A STUDY TO DETERMINE THE PERCEPTION OF PEOPLE ANALYTICS TOOLS TO IMPROVE PEOPLE MANAGEMENT PRACTICES IN SELECTED DEPARTMENTS WITHIN THE PUBLIC SECTOR IN THE WESTERN CAPE

by

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in

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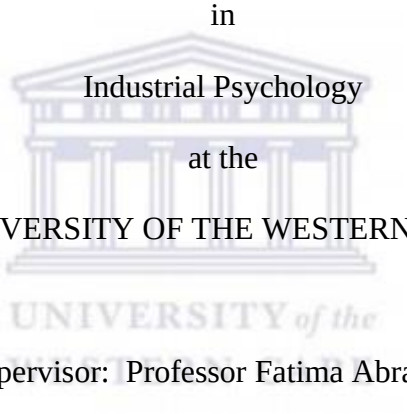

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I am grateful for all the blessings.

DECLARATION

I declare that "An investigation to determine the perception of people analytics tools to improve people management practices in selected departments within the public sector in the Western Cape" is my own work, that it has not been submitted for any degree or examination in any other university and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

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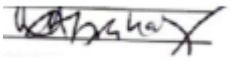
Signed: 

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ABSTRACT

People analytics refer to people-related, data-driven, processes (e.g. trend analyses and data management) aimed at describing and evaluating the effectiveness and efficiency of people management practices and processes in support of business outcomes in order to inform and improve people management initiatives and performance as well as business decision making.

The role of human resource management (HRM) has changed over time from an administrative role that concentrated on overseeing basic employee practices to a more supportive strategic one, with creating a value creation culture for improving business outcomes (Ulrich & Dulebohn, 2015). The issue of effective human resource (HR) data utilisation has been an old concern. Organisations have been struggling to address people management issues such as how to find the right person for the right job and organisational fit at the correct time and at the correct cost. This required to be done as proficiently and effectively as possible because employees were seen primarily as expenses. Increasingly the emphasis from expenses to the potential competitive advantage has changed over time that employees can bring about to organisations. As a result, the key role of people management (PM) evolved from basic administrative duties towards being a more strategic partner to more data-driven decision making as rendered by people analytics with rapid information technology integration sources (Buller & McEnvoy, 2012).

Given the potential benefits of people analytics to HR and the organisation, a qualitative research study and evaluation was conducted among 13 department coordinators and people professionals to gauge their perceptions and understanding about people analytics (PA) and the current state of implementation within ten selected government departments in the public sector in the Western Cape.

Being qualitative in nature, the limitation of this study was that it was not representative of all 13 Western Cape government departments and therefore the results cannot be generalised. Further opportunities exist for quantitative, longitudinal research in this field to objectively determine a platform for further research across the other three departments to determine usage and level of people analytics application in the rest of the province.

The findings of this thesis indicated that the application of the concept of people analytics is fairly new and the common understanding and application of people analytics is still not yet fully being established and practiced amongst the department coordinators and people

professionals within the ten client departments. The people management function is still viewed as a compliance and regulatory practice and is not yet given key focus or is yet sufficiently prioritised by line and senior management stakeholders in the respective departments.

Furthermore, respondents understood the possible use of people analytics however do not have a clear conceptual understanding of the various tools that the People Analytics Unit at the Corporate Services Centre of the Western Cape Government can offer and how it can be utilised. It can be concluded that the People Analytics Unit can offer innovative and sophisticated tools for effective data reporting. Its successful implementation, however, is dependent on the capabilities of the people that are using these tools, their ability to understand them and the story the data is telling in order to be assured of quality people decisions to sustain the competitive advantage.

KEY TERMS: People analytics, people management practices, people professionals, data driven HRM, employees, decision-making, strategic partner, measurement, HR metrics, analytical tool

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES Page no

LIST OF ACRONYMS

AI	-	Artificial Intelligence
CSC	-	Corporate Services Centre
HR	-	Human Resources
HRA	-	Human Resource Analytics
HRM	-	Human Resource Management
HRIS	-	The Human Resource Information System
IT	-	Information Technology
ML	-	Machine Learning
PA	-	People Analytics
PAU	-	People Analytics Unit
PM	-	People Management
PMP	-	People Management Practices
PP	-	People Professionals (HR Professionals)
PMS	-	People Management Strategy
ROI	-	Return on Investment
SQL	-	Structured Query Language
UK	-	United Kingdom
USA	-	United States of America
WCG	-	Western Cape Government

LIST OF DESCRIPTIONS

Analytics	-	Converting metrics into decision-supporting insight, for example turnover of high potential employees in poor performing business
Measurement	-	Fundamental constructs based on tabulation of data, for example employee headcount
Metrics	-	Higher level constructs based on two or more measures

CHAPTER 1: INTRODUCTION

1.1 Introduction

In today's business environment people professionals are under pressure to understand the workforce in greater depth to enable them to recruit, develop and retain talent more and more effectively. Although evaluating talent management and development techniques are core functions of people professionals it is known that, while important, identifying opportunities to effectively manage human capital behaviour has been historically difficult to undertake, and is less predictable than tangible resources. There can be no doubt that people professionals are responsible for issues relating to the workforce and they have been faced with the challenge to critically understand, manage and predict behaviour towards attainment of organisational goals (Fitz-Enz, Phillips, & Ray, 2012).

With prevailing technologies, human resources (HR) can now do much more than track basic performance indicators from basic workforce analytics to predictive analytics, modelling and big data (Chrysler-Fox & Roodt, 2014). Although analytics is a fairly new concept within HR, Davenport, Harris, and Morison (2010) argue that it really holds the promise of elevating HR practices. In addition, Fitz-Enz and Mattox (2014) concur with Bassi (2011) that HR is now finding it easy to understand the workforce in greater depth with regard to what is happening and why it is happening and can decide on the best way to move forward using people analytics. In recent years, the use of people analytics has increased due to its perceived benefits. Bersin (2015) believes that organisations can be assured of quality strategic decisions and effective implementation, through the use people analytics approaches, by making use of real time data and appropriate metrics to create, evaluate, and apply new people management policies.

1.2 Research context: background

Literature reveals that at first human resource management was an administrative function that focused on managing employee practices (Guest, 2011). Organisations have been struggling to address people management issues such as how to find the right person for the right job and organisational fit at the right time and at the suitable cost. These needed to be done as efficiently and effectively as possible, because employees were seen primarily as expenses (Guest, 2011). Gradually, the focus has shifted from expenses to the possible competitive

advantage that employees can bring to organisations and, as a result, the role of people management evolved towards being more strategic (Guest, 2011; Ulrich & Dulebohn, 2015; Schalk, Timmerman, & van den Heuvel, 2013).

The development of human resource management has evolved almost hand in hand with progress in technology. Data storing, processing and utilisation have played a central role throughout people management and therefore a gradual evolution from the basic administrative duties to more data-driven decision-making as rendered by people analytics (Harvard Business Review, 2014) has taken place. The concept of people analytics has thus evolved from merely analysing human data to using integrated people management data to measure impact, as well as to influence strategic business decisions.

Organisations started showing interest in the field back in the early 2000s, however the issue has been receiving more attention since Google published an article in 2013 titled "How Google is using people analytics to completely reinvent HR" (Sullivan, 2013). Hence, as stated by Bersin (2015), the practice of people analytics, although being perceived as a new phenomenon, is not new in the HR field.

Recently there has been a growing belief that people analytics offers a possible solution to ensure and improve data-driven people management practices, thereby helping HR in its role as a strategic partner (Bersin, 2015). Literature reveals that when effectively facilitated and implemented, people analytics fulfils a critical role as one of the key drivers of an organisation's strategic intent (Angrave, Charlwoord, Kirkpatrick, Lawrence, & Stuart, 2016). This means that by determining the use of the most appropriate metrics and relevant data that makes sense and provide important information, HR can link organisational resources to those initiatives that impact critical business outcomes. There is consensus between findings by Bassi (2011) and propositions by Davenport et al. (2010) that important HR metrics should focus on the provision of information that will guide and enable the organisation to take a more proactive role in driving its business strategy. Predictive modellers argue that in HR people analytics is the best practice of making data-backed people management decisions within an organisation as it involves the systematic collection, analysis and interpretation of data to influence and inform business decisions (Bersin, 2015). To suffice, people analytics can provide insights and further demonstrate the direct impact of people data on business outcomes.

From the literature review it is clear that the competitive edge of any organisation is dependent on its ability to invest in people management practices and its ability to undertake a strategic analysis of its workforce. Given the potential benefits of people analytics to HR and the organisation, it is therefore necessary to investigate the state of play of people analytics within selected departments in the public sector in the Western Cape.

The Department of the Premier established a People Analytics Unit five years ago, in order to provide relevant management information that supports effective decision-making. The People Analytics Unit uses statistical methodologies to draw inferences from the data and the metrics applied are developed and selected in order to influence and inform the organisation's strategic direction.

The People Analytics Unit currently renders strategic support services for 11 client departments by utilising people management data, through providing responses to ad-hoc questions, relating to people management issues, publishing surveys, analysing and disseminating the information to stakeholders. The production and dissemination of themed trend reports, to inter alia examine the utilisation of employee benefits and/or employer resources. The creation of monthly fact files, which provide clients with an overview of people management data for their respective departments or teams. The development of a number of compliance reports, either in terms of the current legal framework, and/or in terms of its client's own requirements. The development of measurement instruments to evaluate the maturity of the organisation's people management practices, as well as, the achievement of the goals set within the PMS, and finally the integration of people management data within the organisation's Business Intelligence BI suite.

The People Analytics Unit has 24 business plan deliverables for the 2019/20 financial year, which in turn results in 24 products or services, and obtains a large amount of PM data from the National Personnel and Salary Administration System (PERSAL) system, of which the Provincial Treasury is the custodian. Additional provincial people management and related data that are used, which is fragmented and dispersed within various other data systems. Examples of such systems are namely; the Provincial Performance Management Information System (PERMIS), the Basic Accounting System (BAS), the Provincial Dashboard, as well as, a number of internal databases, maintained by various components within the people management environment.

The unit stores PM data within the three components of the Business Intelligence (BI) suite, namely: BizBrain, BizPerformance and BizProjects. BizBrain draws PM data from different data sources, integrates and conceptualises the data and provides dashboards for reporting. The effective implementation of integrated people analytics practices will enable the organisation to progress towards being more predictive and proactive, as envisaged within the people management strategy.

The research that was undertaken here, therefore, is to gauge people professionals' and department coordinators' perceptions about people analytics and its current state of implementation within selected departments in order to deepen the understanding of people analytics and the broader concept of data driven people management practices.

1.3 The problem statement

Research by Buller and McEvoy (2012) shows that the role of people management has changed over time from the administrator of legal and obligatory human resource practices to more of a supporter of value creation and business strategy. As indicated by Kavanagh and Johnson (2015), the gathering and processing of employee data has been the central component in people management practices since the twentieth century.

As the understanding of employee proficiency and also the potential contribution of people management increased, more diverse data were being collected and gradually the role of people management began to change (Ulrich & Dulebohn, 2015). A major actuation behind this evolution has been the fast development of information technology (Stone, Deadrick, Lukaszewki & Johnson, 2015).

Bassi, Carpenter and McMurrer (2012) explained the emergence of people analytics from two sides of the coin. "On the one hand, they state that big data movement and advanced software applications provided the opportunity for the development of data-based decision making. In recent times, it is essential for HR to start with people analytics due to recent business developments, which considers human capital more and more as a determining factor in maintaining the competitive advantage" (p. 15). Hence, case studies revealed that the basic premise of the people analytics approach - namely that effective people management decisions were of great importance – was essential as the cost of human capital is often as high as sixty percent (60%) of any organisation's variable costs. Against this backdrop, it is evident that

managing of such a large cost item through proper analysis would be of a great advantage. However, the current effects and usage levels of people analytics by people professionals were relatively unclear.

It is clear from the literature that most HR sections in South African organisations seemed to be bogged down with basic workforce metrics and that not enough focus is given to an understanding of the link between human capital and business outcomes (Bersin, 2015; Chrysler-Fox & Roodt, 2014). A gap still exists between the analytical practices of people professionals and their capability in dealing with the rapidly 'rising ocean' of people data. The value of people analytics has been proven; what remains is to gauge how far the departments chosen for this study have gone in adopting this concept. This forms the basic research problem of this study, while an attempt is made to assess perceptions of different stakeholders on people analytics, the understanding of its current state of implementation and the broader concept of data driven people management practices within the departments selected for this study.

1.4 Significance of the study

People data is simply valuable when it tells a story. People analytics data should be utilised to inform business decisions and influence outcomes. The use of analytics to solve key workforce challenges as well as to arrive at smarter, data-driven decisions, has become a critical driver for productivity and outcome management for many organisations (Marr, 2018).

The benefits of data-driven decision making include optimised talent acquisition, progressive people policies, strengthened organisational culture, relationships and team building as well as greater employee engagement. In recognition of these benefits, the Provincial Strategic Plan, 2016 – 2020 (PSP) for the Western Cape Government identified the adoption and implementation of a comprehensive strategy for people management (PMS), with a focus on strengthening key policies, processes and systems such as, among others, strategically focussed people management data and analytics. This enhances the need for integrated people management data, which will encourage and promote effective people management practices such as recruitment and selection, skills development, talent retention etc. People analytics can further provide an understanding of the linkage between people management practices and organisational outcomes.

1.5 Aim of the research

The aim of the study is an investigation to determine the perception of people analytics tools as a means of improving people management practices in selected departments within the public sector in the Western Cape.

1.6 Research objectives

The objectives of the research are as follows:

- To gain an in-depth understanding of people analytics as a concept and in practice.
- To ascertain of there is a common understanding of people analytics by departmental coordinators and people professionals within the selected departments.
- To assess the perceived impact of people analytics products for an organisation by departmental coordinators and people professionals within selected departments.

1.7 Conclusion and overview of the chapters

This chapter introduced the research problem. It then examined the research context, background, problem statement, significance of the study, the aim of the research and research objectives. The chapter then culminates in providing a structure for the rest of the research report. The mini thesis will be organised as follows:

Chapter 1 provides the general overview which includes the introduction, background to the problem, rationale, aim and objective of the study.

Chapter 2 comprises of a literature review and provides a theoretical basis to underpin the study. Each of the variables of interest is defined, explained and discussed in terms of existing academic literature available on the subject.

Chapter 3 presents the methodology used in the research study and describes the study design, population, sampling method and sample size. It also describes the data entry and analysis for each objective, the validity and measurement reliability of the instrument, elimination of bias concepts and ethical considerations.

Chapter 4 provides detailed findings of the research based on the data collected and presents the interpretation of the findings, discussions and literature control relating to the three objectives.

Chapter 5 provides a summary of the major findings, the contribution to knowledge, study limitations, recommendations and insights for future research based on the notes relating to the study's limitations.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The key objective of this literature review is to provide a comprehensive overview of the academic literature which focuses on people analytics, i.e. human resources (HR) and people analytics, however it is defined. Thereafter the barriers to successful people analytics adoption concepts are described. The next section concentrates on the maturity of research and theory into people analytics over the last 15 years and suggests a few key themes and reflections. Furthermore, the different types of analytics are described, the ways in which the data reporting is utilised and identified key factors are discussed. Finally, the practical delivery of people analytics is presented and ended with a summarised conclusion of the presented topics.

2.2 The definition of human resource (HR) and people analytics (PA)

People analytics is not HR analytics. HR analytics is defined as "the systematic identification and quantification of the people drivers of business outcomes with the purpose to make better decisions" (Van den Heuvel & Bondarouk, 2016, p. 4). Furthermore, "people analytics refers to a practice of connecting HR data to business outcomes in a way that allows for proactive, purposeful, forward-looking action" (Sindhar, 2018, p. 1). Hence, HR analytics is used interchangeably with names such as human resource analytics (HRA), people analytics and work force analytics

"People analytics is a data-driven approach of managing people at work. With the spread of computational applications, managers can now make decisions about their employees based on the analysis of data rather than traditional methods that rely on personal relationships, subjective experience and an undue proclivity for risk-avoidance" (Sullivan, 2013, p. 1; Waber, 2013, p. 159).

"A data-driven approach to management is claimed to allow managers to make decisions and manage people more objectively, rationally, and effectively" (Zarsky, 2016, p. 118).

Human resource analytics (HRA) is "the application of a methodology and integrated process for improving the quality of people-related decisions for the purpose of improving individual and/or organisational performance" (Bassi, 2011, p. 11).

Bassi here makes a fundamental point regarding people analytics. HR has traditionally taken responsibility for collecting, monitoring and acting on people data at many organisations with

the main purpose of determining those aspects of HR management that must be prioritised and improved upon to allow HR to perform better. The audience was HR and some line management (Van den Heuvel & Bondarouk, 2016).

Through the implementation of people analytics and the accompanying techniques, a deeper understanding will be developed of how data analytics can drive and enhance people decisions within the HR space. The people analytics methodology is no substitute for engaging directly with employees to understand their frame of mind, challenges and requirements, however, if prepared well, can produce data-driven, organisation-specific awareness for senior managers and people professionals to create more strategic decisions about the entire organisation.

In the past few years with the fast pace of change happening, organisations are executing transformational business models, with intent to align their workforce / people planner strategy to the organisation's overall business strategy. Organisations should clearly ascertain the desired essential skills/employee career segments required which are likely to drive their business plan and create an adapted strategy for scarce skills and critical occupations. People analytics performs a huge part in guiding and leading people management evidence-based decision making in organisations.

Marler and Boudreau (2017) performed comprehensive review searches on HR analytics literature and discovered 16 peer-reviewed articles only that are supported to the subject matter in publications of the Journal Quality List.

The summative description asserts that HR analytics is about maintaining and adopting HR related business outcomes to strategic positioning of an organisation. Furthermore, it postulates that the analysis takes place within a broader framework as it brings together HR and non-HR information from a number of both internal and external resources. It also explains the part of computer technology software systems as an enabler of the practice. In addition to the description of Marler and Boudreau (2017) does not contain the same features as identified by the Bassi (2011) regarding the different level and dimensions of analysis that deals with both the past and the future HR data.

People analytics is simply the adoption of practices already followed by other functions, supporting decision making and extracting meaningful insights from data. Although a predominant adoption might be contained, people analytics has developed from a technical specialist's business function to a function that must meet the needs of many stakeholders throughout the organisation. Hence by using people analytics, people professionals (HR

practitioners) can justify its operations much more effectively than has been possible. It is important for people professionals driving the adoption of analytic methods to consider the purpose behind these efforts.

According to Angrave et al. (2016), during the analytics process, meaningful insights is to be gained with a deep overall understanding of the data that were collected, in order to establish the essential resources required to administer the various steps of the analytic process effectively.

Therefore, it is imperative that people professionals and management should first acquire a strategic understanding of their current people management plans and strategy and then determine exactly how human capital will contribute to the organisation's positive outcomes prior to adopting people analytics. If the business problem is not clearly identified, the probability of adding value to the organisation is extremely low. Therefore, it is important to establish which data will be used in the succeeding analyses.

Data analytics is not about scouting for actionable information anymore; now data are being utilised to analyse the entire business operation and hence analytical tools are being embedded into everyday decision making.

A large number of companies including Google, AOL and Facebook make use of analytics to obtain insights into the impact of each interview and source of appointments. A survey done by Deloitte in 2017 found that 71% percent of companies viewed people analytics as a high priority in their organisations, the progress however, has been slow. A very recent 2019 study by KPMG says analytics initiatives remain a low priority among HR leaders and their businesses - ranking near the bottom of ten potential HR initiatives (Ahmed, 2019).

According to Bersin (2015) more than half of respondents cited analytics as a key skill needed for optimising the integration of artificial intelligence (AI) and or machine learning (ML) and over 80% agreed that HR can provide value through analytics.

Overall, the number of organisations connecting people data to business outcomes and performing predictive analytics barely changed from last year. The McKinsey Global Institute report that organisations using a portfolio of HR analytics solutions could on average realise a growth of 275 basis points in profit margins by 2025 (Ahmed, 2019).

With a few case studies regularly reporting the positive business impact of people analytics (see examples in Figure 2.1), it can be concluded to envisage that the field will continue to grow in years ahead.

