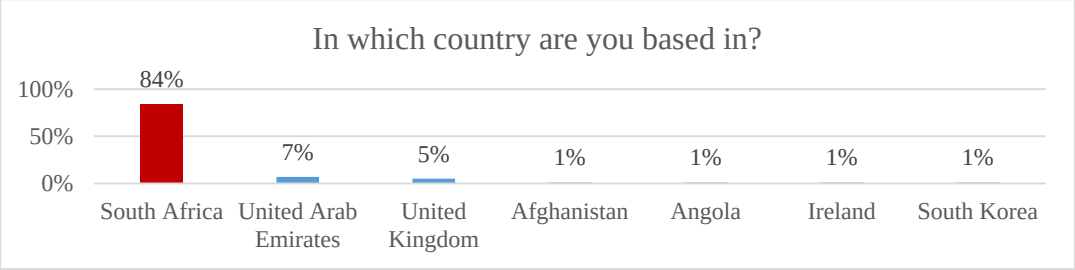


Figure 4.2: Respondents' location (n=101)

Figure 4.3 represents the respondents' gender. The majority of the respondents were male (57%). Seven percent (7%) of the respondents did not feel comfortable to disclose their gender.

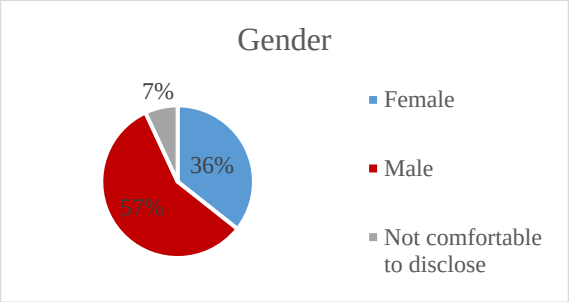


Figure 4.3: Respondents' gender (n=101)

Figure 4.4 presents the age of the respondents. Most respondents were aged between 25-35 (44%).

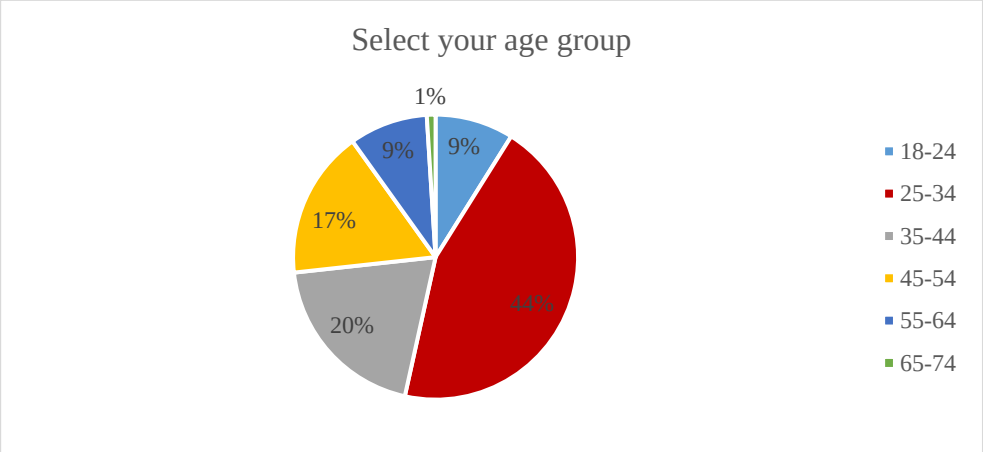


Figure 4.4: Respondents' age group (n=101)

Figure 4.5 presents the size of the organisations for which the respondents worked. Most of the respondents (45%) worked for large organisations that employed more than 300 people. The minority of respondents (21%) worked for small organisations that have between 1-49 employees.

Figure 4.5: Size of the respondents' organisations (n=101)

Figure 4.6 presents the number of respondents who worked with multiple teams. Most respondents (73%) agreed that they worked with multiple teams.

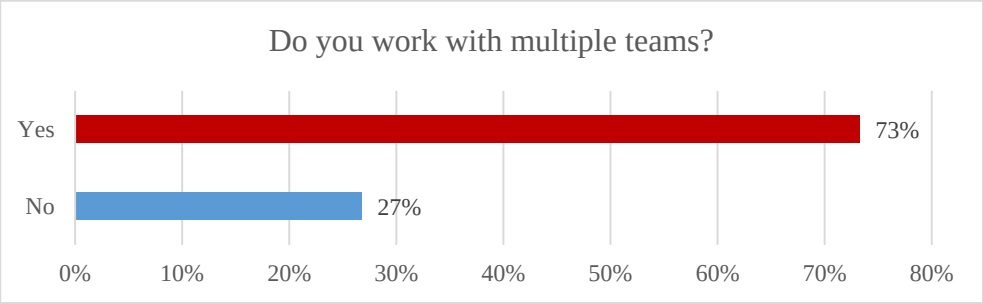


Figure 4.6: Respondents' involvement with other teams (n=101)

Figure 4.7 presents the average size of teams in which respondents were involved. Most respondents (60%) were involved in small teams that constituted between 1-10 people, followed by teams of between 11-20 people (12%).

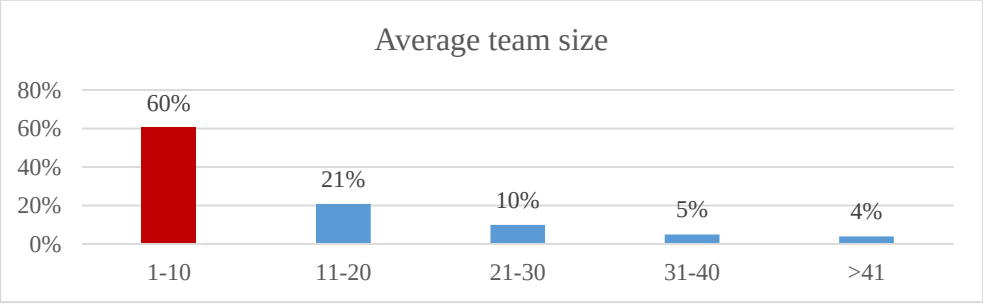


Figure 4.7: Respondents' average team sizes (n=101)

Figure 4.8 presents the number of respondents who used different delivery frameworks. Most respondents used agile frameworks to deliver projects (52%).

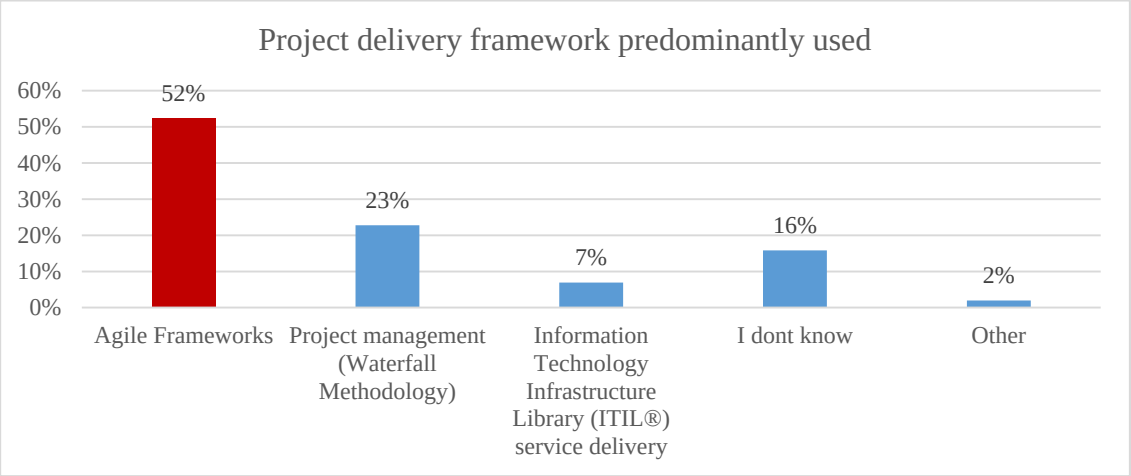


Figure 4.8: Project delivery framework predominantly used (n=101)

Those using agile frameworks were asked how long they had been working with these. Figure 4.9 represents those who were using agile frameworks and the majority tended to have at least three years' experience (68% had more than three years).

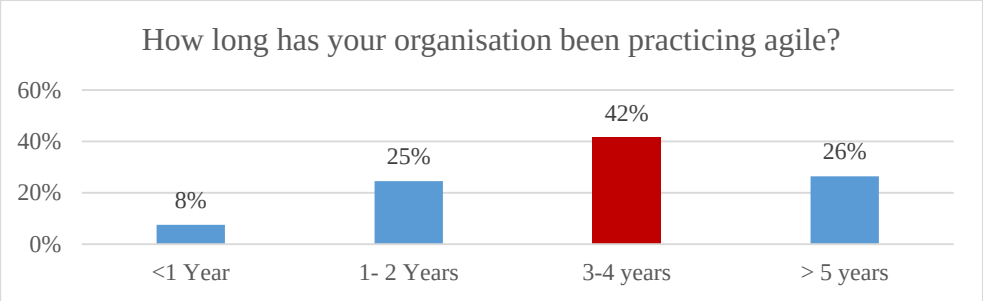


Figure 4.9: How long has your organisation been practicing agile? (n=53)

4.6 Descriptive statistics on the agreement Likert scale

Figure 4.10 represents a group of questions that were categorised according to the agreement Likert scale. The questions are not in sequence as a result of the grouping. The analysis presented below relate to the questions presented in Figure 4.10. Table 4.1 presents the scale values used. Considering the fact that the majority of respondents use agile frameworks, the descriptive analysis may come across as

misleading, as it leads towards using agile frameworks. In order to scientifically test the data, the inferential analysis will provide more insight than the descriptive analysis.

