

**Regent Business School**

**Exploring the Role of Knowledge Management support for Enterprise Architecture adoption and its Impact on Organisational Performance. A Case Study of Motor Vehicle and Asset Finance bank., in Gauteng.**

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**Exploring the Role of Knowledge Management support for Enterprise Architecture adoption and its Impact on Organisational Performance. A Case Study of Motor Vehicle and Asset Finance bank., in Gauteng.**

**by**

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## **Abstract**

In recent years organisations depend heavily on enterprise architecture to stay competitive in the global space (Zapata, et al.,2019). These organisations now anticipate the resources hired to have basic information technology skills. It was noticed that there are number of challenges that prevent successful adoption of enterprise architecture into organisations.

The study followed a quantitative approach to establish what are the challenges. Therefore, it is very critical for organisations to adopt enterprise architecture into their working environment and equip employees with the necessary required skills by the present workspace, which prevent successful adoption of enterprise architecture into the organisations. The challenges raised on this dissertation would inform the management and some decision-makers regarding the challenges and issues faced by employees about the utilization of enterprise architecture and knowledge management in the organisation. Collection of data was received from 85 participants which were chosen utilizing probability simple random sampling type.

The key findings of the study revealed that majority of participants know what Enterprise Architecture does and believe it is important. The areas in which participants are expecting to identify the benefits from utilizing enterprise architecture is to standardize, integrate or/and remove duplication of related systems and processes. The participants indicated that business and/or IT governance has changed as an outcome of enterprise architecture in the organisation under study. Most participants agree that the adoption of Enterprise Architecture was supported by a culture change and transformation program, this factor was rated high. The findings of the study indicate that there is significant improvement in promoting knowledge sharing among Enterprise Architecture team and other organisational employees.

The recommendations of the study, majority of respondents know what Enterprise Architecture does and believe it is important the organisation must therefore direct its efforts assuring that Enterprise Architecture is accepted by all organisational members. It may be advisable for possible future research to elaborate on more than 1 company that can enable for more generic conclusion to be done. This study adds to the body of knowledge on the topic. The changes that should be implemented as a result of the findings of the work is that the organisation must ensure that every employee participates actively on the development of Enterprise Architecture to improve organisational performance.

**Declaration**

I, Phillip Mandla Mtombeni, do hereby declare that this dissertation is the result of my investigation and research and that this has not been submitted in part or full for any degree or for any other degree to any other University.



12/10/2020

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P.M Mtombeni

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Date

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## **TABLE OF CONTENTS**

<b>Content</b>	<b>PageNo.</b>
<b>Title page</b>	<b>i</b>
<b>Abstract</b>	<b>ii</b>
<b>Declaration</b>	<b>iii</b>
<b>Acknowledgements</b>	<b>iv</b>
<b>Table of Contents</b>	<b>v</b>
<b>List of Tables</b>	<b>ix</b>
<b>List of Figures</b>	<b>x</b>
<b>List of Acronyms</b>	<b>xi</b>
<b>1 CHAPTER 1: INTRODUCTION</b>	<b>1</b>
<b>1.1 Introduction</b>	<b>1</b>
<b>1.2 Background to the Problem</b>	<b>1</b>
<b>1.3 Problem Statement</b>	<b>2</b>
<b>1.4 Aim Of the Research</b>	<b>3</b>
<b>1.5 Research Objectives</b>	<b>3</b>
<b>1.6 Research Questions</b>	<b>3</b>
<b>1.7 Significance of the Research</b>	<b>3</b>
<b>1.8 Format of the study</b>	<b>5</b>
<b>1.9 Conclusion</b>	<b>6</b>
<b>2 CHAPTER 2: LITERATURE REVIEW</b>	<b>7</b>
<b>2.1 Introduction</b>	<b>7</b>
<b>2.2 Enterprise Architecture Definition</b>	<b>7</b>
<b>2.3 The current role of EA in the asset finance and motor vehicle industry</b>	<b>8</b>
<b>2.4 Important success factors for EA adoption</b>	<b>19</b>
<b>2.5 Knowledge Management Definition</b>	<b>20</b>

<b>2.6 Impact of knowledge management and its linked practices may be utilized in increasing the potential success of EA</b>	<b>21</b>
<b>2.7 Sample Technologies</b>	<b>25</b>
<b>2.8 Knowledge Management and organisational culture</b>	<b>26</b>
<b>2.9 Barriers and recommendations to improve adoption of EA in asset finance and motor vehicle industry adoption</b>	<b>27</b>
<b>2.10 The South African motor VAF industry</b>	<b>31</b>
<b>2.11 The industry of banking</b>	<b>31</b>
<b>2.12 The industry of South African Asset Finance and Motor Vehicle</b>	<b>32</b>
<b>2.13 Conclusion</b>	<b>33</b>
<b>3 CHAPTER 3: RESEARCH METHODOLOGY</b>	<b>34</b>
<b>3.1 Introduction</b>	<b>34</b>
<b>3.2 Research Philosophy</b>	<b>34</b>
<b>3.3 Research Design</b>	<b>35</b>
<b>3.4 Research Strategy</b>	<b>36</b>
<b>3.5 Target Population</b>	<b>37</b>
<b>3.6 Sampling</b>	<b>37</b>
<b>3.6.1 Kinds of Sampling on both Probability and Non-probability</b>	<b>38</b>
<b>3.7 The Research Instrument</b>	<b>39</b>
<b>3.7.1 Questionnaire</b>	<b>40</b>
<b>3.8 Pilot Study</b>	<b>40</b>
<b>3.9 Administration of Questionnaires</b>	<b>41</b>
<b>3.10 Collection of Questionnaires</b>	<b>41</b>
<b>3.11 Data Analysis</b>	<b>41</b>
<b>3.12 Validity and Reliability (quantitative)</b>	<b>42</b>
<b>3.13 Limitations of the Research</b>	<b>43</b>

<b>3.14 Elimination of Bias</b>	<b>44</b>
<b>3.15 Ethical Consideration</b>	<b>44</b>
<b>3.16 Conclusion</b>	<b>46</b>
<b>4 CHAPTER 4: RESULTS ,DISCUSSION &amp; INTERPRETATION OF DISCUSSION</b>	<b>47</b>
<b>4.1 Introduction</b>	<b>47</b>
<b>4.2 Presentation</b>	<b>47</b>
<b>Section A</b>	<b>48</b>
<b>4.3 Demographics</b>	<b>48</b>
<b>SECTION B</b>	<b>53</b>
<b>4.4.1 First Research objective: To identify the current role of EA in the asset finance and motor vehicle industry</b>	<b>52</b>
<b>4.4.1.1 Question 1: Which phrases describes your identification of EA in the organisation?</b>	<b>48</b>
<b>4.4.1.2 Question 2: In which areas are you expecting to identify the benefits from utilizing EA?</b>	<b>54</b>
<b>4.4.1.3 Question 3: Please show how these factors are changing or have changed as an outcome of EA in your organisation.</b>	<b>57</b>
<b>4.4.2 Second Research objective: To determine the impact of knowledge management in increasing the potential success of Enterprise Architecture in the organisation</b>	<b>73</b>
<b>4.4.3 Third Research Objective: To determine the barriers and offer recommendations to improve adoption of EA in asset finance and motor vehicle industry</b>	<b>82</b>
<b>4.5. Conclusion</b>	<b>100</b>
<b>5 CHAPTER 5: CONCLUSION AND RECOMMENDATION</b>	<b>101</b>
<b>5.1. Introduction</b>	<b>101</b>
<b>5.2. Finding from the Study</b>	<b>101</b>
<b>5.2.1. Finding from Literature Review</b>	<b>102</b>
<b>5.2.1.1 First Research objective: To identify the current role of EA in the asset finance and motor vehicle and industry</b>	<b>102</b>



5.2.1.1.1 Question 1 which phrases describes your identification of EA in the organisation?	102
5.2.1.1.2 Question 2 In which areas are you expecting to identify the benefits from utilizing EA?	102
5.2.1.1.3 Question 3: Please show how these factors are changing or have changed as an outcome of EA in your organisation?	103
5.2.1.1.3.1 Viewed effect of EA on Business and/or IT governance	103
5.2.1.2 Second Research objective: To determine the impact of knowledge management in increasing the potential success of Enterprise Architecture in the organisation	103
5.2.1.2.1 Promoting knowledge sharing among EA team and other organisational employees	103
5.2.1.3 Third Research Objective: To determine the barriers and offer recommendations to improve adoption of EA in asset finance and motor vehicle industry	104
5.2.1.3.1 Adoption of EA was supported by a culture change and transformation program	104
5.2.2.1 To identify the current role of enterprise architecture in the asset finance and motor vehicle industry, in Gauteng	105
5.2.2.2 To determine the impact of knowledge management and its linked practices may be utilized in increasing the potential success of enterprise architecture, in Gauteng	105
5.2.2.3 To determine barriers and offer recommendations to improve adoption of EA in asset finance and motor vehicle industry, in Gauteng	105
5.3 Conclusion	106
5.4 Recommendations	106
5.5 Area/s for further Research	107
5.6 Conclusion	108
Bibliography	109
Appendices	

<b>Appendix A</b>	<b>119</b>
<b>Appendix B</b>	<b>123</b>
<b>Appendix C</b>	<b>124</b>

## **List of Tables**

<b>Table 3.1: Four 4 key philosophy paradigms</b>
---

<b>33</b>
-----------

## List of Figures

<b>Figure 2.1 Macro view of the environment and enterprise architecture</b>	<b>14</b>
<b>Figure 2.2: Proposed theoretical framework for project knowledge sharing contribution to project</b>	<b>22</b>
<b>Figure 2.3: Sample Knowledge Management Initiative</b>	<b>25</b>
<b>Figure 2.4: Sample Technologies of Knowledge Management</b>	<b>26</b>
<b>Figure 4.3.1 Age Group</b>	<b>48</b>
<b>Figure 4.3.2 Gender</b>	<b>49</b>
<b>Figure 4.3.3 Highest Qualification</b>	<b>50</b>
<b>Figure 4.3.4 Years of Employment</b>	<b>51</b>
<b>Figure 4.3.5 Job Level</b>	<b>52</b>
<b>Figure 4.4.1 The current role of EA in the asset finance and motor vehicle industry</b>	<b>53</b>
<b>Figure 4.4.2 The benefits from utilizing EA</b>	<b>55</b>
<b>Figure 4.4.3.1: The effect of Enterprise Architecture on Audit Compliance</b>	<b>58</b>
<b>Figure 4.4.3.2: The effect of Enterprise Architecture on Management of Risk</b>	<b>60</b>
<b>Figure 4.4.3.3: The effect of Enterprise Architecture on System Integration</b>	<b>61</b>
<b>Figure 4.4.3.4: The effect of Enterprise Architecture on Continuity of company's knowledge</b>	<b>63</b>
<b>Figure 4.4.3.5: The effect of Enterprise Architecture on Data Integrity</b>	<b>64</b>
<b>Figure 4.4.3.6: The effect of Enterprise Architecture on Technical Integrity</b>	<b>65</b>
<b>Figure 4.4.3.7: The effect of Enterprise Architecture on lowering of Technical Integrity</b>	<b>66</b>
<b>Figure 4.4.3.8: The effect of Enterprise Architecture on Making Decision</b>	<b>67</b>
<b>Figure 4.4.3.9: The effect of Enterprise Architecture on IT and/or operating costs optimization</b>	<b>68</b>
<b>Figure 4.4.3.10: The effect of Enterprise Architecture on business and/or IT governance</b>	<b>70</b>
<b>Figure 4.4.3.11: The effect of Enterprise Architecture on Business Efficiency</b>	<b>72</b>
<b>Figure 4.4.4.1 Promoting knowledge sharing among EA team and other organisational employees</b>	<b>73</b>

<b>Figure 4.4.4.2 Consistently communicating Enterprise Architecture- success stories and related issues</b>	<b>75</b>
<b>Figure 4.4.4.3 More involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture</b>	<b>76</b>
<b>Figure 4.4.4.4 Constant communication concerning the goals and purpose of EA</b>	<b>78</b>
<b>Figure 4.4.4.5 More involvement of management in Enterprise Architecture</b>	<b>80</b>
<b>Figure 4.5.1: There is a great knowledge sharing level among other organisational members and the Enterprise Architecture team</b>	<b>82</b>
<b>Figure 4.5.2: Activities of Enterprise Architecture are producing the anticipated benefits</b>	<b>84</b>
<b>Figure 4.5.3: Workers are participating actively on the Enterprise Architecture development</b>	<b>86</b>
<b>Figure 4.5.4: Enterprise Architecture is having required support from management</b>	<b>88</b>
<b>Figure 4.5.5: The company is having the necessary skills for the development of Enterprise Architecture</b>	<b>90</b>
<b>Figure 4.5.6: Requirements from Enterprise Architecture stakeholders/ users are reflected and understood in the artefacts of Enterprise Architecture</b>	<b>92</b>
<b>Figure 4.5.7: Adoption of Enterprise Architecture was supported by a culture change and transformation programme</b>	<b>94</b>
<b>Figure 4.5.8: Enterprise Architecture was fully welcomed at the company</b>	<b>96</b>
<b>Figure 4.5.9: The purpose and goals of Enterprise Architecture are understood well at the company</b>	<b>97</b>
<b>Figure 4.5.10: My company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work</b>	<b>99</b>

## List of Acronyms

<b>Acronym</b>	<b>Description</b>
AML	Anti Money Laundering
CSF	Critical Success Factors
EA	Enterprise Architecture
FICA	Financial Intelligence Centre Act
ICT	Information and Communication Technology
IEEE	Institute of Electrical and Electronics Engineers
ISE	Information Systems Engineering
KM	Knowledge Management
PMBOK	Project Management Body of Knowledge guide
PMI	Project Management Institute
POPI	Protection of Personal Information
TOGAF	The Open Group Architecture Framework

## **CHAPTER 1: INTRODUCTION**

### **1.1 Introduction**

This research concentrates on exploring the role of knowledge management support for enterprise architecture adoption and its impact on organisational performance. The aim of this chapter is to formulate the aims and problem statement of the research and provide theoretical background for change.

### **1.2 Background to the Problem**

This financial institution consists of different lines of businesses which are operating in large structure that subsequently develops unwanted duplication and complexity (Premchand, et al., 2016). In every case, over time, this financial institution is ending up with a large number of technologies which are implemented in a reaction to changes in the environments in which the institution is operating in. Often there is a shortage of integration and interoperability among different technologies. The difficult maintenance, lack of agility, resultant costs and some considerations demand the financial institution to use EA (Enterprise Architecture).

As an outcome, EA which is poorly executed results in remarkable problems and losses for the company under study. Nevertheless, EA which is implemented successfully provides a broad range of benefits to the company, involving more effective decision-making processes, cost savings, reduced complexity, the strategic capability arising from the better digital business platform and successful delivery of transformation projects built throughout the transformation (Schmidt, et al., 2016).

Additionally, EA offers descriptive and tangible artefacts which enable the company to decode its complexity and helps the company to cope with change. Meanwhile there is no solidarity on the EA definition, 1 of the broadly cited definition is provided by Olsen and Trelsgård (2016). Their perspective is that EA is a method of “managing the complexity of business environment, IT (information technology) and organisation’s structure, EA facilitates information technology (IT), business ,personnel, and integration of strategy with regard to usual objective via the utilization and production of structural models offering a holistic perspective of the company” (Olsen & Trelsgård, 2016).

### **1.3 Problem statement**

Enterprise architecture comes with a promise to improve organisational agility and reduce complexity, as one of its benefits. Nevertheless, Enterprise architecture tends to spread rapidly as Enterprise architecture affects each and every organisational member. In addition, determining the practice of enterprise architecture is a cost-intensive and complex venture with less rate of success (Foorthuis, et al., 2016; Alwadain, et al., 2016). In reality, researches indicate that greater than sixty six percent initiatives of enterprise architecture are unsuccessful (Banaeianjahromi, et al. 2017). Therefore, there is a need to enhance success rate for the initiatives of enterprise architecture at this organisation.

Nevertheless, because of its broad scope and pervasive nature, successful initiatives of enterprise architecture rely on number of issues, including different company's constituencies involving organisational culture (Fatemeh, et al., 2017; Kaisler & Armour, 2017). Additional to the human being factors that are affecting EA acceptance as reported on (Fatemeh, et al., 2017; Kaisler & Armour, 2017), 'company's politics was discovered as a remarkable challenge which is facing enterprise architecture (Bernus, et al. 2016). Additionally, Jallow, et al. (2017) and Lange, et al. (2016) consider culture of the organisation to be a critical factor when governing company's transformation via enterprise architecture.

There is substantial large quantity of advice and research on utilization of knowledge management to overcome and understand issues and challenges that are related to organisational culture and as well as people (Canat, et al., 2018; Arijitsatien, et al., 2017). Nevertheless, currently there is limited research which investigates knowledge management as a way to support EA in the South African asset finance and motor vehicle industry.

Alwadain, et al. (2016) states that Enterprise architecture provides suitable artefacts, frameworks, tools, and methods which help this organisation to lower complexity, which is not needed and allows organisational agility. Nevertheless, there are different difficulties and challenges that face the adoption of enterprise architecture. Other challenges include the organisational culture and employees (humans). The organisation under study requires to establish if the factors determined by Fatemeh, et al. (2017) and also the ones determined by Spewak in (Drews, et al., 2017) are hindering their EA adoption efforts.



#### **1.4 Aim of the Research**

The aim of the study is to explore the role of knowledge management support for enterprise architecture adoption and its impact on organisational performance of motor vehicle and asset finance bank., in Gauteng.

#### **1.5 Research Objectives**

- To identify the current role of enterprise architecture in the asset finance and motor vehicle industry, in Gauteng.
- To determine the impact of knowledge management and its linked practices which may be utilized in increasing potential success of enterprise architecture which improves organisational performance, in Gauteng.
- To determine barriers and offer recommendations to improve adoption of enterprise architecture in asset finance and motor vehicle industry., in Gauteng.

#### **1.6 Research Questions**

- What are the roles of enterprise architecture in the asset finance and motor vehicle industry, in Gauteng?
- What is the impact of knowledge management in increasing the potential success of enterprise architecture in the organisation?
- What are the barriers to adoption of enterprise architecture in asset finance and motor vehicle industry., in Gauteng?

#### **1.7 Significance of the Research**

This section focuses on the benefits this study will bring to the organisation and other related fields such as the academia. The topic was chosen mainly for academic purposes. The topics of knowledge management and enterprise architecture attracted significant interest from both

practitioners and academics. The significance of this study is occurring in various ways (Kitsios, et al., 2019).

First, it is studying the relation among knowledge management and enterprise architecture due to the fact that this specific kind of research was not previously carried out in this organisation. Consequently, its outcome is vital in creating awareness to managers of the organisation under study regarding determinant variables which may have an impact on the organisational performance. The research is seeking to fill up the gap in a literature (Jusuf, et al., 2017).

Second, the research findings add to the body of knowledge in some enterprise architecture and knowledge management studies, and also provides practical steps to incorporate activities of knowledge management throughout the adoption of EA consequently increase the possibility for the success of adoption of EA (Weill, et al,2018a).

Additionally, it can be helpful for people that want to carry out more studies in the related topics and some companies that are facing the same challenges. Nevertheless, the adoption of EA is stressed with challenges, specifically organisational and human culture factors. Knowledge management is promising to improve and address the organisational and human culture challenges (Lankhorst,2017).

There are different efforts of research on the topic of EA, its benefits and adoption (Rahimi, et al., 2017). Likewise, number of researches were also carried out on knowledge management in the South African banking industry context (Nikpay, et al., 2017). Knowledge management is a segment which offers effective methods and tools that are having an impact on organisational and human culture challenges. Inevitably, this dissertation contributed to the body of study on antecedents to the role of knowledge management support for enterprise architecture adoption and its impact on organisational performance. There is a believe that this research would have added value to the literatures on knowledge management support and adoption of enterprise architecture, mainly in the South African settings since there were limited literatures done on same setting (Weill, et al,2018b). This dissertation is aiming to expand the potential success for the initiatives of EA by determining suitable KM tools and activities which may be tried throughout the adoption of EA (Rahimi, et al., 2017).

## **1.8 Format of the study**

**CHAPTER 1: Introduction:** Provide a brief description on content of each chapter of the dissertation. Chapter 1 provides an introduction to the research. The researcher is going to investigate the combination of EA and KM for the EA success in the SA asset finance and motor vehicle bank context. KM can improve and address people issues, organisational culture, procedural, structural, and technical elements of an organisation.

**CHAPTER 2: Literature Review:** Reviewing current literature on EA to perceive the intended meaning of what EA is entailing, its benefits, its adoption, and also the factors which influence EA adoption in the organisations. Literature review is going to offer a KM overview then next other important KM constructs are discussed involving knowledge initiatives.

**CHAPTER 3: Research Methodology:** Chapter 3 is discussing the approach which is selected and the reasons for selecting the approach for providing answer to the research question. To be specific, the 2 wide social science research categories: qualitative and quantitative research are going to be covered in chapter 3. Even in the past years, a 3rd approach called mixed methodology has surfaced. The 3rd approach links the qualitative and quantitative approaches.

**CHAPTER 4: Results, Discussion and Interpretation of Findings:** Chapter 4 deals with the findings of relationship among KM and EA. Chapter 4 is investigating the integration of EA and KM for the EA success in the environment of a bank which operates in the industry of SA asset finance and motor vehicle. In addition, the significance of KM and EA to the company which take part in such industry.

**CHAPTER 5: Conclusion and Recommendations:** Chapter 5 is discussing the conclusion and recommendations for the proposed research study. Conclusion and recommendations regarding technology and KM are therefore discussed followed by EA and organisational culture.

## **1.9 Conclusion**

Chapter 1 was serving as introduction to the research. Chapter 1 offered a background to the problem which was identified. In addition, chapter 1 outlined the research objectives and questions which the research study will focus on. Chapter two of this research study is about the discussion of literature review to understand the ideas which are fundamental to research objectives.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

The literature review which is carried out on this research is split into 4 sections, every section on its own. The first section is dedicated to enterprise architecture. Second section is reviewing KM literature meanwhile third section is investigating relation among KM and EA. Fourth the sector of South African banking. Chapter 2 offers more knowledge of EA involving its role in the organisational context. The continuous change in operating environment where organisation is operating demands organisational strategies to be reviewed continuously and modified so that the organisation can respond constructively to such changes, and the fact that IT plays an important role as an organisational strategy enabler, the strategy of information technology must continuously be aligned with the organisational strategy.

### **2.2 Enterprise Architecture Definition**

In the year two thousand, the Institute of Electrical and Electronics Engineers (IEEE 1471) provided guidelines for defining EA and the guidelines were published by Institute of Electrical and Electronics Engineers (IEEE). The group of guidelines became the basis where number of EA definitions are based (Serenko, et al., 2017). This group of guidelines describe architecture as “[...] the foundational collection of a system incorporated in its components, the relationship to the environment, and to each other, and the morals guiding its evolution and design”.

And in 2016 Sajid and Ahsan (2016) noted that this description became a broadly standardized and accepted EA definition. Adding on the Institute of Electrical and Electronics Engineers (IEEE 1471) group of guidelines, Lankhorst described EA as “a logical whole of models, principles, and methods which are utilized in the realization and design of an enterprise’s infrastructure, information systems, business processes, and organisational structure” (Kaisler & Armour, 2017). This description is revealing that enterprise architecture contains all the aspects and domains of an organisation.

In the same way, Banaeianjahromi, et al. (2016) describe enterprise architecture as “the logic arrangement of IT capabilities and business process which reflects the standardization and integration requirements of operating model of the organisation. The EA offers a long-term view of an organisation’s technologies, systems, and processes in order for individual projects to be able to have building capabilities – not only fulfilling the immediate needs”. The important idea

incorporated in this description is the standardization and integration of the organisation's core processes.

### **2.3 The current role of EA in the asset finance and motor vehicle industry**

On this section the researcher emphasizes the role of enterprise architecture and the added value with the aim of creating a deeper appreciation and understanding of the EA importance to organisations. The studied literature is going to be useful in connecting with the research findings explained on chapter 4 (Hinkelmann, et al., 2016).

In addition, Nikpay, et al. (2017) adds that enterprise architecture can explain the strategic limits of the company in terms of initiatives that the company has abilities to implement. Likewise, Simon et al. in (Amalia, et al., 2017) appreciates the fact that EA allows a structured technique to prioritize the strategic initiatives. EA enhances decision-making by accelerating the systematic assessment for proposals of the projects to establish their strategic significance (Aldea, et al., 2018).

Over decades, researches have established other enterprise-wide and far-reaching benefits and roles which are obtained via the utilization of enterprise architecture. Different authors are suggesting that enterprise architecture offers the riggings needed to allow a company to obtain overall efficiency (Shanks, et al., 2018).

However, it was also discovered that enterprise architecture is making it possible for companies to organize different organisational initiatives which have the intention of achieving elimination of the existence of information islands and also the initiatives which align the IT and business domains (Sandkuhl, et al., 2017).

In addition, Saint-Louis et al. (2016) adds that enterprise architecture can explain the company's strategic limits in terms of the initiatives the company has abilities to carry out. Likewise, Perez-Castillo, et al. (2019) appreciates that enterprise architecture allows a structured technique to prioritize the strategic initiatives. This enhances decision-making by accelerating the systematic assessment of proposals of the projects to establish their strategic significance (Puspitasari, et al., 2016).

The reviewed literature is compatible with Bankauskaite's (2019) opinion that EA "is promoting an ideology that an enterprise, is a complex system, which may be improved or designed in a methodically arranged fashion, obtaining greater overall outcomes than ad-hoc design and organisation ". Siluo, et al. (2017) carried out a comprehensive synthesis of the role of EA

discovered in current knowledge base. Such roles are identical to the ones discovered by Hafsi and Assar (2016) and Kaisler and Armour (2017). The EA roles are highlighted below:

### **Improvement of Information Technology Risk Management**

It was discovered that the application of enterprise architecture assists in improving the management of information technology related risk involving shortening time and reducing the risk of delivering IT projects.

### **IT & IS Responsiveness & Openness**

There was a discovery that EA is valuable in developing more open (for example enhancement on data sharing and data accessibility) and responsive IT/IS/domain (Yeow, et al.,2018).

### **IT & IS Homogeneity, Integration & Consolidation**

It was discovered that enterprise architecture is making essential contribution to improved interoperability, minimizing heterogeneity, reducing IT complexity, as well as the IT infrastructure, the shared data and cleaning up of enterprise applications. In addition, applying EA assists in consolidating applications, data stores, data, technology, and generally the improvements and consolidation to share organisational data and information (Zapata, et al.,2019).

### **Reduction of IT Costs and Increases in IT Value**

It was discovered that applying enterprise architecture enhances the information technology ROI (return on investment). In addition, applying enterprise architecture is optimizing information technology investments value. However, it was also discovered that enterprise architecture is leading to lowering of both indirect and direct information technology costs. Indirect costs involve costs linked to application of information technology resources, effective use and information system development time. Direct information technology costs involve costs linked to information technology operations costs and also application maintenance (Zapata, et al.,2019).

### **Improvement of Decision-making & IT Management**

It was illustrated that the results of enterprise architecture enhance the process of decision-making and also improve the management of IS/ IT (Foorthuis, et al.,2016).

### **Collaboration and improvement of Organisational Communication**

There was an improvement on inter-organisational information sharing as well as enhancement of intra-organisational collaboration, trust, as well as a causal connection among improvements and EA in both inter-and intra-organisational communication.

### **Organisational Performance Improvement**

A causal connection among improvements in the company's performance and enterprise architecture was also found. Additionally, it was discovered that enterprise architecture was contributing by allowing companies to obtain operational excellence and also enhancement in organisational efficiency (Soares, et al.,2017).

### **Requirements Engineering**

It was indicated that enterprise architecture is contributing to the enhancement of the engineering process of requirements, specifically enterprise architecture is making it practicable for elicitation of the requirements depending on the company's existing enterprise architecture documentation, which allows reuse of requirements throughout the eliciting requirements process. Therefore, the requirements elicitation process speed has improved (Siluo and Qingli,2017).

