

AGILE WORKING AND ITS POTENTIAL EFFECTS ON URBAN PLANNING



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Declaration

I declare that this research report is my own unaided work. It is being submitted for the degree of Masters of Science in Development Planning to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

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Nazeefah Wadia

..... day of year

Abstract

Agile working in the workplace has increasingly become part of modern work practices to accommodate the needs of employers and employees. It is a transformational concept that allows businesses the possibility to eliminate barriers by working smarter and allowing the business to operate in a manner that is efficient, effective and responsive to the current market while ultimately ensuring increased levels of client satisfaction and overall sustainability. The purpose of this research is to understand how alternative commercial working practices may have an impact on urban planning, which include transportation usage, the link between public and private environments and policy implementation. The research will take an exploratory research design approach to the study as the subject of agility in the workplace and its impacts on the urban environment and urban planning have very limited existing research. Although it is impossible to predict future preference of work styles it is possible to consider a number of contributing factors that could assist in providing efficient and sustainable environments, both public and private, for the future.

It is imperative that planners and developers address and act upon the potential opportunities to ensure that cities remain attractive to a variety of users. In addition, cities should leverage their uniqueness and provide a balance of amenities to ensure current environments are liveable, sustainable, integrated and address the needs of the public.

***To my parents, my brother and the rest of my extended
family.***

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In the name of my Lord, the Most High, the Most Merciful...

All praise is due to my Lord

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Introducing the Research



1. Chapter 1 – Introducing the Research

The objective of this research is to understand how alternative commercial working practices may have an impact on urban planning in various ways such as transportation usage, the link between public and private environments and policy implementation. Essentially it seeks to unpack potential consequences that cities can explore to ensure maximum benefits for its citizens. The research will take an exploratory research design approach to the study as the subject of flexibility in the workplace and its impacts on the urban environment and urban planning have very limited existing research. Thus resulting in increased levels of uncertainty existing around the subject in which the potential pros and cons have not been explored. Literature on flexibility in commercial environments, both local and international, focus on the impacts on employers and employees from a human resource perspective, as well as, focusing on flexibility from a real estate perspective and the manner in which it impacts on the businesses real estate portfolio. For the purpose of this report the term commercial and commercial real estate will be considered as all property with the primary function as office space. Urban planning literature does not directly link to flexibility in the workplace. However, literature does focus on sustainability, transport and link between public and private space in commercial environments, thus, these broad bodies of knowledge will guide the research.

In recent years, commercial real estate has seen an increase in new and innovative initiatives to accommodate the fast pace industry to ensure that businesses are globally competitive (Choudhary, 2016). Therefore, it is vital to understand the impacts and their potential effects on urban planning to avoid creating cities that are static in nature and do not compete with cities globally. With workplaces moving away from traditional fixed workplace design towards a more social and interactive workplace environment, it is key that urban planners consider the impact on the surrounding public areas. Furthermore, the research report will potentially act as a catalyst for future developments and will encourage further research into an evolving link between the practice of commercial business, urban planning and urban environments in general.

1.1. Theme of the Report

The past few decades has seen a significant shift in commercial real estate to accommodate and adjust to ever-changing business and organisational requirements. Workplace environments have transformed from private office space to open plan office layouts due a number of financial benefits such as reduced net usable area and a significant decrease in building operational and rental costs (Shafaghat et al, 2015). Currently the most common type of office layout includes a significant proportion of the office plan as open space with limited private offices integrated into the office design layout. (de Been & Beijer, 2014).

In addition, the characteristic of workforces has evolved within businesses which have resulted in the creation of new and innovative working practices within business organisations. Flexible and agile work practices in the workplace have increasingly become part of modern work practices to accommodate the needs of employers and employees. The primary impact of adjusting to new work practices is experienced by employers and employees, however the secondary impact can be experienced in the way people utilize the surrounding private and public spaces. Thus planning intervention and legislation is required to explore how the changing needs and requirements of businesses can result in creating surrounding environments that accommodate the users within the area.

There are a number of implications, both positive and negative, which are experienced with the implementation of agile working practices. Agile working is an alternative working practice in which the employer of business empowers their people by allowing them the choice of when, where, and how they choose to work, with limited constraints and maximum flexibility, to optimise their productivity performance in order to deliver exceptional services to the client (Choudhary, 2016). Agile working utilises information technology to enable employees to communicate and work in less traditional settings by allowing them to perform a task in a manner best suited to their individual needs.

Agile working has become an increasingly popular concept in the current ever-changing business environment. Essentially the concept is based on the output of work produced by an employee rather than the amount of time spent at office, such that work is action rather than a location. With increasing growth and development in technology, modern business has various options available at their disposal to implement agile working within their organisations (Gibson, 2003). Essentially it allows business to provide services to a customer in a manner that improves sustainability and productivity while reducing the cost to the business. Furthermore, agile working is a transformational concept that allows businesses the possibility to eliminate barriers by working smarter and allowing the business to operate in a manner that is efficient, effective and responsive to the current market while ultimately ensuring increased levels of client satisfaction.

1.2. Research Aims and Objectives

The aims and objectives seek to guide the researcher to ensure that the research is detailed and definitive. These aims will assist in directing the study towards the desired outcomes of the research. The aims and objectives of the research will be attained through unpacking of the relevant literature as well as through the research methodology of interviewing key respondents.

1.2.1. Aims

To understand agile working in the commercial industry in order to improve current and future policies and initiatives

- Unpack the dynamics of agile working in the industry.
- Highlight the importance of exploring alternative commercial work practices.
- Explore the social and physical dynamics which exist when employers/employees utilize agility as part of their business plan.

- Identify the perceptions of agile working for employees and employers.

1.2.2. Objectives

To understand the how agile working can have an effect on urban planning

- Evaluate the success and failures of agile working.
- Examine the effects of agile working on employers and employees.
- Investigate how employers/ employees in agile working environments utilize public and private environments.
- Explore possible planning interventions.

The aims and objectives highlighted above will guide the research and ultimately act as a catalyst to assist in obtaining the findings during the research interview process while ensuring that the analysis is linked to answering the research question. By exploring the above aims and objectives the importance of linking urban planning and commercial real estate will be emphasised.

1.3. Research Questions

Based on the previous section, it is evident that the research is primarily concerned with the following broad concepts:

- Agile Working in commercial spaces
- Public spaces contribution to creating a livable environment
- Sustainability by reducing car dependency
- Transport in relation to urban planning
- Advancement of technology in business, and
- Urban Planning policy contributions

Fundamentally the purpose of this study is to attempt to answer the following research question:

‘What are the effects of agile working conditions in commercial real estate on urban planning and surrounding urban environments?’

In addressing the above research question the focus should remain primarily on the manner in which agile working affects the user on a daily basis. It is important to understand agile working and the how employers and employees utilize it. Although there are number of benefits to agile working it is critical to understand both the positive and the negative impacts it may have on people to further understand the opportunities and challenges that can identified from a planning perspective. The interviews will seek to shed light on unanswered questions and can potentially provide ideas that can be implemented in future development of commercial areas.

In the process of addressing the research question various other issues and questions may be raised in relation to the topic. Thus it is vital to employ additional facets related to the topic in order to further gain a more holistic understanding the overall topic. Essentially this method will be more appropriate to achieve the desired outcome that will be beneficial to the research.

Imperative to the research the following questions must be asked in order to answer the research question:

- What are the positive/ negative effects of agile working in commercial real estate?
- What are the impacts of innovative workplace environments on productivity?
- What are the effects on the surrounding public/ private areas?
- How can urban planners address these changes?

The critical themes and questions highlighted in this section of the research will be addressed in later chapters to ensure that a broad yet cohesive outcome is achieved. The questions raised will be answered through theoretical and ideological themes which will be explored during the fieldwork. Effectively this will result in

understanding the research in its entirety in relation to the urban environment and urban planning related matters.

1.4. Rationale

Traditionally, urban agglomerations and central business districts acted as an environment that assisted in the organisation of people in the same physical environment in order to conduct business as sources of communication were limited to a few technological facilities. For many, the modus operandi of conducting business and having employees within the same physical environment still exists and persists despite continuous and exponential developments in technology. However, in recent years there is a growing trend to offer flexible working hours to employees as the benefits can be experienced by both the employer and the employees (Gibson, 2003). The most common and desirable benefits include increased employee productivity and greater profitability for businesses and organisations (ACAS, 2015). Presently, unlike previous generations, the desire to find a work-life balance is equally desired by both men and women as monetary and family responsibilities within households are equally shared (Gibson, 2003). To facilitate a work-life balance, reduced stress and anxiety levels and essentially improved overall wellbeing for employees, flexible working hours acts as a component in achieving this (Choudhary, 2016). However, additional and other work practices should be explored.

Researchers have not fully explored the effects of agile working on commercial urban areas; there is limited international research with regards to the relationship between agile working and urban planning. In South Africa companies within the commercial sector have recently begun to exhibit agile working conditions within their organisations. Agile working may have an effect in the manner in which planners develop CBD's and other business nodes as citizens are expected to interact more with the environment than previously. It is vital to evaluate the success and failures of agile working as well as examine the effects of agile working on employers and employees, as well as, unpacking their behaviours. Furthermore, critical to this type of research are the relationships that exist between employers/ employees in agile working

environments and how they utilize public and private environments. Thus explore possible planning interventions.

1.5. Conceptual Framework

Below is diagram of the conceptual framework of the research which illustrates how variables in the study link to each other. In the diagram below *agile working* is at the centre of the diagram and is essentially the centre of the research. The five theoretical topics that may have a direct or indirect relationship with *agile working* are indicated below.

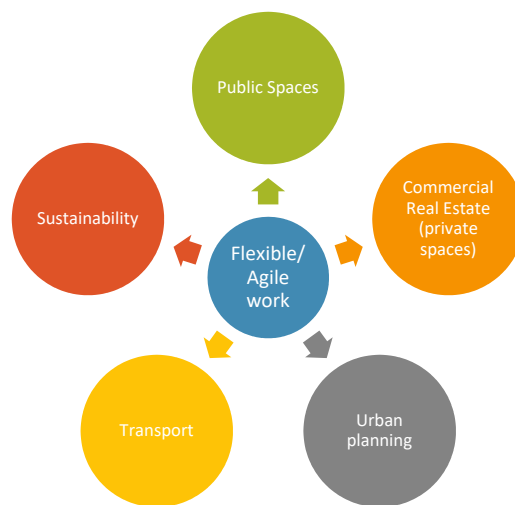


FIGURE 1: CONCEPTUAL FRAMEWORK

1.6. Research Method

As the research has not been fully explored theoretically, a qualitative approach to conducting the research was utilised. This methodology will assist in achieving a comprehensive, efficient and conclusive research. A qualitative analysis as Burney notes encourages an open ended research process that effectively allows for modification of the research to occur, while ensuring that research outcomes continue to be beneficial and effective.

Hesse-Biber (2010) indicates that a qualitative approach is often utilised to understand how individuals interpret their social interactions and thus provide meaning and depth to their social world. Essentially this approach will allow the researcher to provide a

multifaceted approach and view to the social nuances experienced within agile working environments with a focus in predominantly commercial office environments. As there is limited research on this field an explorative approach will be explored to answer the research question. A qualitative approach is critical as it promotes the exploration of human interaction and meaning thus ensuring that a connection can be drawn between employees/ employers and their current or potential agility in the workspace and its effect impact on urban planning. Lincoln and Denzin (2005) state that a qualitative research approach is one that is socially constructed and develops an intimate relationship with the research itself thus providing the research with a more flexible and subjective approach which enables the researcher to conduct the research that is more interactive and detail oriented.

The research report will concentrate broadly on one research area to ensure the full extraction of specific ideas and information and to ensure that the outcomes are more detailed and comprehensive. The research will be conducted through site visits that will entail conducting interviews - with employers and employees of commercial business that currently utilising or are considering utilising agile working as part of their business model. Personal observations as well as visual analysis of commercial workspaces and the surrounding public realm will be included as part of the research findings.

The qualitative research methodology will be investigated and unpacked in further detail in chapter three of the report.

1.7. Area of Focus

The exploratory nature of this research allows the research to focus on extensive areas to understand the impact of agile working on urban planning rather than narrowing the focus to smaller regions. The report will briefly focus on the Sandton CBD as these experience high levels of congestion and are commercially dense in nature. Although the Sandton traffic can be considered lighter than the traffic experienced during peak hours in other cities, increasing developments in the CBD can potentially result in

further congestions within the area which may be unsustainable for the environment. Furthermore, the implementation of agile working can potentially influence residential environments, thus new developments can be created with residential areas based on the impact of agile working.

1.8. Chapter Outline

This report is organized into five chapters, which includes the current chapter to ensure the aims and objectives of the research will be attained. The chapter outline below will provide a brief overview and explanation of the chapters to follow.

Chapter two consists of the relevant literature that will lay the foundation of the research report. In addition, it seeks to unpack and explore existing theories, concepts and approaches that are related to the research. The focus of this chapter will be embedded in unpacking agile working, the interaction between public and private space in commercial environments and the urban planning policy and design.