The agreement scale is presented next.

Table 4.1: Agreement Likert scale

Strongly agree	5
Agree	4
Neutral	3
Disagree	2
Strongly disagree	1

Q1 – The respondents were asked if their organisation used intent-based leadership. The majority (30%) agreed. The mean was 3.31, the median was 4.00, the mode was 4.00 and the standard deviation was 1.30. The standard deviation of 1.30 shows that the individual responses on average were over 1 point away from the mean. This indicates that the data was not closely clustered.

Q3 – The respondents were asked to what extent their organisation encouraged cross-functional teams. The majority's response (37%) was neutral. The mean was 3.53, the median was 3.00, the mode was 3.00 and the standard deviation was 1.12. According to the agile principles, it is encouraged for teams to be self-organised and cross-functional teams (Beck, et al., 2001).

Q5 – The respondents were asked if their organisation aligned work to the vision of the organisation. The majority's response (38%) was neutral. The mean was 3.68, the median was 4.00, the mode was 3.00 and the standard deviation was 1.00. Intent-based leadership aligns the work done to the organisation's vision and that allows for leaders to delegate authority to the team (Marquet, 2013).

Q6 – The respondents were asked if their current project delivery framework frequently acquired feedback from customers or stakeholders. The majority's response (37%) was neutral. The mean was 3.56, the median was 4.00, the mode was 3 and the

standard deviation was 1.03. An agile principle states that, to develop an agile mindset, the team and the customer or stakeholder should frequently co-create in order to proactively respond to challenges in the industry (Beck, *et al*., 2001).

Q8 – The respondents were asked if their organisation supported experimentation without fear of negative consequences. The majority (30%) agreed. The mean was 3.45, the median was 4.00, the mode was 4.00 and the standard deviation was 1.27. Where there were negative consequences applied to employees when they did something wrong, it discouraged them from experimenting. Instead, out of fear, employees spent a lot time to get something perfect before testing it or showcasing it (Modern Agile.org, 2021). This affects organisations from being creative and innovative.

Q9 – The respondents were asked if their organisation encouraged the concept of fail fast and learn faster. The majority (31%) agreed. The mean was 3.50, the median was 4.00, the mode was 4.00 and the standard deviation was 1.25. When organisations frequently experiment on learning an organisation is created and the faster teams can test their theories before the organisation wasting a lot time and money on an idea (Schwaber & Sutherland, 2020).

Q10 – The respondents were asked if their organisation prioritised the flow of work. The majority (29%) strongly agreed. The mean was 3.65, the median was 4.00, the mode was 5.00 and the standard deviation was 1.14. Through the use of agile frameworks the work is prioritised to ensure the highest value is always delivered (Schwaber & Sutherland, 2020). With intent-based leadership, employees are empowered to start identifying and working on the items that deliver the highest value that aligns to the objective of the organisation (Marquet, 2019).

Q11 – The respondents were asked if their current project delivery framework encouraged relentless improvement as part of its culture. The majority (46%) agreed. The mean was 3.68, the median was 4.00, the mode was 4.00 and the standard deviation was 1.00. Continuous improvement is built into the agile principles. The purpose of agile frameworks is to allow teams too frequently to reflect and adapt their process and ways of working to deliver better projects (Schwaber & Sutherland, 2020).

Q12 – The respondents were asked if their current delivery framework motivated them to be their best. The majority (41%) agreed. The mean was 3.60, the median was 4.00, the mode was 5.00 and the standard deviation was 0.97. The agile principles and intent-based principles include that work should be built around motived employees and for leadership they must trust their employee(s) (Beck, et al., 2001).

Q13 – The respondents were asked if their organisation could execute a change in their strategy proactively to respond to opportunities and threats. The majority (39%) agreed. The mean was 3.19, the median was 3.00, the mode was 4.00 and the standard deviation was 1.03.

Q14 – The respondents were asked if their current project delivery framework positively influenced the speed at which the organisation responds to change. The majority (41%) agreed. The mean was 3.25, the median was 4.00, the mode was 4.00 and the standard deviation was 1.23.

Q17 – The respondents were asked if their current project delivery framework ensured the highest quality is achieved. The majority (50%) agreed. The mean was 3.59, the median was 4.00, the mode was 4.00 and the standard deviation was 0.90.

Q18 – The respondents were asked if their teams purposefully shared learnings across the organisations. The majority (46%) agreed. The mean was 3.49, the median was 4.00, the mode was 4.00 and the standard deviation was 1.07.

Q19 – The respondents were asked if their team could solve problems without input from leadership. The majority (47%) agreed. The mean was 3.36, the median was 4.00, the mode was 4.00 and the standard deviation was 0.94.

Q21 – The respondents were asked if their leaders moved decision authority to where the information was. The majority (35%) agreed. The mean was 3.52, the median was 4.00, the mode was 4.00 and the standard deviation was 1.04.

Q22 – The respondents were asked if they would be more dedicated and committed to their job if they had shared leadership authority. The majority (50%) strongly agreed.

The mean was 3.96, the median was 4.00, the mode was 5.00 and the standard deviation was 1.10.

Q23 – The respondents were asked if their team shared accountability when things went wrong. The majority (41%) answered neutral. The mean was 3.38, the median was 3.00, the mode was 3.00 and the standard deviation was 0.80.

Q24 – The respondents were asked if their leadership provided a compelling vision for change. The majority (40%) agreed. The mean was 3.45, the median was 3.00, the mode was 4.00 and the standard deviation was 0.83.

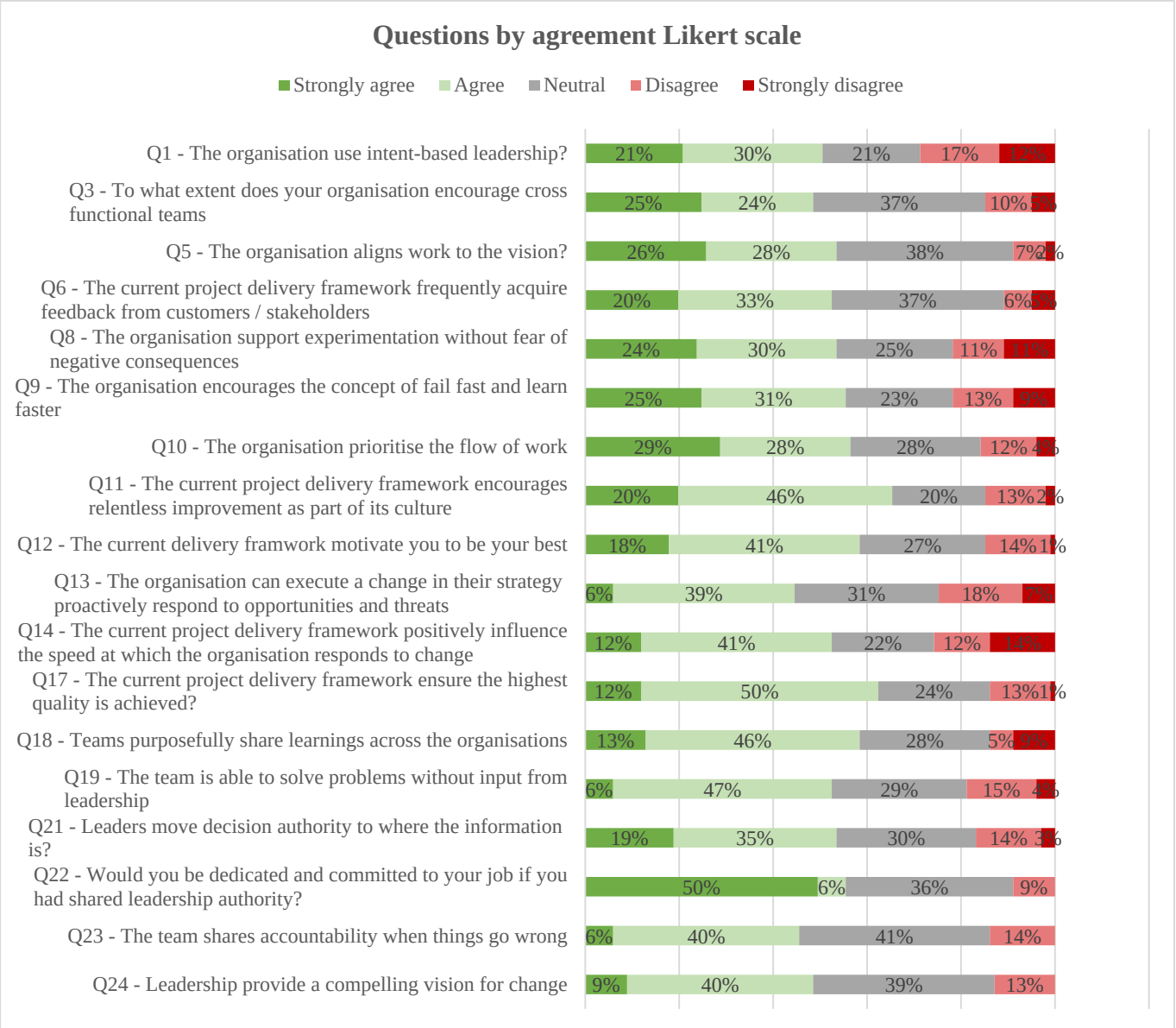


Figure 4.10: Frequency distribution of Likert scale responses (n=101)

Table 4.2 summarises the mode, medium, mode and standard deviation of the questions presented in Figure 4.10.