### **Project Management**

It was indicated that enterprise architecture allows different stakeholders of the project to collaborate and communicate in a manner which is improved. Furthermore, it was discovered that enterprise architecture supports management of project by assisting to manage and identify the different views of the project stakeholder. In addition, enterprise architecture supports ambiguous project management goals. It was discovered that enterprise architecture is contributing to lowering of project resources waste, improved project scoping, additionally enterprise architecture assists to improve consistency and also the completeness of different project deliverables (Hafsi and Assar,2016).



### **Improvement of company's standards and processes**

It was discovered that EA assists companies to improve, standardize business processes and enforce discipline. Furthermore, additional to EA assisting to determine company's "execution foundation", EA also allows companies to integrate their process standards as well as to reuse and consolidate their business processes. Additionally, EA is improving agility, process change, business change and flexibility (Kaczmarek-Heß, et al., 2017).

### **Reduction of Information Technology Costs**

Jallow, et al. (2017) states that enterprise architecture is supporting the reduction of information technology costs via (i) improved costs management relating to information technology operations. (ii) Consolidation of information technology obtained via the redundant technological and elimination of expensive platforms.

### **Management of Risk**

Management of risk was also indicated to benefit from enterprise architecture (Zapata, et al., 2019).

### **Development of Systems**

It was discovered that enterprise architecture is helpful during the development of systems.

### **Regulatory Compliance**

Enterprise architecture was indicated facilitating regulatory compliance, both quality management and general compliance management. Due to the fact that applying enterprise architecture is improving data accessibility needed for regulatory compliance (Kühne, et al., 2019).

## **Decision Making**

Fatemeh, et al. (2017) states that enterprise architecture assists in COTS software adoption, making sourcing decisions and it is also supporting activities of general decision-making.

## **Management of Project Portfolio**

It is also determined that enterprise architecture is supporting management of project portfolio, involving the associated investment decisions, management of information technology portfolio and also planning of project portfolio (Weill, et al., 2018b).

## **Organisational Design**

It has been indicated that enterprise architecture enables the re-design and design organisational structures.

Bernad cited in Niemi (2016, p. 31) presented similar roles as listed below:

- Improved stability
- Improved compliance with regulations
- Risk reduction
- Integration improvements
- Reuse of organisational resource
- Information technology systems Improvements
- Business process improvements
- Alignment of information technology and business domains
- Lowering of information technology costs
- Improved collaboration and communication.
- Improved decision making
- The guidance to changes increased and improved organisational responsiveness.

It is clearly understood that the EA roles and benefits depicted by different authors that applying enterprise architecture is contributing to IT domain and improves organisational performance. Without the success of enterprise architecture adoption, it is impossible to realize the EA benefits (Centobelli, et al., 2017).

As stated by to Alzoubi, et al. (2018), the common process of carrying out adoption of EA is as follows. (i)Choosing the framework of EA. Even though different frameworks of EA might already be assessed previously, it remains vital to choose the framework prior defining the future and current states. (ii)Defining the current state is the second duty. (iii)Thirdly the task is describing the enterprise's future state.

The arrangement in which the future and current states are defined depends on the chosen framework. For instance, in the framework of Kartturi (Barbosa, et al., 2019), it is suggested that the future state of the enterprise is defined prior the description of its current state. (iv)The last task is executing the change. The EA adoption challenge is that the changes to organisational culture are unavoidable (Akhavan, et al., 2016). Additionally, as noted previously, Aldea, et al. (2018) assert that "EA is more about human beings instead of technology". More important, organisation-broad communication was also discovered to be important throughout the adoption of EA (Alwadain, et al., 2016).

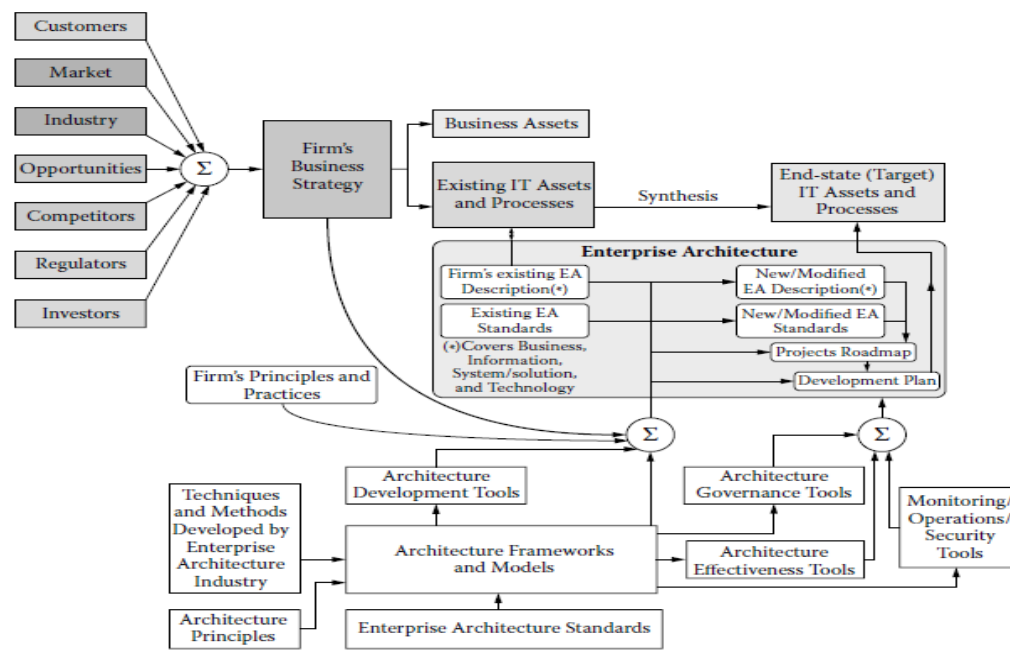
Amalia and Supriadi (2017) stated that during the start of enterprise architecture adoption, the understanding and knowledge of enterprise architecture is very low. It is implying that valuable communication is having a vital role to play throughout the adoption of enterprise architecture. Likewise, Bankauskaite (2019) suggested that in order to have successful adoption of enterprise architecture, it is critical that organisational members must consider the adoption of EA to be supported by top-management, beneficial to the individual, valuable, achievable, and necessary to the organisation.

The people factors which are affecting the acceptance of EA as mentioned in previous section are necessary during the investigation of the research to help organisations to successfully adopt enterprise architecture during the utilization of knowledge management. Such factors created the starting point where the questionnaire (research instrument) created on this research is founded (Hung, et al., 2017).

Enterprise architecture started to evolve as a regulation and currently EA is deemed to be offering company's high-ranking holistic view of the whole 'Business to Information Technology' stack which covers organisational structure, business processes, information technology and software infrastructure (Soares, et al., 2017).

Minoli (2018), proposes that the objective of EA is creating unified information technology throughout the organisation with symbiotic links which are tight to organisational strategy and the business side of an enterprise.

**Figure 2.1 Macro view of the environment and Enterprise Architecture**



**Source (Minoli, 2018)**

Figure 2.1 is illustrating the view of macro level for an environment as discovered in (Minoli, 2018). The entities which are external can move an organisation forward are presented on the figure's left-hand side. Such entities and factors involve investors, regulations, the competition, the potential or existing opportunities, the prevailing market conditions, the industry the organisation is in, and customers, among others (Minoli, 2018).

In most cases an organisation is having a group of business assets and also business strategy. It is important for an organisation to create an information technology infrastructure which is going to back up future information technology environment state in order to facilitate, support, and enable the organisation's strategy.

To obtain such, in most cases organisations create enterprise architectures that are illustrating organisation's technology, systems and information environment. Incorporated in the blueprint are the standard specifications which relates to instance interface, protocols, equipment standards, so on (Shanks, et al., 2018).

The organisation's architecture development is usually carried out utilizing mechanisms of the industry that involve "architecture development tools; information technology industry enterprise architecture models and frameworks; enterprise architecture information technology industry standards; architecture principles; methods to develop an enterprise architecture and the IT industry techniques" (Minoli, 2018).

When introducing transformation to the organisation's strategy, the organisation's enterprise architectures may need some modification based on identified gaps. The modified or new enterprise architectures must take into consideration the availability of tools or frameworks to develop a new one or to modify the existing enterprise architectures, the organisation's desired or updated strategy, the organisation's practices and principles, enterprise architecture standards, IT assets as well as existing EA.

The outcome of such synthesis is going to be an modified/new EA standard, modified/new information technology strategies, modified/new EA standard, and the roadmap that identifies the information technology projects needed to implement or execute the modified/ new architecture and obtain deployment plan and as well as the target state .Additionally, the graph (Figure 2.1) indicates that effectiveness assessment, environmental monitoring, as well as governance are key functions (Saint-Louis, et al., 2016).

Besides shortage of a general agreement regarding Enterprise Architecture, 2 important perspectives of EA emerged. Firstly, is that the theme of Enterprise Architecture is an artefact and secondly is that the theme of Enterprise Architecture is a process. Fatemeh, et al. (2017) argued that the perspective of enterprise architecture as an artefact is aiming to offer a strategic holistic perspective of the enterprise consequently allows conducting, integration and coherent coordination of organisational activities.

Simultaneously, Enterprise Architecture viewed as a process theme which concentrates on Enterprise Architecture as a technique to define the enterprise's future and current states and all interventions and processes to change the enterprise from the state of 'as is' to the state of 'to be'. Enterprise Architecture as a process point of view concentrates on development of Enterprise

Architecture products like tools, processes, viewpoints and models. Utilizing Enterprise Architecture as an organisational strategy for execution of business emerged as a 3rd perspective of Enterprise Architecture (Uludağ, et al., 2019).

Such point of view is merging the process and artefact views of Enterprise Architecture. The organisational strategy is considered as the “choices of framework which identifies the direction and nature” of an organisation. Furthermore, Weill, et al. (2018a) proposed that the success of organisational changes are outcomes of integrating and identifying each and every variable of an organisation for example systems, people, processes, structure and culture. In such view, enterprise architecture is regarded as a strategic tool which allows organisational governance (Saint-Louis, et al., 2017).

In such circumstance, enterprise architecture is viewed to be placed among development initiatives and strategic planning (Alzoubi, et al., 2018). Bankauskaite (2019) suggest that Enterprise Architecture must not be placed in such a way that it is regarded just as an information technology matter. An organisation will either identify its enterprise architecture function as an EA project or initiative (for example development initiative) or as a dedicated function (Niemi,2016).

Simultaneously, Bernard as mentioned in (Kotusev,2017b) illustrated various enterprise architecture perspective where he decided to draw distinctions among EA as a practice and EA as an idea. As a practice, Bernard states that EA is perceived as programme management and also a documentation method (Kotusev,2017a).

While, in the enterprise architecture as an idea perspective, enterprise architecture is a method for developing abstract views of a company that is improving decision-making and planning. This is equivalent to Zachman’s description. As a programme management Bernard pointed out that enterprise architecture is taken into consideration as a method of “resource development, decision-making, and planning on a specific level and also on a general level” (Kotusev,2018).

In such point of view, enterprise architecture must be perceived as a component which is integrated for general governance structure of the organisation (Kotusev,2016). This allows enterprise architecture to take part in attempts which are uniting every department’s goals, organisational strategic goals, and unites them with the information technology projects tackled to achieve the organisational goals (Weill, et al., 2018b). The management plan of enterprise architecture is important in an approach of Bernard which involves documentation of EA.

The management plan of EA is formulating a pathway from the AS-IS state of the enterprise (for example current state which is documented) to an intended future (TO-BE) state. Such elements of Enterprise Architecture are confined in a modelling framework. These dynamics are important and furthermore they highlight the EA holistic nature.

In addition, it is sufficiently good to note that Supérieure as well as Lapalme mentioned in (Fatemeh, et al., 2017) that Enterprise Architecture is having 3 important various schools of thought, every one of them is differing just marginally on the purpose and scope of Enterprise Architecture.

Nevertheless, John Zachman, who is regarded as the Enterprise Architecture father, is disagreeing with Supérieure and Lapalme argues that "Architecture is Architecture is Architecture" (Alzoubi, et al., 2018). It means that practices and principles which were successfully proved in the evaluation and analysis of software architectures must be suitable throughout the evaluation and analysis of architectures for "systems, enterprises, and systems of systems" (Ractham, et al., 2018).

Meanwhile appreciating and understanding different views of enterprise architecture is very important, enterprise architecture is existing primarily to offer more understanding of an organisation, by combining the surrounding business environment, strategies, goals, the business drivers via organisational responsibilities and roles, business processes and combining them to the basis of information technology systems which the organisation relies on (Centobelli, et al., 2017).

Therefore, to summarize this, the success of enterprise architecture initiatives takes into consideration a broad spectrum of inputs from different organisational domains. The purpose explored in this part can allow a researcher to create an instrument which is effective for gathering data. In addition, this will ensure the possibility of relating other findings to the present literature. An environment where the company is operating is specified by relentless change and ever-increasing complexity.

Constant pressure exists from organisational external forces (for example technological trends, mergers and acquisitions, economic changes, regulations and laws, client preferences and needs) which is putting more pressure on the companies so that companies align their information technology and business domains to allow them to reply to the environmental changes as a result of allowing their continuity (Niemi, 2016).

Additionally, Alwadain, et al. (2016) argues that there is a benefit for a company to keep updated documentation of the complex interaction among information system and business process at each and every level of the organisation (Cerchione, et al., 2016). Without a general view of the different complex interactions, people making decision may take decisions that are wrong. Enterprise architecture was discovered helpful in offering such general view. Different authors and researchers decided to document different reasons which inspire organisations to carry out enterprise architecture.

As proposed by Weinberger as cited in Alwadain, et al. (2016), Enterprise architecture is usually carried out for the following reasons: - Enterprise architecture allows enhanced risk management and is promoting more transparency , - Enterprise architecture is promoting achievement of the preferable balance among business innovation and IT efficiency, - Enterprise architecture assists organisations to deal with complexity and also changes to IT and business . - Enterprise architecture is facilitating the stakeholder management concerns which can be addressed by information technology systems. - The capacity of effectively utilizing and managing information is important for competitive advantage as well as the success of the business , - Enterprise architecture assists in assuring that the legacy processes that are fragmented are optimized to an integrated environment , - Enterprise architecture is facilitating attainment of strategy of the business by allowing IT transformation alignment to organisational needs.

In addition, Banaeianjahromi, et al. (2016) discovered reasons why EA is frequently carried out: Enterprise architecture develops a usual organisational language, Enterprise architecture makes the possibility of expanding, promoting, or planning communication and information systems, Enterprise architecture assists organisations to replace uncertain systems, Enterprise architecture repeats or promotes foundations of communications and information technology, Enterprise architecture assists organisations to manage change, Enterprise architecture develops agreement between the organisation's communications, information and operational technology layers.

The above mentioned reasons indicate that the EA role in organisations is vital and is more intensified and because it is critical for companies to function with more capability of providing attractive products or services to their clients. Nevertheless, enterprise architecture allows organisation to better understand the future and present nature of the business. The reviewed literature is going to provide contribution to the investigation efforts and data gathering.



## **2.4 Important success factors for EA adoption**

There are specific factors which are preventing organisations from obtaining the anticipated benefits of a successful enterprise architecture. To overcome the destructors, it is essential determining the important success factors which are needed for adoption of enterprise architecture to be successful. This part is aimed to discuss the important success factors. Nikpay, et al. (2017) carried out a literature review of the important factors for implementing initiatives of enterprise architecture successfully.

A review of Olsen, et al.'s (2016) was depending on comparing models of CSFs (Critical Success Factors) from 5 articles: (Barbosa, et al., 2019; Bankauskaite, 2019; Bernus, et al., 2016; Hacks & Lichter, 2018; Jallow, et al., 2017). Olsen, et al. (2016) established the findings which are listed below from the 5 articles:-The enterprise architecture team and architect skill, it was discussed by different researchers as essential to the success of implementing the initiatives of enterprise architecture (Jallow, et al., 2017; Hacks & Lichter, 2018; Bankauskaite, 2019).

Hacks, et al. (2019) argues that among others the architect's role is to effectively communicate the goals and vision of the initiative of EA, be able to integrate and put together resources required to achieve the goals of EA, defining technical architecture guidelines, among others identifying the data and its movement throughout the enterprise. Furthermore Lankhorst (2017) emphasize that the enterprise architect should carry out business in a way which her or his efforts can enhance the value and quality of IT operations in the enterprise.

Additionally, the architect should have powerful skills of project management to assure that each and every activity in the enterprise life cycle is implemented utilizing the best practices and strategies. - Participation of stakeholders, Niemi (2016) highlighted the significance to secure support and commitment of important stakeholders to the EA success. Likewise Amalia and Supriadi (2017) propose that it is important identifying the group members and individuals needed to contribute throughout the development of enterprise architecture, to be specific the groups and individuals "who are going to lose and the ones who are going to gain from introducing EA" (Hafsi & Assar, 2016, p. 99), and formulating strategies of dealing with them.

-Support and communication are described by (Canat, et al., 2018) as keeping and informing each and every enterprise architecture stakeholder informed about the enterprise architecture related activities and issues. In addition, this involves continuous support provided to enterprise architecture stakeholders throughout enterprise architecture implementation and planning (Hacks,

et al.,2017). Communication which is effective allows knowledge sharing and assists in establishing usual understanding of the agreed artefacts, models, objectives, vision, scope and goals.

-Planning is the factor, which is discussed in those 5 articles, it is taken into consideration as pivotal to the success of the implementation. Mapping a roadmap task to targeted state should be planned so that organisations can obtain their desired results and successfully implement enterprise architecture. -Documentation is the other important factor for the success of EA. Each activity of enterprise architecture should be captured in architecture guidelines, principles, standards and models. -Involvement of management is mentioned by 5 articles stating its significance and it is considered to be the most essential factor. Support and involvement of management is basically one of the broadly factors mentioned essential for successful implementation of every IT initiative or project (Olsen, et al., 2016).

-Enterprise architecture cognition is regarded as an impact of EA on the organisation's data architecture as well as process view. -Information technology governance was discovered as the most important factor. Alwadain, et al. (2016) describe information technology governance as "to specify the accountability framework and decision rights to motivate desirable behaviour in the utilization of information technology" (Wang & Yang, 2016). In addition, Sajid and Ahsan (2016) suggest that information technology governance identifies a decision making and responsibility structure to promote desired behaviour for utilizing information technology for risk management as well as internal control.

Schilling (2018) highlighted that the enterprise architect captures the requirement and concerns of enterprise architecture stakeholders by developing perspectives of the architecture which illustrates to the EA stakeholders what kind of compromises are going to take in addressing each conflict among concerns of various stakeholders, and how their requirement and concerns are going to be addressed. It implies that EA is anticipated to harmonize each and every concern and requirement of different stakeholders and implementing architectures which are addressing as many of those requirements and concerns as possible.

## **2.5 Knowledge Management Definition**

As proposed by Inkinen (2016) knowledge management is a process that assists companies with transmission (publishing), organisation, selection, and identification of information. In addition,

knowledge management is described as awareness of the company's current knowledge together with the sharing, creation of knowledge, usage of the current knowledge, storage and acquisition of knowledge (Akhavan, et al., 2016). Therefore, as companies are managing their resources, knowledge is asset which should also be managed. KM has arisen as a discipline which provides the ability to manage such essential resource.

## **2.6 Impact of knowledge management and its linked practices may be utilized in increasing the potential success of EA**

This section deals with the relationship which is existing among KM (knowledge management) and EA (enterprise architecture). A great knowledge of the relationship is going to assist in determining the role of knowledge management in supporting efforts of enterprise architecture that is the primary goal for this research (Nikpay, et al., 2017). As proposed by (Barbosa, 2019), "A great deal of what enterprise architects are doing is to transform, translate and transmit knowledge over boundaries, if the boundary is among IT" and the classic business, among business silos, and among vendor and the client. In the same way, the significance of knowledge shared and created throughout development and planning of enterprise architecture was emphasized on previous sections. Wang, et al. (2016) argued that knowledge is an essential resource of the organisation that should be managed properly. If there exists knowledge management induced organisational abilities like changes to the IT landscape or changes to organisational processes as an outcome of knowledge management, enterprise architecture could suitably demand to be updated to carry on supporting the supply of organisation's services and products (Alwadain, et al., 2016).

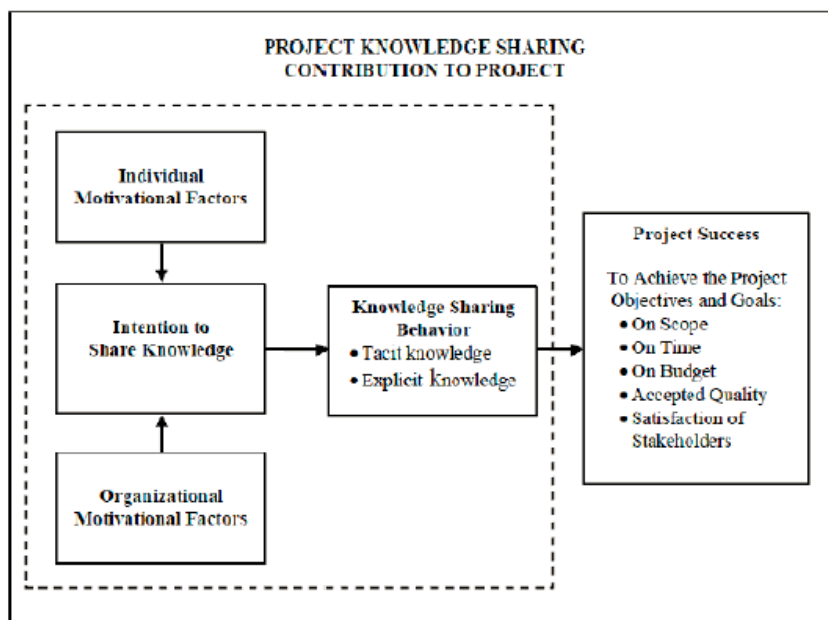
Consequently, knowledge management has an impact on enterprise architecture. Moreover, Fatemeh, et al. (2017) proposed that "when EA is generally believed to be valid, the organisation has benefits of gathering knowledge regarding how individuals included in EA operate. Retaining and capturing useful knowledge of the humans might be resulting in an information which is reusable." Therefore, it is clearly understood that EA is facilitating successful flow of information therefore promotes knowledge management in the organisation. Besides plethora of literature on sharing knowledge, "less is known regarding how people are sharing knowledge, particularly in an environment of the project" (Evans, et al., 2016).

This section is focusing on the present literature which integrates project management and KM to enhance success of EA in the organisation. This is done with the objective of creating a more understanding about how sharing of knowledge among people in a project environment occurs. It

is essential in this study's context due to the fact that management of project is a carrier via which EA is implemented in organisations (Hislop, 2018). Meanwhile there is an abundance of definitions of the project management and project terms, 1 of the regularly mentioned definitions is given by the PMI (Project Management Institute). As proposed by the PMI's PMBOK (Project Management Body of Knowledge guide), a project is described as "a short-term endeavour managed to develop a unique result, service, or product".

Different researches proposed that knowledge management plays an important role when it comes to the success of project management (O'Leary, 2019; Sajid, et al., 2016; Iskandar, et al., 2017). Martini (2016) suggested a theoretical framework shown in Fig.2.2 which proposes that eliminating inhibitors to sharing of knowledge and the supply of proper motivators could be leading to an effective and efficient sharing of knowledge in projects therefore leads to a better probability for the success of the project. As proposed by model of Pipatanantakurn, et al. (2016), there is a vital relationship which exists among the project success and effectiveness of knowledge sharing throughout the project. In addition, Pipatanantakurn, et al. (2016) discovered that the success of a project is improved by how and when the sharing of explicit and tacit knowledge is occurring.

**Figure 2.2: Proposed theoretical framework for project knowledge sharing contribution to project**



Source: (Gebayew, 2018)

Likewise, Ractham, et al. (2018) argues that organisations could be benefiting more by sharing and capturing both explicit and tacit knowledge in the community of project management. Managers of projects to the greatest extent adopt (1) best practices and lessons learned repositories as practices of knowledge management to assist them, (2) content and document management systems, (3) sharing of repository for project artefacts. Hung, et al. (2017) proposed that, KM in which learning is project-based is facing important challenges because of different reasons with 1 of the main extenuating situations being short-term nature of projects.

O'Leary D (2019) pointed out during project environment "...novel yet temporal connections should be forged then provided with defensive work as a protection against attack but urgent matters are competing for what time , skills, and discipline ought to be made available for that; meanwhile, the assurance that members of the team will be separated to take up some work if the project is closed resists against serious intentions of engaging in deep sharing of knowledge".

Additionally, Yeow & Hansen (2018) makes awareness that identification of essential knowledge, and also the capability of exploiting it, are project organisation challenges. Due to the short-term nature of project teams, such teams are not having a supporting culture as well as defined knowledge system to retain and capture knowledge as corporate memory. Therefore, it means that organisations may simply lose important knowledge assets after the completion of the project and a project team is dispersed (Sandkuhl, et al., 2017).

The transfer, capture, and creation of knowledge in the projects must be facilitated by planning management incentives and efforts. For instance, Ramy (2018) suggests a cautious socialization of lessons learnt from a project between project members prior the project team is dispersed. Without planned initiatives of knowledge management, the gained experience from 1 project may not improve organisational processes by enhancing implementation of next projects (Akhavan, 2016).

In addition, Ouali, et al. (2016) proposes that successful knowledge management implementation is important to the success of project management, that can in turn change the company to excellence. He highlights the significance of inserting KM during project management lifecycle due to the fact that the organisation's knowledge asset base continues to grow, every project should be constructed on such knowledge assets and sharing the knowledge.

Therefore, in conclusion KM is important to the success of different information technology projects which are guiding a transformation of EA of the organisation. It may be suggested that KM is substantially important when coming to the success of the EA.

IT allows organisational members to effectively collaborate and share knowledge (communicate). IT involves sharing of knowledge throughout the adoption of EA. IT is playing an essential role in the knowledge management as IT accelerates the knowledge transfer and broadens the reach. In addition, information technology is promoting the storage, digital capture, dissemination and retrieval of knowledge.

Therefore, knowledge management systems which are technology driven are aiming to facilitate the knowledge transfer from the holders of knowledge who originally created and experienced knowledge to some organisational members that may benefit from the similar knowledge (Ramy, et al., 2018). However, it is vital noting that executing 1 or more of such tools is not a simple and seemingly magical solution to a complicated problem, to overcome the weakness of the knowledge sharing processes for the organisation (Aldea, et al., 2018). In the existing KM literature, IT is normally appearing as a success factor (Harzing, et al., 2016), as a potential failure factor (Garca, et al., 2017), as a main component (Martini, 2016).

Nevertheless Iskandar (2017), is highlighting the important roles which technology is playing with knowledge management as follows: -Technology supports the mapping of dispersed pieces and bits of explicit and tacit knowledge to maintain and establish complicated interdependencies between them.- Technology offers infrastructure for storing explicated and codified knowledge.- Technology is facilitating communication.

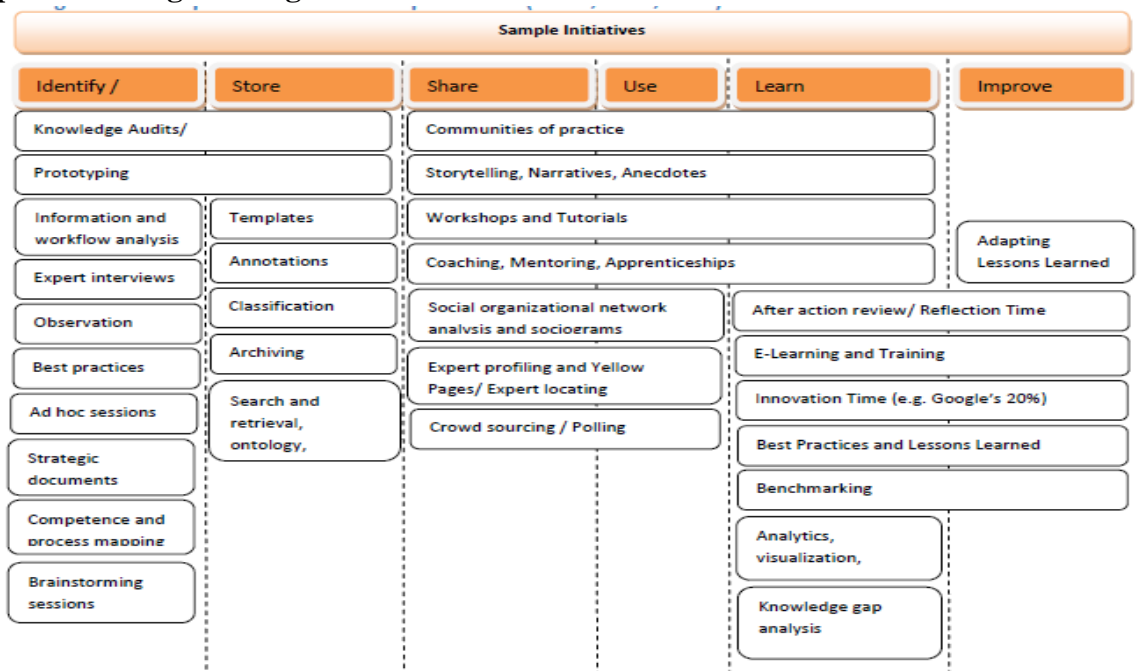
In addition, systems of information technology allow companies to source latest information, nevertheless Hislop (2018) proposes that the similar systems of information technology may also restrict the information that the company sees. For instance, when there is latest information that the system is not looking forward to, the system may ignore or filter out such information.