The focus of chapter three will be to provide an understanding of the different methods that will be utilised to gather and capture data from participants of the research. In addition, it will unpack the research area as well as the characteristics of the chosen research participants and the relevant ethical consideration that are linked to this type of research.

Chapter four will provide an analysis of the data that was acquired from conducting interviews and site visits. It will include feedback from interviews which will include photographic analysis where necessary. In essence it will seek to extract the vital information that deals with the users and their experiences with agile working while including their individual interpretation of the how alternative working practices may have an impact on their personal and work life. This information will inform chapter five.

Chapter five will focus on the lessons learnt from this project and the potential recommendations that could be implemented in the future. In addition, it will focus on the role of urban planners in the development of cities and improving the link

between the public and private realm to ensure commercial environments are providing efficient services to the users. The chapter will seek to understand the role of the planner in creating policies that align with business and city growth. In addition, it will focus and review the aims and objectives of the research report as well as highlight the limitations that existed. Finally, this chapter will conclude by attempting to review the research report.

2

Theoretical Insights



2. Chapter 2 – Theoretical Insights

The purpose of the literature review is to outline the main concepts that will assist in guiding and framing the findings of the research. In addition, this chapter will seek to illustrate and explain the notions of: agile working in commercial offices, public spaces, transportation and technology. Agile working has gained popularity in recent years and its impact on urban planning has limited academic research available. Research in this field often focuses on Agile working from a human resource or real estate perspective with very few elements linking to how these new work styles may affect the ways cities are developed. This chapter will highlight broadly on the themes addressed in the conceptual framework which will guide the research to ensure that the research question is answered appropriately.

2.1. Agile Working

Agile working is an alternative working practice in which the employer of a commercial business empowers its people by allowing them the choice of when, where, and how they choose, with limited constraints and maximum flexibility, to optimise their work and productivity performance in order to deliver exceptional services to the client (Choudhary, 2016). Agile working utilises information technology to enable employees to communicate to work in less traditional settings by allowing them to perform a task in a manner best suited to their individual needs.

Agile working has become an increasingly popular concept in the current ever changing business environment. Essentially the concept is based on the idea that work is an action leading to an outcome rather than a location which people gather. With increasing growth and development in technology, modern business has a various options available at their disposal to implement agile working within their organisations (Gibson, 2003). Essentially it allows businesses to provide services to a customer in a manner that improves sustainability and productivity while reducing the cost to the business. Furthermore, agile working is a transformational concept that allows business corporations the possibility to eliminate barriers by working smarter

and allowing the business to operate in a manner that efficient, effective and responsive to the current market while ultimately ensuring increased levels of client satisfaction.

Agile working has gained popularity and approval by many businesses in the 21 century and has recently gained the attention from a number of businesses organizations as family-friendly policy (Choudhary, 2016). The culture of trusting employees by allowing them maximum flexibility has resulted in the retention of many employees. Furthermore, agile working seeks to facilitate an improved work life balance that allows for increased productivity and higher levels of job satisfaction.

2.1.1. Agile vs flexible working

Agile working incorporates a number of flexible working practices, however it has significantly different aims, goals and drivers. Flexible working has been designed to individuals to improve their work and home life to accommodate other individuals, such as woman with children, into an organisation (Enei, 2014). Flexible working often only includes changes in work times and in most cases is short term solution that affects a limited number of employees while agile working seeks to provide a solution that allows for long term organisational growth that has a positive impact on the entire organisation.

It should be noted that some literature refers to the definition of agile working as flexible working. For the purpose of consistency, this report will refer to agile working as defined above.

2.1.2. Types of agile working practices

There are numerous options available to organisations that wish to implement agile working into their business. Agile working as discussed earlier provides an employee the autonomy to work when, where and how they choose. If a business applies the correct form of agile work to its organisation the benefits can be significant. In this

section the types of agile working will be discussed and they can benefit the employee/employer.

Gibson (2003) suggest the three main types of flexible working practices are: Flexible contracts, flexible time and flexible location illustrated in figure below. In addition, Gibson (2003) indicate that the first two types may have little impact on the workspace requirements of an organisation. However, the last option provides a significant impact on businesses and in particular on their real estate portfolio, in addition this change can affect cities as the demand for office space may decrease but the increase in employment may still. Locational flexibility has led to a number of alternative working practices, coupled with advancements in technology the popularity of locational flexibility has increasingly become popular. This type of agility encourages workers to work in environments suitable for the type of work they are doing to ensure their productivity levels are increased and the quality of the output is not negatively influenced based on a work environment that does not promote creativity and efficiency.

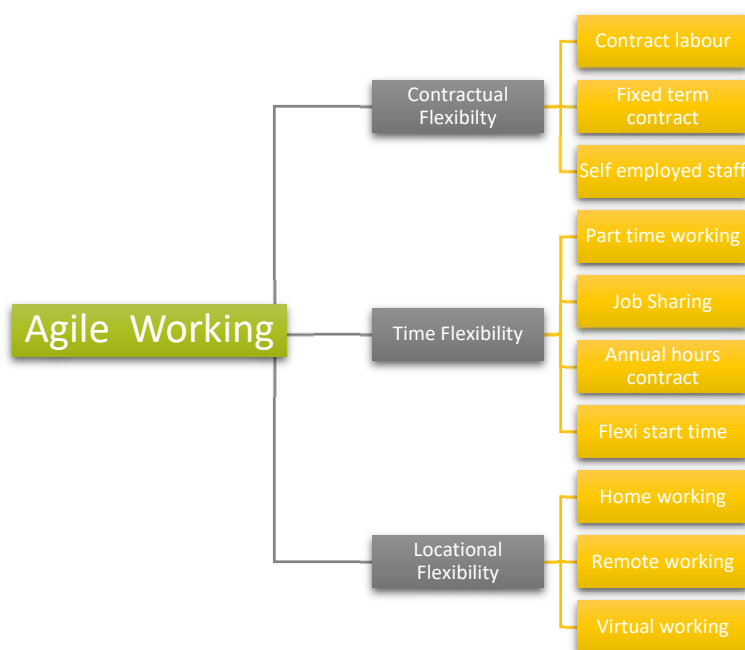


FIGURE 2: LAYERS OF FLEXIBLE WORKING ADAPTED FROM GIBSON (2003)

2.1.3. Pros and Cons of agile working

With many businesses increasingly moving towards agile practices it is vital to understand the pros and cons that are attached to it. There are various benefits associated with changing work styles, utilising innovative technology and creating working environments that seek to enhance productivity (Gibson, 2003).

Many businesses and organisations have opted for agile working based on the fact that it increases productivity and efficiency amongst employees. However, one of the main motives for changing work styles is that agile working reducing the office space required for its employees. Thus with a reduction in rentable area, property operational cost is also decreased. In addition, the cost of parking is also reduced thus significantly reducing the employees cost to the business and increased savings and revenue can be achieved.

As agile working encourages flexible working hour's businesses essentially have extended working hours without incurring additional human resource cost. Customers' needs and expectations are often met without resulting in over working employees. Essential there is a better and more efficient utilisation of skills while increasing innovation and collaboration amongst workers (Gibson, 2003). Agile working allows for business continuity as employee can access their work remotely, thus there is less disruptions in the event of poor weather conditions, travel problems and/or office security issues.

By empowering staff, performance and productivity increase and the business becomes more attractive for skilled employees. Thus there is an increased ability to retain and attract high quality and talented staff. In addition, businesses have noticed a reduced rate of absenteeism due to employees having balanced lifestyles.

Employees will immediately experience reduced travel time as there are no fixed offices hours thus travelling during peak times becomes limited and the cost associated with spending hours in traffic is significantly reduced (Gibson, 2003). In addition, employee's productivity levels increase as there are fewer distractions, as a consequence, improved concentration and creativity results in improved skills application. Employees that have autonomy in their work schedules are more likely to

engage with other employees thus collaboration and team work improves dramatically (Choudhary, 2016)

For most employees the primary benefit of agile working is the improved work life balance which results in overall enhanced wellbeing, happiness and physical and mental health. Employees experience reduce stress as they are able to integrate a healthy lifestyle into their daily routines by having more time available to exercise and eat healthier.

Although there a number of benefits associated with agile working for employers and employees. However, the negative effects cannot be ignored as they provide further insight into the working style. It is vital to understand that not everyone is the same and people do not experience change in the same manner. Agile working can often be met with great resistance especially to employees that place attachments to their work space. Employees feel that policies such as the 'clean desk' policy for hot desking creates impersonal work stations that are unattractive and reduce one's ability to work creatively. In addition, some employees considered hot desking as a breeding ground for germs and are often not positively inclined to work in an agile situation. People that thrive in office environments often feel disconnected from their co-workers and struggle to build relationship as they are always working in isolation. The literature available did not provide a solution to how these individuals address this issue, thus it may be explored during the interview process. For others that embrace agile working the lines between home and work are often blurred creating additional unwanted stress. In addition, on the one hand, agile working practices provide people with work autonomy while on the other some managers may be less trusting of staff if the options of agile working may have been previously abused by certain employees. Although clients benefit from extended working hours of employees, clients may dislike the idea of certain employee not always being available.

Although there are a number of negative impacts to agile working they are far outweighed by the positive outcomes. Thus it can be suggested that agile working will continue to flourish in many organisations.

2.1.4. Effects of agile working on real estate

Workplaces have various layouts, office space can in general be divided into four different categories. Research has found the arrangement and layout of the office space is the determining factor to classify and office type (Lee and Brand, 2010). Duffy (1997) and Haynes (2008) identify hives as office space that accommodates individual processed work while cells accommodating concentrated work can be more broadly classified as private/cellular office spaces. Other typologies including dens which cater for group administered work and clubs which allow for transactional knowledge can be classified as open plan/group office spaces (Duffy, 1997; Haynes, 2008; Brennan, Chugh & Kline, 2002; Shafaghat et al., 2015 and Allen et al., 2004).

The distinction between different office types are primarily based on architectural features such as the lay-out, design and functional features within workspaces as well as typological frameworks (de Been & Beijer, 2014 and Duffy, 1997). The existence of different office typologies is due to the advancement of technology, modifications to suit corporate changes and the desire to meet organisational aims and objectives in the work environment (de Been & Beijer, 2014). It is important to select the correct type of office in order to cater for the sharing of knowledge within the workplace, reduce facility costs, maximize on productivity and achieve a more flexible building to accommodate for future organizational changes (de Been & Beijer, 2014).

A well designed workspace environment must integrate the following critical elements into its design and settings to ensure efficiency and sustainability. These include: clear spaces catering for optimal flexibility of layout, clear entry and exit stations, accessibility to relevant spaces and views, premium lighting and fixtures, clear acoustics, adequate ventilation, ergonomics and office designs that are sustainable and energy efficient. (CABE: Creating Excellent Buildings, 2004).

Cellular/ Private office spaces

Allen et al (2004) have defined private/cellular office spaces as a large sections of enclosed floor space that is separated by several permanent walls to form office within

a building, while Chigot (2003) has defined private/cellular offices as private or autonomous work environments.

The fundamental advantage of private/cellular office spaces is the sense of privacy and confidentiality that it has to offer while the main disadvantage of this type of office arrangement is the increased net usable area per employee increasing building and rental costs (Becker, 2001 and Shafaghat et al., 2015). In addition, private offices reduce opportunities for collaboration and interaction among employees.

Group/ Open plan offices

Open plan/group offices defined by Brill et al., (2001) and Allen et al., (2004) are workspaces with desk partitions that do not extend up to the ceiling. Literature on open plan offices has indicated that open plan/group offices can be categorised into a wide variety of types ranging from landscape offices, which include partitioned workstations, to bull pen offices which has no partitions catering for teamwork with small groups of desks or long rows of desks in an open area (Lee, 2010; Shafaghat et al., 2015 and Allen et al., 2004). Open plan/group offices can also be considered as enclosed shared, which accommodates between two to ten individuals. In addition, open plan offices are often characterised by high or low cubicle partitions. In offices with low cubicle partitions, workers are able to clearly see their colleagues while seated while higher partition only allow colleagues to see each other if they stand from their seats. (Lee, 2010; Shafaghat et al., 2015 and Allen et al., 2004). Open plan offices also provide a variety of office types and cater diverse office spaces for executive within the organisation (Shafaghat et al, 2015).

The open plan working environment can be designed and used for a wide range of office mechanisms. It can be designed as caves which allows for partitioned areas for common use within the general office (Stocks, 1998). Common areas can also be designed to facilitate open plan meeting rooms which encourage spontaneous meetings and gatherings. Other designs that can be incorporated into open plan office designs include hot desking; whereby desks and workstations are used by multiple workers and organisations use each other's office spaces (Stocks, 1998). Becker (2001)

and Kim & de Dear (2013) discovered that the transition from private offices to open plan office spaces was primarily due to economic advantages of open plan offices which resulted in the decrease in net usable area, higher density of occupants and reduction in cost per employee. This can be confirmed by (Shafaghat et al, 2015 and Becker, 2001) who found that a larger number of workers are accommodated in a smaller space in open plan offices. The reduced space required allows for a reduction in rental and building costs as well as technical services, maintenance and energy consumption costs (Shafaghat et al, 2015).