Table 4.2: Descriptive statistics on the agreement Likert scale (n=101)

Statistics

		Q1	Q3	Q5	Q6	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q17	Q18	Q19	Q21	Q22	Q23	Q24
N	Valid	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3,31	3,53	3,68	3,56	3,45	3,50	3,65	3,68	3,60	3,19	3,25	3,59	3,49	3,36	3,52	3,96	3,38	3,45
Median		4,00	3,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00	3,00	4,00	4,00	4,00	4,00	4,00	4,00	3,00	3,00
Mode		4,00	3,00	3,00	3,00	4,00	4,00	5,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00	5,00	3,00	4,00
Std Dev		1,30	1,12	1,00	1,03	1,27	1,25	1,14	1,00	,97	1,03	1,23	,90	1,07	,94	1,04	1,10	,80	,83

4.7 Descriptive statistics on the frequency Likert scale

Figure 4.11 presents a group of questions that has been categorised according to the frequency Likert scale. The questions are not in sequence as a result of the grouping. The analysis below relates to the questions presented in Figure 4.11.

Table 4.3 sets out the scale values used. The frequency scale is presented next.

Table 4.3: Frequency Likert scale (n=101)

Always	5
Often	4
Occasionally	3
Rarely	2
Never	1

Q4 – The respondents were asked how frequently leadership negatively influenced project delivery. The majority (34%) answered never. The mean was 2.45, the median was 2.00, the mode was 1.00 and the standard deviation was 1.35.

Q7 – The respondents were asked how often the organisation used intent-based leadership to drive project delivery. The majority (64%) answered often. The mean

was 3.13, the median was 3.00, the mode was 3.00 and the standard deviation was 0.82.

Q16 – The respondents were asked how frequently issues hindered project delivery resolution. The majority (49%) answered occasionally. The mean was 3.33, the median was 4.00, the mode was 4.00 and the standard deviation was 1.13.

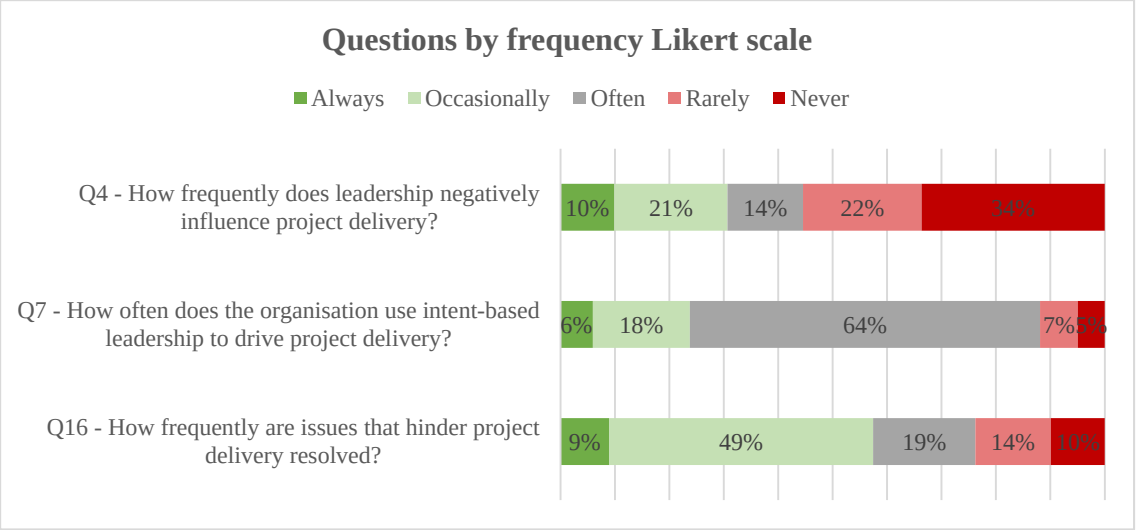


Figure 4.11: Questions by frequency Likert scale (n=101)

Table 4.4 summarises the mode, medium, mode and standard deviation of the questions presented in Figure 4.11.

Table 4.4: Frequency Likert scale statistics (n=101)

Statistics

		Q4	Q7	Q16
N	Valid	101	101	101
	Missing	0	0	0
Mean		2,45	3,13	3,33
Median		2,00	3,00	4,00
Mode		1,00	3,00	4,00
Std Dev		1,35	,82	1,13

4.8 Descriptive statistics on the likelihood Likert scale

Figure 4.12 presents a group of questions that has been categorised accordingly to the likelihood Likert scale. The questions are not in sequence because of the grouping.

The analysis presented will relate to the questions presented in Figure 4.12. Table 14 presents the scale values used.

The likelihood scale is presented next

Table 4.5: Likelihood Likert scale

A great deal	5
Considerably	4
Moderately	3
Slightly	2
Not at all	1

Q2 – The respondents were asked to what extent their organisation had invested in agile delivery. The majority (48%) answered moderately. The mean was 3.44, the median was 3.00, the mode was 3.00 and the standard deviation was 0.98.

Q15 – The respondents were asked how equipped their organisation was to work from home when Covid-19 started. The majority (35%) answered considerably. The mean was 3.28, the median was 4.00, the mode was 4.00 and the standard deviation was 1.34.

Q20 – The respondents were asked how often the current project delivery framework provided them greater control over their work. The majority was evenly split between considerably (30%) and moderately (30%). The mean was 3.30, the median was 3.00, and the standard deviation was 1.20.

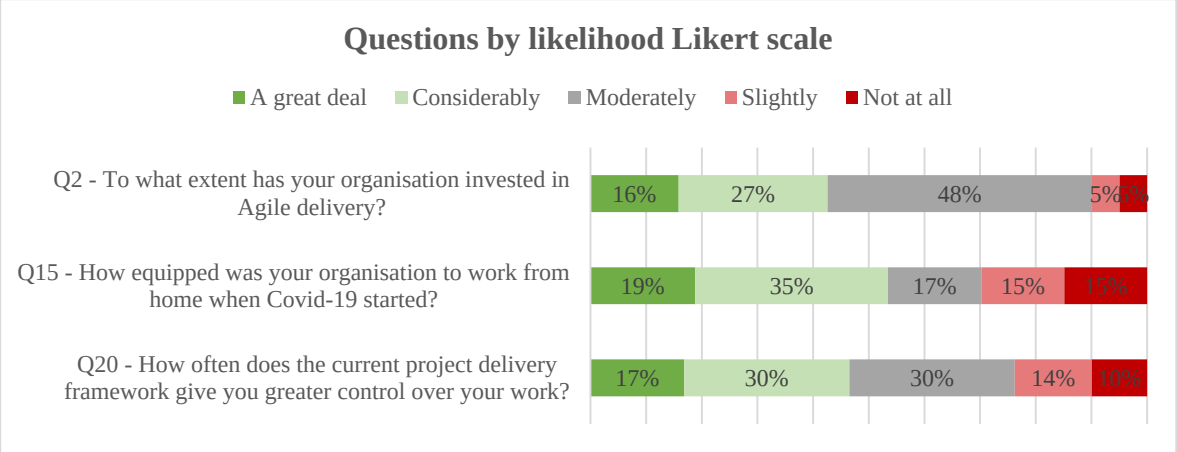


Figure 4.12: Questions by likelihood Likert scale (n=101)

Table 4.6 presents a summary of the mode, medium, mode and standard deviation of the questions presented in Figure 4.12.

Table 4.6: Likelihood Likert scale statistics (n=101)

Statistics

		Q2	Q15	Q20
N	Valid	101	101	101
	Missing	0	0	0
Mean		3,44	3,28	3,30
Median		3,00	4,00	3,00
Mode		3,00	4,00	.
Std Dev		,98	1,34	1,20

4.9 Inferential Analysis

4.9.1 Intent based leadership by framework

Figure 4.13 seeks to understand the likelihood of using intent-based leadership when different delivery frameworks are employed.

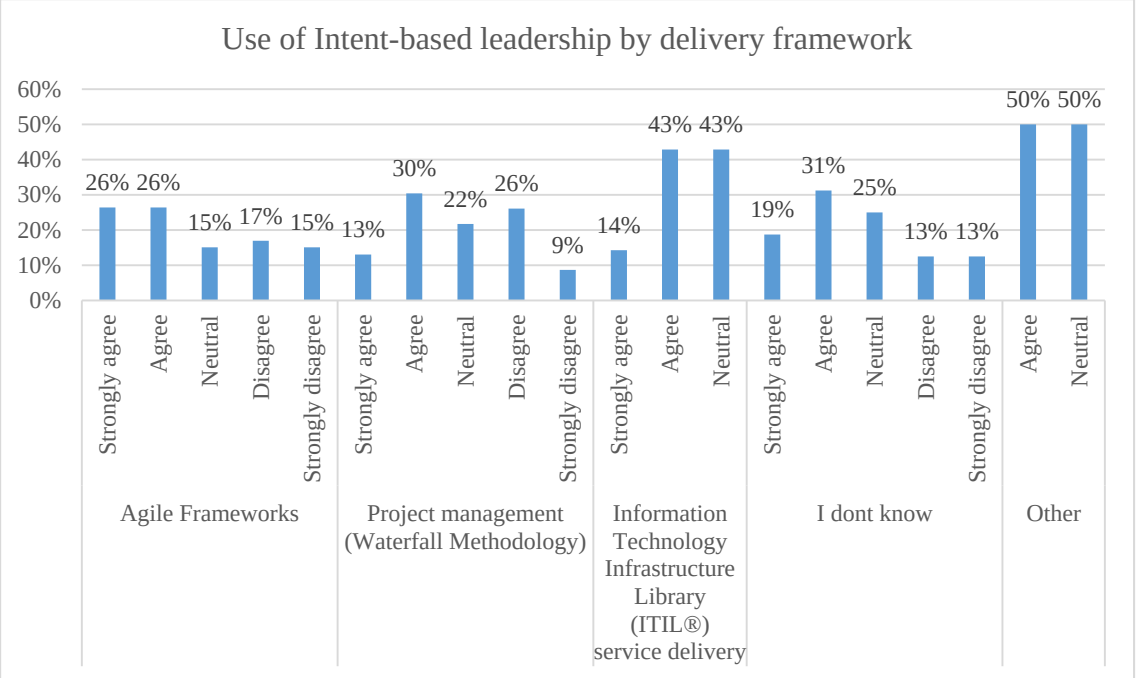


Figure 4.13: Use of Intent-based leadership by delivery framework (n=101)

Agile frameworks and waterfall methodologies are used most often in this study. The base size for the delivery framework called Information Technology Infrastructure Library and the Other selection were too small to allow for meaningful statistical comparison. Therefore, with two groups to compare, an independent t-test was used. The non-parametric version yielded similar results and it was decided that parametric statistics would be robust enough to point towards trends for this study.