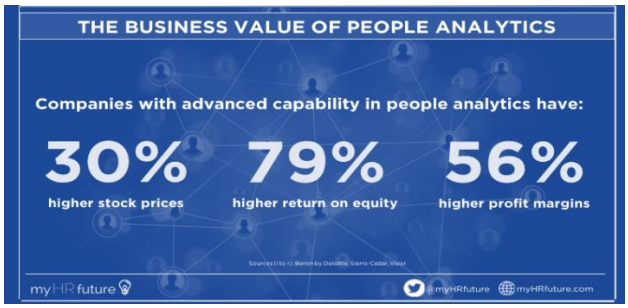

Figure 2.1. The business value of people analytics, Adapted from *myHR future* by D. Green, 2019, https://www.myhrfuture.com/blog/2019/6/28/six-factors-influencing-the-adoption-of-people-analytics/ Copyright 2019 by myHRfuture.

As alluded by Green (2019), with all this positive business value, the key issue of any organisation is to develop a data-driven culture throughout HR. With a number of studies consistently reporting the positive business impact of people analytics, six key themes, namely capability, confidence, culture, mindset, training and organisation emerged in relation to the willingness for an organisation to become data-driven (refer to Figure 2.2 below).

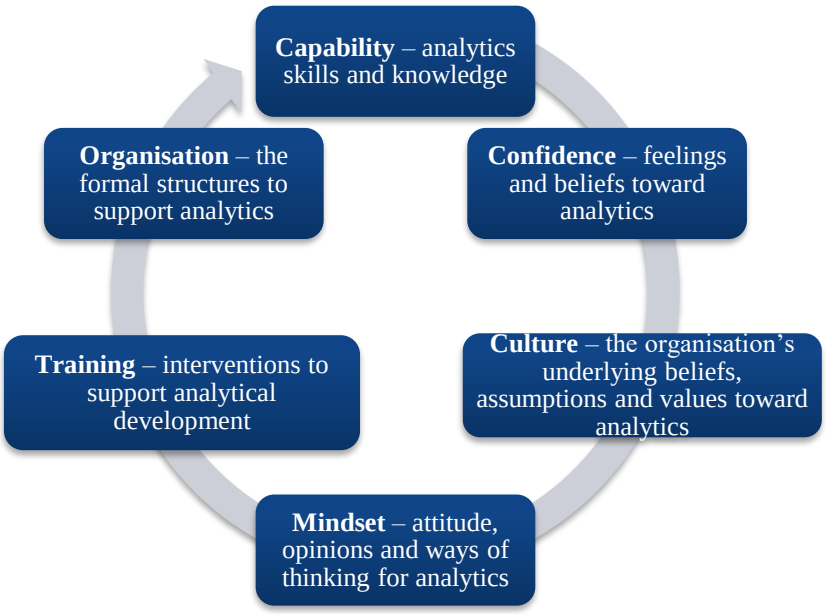

Figure 2.2. The six (6) key themes for an organisation to develop a data-driven culture. Adapted from *myHR Future,* by D. Green, 2019, from https://www.myhrfuture.com/blog/2019/6/28/six-factors-influencing-the-adoption-of-people-analytics/ Copyright 2019 by myHRfuture.

As per Fitz-Enz and Mattox (2014), when data are commonly stored in one place, it facilitates the gathering of information quick and effortless. Reference is made to both missing data and possible errors in data entry which impacts on the data quality aspects. Analysis of data will require descriptive, predictive or prescriptive analyses. Angrave et al. (2016) contend that people analytics should enable experimentation to identify the reasons of performance development and enumerate the benefits on investment that such attempts may support.

This would involve complex projects that begin with question formulation, specifying a logical research design and organising the data in a meaningful way by using the most suitable statistical modelling and techniques, which would require various levels of complexity.

The future of HR is dependent on being able to leverage the right data, making meaningful correlations and drive action-based recommendations.

Successful adoption of people analytics has to comprise the identification of a question that needs to be answered, the collection of data, interpretation of the results and then action based on the latter.

Analytics will transform the recruitment function by automating screening of candidates. This has downstream advantages for performance management, turnover and workforce planning.

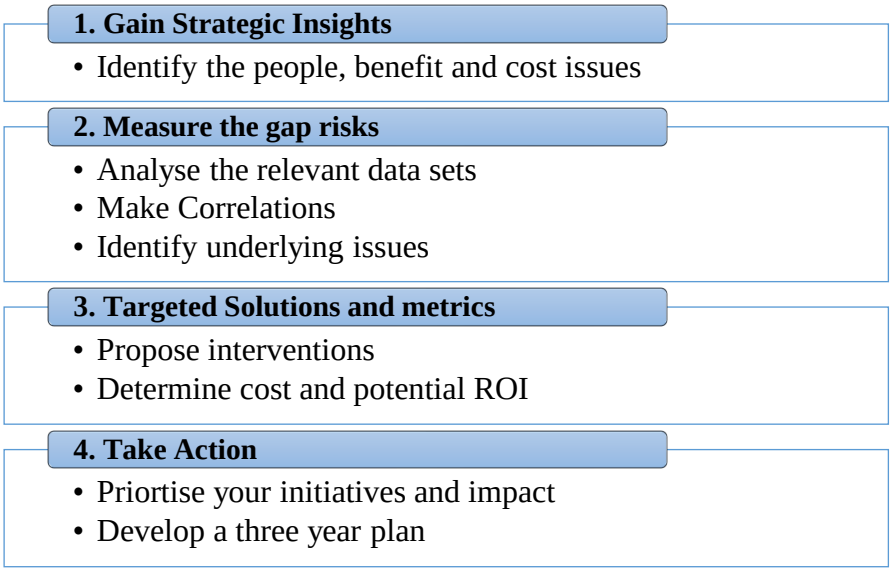

Figure 2.3. People analytics steps to using the right data, metrics and analysis to solve your people challenges. Adapted from Mercer LLC, by L. Attard, 2014, from https://www.imercer.com/uploads/asia/pdfs/2014aphr-People-Analytics.pdf/ Copyright 2014 by Mercer Marsh Benefits.

As stated by Attard (2014) “people analytics is mainly just bringing data where data has not been used before” (p. 5). Like any data-driven initiative, success is all in the planning. People analytics provide significant opportunities for HR, for example leadership feedback for business decision inputs, influencing senior decision makers with data, improving governance and tangible cost savings that addresses the organisation’s employee benefit challenges.

People analytics has developed from an administrative function to being a strategic partner, which has had a major effect on the measuring and decision making of people management practices, recently adopted within the public sector. The overall transformation is further described in more detail in figure 2.4 below.

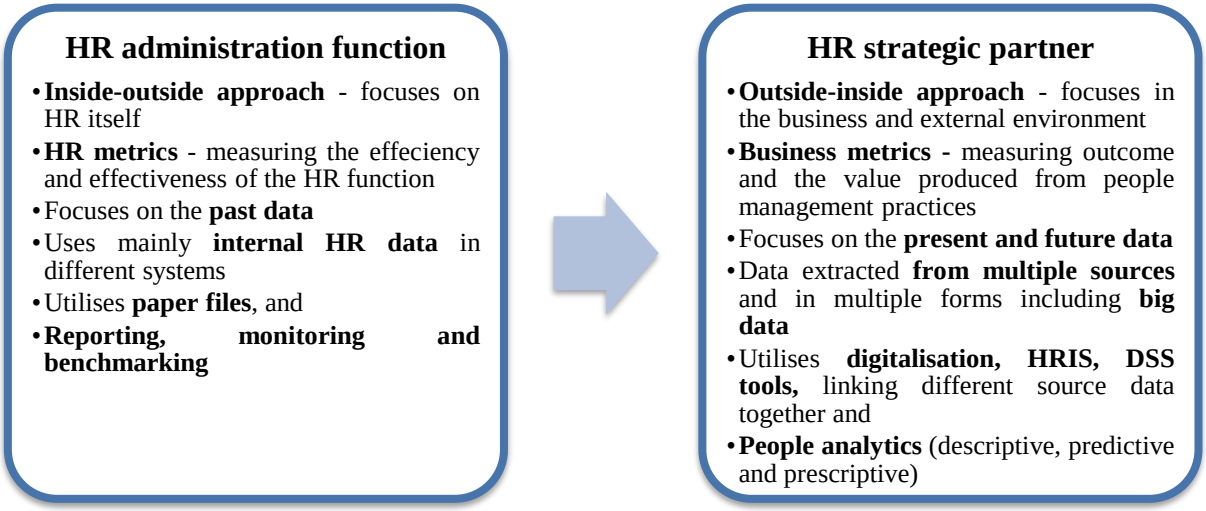

Figure 2.4. Overview on the development of people management. Adapted from *Forbes.com*, by J. Bersin, 2015, from https://www.forbes.com/sites/joshbersin/2015/02/01/geeks-arrive-in-hr-people-analytics-is-here/#3cd1987473b4/ Copyright 2020 by Forbes Media LLC.

It is equally important for organisations to apply rigour surrounding data accuracy and consistency as well as security and privacy in order to ensure people analytics are valuable and actionable to the social enterprise. “Transparency, including sharing how the data will be used, is critical to building trust and providing a positive experience for all stakeholders.” Companies also need to ensure that people analytics is foundational to their culture, valuing data as an asset and committing to make data-driven decisions” (Bersin, 2015, p. 4).

In recent studies it has been concluded that adopting people analytics is no longer about finding interesting people information and flagging it for managers. Now people data are being used

to understand every part of a business operation and analytical tools are being embedded into the organisation's day-to-day decision-making processes (Deloitte Consulting LLP, 2014).

2.2 The barriers to successful people analytics adoption

According to the Chartered Institute for Personnel and Development, the HR function lacks the skills, knowledge and acumen to ask the right questions of the HR data they have at their disposal (CIPD, 2013; Rasmussen & Ulrich, 2015).

There may be inadequate or incomplete data to ask the right questions. Silo approaches within organisations prevent HR-related data being combined with data on other elements of productivity and performance, which can impede the development of effective analytical models.

According to Fitz-Enz and Mattox (2014), approximately 75% of HR departments do not have practical base metrics. The effective and meaningful utilisation of people analytics is dependent upon the efficacy, quality and credibility of people management data. This refers to the availability, consistency, maintenance, portability and production of people management intelligence. To attain an integrated approach, an effective utilisation of appropriate technologies and systems as well as the appropriate skills and knowledge are required to design, implement and co-ordinate/facilitate data identification, sourcing, evaluation, warehousing, integration, analysis and dissemination processes.

According to the Harvard Business Review, the leading obstacles for adoption are "inaccurate, inconsistent or hard-to-access data requiring too much manual manipulation" and a "lack of analytic acumen or skills among HR professionals." "Even if the skills and ability to perform the analyses are displayed, it is still a challenge to gather the quality of data required to transform information into actionable results" (Fitz-Enz & Mattox 2014, p. 3).

This, in part, is due to the non-central position of people management within many organisational hierarchies and people management's ability to obtain support for analytical efforts. The relevant skills required for HR professionals are: HR analytics and metric skills, structured query language (SQL) and reporting skills, social networking skills, HR content and strategy knowledge and change management skills (Fitz-Enz, 2010).

Johnson, Gueutal and Marler (2012) assert that based on the above-mentioned highlighted required skills for HR professionals, the following initiatives could be expected to unfold in the people management profession. The registration with professional associations / bodies and

academic training institutions, will all continue to collaborate make an important contribution to Human Resource Information System (HRIS) knowledge, especially through extensive research, formal academic training and integrated e-learning short courses.

According to Lawler III and Boudreau (2009), the roadmap for the future of people management and analytics lies in people management itself, so that it has the skills and expertise to operate at a corporate level, to have in place metrics and analytics that measure the impact of people management practices, and to improve decision making by bringing people management analysis to the business.

It is therefore imperative that people professionals evaluate both the potential limitations of applying analytical techniques and establish an all-encompassing strategy for approaching data collection before initiating the use of people analytic processes.

2.3 The importance of people analytics

HR professionals should take cognisance of a few key themes and lessons that were developed over the last 15 years within the people analytics research context.

According to Cascio and Boudreau (2011), HR (people professionals) needs to acquire a strategic understanding of just how people (human capital) could contribute to the organisation business outcomes. If a strategy is to initiate, capture, influence and protect value, then it needs to be exclusive to the organisation rather than being a basic strategy. This level of strategic insight is essential if senior HR leaders are to persuade an organisation's leadership team to develop people analytics capabilities (Sparrow, Hird & Cooper, 2015).

For analytics to create significant insight, a well-developed understanding of the data and the framework is needed, – in the words of Boudreau and Jesuthasan (2011) "logic-driven analytics". This then consents for the generation of meaningful metrics which agree to the costs and benefits of various HR strategies and methods to be measured and modelled. These metrics and tools, sequentially, concede key "talent segments" which makes reference to those employees whose performance causes the most strategic change to the business delivery outcomes, to be acknowledged (Boudreau & Jesuthasan, 2011).

Closely related to the third point is that data-driven decision making follows from careful empirical analysis, using progressive statistical and econometric methods that move beyond the analysis of correlation between variables to use experiments and quasi-experiments to identify how human capital inputs affect the performance of the organisation. Changes follow when

analytics show that a policy or approach brings about improvements in performance and that there is a significant return on improved performance. Analytic capabilities can therefore be focused on optimising the performance of key talent segments in order to ensure that the organisation can adequately resource the talent it needs in future (Cascio & Boudreau, 2011).

A possible strategy is to invest in people analytics at a senior level in order to drive change and provide a global support consulting function, encompassing a strong business-focused leadership strategy across various senior management levels. The people professional should establish clear leadership, which is owned by a single team and leader that owns the initial stages of the analytics efforts in their respective departments.

There should be mechanisms in place to making the provision of clean, up-to-date and reliable people management data a priority across all departments by taking concrete steps to ensure data quality is a part of every stakeholder analytics conversation. At the same time, people management stakeholders need to be educated about the implementation of data governance programmes, to clean these data and maintain data accuracy and consistency across people management and operations' data stores.

Literature by Stephan and Walsh (2017) also suggests that the people professional should understand that analytics is a multidisciplinary approach, namely the identification of a curriculum with other partners to assist with training, implementation of standard tools, standardised reporting and real-time dashboard reporting.

The development of a two- to three-year roadmap for investment in people analytics programmes should aim at building a new business function for the organisation. The relevant stakeholders should focus on actions based on recommendations (and not just findings) by providing value through translating the information into solutions and implementing the required action by respective respondents. The development of a data strategy framework would require the integration and use of structured and unstructured data from internal and external sources. Hence, going forward people analytics will be completely integrated into systems and continuously in the background, rather than a distinct source of information. (Volini, Occean, Stephan, & Walsh, 2017).

2.4 Different types of analytics

There are four broadly defined types of analytics as described by Gartner's Business Analytics Maturity Framework model in Figure 2.5 (Rajteri, 2010):

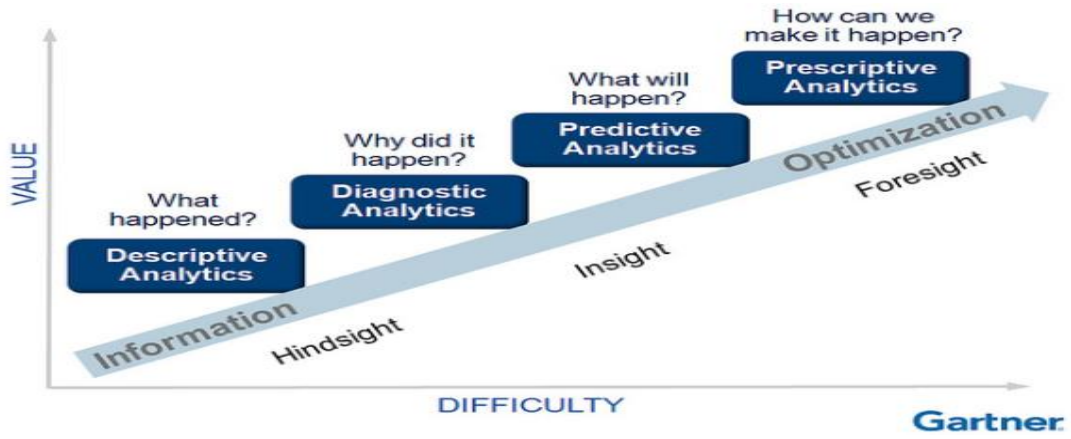

Figure 2.5. The Gartner's Data Analytics Maturity Model. Adapted from "Overview of Business Intelligence Maturity Models," by I.H. Rajteri, 2010, International Journal of Human Sciences, 15(1): 47-67.

Descriptive analytics are considered the groundwork of business intelligence which is mainly focused on what happened, for example, workforce turnover, new appointments report, average time to fill posts, vacancy reports et cetera. The aim of this analysis is to understand the past employee behaviours, outcomes and to observe and explain observable relationships and patterns of the past data for a period of time. The key focus of this maturity stage, typically would include concepts on cost reduction and process improvement strategies.

Diagnostic analytics concentrates on the question "why did it happen"? It reflects a deeper understanding of the causes and events of employee behaviours. For example, staff establishments report, for staff movement and turnover. Furthermore, the diagnostic analysis would help categorise the voluntary versus involuntary separations per department or programme data. In this way, senior managers can also ascertain and review the need for onboarding processes and training requirements.

Predictive analytics is the developed mature stage of the analytics model and encompasses large data sources. This stage focuses on statistical analysis, estimations and co-relations and develops predictive models established on historical people-related data. It is a future-focused analysis that forecasts future patterns based on past data by providing insightful meaning to perceptible patterns. For example, identifying possible exit risk employees which helps to

reduce employee turnover and improves the bottom line. The other example is acquiring talent with potential applicants with the readiness to join the organisation which will expedite the recruitment and selection process. At this level analysis tries to predict the future, which is dependent on four features, namely understating past and current people events, the trends and drivers behind them, the ability to see patterns of consistency (but also change), and possessing the right tools to predict the probability of an event in the future (Fitz-Enz & Mattox, 2014).

Prescriptive analytics is considered the future of big data and focuses on proposing probable actions that guide towards a solution which is about decision options and workforce optimisation (Fitz-Enz & Mattox, 2014). It analyses complex data, provides evidence about possible decision alternatives and their possible outcomes. Prescriptive analytics uses machine learning and artificial intelligence to understand the future impact on the organisation and determines the best outcomes based on those scenarios, thereby helping organisations to mitigate future risks. Prescriptive analytics is in its early stages and according to Heger (2014), prediction it will take five to 10 years before prescriptive analytics is adopted by all. Currently it is used widely in transportation, the oil and gas industries as well as the travel industry which has extensively used analytics to take some strategic people-related decisions.

Literature asserts that the different steps and types of analytics described in the framework illustrated above can be viewed in relation to the value added. On the lower level the process of collecting and interpretation of data is easier than on the upper level, but the relative value also increases when proceeding from level to level. The measured value can be described in terms of financial or economic value (Fitz-Enz & Mattox, 2014).

2.5 Practical delivery of people analytics

Service businesses, particularly within the public sector, increasingly dominate core services rendered, of most modern economies. The bulk of these organisations do not only have people as their biggest source of competitive advantage (or disadvantage for that matter), they also represent the biggest source of costs.

Analytics will only become valuable in conjunction with the application of deep business insight, so that organisations can ensure that they are solving problems that are relevant. While it is easy for a finance analyst to produce a business case that shows compound savings from reducing headcount, or an investment case that shows the cost of hiring new people, attributing value directly to activities of those people has been traditionally difficult, therefore people

analytics is all about connecting the value of your people (capital) to the strategic goals and business plan of the business.

According to Haak (2016), there are five prominent steps for practical, effective delivery of people analytics and effective data reporting. The first step should be undertaken through the exploration phase of the people analytics report (which should contain detailed information supporting the graphical illustrations). The second step would provide management the capacity to determine the most critical business issues relevant to people management. Thereafter, management would be able to map the current situations for each HR priority area and, based on that design, the most impactful interventions. The fourth step, could be done through an initial pilot process on the identified interventions and thereafter management should track and measure the effectiveness of the implementation. The final step would be the basis for an ongoing process of self-reflecting learnings, improvements and business change strategy.