Meel and Vos (2001) found that as time progresses, organisational cultures become more informal, flexible and less hierarchical. Furthermore, open plan office spaces allow for quick, inexpensive reconfiguration of office layout and settings due to the nature of flexibility in its design (Shafaghat et al, 2015). New open plan office buildings tend to include luxurious facilities such as coffee bars, lounge areas, gyms, day care facilities, restaurants/canteens, hairdressing salons, pool tables etc. into the design to facilitate an informal, relaxed layout. Agile working requires office to be responsive in nature, thus it evident from the above that organisations that seek to implement agile working need include a culmination of work spaces to ensure maximum output by employees. The location of office space, its size and layout all affect how people interact and utilise the space. For agile working to function optimally offices new to provide appropriate space to its users.

2.2. Public Spaces

Agile working in commercial businesses has as direct impact in the manner in which the private realm is designed and utilized. However, its impact is not limited to the private realm - the impact on the environments between work environments, the public realm, should also be considered as top priority when creating cities. Cities should provide its inhabitants with a democratic setting by providing opportunities that maximize variety and choice available (Bentley et al 1985). In many cities large-scale privatization and the loss of public life has resulted in poor urban design resulting

in poor livability in many environments. Areas that are highly privatized become symbols of inequality and result in environments that exclude lower income users.

Government and city planners have many roles within city development but a fundamental role is to ensure that cities are democratic in nature and provide equality amongst all (Penalosa, 2009). The public realm within cities are critical to ensuring that cities are attractive and competitive in nature by providing spaces that exhibit characteristics of equality. Although it is not possible for everyone to earn the same income, it is possible for equality to exist within the public realm ensuring that all income groups have access to the same benefits and opportunities available within this environment.

Public spaces are dynamic and complex environments that link multifaceted social interactions and cultural relationships. Public realms in general have distinct yet diverse identities, these characteristics are often linked to creating a sense of place within an environment. In order to understand the dynamics that exist within a physical and social environment and to enhance and develop it for the citizens that will utilize it, it is critical that the history, culture and social dynamics are clearly understood to avoid creating and developing environments that do not address the needs of the people. Lefebvre (1991) notes that the social space is as result of previous actions – social and public environments allow for fresh and new thoughts to develop while continuing to inhibit existing ones and prohibiting others. Public spaces are intimately linked to the idea that a particular environment has universal access or the ‘common’ ground with shared access to amenities. Essentially public spaces influence the form and function of cities and the everyday interactions that take place at a community level. Essentially public spaces are environments for individuals to come together as a community and experience a place. Such interactions can be experienced both directly and indirectly by users participating in the public life.

Agile working, as indicated in the previous section, is primarily available to users within a more corporate setting. Thus when considering existing or new public environment it is important to be aware of the very formal, strong, intense and conventional corporate feelings that are often associated with these areas. Although these features can be considered positive characteristics of an environment their attributes and

feature need to be addressed to ensure that cities provide diversity in its business base in order to attract new corporate firms. With the change of office environments embracing change to agile working methods public spaces need and cities need to embrace the change and adapt the city accordingly.

The importance of public urban environments and the effect they had on facilitating public life and communication between citizens were previously by those creating the modern city (Crowhurst Lennard and Lennard, 1995). Public places in cities have significantly contributed to urban life which is made up of diverse users which include the young and old, rich and poor, people with differing ethnic and religious backgrounds that are both residents and tourist in the city. Public space offers a variety of opportunities to interact with family, friends, co-workers, neighbours and many other types of acquaintance (Crowhurst Lennard and Lennard, 1995). However, it should be noted often public spaces are not designed equally for users. Urban planners repeatedly create public spaces that are not inclusionary in nature (Bodnar, 2015). Agile working, in addition to creating a wide variety of opportunities for employees, allows room for including individuals into the certain workforces that may have previously been excluded.

For environments to be responsive in nature they should provide a variety of opportunities to users. Responsive environment design is embedded in the notion that 'there are important relationships between social life and the arrangement of the built environment (Bentley et al 1985). There are 7 qualities described by Bentley et al, (1985:9) that create and ensure responsive environments. These include, but are not limited to the following:

- **Permeability:** refers to the numbers of alternative ways an environment can be accessed, while also measuring how easy it is to move between spaces and is heavily dependent on the routes created and the objects placed on them. Permeability can be both physical and visual. For example, a route may exist in an area, however, if it is not visually noticeable it may remain unused and become redundant in the environment. In addition, and key to highly

commercialised areas, if an environment is privatised it does not provide access to everyone thus in relation to agile working environments need to provide a certain level permeability to ensure its success.

- Variety in an agile environment is another key characteristic that should be carefully considered in agile working environments. Variety refers to the various amenities, available to a user within the environment. This key characteristic is what sets apart the success of one environment compared to another. The more diverse and area is the more people it will attract to the area.
- Robustness is a characteristic that is critical in urban spaces that encourage agility as it explores how a single space can be used in a numerous alternative way. An example in a commercial building could be how a single space could be used for offices, boardrooms and pause areas or a culmination of all three. In addition, robustness considers the activities of an environment both short and long term.
- Visual appropriateness is achieved when design is clear and users can easily identify the choices offered to them within a particular environment. This characteristic become critical as it allows people to place importance on a specific environment based on external appearance.
- Richness relates to the diversity of sensory experiences presented to the user. In addition, it is concerned with how users' perceptions can affect their emotional state when visiting the area.
- Personalisation is the ability users are given to modify an environment on both a small and large degree, thus encouraging people to create a personal imprint on the environment while still maintain the buildings public role in an environment
- Legibility is how easily it is to understand an environment while also concern with the massing of building and the paths, nodes, landmarks, district and edges that link areas. These linkages will also contribute to the degree to which an environment is utilised.

Agile working requires environments to be more responsive in nature. With changes in the nature of how businesses function cities should accommodate their agility by providing environments that are diverse while displaying the characteristics mentioned above. In addition, urban planners can ensure that public and private realms do not function as isolation rather they provide a level of inclusion.

2.3. Experience

Due to the nature of the research the way in which people perceive and experience an environment is key component to understanding how and why they act in a particular way in agile environments. As noted by Shiffman and Kanuk and Wisenblit (2010) perception is the process by which people interpret their surrounding by creating a meaningful mental image through their five sense. Perception is linked closely to an individual's characteristics and their past experience. Effectively an individual's perception affects the manner in which they interact and relate to a particular situation, thus resulting in the way in which they interact within a specific environment. As with most psychological characteristics, perception, is subjective in nature. People are governed by what they see, hear and ultimately by their interests and passions. Due to the subjective nature of perception it determines the manner in which people act in their everyday lives. People are who they are due to what they believe in, who they are, what they are exposed to, their values, and so on (Mukherjee, 2009). Perception is a social element that affects individuals, it affects actions and attracts or diverts attention in a manner that is subjective to the individual. To critically understand the way urban environments are utilised it is essential to understand the way in which individuals perceive the area. People that may have a positive perception of the environment may interact with the area more openly while a person that may negatively perceive the environment may rush through without placing any emotion or attachment to the specific environment. It is evident that through our history and background our everyday actions are affected.

Sociology in general provides one with the ability to conceptualise and understand the world from a unique perspective. Essentially this is what is known as the 'sociological imagination'. According to C. Wright Mills (1959:6) 'the sociological imagination enables us to grasp history and biography and the relations between the two in society'. Vital to this, Mills (1959) suggests that, the personal life of an individual or the history that is attached to society through a specific context cannot be effectively understood without understanding both of these issues. It focuses on the context in which people live in and the manner in which these social norms and realities affects the people. Fundamentally the sociological imagination is viewed as an 'analytical tool' that assists in understanding the nature and issues that exist within complex societies (Solis- Gadea, 2005). Understanding the larger context of the historical scene allows the individual the ability to grasp complex situations in which to 'take into account how individuals in the welter of their daily experience, often become falsely conscious of their social positions' (Mills, 1959). Fundamental to the sociological imagination is the concept to understand differently from the norm while perceiving society in a manner to benefit the 'public interest'. The manner in which people interact with a space is largely affected by the way in which they perceive their environment, both social and physical. Perception has no limits or boundaries, such that, it affects people's actions at different degrees and can affect mental, physical and oral activities. Perception as Nasar (2011) notes is achieved 'when something that is observed by a person bear meaning for him/her, whether seeing it for the first time or not'.

According to Ralph (1976) environments are individual experience that are only visible through the lens of personal experiences, perceptions, attitudes, actions and are based on past experiences and circumstances. Thus it can be said that perception is and individualised emotion that is distinct and ultimately unique to oneself. The way in which people interact and react to environments is related to the perception a person has of a specific environment. Visual analysis of a person can assist in understanding the perception a person has of a specific area without actually questioning/ interviewing the person. Through perception a person's attitudes, feelings, experience and values affect the manner in which they interact with a space

place identity. Parts of the research seeks to understand how people perceive and know their physical environment. The physical environment essentially form part of who we are as individuals.

The social environment through place attachment can be unpacked through understanding the links and relationships that people have with a particular environment. People that have a social relationship or bond with an environment are more inclined to openly and easily interact with the environment. This can potential create emotional attachments which in turn result in the person increasing the time spent in a specific location.

2.4. Technology in Business

Agile working encourages people to work from locations other than the office thus communication is vital to ensuring that agile working can reap the ultimate benefits. Agile working essentially uses information technology as a tool in linking people in ways that are not traditional performed in workplace environments (van de Voordt, 2004). Technology can remove barriers and limitations and can connect people globally allowing businesses to interact beyond their current physical locations (van de Voordt, 2004).

Technology provide tools for businesses to communicate in numerous ways while ensuring information can be shared internally or with customers in a manner that is productive, sustainable and cost effective. Effectively the use of technology within agile working environments eliminates barriers that may have previously existed within a particular field.

In the current economic situation, the internet plays a critical role in affecting the scope of business application and is often seen as the foundation of many business and organisations infrastructure. According to Kim and Park (2008: 210) “given the inevitable movement to electronically connected organisations, industry practitioners must understand how to facilitate inter-organisational, computer-mediated

communication and web-marketing activities, considering their counterparts 'preference and usage of communication channel'".

The exponential growth of technology has made easier for people to be connected while working away from an organisations business premises. However, although there are number of positive effects, Elias et al (2010) notes that a certain level of trust needs to exist between the employer and the employee to ensure that information is secured while employee is out of the office.

As the advancement of technology provides employers and employees the ability to have autonomy in the deciding where they should work, workplaces begin to transform from traditional open office plan to the communal open plan office which has a significant impact on the design and layout of the office. Facilities, technology in specific, within these open space designs need to be adaptable to ensure that the demands of the business are met. This will ensure that interaction and collaboration is not decreased due to change work styles. Individual workstation has reduced as smaller and more portable technological tools are being utilised. Shafaghat et al (2015) and Becker (2001) confirm that an increased number of workers are increasingly being accommodated into smaller open plan offices.

Technology facilitates us to effortlessly and inexpensively connect with places around the world. New and innovative technology is developed on a regularly and connection speeds have increased to ensure there is no delay in communicating and sharing data.

The existing technological solutions outlined by the Employer Network for Equality and Inclusion (2016: 12) include the following:

- Laptops, tablets and portable computers
- Smart phones (i.e. Android and Apple)
- Instant-messaging (i.e. WhatsApp)
- Mobile phones (i.e. landlines with logging off capabilities)
- Telephone-conferencing (i.e. people in different locations participating in a joint telephone conversation, reducing individual business cost)
- Cloud based data storage (i.e. DropBox, Google Drive, etc.)

- Virtual Private Networks – VPN (i.e. where an employee's uses a secure connection to the companies shared drive)
- Video-conferencing (i.e. Skype)
- Apps for specific business applications (i.e. mobile applications for management information and systems, designed for use with a smart phone or tablet)
- Social networks (i.e. LinkedIn)

Through the above facilities organisation and cities can easily share information at a fraction of the cost and time taken previously. Whilst the inclusion of technology within organisations is beneficial it is important that cities provide the bulk infrastructure for growth in technology to advance local business. In addition, technology such as high speed internet connections should be included into the public realm to enhance agility and connectivity of people.

2.5. Transport and Sustainability

Transport has a significant impact on cities and economic development of regions are often influenced by the quality of transport available. The desirability and attractiveness of urban area are influenced by the quality and the quantity of transport infrastructures available within the region (Banister,1995). Small and Verhoef (2007: 1) suggest

“the heart of all modern economic activity is trade. People trade labour and ideas for cash, and cash for goods and services; firms trade technology, expertise, financial capacity, intermediate goods, administrative functions, and many other things with each other, with individuals, and with governments. All these transactions require communications and most require transport of goods or people – to work, shopping, tourist sites, meeting locations. Thus it is fair to say that transportation is central to economic activity”.