Chen, et al. (2016) highlights that the essential reasons for knowledge processing is “for the organisation, groups, and individuals to remember , to learn, what it learnt and leveraging the collective expertise so that organisation can perform more effectively and more efficiently ” Technology is playing an important role in disseminating knowledge to the organisational members as well as codifying and capturing knowledge.

## 2.7 Sample Technologies

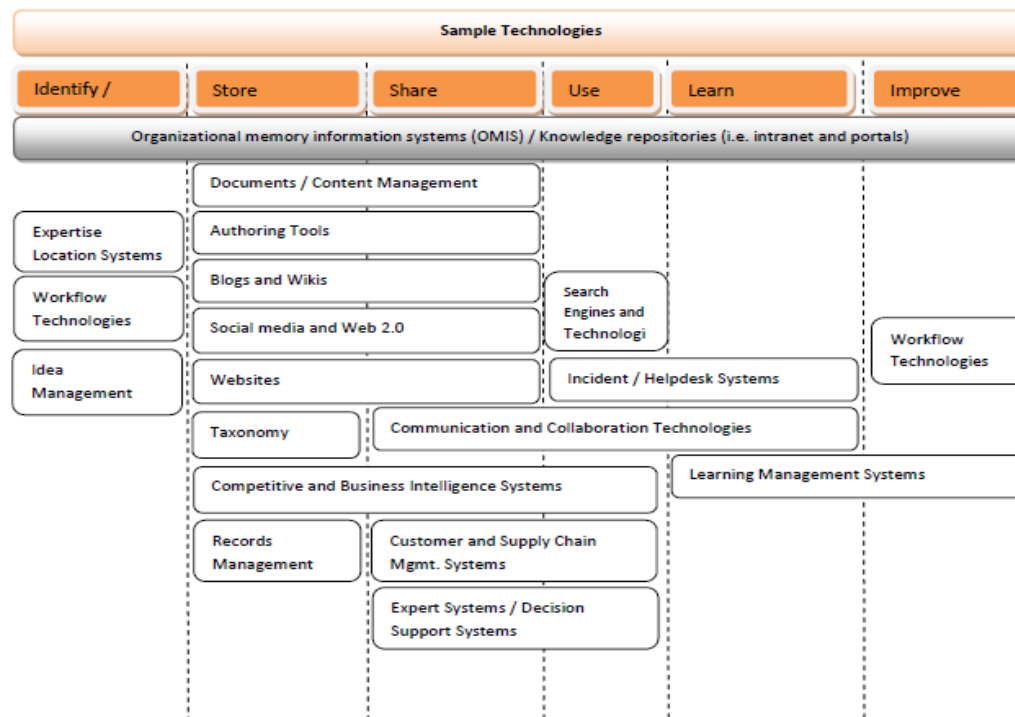
Based on the works of Banaeianjahromi and Smolander (2016), Jung (2019) gained a checklist of sample techniques and technologies which may be acquired to support every activity of knowledge management the list involves : Learning Management Systems , Decision Support Systems/Expert Systems , Helpdesk Systems/ Incident , Technologies and Search Engines , Websites, Web 2.0 and Social Media, Wikis and Blogs , Authoring Tools, Content Management Systems/Documents , Idea Management Software, Workflow Technologies. The initiatives and technologies may span greater than 1 phase of knowledge management as represented graphically in Figure 2.3. The technologies are playing a vital role in fulfilling management of knowledge shared, stored, and created throughout the adoption of enterprise architecture.

**Figure 2.3: Sample Knowledge Management Initiative**



Source: (Weinreich, et al., 2016)

**Figure 2.4: Sample Technologies of Knowledge Management**



**Source: (Weinreich, et al., 2016)**

Ouali, et al. (2016) the barriers are experienced throughout the adoption of EA. It is essential to give an insight to the level at which stakeholders of EA believe that the efforts of EA can benefit from promotion or introduction of KM activities like giving the important tools which enable the EA team and other employees to collaborate or promoting a culture of knowledge sharing.

## 2.8 Knowledge Management and organisational culture

Valaei, et al. (2017) proposed that it is at the core of KM theory where organisational culture and KM are securely entwined. Moreover, the existing literature is revealing that the knowledge management success, its activities and approaches rely on how good these are fitting with the organisation's specific environment and context. Organisational culture is an important section of the context.

The term organisational culture includes ideas which are complex, that are making it hard to describe organisational culture comprehensively. Schilling (2018) mentioned one definition which defines organisational culture as "a pattern of shared expectations and beliefs which are governing the manner organisational members behave". Likewise, in the Hofstede's words, is: "a collective



programming of the brain which differentiates the members of 1 category or group of individuals from the other” (Sumbal, et al., 2017). Both descriptions propose that organisational culture is relating to the existence of common norms, values and assumptions in the organisation.

The definition of culture as stated by Schein is adopted on this research due to the fact that it integrates number of different concepts and elements of culture discovered in the literature (Rashed & Drews, 2020). As proposed by Schein, a culture may be defined as “[a] sample of basic assumptions shared which the group learnt as it was solving its challenges of internal integration and external adaptation , which has worked sufficiently great to be regarded as valid, and consequently , to be taught to members that are new as the proper way to feel , think, and perceive in relation to the challenges” (Kotusev, 2016).

Organisational culture is emphasized as an important factor in establishing the accomplishment of strategies of knowledge sharing (Kotusev, 2017a). Nevertheless, Alwadain, et al., (2016) proposes that an organisational culture which supports knowledge management, “is highly valuing knowledge and encourages its application, sharing and its creation via the individual’s empowerment to explore new approaches and possibilities”.

Likewise, Brosius, et al. (2017) decided to investigate the relationship among organisational culture and KM and discovered that even though the relationship among the 2 is difficult, existing evidence shows that interventions of KM are leading to change in organisational culture. Therefore, KM may be utilized in creating organisational culture which is promoting adoption of EA.

## **2.9 Barriers and recommendations to improve adoption of EA in asset finance and motor vehicle industry adoption**

In spite of the good EA benefits mentioned in the last sections, adoption of EA is distracted by challenges. This section is examining the barriers which should be overcome in order to have successful adoption of EA. Such barriers are further going to be analyzed and investigated in the gathering of data section. The current challenges which are faced by enterprise architecture are the obstacles which must be overcome by an organisation in the aim of achieving long term success throughout the execution of initiatives of the enterprise (Alwadain, et al., 2016).

As proposed by Kaisler & Armour (2017) such challenges may be caused by low level maturity of enterprise architecture. Other barriers that are encountered throughout the implementation of enterprise architecture which were discovered by Rashed, et al. (2020) and some authors are

mentioned below. As stated by Rashed, et al., (2020) challenges which are experienced throughout implementation of enterprise architecture involve the following:

- Shortage of collaboration among the current determined information technology processes and the enterprise architecture life cycle processes.
- Difficulties to enforce standards and policies of enterprise architecture, and shortage of enterprise architecture acceptance in the information technology organisation.
- Current artefacts of enterprise architecture are not often utilized in decision-making and not utilized daily during the working hours, -Less quality of enterprise architecture artefacts as well as enterprise architecture artefacts which are outdated.
- The initial collection of information needs more effort. In addition (Alwadain, et al., 2016) discovered the following as other important challenges linked to EA:

### **Requirements of compliance**

The spread of latest regulations and also the growth in requirements of compliance are challenging specifically for organisations which operate in the utilities, insurance, telecommunication, and banking sectors. A compliance management which is efficient relies on organisation's transparency. To implement compliance requirements efficiently in a manner which is agile, it is essential revealing architectural dependencies.

### **Data quality & Consolidation**

Alwadain, et al. (2016) notes that challenges concerning the data quality are other huge barrier because of the continual changes to requirements of the business which are not integrated well to the current infrastructures of the organisation. It is leading to complex and a heterogeneous application structure. Quality of data may be evaluated on various dimensions like consistency, reliability, integrity, and completeness. Data quality which is low implies that it is impossible to supply enterprise architecture stakeholders and other managers with the correct information on time.

### **Glossary inside information technology among IT and Business / Common language**

There is a requirement to obtain agreement on a usual terminology to be utilized in the organisation. For instance, if an architect is designing a house, he can discuss how windows, balconies or rooms must be built utilizing a usual vocabulary

### **Tasks which are complex need complex approaches**

Alwadain, et al. (2016) advise “even when you are having the smartest technique, you require to discover individuals to implement it in a company and every time you are working with human beings you must handle emotions, sometimes that may be totally unpredictable”. Hence, it is essential to inspire organisational members to adopt and learn new manners of thinking and/or working is essential. Working with difficult tasks frequently demands techniques that are complex which are usually complicated to teach and other times even harder to sketch graphically.

### **For each enterprise a specified Enterprise architecture must to be created**

As previously mentioned, EA introduction is a cost-intensive and complex process. It was a discovery that creating the initial documentation is complicated for different reasons like quality of information, maintenance of information and choosing information. As observed before, enterprise architecture “is such a difficult concept that general and easy simple solutions are not likely occur simple”. Yet Alwadain, et al. (2016) discovered that nine out of ten individuals that are assigned the responsibility of rolling out enterprise architecture experience the questions meanwhile collecting client’s information requirement such as “what is the greatest practice for this?” In many instances although, the greatest practices are just partially helpful, yet the organisation’s certain information is important so that one can properly customize the greatest practices to the organisation’s context.

### **Shortage of capacity to express demands of information**

It is challenge for organisations to meet their client’s requirements and grow their market share in the absence of the ability to handle their all in all circumstances. Companies are frequently lacking the capacity to understand their information requirements, as a result of that delays attempts intended to develop proper solutions (Kaisler & Armour, 2017).

### **Delivery of Enterprise Architecture value proposition**

To deliver a tangible enterprise architecture value proposal is a big challenge for organisations. Consequently, the value proposition of EAM requires “to be conveyed to the correct

stakeholders in the correct manner and its execution must be viewed to be beneficial”  
(Kaidalova, et al., 2017).

### **Insufficient awareness of Enterprise Architecture**

Having to emerge from ISE (Information Systems Engineering as a technical domain), enterprise architecture is still to fully identify the importance of an organisation’s social factors like communication, organisational and human behaviour. Additionally, new strategy utilization often meets behavioural resistance, as the organisational goals may not be embraced/shared by other organisational members.

While, Kaidalova, et al. (2017) discovered the challenges that face the implementation of enterprise architecture they are:

- Enterprise architecture was originally obtained from the information technology discipline, and in many organisations, initiatives of EA are led by information technology personnel who might not be having the necessary understanding of the business in which information technology is meant to endorse. EA develops a misrepresentation of cost-benefit which is rejected by leaders of the business.
- Not similar to some industries such as automotive, information technology systems are frequently altered, and improved while being utilized. This is making enterprise architect an initiative which is open-ended in which the end product keeps on changing. As an outcome, the tangible and effectiveness EA benefits are not easily recognized.
- Comparing to some disciplines of engineering, operational, development, and the design processes of enterprise architect are not that mature.

From above mentioned challenges, it is understandable that the EA team or the enterprise architect should be given the opportunity to sell the requirement for enterprise architect to stakeholders, users and management in a manner which is properly defining the benefits that EA is bringing to the enterprise (Kaisler & Armour, 2017). In addition, the change management principles must be cautiously twisted together with the implementation of EA so that numerous requirements of all stakeholders are addressed. Meanwhile it is impossible catering for each and every requirement, where an agreement is done, communication should be made clear so that agreement is not leading to lack of satisfaction on the stakeholder side which is affected by EA (Kaisler & Armour, 2017).

## **2.10 The South African motor VAF industry**

SA banks are usually struggling with various legacy systems which are not simple to modify and integrate. Deregulation and shrinking profit margins are important factors which affect financial institutions and require better organisational agility (Saint-Louis and Lapalme, 2016). The laws of traditional banking are restrictive and gave rise to fragmented information technology infrastructures, that currently need adjustment of meeting the newly discovered demands of the most sophisticated client base.

SA banks which are having ICT architectures that is outdated are currently experiencing high demands of IS (Information Systems) architectures which are cost-effective and flexible. As proposed by Saint-Louis and Lapalme (2016), the capability “to gain newly discovered ICT architecture becomes an important competitive factor of supporting newly discovered financial business drivers in SA banking”. Nevertheless, outdated architectures are making it hard integrating applications of the enterprise because the underlying elements of the architectures have developed ‘closed architectures’ (Uludağ, 2019).

Likewise, (Bajaj, et al., 2017) propose that some information systems in the industry of banking comprise of legacy systems. Asrar-ul-Haq (2016) makes awareness that ‘closed architectures’ are imposing limitation of access which restrict essential configurations (both hardware and software) therefore this forces organisation to rely on solutions from a single vendor for their specific ICT components (Asrar-ul-Haq, 2016).

Furthermore, SA banks are usually struggling with diversity of applications which are running on various platforms like PL1/COBOL/.Net/ or Java. Schlör (2018) made a warning that ‘closed architectures’ discourage ability for SA banks to consolidate redundant operations, ability of banks to merge with other organisations, to provide integrated and new products. Likewise, (Bernus, et al., 2016) discovered that integration of products of the banks is a specific challenge for companies that are bancassurance.

## **2.11 The industry of banking**

Consolidation of the market is a big challenge that faces companies in the industry of banking (Brosius, et al., 2017). As an outcome number of companies which are traditionally serving market segments or distinct markets in the sector of financial services are currently trying to integrate their offerings. Therefore, the bancassurance concept has arose that is “a kind of organisation which

provides financial services which is comprehensive and realizes the idea of the 1 stop shopping solution in the market of financial services”.

The ‘bancassurance’ companies have important advantage due to the fact companies can push (offer and promote) the products into the market utilizing similar distribution channels (Hacks, et al., 2019). EA is playing an important role to facilitate the bancassurance business strategy and model. Furthermore, Schlör, et al. (2018) proposes that since the nineteen eighties the banking face has remarkably transformed by rapid innovations in financial markets and also the financial internationalization flows.

Furthermore Hacks, et al. (2018) noticed that an integration of high competition between non-banks and banks and technological progress as well as the deregulation has offered newly discovered opportunities to companies in such industry. Additionally, Hacks, et al. (2019) noticed that during late nineteen eighties, the capital adequacy requirements was increased meanwhile the traditional banking started to provide low margins.

Responding to such challenges, the SA banks started to become more imaginative and entered newly discovered business areas with more concentration on KM abilities and superior information. Newly discovered architecture of information technology adjusted for solutions of core banking that will be economical, agile, adaptable and scalable. Integrating EA and KM to have a successful EA is still under researched on this sector. The research is therefore contributing to the knowledge body for both disciplines of the KM and EA (Schmidt, et al., 2016).

## **2.12 The industry of South African Asset Finance and Motor Vehicle**

The industry South African asset finance and motor vehicle is falling under the industry of SA banking that is more competitive and this industry is dominated by 4 houses of finance, which are: -Stannic, a Standard Bank division that has eighteen percent. -Division of Absa Vehicle and Asset Finance, an Absa Bank division that has a market share of eighteen percent. -MFC (Motor Finance Corporation), that is a Nedbank subsidiary that is having a market share of twenty four percent, - and WesBank, a First Rand Bank division of that has a market share of thirty two percent. As stated by the SA Automotive Export Manual, SA’s wider automotive industry was contributing to seven-point two percent to South Africa’s GDP (R3 897,4 billion) in 2014 (Kehrer, 2016). Therefore, the industry of vehicle finance is an important contributor to the economy of South Africa (Kotusev, 2016). The banking client’s tastes, preferences and expectations are continuously

evolving. This is dictating that the SA banks should develop attractive services and products and be imaginative which suits the client's needs. Responding to the changes in the environment where banks are operating, systems of banking are still evolving.

### **2.13 Conclusion**

Chapter two discussed the EA definition; the literature review tackled the research objectives which include role of EA in the asset finance and motor vehicle industry and defined KM. The chapter looked at the impact of knowledge management and its linked practices which may be used to increase the potential success of EA, Barriers and recommendations to improve adoption of EA in asset finance and motor vehicle industry adoption were discussed. The SA motor VAF (Vehicle and Asset Finance) industry, the industry of banking, the industry of SA banking and talked about the industry of SA asset finance and motor vehicle as whole. The next chapter which is chapter three is going to provide the means or method to obtain those answers.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

Chapter 3 communicates how empirical data was collected including the way this research has been carried out. This section is divided into the following main sections: the research philosophy, design, strategy, target population, sampling, research instrument, questionnaire, pilot study, administration and collection questionnaires, data analysis, validity and reliability, limitation of research, elimination of bias and ethical consideration.

### 3.2 Research Philosophy

Chen, et al. (2016) highlighted the significance of research philosophy by mentioning that, “Research philosophy is the basic point of every research unifying and guiding the research techniques and strategy”. Such philosophical stance is the analysis of the collected data and also the data requirements for the research (Arijitsatien, et al., 2017). Furthermore, the research philosophy with regards to the researcher’s perspective of the world; additionally, research philosophy is relating to “the nature of the knowledge and the creation of that knowledge”. Saunders, et al. (2019) in table 3.1 provides important features of the 4 key philosophy paradigms.

**Table 3.1: Four 4 key philosophy paradigms**

	Positivism	Realism	Interpretivism	Pragmatism
<i>Ontology: the researcher's view of the nature of reality or being</i>	External, objective and independent of social actors	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best enable answering of research question
<i>Epistemology: the researcher's view regarding what constitutes acceptable knowledge</i>	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism). Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
<i>Axiology: the researcher's view of the role of values in research</i>	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Research is value laden; the researcher is biased by world views, cultural experiences and upbringing. These will impact on the research	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective	Values play a large role in interpreting results, the researcher adopting both objective and subjective points of view
<i>Data collection techniques most often used</i>	Highly structured, large samples, measurement, quantitative, but can use qualitative	Methods chosen must fit the subject matter, quantitative or qualitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative

Source: (Saunders, et al., 2019)



In this dissertation, the intention was to collect the data from a sample of 85 participants with a goal to measure the level in-which enterprise architecture is valued in the organisation. Moreover, the aim was measuring the barriers acceptance of the enterprise architecture adoption as indicated in the literature review section. In addition, the researcher was independent of the process of data collection. It is for such reasons that the data required were gathered utilizing a paradigm of positivism philosophy. The research adopted quantitative methodology. The reasons for choosing quantitative in this study is that the researcher can be able to obtain primary data. Quantitative data is associated with analytical research and its purpose is to arrive at a universal statement from analysis of the data collected.

### **3.3 Research Design**

The research design is necessary due to the fact that it allows a researcher to deliver and structure evidence which is necessary when it comes to answering the research problem (Sandkuhl, et al., 2017). The different types research designs include: Causal-Comparative research, Correctional research, Explanatory research, Descriptive research and Exploratory research. During causal-comparative research, a researcher is investigating the impact of independent variable on a dependent variable, then compares 2 groups of individuals, causal-comparative research basically compares 2 or more groups of the subjects. Correctional research looks for variables which appear to interact with one another, so that if 1 sees 1 changing, then he has an idea of how another can change. It means that a researcher is utilizing variables he cannot control. Findings from correctional research may be utilized in determining relationships and prevalence between variables and forecasting events from knowledge and current data (Schlör, et al., 2018). Explanatory research is conducted for an issue that was not researched well before, generates operational definitions, demands priorities and offers a better-researched model. Explanatory research tries to connect ideas to understand cause and effect. Explanatory research takes place when researchers are starting to acknowledge what they are looking at and attempt to develop models of cause and effect. Exploratory research is a research utilized to investigate an issue which is not defined clearly. Exploratory research is carried out to understand the current issue yet is not going to give conclusive results. Descriptive research is a kind of research which is describing a phenomenon, population, or situation which is currently being studied. Descriptive research can answer how, when, where, when and what questions, but not

why questions. A descriptive research design may utilize a broad variety of research methods to investigate 1 or more variables (Saint-Louis, et al., 2017). The research adopted descriptive research. The reasons for choosing descriptive research is because surveys are either naturally relational or descriptive. The aim of carrying out surveys that are descriptive is to define the situation which is prevailing. Simultaneously, the aim of carrying out relational surveys is to empirically inspect relationships between 2 or more variables. This research is seeking to investigate the interdependence of knowledge management and enterprise architecture practices. A design of relational survey, instead of a method which is descriptive therefore was used in this research (Uludağ, et al., 2019).

### **3.4 Research Strategy**

Research strategy is the general approach to answer the research questions (Olsen, et al., 2016). De Villiers (2017) propose that diversity of research strategies may be adopted in answering the research questions. There are different types of research strategies for example [Qualitative (Phenomenological, which includes Case Study, Action research, Grounded theory and Ethnography)]and [Quantitative (survey)] including a Mixed study. Phenomenological aims to interpret, understand, and describe the experience meanings of individual's life. It concentrates on research questions like what it feels like experiencing a specific situation (Siluo, et al. ,2017). A case study enables for a phenomenon to be studied thoroughly within a natural setting. Action research is a methodology and philosophy of research usually applied in the social sciences, it is seeking transformative change via simultaneous process of doing research and taking actions, that are combined together by critical reflection. Grounded theory is systematic methodology, which is mostly applied to qualitative research, yet not exclusively carried out by social scientists. This methodology includes the construction of theories and hypotheses via the analysis and collecting data. Ethnography is a qualitative method where researchers interact and/or observe with study's respondents in their real-life environment. It was popularized by anthropology yet is utilized all over a broad range of social sciences. Survey research is a quantitative method which features the utilization of self report measures on samples which are carefully selected. Survey is a flexible method which may be utilized to research a broad diversity of applied and basic and research questions. Mixed study is a methodology for carrying out research which includes integrating, analysing, and collecting qualitative (for example interviews, focus groups) research

and quantitative (for example surveys, experiments). Therefore, this study adopted a positivist (survey) since the researcher is using a quantitative method. The reason for choosing survey is to give an insight into the barriers experienced throughout the adoption of EA. This dissertation is fitting into the realm of quantitative analysis due to the fact that survey can allow the individuals using this research to quantify the level to which stakeholders of enterprise architecture in the asset finance and motor vehicle industry appreciate and recognize the EA role.

### **3.5 Target Population**

Target population is the total group of individuals from which the sample might be drawn (Sumbal, et al., 2017). Quantity of target population: In terms of statistics, it was generally believed that a sample must ideally be more than 25. Provided that the population size which will be surveyed in this research is 114, a sample size of 85 was considered suitable for the motive of the investigation. Reasons for choosing quantity of the target population: As proposed by Zikmund in Schilling (2018), a population is “every complete set companies, people, or the like that are sharing other sets of characteristics”. The relevance population for this study is comprised of IT personnel, every IT personnel working for this organisation formed the participant of the research because the whole organisation is either influenced or impacted by enterprise architecture.

### **3.6 Sampling**

Sampling, as described by Zikmund in Schilling (2018), is “a process of utilizing a smaller number of parts or items of a big population to do conclusions regarding the entire population”. Sample is referring to the randomly selected respondents from the sampling frame (Sumbal, et al., 2017). Sample Frame is referring to a list of all people in the population from which the sample were drawn from (Serenko & Bontis, 2017).

Sampling is falling into 2 important categories: non-probability and probability sampling (Sandkuhl, et al., 2017). This means that there are 2 wide kinds of sampling probability and non-probability. During probability sampling, the odds of every 1 element (or member) of the population being chosen, is known. When there are 2 hundred rural secondary schools and thousand rural schools, the likelihood of choosing 1 secondary school as part of the sample is 0.20 or 200:1000. During non-probability sample, the precise number of members (or elements) in the

population is unknown with the outcome that the odds of choosing every 1 element (or member) of the population, is not known. The research adopted probability sampling.

The reason for choosing the probability sampling is that in probability sampling, a sample is chosen depending on the researcher's subjective judgement. Nevertheless, a big percentage of the selected sample took part in this research therefore increasing the transferability and validity of findings of the research. Probability sampling is best utilized if the aim of the research is to study a specific subgroup within a greater population. Probability sampling offers a researcher the best chance to develop a sample which is a true representative of the population. Utilizing probability sampling to discover sample sizes implies that a researcher may employ statistical methods such as margins of error and confidence intervals to validate researcher's outcomes. The HR personnel was also substantially instrumental when it comes to the research study.

### **3.6.1 Kinds of Sampling on both Probability and Non-probability**

There exist different types of sampling strategies. Probability sampling examples involve the following: cluster, stratified, systematic, simple random. During cluster the population is divided into internally heterogeneous sub-groups. Stratified population is divided into strata or sub-populations and utilize simple random sample on each stratum. Systematic, chooses a member (or element) of the population at the start with a random start and following the sampling fraction chooses any  $k$ th element. Simple random, every population member (or element) is having equal opportunity of being chosen into the sample. Sample is drawn utilizing random number generator/table.

Under non-probability sampling provides a variety of methods like purposive sampling, snowball sampling, convenient sampling, simple random, and so on which may be utilized if it is not suitable to use a random sampling approach for the research question. Additionally, non-probability sampling is suitable if a researcher is not having a sampling frame (Cerchione, et al., 2016).

Non-probability sampling examples involve the following: Maximum variation, snowball, judgmental/purposive, quota, convenience. During maximum variation the researcher is identifying categories of interest relating to the research topic and therefore is intentionally seeking out settings or subjects that are representing the significant viable range of differences in the phenomena which currently being studied. Snowball here the researcher can choose a sample which is linked to the other. Judgmental/purposive, the researcher can choose anyone in a target

population which is hard-to-find. Quota, a sample in a predetermined group is chosen. Judgemental/purposive the researcher chooses a sample which is convenient.

A sample was selected from the organisation. The researcher chose to employ a probability simple random sampling kind for this study. Statistically, it is accepted that a sample should preferably be greater than 25. Given that a sample size of 85 was deemed appropriate for the purposes of this investigation. This implies that data will be collected from 85 participants who were selected using a probability simple random method. The reason why the researcher decided to choose this sampling kind and sampling size is because this technique enabled a researcher to choose sample depending on her/his population knowledge and also the research objectives (Cerchione, et al., 2016; Sandkuhl, et al., 2017). This sampling choice might limit the number of individuals taking part therefore probability simple random has an impact on the transferability and validity of the findings. However, a large percentage of the chosen sample participated in this study thus increasing the validity and transferability of the research findings.

### **3.7 The Research Instrument**

Research instrument is measurement tools for example scales or questionnaires designed to gain data on a topic of interest from research subjects. Research instrument involves research instrument records. Research instrument records offer details on utilization and validation of research instruments. According to (Saunders, et al., 2019) data collection step which is one of the research designs, poses a great challenge to the social science researcher caused by the rational, historic, and normative characteristics of human beings. The critical consideration of validity concerning the process of data collection, is that of radiality. The reason for choosing such tool is that the tool allowed distribution of questionnaires to a broad number of participants by giving a link which is direct to the survey. This is password protected therefore assuring privacy. The questionnaire design involved a fixed alternative questions list to allow analysis. By using guidelines given by Swenson (2019) on phrasing questions, double barrelled, leading, ambiguous question were ignored. The techniques of data collection used is questionnaire. The questionnaire relied on literature review and combined to the research questions. Literature review was containing the EA benefits to establish the significance of enterprise architecture to the organisation under study. Additionally, literature review was containing the barriers which disrupt efforts of EA as discussed earlier. In addition, the individuals who took part were asked to rank

any potential answer to the barrier that were identified about the answer viewed productivity to solve the barrier, on a 5-point Likert scale. However, should there be any changes to the objectives and the literature review; researcher needs to ensure that the research instrument is adjusted accordingly.