People analytics is a must for HR. It is required that the people analytics team has a good methodology framework in place and the necessary statistical skills as well as seeking collaboration with other groups in the organisation in order to learn from them, for example the marketing and information technology (IT) divisions (Haak, 2016).

As alluded by Marler and Boudreau (2017), theoretical literature on people analytics is most often guided by the LAMP model framework. The same framework is further supported by Boudreau and Ramstad (2007), who use the LAMP model as a guide towards the adoption of people analytics. The LAMP model is an abbreviation for logic, analytics, measures and processes, which comprises the key elements for measurement. The model outlines that the analysis and measurements should contain a certain logic, for example people analytics should be aimed at responding to specific business questions and development of measures should not depend on the standard reports available in HRIS (Boudreau & Ramstad, 2007).

The LAMP model framework is illustrated in Figure 2.6 which provides a theoretical framework that will assist stakeholders in the effective adoption of people analytics within their departments.

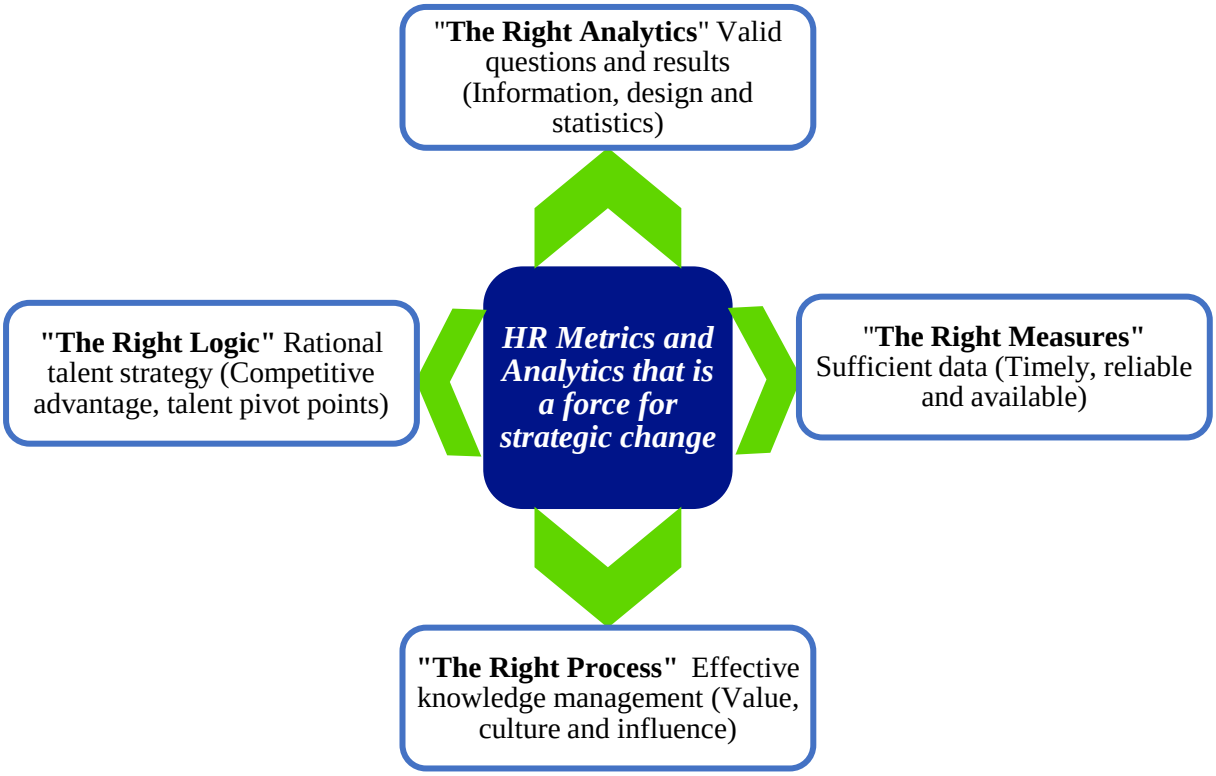

Figure 2.6. The LAMP model framework. Adapted from "Beyond HR: The new science of human capital," by J.W. Boudreau and P.M. Ramstad, 2007, *Harvard Business Press.*

As stated by Boudreau (2006) the model advocates that people analytics shall institute the components of the change management methodology which ultimately influence the organisational business outcomes and behaviours of employees in the organisation. Boudreau and Ramstad (2007) accentuated that all the components of the model should be in balance without over-emphasising any one of them in order to obtain more prolific results from the adoption of people analytics.

Marler and Boudreau (2017) suggest that the reviewed academic models could also establish the framework for understanding the people analytics concept. For example, both authors explain that the LAMP model is used to describe the correlation between the factors of people analytics and changes in decisions.

Descriptive/diagnostic analytics are fact-based, while predictive/prescriptive analytics deal in the future and hence probabilities. Studies reveal that the value of data lies in applying data analytics to understand issues and impact and develop targeted outcomes. They suggest that one should iincrease the use of analytics and strategic metrics through decreased use of

operational metrics and reporting, focus metrics on key populations, set targets that align with objectives and goals, emphasise horizontal versus vertical analysis (as this is how impact can be established), validate assumptions, replace “we think” with “we know” and, finally, share the story.

The case study on people analytics at Google revealed that Google is one of the leading technology organisations across the world. Its innovative work environment and impactful HR practices have made it a favoured employer and one of the best organisations to work for globally. Google is also one of the leading organisations in the area of people analytics and has achieved exclusive business results through its broad usage of analytics in the domain of HR. Data and analytics have substituted opinions, feelings and perceptions of its managers and are now the foundation of all its people-centric decisions (Shrivastava, Nagdev & Rajesh, 2016).

For the Western Cape Government, data analytics can prove a crucial resource; it is however important that appropriate people-orientated decisions are made. As per literature, Google created a good example of incorporating analytics in the day-to-day decision making which facilitated crucial insights into people operations.

Within the Western Cape Government, research results obtained show that the public sector is a long way from maturity and it is imperative that senior managers within the organisation start realising that only the combination of people, mind-set, processes and technology will begin to uncover the critical data insights to propel the organisation forward as suggested by Green (2019). These initiatives would also help bridge the gap between the existing judgement-based approach, and that the HR function be adapted towards a data-driven approach for more effective business outcomes.

The South African scholar Chrysler-Fox and Roodt (2014), report even with the emerging developments and research in developed countries, specifically the USA and the UK, the practical application of people analytics is still in its early growing stages in South African organisations.

In 2016, Experian’s UK global HR function found itself facing global resignation rates that were 4% above the industry benchmark. The knock-on effect was substantial. Financially every 1% increase was costing the business around $3million and ultimately putting a strain on the organisation’s growth and innovation (Dickens, 2016). The organisation prides itself in providing a healthy working environment that stimulates a culture of high performance and innovation and with its people its most precious asset. The organisation’s people analytics team

developed a set of definitions of all their metrics which included a predictive model of 200 attributes that could identify risk triggers. They used their exit data to generate predictive reporting across all the countries the organisation operates in. In this way, the team reduced their time spent on scheduled reporting by almost 70%, thereby also reducing the turnover costs by more than 3% with an estimate saving of $14 per year globally (Britnell, 2019).

Another case study in 2014 refers to a local company in Zimbabwe which developed and used psychometric tests to predict road traffic accidents. The impact risk of accidents includes various factors including the impact of drivers, client property, insurance rates etc. The people analytics unit piloted a study using 54 drivers and using different psychometric tests to find if they could predict superior driving performance for new hires during periods 2014 to 2015 with a high accuracy rating. The pilot research study resulted in the organisation initiating the development of a logistic regression model using these results and accident records which could differentiate between good and bad drivers and, furthermore, could proactively identify specific training needs for drivers (Van Vulpen, 2015).

In 2017, a local South African organisation, Bidvest Procurement Department in Johannesburg, adopted a people analytics software data reporting tool called Qlik. Bidvest's procurement data management was constantly disadvantaged by the common and variation of data sources and types at hand. Previously manually generated information required arduous collation and manipulation of data on spreadsheets. This was time-consuming and ineffective. With the implementation of the new people analytics reporting tool the department can now see a consolidated view of their operations across the group and the data reporting capability allows for the identification of trends and exceptions, as well as structured commercial agreements. The implementation of effective decision making on real-time and reliable data reporting and finally, for disparate data, could now be consolidated in a single dynamic view. In the telecoms department the overall solution view resulted in the time-to-value for telecoms at an average of 24% reduction in costs per minute and some of their customers have experienced up to 57% in cost savings (Brink, 2017).

Telesure Investment Holdings (Pty) Ltd operates in several of South African leading insurance brands and has a multiple brand approach with a vast range of business areas under their organisation's umbrella. Telesure is faced with hundreds of data sources with each source containing their own sets of people data information, making version control nearly impossible. Due to the size of the business, creating monthly board pack reports could take an employee

many days to consolidate and complete. Due to the data reporting complexity, Telesure decided in 2008 to implement the QikiView analytics software, which would allow the various segment data to be consolidated into a single reliable centralised dashboard and accurate reporting tool. With the implementation of the new analytics software, the employees became more productive and reliable data reporting was delivered in minutes or hours rather than weeks. HR and marketing planning were more effective with real-time data reporting ability and ROI analytics instantaneously available, resulting in a positive impact on the overall efficiency and on organisational objectives (Smith, 2010).

The Harvard Business Review (2014) identified that the road to actionable people analytics is not always easy to implement. Organisations can experience several adoption challenges in order to reap value for the business, namely recruiting people with the right skill set to gather, manage and report on the data; undertaking data cleansing and gathering real-time data; ensuring quality of the data, data privacy and compliance; proving its worth to senior management; the challenge of people professionals who are mostly lacking in analytical and numeracy skills; trying actions and insights into return on investments and finally, identifying the best HR technologies to keep track of the data. This gap concerning the desire to use analytics and its actual application represents a vast opportunity for progressive HR departments to establish a competitive advantage.

While global responses indicate a major leap forward in capabilities, this is indicated as the second largest capability gap for South Africans. Companies globally, and to an extent locally, are hiring people analytics staff, cleaning up their data and developing models that help transform their business. Clearly South African organisations have both challenge and opportunity in developing these emerging competencies. Business and HR leaders who attempt to assertively address these trends will most likely acquire an advantage over their competitors in a phase of accelerating change (Harvard Business Review 2014).

2.6 Summary and conclusion

In the above literature review a comprehensive overview of the scientific literature about data-driven people management and people analytics was presented. To start with, the scene was set by describing the overall evolution of HR as background for examining and understanding the development of data-driven measuring and decision-making processes of people management as well as actual people analytics. HR has developed from fulfilling an administrative function

to being a strategic partner which has had a major effect on the measuring and decision-making of people management.

The overall strategic decision-making processes of HRM are established on the business environment and external and internal stakeholders, for example the outside-in approach (Rasmussen & Ulrich, 2015). Data-driven HR management functions are the basis for this circular strategic decision-making process. As it was argued throughout the literature review, all the different levels of the data-driven HR management are in fact tools that can be utilised to achieve a desired action.

Finally, as alluded by Marler and Boudreau (2017), the academic literature on people analytics is most frequently prescribed by a commonly used theoritical framework, namely the LAMP model. As specified in the model, analysis and measures should be driven by a certain logic, for example, people analytics should be targeted at answering particular business questions and development of measures shouldn't depend on standard reports available in HR information systems. Organisations can use this model to acquire a better conceptual understanding of the people analytics phenomenon.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology, research design, population, sampling method and sample size used in this study. It also describes data entry and analysis for each objective, the validity and reliability of the measuring instrument and ethical considerations relevant to the study.

3.2 Research approach

There are multiple schools of thought in the field of science and knowledge, of which positivism and phenomenological philosophy or non-positivism are the most prevalent. Quantitative research is generally associated with the positivist philosophy and it usually includes collecting and converting data into numerical form so that statistical calculations can be made and objective conclusions can be drawn.

According to Saunders, Lewis and Thornhill (2012) the options that support this philosophy are experimental surveys, case studies and forecasting.

In contrast, qualitative research is generally associated with phenomenological philosophy, which refers to the way in which humans make sense of the world around them and this approach to science is driven by human interest. This highlights the different approaches to research that concerns itself with people rather than objects. It is therefore considered to be subjective, inductive and dynamic and is undertaken by means of various methods of research such as reviews, action research, case studies and ethnographic observations (Saunders, Lewis, & Thornhill, 2016).

This study is an inductive study, which by its very nature is both descriptive as well as interpretative. Therefore, it was imperative that the research approach identified, analysed and determined patterns or themes from the data that were collected. The research paradigm that was adopted for this qualitative study was based on the model of phenomenological philosophy. The draft questionnaire guideline was designed and aimed to support the research philosophy of a lived people experience through gathering narrative data, which were natural observations about practices, situations or views about real world environments.

A pilot study to pre-test the research instrument was conducted. According to Saunders et al. (2012) a questionnaire should first be tested before being used to collect real-time data. The aim of the pilot test was to refine the questionnaire guideline by checking that the respondents would have no problems in answering the interview questions. The pilot study was also a time-and-motion study exercise to test the estimated completion time for the interviews, to assess the questions' validity, to check the research methods and their feasibility that would be used, to pick up any issues when recording the data, and to assess the reliability of the data which would be collected. The pilot study was carried out with two colleagues as sample and their comments served as a guideline for the final questionnaire, which was then revised with additional questions included (see Appendix A).

According to Boyatzis (1998), "thematic analysis is a process for encoding qualitative information. The encoding requires an explicit code. This may be a list of themes or a complex model with themes, indicators and qualifications that are causally related or something between the two forms" (p. 5). By using this approach, the researcher searched for themes of relevance to the research topic. The themes that were identified had richness of data, were the shared experiences of all respondents and could become discussion points for the research.

3.3 Research design

There are two basic approaches to research, namely the quantitative and the qualitative method. Each method has its own tools and techniques to approach the research. The quantitative method is used to collect, organise and analyse numerical data with a statistical approach in a defined measurement and analysis of target concepts by using surveys and questionnaires. One of the advantages of this type of research is that it allows for a broader study, including a greater number of subjects and improving the overview of the results, which makes it easier to compile the data into a chart or graph, because of the numerical values that are made available. This type of research can be conducted on a large scale and provides more information with regard to value and statistics, while personal bias of the researcher can be avoided by keeping a distance from participating subjects. One of the main disadvantages of this type of research is, however, that it is a costlier process. The results are limited, as they provide only numerical descriptions, rather than a detailed narrative, and it generally provides less elaborate accounts of human perception (Bryman, Teevan & Bell, 2009).

In contrast, qualitative methods are used to collect information, knowledge, and opinion. This includes focus group discussions, in-depth interviews, ranking techniques and mapping

exercises (Saunders et al., 2012). This type of research has its own strengths, as it can be conducted at low cost because it requires a smaller sample of the population, providing in-depth information by means of recording attitudes, feelings and behaviours and by sketching the respondent's individual experiences by means of a more detailed picture. However, the disadvantage in the collection of these data is that it is generally more time-consuming and it is therefore generally necessary to use a smaller sample size unless the time, staff and budget allow it.

Qualitative research depends on a relativistic, constructivist ontology that believes that there are several meanings to different experiences by people who encounter a phenomenon of interest (Creswell, 2014; Krauss, 2005). This method was chosen because the researcher wanted to gauge and gain understanding of how people practitioners and department coordinators perceive the importance of people analytics to the organisation. Creswell (2009) notes qualitative research as a method for investigating and understanding the importance which people or gatherings of individuals attribute to a social or human issue.

More so, the researcher employed an exploratory method. The reason for employing this method was guided by the need to search for new knowledge in the field of people analytics, and this approach allowed the researcher to ask new questions and to examine the themes in a new light (Saunders et al., 2012). Antwi and Hamza (2015) underpin this perspective by saying that qualitative exploratory research is best utilised where the researcher wants to obtain a deeper understanding of a phenomenon. Creswell (2014) argues that this technique can also be employed when the subject is new or there is limited literature on the subject.

This study was aimed at gathering a more in-depth understanding of people analytics as a concept as well as in practice and to find out if there was a common understanding of people analytics by people professionals and department coordinators within the Corporate Services Department of the Western Cape Government. The objective of the study was also to assess the perceived impact of people analytics products to the organisation by department coordinators and people professionals within selected government departments.

3.4 Research instrument

The research instrument that was used consisted of in-depth interviews in order to address the research question. These interviews were done on a one-on-one basis and were driven by a purposive and interactional conversation using an interview guide (see Appendix A). The interviews took place in a natural setting, whereby respondents were free from any control and

the data was collected in the respondents' natural environment. An interview schedule, recording device (cell phone) and laptop were used to obtain and store the information gained during the interviews.

3.5 Data collection instrument

Since the literature on people analytics is still limited and this study was aimed at investigating the impact of people analytics on a broad range of expected outcomes, semi-structured interviews were thought to be most useful in this context.

The purposive conversation focused around a specific topic in order to elicit information that would aid in understanding the individual's perceptions, opinions and points of view as formed and contained about a broad range of topics. This included the respondents' concept understanding and perception of people analytics, the current level of maturity in terms of people management practices in the functional area of people management, the organisational decision-making culture, and the level of support regarding the adoption of people analytics.

Due to the scope of topics, the semi-structured interviews were scheduled to take about one hour to complete. This was communicated to the respondents beforehand. All the interviews were conducted in English and face-to-face. Permission was obtained from the participants to use the recorder and to transcribe the information attained during the interview verbatim before analysing any data. A cell phone recording device was used to capture the data. Each recorded interview and its corresponding notes were labelled to ensure confidentiality and to ease coding of the information.

During the interviews field notes were also taken and immediately captured after the session, after which they were sent back to the respondents to check whether everything was recorded correctly. Subsequently, the transcripts made it possible that the qualitative data coding process could be used for a structured analysis of the findings.

3.6 Sampling method

3.6.1 Population and sample

As defined by Saunders et al. (2012, p. 273) “the target population is the entire set of people that meet the designated set of study criteria”. This study made use of a sample size of 13 respondents, which was made up of a combination of people professionals and department coordinators from ten selected Western Cape Government departments. A total number of 16 professionals were invited for this research. Out of the 16, only 13 responded to voluntarily participate in the research study (the 13 respondents represented 10 of the 11 client departments of the People Analytics Unit of the Corporate Service Centre at the Department of the Premier; no representative for the Department of Local Government was available for the study at the time the interviews were done). The study excluded two of the largest departments that consist of more than 60% of the public sector workforce in the province, namely the Department of Health and the Western Cape Education Department. People analytics practices still need to be adopted within these two departments.

Figure 3.1 is an overview of the sample group of 13 professionals that were chosen based on their knowledge and experience in the field of people analytics.

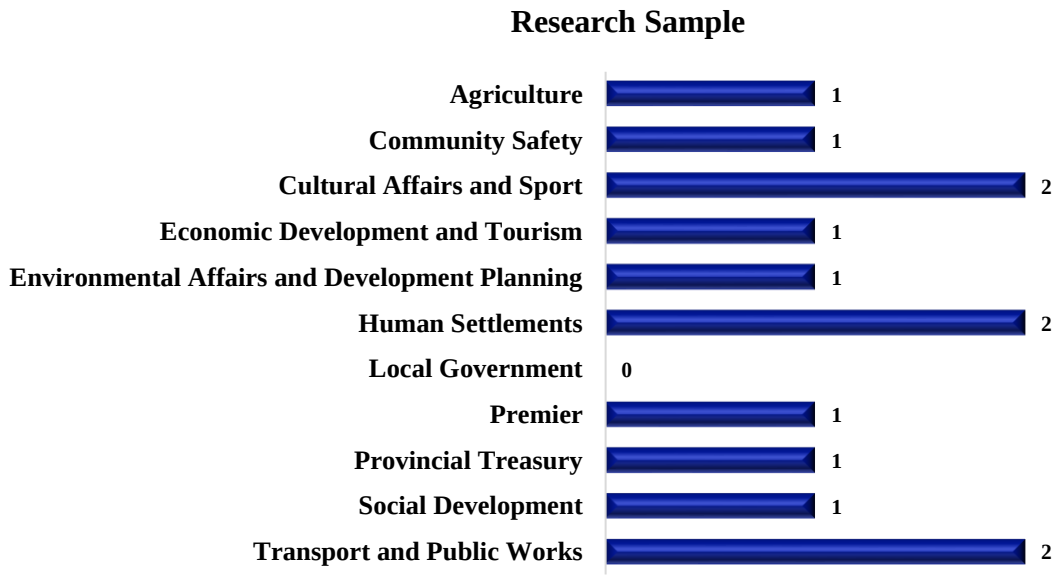

Figure 3.1. Research Sample

3.6.2 Sampling procedure

In order to answer the research objectives and questions of a study, the data first need to be collected. According to Saunders et al. (2012, p. 150) however, it is impossible to collect all available data due to time constraints, financial reasons or access restrictions.