Table 4.7: Independent t-test result between framework used and intent-based leadership present in organisation.

	Levene's Test for Equality of Variances		T-Test for Equality of Means		
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	1.94	0.168	0.56	74	0.579
Equal variances not assumed			0.59	48.65	0.555

While those following an agile framework were slightly more likely to agree to using intent-based leadership (mean of 3.32 vs, 3.13), it is evident in Table 4.7 that this difference is not statistically significant (p value of 0.579, p-value larger than 0.05).

While it is true is that the self-assessment of “intent-based leadership” by people working with different frameworks do not show any significant differences, this might be due to the understanding of what intent-based leadership actually entails.

Interestingly, in Table 4.8 there is a significant difference between the degree to which leadership in organisation can negatively affect project delivery, based on the framework used. The mean score for those using agile frameworks was lower (less agreement) than those using waterfall methodologies.

Table 4.8: Descriptive statistics for intent based leadership principles by agile or waterfall frameworks.

	N	Mean	Std. Deviation	S.E. Mean
How frequently does leadership negatively influence project delivery?				
Agile frameworks	53	1.7	0.91	0.13
Waterfall frameworks	23	3.65	1.3	0.27
The organisation aligns work to the vision?				
Agile frameworks	53	4.04	0.81	0.11
Waterfall frameworks	23	3.65	0.93	0.19
Leadership provides a compelling vision for change				
Agile frameworks	53	3.51	0.91	0.13
Waterfall frameworks	23	3.35	0.83	0.17
Leaders move decision authority to where the information is?				
Agile frameworks	53	3.96	0.88	0.12
Waterfall frameworks	23	2.7	0.97	0.2

Table 4.9: T-test results comparing leadership dimension scores for agile and waterfall frameworks.

	Levene's Test for Equality of Variances		T-Test for Equality of Means		
How frequently does leadership negatively influence project delivery?					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	4.2	0.044	-7.51	74	0.000
Equal variances not assumed			-6.54	31.76	0.000
The organisation aligns work to the vision?					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	1.55	0.216	1.82	74	0.072
Equal variances not assumed			1.72	36.93	0.094
Leadership provides a compelling vision for change					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	0.75	0.389	0.73	74	0.469
Equal variances not assumed			0.76	45.68	0.454
Leaders move decision authority to where the information is?					
	F	Sig.	t	df	p-value (Sig. 2-tailed)

Equal variances assumed	1.12	0.292	5.6	74	0.000
Equal variances not assumed			5.37	38.18	0.000

The differences are significant with a p-value of 0.000. Additionally, those using agile frameworks were more likely to indicate that the organisation aligned work to vision. This difference was only significant at the 90% level with a p value of 0.07. It is however still a strong indication that organisations that follow agile frameworks exhibit characteristics associated with intent-based leadership. Irrespective of the framework, leadership can provide a compelling vision for change. Those using agile frameworks scored higher on the factor of leaders' delegation of authority towards information.

Table 4.9 indicates that this difference is statistically significant at the 99% level (p = 0.000).

4.9.2 The ability of different frameworks to meet the challenges of a competitive changing environment

This section seeks to investigate the ability of different frameworks to meet the challenges of a fast-moving environment and therefore create a competitive advantage. Figure 4.14 indicates that organisations, Covid-19 and the lockdown regulations impacted many businesses, and required that employees work from home at short notice. Those following an agile framework were more prepared to work from home. The mean agreement was 4.08 out of 5 vs. those who followed a waterfall methodology (with a mean frequency of 1.9). This difference was statistically significant with the t-test showing a p-value of 0.000.

Table 4.10: Descriptive statistics for preparedness to work from home when Covid-19 started

	N	Mean	Std. Deviation	S.E. Mean
Agile frameworks	53	4.08	0.73	0.1
Waterfall frameworks	23	1.91	1.04	0.22

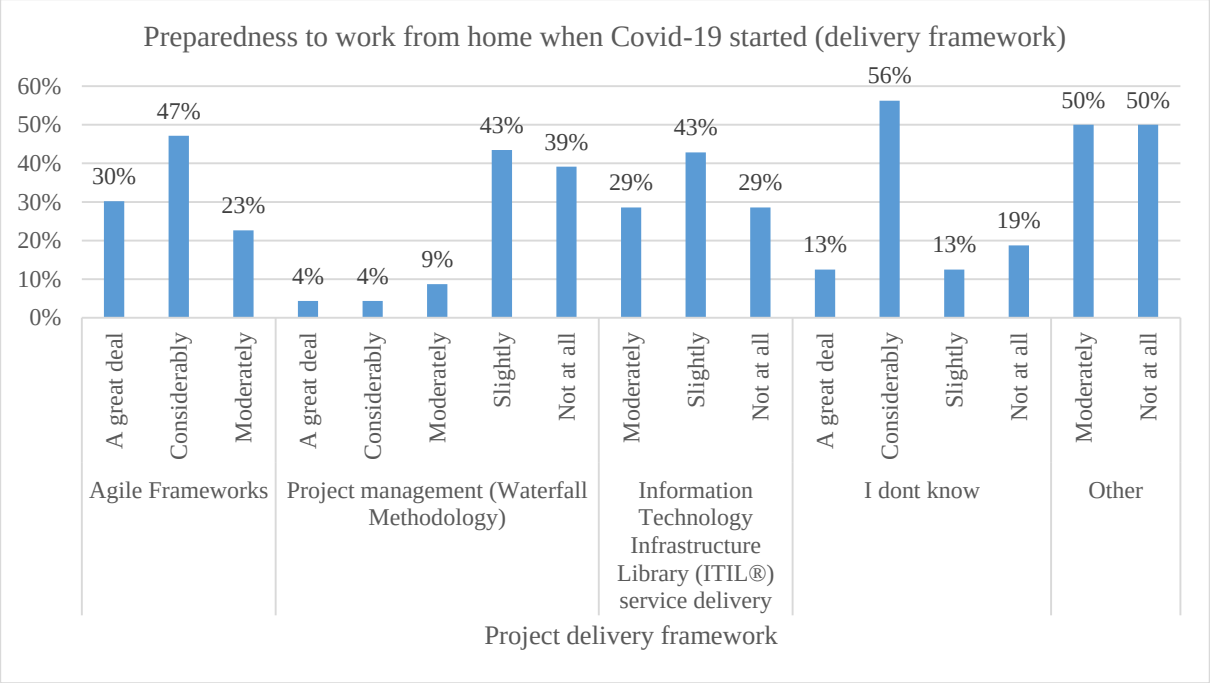


Figure 4.14: Preparedness to work from home when Covid-19 started (delivery framework) (n=101)

4.9.3 The ability of leadership to negatively influence project delivery in different frameworks

This section seeks to investigate how frequently leadership negatively influenced project delivery. Table 20 shows that those who followed an agile framework were less negatively influenced, with a mean of 1.7 out of 5, versus those following a waterfall methodology (with a mean of 3.65). This difference is statistically significant with the t-test showing a p-value of 0.000.

Table 4.11: T-test results and descriptive statistics comparing leadership dimension scores for agile and waterfall frameworks.

	Levene's Test for Equality of Variances	T-Test for Equality of Means
How frequently does leadership negatively influence project delivery?		

	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	1.25	0.268	10.38	74	0.00
Equal variances not assumed			9.05	31.78	0.00
Descriptive statistics					
	N	Mean	Std. Deviation	S.E. Mean	
Agile frameworks	53	1.7	0.91	0.13	
Waterfall frameworks	23	3.65	1.3	0.27	

Other aspects with the ability to show how well organisations react to change include:

4.9.4 The ability of organisations to execute a change in their strategy in different frameworks

This section sought to investigate to what extent an organisation can execute a change in their strategy proactively in order respond to opportunities and threats. Table 4.12 shows that those following an agile framework were more able to execute a change in their strategy, with a mean of 3.74 out of 5, versus those following a waterfall methodology (with a mean of 2.09). This difference is statistically significant with the t-test showing a p-value of 0.000.

Table 4.12: T-test results and descriptive statistics comparing an organisations ability to execute a change in their strategy using agile and waterfall frameworks.

	Levene's Test for Equality of Variances		T-Test for Equality of Means		
The organisation can execute a change in their strategy proactively in order respond to opportunities and threats.					
	F	Sig.	t	df	p-value (Sig. 2-tailed)

Equal variances assumed	0.07	0.796	10.71	74	0.000
Equal variances not assumed			10.21	37.75	0.000
Descriptive statistics					
		N	Mean	Std. Deviation	S.E. Mean
Agile frameworks		53	3.74	0.59	0.08
Waterfall frameworks		23	2.09	0.67	0.14

4.9.5 The ability to positively influences the speed at which the organisation responds to change in different frameworks

This section sought to investigate if the current project delivery framework positively influenced the speed at which the organisation responded to change**.** Table 4.13 shows that those following an agile framework were more able to influence the speed at which the organisation responded to change, with a mean of 3.98 out of 5, versus those following a waterfall methodology (with a mean of 1.7). This difference is statistically significant with the t-test showing a p-value of 0.000.