### **3.7.1 Questionnaire**

The research methodology adopted for this research is questionnaire. Collection of data for this research was completed via a questionnaire as defined in Appendices-Question then posted on a <http://www.surveymonkey.com> (SurveyMonkey) website, this is the website created for public utilization of surveys. Babbie as cited in Canat et al. (2018) describes questionnaire as “a document containing questions and some kinds of items created to obtain data suitable for analysis”. The researcher sent an email to the participants, that email contained url link to the questionnaire.

### **3.8 Pilot Study**

Pilot studies is preliminary, small-scale, study that is aiming to investigate if important components of a main study normally an RCT (randomized controlled trial) can be feasible (Garca, et al., 2017). The reporting of pilot studies must be of high quality to allow readers to interpret the results and implications correctly. A number of researchers argue that a pilot test should be conducted before embarking on the main data collection. Foorthuis, et al. (2016) proposes that the purpose of “the pilot test is to determine how well the new test performs. Before administering the research instrument to participants in the study, the researcher must test research instrument on a small sample. The analysis of the pilot survey will reveal flaws in some questions suggest possible improvements and supply a range of possible answers to open-ended questions. The quantity of the pilot study is indicated here. The pilot sample is usually a small subset of the target population. The pilot test surveyed 8 participants using the instrument. This means the researcher chose a pilot group of 8 participants from the target sample. Pilot group may not be a true depiction of the whole sample population. Then administering the questionnaire on the pilot group was done utilizing email. Pilot testing is an often overlooked but extremely important part of the research process. Pilot testing helps detect potential problems in the research design and/or instrumentation (for example, whether the questions asked is intelligible to the targeted sample), and to ensure that the measurement instruments used in the study are reliable and valid measures

of the constructs of interest. After a successful pilot testing, the researcher may then proceed with data collection using the sampled population. The data collected will be quantitative, depending on the research method employed. The outcomes of the pilot are briefly discussed below. To assure that the survey got to the soul and heart of the problem and that the people who took part gave information which allows the researcher to provide answers to the questions. The pilot study was carried out and the deficiencies which were identified are grammatical errors, the changes were made to the questionnaire as a result of the pilot study to ensure that questions were readable, easy to understand, free of grammatical errors, and fulfilled the purpose of this research. The researcher had to ensure that the questions were written by utilizing easily understood language.

### **3.9 Administration of Questionnaires**

This research is a quantitative study. The questionnaire was administered by using email. Email is described as messages distributed by electronic means from 1 computer user to 1 or more recipients through a network. Email is the best option because 85 participants received email from the researcher which contained a link to the questionnaire at the same time, this means the researcher reached people on their devices.

### **3.10 Collection of Questionnaires**

The collection of questionnaires includes time frame given to respondents which is two weeks. Data collection for this study was done via a questionnaire as defined in Appendices- Question posted on a website called <http://www.surveymonkey.com> (SurveyMonkey), survey monkey is a website created for public utilization of surveys which are web based. The data is stored on servers which are located at regional data centres.

### **3.11 Data Analysis**

Data analysis is a process of modelling, transforming, cleansing, and inspecting data with the aim of supporting decision-making, informing conclusions, and discovering useful information (Centobelli, et al., 2017). Data analysis has multiple approaches and facets, encompassing diverse methods techniques under a variety of names, and is utilized in various social science, science, and business domains. In current business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively (Garca, et al., 2017). Descriptive

Statistics describes data, it allows other basic questions to be answered. This is a technique to summarize, organize, collect, analyse and display sample data which was taken from the population. Descriptive Statistics is paving a way to visualize and understand data better. Descriptive statistics are broken down into spread (measures of variability) and measures of central tendency. Once the data was gathered, the analysis of the data was undertaken. The method that was utilized for this research is Microsoft Excel. The reason is that data was extracted from a website called SurveyMonkey, on a Microsoft Excel spreadsheet. Microsoft Excel is a spreadsheet programme. That means Microsoft Excel spreadsheet was utilized to create grids of numbers, text, and formulas specifying calculations. The primary reason why Microsoft Excel was used is that a spreadsheet is suitable for automatic calculations. Another strength of spreadsheets is that spreadsheets can produce diagrams, such as pie-charts and like graphs, based on the data the user enters. Sometimes the numbers make more sense when the computer turns them into a picture.

### **3.12 Validity and Reliability (quantitative)**

The research adopted Validity and Reliability which is quantitative method. Validity deals with the accuracy of a measure, and reliability deals with the consistency of a measure (Serenko, et al., 2017). It is essential to take into consideration validity and reliability when one creates his research design, planning methods, and writing up his results, especially in quantitative research. Validity and reliability were ensured in the study by using this relevant concept, the sampling choice might have limited the number of participants thus influencing the validity and transferability of the findings. However, a large percentage of the chosen sample participated in this study thus increasing the validity and transferability of the research findings. Researcher used design questionnaires to verify the validity and reliability of the questions. A pre-test was conducted to determine the validity and design of the questionnaire. The chosen sub-sample comprised members of the target population. The size of the sub-sample was ten participants. Of interest to the researcher was to determine the ease of understanding, flow of the questionnaire. The researcher also needed to establish whether any of the questions were ambiguous or confusing. All respondents reported that the questions were easily understandable. The questionnaire was subdivided into three main sections.

The first section was designed to collect data in regard to research question 1.



The second section was designed to collect data in regard to research question 2.

The last section was designed to collect data in regard to research question 3.

### **3.13 Limitations of the Research**

Like in all research, the characteristic of this study will have specific limitations in the applicability of the findings. Firstly, the evidence will be limited only to one SA asset finance and motor vehicle bank instead of focusing on four leading houses of finance. Since VAF or motor vehicle and asset finance cover large portion of SA banks, a larger sample must be utilized, thereby providing a larger quantity of data from other banks, during the research the constraints like covid-19 lockdown, lack of sufficient fund, and time restricted the requirement to involve a large sample size which could nearly indicate the total population of the study.

The researcher will only be able to collect data from one SA motor VAF bank. Because of the covid-19 lock down restrictions, distance problem, and time constraint, will limit researcher to collect data just from one bank. Because of small sample size, it will be difficult to discover significant relationships from the data and it has a greater possibility that observation just will happen within small area. So, it could be hard to generalize the findings to other SA motor VAF banks due to social, infrastructural and/or economic differences.

Secondly, the researcher will apply cross sectional analysis for exploratory purposes about the characteristics of the SA asst finance motor vehicle bank according to their EA adoption intentions. However, a longitudinal study could be more useful in explaining whether or not this organisation will follow the process described.

Thirdly, a very detailed questionnaire with many specific questions could be more helpful in gaining a better definition on of the stages of web site adoption. Fourthly the impact of the organisation's culture on the individual assessment should not be underestimated. Some changes in the organisation may also have an influence on people's opinions and attitudes.

Finally, the data that will be obtained from a questionnaire which will be returned and sent via email, and therefore the information may have significant deficiencies, questionnaire replies are more useful to identify attitudes than to predict behaviour (Gebayew, 2018). Besides the limitations, the research will give valuable insights into exploring the role of knowledge management support for enterprise architecture adoption and its impact on organisational performance. A Case Study of Motor Vehicle and Asset Finance bank., in Gauteng.

### **3.14 Elimination of Bias**

Racial bias refers to the attitudes or stereotypes that affect an individual's understanding, actions, and decisions in an unconscious manner. The research remained objective throughout the study, elimination of bias was done: The researcher avoided being biased by avoiding a language that suggests evaluation or reinforces stereotypes. By identifying people by race or ethnic group unless it is relevant, the people who took part are whites, Indians, coloured and black people. By making assumptions about various age groups. By using gender neutral words. Nevertheless, meanwhile the findings may be useful, findings are definitive as the findings are not biased by the researcher's experience and background. Biases were identified, explained and were avoided as indicated below. A good sample design is able to control systematic bias efficiently. To avoid bias, the researcher has evaluated information found in other dissertations for 'scholarliness' including bias, validity, trustworthiness of the authors so on in this approach, the investigator attempts to achieve objectivity by not letting his or her personal biases influence the analysis and interpretation of the data. Technical difficulties, low response rates, challenges including representativeness and sampling bias are other common issues experienced with online surveys. Possible respondents can find it challenging to interpret or read surveys which are designed poorly. This is leading to survey incompleteness. Garca, et al. (2017) proposed that some technical challenges stem from utilizing survey software which is more advanced for other computer systems, as web browsers may crash or load information slowly. Self-selection bias is the other great limitation of online survey research. On every given internet community, there are certainly other people who are more likely than other people to finish an online survey. Some could have decided not to take part in the survey because of lack of time, or interest or due to fears regarding their computers being infected with spam and virus or breach of information security. A further study limitation was the small size of the sample that could not produce the statistical outcomes hypothesized. Smaller size of the sample can lead to a risk of generalizing. A study of this nature requires a relatively large sample. Other challenges experienced in this research are consistent with views of some researchers.

### **3.15 Ethical Consideration**

Ensuring Participants have given Informed Consent

The concept of informed consent refers to the importance of informing participants of the nature of the research study. Participants of the study can only give informed consent provided the

participants have a holistic understanding of the nature of the study and a full understanding of their requested involvement in the research project (Metcalf, et al., 2016). This includes time commitments, type of activity, topics that will be covered and risks involved.

Informed consent implies the following:

Participants have the intellectual capacity and psychological maturity necessary to understand their involvement in the study.

Participants are making an autonomous decision to participate in the study.

Involvement in the study is absolutely voluntary.

Participants are aware of the nature and details of the research being conducted.

Participants are aware of their right to discontinue in the research study.

The researcher is honest to participants about the nature of the study.

Participants are in no way coerced into participation in the study.

Ensuring no Harm Comes to Participants: Researchers should ensure that no harm is caused to participants of the research project, this was assured on this research by ensuring that the nature of this research was explained thoroughly to the individual taking part and the participant's safety was not compromised in any way. It was left to participant's discretion to make a decision if the participants wanted to take part in the study, making this study voluntary. Whether participants wished so, the participants were offered an option withdraw from this study at any given time.

Ensuring Confidentiality and Anonymity

The researcher should ensure that the identity of all participants is protected. Protection of confidentiality may involve restricting access to raw data, storing all data securely, reporting findings in a manner that does not allow for ready identification of participants, and obtaining permission for subsequent use of data. Due to the fact that information required by a researcher was of personal nature, individuals taking part were assured of confidentiality and anonymity. It was obtained by communicating to individuals taking part that data will not be shared with or given to any organisation or person and that participants did not have to provide their identify on the research questionnaires. It was explained clearly communicated to the individuals that the data collected was only for research purposes (Hohenstein, et al., 2019).

Ensuring that Permission is Obtained

It is important that official channels are cleared by formally requesting permission to carry out a study. Negotiating access to respondents is an important aspect of the study. In some instances, a

copy of the final research report may be required. The organisation who owns the copyright to an instrument that the researcher intended to utilize for data collection, granted the researcher permission to use the survey or data collection tool. The researcher requested permission letter from the organisation, and the researcher was granted a permission letter to conduct a research study. The permissions process extends to any photos, figures, models, charts, graphs, or other supporting materials for researcher's discussion sections, data results, data support, or literature review.

### **3.16 Conclusion**

This chapter discussed introduction to research methodology, Research Philosophy, Research Design, Research Strategy, Target Population, Sampling Strategy, The Research Instrument, Data Collection, Pilot Study, Data Analysis, Validity and Reliability, Limitations of the Research, Elimination of Bias, Ethical Considerations. Research Instrument is measurement tools For instance scales or questionnaires designed to gain data on a topic of interest from research subjects. Pilot Study was defined. It is essential to take into consideration validity and reliability when one creates his research design, planning methods, and writing up his results is important, especially in quantitative research. Limitations of the Research caused by distance problem, covid-19 lock down and time constraint limited researcher to collect data just from one bank. The next chapter which is chapter 4 will discuss the results, discussion and interpretation of the research findings.

## **CHAPTER 4: RESULTS, DISCUSSION AND INTERPRETATION OF DISCUSSION**

### **4.1 Introduction**

The last chapter, which is chapter three offered a layout of how the data was collected and the adopted research methodology type. The themes to be covered by this chapter includes findings of various tests results, discussions and the interpretation of discussions. The sample is presented and then the concentration is on the data processing, measurement instrument and analysis of collected data from the selected sample. This research is concentrating on finding out how KM (knowledge management) may be utilized to adopt Enterprise Architecture successfully to improve organisational performance. Therefore, relevant outcomes are discussed in the next chapter.

### **4.2 Presentation**

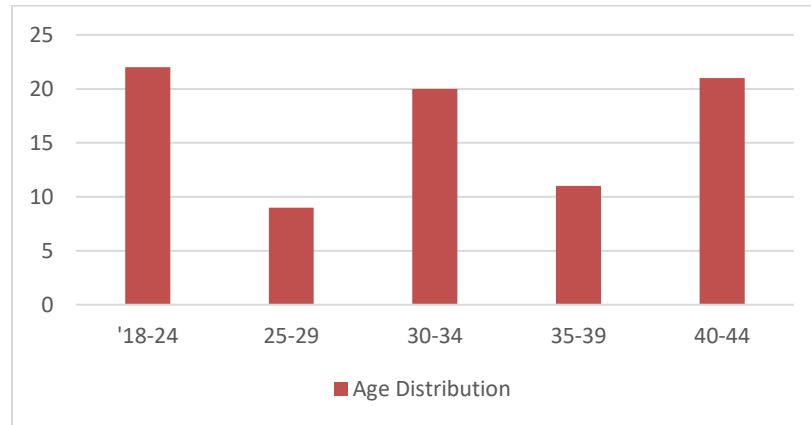
Chapter 4 presents the findings, discussions and interpretation of discussion, it also addresses all the research objectives of the study. The data is presented in 3 basic ways, namely:

- Graphs and tables–these may clarify the presentation of research data and are pictorial representations of data (Kearny, et al., 2017). As proposed by Lange, et al. (2016), graphs and tables are only utilized for “facilitating the communication and highlighting the meaning of data”. In this research data was presented utilizing both graphical and textual representations. Tables were utilized for mean values and bar charts, Pie charts are utilized for frequency analysis (Jusuf& Kurnia, 2017).
- Semi-tabular form–in this kind of presentation, figures are listed in a table and removed from the text.
- Text paragraph–in this kind of presentation, a researcher is drawing the user’s attention to specific comparisons or numbers to emphasize a specific point (Higman, et al., 2019).

## Section A

### 4.3 Demographics

**Figure 4.3.1 Age Group**



The findings reported that majority of the age group of the staff who participated is both 18–24 years (25.9%) and 40-44 years (25.9%), followed by 30-34 years (23.5%) and minority is 25-29 (10.6%). Age is the other expected factor that might establish the role of KM support for EA adoption and its impact on organisational performance in a certain bank as indicated on Figure 4.3.1 (Josey, 2018).

**Figure 4.3.2 Gender**

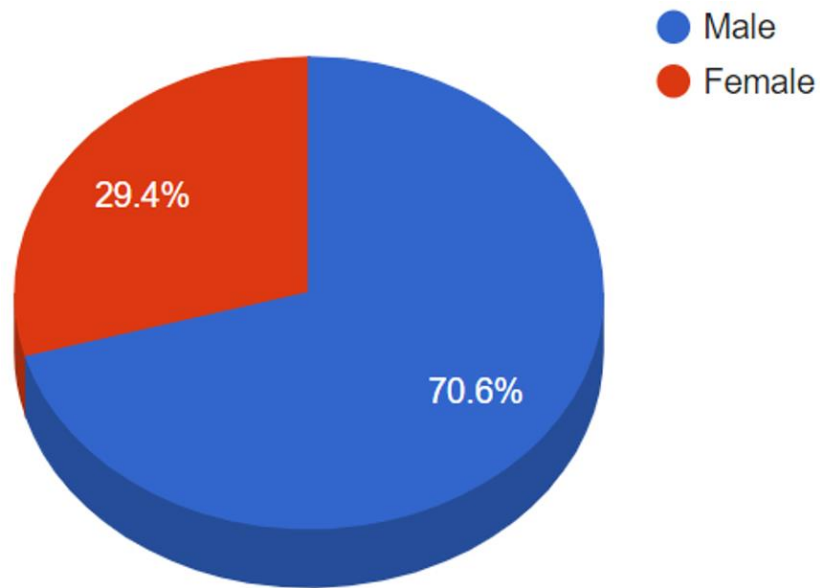


Figure 4.3.2. is illustrating that the majority of the employees who participated on this research are 70.6% males and the minority are females at 29.4%. The illustration may reveal certain role of KM support for EA adoption; as various genders are perceiving the similar challenges differently (Lapalme, et al., 2016).

**Figure 4.3.3 Highest Qualification**

■ Matric ■ Undergraduate degree ■ Post graduate degree

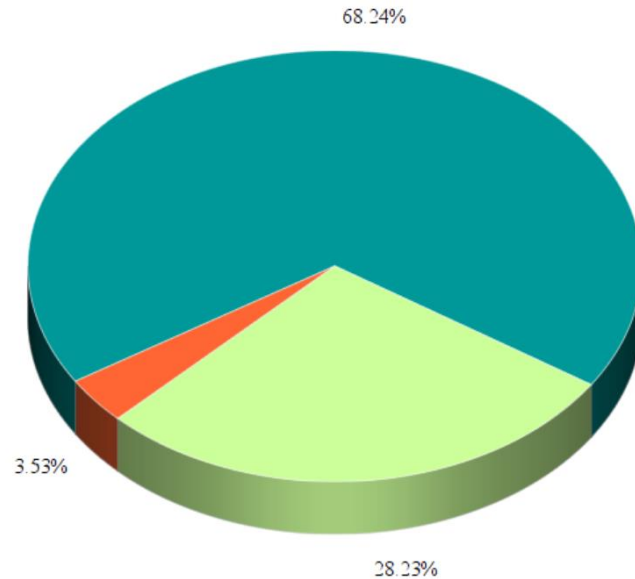
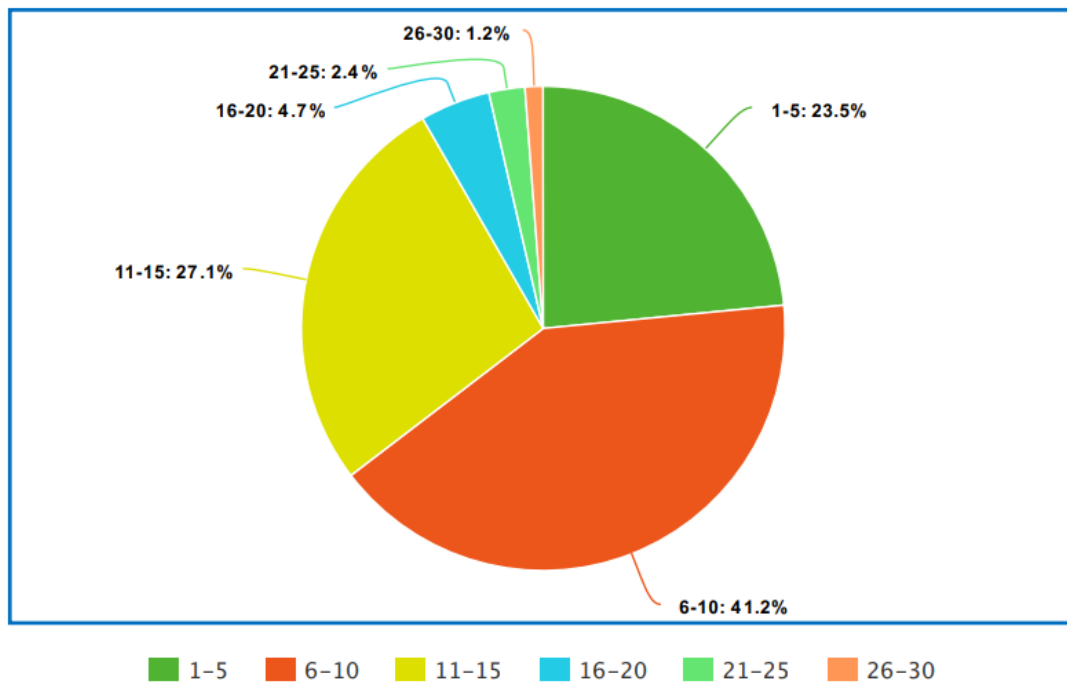


Figure 4.3.3. emphasized that the highest level of qualified employees are undergraduate degree holders at 68.24% followed by post graduate degree holders (28.23%) and minority are under matric holders (3.53%). The qualifications level is having an important role to play on educational environment because qualification level establishes the information level which is taught to an individual (Li, et al., 2016).

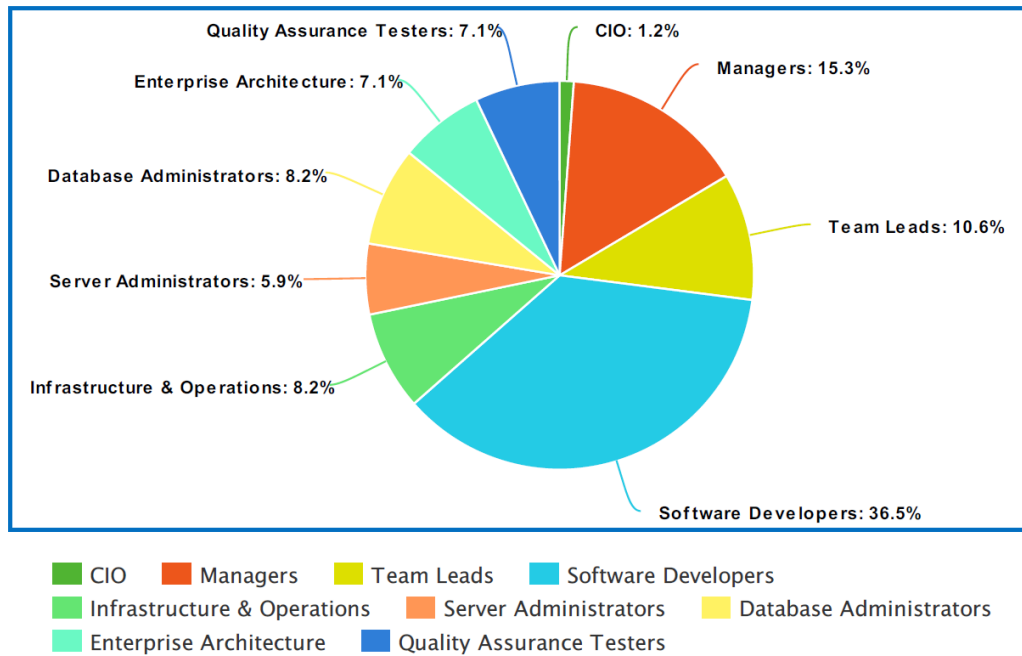


**Figure 4.3.4 Years of Employment**



The findings reported that majority of the years of employment for staff members is 6-10 years (41.2%), followed by 11-15 years (27.1%) and minority 26-30 years (1.2%). Years of employment is another expected factor that might establish the role of KM support for EA adoption and its impact on organisational performance. The more years that staff members are employed at the organisation the more impact that knowledge has on organisational performance (Hacks & Lichter, 2018).

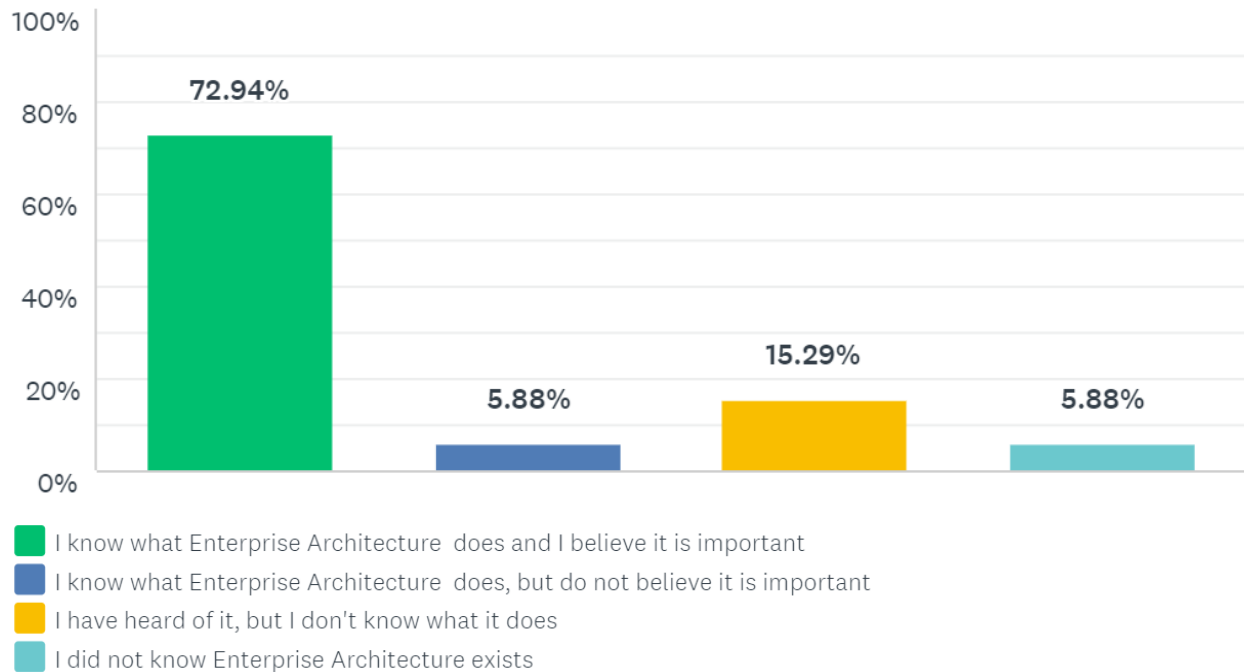
**Figure 4.3.5 Job Level**



The research findings reported that majority of job level for staff members is software developers (36.5%), followed by managers (15.3%) and minority CIO (1.2%). Development of System—There was a discovery that that EA is helpful during the development of systems. EA is mostly used in software development space hence the high job level for staff members is software developers (Lnenicka & Komarkova, 2019).