According to Cooper and Schindler (2006, p. 183) there are two types of sampling designs i.e. "non-probability sampling which is arbitrary and subjective and where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected" and "probability sampling which is a method of sampling that utilises some form of random selection." To have a random selection method, the researcher must set up some process or procedure to ensure that the different units in the target population have an equal chance of being chosen.

For this study, the interview participants were selected through purposive sampling. One of the criteria for being included in the study was to determine participants' understanding and definition of the people analytics concept and the adoption and usage of people analytics by a people management functional area in the selected departments. Another criterion concerned the maturity levels which are expected to influence the degree to which outcomes are being achieved. To test this relationship, the functional area in people management that participated in this study had variances in their level of maturity of analytics.

As Fitz-Enz (2010) indicates, real analytics begins at the level of descriptive analytics. The departments that have at least achieved this stage of analytics maturity, could be approached as potential case studies. The research study was approved by the Chief Director People Management Practices a section of the department of the Western Cape Government. Prior to conducting the interviews, written correspondence was disseminated to the respective respondents providing clarity with the motivation for the study along with all the ethical factors regarding participation in the study. It was decided to include people professionals and department coordinators from selected departments and these were invited individually to participate in the interview conversations. The Western Cape Government departments that were included were Agriculture, Community Safety, Cultural Affairs and Sport, Economic Development and Tourism, Environmental Affairs and Development Planning, Human Settlements, Premier, Provincial Treasury, Social Development and Transport and Public Works.

With this choice it was anticipated that effective results could be obtained and sufficient respondents for the study could be found. Of the original 16 respondents that were invited to participate in the study, only 13 respondents accepted the interview invitation, resulting in an 81% response rate.

Saturation can be defined simply as data satisfaction. This is a point where the researcher reaches a level where no new information can be obtained from further data (O'Reilly & Parker, 2013). Data saturation is achieved when there is enough information to replicate the study, when the capacity to find additional new information has been achieved and when additional coding is no longer feasible (Guest, Bunce, and Johnson 2006). The saturation points for this study determined the sample size for this study and it indicated that adequate data was collected for a detailed analysis, as the responses obtained from the participants in the research answered the research questions and no new themes or explanations were emerging from the collected data. The interview questions were structured in such a way that all respondents were given the same set of questions.

The interview guideline consisted of the demographic information of the respondent's age, tenure, date of birth, job level and job description. The following interview questions were discussed to assess the respondent's understanding of the concept of people analytics: their perceptions around people analytics used in their department, and the type of data reports received and adopted in their respective department. Furthermore, to determine the business need, expectations and training requirements around specific features of the analytics data reporting requirements were explored. The respondent was asked how they saw the field developing within the next two years taking into account the adoption of people analytics data reports and they were also asked to list any benefits, limitations or barriers and finally to plot their unit's people analytics maturity level of the products/services delivered to the client.

3.7 Data analysis

According to Mouton (1996), data analysis and the interpretation thereof involves identifying patterns and themes in order to draw conclusions from them. Interpretation is required when it comes to qualitative data collection, based on its requirement for some further explanations to the data. Thematic analysis served as the analytical approach in this research study. Bryman et al. (2009) state "thematic analysis looks at what was said rather than how it was said". Themes were derived by coding and categorising data received from the transcripts. According to Braun and Clark, (2006, p. 82) "a theme captures something valuable about the data in relation to the

research question, and represents some level of patterned response or meaning within the data set".

The interviews were recorded and afterwards transcribed to have a precise overview of the gathered data. The transcripts were sent back to the respondents, who could then check whether everything was transcribed correctly and make amendments where necessary, before the transcripts were finalised.

According to Boyatzis (1998), thematic analysis is a type of qualitative analysis that is used to present themes and analyse classification that relate to data. Interpretation is required when it comes to qualitative data collection, based on its requirement for some further explanations to the data. Thematic analysis using the Atlas.ti software analysis system served as the analytical approach in this research study.

The Altas.ti system provided an easy and intuitive assessment to the data analysis process. Most of the documents and media files that the researcher used were uploaded into Atlas.ti. It was important to file the project data properly from the beginning and this method assisted the researcher to manage the project more effectively.

The respective documents were grouped by demographic categories. The following process was used to analyse the qualitative data:

Step 1 - A project folder with a descriptive name, suitable for the research project, was created with a strong naming convention, where all the relevant document files were loaded. The respective documents were grouped according to demographic categories.

Step 2 - The documents, images, files and sound files were prepared by creating a suitcase file folder on the researcher's desktop to allow for easy transfer. Descriptive file names for the documents were employed in the form of a naming convention that was assigned to the project unit.

Step 3 - The researcher already had some idea of how codes would be assigned to the texts that would be analysed, before formally beginning with the process. Allocation of specific codes were given to a piece of relevant text per transcript. Coding that is created prior to analysis is usually known as deductive coding, as the coding framework is imposed or applied to the collected data. Thereafter the coding by list, associated to an existing code to a selected piece of text, was completed. The codes on the list were initially created in the process as free codes or open codes.

Step 4 - Furthermore, memos or comments written about a specific piece of text or code were captured. Once the related documents were all coded, the codes were organised into themes, then grouped together and finally, the output document report was created from which to write the report.

Step 5 - At this point the relevant groups were defined and filtering out codes from a particular theme was done in order to focus on writing about these specific themes and sub-themes which emanated from the research findings.

Step 6 - Thereafter, the researcher used the existing project to create a network view. This was done after all the relevant sections of the texts were coded. The researcher learnt how to use the network feature to create connections and patterns, which assisted the researcher in understanding the emerging story numerically and to see the potential relationships between codes that were not expected or that confirmed any expected patterns that needed to be confirmed.

Step 7 - The researcher generated an output report in Excel, which noted the frequencies of the use of all the codes or groups as related to each document. A word cloud was generated that provided a visual representation of the frequency of words used in the project.

Step 8 - Several word documents were saved in the project outputs folder: one document for all the codes and a document for each of the emerging themes. To provide more structure, the researcher decided to create saved multiple format documents for each code according to the theme.

Step 9 - Lastly, for the final analysis, an output report that included all analysed data about specific themes was accessed.

3.8 Strategies to ensure data quality and reporting

3.8.1 Credibility

Holloway and Wheeler (2002, p. 30) defined "credibility as the confidence that can be placed in the truth of the research findings." The strategy implemented here was to evaluate the facts and authenticity of the findings that were mutually established between the researcher and respondents as being a true reflection of their perceptions and experiences of the phenomena. This meant that the analysed and interpreted data was sent back to a sample of three respondents, so that they could evaluate the findings and interpretation thereof and to suggest

any possible changes in the event of them not agreeing with the findings report. As the researcher while undertaking the study and during the data collection process, I continuously had to reflect on my own actions, perceptions and personal feelings to prevent any personal bias.

3.8.2 Dependability

According to Bitsch (2005, p. 86) dependability refers to "the stability of findings over time". This involved the respondents having to evaluate the findings and the interpretation and recommendations of the study in order to ensure that they supported the data provided by the study.

3.8.3 Confirmability

Tobin and Begley stated that confirmability is "concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but are clearly derived from the data. The approach to this strategy includes prolonged engagement, building rapport, trust, good interviewing techniques and safeguarding informants' identity" (2004, p. 392). This aspect was visually attained through observing the respondents' behaviour during the interview and what was audibly attained by listening to the audio tapes in respect to the phenomena. The researcher repeatedly listened to the tapes to compare information with notes gained during the interview and during the process of the data being captured on the transcripts. This ensured that the findings were free from bias.

3.8.4 Transferability

Bitsch (2005) stated that transferability refers "to the degree to which the results of *qualitative research* can be transferred to other contexts with other respondents – it is the interpretive equivalent of generalisability" (p. 85). The approach used was *purposive sampling,* which is a technique mainly used in naturalistic focus on key informants that were particularly knowledgeable of the issues under investigation in the study.

3.9 Ethical considerations

Researchers encounter numerous ethical issues during the various stages of a research project. According to Goodwin (2012), ethics refers to a set of principles prescribing behaviours that are morally correct. Saunders et al. (2012) provides a list of key ethical issues that normally require adherence when undertaking a research project.

Informed consent was explained and written confirmation of voluntary participation was obtained from all respondents prior to the interviews being conducted. Forms were signed and electronic copies were sent to respondents. The University of the Western Cape's Ethical Clearance Letter was sent to all respondents as well. The study posed no serious ethical problems and the researcher treated the information provided by respondents with strict confidentiality.

3.9.1 Informed consent

The researcher provided all respondents with an information leaflet and a full explanation of the nature of the study. Respondents were also fully informed of what was required of them and the implications of their voluntary participation were presented to them in order to prevent any misrepresentation of the nature of the study. Respondents were asked to provide written confirmation and give permission for their participation in the study, as well as signing informed consent forms. In addition, the researcher explained that the participation in the survey is voluntary and any participant was free to withdraw from the survey process at any point in time. It should be noted that no incentives for participating in this research were offered as part of this study (Saunders et al., 2016).

3.9.2 Confidentiality

Privacy and anonymity of respondents are of paramount importance (Bryman, Teevan, & Bell, 2009). The survey involved collection of demographic and other information from respondents as stated above, but these were not linked back to individual respondents, as unique study IDs' were created for each participant. The information was treated with respect and privacy was closely guarded. Each interview was individually conducted in a private and quiet room in the participant's offices without access by outsiders. The researcher is the only person that is able to match the identity of the respondents to the voice recordings that were made.

3.9.3 Permissions

According to Saunders et al. (2016), full consent should be obtained from the respondents prior to the research study. Permission to conduct the interview conversations was requested from the Chief Directorate, People Management Practice, from the Corporate Services Centre and approval from the University of Western Cape's Ethics Committee. Key stakeholders at directorate level for each functional area were sensitised about the scope of the study intervention and about related ethical issues.

3.9.4 Risks/benefits

According to Bryman and Bell (2007), the research respondents should not be subjected to harm in any way. The study carried minimal risks to the respondents. The activities of the study in which the respondents were involved, will be of benefit to overall people management practice outcomes.

3.10 Conclusion

Chapter 3 focused on how the research was conducted. The objective was to explore the research questions as indicated in Chapter 1 and 2 by using an approach or paradigm and a research design. This chapter acts as a descriptor of the research tool, the sampling methodology and the sample used for the study. A key aspect covered in this chapter is the research procedure and the analytical approach that was applied to rework raw data into information in conjunction with the theoretical framework of the phenomenological theory context. The chapter concludes by explaining the ethical considerations and how they were carefully managed throughout the study.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Chapter 4 provides detailed findings of the research based on the collected data and presents the interpretation of the findings and discussions relating to the three research objectives.

In the previous chapter, the research methodology and design utilised for the study were outlined. This information as well as the information provided in the introduction and literature review will serve as the essential background against which the content of this chapter will be presented and interpreted.

In this chapter, the research findings will be presented and discussed based on the themes as they evolved during the study and linked to the literature review. The purpose of this research was to find the perceived meaning, understanding and application of people analytics as well as to determine the perception of people analytics tools to improve people management practices in selected government departments in the Western Cape. The main themes emerging from the raw data and the discussions were selected to provide a better understanding of the concept or meaning, practices, understanding and application of people analytics as well as to determine the impact of people analytics tools to improve people management practices within the Western Cape Government. Emerging themes were derived through the data analysis process that gave rise to the research findings discussed in this chapter. The data gathered for this study were obtained by means of in-depth one-on-one interviews.

4.2 Timelines and overview of research experience

As alluded to in Chapter 3, 13 respondents from ten selected government departments in the Western Cape were interviewed for this study. The research fieldwork was conducted during the period 11 September to 14 October 2019 at the respondents' offices in the Western Cape Province. The research experience was positive, and, even though it was in most cases difficult to find times where survey respondents were available, there was otherwise ease of access and willingness to be available to participate in the study, as such an evaluation of the topic had not been conducted in the province before.

All 13 interviews were conducted in a quiet setting at the respondents' offices. Overall, the interviews were undertaken in a conducive environment with supportive respondents. This

chapter starts by giving an account of the demographic data of the respondents and then explores the research responses grouped by the research questions.

4.3 Statement of results

4.3.1 Demographic data of the respondents

Respondents were requested to provide demographic information. Table 4.1 illustrates the demographic profile of the respondents. The job title category ranged from deputy director, director and chief director levels and all respondents were permanently employed in various senior management positions within the ten selected departments of the Western Cape. The respondents' data included information on department employed at, gender and race profiles, age, position per department and years of tenure within the organisation.

Table 4.1.

Biographical data summary of respondents

Respondent	Gender	Race	Age	Tenure	Position
R1	Male	W	45	22	Deputy Director
R2	Male	W	54	32	Deputy Director
R3	Female	W	52	30	Deputy Director
R4	Female	W	54	36	Deputy Director
R5	Male	I	53	31	Director
R6	Male	C	43	17	Deputy Director
R7	Male	C	50	30	Deputy Director
R8	Male	W	57	28	Director
R9	Female	W	37	3	Chief Director
R10	Male	W	54	32	Chief Director
R11	Male	C	54	19	Director
R12	Female	C	33	11	Deputy Director
R13	Male	W	51	28	Chief Director

The average age of the respondents interviewed for the study was 46 years old (ranging from 33 to 57 years) with an average tenure of 24 years (ranging from 3 to 36 years), with 69% being male and eight of the 13 respondents coming from the white population group. Seven of the 13 respondents interviewed were in deputy director positions, three in director and three in chief director positions.

Taking into consideration the average tenure of the respondents, which were all in senior management positions, it can be deduced that the majority have extensive internal institutional knowledge and experience within the public sector.

However, through the interview process the following was observed as well; i.e. that the majority of the respondents had a traditional way of thinking and the research topic was a fairly new concept for these managers.

Through the research interview process these managers realised that there are new sources of growth based on leveraging the vast amounts of HR data on work and their workforce through updated technological changes.

The researcher also observed some resistance in terms of the people analytics concept and application thereof through the responses and behaviour of the majority of respondents. This would necessitate a cultural mind-set change, in that management would need to get better at using analytics to tell a story about what aspects of their HR data priorities would drive the long-term value for their respective departments (aligned with their strategic purpose).

Henceforth, contrary to the narrow, short-term workforce enhancement initiatives which are based on descriptive HR data analysis alone, they would add no value in terms of strategic analysis.

4.4 Themes summary from the data analysis

Figure 4.1 provides an overview of the themes and sub-themes that emerged during the data analysis process.

The three main themes identified from the survey were:

Theme 1: The concepts and practices of people analytics

Theme 2: The understanding and the application of people analytics by department coordinators and people professionals in the organisation

Theme 3: The impact of people analytics products on the organisation.

From **theme one** three sub-themes emerged:

- the general understanding of the concept of people analytics
- the awareness of the existence of the People Analytics Unit in the Corporate Services Centre directorate at the Department of the Premier
- summary of the people analytics products / solutions provided and adopted in the respective departments.

With reference to **theme two**, there were five sub-themes that emerged from the data, namely the general perceptions around people analytics in the respective departments of which two key perceptions were discussed:

- relevant factors influencing management's engagement with the data reports and implementation thereof
- the respondents' views that the people analytics products are a useful tool for HR planning in their respective departments.

The other remaining sub-themes that emerged from the data, as viewed by the respondents, were

- the respondents' expectations around the reporting style of the products/solutions
- the perceived need for the usage of people analytics products in the departments.

For the sub-theme of people analytics tools there were two key perceptions that emerged from the data:

- marketing to raise awareness of people analytics tools and engagement with the client/stakeholders
- the respondents' views on the absence of the availability of real-time data reporting,

The last sub-theme that came up for discussion was the integrity of people management data.

From **theme three** the following sub-theme emerged:

- the benefits and limitations for the successful adoption of the people analytics in respective departments
- people analytics reports were based on past data

- the latter concept made reference to management's understanding and engagement with the people analytics reports.

The other sub-themes that arose were the perceived requirements to expand the people analytics skills capability for all stakeholders. The other sub-theme that originated from the data was the general perceptions around the future of people analytics, with two key insights requested by respondents, namely for additional training/info sessions to be scheduled and hosted in terms of up skilling management and lastly, consideration should be given to tailor -make and adapt the reporting style for the audience with more detail and meaning.

The final sub-theme that originated from the data was the perceptions around the current maturity level of adoption of people analytics practices and, furthermore, a key insight by creating a people analytics culture. Figure 4.1 illustrates an overview of the main themes and sub-themes that emerged from the data.

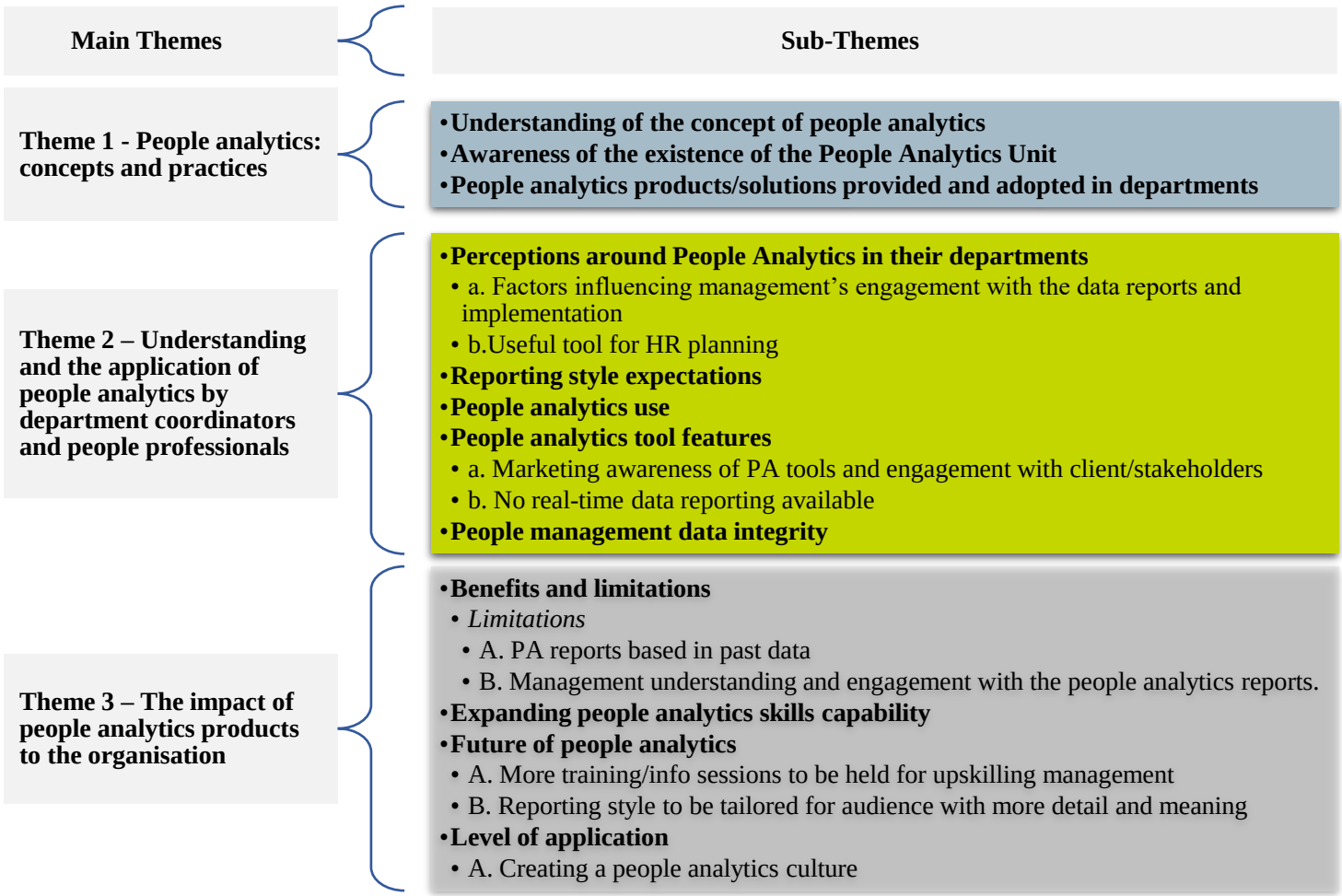

Figure 4.1. Themes and sub-themes that emerged from the study.