Table 4.13: T-test results and descriptive statistics comparing how the current project delivery framework positively influenced the speed at which the organisation responded to change using agile and waterfall frameworks.

The current project delivery framework positively influences the speed at which the organisation responds to change					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	3.82	0.055	13.15	74	0.000
Equal variances not assumed			12.44	37.1	0.000
Descriptive statistics					

	N	Mean	Std. Deviation	S.E. Mean
Agile frameworks	53	3.98	0.66	0.09
Waterfall frameworks	23	1.7	0.76	0.16

4.9.6 The ability to motivate people by using different frameworks

This section sought to investigate if the current delivery framework "motivates you to be your best"**.** Table 4.15 shows that those following an agile framework were more motivated to be their best, with a mean of 4.21 out of 5, versus those following a waterfall methodology (with a mean of 2.65). This difference is statistically significant with the t-test showing a p-value of 0.000.

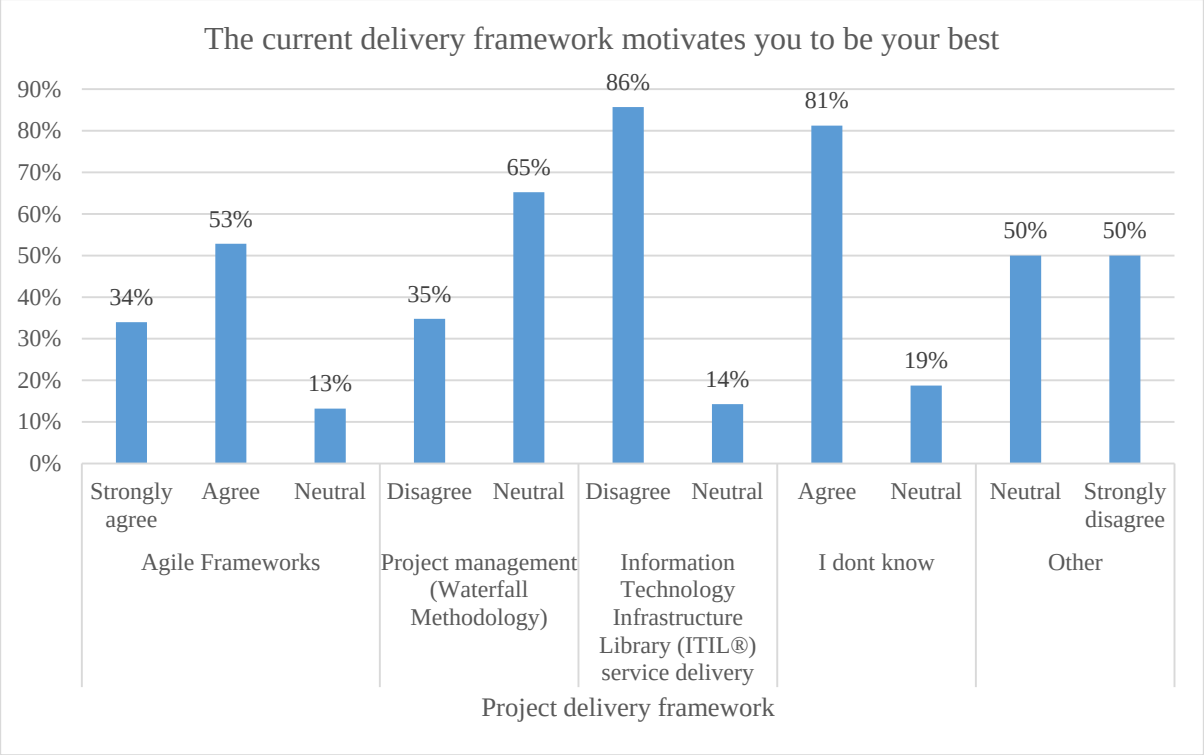


Figure 4.15: The current delivery framework motivates you to be your best (n=101)

Table 4.14: T-test results and descriptive statistics comparing frameworks that motivate people's scores for agile and waterfall frameworks.

	Levene's Test for Equality of Variances		T-Test for Equality of Means		
The current delivery framework motivates you to be your best.					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	1.08	0.302	10.14	74	0.000
Equal variances not assumed			11.42	56.07	0.000
Descriptive statistics					
		N	Mean	Std. Deviation	S.E. Mean
Agile frameworks		53	4.21	0.66	0.09
Waterfall frameworks		23	2.65	0.49	0.1

Also, a culture of improved delivery will yield a more competitive organisation. Figure 4.16 shows the agreement of those using different frameworks for the questions of whether the used framework encouraged relentless improvement.

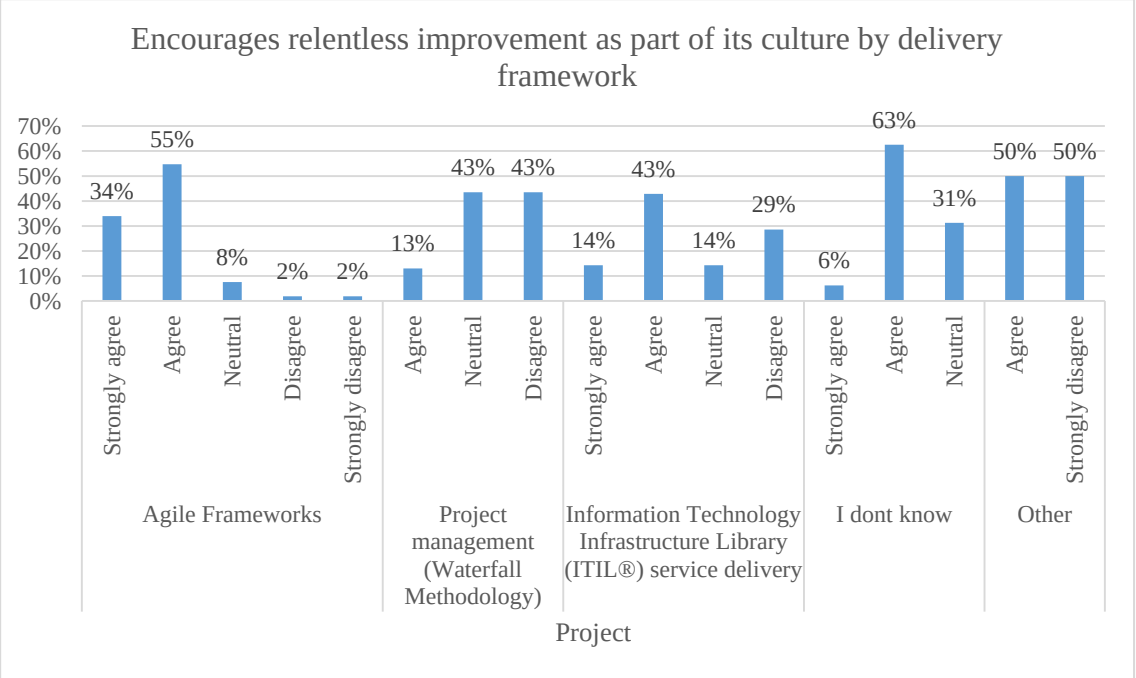


Figure 4.16: Encourages relentless improvement as part of its culture by delivery framework (n=101).

Table 4.16 shows that those following an agile framework were more relentless in encouraging improvement as part of the culture, with a mean of 4.17 out of 5, versus those following a waterfall methodology (with a mean of 2.7). This difference is statistically significant with the t-test showing a p-value of 0.000.

Table 4.15: T-test results comparing relentless improvement scores for agile and waterfall frameworks.

	Levene's Test for Equality of Variances		T-Test for Equality of Means		
Encourages relentless improvement as part of its culture by delivery framework					
	F	Sig.	t	df	p-value (Sig. 2-tailed)
Equal variances assumed	0.1	0.747	7.63	74	0.000
Equal variances not assumed			8.04	47.49	0.000

Descriptive statistics				
	N	Mean	Std. Deviation	S.E. Mean
Agile frameworks	53	4.17	0.8	0.11
Waterfall frameworks	23	2.7	0.7	0.15

4.9.7 The ability of intent-based leadership to deliver value to organisations

While intent-based leadership is used a little more in agile frameworks, it is also perceived to be used in organisations that use other frameworks. Therefore, it is worth examining if intent-based leadership delivers benefits, irrespective of the framework that is applied. Table 4.16 shows the significant positive correlations between the extent to which intent-based leadership is used and the benefits of competitive organisations and highly functioning teams. These highly medium-sized correlations are significant and shows that the higher the score on intent-based leadership, the higher the scores on individual statements as well (higher agreement or frequency.)

Table 4.16: Correlations between survey questions on competitive practices and the extent to which intent-based leadership is used.