## SECTION B

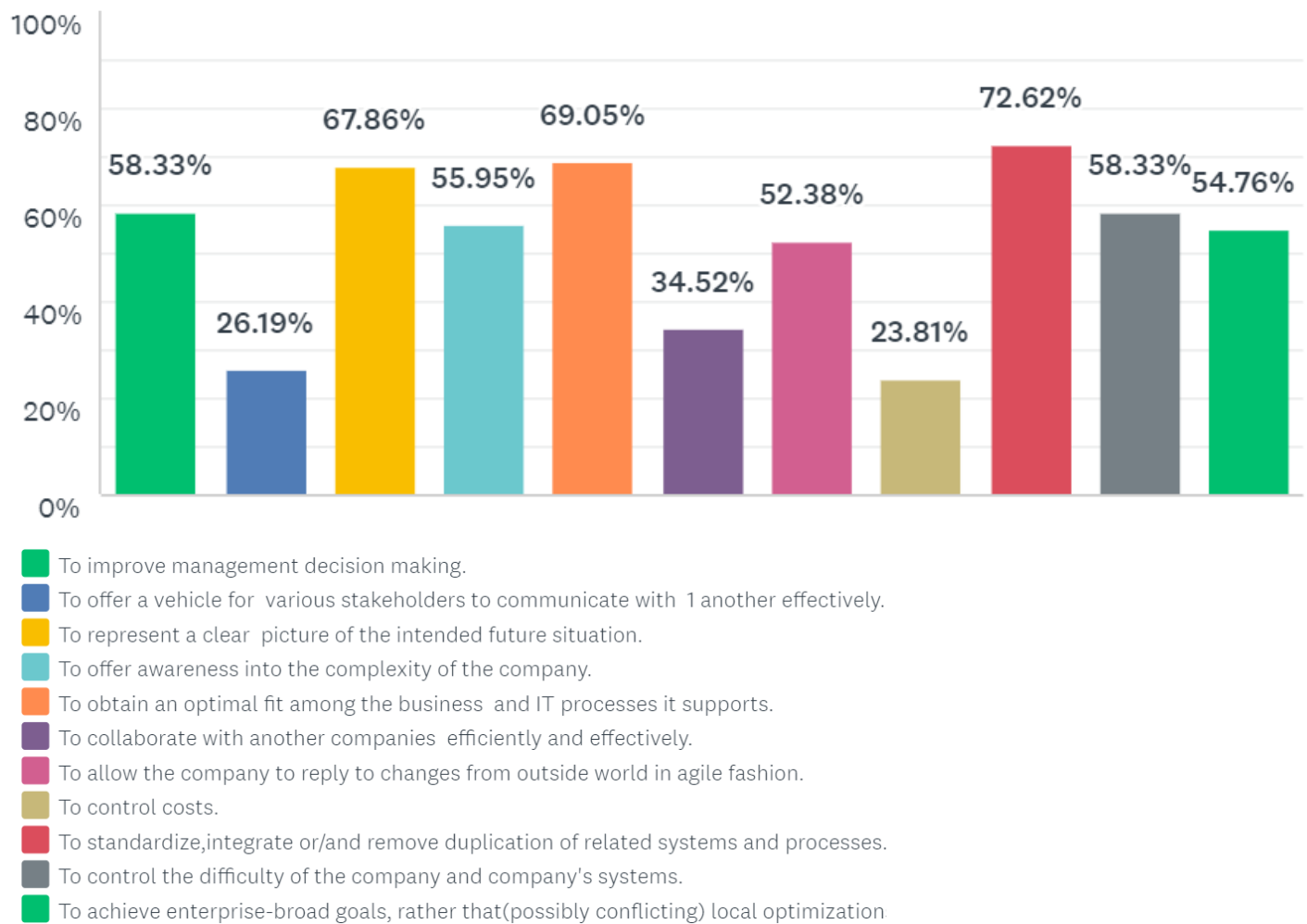
**Figure 4.4.1 The current role of EA in the asset finance and motor vehicle industry**



The result of the survey relating to research question one was depending on the responses to question one, two and three of the questionnaires. Question one from the questionnaire was relating to perceived value and recognition of Enterprise Architecture in the company and this is how it was phrased: Which phrase describes your identification of EA in the organisation? Figure 4.4.1 indicates the perceived current role of Enterprise Architecture in the organisation. A vast majority of respondents 72.94% of the selected sample reported that they know what EA does and believe EA is important for the organisation (Kehrer, et al., 2016). This group has higher score, the findings were statistically significant and had a positive impact on increasing the success of the organisation, these findings were consistent with the literature. The aforementioned responses were supported by the literature: The EA role in organisations is vital and is more intensified and because it is critical for companies to function with more capability of providing attractive products or services to their clients. Banaeianjahromi, et al. (2016) discovered reasons why EA is frequently carried out EA develops a usual organisational language, EA makes possibility of expanding, promoting , or planning communication and information systems, EA assists organisations to replace uncertain systems, EA repeats or promotes foundations of communications and information technology(Centobelli, et al., 2017). It is clearly understood that the roles and benefits depicted by different authors indicates that applying enterprise architecture

is contributing to IT domain and the whole organisation. What these primary findings revealed regarding the relevant objective is that the role of enterprise architecture is identified as important in the organisation and the respondents. Followed by few participants 5.88% who reported that they know what Enterprise Architecture does, but do not believe it is important for this organisation. The score of this group is very low and has a lowest impact on the success of the organisation. While 15.29% of respondents reported that have heard of it, but don't know what it does for the organisation, the score of this group is low and has a low impact on the success of the organisation. Finally, another few respondents 5.88% reported that they did not know Enterprise Architecture exists in the organisation, the score is also very low and has a lowest impact the success of the organisation.

**Figure 4.4.2 The benefits from utilizing EA**

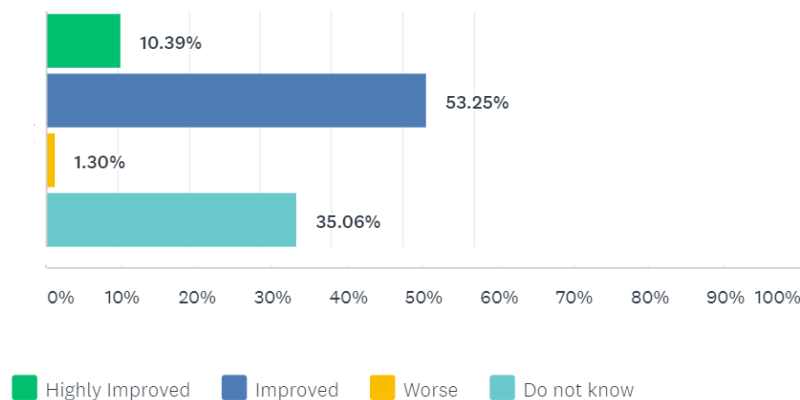


Question two from the questionnaire was aimed at establishing the anticipated EA (Enterprise Architecture) benefits to the company and this is how it was phrased: Which phrase describes your identification of EA in the company? The question was open to many answers, because it is possible to anticipate multiple benefits of Enterprise Architecture to the company. The EA benefits were selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the company, the participants identified the EA benefits for the company as follows. According to Figure 4.4.2, it can be concluded that more than half of the respondents 58.33% reported that the benefits from utilizing EA is to improve management of decision making for the company. This score has a positive impact on the success of the company, this means that the results of enterprise architecture improves the process of decision-making in this company. Followed by few respondents 26.19% who reported that the benefit from utilizing EA is to offer a vehicle for various stakeholders to communicate with 1 another effectively in the

company. This score has a negative impact on the success of the company and the low score indicates that various stakeholders are not communicating with 1 another effectively. This discovery is contradicting with the literature review carried out on chapter two. The contradiction may be the outcome of the barriers which were encountered during the adoption of Enterprise Architecture. While 67.86% of respondents reported that the benefits from utilizing EA is to represent a clear picture of the intended future situation for the organisation. This means that enterprise architecture allows this organisation to better understand the future and present nature of the business. This score has a positive impact on the success of the organisation. More than half of the respondent 55.95% reported that the benefit from utilizing EA it to offer awareness into the complexity of the company. This implies that Enterprise architecture assists company to deal with complexity, EA offers descriptive and tangible artefacts which enable the company to decode its complexity and helps the company to cope with change. This score has a positive impact on the success of the company. Majority of respondents 69.05% reported that the benefit from utilizing EA it to obtain an optimal fit among the business and IT processes of the company. This means that EA allows the company to better understand the nature of the business, it ensures that there is a good relationship between the strategy of the business and the IT processes, the score of this group has a high impact on the success of the company. The graph shows that 34.52% of the respondents reported that the EA benefit is to collaborate with other companies efficiently and effectively. This score has a negative impact on the success of the company, this implies that there is a lack of collaboration between this company and other external companies. More than half the respondents 52.38% reported that the benefits of utilizing EA is to allow the company to reply to changes from outside world in agile fashion. EA allows the company to manage change and it is improving agility so that there can be business continuity, EA also helps the company to react to changes in the environments in which this institution is operating in, this score has a high impact on the success of the company. Very few respondents 23.81% reported that the benefits of utilizing EA is to control costs. This score impacts the success of the company negatively, and this indicates that there is lack of controlling cost. The finding is contradicting with the literature review carried out earlier on chapter two (Zapata, et al.,2019). The contradiction may be caused by the outcome of the barriers faced during the adoption of Enterprise Architecture. Most respondents 72.62% reported that the benefits from utilizing EA is to standardize, integrate or/and remove duplication of related systems and processes of the company. This is the highest score and indicates a strong

degree of positive impact on the success of the company. Based on the graph above, the supporting evidence indicates that the most important benefit of using EA is to standardize, integrate or/and remove duplication of related systems and processes. The literature verifies the aforementioned responses: Banaeianjahromi, et al. (2016) describe enterprise architecture as “the logic arrangement of IT capabilities and business process which reflects the standardization and integration requirements of operating model of the company. The EA offers a long-term view of company’s technologies, systems, and processes in order for individual projects to be able to have building capabilities – not only fulfilling the immediate needs”. The important idea incorporated in this description is the standardization and integration of the company’s core processes. It was discovered that EA assists companies to improve, standardize business processes and enforce discipline. Furthermore, additional to EA assisting to determine company’s “execution foundation”, EA also allows companies to integrate their process standards as well as to reuse and consolidate their business processes (Kaczmarek-Heß, et al., 2017). What these primary findings revealed regarding the relevant objective is that the current role of enterprise architecture is identified as to standardize, integrate or/and remove duplication of related systems and processes of the company while other respondents 58.33% reported that the benefits from utilizing EA is to control the difficulty of the company and company's systems. This score has a positive impact on the success of the company, and this implies that EA assists in dealing with the systems of the company and provides reduced complexity by managing the complexity of business environment. Finally, 54.76% of the respondents reported that the benefit of using EA is to achieve enterprise-broad goals, rather than possibly conflicting local optimizations. It implies that EA assists in achieving organisational strategic goals so that they can be embraced and shared by another members organisation. The score has a positive impact on the success of the company.

**Figure 4.4.3.1: The effect of Enterprise Architecture on Audit Compliance**



Question three from the questionnaire was aimed at establishing the anticipated impact of EA (Enterprise Architecture) in the organisation and this is how it was phrased: Please show how the factors are changing or have changed as an outcome of enterprise architecture in your company? The graph above shows that participants rated the impact of Enterprise Architecture on organisation's audit compliance based on a four -point Likert-type scale. Figure 4.4.3.1 to figure 4.4.3.11 were rated on four -point Likert-type scale. Few participants 10.39% reported that organisation's audit compliance has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's audit compliance followed by vast majority of respondents 53.25% who reported that organisation's audit compliance was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing audit compliance of the organisation, these findings were consistent with the literature. The literature verifies the aforementioned responses: Enterprise Architecture improved compliance with regulations. The spread of latest regulations and also the growth in requirements of compliance are challenging specifically for organisations which operate in the utilities, insurance, telecommunication, and banking sectors. A compliance management which is efficient relies on organisation's transparency. To implement compliance requirements efficiently in a manner which is agile, it is essential revealing architectural dependencies. Enterprise architecture was indicated facilitating regulatory compliance, both quality management and general compliance management. Due to the fact that applying enterprise architecture is improving data accessibility needed for regulatory compliance (Kühne, et al., 2019). This seems to indicate that the impact of enterprise architecture in the organisation were considered important to promote audit compliance. The implications of the key findings provide significant benefits to the organisation's audit compliance. The perception of aforementioned statement was selected in



line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture improves organisational efficiency while minimum 1.30% of participants reported that audit compliance has worsened as an outcome of Enterprise Architecture. This has a lowest impact on the organisation's audit compliance finally, 35.06% of participants reported that Enterprise Architecture did not make any impact on organisation's audit compliance.

**Figure 4.4.3.2: The effect of Enterprise Architecture on Management of Risk**

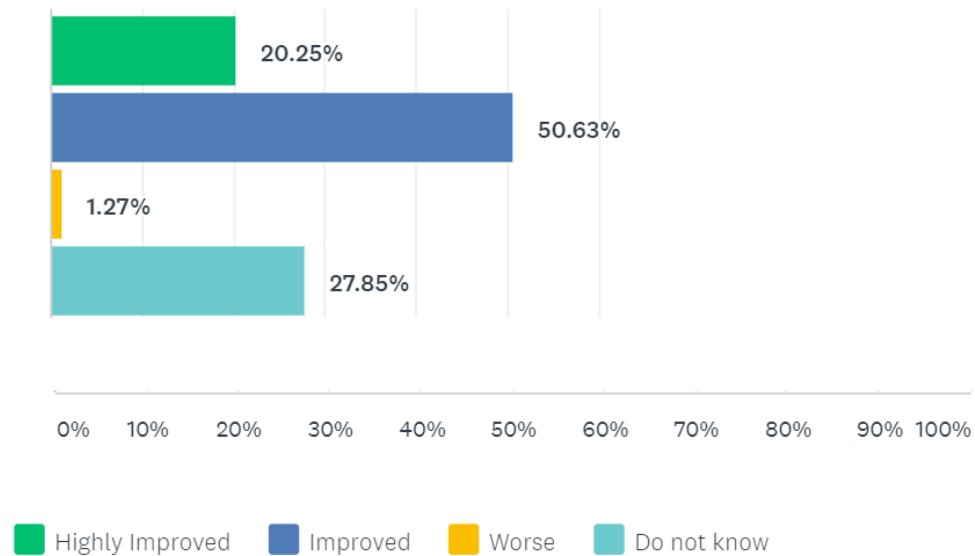


Figure 4.4.3.2 indicates the effect of Enterprise Architecture on risk management of the organisation. Small number of participants 20.25% reported that organisation's risk management has highly improved as a result of Enterprise Architecture. This score has low impact on management of risk for this organisation followed by vast majority of respondents 50.63% who felt that management of risk for this organisation was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing management of risk in the organisation, these findings were consistent with the literature. The aforementioned responses were supported by the literature: Management of risk was also indicated to benefit from enterprise architecture (Zapata, et al., 2019). Enterprise architecture allows enhanced risk management. This seems to indicate that the impact of Enterprise Architecture was considered important to promote management of risk in the organisation. The implications of the key findings provide significant benefits to the organisation. This perception was selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the organisation can successfully use EA to increase organisation's risk management while few participants 1.27% reported that risk management has worsened as an outcome of Enterprise Architecture. This score has a lowest impact on the organisation's risk management finally, 27.85% of participants reported that Enterprise Architecture did not make an impact on organisation's risk management.

**Figure 4.4.3.3: The effect of Enterprise Architecture on System Integration**

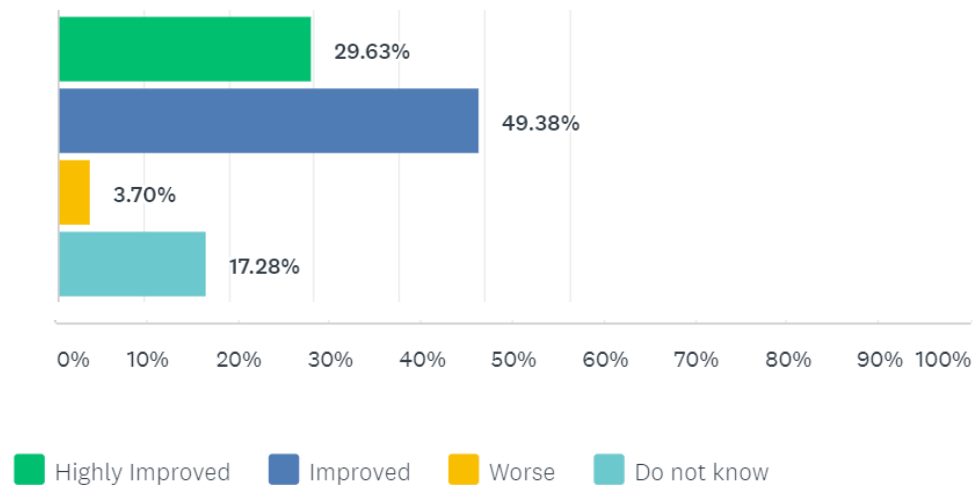


Figure 4.4.3.3 indicates that 29.63% of the participants reported that organisation's system integration has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's system integration followed by vast majority of respondents 49.38% reported that organisation's system integration was improved as an outcome of Enterprise Architecture. This group has higher score, and this shows a strong degree of the positive impact that Enterprise Architecture has on system integration of the organisation. The findings were statistically significant. The literature verifies the aforementioned responses: The EA offers a long-term view of an organisation's technologies, systems, and processes in order for individual projects to be able to have building capabilities – not only fulfilling the immediate needs". The important idea incorporated in this description is the standardization and integration of the organisation's core processes. EA facilitates information technology (IT), business, personnel, and integration of strategy with regard to usual objective via the utilization and production of structural models offering a holistic perspective of the company" (Olsen & Trelsgård, 2016). The implications of the key findings provide significant benefits to the organisation's systems integration. The perception of aforementioned statement was selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture improves organisation's systems integration while minimum of participants 3.70% reported that systems integration has worsened as an outcome of Enterprise Architecture. This has a lowest impact on the organisation's systems integration finally, 17.28% of participants

reported that Enterprise Architecture did not make any impact on organisation's systems integration.

**Figure 4.4.3.4: The effect of Enterprise Architecture on Continuity of company's knowledge**

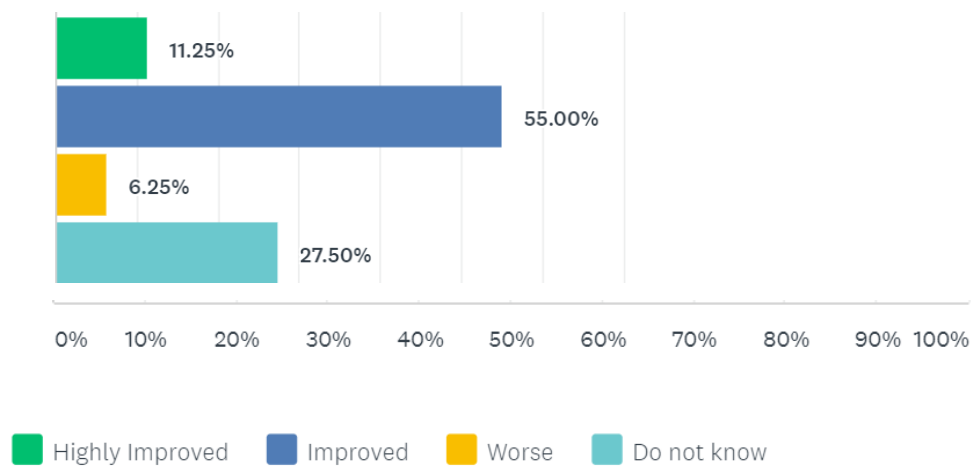


Figure 4.4.3.4 indicates the effect of Enterprise Architecture on continuity of company's knowledge. Small number of participants 11.25% reported that continuity of company's knowledge has highly improved as a result of Enterprise Architecture. This score has low impact on continuity of company's knowledge followed by vast majority of respondents 55.00% who reported that continuity of company's knowledge was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing continuity of company's knowledge. While few participants 6.25% reported that continuity of company's knowledge has worsened as an outcome of Enterprise Architecture. This score has a lowest impact on the continuity of company's knowledge finally, 27.50% of participants reported that Enterprise Architecture did not make an impact on continuity of company's knowledge.

**Figure 4.4.3.5: The effect of Enterprise Architecture on Data Integrity**

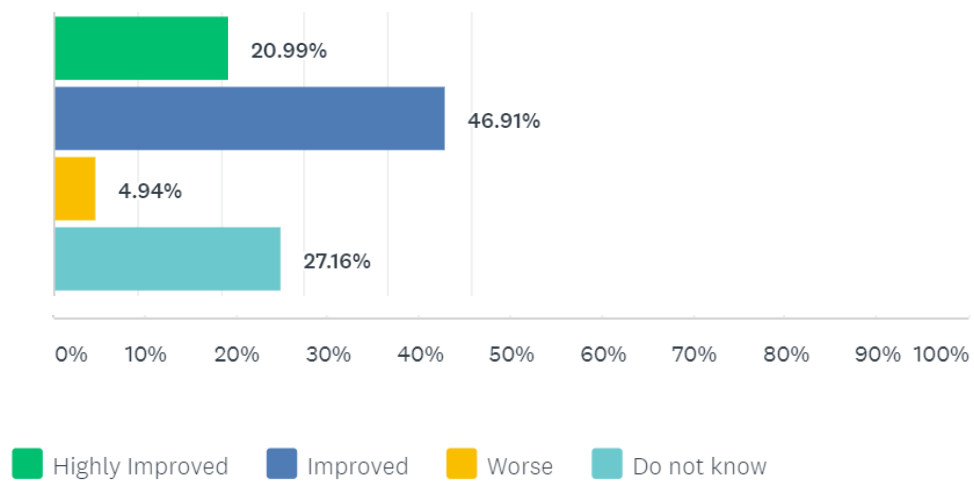


Figure 4.4.3.5 indicates the impact of Enterprise Architecture on data integrity of the organisation. Small number of participants 20.99% reported that organisation's data integrity has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's data integrity followed by vast majority of respondents 46.91% who reported that data integrity for this organisation has improved as a result of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing data integrity of the organisation, these findings were consistent with the literature. The aforementioned responses were supported by the literature: Alwadain, et al. (2016) notes that challenges concerning the data quality are other huge barrier because of the continual changes to requirements of the business which are not integrated well to the current infrastructures of the organisation. It is leading to complex and a heterogeneous application structure. Quality of data may be evaluated on various dimensions like consistency, reliability, integrity, and completeness. Data quality which is low implies that it is impossible to supply enterprise architecture stakeholders and other managers with the correct information on time. The perception of aforementioned statement was selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture is to increase organisation's data integrity. While few participants 4.94% reported that data integrity has worsened as a result of Enterprise Architecture. This score has a lowest impact on the organisation's data integrity. Finally, 27.16% of the respondents reported that Enterprise Architecture did not make an impact on organisation's data integrity.

**Figure 4.4.3.6: The effect of Enterprise Architecture on Technical Integrity**

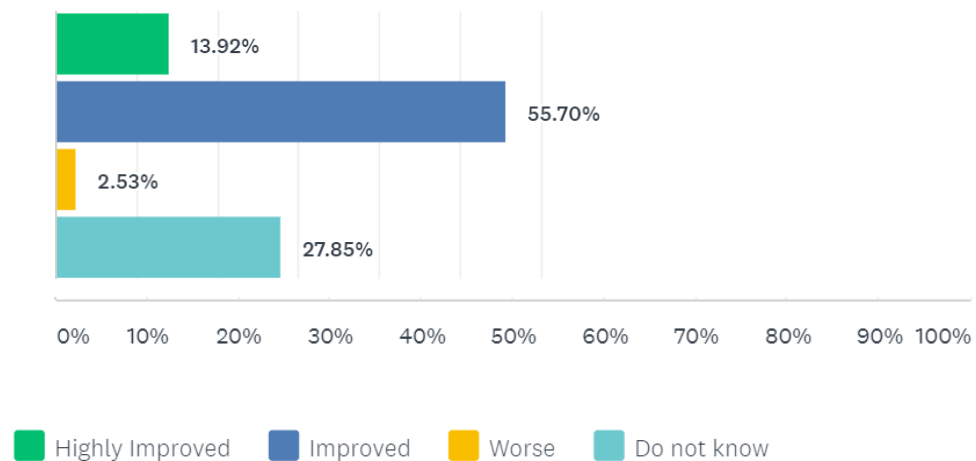


Figure 4.4.3.6 indicates the impact of Enterprise Architecture on technical integrity of the organisation. Few participants 13.92% reported that organisation's technical integrity has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's technical integrity followed by vast majority of respondents 55.70% who reported that technical integrity for this organisation has improved as a result of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing technical integrity of the organisation. The perception of aforementioned statement was selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture to increases organisation's technical integrity while other few respondents 2.53% reported that technical integrity has worsened as a result of Enterprise Architecture. This score has a lowest impact on the organisation's technical integrity finally, 27.85% of respondents reported that Enterprise Architecture did not make an impact on organisation's data integrity.

**Figure 4.4.3.7: The effect of Enterprise Architecture on lowering of Technical Integrity**

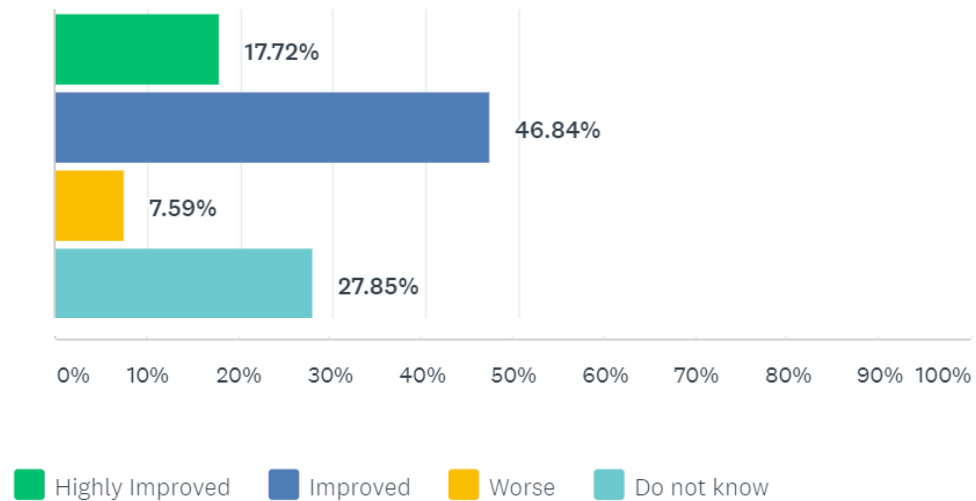


Figure 4.4.3.7 indicates the impact effect of Enterprise Architecture on lowering of organisation's technical integrity. Few participants 17.72% reported that lowering of technical integrity has highly improved as a result of Enterprise Architecture. This score has low impact on lowering of organisation's technical integrity followed by vast majority of respondents 46.84% who felt that lowering of technical integrity for this organisation was improved as a result of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on lowering of technical integrity for the organisation, these findings were consistent with the literature: Alwadain, et al. (2016) states that Enterprise architecture comes with a promise to improve organisational agility and reduce complexity, as one of its benefits. The aforementioned responses were supported by the literature: Alwadain, et al. (2016) states that Enterprise architecture provides suitable artefacts, frameworks, tools, and methods which help this organisation to lower complexity, which is not needed and allows organisational agility. The perception of aforementioned statement was selected in line with the relevant objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture to lower of organisation's technical integrity while other few participants 7.59% reported that lowering of organisational technical integrity has worsened as a result of Enterprise Architecture. This score has a lowest impact on lowering of technical integrity in this organisation finally, 27.85% of participants reported that Enterprise Architecture did not make an impact on lowering of technical integrity (Foorthuis, et al., 2016).



**Figure 4.4.3.8: The effect of Enterprise Architecture on Making Decision**

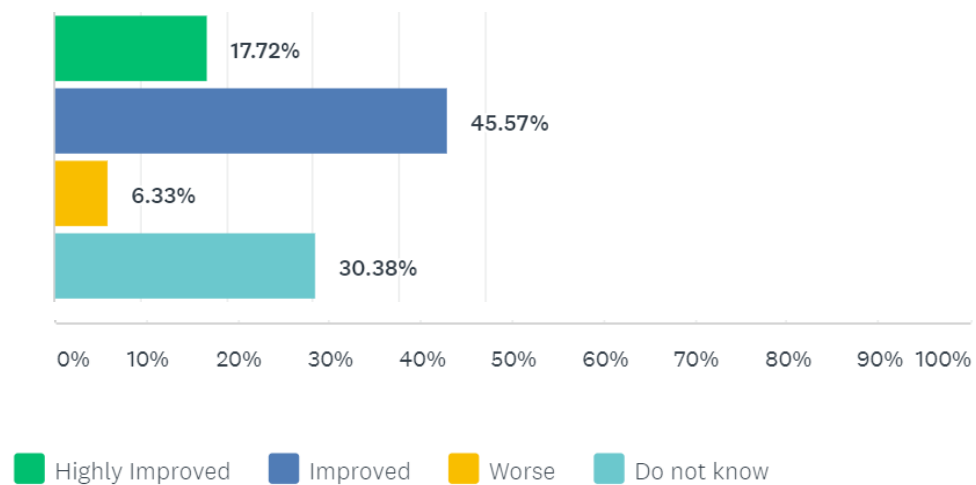


Figure 4.4.3.8 indicates the impact of Enterprise Architecture on making decision for the organisation. Few participants 17.72% felt reported that making decision has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's decision making followed by vast majority of respondents 45.57% who reported that decision making has improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing decision making in the organisation, these findings were consistent with the literature. The aforementioned responses were supported by the literature: Fatemeh, et al. (2017) states that enterprise architecture assists in COTS software adoption, making sourcing decisions and it is also supporting activities of general decision-making. It was illustrated that the results of enterprise architecture enhance the process of decision-making and also improve the management of IS/ IT. EA allows improved decision making (Foorthuis, et al.,2016). The perception of aforementioned statement was selected in line with the relevant objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture allows the organisation to make decisions more effectively while other few participants 6.33% reported that decision-making has worsened as a result of Enterprise Architecture. This score has a lowest impact on the organisation's decision-making finally, 30.38% of respondents felt that Enterprise Architecture did not make an impact on organisation's decision-making.