4.4.1 Theme 1 - People Analytics: Concepts and Practices

4.4.1.1 Understanding of the concept of people analytics

The findings from the interviews indicated that there is basic common understanding of what "people analytics" means, although there are clear differences in the various descriptions of people analytics. Some of the comments made in this regard are shown below:

"From the People Analytics (PA) Unit itself one can see the basic information provided by the CSC, this is to guide HODs to plan proactively, to enhance service delivery, to ensure sound labour relations in their respective departments and to use those data to expedite service delivery for future objectives and goals" (Respondent 2).

"That's just my understanding of people analytics is for me, it is about putting HR data together and see if there are any trends. And to maybe see what can be put in place to address those trends. For instance, when you see everybody that's resigning is the age of 30 to 35 years, which is a problem, as these are the people that you are training for higher positions. That is just my idea. It's about reporting and monitoring and evaluating of HR data" (Respondent 3).

"Previously HR was more on personnel administration doing administrative work, but people analytics I think has taken the concept of taking people management to a new level. looking at various sets of HR data, analysing data, providing recommendations, providing suggestions and assist with decision making" (Respondent 5).

"I think I'm also going to relate to my exposure to people analytics. And it's really coming from digging deeper into and analysing and giving reporting back to the department, specifically on all our people management transactions, if I can call it that. And movements in terms of staff and all the statistics related to people management in the department. So that's been my exposure and obviously feeds into our annual reports and monthly reporting within the department for management to make better decisions and plan ahead and so forth. So that's kind of a tool that we have in support of management decisions in the department" (Respondent 9).

"So, people analytics, we need that, it's like financial analytics. You've got the financial statements, there's all the figures/data, but you must read through it. You must analyse it, see the trends and see where are we going wrong, where we are doing well and what we can do for future HR planning" (Respondent 10).

"I would think it is information, a set of HR data that you could be used to analyse possible trends, about the past and possibly make decisions on going forward" (Respondent 11).

"My understanding with people analytics is basically that it is analysing data in terms of HR resources, looking at the trend analysis and also forecasting, to see what are issues of relevance, issues of risk and opportunity" (Respondent 12).

It also became evident, when engaging with the majority of respondents, that they could gauge a basic overall understanding on the key concepts of people analytics in practice.

However, the data also indicated that a few of the respondents had no or little knowledge of the definition and practice of people analytics. Therefore, their responses lacked the same detail as those of the former respondents. A few comments are shown below.

"It used to be in an advisory position in order to advise the people that need to make the strategic decisions, which is exactly why it's not happening... "(Respondent 1).

"So, it's all complicated information that they make simple..." (Respondent 4).

"I actually have no idea; I suppose to analyse the behaviour of people. I don't know. Yeah, I think it's a new field. I really don't know" (Respondent 8).

The common themes that emerged from the research study showed that the respondents used various terms or provided their own definition of what they understood by the concept of people analytics, for example terms such as analysing data in terms of HR resources, looking at possible trend analyses about the past data, addressing gaps and the data used for proactive decision planning by management to meet business outcomes/service delivery.

The literature review on the definition as eluded by Baek (2016, p. 2) refers to "People analytics is use of people-related data to improve and inform all types of management, business, and HR decisions throughout the company. These objectives can be accomplished, and is most commonly done in many organisations, with simple spreadsheets, effective questions to answer, and good storytelling and change management".

This is further supported by another definition of Sindhar (2018, p.1), that states: "People analytics refers to a practice of connecting HR data to business outcomes in a way that allows for proactive, purposeful, forward-looking action."

This is in line with what was alluded to in Chapter 2 of the literature review, where there are various terms and concepts used to describe what is understood by the concept of analytics associated to human resources (Van den Heuvel & Bondarouk, 2016, p.4); Sindhar, 2018, p. 1; Sullivan, 2013; Waber, 2013; Zarsky, 2016 and Bassi, 2011, p.11).

As pointed out in the literature review, the responses fell short of making clear distinctions of what people analytics terms were and what it is understood to be in practice. Hence, a few of the comments as mentioned above demonstrate that there is limited understanding of the concept and practice of people analytics, what it should entail and what it is supposed to achieve.

4.4.1.2 Awareness of the existence of the People Analytics Unit within the Corporate Services Centre

The findings related to this theme show that 11 out of the 13 department coordinators and people professionals interviewed indicated that they were aware that a people analytics unit existed. Some of the comments made in this regard are shown below.

"No, Not aware of it. If the people analytics forms part of the policy and planning unit, then I'm aware of the policy and planning unit, but I'm not aware of the analytic part. That makes sense. Yes. The other part of it" (Respondent 8).

"No, I am not aware of it" (Respondent 10).

"Yes, but do not know what they do. I'm going to be honest with you. I'm aware of it, but I do not know what they do, actually" (Respondent 13).

4.4.1.3 People analytics products/solutions provided and adopted in departments

Figure 4.2 illustrates the various types of people analytic reports received by the respondents and adopted and applied in the business operations. The monthly HOD reports are the only people analytics report that are disseminated on a monthly basis to the client departments. The rest of the reports are disseminated to the client departments on an annual basis.

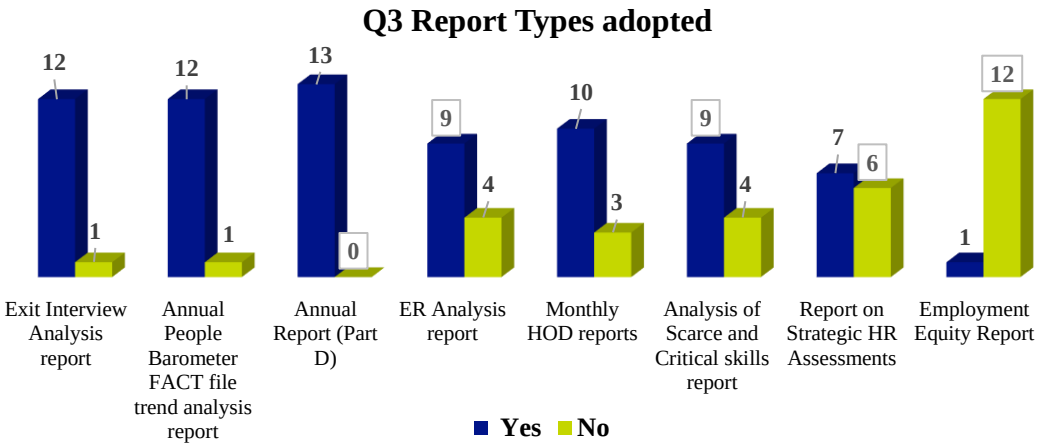

Figure 4.2. Overview of the people analytics reports adopted by the departments.

Firstly, the data indicates that all the respondents received the Annual Report (Part D) report, a reporting tool used for HR department performance data for the previous financial year. Secondly, 12 respondents indicated receiving the Exit Interview Analysis Annual report, which serves as a reporting tool that identifies the departments' voluntary and involuntary exits/staff turnover data. The same number of respondents indicated receipt of the Annual People Barometer FACT file HR analysis report, which looks at past general HR trends.

The various data reports are received either monthly, or quarterly or annually. However, as indicated by a few comments from the respondents, it is clear that not every report received from the People Analytics (PA) Unit is disseminated to all levels of line and senior management for further interrogation and implementation.

Some of the comments made in this regard are shown below:

"Monthly HOD Reports: the HOD does share it with us, but I don't think that the information that we get, that we analyse it ourselves and take the necessary, important data" (Respondent 10).

The overall research findings for this sub-theme, demonstrates that the majority of the people analytics reports were received and adopted by the respective departments. The reports consist of HR data from the past financial year, which reflect reactive and operational reporting aimed more at compliance reporting for audit deliverables.

The findings revealed that there were a few respondents that were able to explain their methodology on how they unpack the data report, their ability to conceptualise the story the

data is telling them and how to use the analysis of results/trends in order to predict future business outcomes. A few comments are mentioned below:

"*But from the reports I get, I think there's very good work done. For example, the sick leave analysis report we received recently, People Analytics assisted with that to see who's taking sick leave over two cycles, the trends, and our management team was able to analyse the key trends and started with engagement discussions with key employees based on the data provided, to investigate reasons and also explain the implications of excessive sick leave taken on the department's business operations"* (Respondent 5).

"If you look at the trends, for instance, with the sick leave a report that was brought out last year. I think sick leave and people who exceeded the 36 days within the cycle - already we started a conversation with employees on what they need to do. How the employee needs to do it and the consequences if they exceed their 36 days for instance and the report definitely adds value for business decisions" (Respondent 7).

"You know, that type of information is portrayed in the documents and it is self-explanatory. So, in the ILMC, I hand document or copies of the documents out, we discuss it and as I indicated earlier, there are barely any questions coming back from the side because the documents are self-explanatory. So, from a union side they understand what is going on in the department" (Respondent 8).

Levenson (2011) alludes that HR functions often collect data to measure their own efficiency, but do not measure the business impact of their people practices. Organisations such as Hewlett-Packard, Wikipedia and LinkedIn are using people analytics reports in their business operations to predict who will be leaving the organisation, what skill sets potential employees may have, and how employees will perform based on past performance and personality traits, just to name a few (Siegel, 2013).

4.4.2 Theme 2 – Understanding and application of people analytics by department coordinators and people professionals

4.4.2.1 Perceptions around people analytics in respondents' departments

The following sub-themes that emerged relating to general perceptions of people analytics in departments were:

- the factors influencing management's engagement with the data reports and implementation thereof and

- whether people analytics products are a useful tool for HR planning.

a. Factors influencing management's engagement with the data reports and implementation

The main sub-theme emerging here relates to the factors influencing management's engagement with the data reports and implementation. The key perceptions found in the data is that managers should begin to take the necessary responsibility and accountability to analyse their HR data reports and to put into place the necessary HR planning.

Another aspect that was evident was that not all the reports are disseminated to all levels of management and that the People Analytics Unit should re-look their distributing mechanism by sending it not only to the HODs, but also to senior management members. Another suggestion that was made was for the development of an online space on My Content located on the department's intranet platform, where line managers can access their HR data reports for their department at any given time. These could be configured with secured password and access rights to the system.

Department coordinators, people professionals and line managers are receiving some people analytic reports. The culture in some departments, however, is that HR data is not a key priority on their agenda as more focus is given to achieving business outcomes and service delivery targets. Some respondents, however, indicated that some line managers may not understand the people analytics reporting data and how they should use this data, which also possibly can impact on their engagement and execution on prioritised HR reports.

The following comments below support the above three key perceptions:

"I would think line managers in that department we must take the responsibility and accountability to work through that documentation and the reports provided by the People Analytics (PA) Unit" (Respondent 2)

"For me it is giving them information on what they want, but they do nothing with the information afterwards" (Respondent 6).

"Skill that we don't have within the department"; "We need to be active and do more planning whatever in order to ensure that things happen with the reports" (Respondent 7).

"The reports get presented to HOD and myself and he/she discusses the reports at his/her extended top or top management for planning" (Respondent 8).

"They're not interested or they don't think the HR environment is important to them and they're making a big mistake because it's actually more important than the construction" and "but I don't think the line functionaries understand and know exactly what the they need to do" (Respondent 8).

"We don't go into analysing why what's the reason for instance. Further analyses and investigations from line managers should be done on evident data trends" (Respondent 10).

"All the reports are not given to management, and CSC should look at distributing the HR reports differently by sending it not only to the HOD, but the senior management levels below as well" (Respondent 13).

The key factors mentioned above as described by the respondents is supported and explained by Bersin (2015), who refers to the element of transparency, which includes how the data will be shared and will be used, which is critical in building trust and providing a positive experience for all stakeholders. It is further stated that organisations would need to ensure that people analytics is foundational to their culture journey, valuing the data as a key asset and committing to make data-driven people decisions.

Furthermore, the data revealed that some line managers may not understand the people analytics reporting data and how they should use this data, which could also probably impact on their engagement and execution on prioritised HR reports. This statement is supported by literature as alluded by Angrave et al. (2016), that analytics must be rooted in an understanding of the data which was collected. Meaningful insight is to be gained to determine the necessary resources required to execute the analytic process steps effectively.

Therefore, it is imperative that people professionals and management must firstly develop a strategic understanding of how human capital contributes to the organisation's success prior to adopting people analytics.

b. Useful tools for HR planning

The findings reflect that seven of the respondents indicated that the people analytics reporting products/solutions received are useful tools for HR planning. This is supported by a few comments below.

*"The positive the benefit for the department again proper planning for middle and long-term terms, reference again to attrition, recruitment and selection" (*Respondent 2).

"The data is relevant and we can use it to incorporate the actual HR data into the department's short and medium plans" (Respondent 6).

"My personal exposure and perception is very positive. I think it's a very useful tool. And I think it's been developing quite a bit since I joined in 2016 to now" (Respondent 9).

The above sub-theme is supported further by authors Boudreau and Jesuthasan (2011), who mention that analytics reporting tools need to be rooted in a keen understanding of data and the context in which it is collected in order to generate meaningful insight, known as logic-driven analytics. The generation of meaningful metrics is established, which promotes the costs and benefits of various HR methodologies to be evaluated and modelled. This is furthermore advocated by Attard (2014), who states that people analytics is primarily consolidating data where data has not been used before and that any data-driven initiatives and proactive planning strategies are key drivers to a successful performance.

4.4.2.2 Reporting style expectations

Figure 4.3 below indicates a summary of the respondent's expectations regarding the People Analytics Unit's reporting style. Of the 13 respondents, seven indicated that they expected a business report and seven respondents also indicated that they would like the report in the form of a detailed infographic; these were the most preferred reporting styles.

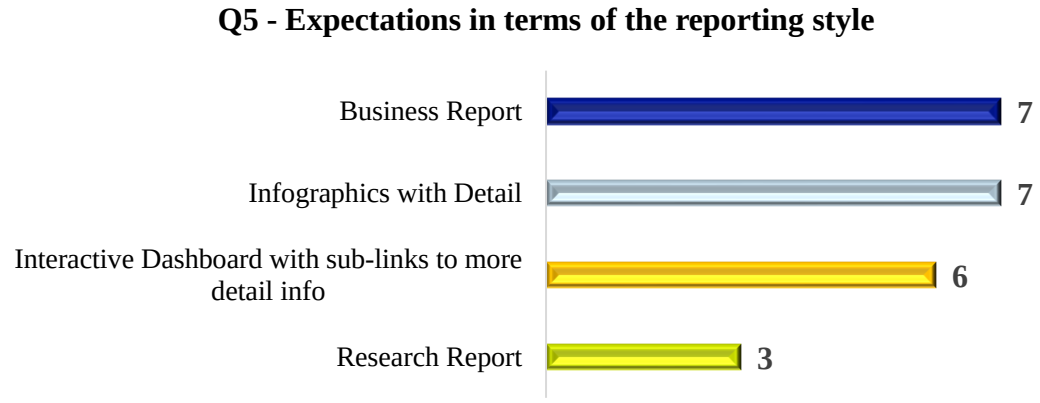

Figure 4.3. Graph indicating the respondents' expectations in terms of the people analytics reporting style.

This following comments from respondents confirm this:

"The infographics is nice, but just sometimes if you just get all the whole graphs, you don't know how they got to it. So sometimes if you've got some report with it, basically to give you

the advice and to give you the information, some of the things is easy to understand where it comes from and where it's going to" (Respondent 4).

"I think that infographics is more eye catching when you see graphs and tables and stuff. Will get the people's attention because people do not like to read. So that report and analysis and all of that the more likely to link to the infographics" (Respondent 6).
"So, a business report is, is important for especially in the beginning just to, to get the concept and so that people can see actually what, what, what is in the end. Then you go to dashboard, you don't want to read too much. You want to see it up there, but if you don't understand what you see, then it's not going to work. Uh, graphs is always nice, it gives you a picture already there. So yeah, a combination of everything. But you must be mature enough to understand and can, uh, analyse it yourself "(Respondent 10).

"I think a combination of that, because it does apply for different some of these things might have to be escalated to Executive level, and you don't want detailed reports. The members want to see a dashboard at executive management. And for the CRU to possibly look at specific interventions, would want some more detail around the data. So probably a combination of various reporting styles, depending on what you want to use the data within with the department, will be the deciding factor "(Respondent 11).

This further explains that it is important to understand the various concepts in the beginning, which should comprise of the basic narrative detail behind the data so that the information that was provided can be correlated to graphical summations on the dashboard.

It was also requested that the contextualisation of the narrative should be adapted to the audience management level, as top management does not necessarily have the time to read through lengthy reports. Should more in-depth information be required to support the data, like research concepts, this should be made available by the People Analytics Unit.

The data is supported by research done by Angrave et al. (2016), who state that analytics must be rooted in an understanding of the collected data.

It is also further acknowledged by Marler and Boudreau (2017) that the revised theoretical models could serve as the thinking tools for understanding the people analytics phenomenon.

For instance, according to these researchers, the LAMP model could be used to explain the relationship between the types of people analytics data reporting and framework.

Therefore, it is imperative that department coordinators and people professionals must first develop a strategic understanding of how human capital contributes to the organisation's success. If the nature of the issue that needs to be addressed using analytical tools is not clearly defined, the probability of adding value to the organisation is extremely low. Following that, it is important to determine which data will be used in subsequent reporting analyses.

4.4.2.3 People analytics use

The data collected was to determine the perceived need for using people analytics tools/products in respondents' departments. The main theme that emerged from 12 respondents indicated that even though people analytics is in its early stages, the current people analytics data reports and services rendered by the Unit do add value to the management team. The data provided does give the client an indication of the past data trends on specific HR measurement concepts, and should a specific lack or gap be evident, management would have the necessary tools and recommendation options that they can prioritise during their HR planning and interventions processes. This is supported by a few extracted comments from respondents below:

"For obvious reasons you need to keep up a clear line of argument when explaining the data analyses, background, how you got to the data, recommendations and conclusions, which gives the management team the option to make the priority recommended choices in their short and medium term strategic planning sessions" (Respondent 1).

"At the moment the performance management part as well as the recruitment management part is more of the after-effect statistics, which is not really of futuristic information. And I'm a little bit wary about. The reports add value, and the gut feel that you referring to you, must be based from correct information. That is the problem. So, whether it is a gut feel anyway it's more scientific. The data needs to be credible" (Respondent 3).

"We take into consideration the recommendations made by the specific reports that's been submitted to us, from people analytics" (Respondent 6).

"Now the tool can measure that, and that's the kind of thing that we can address to assist people with development as well" (Respondent 7).

However, further change management interventions would need to be considered and implemented by the People Analytics Unit change agent with the respective department management teams, to ensure that the client understands and identifies the importance and the value-add for the growing concept of people analytics products and solutions and how to practically apply the evidence provided for strategic decision making. However, it was further alluded that the data provided in the reports should also be correct and credible in order to use it as scientific evidence for strategic decision making.

Recent academic studies suggest that companies wishing to achieve a superior individual and organisational performance shall adopt an evidence-based approach to decision making on people management-related matters, meaning that strategic decisions should be based on facts rather than intuition (Boudreau & Jesuthasan, 2011; Fitz-Enz, 2010; Pfeffer & Sutton, 2006).

The above data is supported by literature and as stated by Attard (2014, p. 3), "People analytics is mainly just producing data where data has not been used before. Like any data-driven initiative, success is all in the planning. People analytics provide significant opportunities for HR to add business value i.e. leadership feedback for business decision inputs, influencing senior decision makers with data, improve governance, tangible cost savings that addresses the organisation employee benefit challenges".