	Pearson Correlation	**Sig. (2-tailed)**
The current project delivery framework frequently acquires feedback from customers / stakeholders.	0.255	0.010
The organisation supports experimentation without fear of negative consequences.	0.204	0.041
The organisation encourages the concept of fail fast and learn faster.	0.387	0.000
The organisation prioritises the flow of work.	0.306	0.002
The current project delivery framework encourages relentless improvement as part of its culture.	0.245	0.013
The current delivery framework motivates you to be your best.	0.266	0.007

The organisation can execute a change in their strategy proactively that responds to opportunities and threats.	0.256	0.010
The current project delivery framework positively influences the speed at which the organisation responds to change.	0.296	0.003
How equipped was your organisation to work from home when Covid-19 started.	0.296	0.003
How frequently are issues that hinder project delivery resolved?	0.234	0.018
The current project delivery framework ensures that the highest quality is achieved?	0.344	0.000
Teams purposefully share learnings across the organisations.	0.246	0.013
The team is able to solve problems without input from leadership.	0.224	0.024
How often does the current project delivery framework give you greater control over your work.	0.297	0.003
Leaders move decision authority to where the information is.	0.235	0.018

4.9.8 Testing the relationship between team size and speed of change

Figure 4.17 seeks to understand which team size structure is able to respond quicker to changes. With regards to team size, the categories were collapsed into three groups; 1-10, 11-20; 21+. This was due to the fact that not many respondents worked in larger teams. Also, this will improve the statistical validity of comparison.

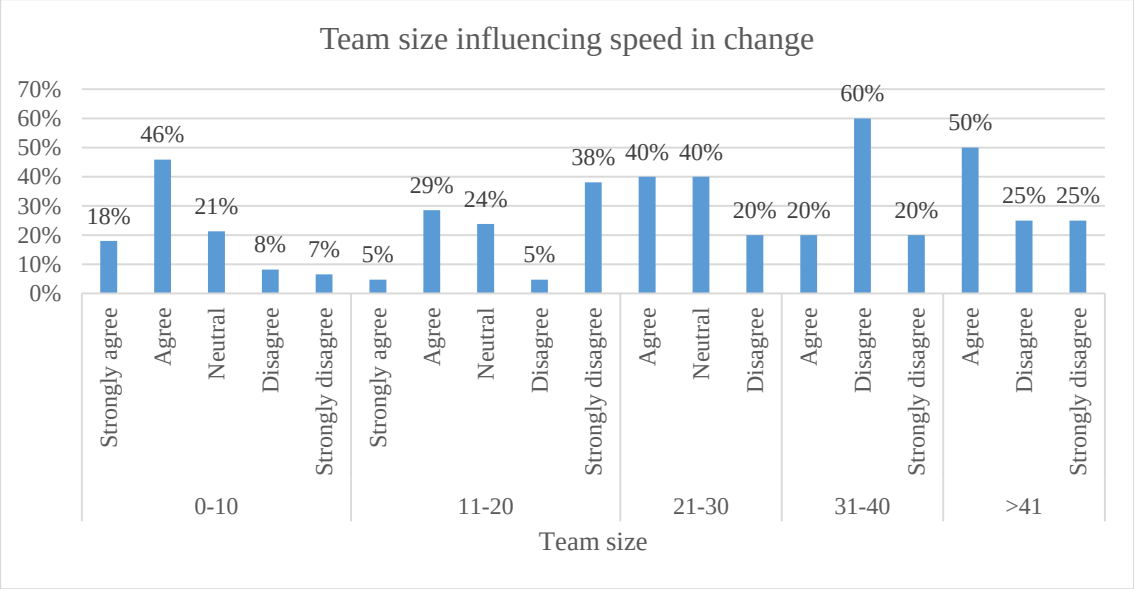


Figure 4.17: Team size influencing speed in change (n=101)

4.10 Conclusion

This section focused on data analysis which is the process of extracting important information from the data collected from the digital survey. The data analysis process started with cleaning the data to ensure that the dataset used was complete and reliable. The survey terminated when people were not part of the project-based organisation. This was one of the methods used to clean the data. Another method was to only focus on respondents who had completed the survey. The last method was to make each question mandatory to stop the respondents from skipping questions. Once the dataset was clean, a descriptive and inferential analysis was conducted on the dataset. For the descriptive analysis, the application Excel was used and for the inferential analysis the application PSPP was used.

Some of the key findings identified in the data analysis included the following: While those following an agile framework were slightly more likely to agree to using intent-based leadership (mean of 3.32 versus, 3.13), this difference is not statistically significant (p value of 0.579, p-value larger than 0.05).

Those using agile frameworks scored higher on the factor of leaders delegating authority to where information is. This difference is statistically significant at the 99% level ($p = 0.000$), and while intent-based leadership is used a little more in agile frameworks, it is also perceived to be used in organisations that use other frameworks. Therefore, an examination was done to determine if intent-based leadership delivered benefits, irrespective of the framework that is applied. The analysis confirmed that it did deliver benefits.

CHAPTER 5: DISCUSSION OF FINDINGS

This section discusses the findings of the study. The section will focus on comparing the empirical results to the theory that motivated the study.

5.1 Introduction

The findings and discussion will be presented in relation to the objectives of the study and divided into four parts. The first part reflects on the theory, the second part investigates the demographics of the analysis, the third part constructs and analyses detected relationships against the study objectives. The fourth part discusses the limitations found in the study.

5.2 Context setting

In Chapter 1 and 2, intent-based leadership was theorised as a subset of agile values and principles. The theory suggests that a relationship exists between these two variables. This indicates that if organisations are applying intent-based leadership, their employees are developing an agile mindset which can be used to respond to changes in an efficient and effective manner.

For an organisation to successfully implement its mandate, good leadership is required to inspire the workforce so that it can work towards a common objective. The manner in which organisations manage and deliver projects in an organisation, provides insight into the organisation's leadership and approach to project implementation.

5.3 Demographic analysis

While 255 people viewed the survey, only 133 started the survey, most of whom finished the survey (101 completed). Fifteen (15) people who started the survey were terminated due to not meeting the set criteria of working in a project-based organisation. The majority of respondents were based in South Africa at the time of completing the survey. This reflects that the researcher's professional network was mainly centred in South Africa. The majority of the respondents fell under the age group 25-35 (44%). There are various assumptions that can be made for this, for example, this age group could be more likely to make use of social websites such as

LinkedIn, has visibility of the survey, or has been more exposed to a project-based organisation. This created the issue to either terminate the survey or allow the respondent to continue. The researcher's social network's age group is also reflected. It was observed that many people work with different teams. This outcome can indicate that organisations encourage collaboration between teams in order to get their work done. It also confirms that teams cannot work in silos if the organisation would like to achieve its overall objectives.

5.4 Analysing Relationships against Study Objectives

The following objectives seek to address the aim of this study:

5.4.1 Objective 1: To determine the extent which intent-based leadership is used in agile project delivery and traditional waterfall methodology

Agile frameworks and waterfall methodologies are used most often. However, the base size for Information Technology Infrastructure Library is too small to allow for meaningful statistical comparison. Therefore, with two groups to compare, an independent t-test was used (see Table 4.7). The non-parametric version yielded similar results and it was decided that parametric statistics would be robust enough to point towards trends for this study. While those following an agile framework were slightly more likely to agree to using intent-based leadership (the mean of 3.32 versus 3.13), this difference is not statistically significant (p value of 0.579, p-value larger than 0.05).

Based on Figure 4.13, it is true that the self-assessment of intent-based leadership by people working with different frameworks do not show any significant differences. This might be due to the understanding of what intent-based leadership actually entails.

Interestingly, there is a significant difference between the degree to which leadership in an organisation can negatively affect project delivery, based on the framework used. In Table 4.8, the mean score for those using agile frameworks is lower (less agreement) than those using waterfall methodologies.

In analysing the descriptive statistics for intent-based leadership principles by agile or waterfall frameworks, these differences are significant with a p-value of 0.000.

Additionally, those using agile frameworks were more likely to indicate that the organisation aligns work to vision; this difference is only significant at the 90% level with a p value of 0.07. It is however still a strong indication that organisations that follow agile frameworks exhibit characteristics associated with intent-based leadership. Irrespective of the framework, leadership can provide a compelling vision for change. Those using agile frameworks score higher on leaders delegating authority to where information is located. This difference is statistically significant at the 99% level (p = 0.000). The core principle of intent-based leadership is to shift the power where the information is. The analysis confirms that agile frameworks encourage this more than other delivery frameworks. In agile teams, cross-functional teams are encouraged. Cross-functional teams are teams that have all the skills and competencies to solve a problem from end to end, meaning they are equipped to make decisions end to end for a project. Organisations that encourage cross-functional teams naturally distribute the power to a team to resolve problems as there is no longer a requirement to have the leader to solve the problem (Schwaber & Sutherland, 2020).

5.4.2 Objective 2: To determine the relationship between intent-based leadership and an agile mindset

The following analysis is based on the outcomes where there was a statistical significance with the t-test showing a p-value of 0.000. Organisations can execute a change in their strategy in different frameworks. Table 4.13 shows that those following an agile framework were more able to execute a change in their strategy, with a mean of 3.74 out of 5, versus those following a waterfall methodology (with a mean of 2.09).

Different frameworks have the ability to meet the challenges of a fast-moving environment and therefore create a competitive advantage. From Figure 4.14, it is clear that organisations, Covid-19 and the lockdown regulations impacted many organisations, requiring working from home at short notice. Those who were following an agile framework were more prepared to work from home. In Table 4.10 the mean agreement was 4.08 out of 5. This is opposed to those organisations who were following a waterfall methodology (where the mean frequency was 1.9).

With respect to the ability to positively influence the speed at which the organisation responds to change in different frameworks, those following an agile framework were more able to influence the speed at which the organisation responds to change, creating a mean of 3.98 out of 5, versus those following a waterfall methodology (with a mean 1.7).

With respect to the ability to motivate people by using different frameworks, those following an agile framework were more motivated to be their best. A mean of 4.21 out of 5 was yielded. Those who were following a waterfall methodology yielded a mean of 2.65.