**Figure 4.4.3.9: The effect of Enterprise Architecture on IT and/or operating costs optimization**

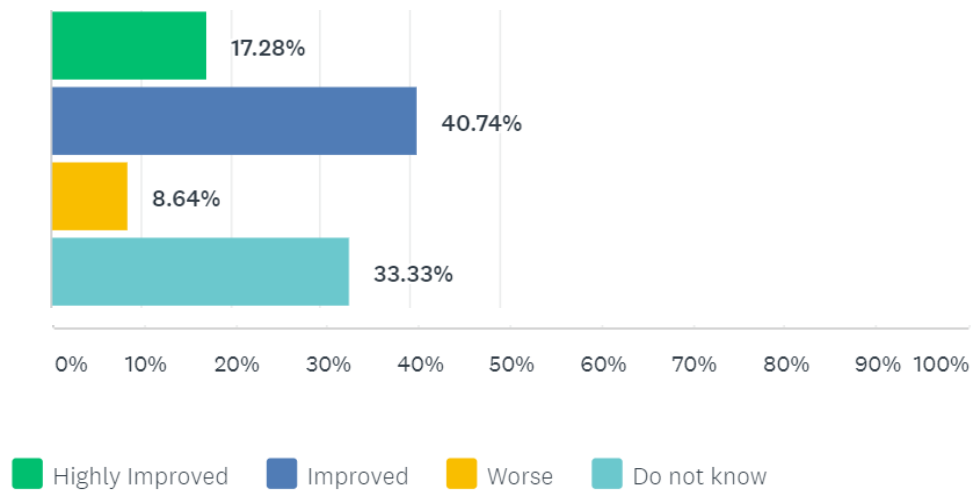


Figure 4.4.3.9 indicates the effect of Enterprise Architecture on IT and/or operating costs optimization. Few respondents 17.28% felt that IT and/or operating costs optimization has highly improved as a result of Enterprise Architecture. This score has low impact on organisation's IT and/or operating costs optimization followed by vast majority of respondents 40.74% who felt that IT and/or operating costs optimization for the organisation was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing IT and/or operating costs optimization, these findings were consistent with the literature. The aforementioned responses were supported by the literature review: Jallow, et al. (2017) states that enterprise architecture is supporting the reduction of information technology costs via (i) improved costs management relating to information technology operations. (ii) Consolidation of information technology obtained via the redundant technological and elimination of expensive platforms. Enterprise architecture is lowering information technology costs (Jallow, et al. ,2017). It was discovered that applying enterprise architecture enhances the information technology ROI (return on investment). In addition, applying enterprise architecture is optimizing information technology investments value. However, it was also discovered that enterprise architecture is leading to lowering of both indirect and direct information technology costs. Indirect costs involve costs linked to application of information technology resources, effective use and information system development time. Direct information technology costs involve costs linked to information technology operations costs and also application maintenance (Zapata, et al.,2019). The

perception of aforementioned statement was selected in line with the relevant objective of the study which is to identify the current role of enterprise architecture in the organisation.

Therefore, the role of enterprise architecture is to optimise IT and/or operating costs of the organisation while other few participants 8.64% reported that optimization of IT and/or operating costs has worsened as a result of Enterprise Architecture. This score has a lowest impact on organisation's IT and/or operating costs optimization finally, 33.33% of participants reported that Enterprise Architecture did not make an impact on IT and/or operating costs optimization of the organisation.

**Figure 4.4.3.10: The effect of Enterprise Architecture on business and/or IT governance**

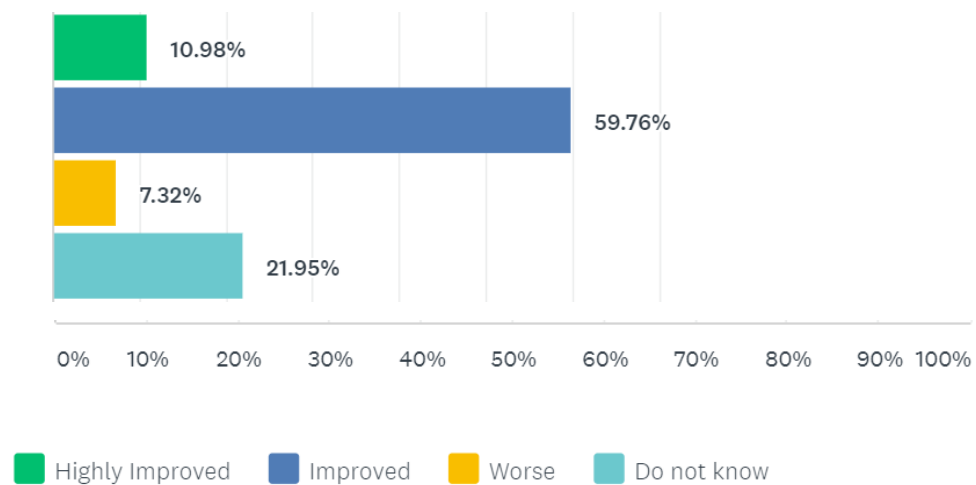


Figure 4.4.3.10 indicates the impact that Enterprise Architecture on business and/or IT governance. Few participants 10.98% reported that business and/or IT governance has highly improved as a result of Enterprise Architecture. This score has low impact on business and/or IT governance of this organisation followed by vast majority of respondents 59.76% who felt that business and/or IT governance of the organisation was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing business and/or IT governance of the organisation. These findings were consistent with the literature, the aforementioned responses were supported by the literature: Information technology governance was discovered as the most important factor. Alwadain, et al. (2016) describe information technology governance as “to specify the accountability framework and decision rights to motivate desirable behaviour in the utilization of information technology” (Weill & Woodham, 2002). In addition, Sajid and Ahsan (2016) suggest that information technology governance identifies a decision making and responsibility structure to promote desired behaviour for utilizing information technology for risk management as well as internal control. This perception was selected in line with the relevant objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the organisation can successfully use Enterprise Architecture to increase business and/or IT governance of the organisation. While other few respondents 7.32% reported that business and/or IT governance has worsened as a result of Enterprise Architecture. This score has a lowest impact on the business

and/or IT governance of the organisation finally, 21.95% of participants reported that Enterprise Architecture did not make an impact on business and/or IT governance of the organisation.

**Figure 4.4.3.11: The effect of Enterprise Architecture on Business Efficiency**

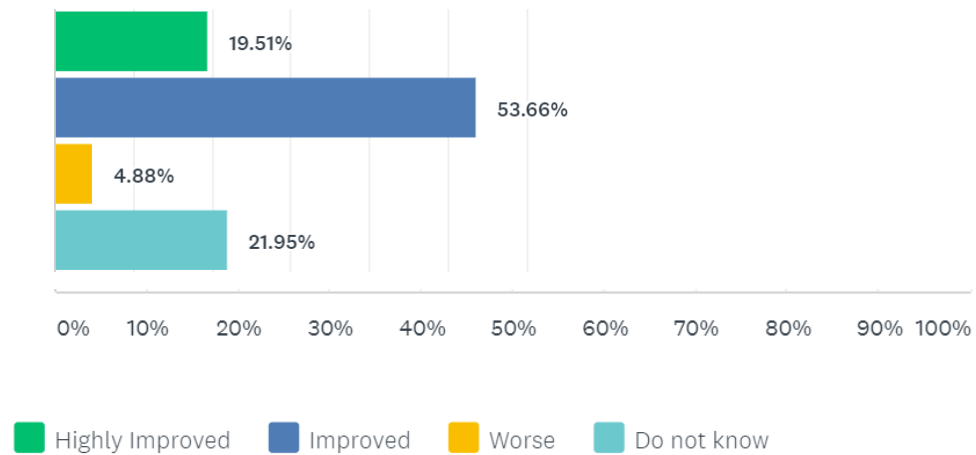
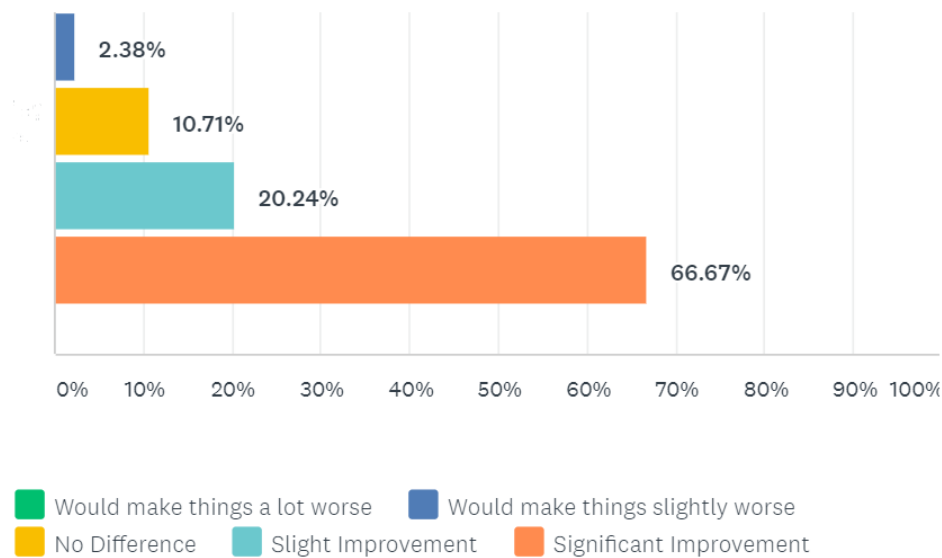


Figure 4.4.3.11 indicates the impact that Enterprise Architecture has on business efficiency. Few participants 19.51% reported that business efficiency has highly improved as a result of Enterprise Architecture. This score has low impact on organisational efficiency followed by vast majority of respondents 53.66% who felt that business efficiency was improved as an outcome of Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact on increasing organisational efficiency. These findings were consistent with the literature, the aforementioned responses were supported by the literature: Different authors are suggesting that enterprise architecture offers the riggings needed to allow a company to obtain overall efficiency (Shanks, et al., 2018). Additionally, it was discovered that enterprise architecture was contributing by allowing companies to obtain operational excellence and also enhancement in organisational efficiency. Enterprise architecture is promoting achievement of the preferable balance among business innovation and IT efficiency (Soares, et al., 2017). The perception of aforementioned statement was selected in line with the research objective of the study which is to identify the current role of enterprise architecture in the organisation. Therefore, the role of enterprise architecture improves organisational efficiency while other few participants 4.88% reported that business efficiency has worsened as a result of Enterprise Architecture. This score has a lowest impact on organisational efficiency finally, 21.95% of participants reported that Enterprise Architecture did not make an impact on business efficiency.

**Figure 4.4.4.1 Promoting knowledge sharing among EA team and other organisational employees**



Question five from the questionnaire was aimed at establishing how effective it would be to support efforts of Enterprise Architecture. The results of Figure 4.4.4.1 to Figure 4.4.4.5 are linked to second research objective of the study which to determine the impact of knowledge management and its linked practices that may be utilized in increasing the potential success of Enterprise Architecture. As specified on the literature, the list of five interventions of Knowledge Management was depicted on the questionnaire. The participants were requested to rate the success of every intervention depending on the perception of the respondent. The discovered success of every intervention of Knowledge Management was rated on a 5-point Likert scale as viewed by the participants. The choices that were depicted are “Would make things a lot worse”, “Would make things slightly worse”, “No difference”, “Slight improvement” and “Significant improvement”. The research findings from this part of the questionnaire may help to answer research objectives presented in chapter one under section 1.5 (Garca, et al., 2017). Figure 4.4.4.1 indicates the how effective it would be to support efforts of Enterprise Architecture in the organisation. Few participants 2.38% reported that promoting knowledge sharing among EA team and other organisational employees would make things slightly worse for the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation.

Followed by 10.71% of participants who reported that promoting knowledge sharing among EA team and other organisational employees did not make an impact on supporting efforts of Enterprise Architecture in the organisation. While 20.24% of respondents reported that there was a slight improvement on promoting knowledge sharing among EA team and other organisational employees. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation finally a vast majority of respondents 66.67% felt that was a significant improvement on promoting knowledge sharing among EA team and other organisational employees these findings were consistent with the literature. The aforementioned responses were supported by the literature: Ouali, et al. (2016) states that it is essential to give an insight to the level at which stakeholders of EA believe that the efforts of EA can benefit from promotion or introduction of KM activities like giving the important tools which enable the EA team and other employees to collaborate or promoting a culture of knowledge sharing. The relevant objective is the impact of knowledge management in increasing the potential success of Enterprise Architecture in the organisation this is indicated by the aforementioned statement. This group had high score which indicates a positive impact on supporting efforts of Enterprise Architecture in the organisation. What these primary findings revealed regarding the relevant objective is that the impact of knowledge management and its linked practices utilized in increasing organisational performance and the potential success of enterprise architecture can be determined by promoting a culture of knowledge sharing in the organisation.



**Figure 4.4.4.2 Consistently communicating Enterprise Architecture- success stories and related issues**

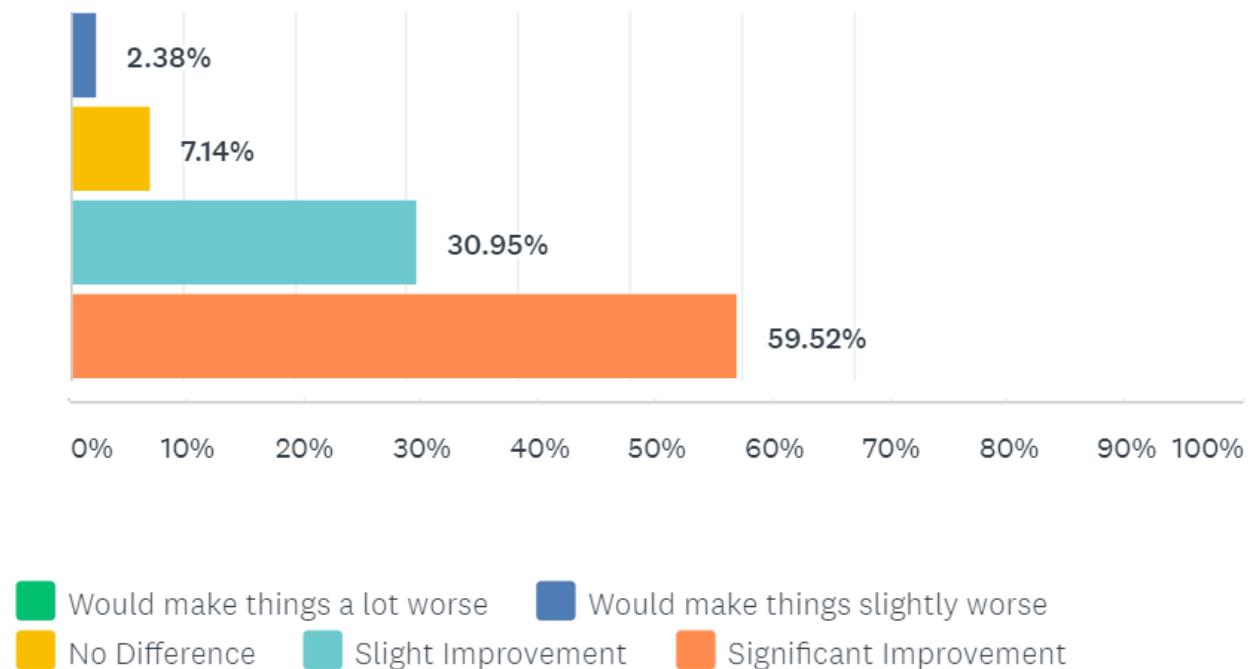


Figure 4.4.4.2 indicates results for consistently communicating Enterprise Architecture- success stories and related issues in the organisation. Very few respondents 2.38% reported that consistently communicating Enterprise Architecture- success stories and related issues would make things slightly worse for the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation. Followed by 7.14% of respondents who reported that consistently communicating Enterprise Architecture- success stories and related issues did not make an impact on supporting efforts of Enterprise Architecture in the organisation. While 30.95% of respondents reported that there was a slight improvement on consistently communicating Enterprise Architecture- success stories and related issues in the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation. Finally, a vast majority of respondents 59.52% felt that was a significant improvement on consistently communicating Enterprise Architecture- success stories and related issues in the organisation.

**Figure 4.4.4.3 More involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture**

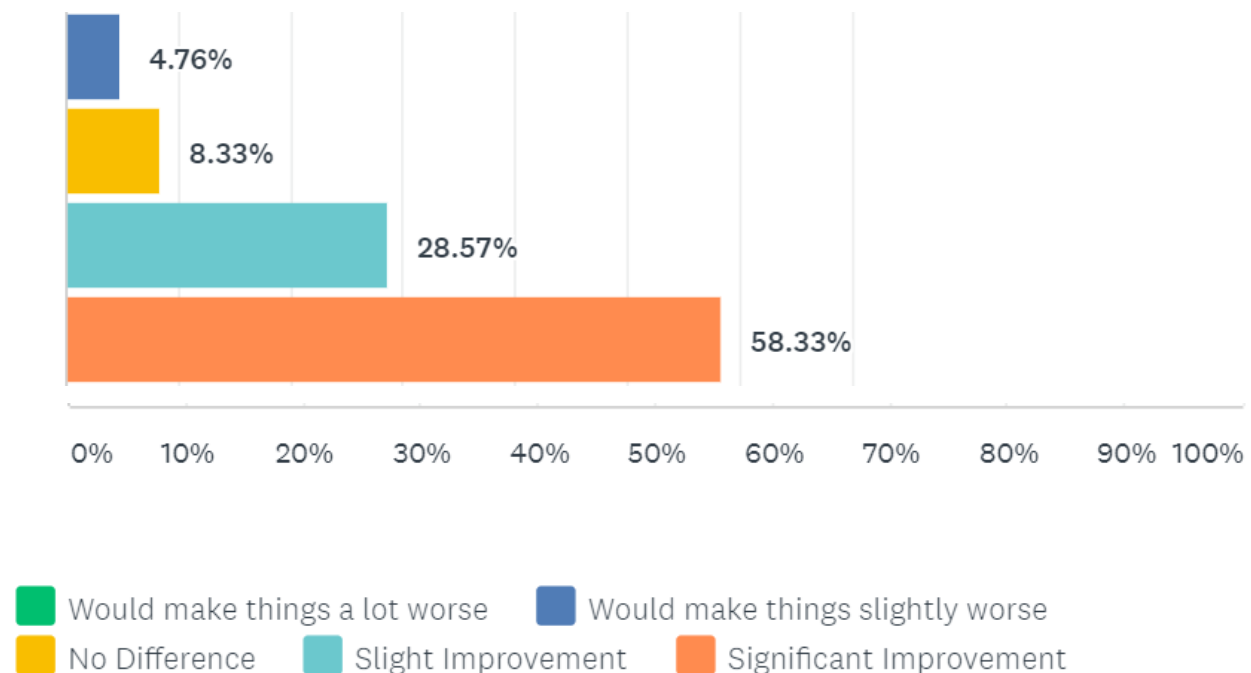


Figure 4.4.4.3 indicates the results of having more involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture. Few participants 4.76% reported that more involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture would make things slightly worse for the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation. Followed by 8.33% of participants who reported that more involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture did not make an impact on supporting efforts of Enterprise Architecture in the organisation. While 28.57% of respondents reported that there was a slight improvement on having more involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation. Finally, a vast majority of respondents 58.33% felt that there was a significant improvement on having more involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture. This group had higher score, the findings were statistically significant and had a positive impact supporting efforts of Enterprise Architecture in the organisation, these findings were consistent with the literature. The aforementioned responses were supported by the literature: Schilling (2018) highlighted that the enterprise architect captures the requirement and concerns of enterprise architecture stakeholders

by developing perspectives of the architecture which illustrates to the EA stakeholders what kind of compromises are going to take in addressing each conflict among concerns of various stakeholders, and how their requirement and concerns are going to be addressed. It implies that EA is anticipated to harmonize each and every concern and requirement of different stakeholders and implementing architectures which are addressing as many of those requirements and concerns as possible. The objective is to determine the impact of knowledge management in increasing the potential success of Enterprise Architecture in the organisation this can be obtained by utilizing the aforementioned statement.

**Figure 4.4.4.4 Constant communication concerning the goals and purpose of EA**

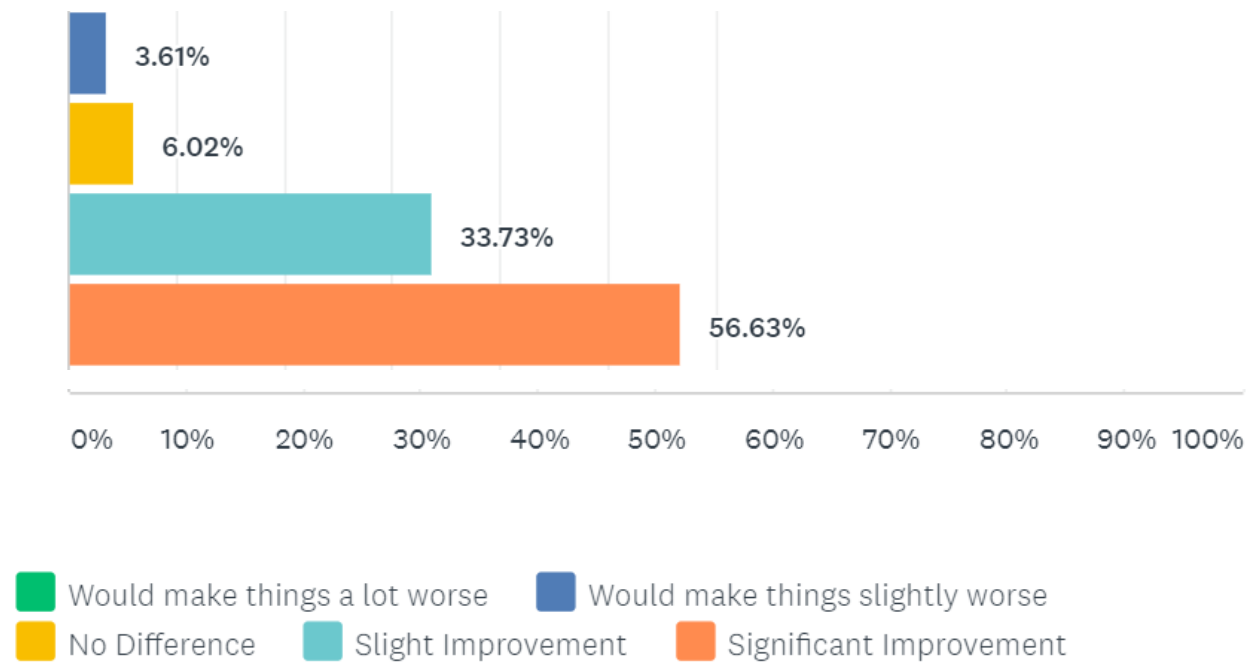


Figure 4.4.4.4 indicates the results of constant communication concerning the goals and purpose of EA. Very few participants 3.61% reported that constant communication concerning the goals and purpose of EA would make things slightly worse for the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation followed by another few respondents 6.02% of participants who reported that constant communication concerning the goals and purpose of EA did not make an impact on supporting efforts of Enterprise Architecture in the organisation. While 33.73% of respondents reported that there was a slight improvement on constant communication concerning the goals and purpose of EA this score has low impact on supporting the efforts of Enterprise Architecture in the organisation. Finally, a vast majority of respondents 56.63% felt that there was a significant improvement on constant communication concerning the goals and purpose of EA, these findings were consistent with the literature. This group had higher score, the findings were statistically significant and had a positive impact on supporting efforts of Enterprise Architecture in the organisation. The aforementioned responses were supported by the literature: Hacks, et al. (2019) argues that among others the architect 's role is to effectively communicate the goals and vision of the initiative of EA, be able to integrate and put together resources required to achieve the goals of EA, defining technical architecture guidelines , among others identifying the data and its movement throughout the enterprise. Furthermore Lankhorst (2017) emphasize that the enterprise architect should carry out business in

a way which her or his efforts can enhance the value and quality of IT operations in the enterprise. Communication which is effective allows knowledge sharing and assists in establishing usual understanding of the agreed artefacts, models, objectives, vision, scope and goals.

**Figure 4.4.4.5 More involvement of management in Enterprise Architecture**

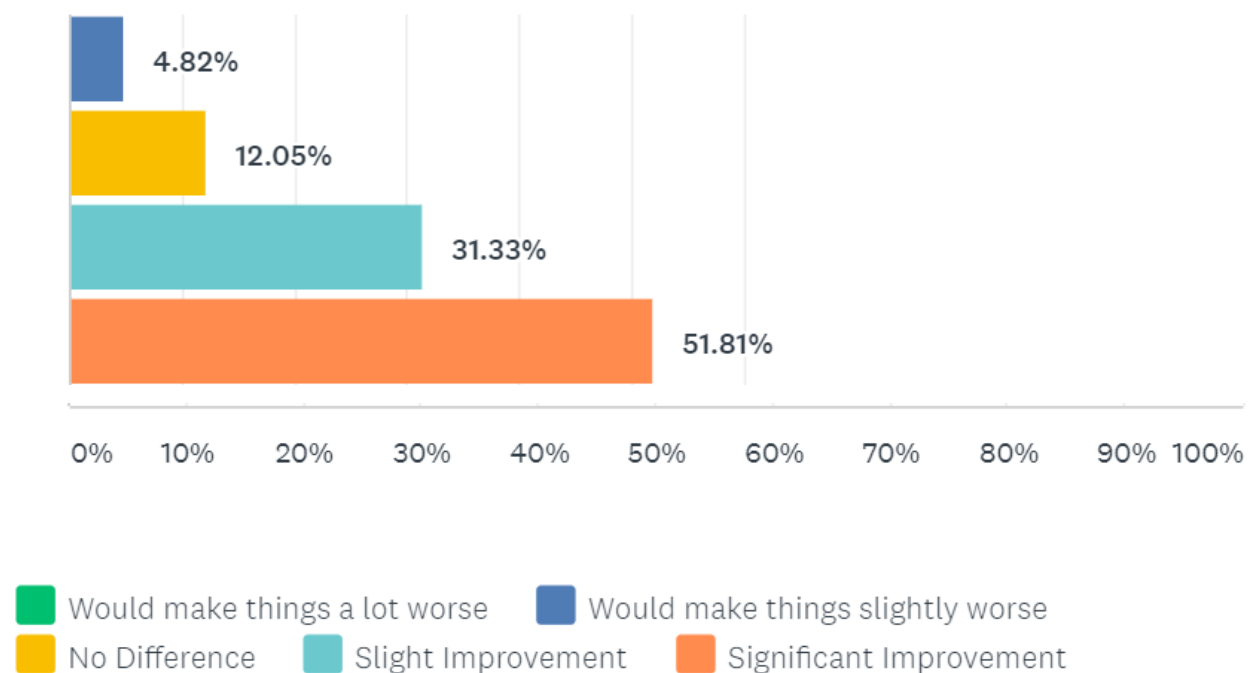
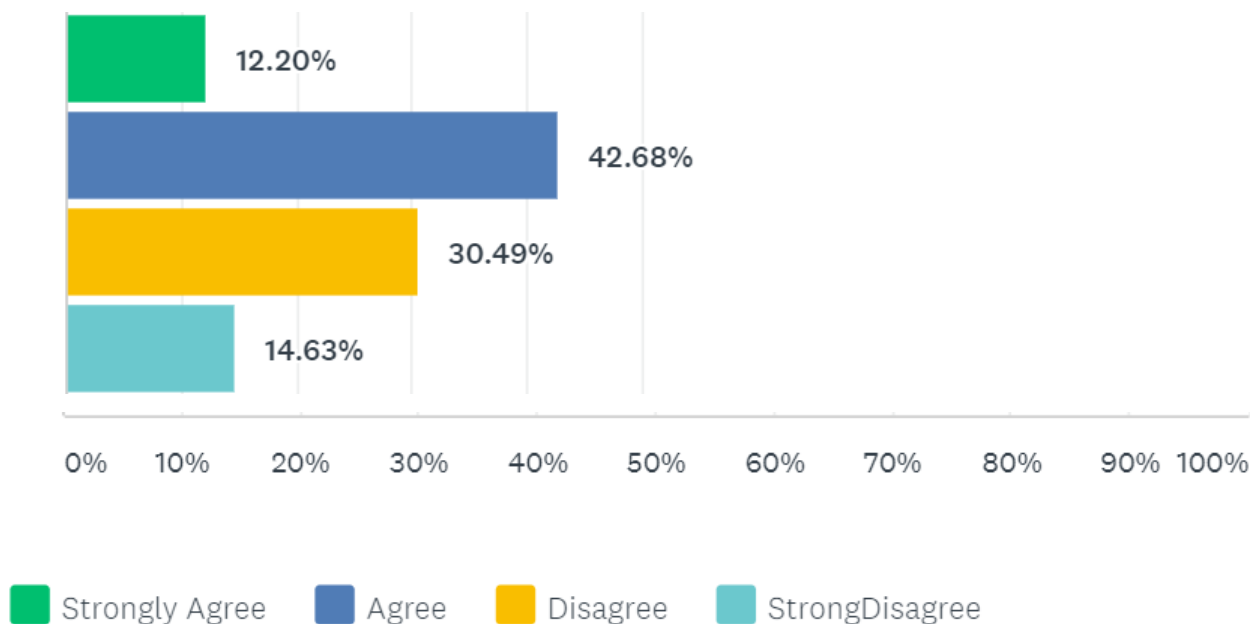


Figure 4.4.4.5 the results of more involvement of management in Enterprise Architecture. Few participants 4.82% reported that more involvement of management in Enterprise Architecture would make things slightly worse for the organisation. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation followed by 12.05% of participants who reported that more involvement of management in Enterprise Architecture did not make an impact on supporting the efforts of Enterprise Architecture in the organisation. While 31.33% of respondents reported that there was a slight improvement on having more involvement of management in Enterprise Architecture. This score has low impact on supporting the efforts of Enterprise Architecture in the organisation finally a vast majority of respondents 51.81% felt that there was a significant improvement on more involvement of management in Enterprise Architecture these findings were consistent with the literature. This group had higher score, the findings were statistically significant and had a positive impact on supporting the efforts of Enterprise Architecture in the organisation. The aforementioned responses were supported by the literature: Bankauskaite (2019) suggested that in order to have successful adoption of enterprise architecture, it is critical that organisational members must consider the adoption of EA to be supported by top-management, beneficial to the individual, valuable, achievable, and necessary to the organisation. Involvement of management is mentioned by 5 articles stating its significance

and it is considered to be the most essential factor. Support and involvement of management is basically one of the broadly factors mentioned essential for successful implementation of every IT initiative or project (Olsen, et al., 2016).