4.4.2.4 Features of people analytics tools

The above theme was used to explore the respondents' requirements to make the people analytics reports a more useful feature of people management within the departments. The two main sub-themes that emerged were on the one hand the marketing awareness concept of people analytic tools and engagements with the client/stakeholders and on the other hand, the utilisation of real-time data.

a. Marketing awareness of people analytics tools and engagement with client/stakeholders

One of the main themes that was observed and recommended by the respondents is that the People Analytics Unit should start by engaging with the various department coordinators and people professionals throughout the organisation by marketing and presenting the People Analytics Unit's business model, its data reporting styles and methodology and then adapting the reporting framework for the needs of each respective department. This was supported by 12 comments and is further shown in a few quotations listed below:

"Market themselves more to management, marketing awareness, on the call relationship with department. Closer interaction might be available of documents to all senior management stakeholders, methods of communication and what additional support do we give directly to certain positions in the province to actually get the agenda prioritised for the unit", "*you need to think about, who you are addressing the HR data reports too, your audience level"* (Respondent 1).

"For them to be more visible in the department. Not just sending the reports to us, but attend/come to one or two of the top management meetings and come present the reports or the presentations of the research" (Respondent 6).

"I don't know if you call it training, but definitely engagement with management on how to best utilise the tool. I mean, we can obviously, you can tell managers what to do, but just think how you could potentially use it and not just see it as a snapshot" (Respondent 9).

"I do believe that you must promote it and get the buy-in from everybody on this. I'm, like I said, I am high up in the hierarchy and, it's a new concept for me and us as managers" (Respondent 10).

"They should be made more visible in top management meetings of the departments.
If they, if they want to introduce something new, they should get the buy-in from the departments by having an engagement with management just to discuss the information that they've given to us to give us more background and context to what the information is saying so that we can relay it in a in a more useful and relevant way to our department" (Respondent 12).

"There needs to be a champion in the unit to drive the communication strategy, consult, guide and have the constructive conversation with management stakeholders, in order to make inroads on the prioritisation of HR data matters" (Respondent 13).

The above data clearly validates that marketing is essential from the People Analytics Unit in terms of various engagement and collaboration information sessions with management in the various respective departments for further discussions on critical HR data and prioritised recommendations.

The above sub-theme is further substantiated by research done by Cascio and Boudreau (2011) who have found that HR (people professionals) need to develop a strategic understanding of just how people (human capital) impact to the positive achievement outcomes of their organisation. "If a strategy is to create, capture, leverage and protect value, then it needs to be unique to the organisation rather than a generic strategy" (p. 105). With this said, management in the departments would firstly need to appreciate and understand the people analytics business modelling and methodology in order to establish strategic insight to make the necessary informed people-related decisions.

This is further supported by a quarterly journal published by PWC South Africa (PWC, 2015), in which the observation is made that leaders in local organisations in South Africa are slowly beginning to understand their workforce composition and what drives their employees to perform by developing people analytics centres of excellence. This involves improving management's ability to assess and report on key people issues in order to align this to their business strategy by conducting data-driven, diagnostic analytics in response to the market and the people challenges that they are faced with.

b. No real-time data reporting available

The data indicated that nine of the 13 respondents indicated that they would prefer real-time people data reports and not only data based on past people statistics. This is supported by the following comments that were made during interviews:

"And if that was more alive system that we can use in I would say that the information would be a little bit better when it comes to adding the value for the business because when you when you look at information as it is today" (Respondent 3).

"The information we gave is very valuable. But these glitches, um, because it is not real-time data" (Respondent 4).

"So maybe timespan was. But that's where your dashboard will come in and it will hopefully be more up to date" (Respondent 7).

As mentioned above, the current practices within the various departments have limiting capacity and this does not always afford management an opportunity to make informed future

strategic decisions, as respondents commonly refer to the people data used for compliance audit reporting as “retrospective, past data”.

Relevant literature as defined by Rajteri (2010) regarding the Gartner’s Business Analytics Maturity Framework model clearly provides an overview of the four different types of analytics, namely: descriptive, diagnostic, predictive and prescriptive analytics.

The research findings based on the above sub-theme yield that these departments within the public sector in the Western Cape are is in their infancy and practices are mainly associated with descriptive analytics. It is evident from the respondents that people analytics data reporting is only based on past data and behaviours with limited in-depth diagnosis and insight investigations. The data predominately describes descriptive analytics which are primarily focused on what has happened and analysis relating to past relationships and trends. This is due to the limitation of the change development for an online system called Integrated Financial Management System (IFMS) within the public service in the Western Cape, which will have the reporting capability to present real-time current people data.

Bassi (2011) stress the importance of having consistent, accurate, real-time, integrated, relevant and accessible employee data available in order to track employee competencies and reveal patterns. Bersin (2015) points out that the availability of HR data is not an issue since organisations have captured educational history, demographic and performance information, and many other employee factors since around three decades. However, the full potential of people analytics can only be exploited when real-time data across functions and even external to the organisation are combined.

4.4.2.5 People management data integrity

The key objective here was to determine the perception of how respondents viewed people management data. The findings showed that 50% of the respondents indicated that the people management data is credible and can be trusted as reported. A few comments in this regard are listed below:

“All the analyses and the data provided to us and give you a good indication of what is a current situation and what needs to be improved. So yaa, the data is very important to me” (Respondent 2).

"And on PERSAL there is certain HR data that is not captured 100% but generally speaking the HR data is credible and I do trust the data" (Respondent 5).

"The data is credible and I trust the information presented in reports" (Respondent 10).

"I never had a problem with the data for the HR reports I received, there was never a question about the credibility of the data" (Respondent 13).

However, the findings from the rest of the respondents explained that although the people data is credible, the data is old when it reaches the department. Not all departments have the resource capacity to verify the people management data with their own internal statistics. It was also mentioned that, as explained in a few cases, certain transactional people data captured on the HR system, which refers to the integrated Human Resource, Personnel & Salary System, better known as PERSAL, could be captured incorrectly by the Service Benefits Unit, for example, an employee leave code could be erroneously captured, there could be minor errors in the analytics report and this could compromise the data credibility as reported by the People Analytics Unit. A few comments below support this:

"In principle the data we get is not wrong, but nobody ever sat down with it and took a hard look at it and you say, look, these are problems and when you make strategic decisions, these are the problems that you need to keep in mind" (Respondent 1).

"So, like I say yes or no. Most of the time the data is okay and credible, but there is sometimes there is glitches. And then I would normally take it up with the relevant component" (Respondent 4).

"And on PERSAL there is certain HR data that is not captured 100% but generally speaking the HR data is credible and I do trust the data" (Respondent 5).

"You know, might have been credible at that stage, but once it hits the department it's not credible anymore" (Respondent 7).

The literature review as alluded by Fitz-Enz and Mattox (2014), claims that one of the biggest obstacles for implementation is the inaccurate, inconsistent, or hard-to-access quality of credible data, which requires a considerable amount of manual manipulation and a lack of analytic acumen or skills among people professionals. It is further elucidated that even should the skills and ability to conduct the analyses be present, the challenge of gathering the quality of data required to turn information into valuable results is still present.

Johnson, Gueutal and Marler (2012) asserted that, based on the above-mentioned highlighted skills, the following initiatives could be expected to unfold in the people management profession: professional associations and academic training institutions will continue to make an important contribution to Human Resource Information System knowledge, especially through extensive research and formal academic training and integrated e-learning short courses.

4.4.3 Theme 3 – The impact of people analytics products on the organisation

4.4.3.1 Benefits and limitations

The findings of the above-mentioned themes were to determine the relevant benefits and possible limitations for adopting people analytics products in departments.

4.4.3.1.1 Benefits of adopting people analytics in practice

The findings show that 11 of the 13 respondents claimed that the benefits and the value-add for the utilisation of people analytics reports are used and incorporated in the majority of the department's medium- and long-term HR plans. Another aspect that was described was that certain viable recommendations, which were well researched by the People Analytics Unit, are prioritised and incorporated in the department's business implementation plan. A few of these comments are shown below:

"It comes back to the benefit to see what is really going on in your department" (Respondent 3).

"Because some of the recommendations is true, specifically referring to the exit interview analysis or presentation because some of the recommendations we are following through and will be put in place through this culture journey" (Respondent 6).

"The benefit is for planning purposes and how to resolve or solve when you look at future issues that might surface" (Respondent 7).

"In terms of giving you that overall picture of what does your department look like in terms of its people, management, statistics and the transactions for the last month, it's definitely adding value. I think it's very beneficial. It just needs to be used more" (Respondent 9).

According to Bersin (2015), organisations that embrace people analytics tend to be more successful and have a stronger competitive advantage over companies that do not. The authors

assert that this is because people analytics streamlines HR and eradicates much of the wasted time of recruiting, hiring, and training the wrong people. It reduces wastage of resources by investing in employees and programmes for which statistics demonstrate that no real and lasting results would be produced (Bersin, 2015).

In addition, Hoffmann, Lesser and Ringo, (2012) claim that people analytics can also measure the optimal size of teams within a company, eliminating unnecessary positions and responsibilities. They believe that people analytics can be used to make maternity leave and employee incentive programs more applicable and appealing to employees, which increases overall employee satisfaction, decreases turnover, and creates an engaged workforce.

Literature by Stephan and Walsh (2017) also suggests for the successful adoption of people analytics, leadership and people professionals should understand that analytics is a multidisciplinary approach. This approach is supported through the identification of a curriculum with other partners to assist with training, implementation of standard tools, standardised reporting and real-time dashboard reporting.

4.4.3.1.2 Limitations of adopting people analytics in practice

However, this does not mean that the adoption of people analytics does not come without its share of challenges/limitations. Two main sub-themes regarding this emerged from the study: the majority of respondents indicated that one key limiting factor is the fact that people management data is based on past data and not current data, and, secondly, management's understanding and engagement with the people analytics reports. Some comments made about this sub-theme are shown below:

a. Sub-Theme 1 – People analytics reports based in past data.

"Because the information is not always up to date, it's just that it is delayed information." (Respondent 3).

"I think there's limitation. And if that was more a live system that we can use I would say that the information would be a little bit better when it comes to adding the value for the business because then you look at information as it is today" (Respondent 4).

"The limitation or the barrier for me is that sometimes it's not information that is up-to-date. The information is delayed by a day or two, if I can put it that way" (Respondent 11).

"The information that we get isn't always helpful in making informed decisions because the period is really past. The accuracy of the data is that it's just for the period that it covers. So, a bit of a challenge" (Respondent 12).

The limiting factor for adopting people analytics has been shown in the available literature on people analytics, which shows that the challenges are brought about by technological and system capabilities. Coco et al. (2011) asserts that there are examples of negative moderation attributed to dealing with incompatible or redundant systems housing data, like in the case of this study, the HR system (i.e. Human Resource, Personnel & Salary System, better known as PERSAL), which is used for HR data capturing, but displays quite a few system limitations by reporting only on past people data and has no built-in business intelligence function for online system reporting with live and current reporting functionalities.

This is further supported in literature by Angrave et al. (2016) and Douthitt and Mondore (2014), which also validates the system functionality limitation of people analytics by using "traditional" Human Resource Information System, which is a compromising aspect for many organisations, who aim at staying abreast by having a competitive advantage and embracing a culture of innovation and primarily an engaged workforce.

b. Sub-Theme 2 – Management's understanding and engagement with people analytics reports.

The findings of this theme show that eight of the 13 respondents indicated the inability of management to understand the people analytics report and to conceptualise the story the data is telling, which is another limiting factor for the successful adoption in their departments. Management is not necessarily equipped to analyse their people management data, but should be kept motivated to learn some of the latest practices and best practices on how to use various types of people-related information data across the business on an ongoing basis. Furthermore, line managers should start prioritising HR planning within their respective departments. A few comments about this sub-theme are shown below:

"The only limitation is the accountability and responsibility of the line manager to make use of this important information received from the People Analytics Unit, to manage their line directorates accordingly" (Respondent 2).

"There needs to be a champion in the unit to drive the communication strategy, consult, guide and have the constructive conversation with management stakeholders, in order to make inroads on the prioritisation of HR data matters" (Respondent 5).

"We need to be active and do more planning whatever in order to ensure that things happen with the reports" (Respondent 7).

"It's more and I don't know if it needs more awareness, and kind of exposure to how it can be used better. Perhaps that's how we can benefit on how to use the PM data, from, and I think managers kind of maybe they don't know how to use it better. So that's maybe a plausible suggestion" (Respondent 9).

"Would think line managers in that department we must take the responsibility and accountability to work through that documentation and the reports provided by the People Analytics Unit" (Respondent 12).

"I think there is a lack of data analysis skills amongst most management when it comes to the human nature or interpreting the data. I would recommend generic training/information sessions for management to create a better understanding on basic data analysis processes and the story behind the data insights, presenting the basics" (Respondent 13).

Literature to support the negative aspects of adopting people analytics pertaining to skills, knowledge and attitudes of people professionals is described by Rasmussen and Ulrich (2015), who claim that the progress in the application of people analytics in practice has been negatively moderated by the lack of clear business focus and the required basic analytical skills, as well as changing the mind-set amongst senior HR management and people professionals. Another contributing factor supported by Coco et al. (2011) and Levenson (2011) was the lack of ability to gain general managerial buy-in on the growing concept and practice of people analytics and successfully selling the results of the analysis amongst people professionals and management across the business.

Furthermore, the arguments made by Deloitte Consulting LLP (2014), where further studies were conducted, alluded that adopting people analytics is no longer about finding interesting people information and flagging it for managers. Now people data are being used to understand every part of a business operation and analytical tools are being embedded into the organisation's day-to-day decision-making processes.

Supporting literature, as reviewed in Chapter 2, shows that research conducted by Marler and Boudreau (2017), shows that the most frequently prescribed people analytics theoretical guide adopted by organisations in academic literature is the version of the LAMP model framework. LAMP is an acronym for logic, analytics, measures, and processes, which represent the most important components of a measurement system.

As stated by Boudreau (2006), the model suggests that people analytics shall constitute part of a change management process and affect organisational outcomes through the impact on the decisions and behaviours of people in the organisations. Boudreau and Ramstad (2007) accentuated that all the components of the model should be in balance without over-emphasising any of them, in order to obtain more fruitful results from the adoption of people analytics.

It is also further suggested by Marler and Boudreau (2017) that the reviewed theoretical models could also serve as thinking tools for understanding the people analytics phenomenon. For instance, according to them, the LAMP model could be used to explain the relationship between the elements of people analytics and changes in decisions.

4.4.3.2 Expanding people analytics skills capability

Figure 4.4 is a summarised overview of the two people analytics skills capabilities dimensions which respondents indicated as their preferences should they wish to become more competent in the conceptual understanding of the practice and be equipped with the necessary skills and tools to make sense of their data for efficient management purposes.

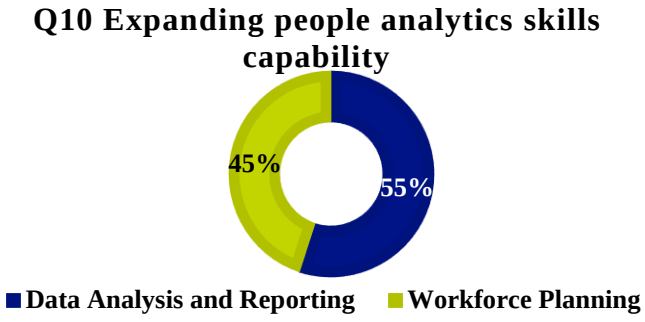

Figure 4.4. Overview on the two people analytics skills capability dimensions.

The findings from 11 respondents yield the need for data analysis and reporting skills training and nine respondents indicated a need for workforce planning training. Some respondents

indicated a combination of both training needs. The data is supported by a few comments below:

"Data Analysis information session with people / line managers" (Respondent 1).

"Data analysis, systems and reporting. Um, with the cause, I don't think, um, including I'm including myself; we don't really know how to analyse the information. So, you know, information sessions regarding that, where they take us through what they did, why they did that..." (Respondent 8).

"I definitely think we could get more assistance in looking at workforce planning. But in terms of the data provided, I can't say that there's anything lacking specifically. But we do need more schooling or awareness or I don't know, honestly to be educated in how to really do proper people workforce planning" (Respondent 9).

"Data analysis plays a big role, so I would be interested in expanding my capabilities in that role" (Respondent 13).

Lack of statistical skills, knowledge, and insight to perform analysis on HR data are among the most frequently mentioned reasons preventing wider adoption of people analytics. In a study done by Levenson (2011) which identified the list of basic analytical competencies needed to perform people analytics. The study also explored diffusion of those competencies among the analytics and general people professional groups.

In literature this is supported by the Harvard Business Review (2014), which states that global responses indicate a major leap forward in capabilities and this furthermore points to the second largest capability gap for South Africans. Companies globally, and, to an extent, locally, are hiring people analytics staff, cleaning up their data and developing models that help transform their business. It is evident that South African organisations have both challenge and opportunity in building these emerging capabilities. Business and HR leaders, who move aggressively to address these trends, will likely gain an advantage over their competitors in a period of accelerating change.

4.4.3.3 Future of people analytics

The objective was to determine the respondent's perceptions on how they felt that the people analytics space could develop in the next two years within the public sector. The main sub-themes that emerged from the findings were the requirement of training/information sessions

to be held by the People Analytics Unit for upskilling of management, and secondly, the reporting style should be adapted and tailored for the audience with more detail and meaning.

a. More training/information sessions to be held for upskilling management

The findings showed that 11 of the respondents indicated that the People Analytics Unit should host training and/or information sessions to enhance the skills capacity of management team members. A few comments are shown below:

"To minimise the gap in terms of HR data analyses, more training/information sessions should be developed to empower the line manager" (Respondent 1).

"In terms of training needs this is a field where the Western Cape government must prioritize. But not only people working with people analytics, but all middle and senior managers to have at least a basic understanding of people analytics and maybe analytics, as a discipline" (Respondent 5).

"I don't know if you call it training, but definitely engagement with management on how to best utilise the tool. I mean, we can obviously you can tell managers what to do, but just think how you could potentially use it and not just see it as a snapshot" (Respondent 9).

"So, the gap is there that the departments need to do some upskilling in terms of people analytics so that the information that they provide to the departments" (Respondent 12).

"I think there is a lack of data analysis skills amongst most management when it comes to the human nature or interpreting the data. I would recommend generic training/information sessions for management to create a better understanding on basic data analysis processes and the story behind the data insights, presenting the basics" (Respondent 13).

The above sub-theme can be cross-referenced to the previous sub-theme, where respondents indicated their key preference regarding the people analytics skills capability in order to become more competent in the conceptual understanding of the practice and be empowered with the necessary skills and tools, so that people analytics can become their radar for change in the business.

This analogy is supported by Lawler and Boudreau (2009), who clearly indicate that the roadmap for the future of people management and analytics lies in people management itself, so that it has the skills and expertise to operate at a corporate level, to have in place metrics

and analytics that measures the impact of people management practices and to improve decision making by bringing people management analysis to the business.

Fink (2017) suggests that an end-to-end HR analytics work flow starts with asking the right question and ends with measuring the result to determine whether the action was effective. However, the Chartered Institute for Personnel and Development (2013) argues that HR professionals do not have enough knowledge, skills and business insight to ask the right question based on the data that is available to them. Moreover, even if HR professionals do have good and promising approaches related to people analytics, their hierarchical position within the organisation may encumber their initiatives from being implemented (Smeyers, 2015).

b. Reporting style to be tailored for audience with more detail and meaning

The data show that six of the respondents indicated that there is a specific need that the People Analytics Unit should consider adapting and tailoring the respective people analytics reports to the target audience and the management level receiving the report, as well as incorporating more detail and meaning. A few comments are shown below:

"The data report must have meaning when analysing and this frame of mind needs to be kept when writing the report to order to empower the SMS member with data reports to assist in him/her with effective people management operations. You need to think about, who you are addressing the HR data reports too, your audience level" (Respondent 1).

"It's just a graph and no information with it or, you know, just a figure and a figure there, then you don't really know what where it came from. So maybe, just some more detail" (Respondent 4).

"Reporting style for HOD/senior management should be adapted and developed differently for the people/line manager, more detailed information to be provided" (Respondent 5).

An inference can be made from the findings that the People Analytics Unit should consider the audience level when developing/designing certain data reports, as the higher the management hierarchy (referred to as SMS members), the less time they have to read too much detail, like a research narrative report. An information session can be held with first line management to explain the detail behind the data and this info can be presented in executive management meetings, should there be any need for more clarity.