Historically, people were brought together in the same physical environment to conduct business together, this environment commonly known as the central business

district of an area (Arnott and Small, 1994). Although the *modus operandi* continue to persist today many industries are slowly moving to alternative working practices as highlighted in previous sections. Although agile working encourages people to work remotely the core business environment still exist and will continue to exist in the near future. Due to the nature of many of these areas rapid motorisation coupled with population growth and poor investment in public transport the majority of many global cities still face high levels of congestion. In the long term high levels of congestion are not sustainable for environment or the wellbeing of commuters. Congestion has become embedded of many big cities globally in and occurs due the transport demand exceeding the transport supply, thus each vehicle in on the road impairs the mobility of another vehicle (Arnott and Small, 1994).

One of the main causes of traffic congestions can be linked to poor transport infrastructure and the individual's dependence on the car. In many areas around the world car there is a strong link between car ownership and economic prosperity. Despite the fact that having a car in some environments is no longer considered a luxury good but rather a consumer good, the change in the value of the car continues to exhibit increased levels of wealth (Williams, 2005). Although the perception of economic prosperity is linked to the car, other advantages such as easy mobility, convenience, comfort and speed cannot be ignored as contributing factors to the increasing car ownership. Thus the private transport is still strongly favoured over public transport. The dominance of the private transport in cities around the world, including cities in South Africa, has segregated people along class lines by embedding notions that people who utilise public transport are only doing so as they cannot afford to buy a private vehicle (Ahmed et al., 2008; Thakuriah et al., 2013)

According to Williams (2005:5) sustainable public transport is defined as “providing basic requirements to meet societies and the economies mobility needs”. In addition, transport systems need to be affordable, safe and easily accessible by all commuters (Banister, 2000; National Planning Commission, 2011). The key objective of public transport development is to create a sustainable public transport system that achieves the three dimensions of sustainable development. These dimensions include: economic development, environmental protection (both current and future

generations) and the promotion of social development goals (Le Clercq and 21 Bertolini, 2003).

Transport planners need to continuously develop and improve on the efficiency of public transport systems to meet the needs of commuter. A responsive and adaptable service ensures transportation systems that have the ability to increase their accessibility and mobility within an environment. Furthermore, public transport cannot occur in isolation, when cities continuously adapt to changing business environments public transport also needs to adapt to avoid losing value and efficiency while providing present and future citizens with adequate access to services and opportunities. UN Habitat (2013) suggests the fundamental values of sustainable transport and mobility is the formation of participatory frameworks in order to ensure efficient support from users.

Sagaric (2014) highlights the importance of participatory frameworks in the development of public transportation and the influence they have on determining fares and routes which are consistent with the needs of commuters. When considering development in agile environments it is vital that a number of stakeholders are involved in the development process, to ensure diversity is promoted in all spheres, this includes public and private participation.

Sagaris (2014) advocates for civil society and diverse groups to be included in consultations for sustainable public transport in order to gain support from users of all income groups. In addition, various public transport modes need to be integrated and aligned to ensure usage by a diverse group of commuters.

2.6. Conclusion

Although agile working is primarily utilised in commercial office type business, its effect can be experienced in many other aspects. The above section of the research supports a number of theories and ideas while identifying the missing elements within the current literature. This chapter has provided a theoretical base which has strengthened ideas and provided clarity in order to capture aspects that have not been

previously researched. Once the aspects have been examined it is necessary to test the current research as well as utilise appropriate methods to extract data of unknown aspects of agile working practices.

3

Research Tools



3. Chapter 3 – Research Tools

This chapter will outline the research methodologies employed in order to uncover and discover the social nuances that exist between office employees that work in agile environments and their relationship with the surrounding public and private environments. As the research is exploratory in nature a qualitative approach was utilised as the research is primarily based on a theoretical and or hypothetical idea. This research method will assist in unpacking aspects of the physical environment, social context and the related concepts regarding agile working and its potential impacts on urban planning. The current chapter will provide the framework in which the qualitative approach will be utilised as well as the application of it in the area of study.

According Neunam (2000) the qualitative approach is fixated with understanding the processes which dominate and determine various behavioural patterns. Based on the research question and the related sub question the chosen research method attempts to identify factors and social nuances that exist in the public and private realm in predominantly commercial environments, hence revealing and linking this relationship will provide vital information that is often forgotten. Through the method of interviewing people and observing the local private and public environment the current behavioural characteristics of people can be better understood. A single case study area will be used to understand and effectively answer the research question. This was as a result of all the participants having their office located within the same area, the Sandton CBD. This will assist in grounding the data to provide for a more distinctive and detailed outcome in which to analyse the relevant data, while providing the research with richness and in essence leads to the desired outcome (Flvbjerg, 2011). The case study will assist in exploring the facets and theories discussed in literature review to provide an analysis that is grounded by both theory and field work. In order to provide a systematic research a number of methods will be utilised to gather various data within the area. These methods include: visual analysis; personal observations; and interviews. This method of collecting data provided an interactive process that demanded interaction between the researcher and the interviewee to

provide the required perceptive dimension for research. A qualitative research method is thus inherently the most effective method for this research, the method will be discussed in further detail below.

3.1. Qualitative Research

The qualitative approach to research is often characterised by its nonnumeric approach to research. These research methods are methodological and interpretive in nature. They feature the possibilities to create research that can illustrate the importance of the diversity while retaining the social meaning of the research material. According Durrheim (1999) qualitative research involves the collection of data through written and illustrative methods thus captivating and recording observations according to particular themes. Often this type of research involves people and their experiences and nature and differences that exist between person to person. Huchzermeyer (2012) suggests that this form of research is 'flexible', meaning that it is characterised by progressive design, presenting a myriad of realities, the research being the instrument of data collection, with the focus on participants' views. This allows for more flexibility, therefore creating opportunities for interesting and different findings. Flexible qualitative research is best suited for this research since it allows for a multitude of views to be captured and included.

Qualitative research occurs in natural settings in which face to face interaction is vital. This element is the core to this particular research as well as the inclusion of other data that will enhance the themes that were discussed in the literature review. According to Creswell (2003) Qualitative research is holistic, it provides for the potential to understand complex issues and attempts to make sense of them. Indicatively this will attempt to provide the social meaning that the research seeks to uncover. This method essentially reflects the social aspect of research and focuses on the human behaviour of individuals and attempts to attach deeper meaning to it and fundamentally grapple with simple concepts that may be multifaceted in nature. Many qualitative researchers aspire to illuminate the social meaning of the subject they are dealing with (Ospina, 2004). The researcher has an important role to play

when unpacking the research (Creswell, 2009). The research in qualitative approach deals with social aspects in which ethics need to be considered. This is vital as the approach should not infringe on any potential unethical aspects. This will be discussed further later in this chapter. Meaning and observations play a critical role in this process as research seek to attach meaning to social nuances in which to interpret situations, feelings and perceptions (Woods 2006). It is also important as the researcher also includes personal observations. This research in particular will include a section that deals with this to further understand and grasp the complexity and diversity that exists within the area.

Qualitative methods are often utilized due to the empirical formation of data that has the ability to capture analysis that includes comprehending the complexities of people's lives and experiences rather than boxing them in statistics. This provides possibilities of progression through a multitude of possibilities. In essence it allows for research to change through new findings and possibilities thus creating a number of opportunities that can be discovered and further investigated. Essentially this method will assist in providing clarity in which to answer the research question. As the research involves close interaction with people there are a number of challenges that can be faced thus this flexibility ensures that research can continue despite obstacles along the way.

3.2. Research Area

The research participants interviewed in this research have their office located in the Sandton CBD, thus the research was narrowed to a specific area as all interviews and site visits were conducted in this area. A case study as suggested by Yin (1994), is an empirical inquiry that explores contemporary circumstances and situations within real life context through multiple sources of evidence. The application of a case study helps to unpack the nuances that exist in agile working and the potential impacts on urban planning. This will allow for the extraction of information that will be useful in achieving these aims and understanding the space in a relative and understandable context. It will also provide richness in detail, variance, and completeness to the

research (Flyvbjerg, 2011). The use of the case study aims to unpack the research question through a manner that will adequately provide for the investigations of the agile working in commercial areas.

The case study will be through a descriptive lens in which the methods listed in the next section of this chapter will help document the data over a period of time to understand and investigate the problem on a more detailed and specific level. Due to time constraints the research will only focus on a few interviews and observations, however this will allow for unpacking the data in greater detail. Essentially the research will attempt to create a link between agile working in Sandton CBD and unpack the relationship it has with the public realm.

Located within the metropolitan region of Johannesburg, South Africa, the area of Sandton is considered is an affluent area that is often referred to as the richest square mile in Africa (Liberty, 2007). Sandton has developed, since its establishment in 1969, into one of the most influential business districts in Africa (City of Joburg Draft Sandton UDF, 2008).



FIGURE 3: DEMARCATION OF THE RESEARCH AREA IN SANDTON

Sandton is considered a mixed use node, which offers premier offices, retail amenities and medium to high rise residential apartments. With the conglomeratin of offices a major side effect is the traffic congestion during peak hours. Although the Gautrain

station is located at the centre of the Sandton CBD, and connects north to Pretoria, south to the Johannesburg CBD and east to the OR Tambo airport with stations along, traffic remains an issue. The success of the Gautrain (Rapid Rail Transit) station has had a significant impact on the growth of the Sandton CBD with a majority of new developments happening within close proximity to the station. Sandton city acts as the main retail attraction within the area, how as the area is predominantly commercial the area lacks public investment thus resulting in static and monotonous commercial environment. It can be noted that the although Sandton displays a number of attractive and advance buildings the public realm suffers as little to no enhancements have been made within the region. The public realm should be at the epicentre of developments and regeneration processors. In order to achieve an efficient and sustainable public realm, environments should move away from creating predominantly privatised areas that limit access.

3.3. Research Participants

The initial intention was to interview seven specialists in the real estate industry with extensive knowledge in agile Working and alternative working practices. However, as they were in high level positions their jobs were demanding such that they did not have time to have the interview, and often rescheduled then later cancelled the interview. Although the best format of conducting an interview would be face to face other options such as video calling, telephonic communication and email were also offered as options. However due to a poor response rate from these individuals and time constraints the decision was vetoed. Participants that were included in the research study included employees based in agile work environments in the chosen research area discussed above. The sample comprised of employees in various levels in the organisation which included but was not limited to; directors, senior and middle management, juniors and administrative staff. The sample size included 15 participants from various companies that use agile working in their work environment. The participants were aged between 20 – 55 years old. The age group of participants were varied to ensure that any generational differences could be identified.

Respondents were both male and female to ensure that results were not gender biased.

The interview was conducted face to face between the researcher and the participant, in which all interviews were conducted individually with respondents to ensure personal information obtained from the participants remained confidential and anonymous. Furthermore, the results obtained from participants were interpreted in a manner to ensure that the information provided by the firm and its employees remained anonymous and confidential.

3.4. Research Instruments

Interviews were utilised as the primary component of the research report to gather data. “The qualitative research interview seeks to describe the meanings of central themes in the life world of the subjects. The main task in interviewing is to understand the meanings of what the interviewee says” (Kvale, 1996: 65). The interviews were semi-structured and open-ended so as to allow for additional question to be asked for elaboration and clarification as required. Semi- structured interviews allowed for detailed responses to pursue in depth information regarding the research topic. Interviews were chosen over other forms of data collection as it allows for active involvement by the researcher. In addition, it also provides for personal communication with the participants thus creating an association that will deepen trust and encourage participants to provide additional insight.

3.5. Ethical Considerations

The qualitative approach utilised in this study required the researcher to actively engage with members of the public through face to face interviews, thus to ensure that the research undertaken is meaningful the process of generating the research should take into consideration ethics of research. The approach adopted for this research adhered to key concepts of ethics such as informed consent, anonymity,

confidentiality and privacy. The researcher provided all participants and relevant companies with information sheets and consent forms which can be found in the appendix of the research. Ethical considerations are critical when conducting any form of research especially through a qualitative approach. According Resnik (2011) ethics are associated to components that may be considered the social norm and distinguishes between behaviour that may be acceptable and/or unacceptable. Through the qualitative approach Halai (2006) notes that there are four factors that need to be addressed, these include: informed and voluntary consent; confidentiality of shared information; anonymity of participants and the assurance of no harm caused to the selected participants. The research will include talking to people (employed in agile working environments) to acquire information pertaining to the research thus it is imperative to recognize and respect the choices of people. As stated above it is vital to ensure that sensitive information that may be gathered during the study should not be shared and should be treated with upmost respect. The research however does not comprise of any sensitive information attained from the employee, it will try to unpack the impacts of agile working in predominantly commercial environments as well as their interaction between public and private realms in the area they are employed.