**Figure 4.5.1: There is a great knowledge sharing level among other organisational members and the Enterprise Architecture team**



Question four from the questionnaire was aimed to discover the barriers and facilitators to the success of EA adoption and this is how it was phrased: Kindly rate the acceptance of these factors in your company? As specified on the literature, ten barrier list of Enterprise Architecture was introduced on the questionnaire. The participants were instructed to rate acceptance of every factor in their company (Premchand, et al., 2016). The acceptance factor has been rated on a 4-point Likert scale. The choices that were presented are “Strongly Agree”, “Agree”, “Disagree” and “Strongly Disagree”. Figure 4.5.1 is presenting the perception there was a great knowledge sharing level among other organisational members and the Enterprise Architecture team. According to the graph, it can be concluded that few respondents 12.20% strongly agreed that there is a great knowledge sharing level among other organisational members and the Enterprise Architecture team. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 42.68% that agreed that there is a great knowledge sharing level among other organisational members and the Enterprise Architecture team. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The



aforementioned responses were supported by the literature: Ouali, et al. (2016) states that the barriers are experienced throughout the adoption of EA. It is essential to give an insight to the level at which stakeholders of EA believe that the efforts of EA can benefit from promotion or introduction of KM activities like giving the important tools which enable the EA team and other employees to collaborate or promoting a culture of knowledge sharing. While 30.49% of respondents disagreed with the aforementioned statement, this score had a low impact on increasing the success of EA adoption for this organisation. Finally, 14.63% respondents strongly disagreed with the aforementioned statement, this has a low impact on improving adoption of enterprise architecture in the organisation.

**Figure 4.5.2: Activities of Enterprise Architecture are producing the anticipated benefits**

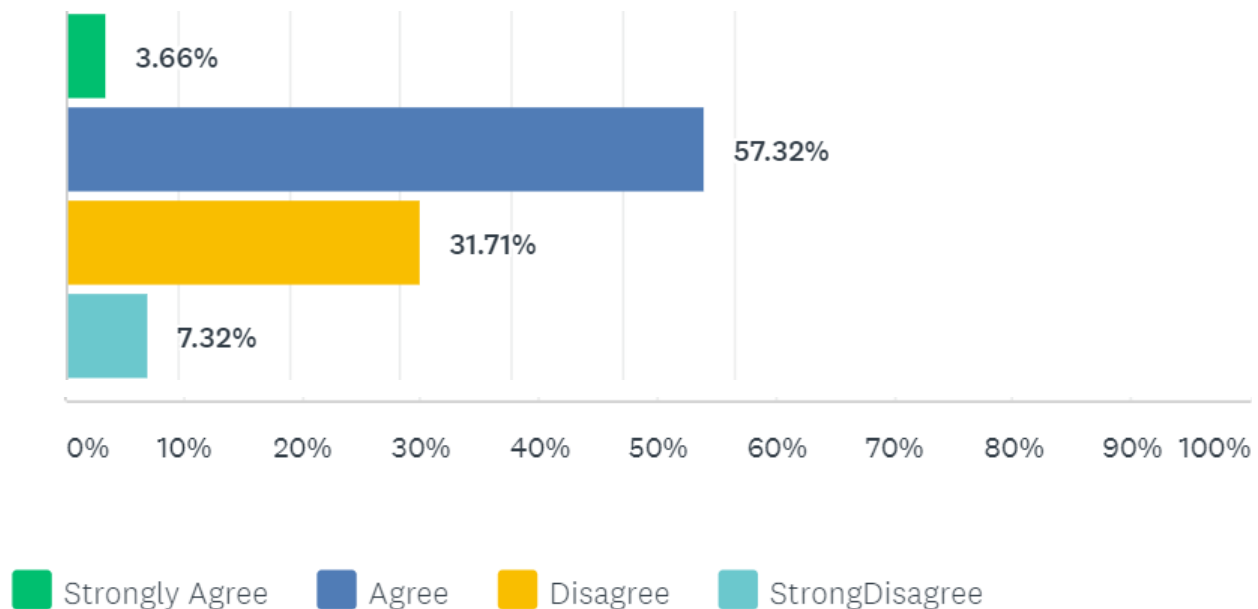


Figure 4.5.2 is presenting the perception that the activities of Enterprise Architecture are producing the anticipated benefits. According to the graph, it can be concluded that few respondents 3.66% strongly agreed that activities of Enterprise Architecture are producing the anticipated benefits for the organisation. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 57.32% that agreed the activities of Enterprise Architecture are producing the anticipated benefits for the organisation. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. The perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The aforementioned responses were supported by the literature: It is clearly understood that the EA roles and benefits depicted by different authors that applying enterprise architecture is contributing to IT domain and improves organisational performance. Without the success of enterprise architecture adoption, it is impossible to realize the EA benefits (Centobelli, et al., 2017). There are specific factors which are preventing organisations from obtaining the anticipated benefits of a successful enterprise architecture. To overcome the destructors, it is essential determining the important success factors which are needed for adoption of enterprise architecture to be successful. Nikpay, et al. (2017) carried out a literature review of the important factors for implementing initiatives of enterprise architecture successfully. While 31.71% of respondents disagreed, this score has a low impact on

improving adoption of enterprise architecture in the organisation finally 7.32% respondents strongly disagreed with the aforementioned statement, this has a low impact on improving adoption of enterprise architecture in the organisation.

**Figure 4.5.3: Workers are participating actively on the Enterprise Architecture development**

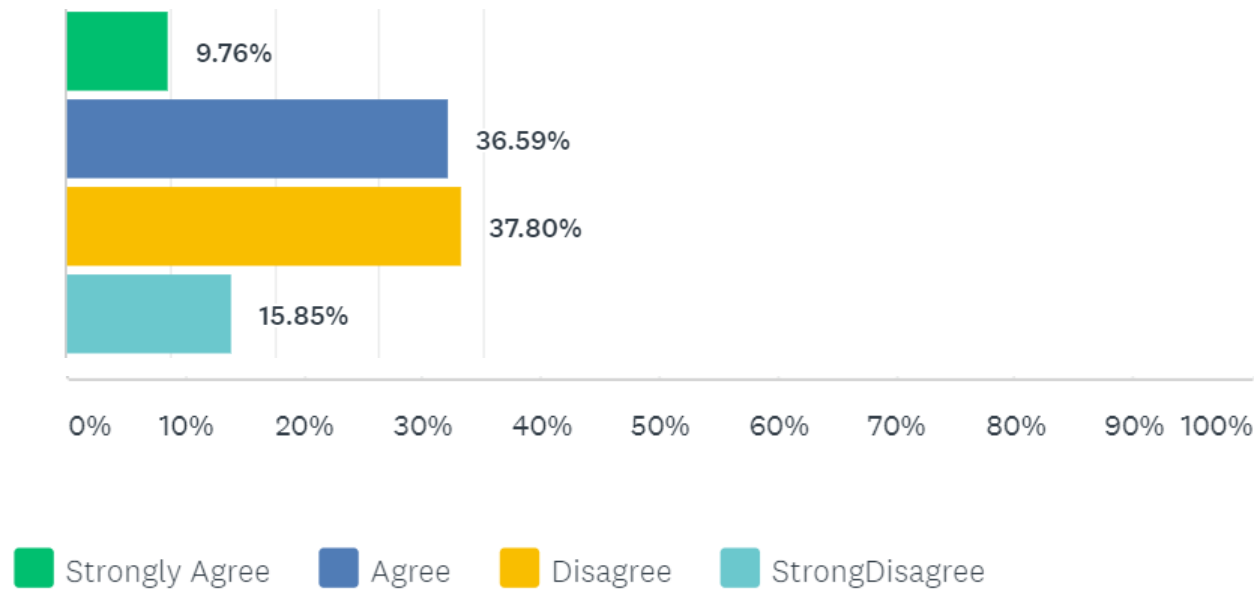


Figure 4.5.3 is presenting the perception that there was a great knowledge sharing level among other organisational members and the Enterprise Architecture team. According to the graph, it can be concluded that few respondents 9.76% strongly agreed that workers are participating actively on the Enterprise Architecture development. This score has a low impact on improving adoption of enterprise architecture in the organisation followed by 36.59% of respondents agreed that workers are participating actively on the Enterprise Architecture development. This score has low impact on improving adoption of enterprise architecture in the organisation while vast majority of respondents 37.80% disagreed that workers are participating actively on the Enterprise Architecture development in the organisation. This has a negative impact on improving adoption of enterprise architecture in the organisation, this means that workers are not actively participating in the development of Enterprise Architecture. This finding is contradicting with the literature review carried out on chapter two. Amalia and Supriadi (2017) propose that it is important identifying the group members and individuals needed to contribute throughout the development of enterprise architecture, to be specific the groups and individuals “who are going to lose and the ones who are going to gain from introducing EA” (Hafsi & Assar, 2016, p. 99), and formulating strategies of dealing with them. The contradiction may be caused by the barriers faced during the adoption of Enterprise Architecture. Finally, 15.85% respondents strongly disagreed with the aforementioned statement, this has a low impact on improving adoption of enterprise architecture

in the organisation. Since most respondents disagreed that workers are participating actively on the Enterprise Architecture development this indicates unexpected results. In order to increase the possibility of successful initiatives of Enterprise Architecture the organisation must ensure that workers are participating actively on the Enterprise Architecture development.

**Figure 4.5.4: Enterprise Architecture is having required support from management**

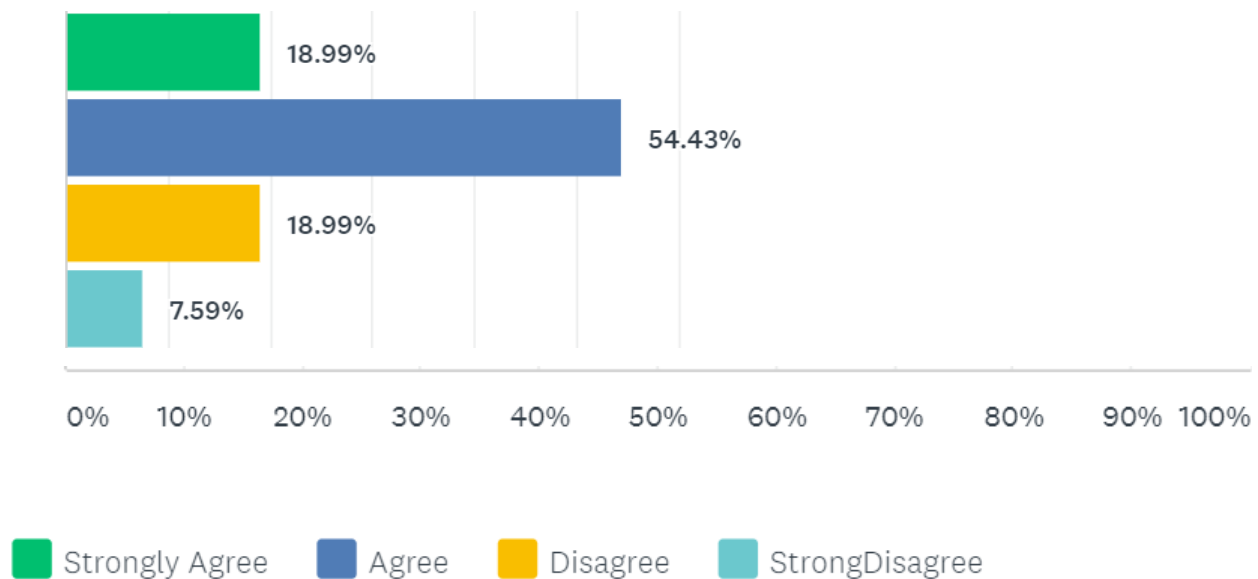


Figure 4.5.4 presents the perception that Enterprise Architecture is having required support from management of the organisation. According to the graph, it can be concluded that few respondents 18.99% strongly agreed that Enterprise Architecture is having required support from management of the organisation. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 54.43% that agreed Enterprise Architecture is having required support from management of the organisation. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The aforementioned responses were supported by the literature: Bankauskaite (2019) suggested that in order to have successful adoption of enterprise architecture, it is critical that organisational members must consider the adoption of EA to be supported by top-management, beneficial to the individual, valuable, achievable, and necessary to the organisation(Olsen, et al., 2016). Support and involvement of management is basically one of the broadly factors mentioned essential for successful implementation of every IT initiative or project. While another 18.99% respondents disagreed with the aforementioned statement, this means that Enterprise Architecture is not having required support from management this has low impact improving adoption of enterprise architecture in the organisation. Finally, 7.59% respondents strongly disagreed that Enterprise Architecture is having

required support from management of the organisation, this has a low impact on improving adoption of enterprise architecture in the organisation. Since most respondents (54.43%) agreed that Enterprise Architecture is having required support from management therefore this is important in increasing the possibility of successful adoption of Enterprise Architecture in the organisation.

**Figure 4.5.5: The company is having the necessary skills for the development of Enterprise Architecture**

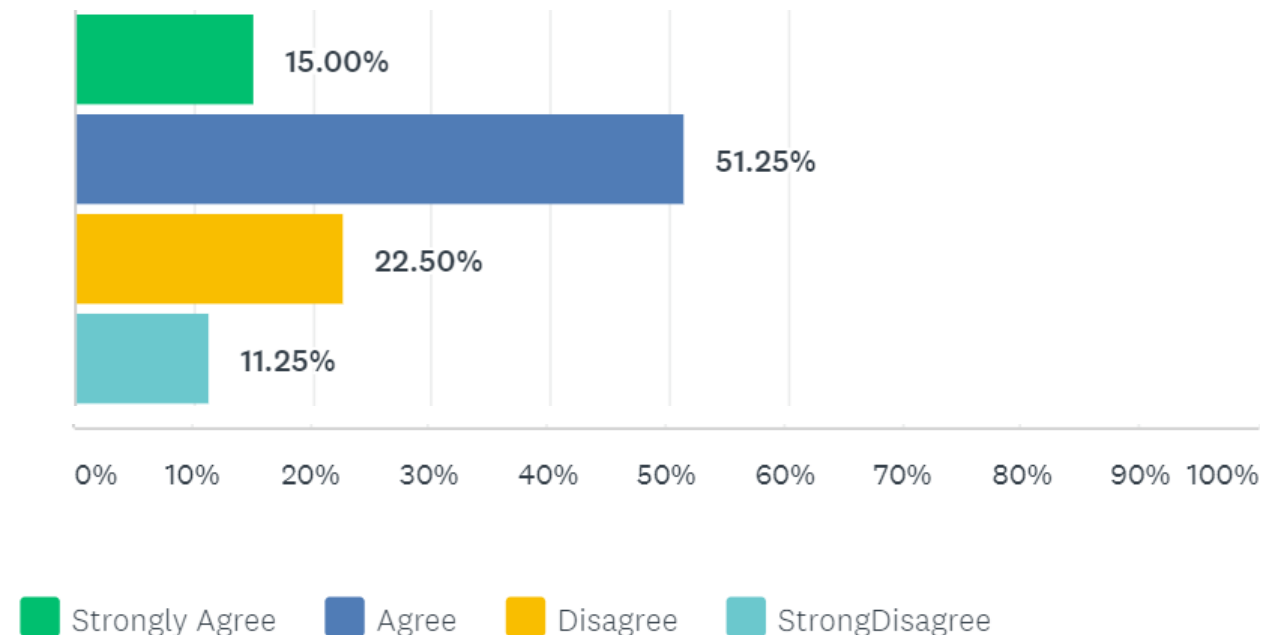


Figure 4.5.5 is presenting the perception that the company is having the necessary skills for the development of Enterprise Architecture. According to the graph, it can be concluded that few respondents 15.00% strongly agreed that the company is having the necessary skills for the development of Enterprise Architecture. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 51.25% that agreed that the company is having the necessary skills for the development of Enterprise Architecture. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The aforementioned responses were supported by the literature: Olsen, et al. (2016) established the findings which are listed below from the 5 articles:-The enterprise architecture team and architect skill, was discussed by different researchers as essential to the success of implementing the initiatives of enterprise architecture (Jallow, et al., 2017; Hacks & Lichter, 2018; Bankauskaite, 2019). Additionally, the architect should have powerful skills of project management to assure that each and every activity in the enterprise life cycle is implemented utilizing the best practices and strategies. While 22.50% of respondents disagreed with the



aforementioned statement, this score had a low impact on increasing the success of EA adoption for this organisation finally 11.25% respondents strongly disagreed with the aforementioned statement. This has a low impact on improving adoption of enterprise architecture in the organisation. The results were verified by the responses that respondents gave, this is suggesting that assuring that the company is having the necessary skills for the development of Enterprise Architecture is increasing the possibility of successful adoption of Enterprise Architecture in the company.

**Figure 4.5.6: Requirements from Enterprise Architecture stakeholders/ users are reflected and understood in the artefacts of Enterprise Architecture**

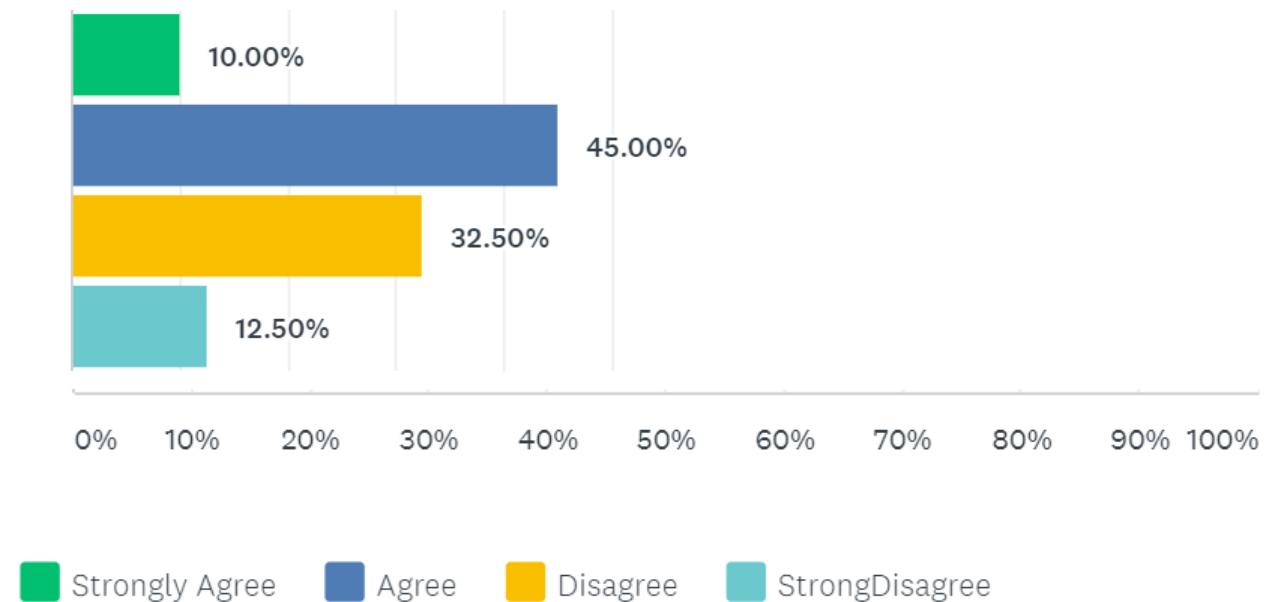


Figure 4.5.6 is presenting the perception that requirements from Enterprise Architecture stakeholders/ users are reflected and understood in the artefacts of Enterprise Architecture. According to the graph, it can be concluded that few respondents 10.00% strongly agreed that requirements from Enterprise Architecture stakeholders/ users are reflected and understood in the artefacts of Enterprise Architecture. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 45.00% that agreed that requirements from Enterprise Architecture stakeholders/ users are reflected and understood in the artefacts of Enterprise Architecture. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The aforementioned responses were supported by the literature: Schilling (2018) highlighted that the enterprise architect captures the requirement and concerns of enterprise architecture stakeholders by developing perspectives of the architecture which illustrates to the EA stakeholders what kind of compromises are going to take in addressing each conflict among concerns of various stakeholders, and how their requirement and concerns are going to be addressed. It implies that EA is anticipated to harmonize each and every concern and requirement of different stakeholders and implementing architectures which are addressing as

many of those requirements and concerns as possible. While 32.50% of respondents disagreed with the aforementioned statement, this score had a low impact on increasing the success of EA adoption for this organisation. Finally, 12.50% respondents strongly disagreed with the aforementioned statement, this has a low impact on improving adoption of enterprise architecture in the organisation.

**Figure 4.5.7: Adoption of Enterprise Architecture was supported by a culture change and transformation programme**

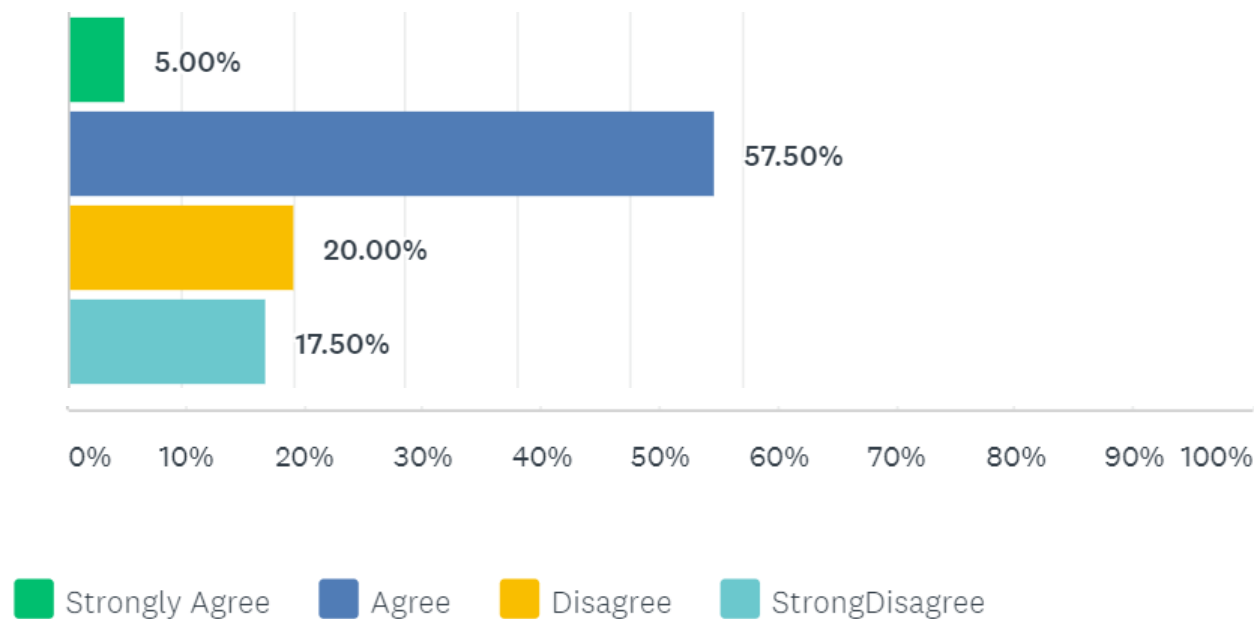


Figure 4.5.7 is presenting the perception that the adoption of Enterprise Architecture was supported by a culture change and transformation programme. According to the graph, it can be concluded that few respondents 5.00% strongly agreed that the adoption of Enterprise Architecture was supported by a culture change and transformation programme. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 57.50% agreed that the adoption of Enterprise Architecture was supported by a culture change and transformation programme. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. What these primary findings revealed regarding the relevant objective is that adoption of Enterprise Architecture was supported by a culture change and transformation programme can be used to determine the impact of knowledge management and its linked practices which may be utilized in increasing organisational performance and the potential success of enterprise architecture. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. The aforementioned responses were supported by the literature: Jallow, et al. (2017) and Lange, et al. (2016) consider culture of the organisation to be a critical factor when governing company's transformation via enterprise architecture. When introducing transformation to the organisation's strategy, the organisation's enterprise architectures may need

some modification based on identified gaps. Enterprise architecture is facilitating attainment of strategy of the business by allowing IT transformation alignment to organisational needs. Enterprise architecture assists organisations to replace uncertain systems, Enterprise architecture repeats or promotes foundations of communications and information technology, Enterprise architecture assists organisations to manage change. While 20.00% of respondents disagreed with the aforementioned statement, this score had a low impact on increasing the success of EA adoption for this organisation finally 17.50% respondents strongly disagreed with the aforementioned statement. This has a low impact on improving adoption of enterprise architecture in the organisation. Based on the graph above there is a sufficient evidence (57.50%) that the adoption of Enterprise Architecture was supported by a culture change and transformation programme in this organisation this was verified by the responses that respondents gave.