Figure 4.17 tests the relationship between team size and speed of change. There was a majority agreement that smaller teams that had between 1-10 employees positively influenced the speed of change. This supports the theory that smaller team structures are better at communicating as they have less lines of communication (Accenture - SolutionIQ, 2018). Figure 5.1 presents the number of lines of communication for adding an additional team member. When there are three people in a team, there are only three lines of communication. However, for a group of 10 people, there are 45 lines of communication, and each person is exposed to a minimum of nine communication lines. In order to respond to change in an efficient and effective manner, organisations are recommended to reduce their number of lines of communication as to avoid that they become gate keepers that slow down the progress.

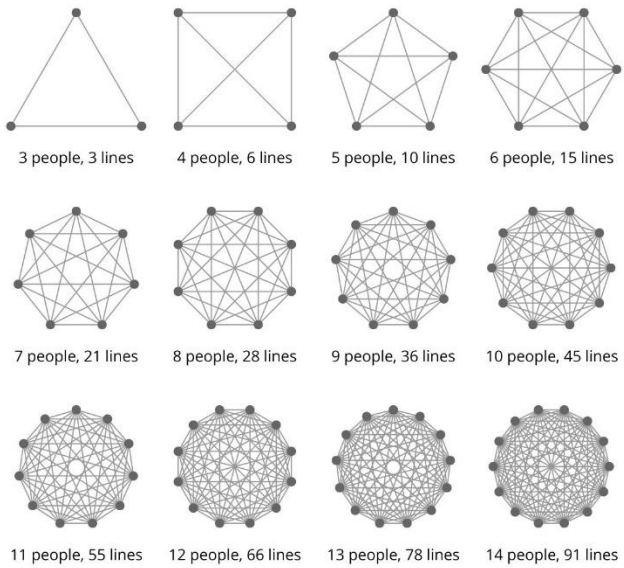


Figure 5.1: Lines of communication in teams

Source: (Accenture - SolutionIQ, 2018)

5.4.3 Objective 3: To determine the ability of intent-based leadership to deliver value to organisations

When analysing the correlations between survey questions on competitive practices and the extent to which intent-based leadership is used, the following can be determined. While intent based leadership is used a little more in agile frameworks, it is also perceived to be used in organisations using other frameworks. Therefore, it is worth examining if intent-based leadership delivers benefits, irrespective of the framework that is applied.

Table 4.16 shows significant positive correlations between the extent to which intent-based leadership is used and the benefits of competitive organisations and highly functioning teams. These highly medium-sized correlations are significant and reveal that the higher the score on intent-based leadership, the higher the scores are on these individual statements as well (higher agreement or frequency). This aligns to Figure 1.2 where the characteristics of intent-based leadership are identified.

5.5 Study Limitations

The study presented a number of limitations. The first challenge was that the researcher relocated to a new country and no longer had access to the same network as before (the researcher was first based in South Africa. The challenge was to identify a population for the study. The second limitation was a time constraint which resulted in only 101 people completing the survey even though 255 people had viewed it. Due to the fact that this was a quantitative study, a third limitation was that there was no opportunity to ask follow up questions that could have provided more clarity or insight into a question.

5.6 Conclusion

This section elaborated on what was discovered during the data analysis. The section was divided into four parts. The first part provided the context and reason for studying

this topic and reflected on the theory. The theory identified in the literature review suggests a relationship between the two variables intent-based leadership and an agile mindset: This indicates that if organisations apply intent-based leadership, their employees develop an agile mindset, which can be used to respond to changes in an efficient and effective manner. The second part discussed the outcome from analysing the demographics. This included understanding the logic behind the respondents' size, location and the size of organisations involved. The third part is the most important as this part reflected on each of the objectives identified and provided supporting evidence to analyse the objective. The fourth part discussed the limitations and highlighted that the main limitation was that the study was quantitative in nature, so there was no opportunity to ask follow up questions.

CHAPTER 6: SUMMARY AND RECOMMENDATIONS

This section summarises the study outcome and makes recommendations based on the data analysis. This section also identifies areas for further investigation and future research. Finally, the section outlines the contribution of this study to the knowledge base.

6.1 Summary of Findings

A summary of what emerged from this study is as follows:

The majority of respondents were aged between 25-35 (44%).The majority of respondents used agile frameworks to delivery projects (52%).

While those following an agile framework were slightly more likely to agree to using intent-based leadership (mean of 3.32 versus, 3.13), this difference is not statistically significant (p value of 0.579, p-value larger than 0.05).

Those using agile frameworks scored higher on *leaders delegating authority to where information is*. This difference is statistically significant at the 99% level (p = 0.000). Analysing the descriptive statistics for intent-based leadership principles by agile or waterfall frameworks: These differences are significant with a p-value of 0.000. Additionally, those using agile frameworks were more likely to indicate that the organisation aligns work to vision, this difference is only significant at the 90% level with a p value of 0.07. It is however still a strong indication that organisations that follow agile frameworks exhibit characteristics associated with intent-based leadership.

The ability of organisations to execute a change in their strategy in different frameworks: Those following an agile framework were more able to execute a change in their strategy, with a mean of 3.74 out of 5, versus those following a waterfall methodology yielded a mean of 2.09. This difference is statistically significant with the t-test showing a p-value of 0.000.

While intent-based leadership was used a little more in agile frameworks, it is also perceived to be used in organisations with other frameworks. Table 4.16 represents the significant positive correlations between the extent to which intent-based leadership is used and the benefits of competitive organisations and highly functioning teams.

6.2 Discussion and Recommendations

Many organisations struggled to adapt to the Fourth Industrial Revolution and to develop sustainable strategies in dealing with volatility, uncertainty, complexity, and ambiguity (VUCA) (Kraaijenbrink, 2018). All organisations focused on achieving the triple bottom line which is focused on enhancing the lives of people, preserving the environment, and financially strengthening the organisation (Miller & Kelsey, 2020). Organisations have realised that their current operating models need to be reimagined in order to remain or to achieve a competitive advantage over their competitors (Bartlett & Ghosal, 2002).

Business agility is more of the dimensions that will enable the organisation to respond quicker to changes. The use of intent-based leadership is a subset of agile. As explained in Figure 2.15 agility is not only about doing agile but also about being agile. This is the cultural shift that can be found in intent-based leadership. It is the intangible skills that help embed agile into the organisation. With the implementation of agile there is a shift to team-based leadership or shared leadership authority because of the use of intent-based leadership (Schwaber & Sutherland, 2020). The study identified that while intent-based leadership is used a little more in agile frameworks, it is also perceived to be used in organisations using other frameworks. This indicates that other frameworks can leverage the benefits that come with intent-based leadership.

The recommendation is that organisations that would like to see the benefit of intent-based leadership start with an experimentation on more or two teams. This will allow such organisations to learn from the experiment and to refine their approach for scaling. Once the return of investment has been realised, then the organisation can identify an additional number of teams to adopt the approach. It is important that sufficient training is provided for leadership to help them understand intent-based leadership and how it aligns to an agile mindset.

6.3 Implications for Future Research

The concept agile project delivery is well-researched and implemented in many organisations, especially in software development projects, however the concept of intent-based leadership is a fairly new concept, less than 15 years old (Marquet, 2013). This study provides evidence that while intent-based leadership is used a little more in agile frameworks, it is also perceived to be used in organisations that use other frameworks. This implies that there is an opportunity to research this further (by identifying a follow up on this study).

6.4 Contributions to Knowledge

This study has been constructed on the research done by various people that developed similar research questions and hypotheses. The contribution that can be derived from this study is that it assists to validate a relationship between intent-based leadership and developing an agile mindset, even though intent-based leadership does not require the use of agile frameworks to realise the benefits. It is also possible for other delivery frameworks to apply intent-based leadership. This study combined two theories that are often discussed in isolation.

6.5 Conclusion

This chapter summarised the findings regarding the study objective. The study set out three objectives that mainly sought to determine the extent which intent-based leadership is used in agile project delivery and traditional waterfall methodology. The outcome of the study confirms that those following an agile framework were slightly more likely to agree to using intent-based leadership (mean of 3.32 vs, 3.13). Table 4.7 confirms that this difference is not statistically significant (p value of 0.579, p-value larger than 0.05).

The self-assessment of “intent-based leadership” by people working with different frameworks did not yield any significant differences, this might be due to an understanding of what intent-based leadership actually entails. Table 4.16 represents

the significant positive correlations between the extent to which intent-based leadership is used and the benefits of competitive organisations and highly functioning teams. These highly medium-sized correlations are significant and shows that the higher the score on intent-based leadership, the higher the scores on individual statements as well. This indicates that intent-based leadership is not only beneficial to agile project delivery frameworks but also to other project delivery frameworks.