In addition, it is important to state the researchers name and affiliation to the university to ensure that the respondents are aware of the reasons the researcher will be conducting the research, this was achieved by providing an information sheet that can be viewed in the appendices of the research. This will also create a sense of trust between the researcher the participant and respect and treat the respondents in a manner that does not offend or harass them. As the researcher knew some of the participants personally, as they worked for the same company, it was important to state that the interviews were solely for the purpose of the research and not linked to the business in any way. In addition, the researcher ensured respondent's opinions as well as their privacy was respected during and after the interview. Furthermore, when participants decided against answering certain question the researcher/ interviewer was not forceful and abrupt in order to acquire a response. The researcher will guarantee the anonymity of the respondents by referring to the respondents with numbering systems or through pseudonyms. In addition, the researcher will not

divulge personal information or discriminate against any person while conducting the research. Morgan (1997) notes that the researcher should avoid asking sensitive questions while conducting the interview to avoid embarrassing and offending the interviewee. The questions asked were not biased or demographically sensitive. Essentially communication with respondents will be transparent to avoid harm as well ensure integrity and honesty. Finally, it is essential that the data gathered while conducting the interviews are communicated in a manner that does not flaw or misrepresent the information obtained (Arksey and Knight, 1999).

The findings of the study were presented in an honest manner that maintains the integrity of the study such that the study avoids being bias to ensure that the findings are objective in nature.

3.6. Limitations

Agile working and alternative working styles are relatively new concepts in the commercial industry as a result the interview participants were exposed to agile working for a short period of time thus results may be flawed due to limited exposure to the concept. In addition, the initial intention was to interview experts and specialists in the real estate industry that had vast knowledge about this concept while also currently working in an agile environment. However, after several attempts to interview these individuals, the researcher was unable to interview relevant specialists. Thus the lack of response from specialised individuals resulted in interviewing a different set of individuals as discussed in a previous section.

Conducting interviews is largely affected by the willingness of interviewees, in some cases participants were reluctant to provide information on certain topics that may be pertinent and critical to the research. Despite ensuring absolute confidentiality some participants were still reluctant with the fear that their employer may have access to their responses.

Due to time and resource constraints the researcher conducted fewer interviews. Although qualitative research provides an insider's perspective to the research, often

with small samplings one may lead to an inappropriate or biased generalisation that may reflect inaccurately on the research. Furthermore, as the researcher knew some of the participants at a personal level there was an inability to provide complete objectivity as the researcher's personal bias may affect the authenticity and understanding of the responses. Breakwall (1995) notes that the effects of preconceptions may occur if the interviewer reacts to a characteristic of the interviewee thus resulting in the manner in which the questions are asked or the manner in which the responses are recorded. In addition, personal bias was presented as the researcher identifies as an advocate for agile working in commercial office environments. Although this quality may allow for a deeper understanding of how people interact in agile working environments, the researcher documented important sensitive aspects of each interview to reduce personal bias and remain objective.

3.7. Conclusion

The central business district of Sandton has a dynamic character due to a variety of aspects, however many issues and concerns are similar to CBD's in other cities. As the research is exploratory in nature the qualitative method allows for an approach to display complex details and provide a comprehensive understanding and perspective to the research. The following chapter will be structured around the findings that have been extracted from the methods mentioned above. Through conducting interviews, and personal observations it will be possible to illustrate and understand how agile working in commercial areas has an impact on surrounding public and private realms. The research will focus on a variety of aspects which include the social and physical dynamics that exist within the environment. These data collecting tools assist in achieving the aims and objectives of the project while ultimately attempting to answer the research question: 'What are the effects of agile working conditions in commercial real estate on urban planning?'

The chosen format of the concept framework will serve as a tool in guiding the interview questions. This will assist and guarantee that the data collected respond to the research questions and sub-questions.

4

Findings and Analysis



4. Chapter 4 – Findings and Analysis

The following chapter aims to highlight and analyse the findings from the data collected from the interviews and site visits. The method of analysis will be based on linking the theory discussed in chapter two while the findings seek to address the aims and the objectives set out for the research. In addition, the sub questions of the research will be tackled in this chapter with expectation to answer the research question. The sub questions of the research were formulated in order to answer the main research question. The research was primarily centred around agile working and its impact on urban planning in which the research linked to the conceptual framework. The questionnaire was formulated in order to unpack the research question, moreover the questionnaire was structured in an open ended format so as to allow for the participants to share additional knowledge and experiences.

4.1. Characteristics of Interviewees

Understanding some personal characteristics of the interviewees assists in providing context for the researcher when analysing the results. The participants we asked some basic personal questions which can be found in the appendix of the research. The participants interviewed were of varied age groups between the age of 22 and 55. As most interviews were conducted in the participant's place of work – visually the age group of staff was younger than 35, however as this is not empirical data it will not be used to guide parts of the research such that the workforce will be considered multi-generational. The researcher's initial perception is that the responses may differ between generations, however based on the interviews this conclusion could not be made thus this link was not drawn in the research. Of the fifteen participants interviewed seven were male and eight were female. It should be noted that very few similarities were identified in the responses between same gendered participants, thus the research did not group the responses and analysis based on gender. All participants interviewed work in the Sandton CBD in an agile office work environment

and lived within a 10 – 50km radius from their workplace. The participants interviewed were highly qualified, eleven of the fifteen participants had a master’s degree and the remainder had an honours degree. In additions most participants were in either a middle management positions or higher. This was a factor to consider as often the privileges of working flexibly is not always awarded to those within lower level positions as noted by the participants.

“Although the company I work for offers agile working, administrators and lower level employees are not offered agility as their job requires them to be at the office”

Participants that were older indicated that in recent years there is a growing trend to ensure that there is an increased focus on the wellbeing of employees in providing an environment that encourage a healthier work life balance. This could be based on the increased demands from the workforce in general and begins to highlight the importance of creating this balance within the public realm especially within corporate environments. Additionally, many of the participants noted that diversity (race, religion, culture and gender to name a few) in the workforce has increased, thus the need to provide services to accommodate this diversity.

The interviews also suggested that previously employees would remain at companies for long periods (10+ plus years) however the recent trend has indicated that most people move within the five-year period.

“Remaining loyal to a company is less important than it was in previous years. People want to experience and learn more and often remaining in the same company restricts the ability gain more knowledge”

As a result, participants at senior level note that it is far more challenging to retain talent than it was in previous generations as the demands of the employee are not only linked to monetary gains.

4.2. Response from interviewees

The interview process was an extremely rewarding experience as the interviewees found the interview questions interesting and were keen to share their knowledge and experiences from not only their current work environment in Sandton but their experiences from working in different cities locally and internationally. The interviewees provided critical information drawing from personal experiences and were willing to share their honest opinions and perceptions of their work environments.

“When I think of town planners, all I think is zoning and legislation. I find it fascinating that planners can, especially within predominantly commercial environments, affect positive change in the public and private realms”

In addition, most of the interviewees found the link between urban planning and corporate real estate fascinating and their perception on how cities could and should work in the future changed. The notion of having cities work more efficiently and sustainably to accommodate the user’s needs by providing options of choice and flexibility became apparent to the interviewee especially within a South African context.

“Often when I, as a South African, travel abroad to major cities with effective urban policy, efficient public transport and attractive public realms – I am left in awe at how cities function especially within predominantly commercial office environments . . . taking into account how seamless the public and private realms link I am now more aware, of the importance the relationship between urban planners, policy makers and developers are to implement change for future cities.”

Although the interviewees were only for the purposes of research the interviewees were excited that new ideas in the way cities function both in the private and public sector were being explored.

4.3. Agile working

Agile working, as discussed in the literature review, allows employees the ability to choose the ways in which they want to work to produce the desired outputs in an efficient and productive manner. All participants worked in an agile environment but the degree to which they were offered agility differed based on their job type, position in the company and the overall culture of the business. Participant 1 indicated that although agile working was encouraged within the company they were often discouraged from working offsite or utilising flexible working hours.

Although all the companies claimed to be agile in nature their interpretation of the concept differed. Participants 7, 14 and 15 highlighted that although the company branded itself as a forward thinking business, which employs new and innovative concepts to ensure efficiency and productivity of their employees, they merely offered flexible working hours and required staff to be in the office daily. This resulted in the participants not having the full experience/ understanding of how agile working can act as a transformational tool for both the employee and the employer.

“As I am in a junior position, I am not offered agile working in the same way it is offered to other employees... in addition my line manager does not trust that I will work if I am working off site”

Participants 9 and 10 indicated that agile working is linked to trusting one's employees and that without trust the success of agile working is limited. Participants that were awarded complete autonomy in the manner in which they worked, suggested it initially complicated the manner in which colleagues interacted and collaborated thus reducing their efficiency and productivity. Participant 4, 5 and 6 noted that they often felt that although they were working remotely they felt disconnected from other colleagues and preferred working from the office.

“Often when people work remotely the ability to work as a team is reduced as communication is often reduced to emails which lack the benefits of face to face interaction, thus productivity and efficiency is reduced”

However, over time, participant's added that this changed as people adapted and worked in a manner that supported their business requirements. Participants 7, 11, 13 and 15 indicated while working abroad the benefits of agile working were in line with the positive outcomes that were highlighted in the literature review. Many participants highlighted the importance and positive aspects that agile working had but indicated that without quality workspaces and technological structures to support it the concept fails.

It was emphasised that the agile working extends its benefits to both the employee and the employer for various reasons which included, but are not limited to: reduced operational cost; improved work life balance; improved client interaction and engagement; reduced disruptions; improved work spaces; increased productivity; and reduced absenteeism. Participants in senior positions that had an impact on business

decisions noted that although there were huge cost benefits to agile working some employees often abused it and productivity levels decreased.

“While many have embraced the opportunity to work in an agile environment, some took advantage and output levels dropped. The strong team dynamic that existed within the company before seemed to have been impacted. While there are many factors that could have contributed to this, as a company we needed to ensure that we have a working environment that encourages collaboration and teamwork. Thus stricter rules had to be implemented”

The participant noted that employees were required to stipulate the day/s and time/s that they were working remotely, which was subject to approval of respective manager/director. The days/times when employees were not working remotely, they were required to be in the office. In addition, their agile working schedule was shared with their teams. Although the company indicated that they were never a clock watching business they could not tolerate the outright abuse of this privilege. All participants noted that if agile working was implemented correctly the negative impacts are few and can often be easily identified and addressed.

4.4. Workspaces

Workplace design has become an important factor for many corporate companies, participants noted that the workspace can act as a brand in itself for the company. In addition, it can visually display the corporate culture that exist within the business. Although this is not always the correct reflection if done incorrectly, however many businesses utilise this as a tool to attract and retain talented employees. Participants 6 and seven noted that previously workspace were merely desk and chairs with a few boardrooms, however more recently offices are moving toward spaces that are collaborative in nature providing innovative workspaces such an inactive collaborative work area that promote communication through design. As noted in the interviews,

workspaces have become less inert in that they provide the user with the ability of choice and variety. This in turn facilitates an environment that increases their productivity. All participants noted that their companies worked in an open plan office environment that provided a variety of workspaces such as collaborate spaces that encourage discussion and communication within teams. In addition, there were dedicated desks, hot desks, quiet rooms, social areas, dedicated formal boardroom and coffee/pause areas. In addition, all participants noted that agile working requires innovative workspaces which their companies did provide to a certain degree. Some of the participants noted that the placement or design of these alternative work environments were not always ideal and thus resulted in low usage or discontent for employees when the facilities did work as anticipated.

“In theory and in its conceptual form agile working and the workspaces associated with it are often ideal to promote productivity – however in reality some work spaces conflict with others. A typical example is creating a pause area that is close to desks dedicated as quiet zones. Although this may seem inane it happens often and work spaces that were meant to improve efficiency become unsustainable and redundant”

Participant 8 suggested that often other employees do not respect the work environment in that they were often noisy and disruptive to other employees. In addition, participant 3 noted that although agile working is a great concept poor implementation in workspace design including noise reducing systems often resulted some level of annoyance and irritation from employees.

All participants indicated the increased density of people within the workspace as the average desk size has reduced significantly thus accommodating far more people than would in a closed office environment, thus reducing operational costs of the business which is in line with the literature. Participants at a senior level indicated that although the real estate requirements have reduced the business still had the ability

to grow in numbers due to the layout and flexibility of the office design. Furthermore, the workspace is often a robust environment that can be altered as the needs of the business changes. Growing from this idea, the public realm can adapt this notion of robustness to ensure that public realm is relevant and appropriate for users of the area.

Furthermore, it should be noted that corporate companies are moving towards creating spaces which encourage collaboration and communication between staff. In addition, based on the diverse nature of the workforce the workspace is adapting to the demands of the users by providing a number of alternative workspaces that include more than just the traditional desk and chair settings. It is important to note that with a change in the workspace cities can proactively also adapt to provide citizen with an environment that interrelates with the interior of corporate structures.

4.5. Private and semi- private Space

Additional amenities within and around commercial environment increase the variety and choice available to people resulting in environments which are more attractive and are frequented compared to those with fewer options. Participants that were awarded agile working to its full degree indicated how the surroundings of their environment affected the way in which they interacted with private amenities.