According to Haak (2016) the people analytics report that containing detailed info supporting the graphical illustrations, should have undergone five prominent steps through the exploration phase for practical, effective delivery of people analytics and effective data reporting. This will enable management to determine the most critical business issues relevant to people management. Thereafter, management would be able to map the current situations for each HR priority area and based on that, design the most impactful interventions. This could be done through an initial pilot process on the interventions identified and, thereafter management should track and measure the effectiveness of the implementation. This would be an ongoing process for self-reflection learnings, improvement and business change strategy.

4.4.3.4 Level of Application

a. Creating a high people analytics culture

The main goal of the Western Cape Government as a public entity is to set up a high business impact for its citizens. In order for this to happen, the leadership in the Western Cape Government should ensure their organisation has the right structures in place to properly translate their people analytics practices. Bersin (2015) created the People Analytical Maturity Model to describe the five different maturity levels of people analytics adoption. The model clearly defines the different levels as shown in Figure 4.5 below:

Figure 4.5. People Analytics Maturity Model. Adapted from Forbes.com, by J. Bersin, 2015, retrieved from https://www.forbes.com/sites/joshbersin/2015/02/01/geeks-arrive-in-hr-people-analytics-is-here/#3cd1987473b4/ Copyright 2020 by Forbes Media LLC.

Figure 4.6 below provides an overview of perception ratings plotted by respondents in terms of the People Analytics Unit practice maturity level indicators. The majority of respondents (nine of 13) indicated that the products/services and solutions rendered by the People Analytics Unit in terms of the maturity practise were plotted on a level 2. This described the maturity practice of proactive advance reporting. This accentuates that the People Analytics Unit within the Western Cape Government is at a fairly early maturity stage and its framework should be its point for the organisation.

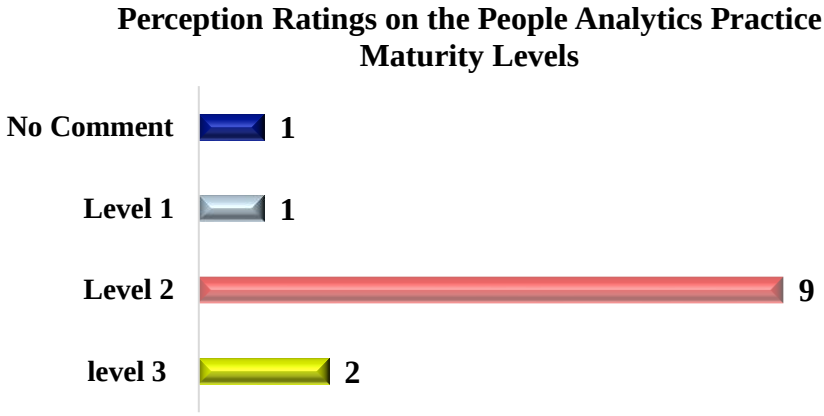

Figure 4.6. Synopsis of the People Analytics Maturity Level as indicated by respondents.

The case study on people analytics at Google refers. Google is one of the leading technology organisations across the world. Its innovative work environment and impactful HR practices have made it a favoured employer and one of the best organisations to work for globally. Google is also one of the frontrunners in the domain of people analytics and has achieved superior business results through its extensive usage and practice maturity of analytics in the domain of HR. Data and analytics have replaced opinions, feelings and intuitions of its managers, and are now the foundation of all its people-centric decisions. (Shrivastava et al., 2016).

Employees are a crucial resource of the Western Cape Government, and it is therefore important that appropriate people-orientated decisions are made. As per the literature review, Green (2019) asserts that Google created a fine example of incorporating analytics in the day-to-day decision making, thereby facilitating crucial insights into people operations. Within the Western Cape Government, the research results of this study make it evident that the public sector is a long way from maturity. It is therefore imperative that senior managers within the organisation are conscientised that critical insights, with which the organisation can be propelled forward, will only be uncovered with the combination of people, mind-set, processes and technology.

According to the South African scholar, Chrysler-Fox and Roodt (2014), even with the emerging developments and research in developed countries, specifically the USA and UK countries, the practical application of human capital metrics delivery in terms of maturity usage levels of choice and applicability is still in its early growing stages in South African organisations.

Davenport et al. (2010) stress the importance of having consistent, accurate, real-time, integrated, relevant and accessible employee data available in order to track employee competencies and reveal certain patterns. Bersin (2015) points out that the availability of HR data is not an issue, since organisations have captured educational history, demographic and performance information, and many other employee factors for nearly three decades. However, the full potential of people analytics can only be exploited when real-time data across functions and even those external to the organisation are combined.

In conclusion organisations' movement towards more advanced analytics maturity is supported by Vokic (2011), who advises that HR executives must do more than use data to report on past performance, generate compliance reports and process administrative tasks, they need to start using data to get to the heart of how employees contribute to business performance.

4.4.3.5 General comments

The last research question was posed to determine any general comments made by respondents. The majority of respondents felt the team members that works within the People Analytics Unit are quite competent and knowledgeable in their field and the Unit is often helpful in assisting departments with people analytics data enquiries. It was also mentioned that the team is always willing to look for ways to improve their application methods. A few comments are shown below:

" If you don't understand or if you question anything that the responses are quite quick. As you also know, I've been good to work with them" (Respondent 9).

"I think they're quite a good unit. The staff that I interacted with was very knowledgeable on the matter. They are very helpful when it comes to providing data. They're always looking for ways to upskill improve themselves" (Respondent 12).

4.5 Conclusion

This chapter focused on the perception of people analytics tools to improve people management practices of the respondents and the most prominent findings that emerged from the study. Through the process of thematic analysis, which was discussed in Chapter 3, key themes were derived and identified which were categorised as:

- people analytics: concepts and practices
- understanding and the application of people analytics by department coordinators and people professionals and
- the impact of people analytics products on the organisation.

The challenges and opportunities identified, are unique in every department. The opportunity presents itself to take time to understand the businesses that people analytics serve, gather the data what makes the respective departments successful. Furthermore, define what the people "levers" of that success factors are and determine how to influence those levers to drive improved business outcomes.

Hence, people analytics is a process journey and is a starting point and involves collaboration of the entire organisation in order to be effective in delivering their people strategy. The people analytics strategy for any organisation should be introduced in small steps, but have big long-terms goals in mind. Furthermore, it should include swift wins to develop and sustain momentum with various elements for change and awareness to all respective stakeholders (Isson & Harriott, 2016).

Finally, for the effective adoption of people analytics within the public sector, people-related analytical techniques will need to establish a predictive component with the right statistical tools in place. The component would have to have the appropriate system capacity and related people skills capability available and in place, in order to be considered business-relevant or effective for future strategic planning. Metrics should not just describe only "what has happened," but to also describe "what will happen". This is further supported and defined by Davenport et al. (2010), who state that more sophisticated statistical techniques are required to support data integrations in order to effectively translate the organisational strategy into practical business value-based outcomes.

CHAPTER 5: SUMMARY OF FINDINGS AND RECOMMENDATIONS

Chapter 5 provides an overall summary of the findings, the study limitations, contribution to knowledge, theoretical contribution, recommendations and insights for future research based on the limitations of the study. This is the concluding chapter of the research undertaken. The results, discussions and literature control were explained in Chapter 4.

5.1 Introduction - summary of the major findings

To summarise, the findings from the interviews indicated that there is a basic common understanding of what people analytic means, although there are clear differences in the descriptions of the term people analytics. However, the majority of the responses fell short of making clear distinctions of what the term people analytics meant and what it is understood to be in practice.

The various department coordinators and people professionals that were interviewed, indicated that the usage and adoption of people analytics in their departments tend to be in the very early stages of application. The research study showed that 75% of the respondents indicated that people management data reporting was mostly for compliance and regulatory purposes. The respondents from the various Client departments of the People Analytics Unit would need to become more equipped with the necessary data tools to develop strategic business planning and would need to manage and develop the right talent to drive the organisation forward. Respondents were mindful that people analytics is the vehicle for accomplishing this, but most indicated that they were not exactly sure how to do so.

It is imperative that the department coordinators and people professionals must first develop a strategic understanding of how human capital contributes to the organisation's success and overall business strategy. Therefore, if the nature of the issue to be looked at using analytical tools is not clearly defined, the probability of adding value to the organisation is extremely low.

One of the main themes that emanated from the study was that respondents recommended that the People Analytics Unit should start engagement sessions with the various department coordinators and people professionals, including on senior management levels, by marketing and presenting the People Analytics Unit's business model, its data reporting styles and its methodology and to adapt and tailor their reporting framework for each department's specific needs.

This is recommendations for the Western Cape Government to realise the value from investing in people analytics tools and processes. Furthermore, the departments would need to understand the relationship between their people management strategies and their business challenges and the potential impact thereof. They should also consider the methodologies at their disposal and the desired competencies from the respective management stakeholders required to translate the raw HR data into valid actionable execution. The People Analytics Unit has already built the capability framework to produce basic people management reports and metrics, using analytics to reveal and understand historical people management data trends, patterns and storytelling dashboards.

5.2 Limitations of the study

Given that the research study was qualitative in nature, the interview results measured the perceptions of the respondents about the topics discussed. These perceptions are not necessarily a representation of all perceptions of the topics discussed within the organisation, therefore the answer cannot be interpreted as a complete answer.

The study was conducted in the Western Cape only amongst respondents that were available from only 10 departments instead of the 11 departments that are supported by the People Analytics Unit. The study excluded two of the largest departments that consist of more than 60% of the public sector workforce in the province, namely the Department of Health and the Western Cape Education Department. People analytics practices still need to be adopted within these two departments.

Another limiting factor was the participants' profile, which included older white males who have worked in the Western Cape Government for very long periods (eight of the 13 respondents were white males between the ages of 45 and 57 years of age and their tenure ranged from 22 to 32 years). There could be a different perspective amongst a younger more diverse set of senior managers who would possess a more modern way of business thinking and perspective on the research matter studied.

This could also pose a possible risk to the reliability of the data, since it implies that if the same interview was extended and conducted, the responses to the research study might have been different.

The literature review consulted was limited in that there was not sufficient academic literature available and therefore, lack of accredited academic journals especially within the South

African context, to provide an academically accepted definition of People analytics, the adoption and practice application thereof. These posed challenges for the research study to provide a detailed academic literature around the subject of People analytics; hence a dependence on literature drawn from researchers and organisations that are experienced in the adoption and application of People analytics.

Further opportunities therefore exist for quantitative, longitudinal research in this field to objectively ascertain the extent of usage of People analytics within the public sector.

5.3 Recommendations for Theme 1 - People analytics: concepts and practices

For the successful adoption of people analytics in the selected departments in the Western Cape, department management teams need to be proactively prepared through the formulation of change management awareness and training curriculum initiatives through hosting various stakeholder workshops and also initiate end-user experience testing and reflection sessions to ensure good and effective practical implementation. Furthermore, the findings support the establishment of a people analytics exchange hub that consists of people professionals from the various departments in the Western Cape Government, where this forum can share best practices, data governance principles and experiences of leveraging people analytics.

These individual stakeholders could probably become the department advocates and could help to promote the adoption of effective people analytics practices by extending fact-based decisions and data-driven approaches across the Western Cape Government.

The People Analytics team should seek to be understood by demonstrating and showing the value and importance of the use of people analytics to the business in a language that business leaders/department management can understand and will embrace. This can be done with the client by identifying the critical business question(s) that the department needs assistance with in their key trend development and by providing accessibility of data information by providing simple and clear data visualisations that are easy to comprehend.

In available literature Isson and Harriott (2016) recommend that a people analytics team should provide meaning by articulating clear and brief interpretations of the data the story is telling. The team should also provide proposed thoughtful business recommendations to the client by using the LAMP theoretical framework. Their key focus should be on a multipronged communication approach that will provide acumen to management in their respective departments, using interactive business intelligence tools and by developing people

management data information by means of newssheets or circulars. Finally, the team together with the client should develop a way to track and monitor the business effects of the reflections and insights that have been prioritised and implemented with quarterly or bi-annual follow-up sessions to ensure sustainable business continuity.

Recommendations for Theme 2 – Understanding of and application of people analytics by department coordinators and people professionals

One of the main sub-themes that was observed during the research findings, and also highlighted by the respondents, was that the People Analytics Unit should engage with the various department coordinators and people professionals throughout the organisation by marketing and presenting the People Analytics Unit's business model, data reporting styles and methodology and by adapting a tailored reporting framework for each department's needs.

This engagement would create awareness in order for the client to gain a comprehensive understanding of the unit's service delivery capabilities and also have greater insights into their department's talent issues, gaps, strengths, and goals.

This development will facilitate the need for a change management process by using the ADKAR change management model as eluded by Hiatt (2006). The ADKAR model is a five-step framework that helps deal with the people-aspect of change management namely; awareness, desire, knowledge, ability and reinforcement dimensions. The methodology is mainly intended to be a coaching and change management tool to help and assist employees through the change process within organisations. The model would explore and drive each building block in respect of mechanisms in building awareness and importance amongst management, it would highlight the importance of adopting the people analytics concept in the department and creating the desire for all stakeholders to participate in the plan. Furthermore, the People Analytics Unit would need to provide the necessary training and support for the process, system knowledge and on how to use the tools for decision making, and, finally, establish a supporting strategy to ensure practice sustainability for efficient people management-related data.

The People Analytics Unit should also facilitate short engagement sessions, for example at a department's quarterly top management meeting. The Unit could select a high impact people management data reporting area to have a critical conversation around the story the data is telling as well as act upon progressive business questions related to the human capital resources of a department.

With this said, it is advised that the team perform research reflections towards development of a learning bank, the formulation of a people analytics framework to outline the elements required to adopt the implementation of the people management framework and to undertake forward planning and propose mutually agreed upon prioritised recommendations with the client to improve internal processes and sound people management intelligence and thereby adding strategic business value.

Another finding that emerged as a limiting factor for departments to successfully adopt people analytics is that the people management reports provided so far were all based on past data and not on update-to-date, real-time data. As indicated by Hendricks (2012), this challenge could be addressed in the organisation's medium to long-term plan (which is dependent on financial resource availability), the implementation of the Integrated Financial Management System (IFMS) online system and procurement of statistical tools for predictive people management analytics. The implementation of an IFMS online platform system would play a critical role in enabling the Western Cape Government to capture, store, manage, integrate, and analyse real-time data. This will assist with the data and intelligence building blocks that range from basic database management tools to the most customised statistical packages for data mining and predictions.

Analysing people management data in order to distil actionable and predictive insights for future planning also requires a statistical or data science specialised skill set that people professionals and business leaders supporting a workforce strategic planning project typically do not possess.

Therefore, the implementation of these tools, which would enable departments to do predictive analytics for scenario forecasting, would provide them with one of the best enabling drivers to make people management become more strategic focused. This would assist the Western Cape Government to sustain and protect their investment in human capital in order to positively impact the organisation's bottom line (Edge, 2012).

Recommendations for Theme 3 - The impact of people analytics products on the organisation

Living in the information age, people management data has become fundamental to our daily business routines. As more aspects of our lives become influenced by technology, the masses of data are increasing. According to Bersin (2015), organisations are also overlooking the

growth opportunities presented by analytics. The Deloitte report also publicised that analytics is one of the areas where organisations face a significant capability gap.

While the widespread adoption might be limited, people analytics has grown from a technical specialist group to a serious business function that must meet the needs of many stakeholders throughout the organisation. In short, the ability to analyse huge amounts of data should be more of a business-wide function which is not only limited to HR, but should also advocate a multidisciplinary stakeholder approach.

A key sub-theme that emerged from the study (the majority of respondents indicated this as a key limitation factor for the success of adopting the application of people analytics practices within the respective departments) was management's understanding, engagement and lack of skills to analyse the people analytics reports presented by the People Analytics Unit.

For the practical adoption of people analytics within the respective departments, one of the recommendations is to minimise the data communication gap for the client through the development of an introductory short course on data analysis information. A few training sessions to be scheduled in this field that will provide the client departments with a basic understanding of data analytics, in particular around topics such as data analytics techniques with the focus on people management data, types of people management data, business intelligence, data warehousing and basic guidelines on predictive and prescriptive analytics. This course design could be a collaborative in-house development between the People Analytics Unit and the Western Cape's Provincial Training Empowerment Directorate responsible for course offerings located at the Kromme Rhee Training School. A blended training approach could be considered for the short course with a combination of face-to-face classroom facilitation and online computer-based modules.

The course will also allow the department coordinators and people professionals to acquire additional skills and tools such as using MS Excel for data analysis and to understand where advanced analytics tools fit in, based on the logic of the data analysis, the process of analysis and basic statistical techniques. In this way, the client may be kept motivated to learn some of the latest techniques and best practices on how to use different types of people-related data information across the business and thereby derive meaningful insights that can support better business decision making.

5.3 The contribution to knowledge

The key contribution to knowledge in support of the upskilling of management in the respective departments would be the development of a short-course workshop for department coordinators and people professionals at all management levels for basic data analysis and reporting training. The People Analytics Unit would provide input and collaborate with the Western Cape Government's Provincial Training Empowerment Directorate in the short course curriculum design. This intervention should be a phased and blended learning approach with all stakeholders. The proposed commencement date should be scheduled within the next financial year.

The typical people professional should become skilled at decision-making clarity, for example the professional should be trained in asking the right business questions, as this is the key contributing driver of the analytics journey. Secondly, they should be competent to apply the basic mathematics literacy and application.

People management will find the greatest impact in the analytics space which includes effective people management data reporting and the exciting world of progressive statistics. Furthermore, the average people professional just needs a little extra support in bringing rigour to decision making to attain these effective levels. If people managers have the confidence to choose the statistically insignificant fork in the road and explain why they made that choice, they are on the right path to analytics.

Another aspect would be to grow the skills capability of the people analytics team in a strategic way. The team members need to demonstrate their ability to conceptualise the client department's business requirements during strategic engagements as well as possess core consulting skills such as business problem definition, change management facilitation, problem solving and project management, which are important inherent skills needed to drive the adopted culture within departments. Another prerequisite is that members of the people analytics team must have the aptitude to run statistical analyses using specialised tools and methodologies, which are also required to understand how facts about people translate into business success in measurable terms.

5.4 Theoretical contribution

The dissertation contributes to new insights related to the implementation of people analytics in the public sector within the South African context. It further provides a more complex

interpretation of the concept based on the perceptions of the department coordinators and people professionals. Therefore, the use of the term of people analytics, its common understanding and application is still not yet fully being established and practiced amongst department coordinators and people professionals within the various client departments. The people management function is still viewed as a compliance and regulatory practice and is not yet receiving the key focus and priority in the respective departments by line and senior management stakeholders.

For the People Analytics Unit to develop into becoming a strategic business partner with its client departments, the people analytics team would need to develop a better understanding of the business and adapt their business models according to the departmental HR specification data needs, which may vary between departments. In this way, the People Analytics Unit would provide efficient support mechanisms for line and senior management, which in turn will enable and empower managers with the necessary tools when making strategic decisions based on their people management process capability, which can only bring value to the business.

The findings of the research study conclude that department coordinators and people professionals understand the possibilities of people analytics, but still do not have a clear understanding of the various tools the Unit can offer and how they can be utilised. It can be concluded that the People Analytics Unit can offer innovative and sophisticated tools for effective data reporting, its successful implementation, however, is dependent on the capabilities of the people that are using them, their ability to understand the tools and the story the data is telling.

Considering its limited application, people analytics hasn't drawn significant attention from the academic community up until recently and thus research on the topic is still very scarce, especially within the South African context. Yet given all the promises that the adoption of the practice holds for organisations, people analytics represents an important topic to explore, as any organisation's human capital is its prime asset.

The extensive literature review recently conducted by Marler and Boudreau (2017) has identified only 16 peer-reviewed articles on the topic of people analytics that were included on the Journal Quality List. The term "HR Analytics" originated in 2003-2004 and thus far no widely accepted definition of HR Analytics has been developed (Marler & Boudreau, 2017).

Although the phenomenon is endowed with high strategic potential as defined by Marler and Boudreau (2017), there is still little evidence that proves the value of people analytics and its

successful adoption by using theoretical frameworks, as practical application by organisations has been limited.