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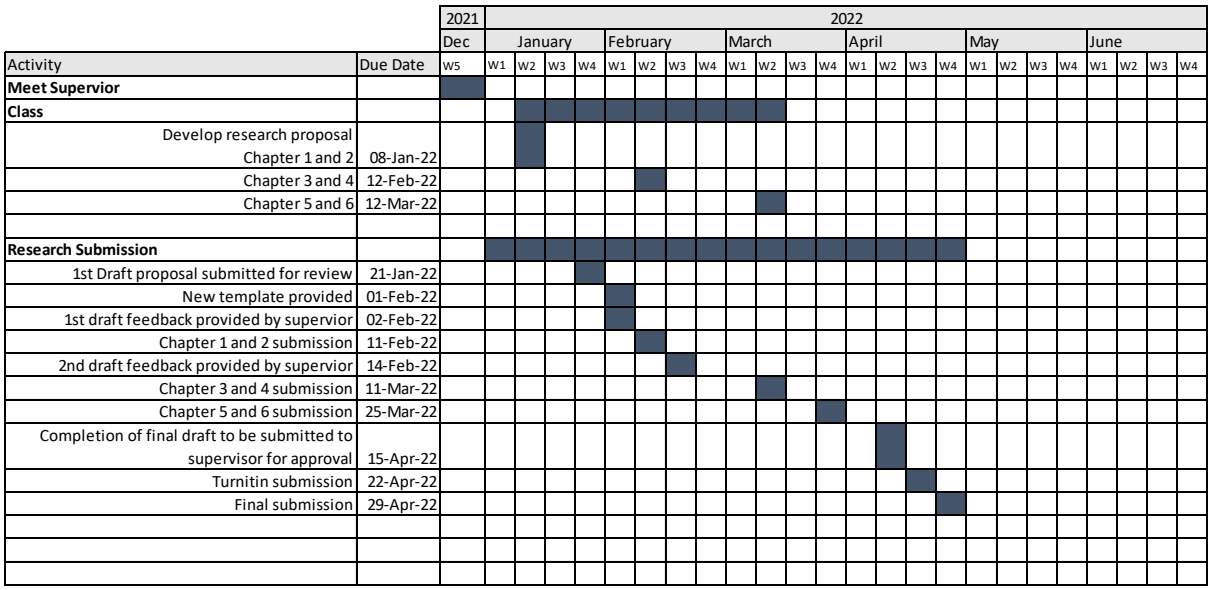
APPENDIX 1: RESEARCH TIMELINE



APPENDIX 2: DRAFT SURVEY

MBA Survey: Leading with intent

Dear Participant

This survey takes approximately 5-10 minutes to complete and consists of multiple choice questions.

The purpose of this survey is to understand the relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively.

Your participation in this study is completely voluntary and you have the right to withdraw your participation at any time. All responses are anonymous and will be treated confidentially.

If you have any questions or would like more information regarding this study, please contact the researcher, Christopher Le Bruh at clebruh@yahoo.com or his MBA supervisor Prof. Allan Pillay at alans.pillay@gmail.com.

By completing this electronically you are giving consent that you have read and understood the intent of the following survey.

Thank you for your time and support.

Useful Terminology

In a project-based organisation, most of the business functions are organised in projects. These projects have specific objectives that need resources, and must meet time, cost and quality requirements (Sarkissian, 2013).

Intent-based leadership can be defined as developing an environment for people to contribute and share ownership, so that they feel valued, inspired and encouraged to reach their potential. Intent-based leadership is where people give intent to each other and they feel proud of their contribution. It helps team members understand their role

in the whole organisation and its objectives. Intent-based leadership is about giving control and the decision-making power to people who maintain the information (Power, 2016).

Agile project delivery is an iterative method to project delivery that emphasizes frequent releases and client feedback. Speed and flexibility are aided by the capacity to alter with each iteration. (Radigan, 2022).

A linear method to project delivery is known as waterfall project delivery. It comprises a carefully defined execution sequence, with project phases not progressing until they have received final clearance. (Radigan, 2022).

Are you involved in a project-based organisation?

No = Go to the end of survey, Yes = Continue to demographics

Research Question	Survey Question	Options presented to the respondent	Value
Demographics	Response ID		
	Country Code		
	Region		
	Select your age group		
		18-24	1
		25-34	2
		35-44	3
		45-54	4
		55-64	5
		65-74	6
	Select your gender		
		Male	1
		Female	2
		Unknown	3

	Select the size of your organisation		
		1-49	1
		50-299	2
		>300	3
	Do you work with multiple teams?		
		No	0
		Yes	1
	What is the average size of the team(s) you are involved in?		
		0-10	1
		11-20	2
		21-30	3
		31-40	4
		>41	5
Project Delivery Framework	What type of project delivery framework does your organisation predominantly use?		
		Project management (Waterfall Methodology)	1
		Agile Frameworks	2
		Information Technology Infrastructure Library (ITIL®) service delivery	3

		I don’t know	4
		Other	5
	What type of project delivery framework does your organisation predominantly use? - Other		
	Which agile framework?		
	How long has your organisation been practicing agile?		
		<1 Year	1
		1- 2 Years	2
		3-4 years	3
		> 5 years	4
To determine if intent-based leadership is used more in agile project delivery or traditional waterfall methodology	The organisation use intent-based leadership?	Agreement	
	To what extent has your organisation invested in Agile delivery?	Likelihood	
	To what extent does your organisation encourage cross-functional teams	Agreement	
	How frequently does leadership negatively influence project delivery?	Frequency	
	The organisation aligns work to the vision?	Agreement	
To determine if intent-based leadership enables employees to	The current project delivery framework frequently acquire feedback from customers / stakeholders	Agreement	

develop an agile mindset	How often does the organisation use intent-based leadership to drive project delivery?	Frequency	
	The organisation support experimentation without fear of negative consequences	Agreement	
	The organisation encourages the concept of fail fast and learn faster	Agreement	
	The organisation prioritise the flow of work	Agreement	
	The current project delivery framework encourages relentless improvement as part of its culture	Agreement	
	The current delivery framework motivate you to be your best	Agreement	
Does the size of the team determine how fast or slow a team responds to change and whether this enables a competitive advantage	The organisation can execute a change in their strategy proactively respond to opportunities and threats	Agreement	
	The current project delivery framework positively influence the speed at which the organisation responds to change	Agreement	
	How equipped was your organisation to work from home when Covid-19 started?	Likelihood	
	How frequently are issues that hinder	Frequency	

	project delivery resolved?		
	The current project delivery framework ensure the highest quality is achieved?	Agreement	
	Teams purposefully share learnings across the organisations	Agreement	
How frequently do different delivery frameworks encourage the re-distribution of authority in decision-making?	The team is able to solve problems without input from leadership	Agreement	
	How often does the current project delivery framework give you greater control over your work?	Likelihood	
	Leaders move decision authority to where the information is?	Agreement	
	Would you be dedicated and committed to your job if you had shared leadership authority?	Agreement	
	The team shares accountability when things go wrong	Agreement	
	Leadership provide a compelling vision for change	Agreement	
To identify what age groups intent-based leadership is more frequently associated with and what factors motivate employees to	Rank your top 5 important factors that you look for in an organisation? (1 being most important factor and 5 being the least important factor)	Rank	

perform optimally			

APPENDIX 3: APPLICATION FOR ETHICS APPROVAL

REGENESYS
BUSINESS SCHOOL

APPLICATION FOR ETHICS APPROVAL

Information Sheet and Consent to Participate in Research

Date:

Dear Staff member

My name is Christopher Le Bruh from Regenesys Business School, I am studying a Master's in Business Admission (MBA). I can be contacted via email on clebruh@yahoo.com.

You are being invited to consider participating in a study that involves research in understanding the relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively. The aim and purpose of this research is to help managers and teams better understand how the use of intent-based leadership can be used to build an agile organisation which will allow employees to think and make decisions like managers do. The study is expected to enroll 80 respondents across various project-based organisational roles and industries. Respondents will be requested to complete a short survey that will be used to collect data. The duration of your participation if you choose to enroll and remain in the study is expected to be once off for 5-10 minutes. The study is funded by the researcher.

The study will not involve any risks and/or discomforts. The study will provide no direct benefits to respondents. The contribution of this research is that it will focus on providing leadership or anyone in the position of leading people with a detailed analysis of how leading with intent is beneficial for creating agile thinking employees in order to be able to better respond to changing environments.

This study has been ethically reviewed and approved by the Regenesys Research Ethics Committee (approval number _____).

In the event of any problems or concerns/questions you may contact the researcher at: research@regenesys.net or 0116695000.

Your participation in this study is completely voluntary and you have the right to withdraw your participation at any time. All responses are anonymous and will be treated confidentially.

The only cost associated with participating in the study is the data cost required to access the digital survey. This cost cannot be calculated as service provider have different prices for data.

The data will be saved in an encrypted database.

APPENDIX 4: LETTER OF CONSENT

I (Name) have been informed about the study entitled “The relationship between leading with intent and developing an agile mindset among employees to respond to change efficiently and effectively” by Christopher Le Bruh.

I understand the purpose and procedures of the study and I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher as this information was provided.

If I have any questions or concerns about my rights as a study respondent, or if I am concerned about an aspect of the study or the researchers then I may contact:

Regenesys Business School

Research Office

Gauteng

SOUTH AFRICA

Tel: 27 011 6695000

Email: research@regenesys.net

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion YES / NO

Video-record my interview / focus group discussion YES / NO

Use of my photographs for research purposes YES / NO

_____ _____

Signature of Respondent **Date**

_____ _____

Signature of Witness **Date**

(Where applicable)

_____ _____

Signature of Translator **Date**

(Where applicable)

APPENDIX 5: APPROVAL OF ETHICAL CLEARANCE APPLICATION

Dear Christopher Lebruh

Approval of Ethical Clearance Application

Project title: An investigation into understanding how leading with intent enables employees to develop an agile mindset in order to efficiently and effectively respond to change.

This letter serves to notify you that your application for ethical clearance to conduct the above research towards your MBA dissertation has been fully approved by the Regenesys Business School (RBS) Ethics Committee.

Please note that any changes to the title and research protocols (title/method/data collection/sample etc.) have to be reviewed and amendments approved prior to commencement of the data collection.

All research being conducted during the Covid-19 pandemic have to strictly follow the RBS research guidelines and protocols, as well as that of the South African National Research Ethics Council.

Please note that this is valid for a period of one year from the date of issue. Furthermore, a copy of this approval letter must be appended to your dissertation/research report.

We wish you every success in your research.

Yours Sincerely

Dr Stanford Makore

Head: Higher Degrees Research Committee