“I regularly utilise the retail facilities available within an around my office – often by the time I get home stores are either about to close or have closed already. Thus due to time constraints in the evening I prefer running errands during my lunch break”

Many participants indicated the benefits of being in a commercial building that provided a variety of retail facilities on the ground floor making the area a functional space that provided to their daily requirements.

“Having ground floor retail that is affordable appropriate is a must in any building ... the services/ amenities may differ but not having any available creates an environment that is harsh and unwelcoming”

Participant 2 appreciated having access to a variety of facilities within walkable distance from the office. In addition, participant two indicated that at a previous job that had its office located in an office park far from any retail amenities, buying food and or accessing any other retail was a time consuming process. Participant 8 shared this sentiment and indicated that having access to private and semi-private environments for retail or leisure purposes allowed them an option to take a break from the office thus improving their general wellbeing as they were not stuck in a monotonous work environment. Some options increased the communication between people while other were convenient and reduced having to spend time after work to access these facilities at alternate locations. Participants advocated for having canteens, coffee shops, dry cleaners, gyms, and health and beauty option as priority facilities that have a positive impact on their lives. Participant 13 and 2 appreciated the convenience of having amenities within close proximity and often developed relationships with the environment and people from other office buildings or companies. Companies indicated they were more likely to locate in buildings that provided retail options within the facility as it had a positive impact for their employees and formed part of the brand of their company. For more than half participants the options of having amenities of a leisurely nature within the commercial environment was encouraged as many noted that after work social occasions has recently become part of the company culture.

“Although I don’t access the facilities provided on a daily basis having the option available is always beneficial”

Many participants noted that there is a need for corporate environments to be less static and inflexible as most of their time is spent within these locations. While others preferred it and related to not wanting to blur the lines between one’s work and personal lives. It can be noted that with the increased desire to promote a healthy work life balance other amenities in around corporate environments can facilitate this change. The next section will discuss the role of the public realm in corporate environments

4.6. Public realm

As discussed in the previous section the desired requirements of the workforce have changed, individuals expect far more from their environments than previous workforces. The expectation of what a commercial environment should offer has increased in which the experience and variety available has become more significant. Essentially indicating the amenities available in the environment should address a wider group of individuals. Many of the interviewees identified the public realm as only public parks and squares and did not include streets and other open spaces between the built environments as part of the public realm. All participants indicated that they never utilised any of the parks or squares within the close proximity to their office and related this to the fact that streets leading to them were often boarded by high-rise buildings with impenetrable edges which made the route feel less inviting and in some degree less safe despite buildings having private security visible around their offices. The social interaction is fundamental to the space as it acts as natural surveillance in the public environment. Passive surveillance as Carmona (2010) suggests is a vital component of the safety of an environment. However, all the participants were positively inclined to utilising the public realm more often as their jobs awarded them the opportunity to be agile, the notion of visiting alternative environments during work hours became an attractive idea which they would consider

utilising are that are considered part of the public realm more actively. Once the definition of the public realm was clarified to include more than just parks and squares, more than half of the participants indicated that the public realm felt separated from the environment and the link between corporate buildings and the public realm was either non-existent or functioned in an inefficient manner.

“Predominantly corporate environments are rigid in nature – there is no life on the streets unless it is a route connecting to a public transport system”

Furthermore, it was expressed that the public realm as a component to facilitate communication between citizens was non-existent within the commercial environment. As a result, the commercial environment is disconnected and the ability to improve or contribute to a positive urban lifestyle is significantly reduced.

There is a growing need for future cities to start addressing the ways in which corporate buildings interact and connect directly with the public realm thus improving the sense of place in the environment. It is important for city planners to start thinking of the manner in which policy and other interventions can drive this change. It is important for planners to communicate with the end user to understand the needs and reduce the risk of creating meaningless and inappropriate environments that become lifeless and hollow. In addition, it was noted that there are limited economic opportunities available on sidewalks. The inclusion of this could result in the creation of social and economic opportunities.

The interviewees also highlighted the lack of cultural identity as the environments did not feel uniquely South African. Although there are benefits of having neutral environments, public spaces that display public art are often more attractive to a wider variety of users.

4.7. Transport

As discussed in the literature review transportation has a significant impact on the ways cities are developed. Due to poor public transport infrastructure many people continue to utilise private vehicles to commute to work. Many interviewees indicated that although they do not work daily from their main office they often are required off site at a client or at other locations.

“I have considered using public transport on many occasions, however, the area I live in and the area I am going to does not link to major transportation systems such as the Rea Vaya or the Gautrain . . . although it is probably close to a taxi route, I would not take a taxi as I carry my laptop and do not feel safe”

This results in the continued usage of their private vehicles as the current public transportation network does not link either to their destination location or their place of origin.

“On average I spend approximately two hours in traffic daily, and when it rains or there is an accident it is often much more time consuming and frustrating. However, I continue to use my own car as current public transport systems are not frequent enough. In other developed countries major routes (railway systems) have a three to five minutes waiting period during peak usage while we have a ten minute wait during peak and twenty minutes during off peak. Thus the convenience of utilising your car is a no-brainer”

Participants spent an average of two and a half hours a day commuting to work and unanimously indicated that they travelled alone. In addition, many indicated that though they did utilise public transport on occasion they were discouraged from using it in the future as the frequency of the transportation modes were not adequate and

often became a fairly time consuming process. Although many of the interviewees have their office within close proximity to major transports nodes, such as the Gautrain Sandton Station, their ability to be agile was significantly reduced as public transport was not an efficient option.

“Although I do not get to work during peak morning traffic time I still experience high traffic volumes... this could be associated with many companies encouraging employees to work remotely or have flexible working hours”

Furthermore, more than half the interviewees suggested that although they did not arrive at their place of work during common peak traffic times the traffic the congestion in the area rarely subsided. It was suggested that this could be linked to companies allowing more workers to be agile and ‘peak’ traffic time has extended. Initially the assumption was that agile working would reduce traffic congestion in agile working environments, however if the primary mode of transportation continues to be the private vehicle the ability to reduce traffic congestion is significantly impacted. As cities continue to grow the urgency to provide citizens with efficient and well located public transport increases. Participant 2 noted that although public transport is a more sustainable option, it is not necessarily a cheaper or more convenient option especially in a South African context. In addition, there is no urgency or desire to utilise public transport. Thus, planners need to consider interventions and incentives to encourage citizens to move away from using private vehicles to more sustainable transport systems as the convenience of using a private vehicle is a deterring factor. In addition, often transport systems are based on the demands of the user, however it is vital to consider that as people are not required to use public transport the demand will not increase from these users. Planners and policy makers should consider incentives and or by laws that require/ encourage people to utilise public transport thus the demand will increase and providing efficient and frequent systems can be financially sustained.

4.8. Conclusion

The current chapter has unpacked the relationship that agile working may have on urban planning in terms of the theoretical framework in the area of the Sandton CBD. The relationships between the physical and the social space have been linked with the desired needs of the user within the space. Agile working as a concept allows people within corporate environments the flexibility to move around during the day. In addition, it highlighted the direct and indirect effects that should be considered for future cities. Thus, it is vital that planners address the needs accordingly and design spaces that are useful and convenient for a variety of users within the environment. The findings of this research are imperative as they provide planners and other relevant decision makers with the knowledge to understand the complexity and possibilities of how the impacts of what happens in a private setting may have on the public environment.

5

Going Forward



5. Chapter 5 – Going Forward

This chapter seeks to provide possible recommendations based on the outcomes to address the research question and sub-questions. In addition, it will provide as a link between the theory and analysis discussed in previous chapters. This link will reinforce certain ideas while providing for a way forward. This chapter will reinforce the aims by addressing them as well as provide interventions to move forward and plan environments that better address the needs of the people. The research highlighted a number of important changes occurring in the commercial landscape which have direct and indirect implications on its surrounding environments. Work styles and work spaces are both transforming based on advances in technology and the ever changing nature of businesses.

5.1. Recommendations

As discussed in the previous chapter the commercial sector as a business is evolving and coupled with this evolution is the change in the workforce and the work styles. The impact of technology has altered the way in which people communicate accompanying this is the change in the type of work outputs required (van de Voordt, 2004). The characteristics of the workforce is thus transformed and their requirements as individuals has changed. With a generally highly qualified workforce their expectations of their relatively immediate private and public environments has altered with many users requiring a greater variety of amenities available within close proximity. This change will have an impact on both the public and private area of predominantly commercial areas.

The Sandton CBD, as many respondents have suggested, is often viewed as an area that is highly commercialised with hard edges that do not encourage interaction between the public and private realms. With limited choice in local amenities the CBD becomes an environment that is less frequented during non-workdays thus reducing its ability to retain people within the area outside of work hours. It is important for

cities to move away these designs and provide users with spaces that embrace seamless interconnectivity between public and private spaces which encourage usage of the space throughout the week. In addition, it is vital to provide users with the ability to connect and link to other environments quickly both through technological advances and through efficient transportation.

Diversity and choice should be awarded at both a private and public level to ensure that the health and wellbeing of users are high priority as this can be linked to increase productivity and tends to attract and retain the right talent for the business. Working environments that are newer or recently renovated have displayed more innovative workspaces designs that allow for an agile working environment to thrive by increasing the robustness of the layout. It is vital for businesses to provide an environment that encourages efficiency within the workplace. While planners need to identify opportunities to effect change on the public environment that supports and enhances the activities available in the private realm. When considering the physical environment negative aspects may deter users from utilising the environment thus resulting in a decline within an area. Once the negatives are identified it is possible to acknowledge future potentials and avoid past errors of development. Identifying with the negatives could further assist in policy making as it would provide for more adequate and efficient policies that positively affect the environment.

5.1.1. Agility and connectivity

Agile working as discussed in previous sections has a number of beneficial effects that can be leveraged when designing and considering policy implementations for future cities. People that work in these environments are far more mobile during the day as research suggests, however, as not all jobs are the same there are still a significant number of people having far more stringent rules that require them being in the office the entire day. This can be a deterring factor and may have an impact on the frequency of people using certain amenities. However, with improved connectivity both technological and through transportation the ability to move around in the city can be a seamless process which allows users the ability to utilise amenities during personal

time while at work. Currently many employees prefer using their private vehicle as the current public transport system does not support their ability to move efficiently between areas. Although the Gautrain, BRT and other transport systems are moving towards creating efficiency the major deterrent was location and frequency. This can be improved by having transport systems run every five minutes during peak times and possible every ten minutes during non-peak times. In addition, local governments can provide incentives to companies to encourage usage of public transport rather than private vehicles such as reduced rates.

Furthermore, although technology is improving and evolving at an exponential rate this needs to be evident not only in the private sector but in the public sector. More needs to be done to provide all citizens with access to the internet especially in areas that experience high frequency.

5.1.2. Permeability

Apart from demographic and social factors, an environment exerts its influence through its physical features (Stedman, 2002). Streets are meant to be social spaces with unique and distinct characters forming its own social organisation (Barker, 2007). Public life and the notion of public space is often characterised on streets. The street as a public space is an attractive and interesting object that is constantly throwing out and conjuring new social formations. They provide connotative meaning which includes elements such as choice, variety and freedom. These elements stand out to the user as attractions that are offered within the environment. Freedom can be expressed through many forms in which it is closely linked to surveillance. Coupled with the change in the physical environment, passive surveillance acts as the eyes upon the street which is enhanced by a number of surrounding activities (Jacobs cited in Carmona et al, 2003). Jane Jacobs advocates for continuous street activity to add the number of eyes on the street and to induce more activity in buildings along the streets. In areas that are highly commercialised permeability is often limited or non-existing, this could be eradicated by having more retail amenities on the ground floor. In addition, commercial buildings can be designed to ensure a seamless change

between the private and the public realm by allowing the flow of movement to be similar between environments thus awarding the user the ability to connect with areas that were previously closed off. The figure below illustrates the different types of building edges within commercial areas. A large percentage of buildings within the Sandton CBD still have their buildings designed with hard edges and no visual accessibility/ permeability. However new developments within the Sandton CBD are displaying buildings with softer edges that will allow access for the general public to ground floor retail and other amenities.