Marler and Boudreau (2017) also advise that future research needs greater precision and more unifying frameworks, for example the LAMP model that is proposed for organisations. This could be used to acquire a better conceptual understanding of the people analytics phenomenon, especially within the public sector.

5.5 Recommendations for future research possibilities

Related to the design of this thesis a few possible directions for future research were identified. As mentioned, the research related to people analytics is still very limited. More research is needed, which could be undertaken at the three departments not included in this study, namely Local Government, Health and Education Departments of the Western Cape, to give a more complete picture of the usage and level of people analytics application in the rest of the province.

Another interesting possibility would be to conduct a comparative study between the public sector and organisations from the private sector where people analytics are already used in order to see how the concept is currently implemented and organised in practice. It would be equally interesting to perceive how these organisations from the private sector have arranged their people analytics department, what their best practices in terms of internal collaborations regarding analytical skills are, what their output is and how it has affected the competencies of their people professionals.

5.6 Conclusion

This study was able to ascertain the levels of application and the current adoption of people analytics within ten selected government departments in the Western Cape. The study revealed that the concept, usage, importance and multidisciplinary approach of people analytics is slowly being embraced, albeit not fully deployed, amongst all department coordinators and people managers in the departments that were surveyed.

Mechanisms to prioritise clean, up-to-date, real-time and reliable people management data across all departments should be incorporated into the organisations three- to five-year project plan which should also include budgeting for necessary resources. The plan should make provision for concrete steps to ensure that real-time data, quality and governance is a part of every stakeholder analytics conversation.

Literature supported by Stephan and Walsh (2017) suggests that the people professional should understand that analytics consists of a multidisciplinary approach through the identification of a curriculum or other partners to assist with change management initiatives, training, implementation of standard tools, standardised reporting and real-time dashboard reporting.

In closing, in this new digital world where change is constant, data and analytics become a living journey. This means building an ongoing relationship with the leaders of an organisation, where predictive analytics will lead to reinvigoration and become the radar for change in the business.

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7. APPENDICES

Appendix A Permission of the Chief Directorate of People Management Practices

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES
UNIVERSITY of the WESTERN CAPE
Department of Industrial Psychology

15 April 2019

Dear Ms Louise Esterhuyse

TO REQUEST PERMISSION TO CONDUCT RESEARCH WITHIN CORPORATE SERVICES CENTRE

I hereby request permission to conduct research for my Masters Thesis, entitled, Research Topic: "*An evaluation of the impact of people analytics in improving People Management practices in selected Corporate Services Departments in the Western Cape*".

I will be performing individual qualitative interviews with the relevant CRU Coordinators from the departments and people professionals per targeted functional area within the CSC branch. The expected interview timeframe should be approximately an hour.

This process will assist me to test the impact and value that goes with the implementation of People Analytics products for People Management Practices within the branch. After the data has been analysed, your office will receive a copy of the findings.

The participation will be voluntarily and the participant can withdraw at any time without penalty. All information provided will be kept confidential and would be used for academic purposes only.

I trust that this application will receive your favourable response.

Thank you in advance for your consideration and support.

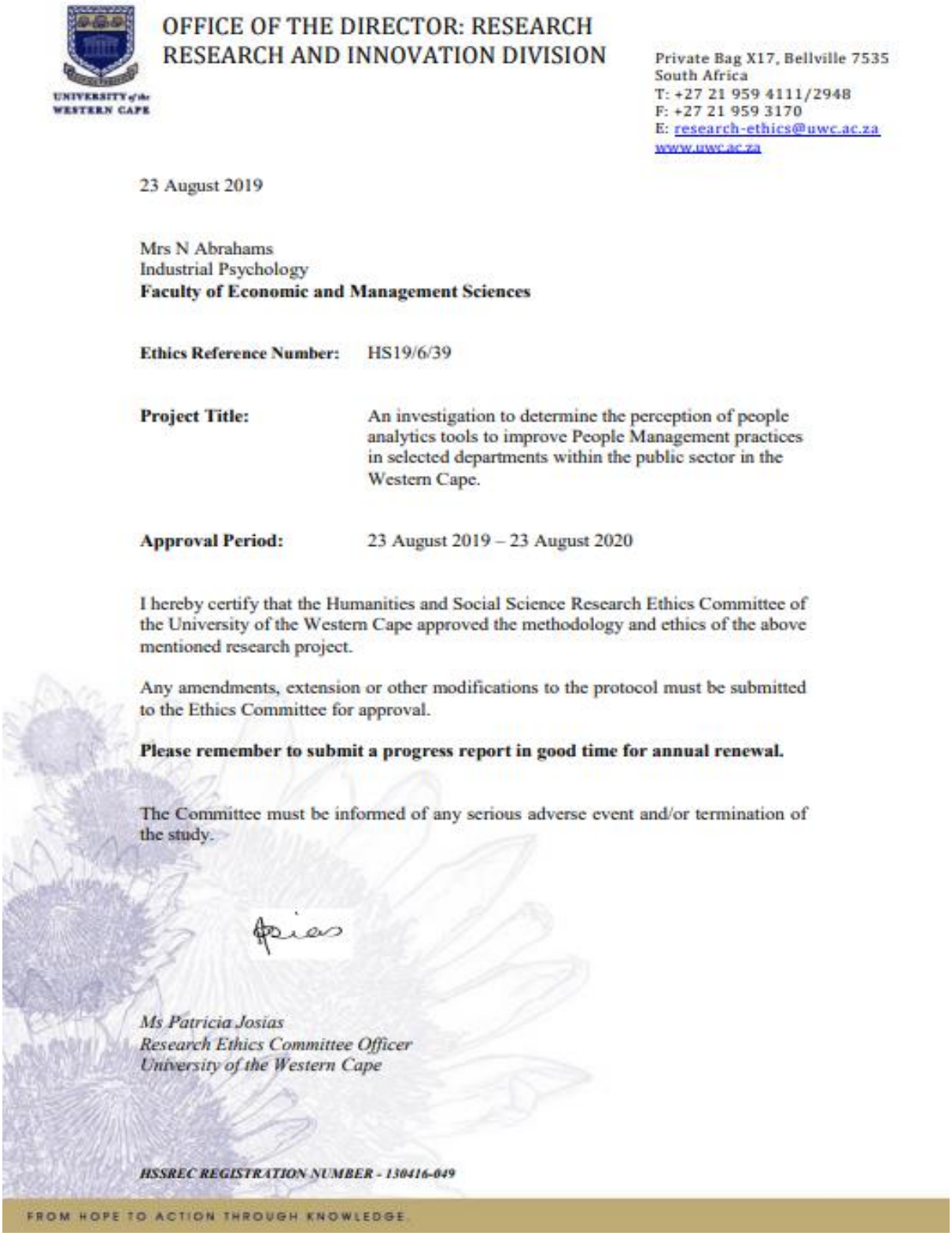
Nazreen Abrahams
Date: 15 April 2019

Approved/ Not Approved

CHIEF DIRECTOR: PEOPLE MANAGEMENT PRACTICES
MS L ESTERHUYSE

Date: 15/4/19

Appendix B Ethical clearance permission from University of Western Cape



UNIVERSITY of the WESTERN CAPE

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23 August 2019

Mrs N Abrahams
Industrial Psychology
Faculty of Economic and Management Sciences

Ethics Reference Number: HS19/6/39

Project Title: An investigation to determine the perception of people analytics tools to improve People Management practices in selected departments within the public sector in the Western Cape.

Approval Period: 23 August 2019 – 23 August 2020

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

HSSREC REGISTRATION NUMBER - 130416-049

FROM HOPE TO ACTION THROUGH KNOWLEDGE

Appendix C Participation leaflet

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

DEPARTMENT OF INDUSTRIAL PSYCHOLOGY

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Bellville
7535

Robert Sobukwe Road
Bellville
7530

(021) 959-3184
(021) 959-3906 (fax)

Dear Participant,

I am conducting research and the title of my thesis is: ***An investigation to determine the perception of people analytics tools to improve People Management practices in selected departments within the public sector in the Western Cape.***

Please take time to read through this information sheet carefully in order for you to be knowledgeable about what is required of you as a research participant in this study. This research project has received ethical clearance reference HS19/6/39 from the Humanities & Social Sciences Research Ethics Committee of the University of the Western Cape, Tel: 021 959 4111/2948, email: research-ethics@uwc.ac.za.

As a participant who gives consent of your participation in this study, you will be required to

- Participate in an interview where you will be asked questions about your perceptions of people analytics tools to improve People Management practices in selected departments in the public sector in the Western Cape. This form gives consent to being recorded for research purposes. The information obtained will contribute to the success of the study.

Please note that:

1. Your participation in this research study is completely voluntary;
2. Your responses and information will be kept and remain confidential and anonymous;
3. You can withdraw from the process at any point in time;
4. Your participation does not in any manner impact your current activities and relationship at your institution;

5. There are no foreseeable risk involved in participating in the study, and
6. There are no costs involved in participating in the study.

I hereby agree that I have read through and understood the information that has been provided to me. I agree that I have been afforded the opportunity to contact coordinator of this programme. My signature below confirms that I have agreed to my participation in this study's activity and I have been given a copy of this form.

_____ _____

Name and surname Signature

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, feel free to contact Professor Fatima Abrahams or my Head of Dept. Prof Bright Mahembe on the contacts below.

Researcher: Nazreen Abrahams Email: 3823124@myuwc.ac.za
Supervisor: Prof. F. Abrahams Email: fabrahams@myuwc.ac.za
HOD: Prof B Mahembe Email: bmahembe@uwc.ac.za;

Thank you for participating in my study

Appendix D Consent to participate in study

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

DEPARTMENT OF INDUSTRIAL PSYCHOLOGY

Private Bag X17
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(021) 959-3184
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Title: An investigation to determine the perception of people analytics tools to improve People Management practices in selected departments within the public sector in the Western Cape.

Researcher: Nazreen Abrahams

	Please initial box
▪ I confirm that I have read and understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project;	☐
▪ I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. (If I wish to withdraw I may contact the lead researcher at any time);	☐
▪ I understand my responses and personal data will be kept strictly confidential. I give permission for the interview to be audio-recorded. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the reports or publications that result for the research;	☐
▪ I understand that there are no foreseeable risk involved in participating in the study;	☐
▪ I am aware that there are no costs involved in participating in this study;	☐
▪ I agree with the data collected from me can be used for future research, and	☐
▪ I agree to take part in the above research project.	☐

UNIVERSITY of the WESTERN CAPE

Name of Participant	Date	Signature
Name of person taking consent	Date	Signature
Lead Researcher	Date	Signature

(*To be signed and dated in presence of the participant*)

Copies: *All participants will receive a copy of the signed and dated version of the consent form and information sheet for themselves. A copy of this will be filed and kept in a secure location for research purposes only.*

Appendix E Interview guide

UNIVERSITY of the WESTERN CAPE

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES
DEPARTMENT OF INDUSTRIAL PSYCHOLOGY

Interview Questionnaire Guideline

Participant Demographic Information: -

Participant Full Name:	
Title:	
Tenure in Role:	
Date of Birth:	
Functional Area:	
Study ID Code:	

Background

Since the early 20th century, the collection and processing of employee data has been the central element in people management practices. As the understanding of employee efficiency and the potential contribution of people management (PM) increased, more diverse data started to be collected and, gradually, the role of PM began to change. A major driving force behind this evolution has been the rapid development of information technology in organisations. The aim of the study is an investigation to determine the perception of people analytics tools to improve People Management practices in selected departments within the public sector in the Western Cape.

Research Objectives:

1. To gain an in-depth understanding of people analytics as a concept and in practice;
2. To find out if there is a common understanding of people analytics by department coordinators and people professionals within the selected departments, and
3. To assess perceived impact of PA products to the organisation by department coordinators and people professionals within selected departments.

1. **What do you understand by the concept/ definition of People Analytics (PA)?**
2. **Are you aware that there is a People Analytics Unit that exists within the CSC?**
3. **What PA product / services is rendered by the unit? Which product/solution is provided and adopted in your department to manage your people data?**
4. **What are your perceptions around people analytics in your dept.?**
5. **What is your expectation regarding the reporting style of the PA reports?**
6. **Is there a perceived need for using PA in your functional area / dept.?**

1

7. **What should be done to make PA a more useful feature of PM at WCG?**
8. **Upon receipt of PA products are there any benefits / limitations of the product?**
9. **Tell me a little more on your perception of the people management data?**
10. **In what areas would you be interested in expanding your PA capabilities?**
11. **Does the receipt of the PA products/services within your dept. have appropriate ability to analyse and interpret the data to make effective strategic decision planning?**
12. **Future of PA**
    a. **How do you see this field developing over the next two years?**
    b. **People Analytics Maturity Model**

i. If you were to plot the services/products rendered by the PA unit in terms of the maturity level of reporting, where would you say the PA unit is situated on the level of maturity.

Source: Bersin & Associates, 2012.

13. **Any further comments about People Analytics within the WCG?**

Thank you for your participation

2

Appendix F Themes/codes framework – created in Atlas.ti

Project: Thesis People Analytics

Report created by Nazreen on 22/11/2019 - Atlas.ti

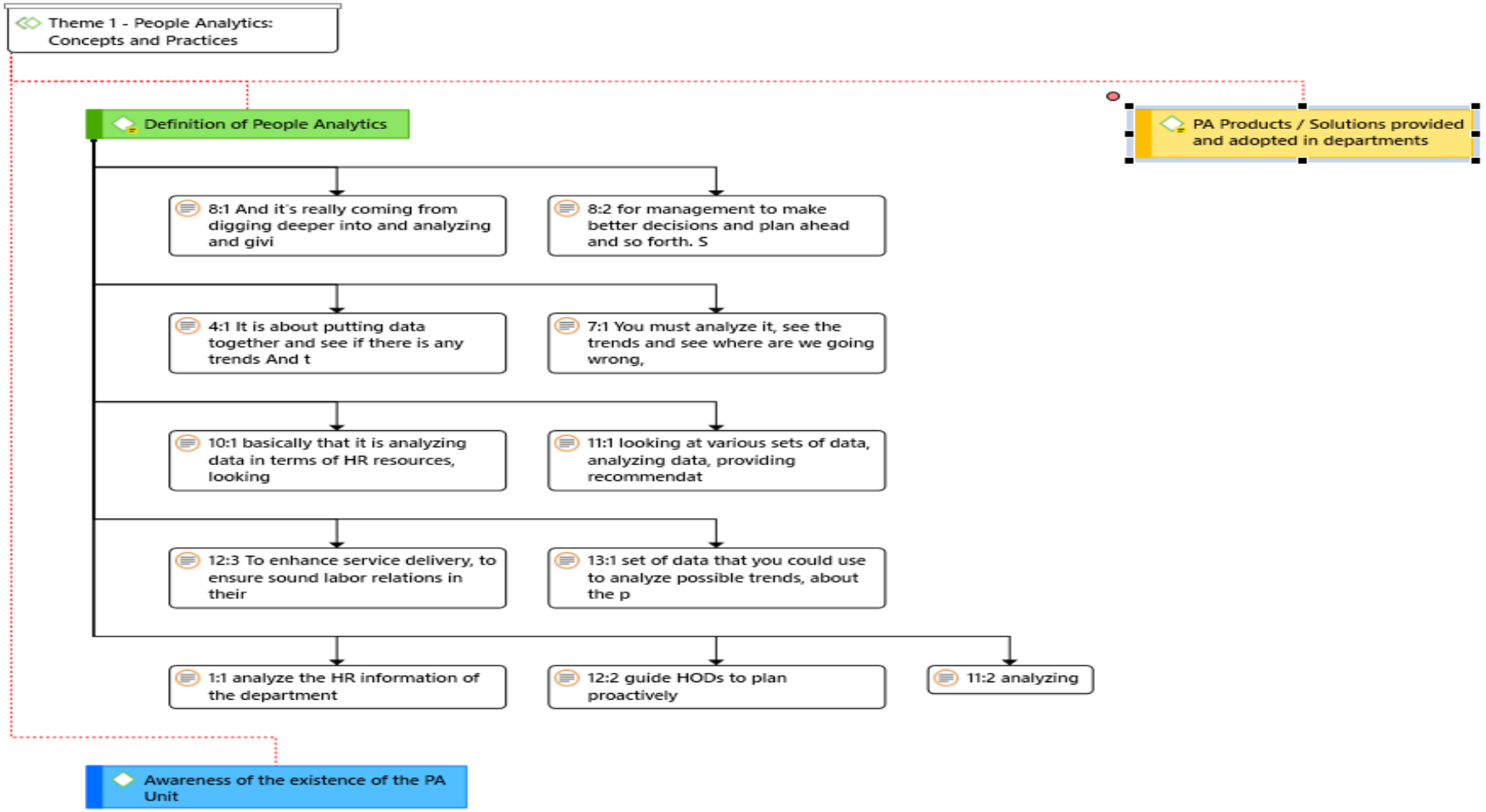
Output code list and description report created in Atlas.ti

Theme 1 - People analytics: concepts and practices	
Definition of people analytics	To determine the concept level of understanding of people analytics
Theme 2 – Understanding of people analytics products to the organisation by department coordinators and people professionals	
Management engagement with data reports and implementation	To determine the level of management's commitment and utilisation of people analytics
Marketing awareness of PA tools and engagement	The brand awareness describes the degree of people analytics business modelling concept and practice recognition
Useful tool for HR planning	The code describes the value brings when applying planning methods and tools to define and interpret the people management information for comparing alternatives
No real -time data	Code relates to the people analytics report, generating information on past people data trends and statistics and not current and real-time data reporting
Data integrity	Perceptions around the HR data
Tailor reporting style for audience with more detail & meaning	The code description makes inferences that people analytics report styles should be adapted and tailored to the requirements and specifications of the client departments
PA use	Describes the perceived need for using people analytics in the client department
PA tool features	Enquiry description to determine the client's requirements in making the people analytics report a more useful feature
Perceptions around PA in respondent's departments	The code dimensions links to the common general perceptions of how the respondent views the application and practice in their relevant departments
Reporting style expectations	The code defines the final report output methodology i.e. business report, infographics report with detail, interactive dashboard with sub-links to more interactive detail and a research report
Theme 3 – The Impact of PA products to the organisation	
Application impact	Describes the impact of the practice has on the client departments
Barriers / challenges	A description of the process and system limitations linked to people analytics practices

Benefits of PA	Defines the key value-added benefits of people analytics application
Expanding PA skills capability	The code refers to the expected training requirements enabling basic data analysis
Future of people analytics	views on the field would be developing over the next 2years with the public sector
General Comments	
General Comments	The code to describe the overall opinions
Active Advisory role for Stakeholder Engagement	The code description emanating from the general comments that the People Analytics (PA) Unit should play an active advisory/consultant role for clients
Useful tool for HR Planning	The code describes the value brings when applying planning methods and tools to define and interpret the people management information for comparing alternatives
PA unit efficient, always helpful	The code describes the services rendered by the People Analytics (PA) Unit
Codes created with low common frequency	
Dissemination of Data Reports	The distribution medium of the people analytics reports within departments
IFMS system implementation with real-time data	Code describes the system requirement to report real-time data
Implementation Online Dashboard with Secured Access	Code description for PA system enhancement capability
Lack of Data Analysis Skills	Specific skills requirements
Level of Application - Maturity PA practice level	The code refers the Bersin people analytics maturity model
Data inform Management to Make Strategic Decision	Defining aspects towards establishing facts to make strategic decision
Management should focus to prioritise HR Planning	Importance of HR planning
More training / Info Sessions for Upskilling	The code created relates to key training requirements for clients
PA Products / Solutions provided and adopted in departments	The code identifies the various people analytics report categories that is adopted in the various client departments
Past HR Data	The code describes one of the key limiting factors of the reports comprising past people data and not real-time current data for scenario planning

Appendix G Word cloud *(A visual presentation of the frequency of words related to the study extracted in Atlas.ti)*

Appendix H Network analysis map – Atlas.ti - Theme 1: People analytics concepts and practices (A few comments illustrated)



Appendix I Network analysis map – Atlas.ti - Theme 2: Understanding and the application of PA by DC & PP – page 1 (A few comments illustrated)