**Figure 4.5.8: Enterprise Architecture was fully welcomed at the company**

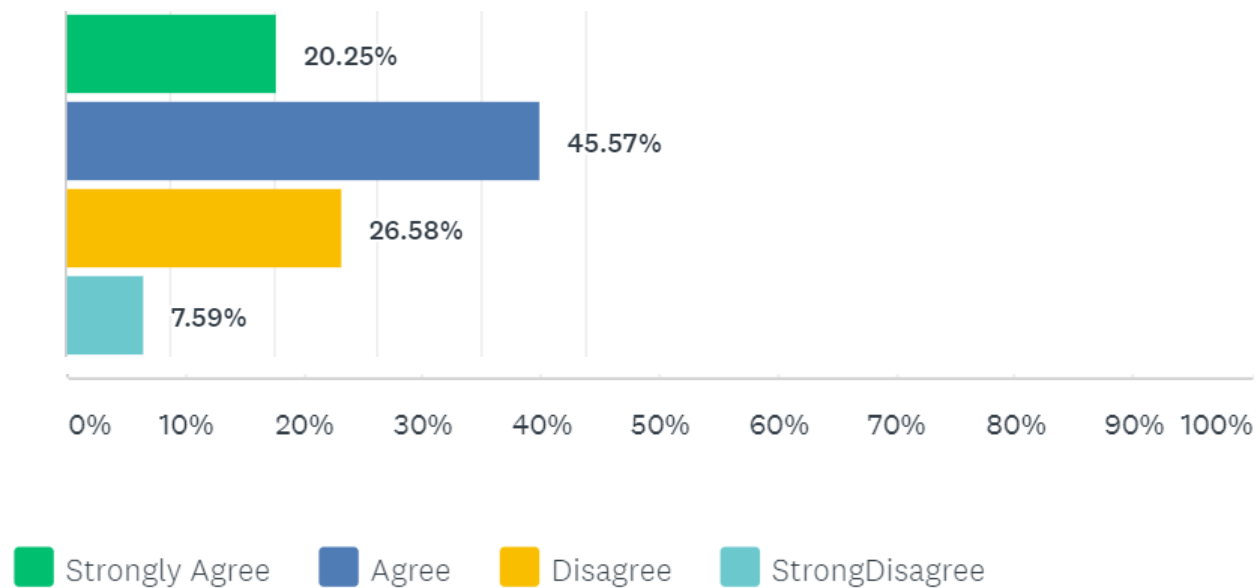


Figure 4.5.8 indicates how Enterprise Architecture was welcomed at the company. According to the graph, it can be concluded that few respondents 20.25% strongly agreed that Enterprise Architecture was fully welcomed at the company. The score of this group has a low impact on improving adoption of enterprise architecture at company followed by vast majority of respondents 45.57% agreed that Enterprise Architecture was fully welcomed at the company. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation. While 26.58% of respondents disagreed with the aforementioned statement, this score had a low impact on increasing the success of EA adoption for this organisation finally, 7.59% respondents strongly disagreed with the aforementioned statement. This has a low impact on improving adoption of enterprise architecture in the organisation. In order for the organisation to obtain goals and objectives that will produce positive results the organisation must direct all their efforts in assuring that Enterprise Architecture is accepted in the company.

**Figure 4.5.9: The purpose and goals of Enterprise Architecture are understood well at the company**

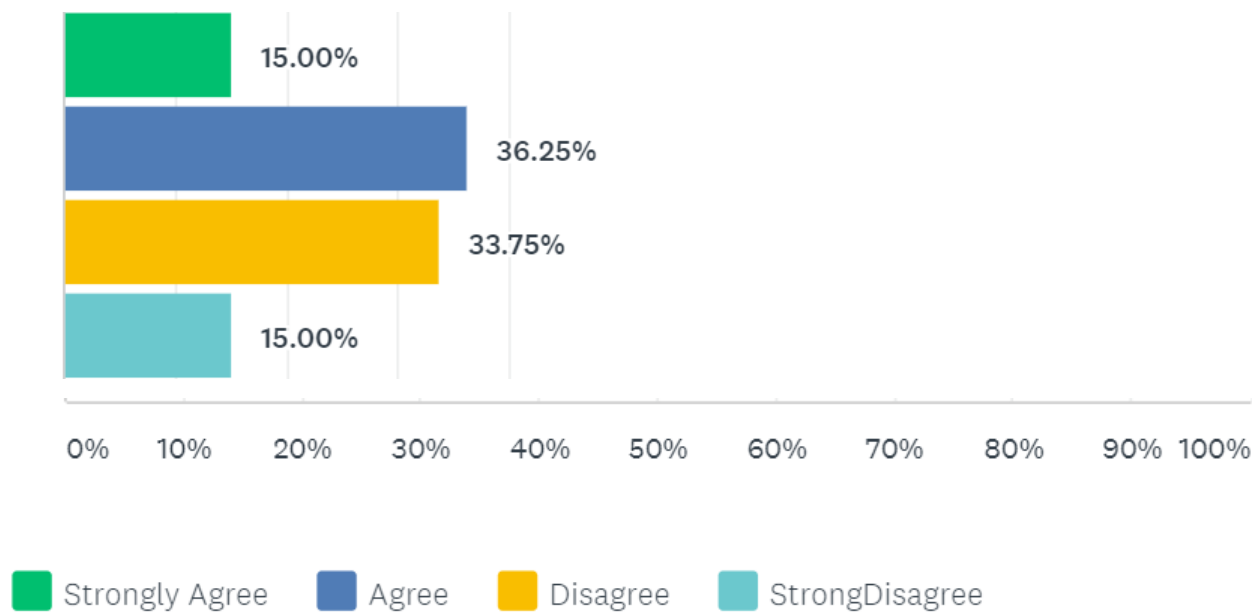


Figure 4.5.7 is presenting the perception that the purpose and goals of Enterprise Architecture are understood well at the company. According to the graph, it can be concluded that few respondents 15.00% strongly agreed that the purpose and goals of Enterprise Architecture are understood well at the company. The score of this group has a low impact on improving adoption of enterprise architecture in the organisation followed by vast majority of respondents 36.25% agreed that the purpose and goals of Enterprise Architecture are understood well at the company. This group had a higher score, the findings were statistically significant and had a positive impact on increasing the success of EA adoption in the organisation. This perception was selected in line with the research objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the organisation (Centobelli, et al., 2017). The aforementioned responses were supported by the literature: Meanwhile appreciating and understanding different views of enterprise architecture is very important, enterprise architecture is existing primarily to offer more understanding of an organisation, by combining the surrounding business environment, strategies, goals, the business drivers via organisational responsibilities and roles , business processes and combining them to the basis of information technology systems which the organisation relies on. While 33.75% of respondents disagreed with the aforementioned statement, this score had a low impact on increasing the success of EA adoption for this

organisation finally, 15.00% respondents strongly disagreed with the aforementioned statement. This has a low impact on improving adoption of enterprise architecture in the organisation. The high score of 36.25% means that the potential success of Enterprise Architecture initiatives is increased when the goals and purpose of Enterprise Architecture are understood well in the company.



**Figure 4.5.10: My company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work**

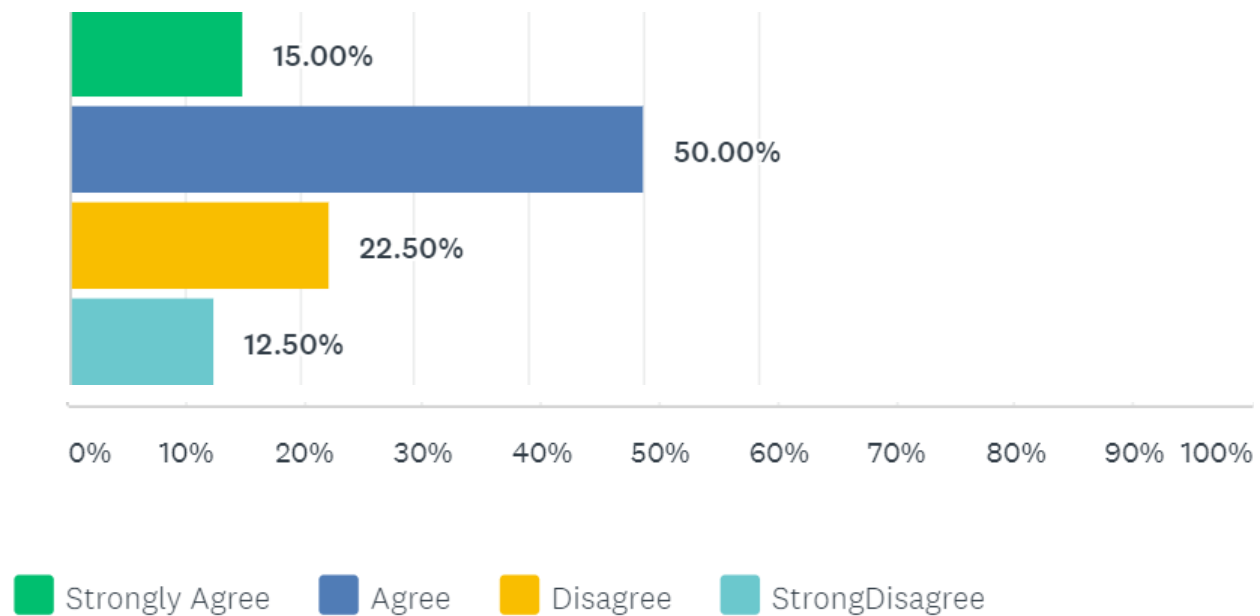


Figure 4.5.10 indicates whether the company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work. This perception was selected in line with the objective of the study which is to determine barriers and offer recommendations to improve adoption of enterprise architecture in the company. According to the graph, it can be concluded that 15.00% of the respondents strongly agreed with the aforementioned statements. This means that the company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work this score has a low impact on the success of the company while 22.50% disagreed. This means that the company is not having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work. This low score indicates that the impact on the organisation was minor but another 12.50% strongly disagreed this means that the company is not having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work. This score has a low impact on the success of the company finally majority which half of the respondents 50.00% agreed that the company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work this has a high impact on the success of the organisation. The finding is statistically significant, the high score on whether the company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing

work indicates a strong degree of positive impact on the organisation. Based on the graph above, the supporting evidence indicates that the company is having open-minded technique to the changes necessitated by Enterprise Architecture and new ways of doing work this was verified by the responses that participants gave. The literature supports the findings Alwadain, et al. (2016) advise “even when you are having the smartest technique, you require to discover individuals to implement it in a company and every time you are working with human beings you must handle emotions, sometimes that may be totally unpredictable”. Hence, it is essential to inspire organisational members to adopt and learn new manners of thinking and/or working is essential. Working with difficult tasks frequently demands techniques that are complex which are usually complicated to teach and other times even harder to sketch graphically.

#### **4.5. Conclusion**

Chapter 4 systematically depicted findings of this research. Additionally, it blended and displayed the quantitative information of the research. It discussed the minimum and maximum values of the figure and then proposed their significance to the representation to the graph itself. Then, deduced interpretation based on the variable that was being tested. The graphical representation was discussed and interpreted, every pie chart and bar chart graph indicated percentages throughout chapter four. The findings were verified by the literature review abstract conducted in chapter 2. A detailed interpretation and investigation of the outcome was also presented. The main goal of this study was to explore the role of KM support for EA adoption and its impact on organisational performance. The research also specifically focused on the demographic characteristics of adopters. After evaluating and analysing all the data, the researcher was not disappointed by the outcomes of the quantitative method because the results produced significant results and powerful evidence. The outcome of every sub-finding was interpreted and discussed in detail, and the interpretations were firmly established in the findings of relevant literature. Based on the findings most participants agree that the role of KM does supports the adoption of EA and it has an impact on organisational performance. The logic for completing the existing research, an overview of the interpretations and findings, an evaluation of the suggestions, recommendations, themes for further research, and a conclusion and summary and are depicted on chapter 5.

## **5 CHAPTER 5: CONCLUSION AND RECOMMENDATION**

### **5.1. Introduction**

Chapter 5 is linking findings in the literature explained in Chapter two and three to the findings of the investigation in chapter four. This can enable a researcher to provide conclusion of the topic under study and offer solutions to the main research question. Finally, potential suggestions of future research are depicted. The key objective which was pursued on this research indicated on the questionnaire was to establish how KM may be utilized to effectively support EA in the SA asset finance motor vehicle bank. There was a farther hope that research findings can grow the potential success for initiatives of EA via the utilization of KM. The next section depicts solutions to 3 research questions posed in section 1.6, therefore by providing an answer to the main research question.

### **5.2. Finding from the Study**

This section provides a summary of the whole study, also shows to the readers what the researcher has achieved and points to the places where the evidence of researcher's achievement can be found. The main goal of this research was exploring the role of KM support for EA adoption and its impact on organisational performance. A case study of motor vehicle and asset finance bank, in Gauteng. The majority of KM initiatives are successful. Given the high improve-rate of how things are changing or have changed as an outcome of EA in the company and the high agree-rate on the acceptance of the factors in the company, this research seeks to raise awareness regarding the impact of KM on organisational performance and support for the adoption of EA, the objective of this research study was described on chapter one and two as the attainment of the goals of KM initiatives. The success of EA in the organisation depends on how well KM initiatives are implemented. Understanding the behavioural skills and thought processes which EA is facilitating attainment of business strategy by allowing IT transformation alignment to the organisation's needs in today's rapidly changing business environment is crucial (Puspitasari, et al., 2016).

### **5.2.1. Finding from Literature Review**

The role of KM support for EA adoption and its impact on organisational performance can be determined by reviewing answers of the findings of literature review which can be found on chapter four.

#### **5.2.1.1 First Research objective: To identify the current role of EA in the asset finance and motor vehicle and industry**

##### **5.2.1.1.1 Question 1 which phrases describes your identification of EA in the organisation?**

The research findings contribute in understanding the identification of EA role in the organisation. The outcomes of a survey were analysed, and sufficient evidence discovered that the majority of the respondents know what EA does and believe it is important. The graph gave us a visual indication of the response from the participants (Perez-Castillo, et al., 2019). The findings indicated that majority of the participants can identify the role of EA in the organisation, the findings proved to be statistically significant. The research literature agrees with the finding in chapter 4. Banaeianjahromi, et al. (2016) discovered reasons why EA is frequently carried out: EA makes possibility of expanding, promoting, or planning communication and information systems (Centobelli, et al., 2017). Therefore, participants know what EA does and believe EA plays an important role in their organisation.

##### **5.2.1.1.2 Question 2 In which areas are you expecting to identify the benefits from utilizing EA?**

The research findings contribute in understanding which areas respondents are expecting to identify the benefits from utilizing EA. The outcomes of a survey were analysed, and sufficient evidence discovered that the majority of the respondents reported that the benefits from utilizing EA is “To standardize, integrate or/and remove duplication of related systems and processes”. The study yielded statistically significant results. Many respondents indicated some understanding of the benefits from utilizing EA (Musulin, et al., 2018). The literature review agrees with the finding on chapter 4: There was a discovery that EA assists companies to improve, standardize business processes and enforce discipline. Furthermore, additional to EA assisting to determine company’s “execution foundation”, EA also allows companies to integrate their process standards as well as to reuse and consolidate their business processes (Kitsios, et al., 2019).

### **5.2.1.1.3 Question 3: Please show how these factors are changing or have changed as an outcome of EA in your organisation?**

#### **5.2.1.1.3.1 Viewed effect of EA on Business and/or IT governance**

The research findings contribute in explaining the perceived impact of EA on business and/or IT governance. The results were depicted in the form of a pie chart, the percentage (or number) of observations were counted. A high score indicated on the graph shows a strong degree of the positive impact. The graph indicated that majority of the respondents reported that business and/or IT governance was improved as an outcome of EA, this implies that EA has an impact on business and/or IT governance, the study yielded statistically significant results (Lopes, et al., 2017). The literature review agrees with the finding on chapter 4. EA is regarded as a strategic tool which allows organisational governance it is critical for EA to be perceived as a component which is integrated for general governance structure of the organisation. Information technology governance was discovered as the most important factor. Alwadain, et al. (2016) describe information technology governance as “to specify the accountability framework and decision rights to motivate desirable behaviour in the utilization of information technology” (Burmeister, 2018).

In addition, Sajid and Ahsan (2016) suggest that information technology governance identifies a decision making and responsibility structure to promote desired behaviour for utilizing information technology for risk management as well as internal control. The investigation yielded results that indicated that business and/or IT governance has changed, it was improved as an outcome of EA.

### **5.2.1.2 Second Research objective: To determine the impact of knowledge management in increasing the potential success of Enterprise Architecture in the organisation**

#### **5.2.1.2.1 Promoting knowledge sharing among EA team and other organisational employees**

The research findings contribute in understanding and/or explaining the impact of KM in increasing the potential success of EA in the organisation. The results were depicted in the form of a bar chart, the horizontal axis represents percentage of observations within each category and the vertical axis represents every category of that variable. The graph gave us a visual indication of the response from the participants. The study yielded statistically significant results (Lněnička, et al., 2017). The outcomes of a survey were analyzed, and sufficient evidence

discovered that the majority of the respondents reported that there was a significant improvement in promoting knowledge sharing among EA team and other organisational employees. The research literature agrees with the finding in chapter 4. There is a reason to give an insight into the level to which stakeholders of EA believe that the efforts of EA can benefit from promotion or introduction of KM activities like giving the important tools which enable the EA team and other employees to collaborate or promoting a culture of knowledge sharing. IT involves sharing of knowledge throughout the adoption of EA. IT is playing an essential role in the KM as IT accelerates the knowledge transfer and broadens the reach. In addition, information Technology is promoting the storage, digital capture, dissemination and retrieval of knowledge (Ramy, et al., 2018).

### **5.2.1.3 Third Research Objective: To determine the barriers and offer recommendations to improve adoption of EA in asset finance and motor vehicle industry**

#### **5.2.1.3.1 Adoption of EA was supported by a culture change and transformation program**

The research findings contribute in explaining the adoption of EA was supported by a culture change and transformation program. The graph gave us a visual indication of the response from the participants. The findings indicated that majority of the participants agree that adoption of EA was supported by a culture change and transformation program, the findings proved to be statistically significant. The research literature agrees with the finding in chapter 4, Jallow, et al. (2017) and Lange, et al. (2016) consider culture of the organisation to be a critical factor when governing company's transformation via EA. Likewise, Josey (2018) decided to investigate the relationship among organisational culture and KM and discovered that even though the relationship among the 2 is difficult, existing evidence shows that interventions of KM are leading to change in organisational culture. Therefore, KM may be utilized in creating organisational culture which is promoting adoption of EA. Furthermore, Weill, et al (2018a) proposed that the success of organisational changes are outcomes of integrating and identifying each and every variable of an organisation for example systems, people, processes, structure and culture. Thus, as a researcher conclusion, the statistical evidence indicates that adoption of EA was supported by a culture change and transformation program (Bernus, et al. 2016).

#### **5.2.2.1 To identify the current role of enterprise architecture in the asset finance and motor vehicle industry, in Gauteng**

The evidence depicted on chapter four indicated that the enormous majority of people who participated view EA essential to the organisation. In addition, the evidence revealed that obtaining an optimal fit among the business and IT processes is considered to be one of the anticipated benefits of adoption of EA. The outcomes from the evidence presented on chapter 4 together with the importance of EA documented in the literature review provide satisfactory answer to the first research objective.

#### **5.2.2.2 To determine the impact of knowledge management and its linked practices may be utilized in increasing the potential success of enterprise architecture, in Gauteng**

Findings in chapter 4 indicate that there is more involvement of EA stakeholders/users in the development EA and also constant communication concerning the goals and purpose of EA can be more effective when trying to overcome the barriers that were reported. The evidence depicted on chapter 4 revealed activities of KM like knowledge sharing are viewed to hold significant possibility to support the adoption of EA.

#### **5.2.2.3 To determine barriers and offer recommendations to improve adoption of EA in asset finance and motor vehicle industry, in Gauteng**

The significance for involvement of stakeholder is emphasized by both findings on chapter 4 and the literature. Both literature review on chapter 2 and the evidence on chapter 4 revealed barriers which must be overcome for adoption EA to be successful, therefore answers the second research objective.

On the next section, a summary done by this study is depicted. To answer the 3 research questions satisfactorily, the primary research question indicated on the questionnaire “How knowledge management may be utilized to effectively support enterprise architecture in the South African asset finance and motor vehicle bank.” was answered satisfactorily. As an outcome, the topic may be contributing to academic literature.

### **5.3 Conclusion**

This study has established important findings on the significance of EA to the asset finance and motor vehicle company operating in Gauteng. In addition, the study discovered the barriers or challenges experienced during the adoption of EA. The viewed success KM interventions were measured. Other important findings done on this study are that EA is well perceived and recognized to be essential. Other anticipated EA benefits are: (i)To standardize, integrate or/and remove duplication of related systems and processes. (ii)To allow the company to reply to changes from outside world in agile fashion. (iii)To obtain an optimal fit among the business and IT processes it supports. Decision making and business efficiency are perceived as being improved as the outcome of EA. Other barriers to successful adoption of EA include (i)The purpose and goals of EA are understood well at the company. (ii)Workers are participating actively on the EA development. Other interventions of KM that are regarded to be effective to overcome the barriers are: (i)Promoting knowledge sharing among EA team and other organisational employees. (ii)More involvement of EA stakeholders/users in the development EA. (iii)More involvement of management in EA. Carrying out this research is contributing in 2 ways. This research has provided practical steps to incorporate activities of KM during the adoption EA therefore contributes to the EA practitioner's domain. This research has also added to the current KM and EA body of knowledge, therefore contributes to academic literature on both KM and EA and also the relation among the 2.

### **5.4 Recommendations**

Since majority of respondents know what Enterprise Architecture does and believe it is important the organisation must therefore direct its efforts assuring that Enterprise Architecture is accepted by all organisational members. Most respondents perceive that the benefits from utilizing enterprise architecture is to standardize, integrate or/and remove duplication of related systems and processes, therefore ensuring integration, standardization and removing duplication of related systems and processes is essential in increasing the possibility of success for the initiatives of Enterprise Architecture. Many respondents perceive that business and/or IT governance has changed as an outcome of enterprise architecture; the organisation must therefore direct their efforts promoting business and/or IT governance. Another majority of respondents perceive that the adoption of Enterprise Architecture was supported by a culture change and transformation



program, the organisation must therefore direct its efforts promoting cultural change and transformation program.

## **5.5 Area/s for further Research**

Because of covid-19 lockdown, access to participants and time constraints, this study considered just 1 asset finance and motor vehicle company in Gauteng. It may be advisable for possible future research to elaborate on more than 1 company that can enable for more generic conclusion to be done. Nevertheless, this study just concentrated on the asset finance and motor vehicle bank. It may be more perceptive to establish if identical conclusions may be done from a broader banking industry in Gauteng. 1 of the discoveries of this study is that the knowledge sharing level of among other organisational members and the EA team of the company is not optimal. Therefore, it may be beneficial investigating the cause for this shortage of sharing the knowledge. The scope for further research must include other different banks, this research study focused on only one bank. Areas for further Research referrers to methodologies and topics or to both. Removing other limitations of the research study which were mentioned on section 3.13 offers opportunities for further research for example various industries/sectors/ regions/funding/time/larger sample size/different asset finance and motor vehicle bank and various management levels. It could be desirable for an area for further research to grow to greater than 1 company that can enable a conclusion which is more generic to be done. Future research studies on this area must utilize larger samples. On areas for further research, it may be substantially interesting to evaluate causal relationships and take into consideration the different modes of enquires like employing the longitudinal design for example interviews or observations to establish whether the research findings that are tested are suitably sustained. Areas for further research must also include a nationwide survey which covers samples from the entire population in the industry of asset finance and motor vehicle bank rather than focusing on an organisation which is only based in Gauteng province. The research findings of this study must not be generalized to the entire asset finance and motor vehicle industry or to some kinds of companies in the country. Generalization of the existing research findings must consequently be evaluated on the areas of future research on other different organisations with more balanced gender, and heterogeneous samples. Nevertheless, researchers may further evaluate the specific conditions under which the KM behaviours may impact continuance commitment. Highlight on this area may improve organisational performance.

Adoption of EA may have a positive impact on workers who stay with the company due to the fact that workers feel they do not have other option. Regarded as a whole, the areas for future research suggestions must provide more opportunities to further investigate amount of variance that the role of KM support for EA adoption and its impact on organisational performance. Areas for future research studies must assure that the measurement instruments are proper with a narrow concentration, due to the fact that EA is such a wide concept. A diversity of various research methods may be utilized to test the theory directly, involving simulation studies, survey field studies, and comparative case studies.

## **5.6 Conclusion**

As explained on section 5.2, this study has provided answers to the research question presented on chapter one by providing answers to 3 research questions. It was discovered that research findings are supported by the current literature. On chapter 5, the answers to 3 research questions were discussed and presented. In addition, chapter 5 explains how this study is contributing to body of knowledge. The ideas of potential future research based on the existing study were depicted. To conclude KM appears to contain the ability to assist organisations overcoming barriers to adoption of EA. Therefore, activities of KM, requires to be included in the adoption of EA programme. Therefore, in conclusion this study has succeeded in establishing how knowledge management may be utilized to effectively support EA in the South African asset finance and motor bank.

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## Appendix A

If “YES” attach a copy of the research instrument

### **How knowledge management may be utilized to effectively support enterprise architecture in the South African asset finance and motor vehicle bank?**

⊕ PAGE TITLE

1. Which phrase describes your identification of EA in the organization?

- ☐ I know what Enterprise Architecture does and I believe it is important
- ☐ I know what Enterprise Architecture does, but do not believe it is important
- ☐ I have heard of it, but I don't know what it does
- ☐ I did not know Enterprise Architecture exists

2. In which areas are you expecting to identify the benefits from utilizing EA?

- ☐ To improve management decision making.
- ☐ To offer a vehicle for various stakeholders to communicate with one another effectively.
- ☐ To represent a clear picture of the intended future situation.
- ☐ To offer awareness into the complexity of the company.
- ☐ To obtain an optimal fit among the business and IT processes it supports.
- ☐ To collaborate with another companies efficiently and effectively.
- ☐ To allow the company to reply to changes in the outside world in an agile fashion.
- ☐ To control costs.
- ☐ To standardize,integrate or/and remove duplication of related systems and processes.
- ☐ To control the difficulty of the company and company's systems.
- ☐ To achieve enterprise-broad goals, rather that (possibly conflicting) local optimizations.

3. Please show (IN YOUR OWN OPINION) how these are changing or have changed as an outcome of enterprise architecture in your company.

	Highly Improved	Improved	Worse	Do not know
Audit compliance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management of risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systems integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Continuity of company's knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lowering of technical complexity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT and/or operating costs optimization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business and/or IT governance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please rate (IN YOUR OPINION) the prevalence of the following factors in your organization.

	Strongly Agree	Agree	Disagree	Strongly Disagree	
There is a good level of knowledge sharing among the Enterprise Architecture team and other organizational members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enterprise Architecture activities are yielding the expected benefits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees actively participate in the development of Enterprise Architecture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enterprise Architecture has the necessary management support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The organization has the practical skills required in Enterprise Architecture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requirements from EA users/ stakeholders (such as yourself) are understood and reflected in the EA artifacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enterprise Architecture adoption has been supported by a transformation and culture change program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enterprise Architecture has been fully accepted in the organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The goals and purpose of Enterprise Architecture are well understood in the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization has an open-minded approach to new ways of working and the changes necessitated by Enterprise Architecture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Kindly rank every answer according to YOUR OWN OPINION in terms of how effective it would be to support efforts of Enterprise Architecture

	Would make things a lot worse	Would make things slightly worse	No Difference	Slight Improvement	Significant Improvement
Promoting knowledge sharing among Enterprise Architecture team and other organizational employees.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More involvement of Enterprise Architecture stakeholders/users in the development Enterprise Architecture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consistently communicating Enterprise Architecture-success stories and related issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant communication concerning the goals and purpose of EA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More involvement of management in Enterprise Architecture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## **Appendix B**

The respondent's letter

Dear Madam/ Sir

I am busy with MBA research on exploring the role of knowledge management support for enterprise architecture adoption and its Impact on organisational performance. A Case Study of Motor Vehicle and Asset Finance bank., in Gauteng. You may withdraw at any time without any penalty because your participation in this research is voluntary. All the data is going to be kept confidential. When you have concerns, you can contact my supervisor or contact me. You can find our details below. Therefore, please complete a survey by clicking on this link:

<https://www.surveymonkey.com/r/FRRWBBK>

Thanks for your participation!

Researcher name: Phillip Mandla Mtombeni

e-mail: pmtombeni@gmail.com

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Research Supervisor name: Mr. Abner Mthembu

e-mail: abner.mthembu@regent.ac.za

Phone: 072 643 3018

## Appendix C



29 March 2020  
Mr PM Mtombeni  
Student Number: 51600131  
REGENT Business School  
2nd Floor  
Sunnyside Centre  
13 Frost Avenue  
Auckland Park

Dear Sir

Permission to do research

Permission to do research is granted on the following topic at WESBANK. Exploring the Role of Knowledge Management support for Enterprise Architecture adoption and its Impact on Organizational Performance. A Case Study of Motor Vehicle and Asset Finance bank ., in Gauteng.

The researcher will protect the participant as well as the organization and will secure that no harm or damage will be caused to the organization in the research process.

The company name which is WesBank will not be mentioned, nor any of its employees or affiliates on the research. The company's confidential or sensitive information will not be disclosed and that the survey questions will be approved by WesBank prior to the survey going out. The researcher must provide a copy of research study to the organization prior to submission.

The organization wishes you success with all your research efforts



Regards,

**Krishen Rangappa**  
Chief Technology Officer  
WESBANK

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