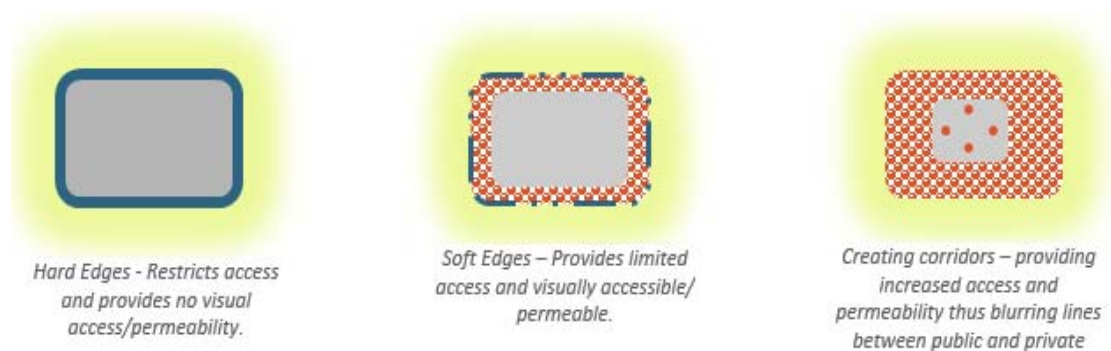


FIGURE 4: BUILDING EDGES WITHIN THE CITY - ADAPTED FOR RAMIDUS (2013)

The move to designing buildings that provide increased permeability and accessibility is essentially a move in the right direction. The new Discovery building located on the corner of Katherine and Rivonia road in Sandton provides citizens with soft edges around the building. At the time of the research the building was not officially open, thus the researcher was unable to determine the type of impact both positive and negative that the building would have on the public and private realm as citizens

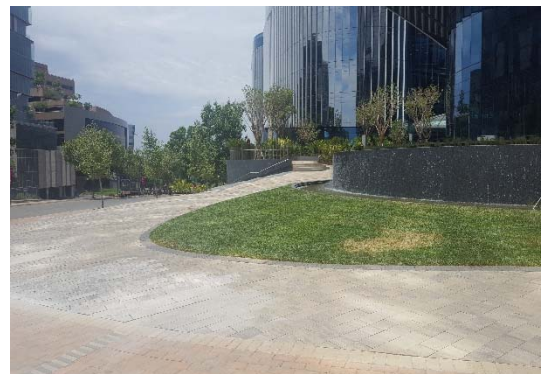


FIGURE 5: DISCOVERY BUILDING



FIGURE 6: DISCOVERY BUILDING - VIEW FROM THE STREET

were not utilising the buildings. However, the seamless integration between the public and private realm solely based on the visual appearance suggests that the design will provide a positive element to the area.

Urban planners/ designers and developers need to work closely to improve the linkages between the private and the public realm by creating environments that are not limiting and restrictive in nature.

5.1.3. Variety

Environments should be designed for: “a variety of uses including unforeseen and unforeseeable uses, used by citizens who do different things and are prepared to tolerate, even to take an interest in things they do not do” (Walzer, 1986: 470). Users of the space need to be included in the types of activities that go on within an area. This is to ensure that the users feel comfortable within the environment in which they regularly interact in. The activities and services that are provided in the area should address the needs of the user. The perspective of encouraging diversity within an urban environment, the public realm must be recognized as an enhancer of the well-being of citizens and improved quality of life in urban areas. Typically, CBD’s have been linked with monotonous environments that do not provide the user with choice. It is vital that commercial environments provide a variety of quality amenities that address a variety of users within the area. These could include retail on the ground floor by providing facilities to accommodate restaurants, coffee shops and other retail stores. In addition, the city should create green spaces to allow users a break from the indoor environment these spaces within walking distance from buildings to ensure increased usage or on rooftops of buildings. Coupled with providing these amenities the area should ensure that residential and leisure facilities are also made available making the

environment a desirable option to visit during non- working days to users that do not live within the environment.

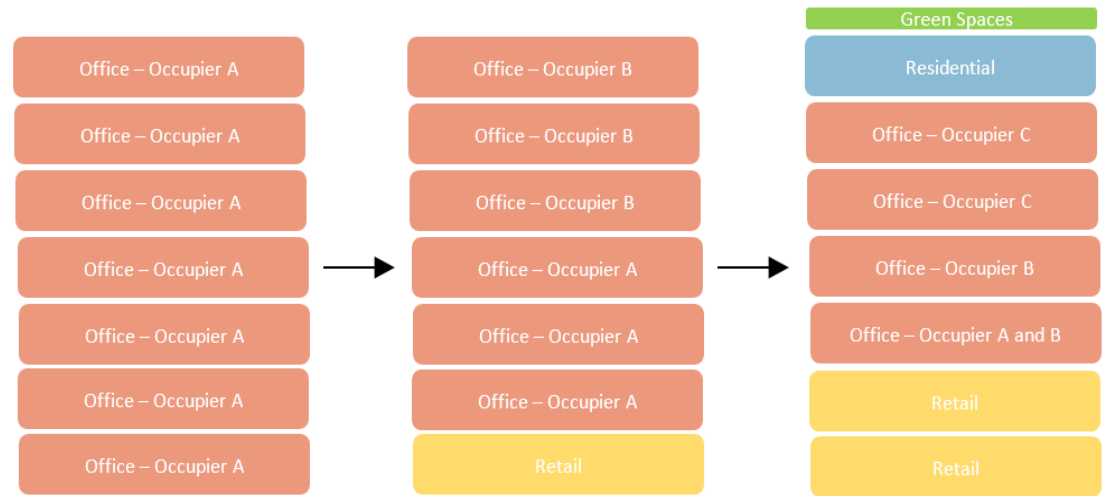


FIGURE 7: MIXED USE BUILDING

The figure above displays different tenant mix options, with the option on the right being the most optimal. Moving towards creating a sustainable and efficient environment buildings that provide a variety of uses will essentially attract more people based on the options available.

Although in the case of Sandton the Sandton City mall does provide a number of options in terms retail options, however it fails the city as it encourages users to be within the privatised areas rather than on the sidewalks. On non-working days the city is abandoned with little to no activity on the sidewalks and streets. Providing space for non-commercial businesses within commercial business will encourage usage throughout the week. In addition, and discussed in the previous section, permeability of privatised buildings will create a less hostile and more open and inclusive environment.

5.1.4. Robustness

It is critical for planners to create spaces that are flexible, in which the design of spaces evolve over time. This will develop into a responsive environment in which all its users

can utilise the space to its full capacity while encouraging users in others areas to feel included in the environment. Robustness “affects the degree to which people can use a given place for different purposes” (Bentley et al, 1985: 10). The characteristic of robustness needs to be present in all design principles to avoid creating environment that become redundant over time. In addition, it is important for urban planners to revisit public areas to ensure the environment remains relevant to the needs of the users. Users should have the ability to use the space differently over time without the physical elements of the space negatively affecting interaction and growth in the area. Furthermore, commercial buildings should be designed in a way that can adapt to future changes and demands of small, medium and large companies. Creating environments that attract a variety of users will ensure that the environment can be sustainable for future generations.

5.1.5. Experience

As Simone (2004) notes urban spaces are imagined to be functional destinations. Particular environments are linked to specific identities, functions, and properties so that the environment becomes legible for specific people at a given time and space (Simone, 2004). Bonds that are created between people and environments result in creating an intensified link between them. Thus awareness is created in which people attach social and emotional bonds (Lewika, 2005). It is evident from the interviews that people require a high quality work environment to improve their work experience and their productivity levels. Urban planners could start creating a links between building developers and interior designers to ensure relationship between the public and private realms creates a sense

“Place attachment is generally associated with feelings of ‘being at home’ belonging, comfort and security” (Antonsich, 2010: 122) Essentially studying people’s perceptions, both positive and negative, informs the planner to unpack the way people think and interact thus giving deeper insight into the environment. This will promote better planning strategies that will result in good public design and policies that are beneficial to the city and its users. Environments in predominantly

commercial areas should include green spaces, such as roof top gardens and outdoor activities as a break from the monotonous concrete structures. This will give respite from the static surrounds creating an experience for the user increasing pedestrian traffic in the area. Providing outdoor areas in both the public and private realms helps improve the overall wellbeing of users.

5.2. Planners Role

In a post-modern context engaging with the local communities to provide public spaces that encourage interaction between people is vital. Planners need to constantly be in communication with the public to understand the changing needs of the users to ensure environments are utilised to their full capacity. The manner in which planners conduct research is important as incorrect data collection could result in developing spaces that do not respond to the public's needs and demands. Through conducting the research, it has become evident that users often do not have time to communicate and constantly engage, this often poses a challenge as participants are not often committed and the results obtained may be warped. Planners need to be understanding and patient during the research process in addition the planner's role in communicating and providing for the users of a particular space is often complex. As agile working may result in a concept referred to as space-less growth, planners need to shift focus on providing space is high quality rather than space that will address increased quantity. In addition, based on the changing nature of growth within the commercial real estate sector planners need to address nature of the growth by developers to enhance the variety in the environments. This should in turn result in creating memorable environments that attract users to the environments by providing a multitude of services that address the needs of the users. The scene that is created in predominantly commercial environments is linked to the perception of the area being exceptionally corporate in nature, this can be altered by ensuring developers create buildings that encourage tenants that would provide retail and recreational facilities. Similarly, planners can also focus on creating public areas that enhance the interconnectivity between private and public spaces. Furthermore, this

is entrenched in the notion that commercial buildings should provide a certain level of permeability on the ground by increasing public access through the basic design of the building.

Planners need to constantly be aware of the importance of the inclusion of users within the space. This will develop spaces that are inclusive and diverse which essentially promotes interaction while promoting liveable spaces that are robust and legible in nature. Public infrastructure is costly and should therefore be done once thorough evaluation of the environments demands has been assessed. This will avoid planning spaces that do not address the needs of the public. Through the evaluation process, participation is key. It is therefore the role of the planner to ensure that the spaces provided are appealing and satisfy the needs of all its users.

5.3. Policy Implementations

The planning profession, in general, provides value as it intends to bring about positive and desirable change into environments. This change needs to bring about innovative policies and designs that sufficiently address the needs of the people. Often urban design is linked to creating aesthetically appealing environments however the result in some cases is impractical and socially awkward. These environments are intended to address the needs of the people, however as a result of poor communication between planners and the people, areas do not adequately function. Policy makers and urban designers should not disrupt the manner in which people experience and interact with an area. Rather they should improve on existing positive social interactions that would further deepen the attachment to a specific environment.

Policy implementation can be through encouraging businesses to adopt agile working by providing incentives that will actively benefit the business. In addition, policy can drive the design of buildings to ensure that there is a link between the public realm and private realm. Policy makers can assist in providing guidelines for the types of amenities and facilities that should exist within a particular area.

5.4. Organisational changes

While conducting the research the issue of organisational attitudes became prevalent as a key contributor to the success and failures of agile working. The concept of creating an agile corporate culture is often imbedded in a number of factors that are not confined to the physical environment, rather these issues can be closely linked to altering the company's culture in its entirety. In many instances participants highlighted the stark difference between the brand the company portrays externally and what is actually inhibits. Often, and most likely not intentional, the façade created through alternative work spaces with laidback designs can be seen as a marketing gimmick conveying a modern and forward thinking business while the ideals of the company are static and old fashioned.

In addition, and mentioned previously, work does not only happen in the traditional work hours as it did in previous generations and trying to force this notion is counterproductive for growth of businesses. In competitive work environments and marketplaces companies that create environments that award their employees the ability to work flexibly further increase their ability to retain great talent. Coupled with a certain level of trust between the employer and employee the success of agile working can dramatically increase as the 'out of sight, out of mind' mentality would not exist as an ideology in the company.

As discussed in previous sections, the prospective to attract new talent can be linked to businesses attempt to quickly move away from traditional working styles and modernise their business environment, however and key to this research, the false perceptions of introducing agile and alternative work styles results in little or no change to the corporate environment and thus the hope to change the corporate landscapes and its surroundings becomes futile.

5.5. Responding to the research Question

‘What are the effects of agile working conditions in commercial real estate on urban planning and surrounding urban environments?’

The purpose of this research was to unpack the aims and objectives in order to critically answer the research question by reviewing current literature and using it to guide the interviews. The research focused agile working in commercial spaces and the potential impacts it had on urban planning.

The literature review in chapter two covered the concepts of the theoretical framework that assisted in creating questions that would be asked in the questionnaire. These aspects supported the literature in providing a theoretical background to important concepts and ideas while critically understanding agile working as concept in the commercial sector. Furthermore, these elements were used to identify factors that could be utilised in creating recommendations, after the field trip visits were conducted. It also provided as a basis for further research. The research was primarily through conducting interviews with individuals that worked in commercial environments in the Sandton CBD. Essentially the research brought light onto how important the link between public and private space is in their contribution to creating a liveable environment. In addition, it highlighted the current issues of sustainability in relation to transportation and the growing dependency on cars in many environments. For many, the efficiency of public transport in certain areas was critiqued and the notion of living car free lifestyles was almost a foreign concept. The advancement of technology promises to enhance current practises, however, for many companies that employ agile working practices are still lagging behind compared to other cities across the world. In addition, it was important to understand how agile working was experienced from the user and how their flexibility impacted on the manner in which they utilised both private and public areas.

Furthermore, the research addressed the aims and objectives laid out in chapter one either in the literature review or in the findings by conducting interviews, while the research sub questions helped guide the research to answer the main research problem. Agile working is a dynamic concept that is becoming a part of many commercial business as discussed in this and previous chapters. Coupled with agile working, working styles and workspaces have adapted to address this change and going forward this change should be reflected in the manner in which policy is developed and implemented.

5.6. Lessons Learnt

Many important lessons have been learnt about work styles in the commercial environment and the impact it has on both public and private spaces. It has become apparent through the research that both public and private environments have the potential to provide additional amenities to improve the users experience within the commercial sector. Through close engagement with users I was able to cultivate new knowledge that would not have been possible through other research method. Although urban planning and property studies are both built environment disciplines they are often not interrelated so closely, this research allowed for this link to be further explored and was thus a very rewarding experience. In addition, the interview process allowed the transfer of knowledge from both the interviewer and the interviewee – sharing planning knowledge with individuals not usually inclined into thinking this way allowed for additional discussion that were insightful.

Cities need to change to accommodate new social, physical, economic and political dimensions. The everyday demands of people can only be understood through engaging directly with the users of the space. Participation, although time consuming, is a vital component when planning for public spaces. It provides the social element in which perception of the physical environment can be understood. Fundamental to the information gathered is the need for planners to create environments that address the needs of the people by involving them in the decision and policy making process to promote liveable environments.

5.7. Conclusion and Going forward

This report focused on a number of elements which may have an impact on cities future developments based on the changing nature of work styles and workspaces. Individuals that worked in agile environments assisted in exploring the potential nuances that exist within this context. This method of research provided a close relationship between the researcher and the participant. It provided insight into how individuals interact with the private and public environments while providing elements that planners could utilise in both policy making and design principles. Often research within this field is focused either on the internal effects or external on environments and rarely focus on the amalgamation of the two. The process of moving away from inert environments that provide no value is the defining factor that will result in creating public and private spaces that display positive interconnectivity. Commercial areas that only provide high quality buildings with monotonous surroundings that only act as a transport link become far less attractive to businesses that seek to promote new work styles.

The data analysis was done through achieving the aims and objectives in order to answer the research question. As discussed in the limitations of the research due to time constraints it is possible to do a similar research that is more detail oriented to provide a more thorough research that can result in changes in policy and commercial urban design. It is also vital to ensure that, in general, further research is done on the link between the private and public environments as they are intertwined so tightly. It is evident in recent literature that agile working has been embraced positively by some theorists and the shift to alternative work styles are imminent. Further research can be done in areas across South Africa to identify com South Africa to identify the different dynamics and characteristics that exist. Fundamental to understanding the dynamics to other commercial environments will provide for a critical evaluation and potential key differences and similarities that exist amongst in different areas. Commercial businesses and corporations often have models in place in order to ensure the economy is right for specific trade thus ensuring economic growth. Thus to

assist in the growth of business planning strategies and design need to ensure that the surrounding environments support the growth by ensuring the foundations in place ensure sustainability.

Additional research could be conducted in understanding the physical design aspects that encourage/discourage users within a specific environment. These physical characteristics can be linked to perception and social interactions that create liveable environments. Urban designers could create a model that could benefit other commercial environments. This could potentially enhance local environments while ultimately creating and attracting better opportunities to business.

In conclusion in order to promote positive change planners need to go beyond what has previously been done when dealing with issues on the ground, social interaction is pivotal to any project. Through a range of processors, it is possible to advocate for a variety of people by understanding the environment more resourcefully and developing change that will encourage growth and future development. Although it is impossible to predict future preference of work styles it is possible to consider a number of contributing factors that could assist in solutioning for the future. In addition, by creating robust environments, future cities are awarded the privilege of making changes as required. The propensity of the style of work is most likely to change over the next few decades with the rise in artificial intelligence and other technological advancements, however this will create new opportunities for planners as the manner in which public/ private areas are utilised and accessed may be differ to the existing culture. In conclusion if cities continue to leverage their uniqueness and provide a balance of amenities it will ensure current environments are liveable, integrated and address the needs of the public.

6. References

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APPENDICES



Appendix A – Participant Information Sheet



School of Architecture and Planning
1 Jan Smuts Avenue
Wits 2050
Johannesburg
July 2017

PARTICIPANT INFORMATION SHEET

Dear Participant

I, Nazeefah Wadia, am currently a part time student studying towards a Master of Science (MSc) in the field of Development Planning in the School of Architecture and Planning (SOAP) at the University of Witwatersrand. I am currently investigating the effects of agile working on urban planning. The focus of my research seeks to understand how people in agile working environments interact in the public and private realm. The research is exploratory as there is limited academic research available in this field of study. You are invited to participate in a research project that will analyse and understand 'Agile Working and its Potential Effects on Urban Planning'.

You are invited to participate in this research project that will analyse how agile working can have an impact on surrounding environments within the city. The results should provide valuable insights for urban planners and designers in the development of cities. As part of this process I am required to conduct interviews. I therefore offer you the opportunity to participate in this process in which I will conduct the interview. The interview will take no longer than 30min to an hour of your time. The place and time of the interview will be decided upon by you, the interviewee, depending on your availability.

The captured data from your response will be stored in a secure online platform that is password protected. Organizations that may inspect and/or copy my research records for quality assurance and data analysis include groups such as the Research Ethics Committee. In addition, the data obtained will not be used for either commercial purposes or made available to third parties. You have the right to discontinue participation in this research at any time without reason. The results from the study will be made available to you and your employer as a report on request. This research will adhere to the framework and policies of the *School of Architecture and Planning as well as the University of the Witwatersrand Research Ethics Committee*.

Yours Sincerely

Nazeefah Wadia (Master's Student)
University of the Witwatersrand
Cell: 076 289 8928
E-mail address: 477509@students.wits.ac.za

Supervisor: Professor Aly Karam
E-mail: Aly.Karam@wits.ac.za
Telephone: 011 717 7707

Appendix B – Consent Form (Company)

		
School of Architecture and Planning		
1 Jan Smuts Avenue		
Wits 2050		
Johannesburg		July 2017
<i>To whom it may concern</i>		
I, Nazeefah Wadia, am a Masters student in Development Planning at the University of the Witwatersrand in the School of Architecture and Planning. I am currently conducting research for the submission of a research report as part of my MSc Development Planning Degree. Your company is invited to participate in a research project that will analyse and understand 'Agile Working and its Potential Effects on Urban Planning'.		
As part of this process I require conducting interviews. I therefore offer your company the opportunity to participate in this process in which I will conduct the interview.		
I hereby state that:		
• Your company may decline this invitation to participate in this interview • Participation is entirely voluntary. • If your company chooses to end this interview you may do so, with no loss or harm to your company. • Information obtained will be used for the sole purpose of my research report. • Anonymity and confidentiality will be respected. • If your company chooses to remain anonymous your contribution will be utilised through a numbering system or through other pseudonyms that your company may choose.		
Should you have any questions or complaints about the study, the interviews or the researcher, please do not hesitate to contact my research supervisor,		
<i>Yours Sincerely</i>		
Nazeefah Wadia (Master's Student)		Supervisor: Professor Aly Karam
University of the Witwatersrand		E-mail: Aly.Karam@wits.ac.za
Cell: 076 289 8928		Telephone: 011 717 7707
E-mail address: 477509@students.wits.ac.za		



CONSENT FORM

I, on behalf
of (Company Name), am willing to
take part in this study and understand that my participation is voluntarily and that I can withdraw
from participating at any time, for whatever reason without penalty or loss. I hereby confirm that I
have been informed by the student researcher of the purpose, procedures, and my rights as
a participant. I have received, read and understand the written participant information
sheet. I have also been informed of:

- ☐ the nature of my participation in the form of a written survey
- ☐ the place and duration of the study
- ☐ the reasons for why I was selected to participate in the study
- ☐ the voluntary nature, refusal to answer, and withdrawing from the study
- ☐ no payment or incentives
- ☐ no loss of benefits or risks
- ☐ anonymity
- ☐ confidentiality
- ☐ how the research findings will be disseminated

Name:		
Signature:		
Date:		
I chose to have my company remain Anonymous:	YES	NO

Thank you for your time

Appendix C – Consent Form (Individual)



School of Architecture and Planning
1 Jan Smuts Avenue
Wits 2050
Johannesburg
July 2017

Dear Participant

I, Nazeefah Wadia, a Masters student in Development Planning at the University of the Witwatersrand in the School of Architecture and Planning. I am currently conducting research for the submission of a research report for my MSc Development Planning Degree. You are invited to participate in a research project that will analyse and understand 'Agile Working and its Potential Effects on Urban Planning'.

As part of this process I require conducting interviews. I therefore offer you the opportunity to participate in this process in which I will conduct the interview.

I hereby state that:

- You may decline this invitation to participate in this interview
- Participation is entirely voluntary.
- If you choose to end this interview you may do so, with no loss or harm to you.
- Information obtained will be used for the sole purpose of my research report.
- Anonymity and confidentiality will be respected.
- If you choose to remain anonymous your contribution will be utilised through a numbering system or through other pseudonyms that you may choose.

Should you have any questions or complaints about the study, the interviews or the researcher, please do not hesitate to contact my research supervisor,

Yours Sincerely

Nazeefah Wadia (Master's Student)
University of the Witwatersrand
Cell: 076 289 8928
E-mail address: 477509@students.wits.ac.za

Supervisor: Professor Aly Karam
E-mail: Aly.Karam@wits.ac.za
Telephone: 011 717 7707



CONSENT FORM

I, _____, am
willing to take part in this study and understand that my participation is voluntarily and that I can
withdraw from participating at any time, for whatever reason without penalty or loss. I hereby
confirm that I have been informed by the student researcher of the purpose, procedures,
and my rights as a participant. I have received, read and understand the written participant
information sheet. I have also been informed of:

- ☐ the nature of my participation in the form of a written survey
- ☐ the place and duration of the study
- ☐ the reasons for why I was selected to participate in the study
- ☐ the voluntary nature, refusal to answer, and withdrawing from the study
- ☐ no payment or incentives
- ☐ no loss of benefits or risks
- ☐ anonymity
- ☐ confidentiality
- ☐ how the research findings will be disseminated

Name:		
Signature of interviewee:		
Date:		
I chose to remain Anonymous:	YES	NO

Thank you for your time

Appendix D – Questionnaire



School of Architecture and Planning
1 Jan Smuts Avenue
Wits 2050
Johannesburg
July 2017

**SCHOOL
of
ARCHITECTURE
and
PLANNING**



Questionnaire

1. Are you a South African citizen?
2. Of the 11 official languages in South Africa, which is your home language?
3. How old are you?
4. In which city is your office located?
5. What is your position in the organisation? (Senior, middle or non-management)
6. What is the highest educational qualification you currently hold? (Matric, Diploma, B-Tech, Honours, Post Graduate Diploma, Masters or Doctorate)
7. What is nature of your organisation? (Insurance, Pension Fund, Professional Services, Bank or Other)
8. How long have you been employed in the company?
9. How many hours per day are you at your desk?
10. What type of office do you work in? (open plan/ closed offices)
11. What facilities are available at in your office? (Meeting rooms, pause areas, quiet rooms, video conferencing and/or hot-desking) how often do you utilise these facilities? And what other facilities do you think should be available?
12. Do you feel that your current work environment impacts on your productivity levels?
13. Are there any supplementary services available at your office? (Gyms/ canteen/ etc.)
14. What types of technological facilities are available to you in an agile environment?
15. In your opinion, what is agile working?
16. Does your company offer agile working as an option? If yes, is this option available to you?
17. If you are currently not agile, would you consider agile working? And why?
18. What are the positive aspects you have experienced in agile working? (As an employer/employee)
19. What are the negative aspects you have experienced in agile working? (As an employer/employee)
20. In your experience is agile working beneficial for the employer/employee or both?
21. Do you think agile has an effect on productivity? Explain
22. How do you commute to work? (public/private/sharing) and how long is your daily commute?
23. What would make you consider utilising other forms of transport?
24. What time do you usually arrive and leave work?
25. Besides your company office, what other locations do you work from and why?
26. Do you access other private spaces around work? If yes, what and why?
27. Do you access other public spaces around work? If yes, what and why?
28. What services do you think should be available in the vicinity of your office?

Please note that the questions may differ slightly based on participant's responses.

Appendix E – Ethics Clearance


**SCHOOL OF ARCHITECTURE AND PLANNING
HUMAN RESEARCH ETHICS COMMITTEE**

CLEARANCE CERTIFICATE

PROTOCOL NUMBER: SOAP043/06/2017

<u>PROJECT TITLE:</u>	Agile Working and its Potential Effects on Urban Planning
<u>INVESTIGATOR/S:</u>	Nazeefah Wadia (Student no#477509)
<u>SCHOOL:</u>	Architecture and Planning
<u>DEGREE PROGRAMME:</u>	Master of Science in Development Planning (MScDP)
<u>DATE CONSIDERED:</u>	18 October 2017
<u>EXPIRY DATE:</u>	18 October 2018
<u>DECISION OF THE COMMITTEE:</u>	APPROVED

CHAIRPERSON 
(Professor Daniel Irurah)

DATE: 19-10-2017

cc: Supervisor/s: Aly Karam

DECLARATION OF INVESTIGATORS

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to endure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.


Signature

30/10/17

Date

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