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# The transition to software-as-a-service in South Africa

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# The transition to software-as-a-service in South Africa


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**A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration**

**Johannesburg, 2015**

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# ABSTRACT

The global trend towards adoption of Software-as-a-Service (SaaS) is having a transformative effective on the software industry. Global software vendors have started to shift towards SaaS by offering software, which is developed and hosted by the vendor and offered to customers as a service through the Internet. In South Africa, the majority of software in use is developed by major international software vendors and distributed and supported by local channel partners or value added resellers.

The transition to SaaS challenges existing business models and software industry structures, as well as the core operations of existing valued added resellers.

While the implications of the transition to SaaS for primary software vendors have been studied, the impact on other players in the software value chain, such as valued added resellers, is not well understood. For South Africa, where valued added resellers dominate the software distribution market, successful adoption of the SaaS business model by resellers is crucial to the sustainability of the local software industry.

This research focuses on the implications of the transition to SaaS for the business models of South African software value added resellers. Based on literature, four propositions were put forward. These propositions were examined in multiple face-to-face interviews with executives of South African software companies that have undergone a transition to SaaS. The Business Model Canvas, first promulgated by Alexander Osterwalder, was selected as the framework within which to analyse the business model. Results show that SaaS adoption has implications for affected software value added resellers for all nine of the building blocks of the Business Model Canvas.

The findings demonstrate the disruptive nature of the SaaS phenomenon and highlight the need for existing players to brace themselves for the major changes required for a successful adoption of SaaS. Through the adoption of such measures, incumbents in the software industry can remain competitive and defend their market share against emerging SaaS start-ups or SaaS offerings from other vendors.

The research contributes to an increased understanding of changes that software value added resellers need to undergo to transform their business models from that of distributors and implementers of software to providers of a service.

For the South African software industry, the research provides vital information on the challenges, critical success factors and organizational transformation required for a successful transition to SaaS. Local software resellers whose business is still based on the on-premise model can use this framework and the findings of this research as a guide to ensure a successful transition to become SaaS vendors. Alternatively, the lessons learnt can help organisations undertaking such a transition to minimise risks and costs and the potential business failure associated with an unsuccessful transition.

**Keywords:**

Business model, Business Model Canvas, Cloud computing, On-premise, Software-as-a-Service, SaaS, Software ecosystem, Software vendor, Traditional licensing model, Value Added Reseller

# DECLARATION

I, Tapiwanashe Zhou, Student Number 736331, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

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Signed at ……

On the …….. day of …… 2015

# DEDICATION

I dedicate this report to my mother Vesta Zhou, whose words of encouragement and guidance in my formative years helped me to appreciate the value of education.

# ACKNOWLEDGEMENTS

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# CHAPTER 1. INTRODUCTION

This Chapter introduces the concept of Software-as-a-Service, sets the context of the research by outlining the background. In addition it identifies the research problem, purpose, significance and the scope of the research, as well as any assumptions made prior to the start and during the research process. The objective of this Chapter is to set the scene and motivate interest in the subject and importance of the research.

## 1.1 Purpose of the study

The purpose of this study is to analyse the organizational implications of adopting Software-as-a-Service (SaaS) for software Value Added Resellers (VARs) in South Africa, with a focus on the changes to their business models. The outcome of the study is expected to contribute to both theory and practice on how software resellers need to adapt existing organisation structures, activities and processes in order to effectively deliver SaaS solutions.

## 1.2 Context of the study

### 1.2.1 *Software-as-a-Service vs. Traditional licensing model*

Software-as-a-Service is having a transformative effect on the software industry. A change of this magnitude and impact has not been seen since the transition to client-server computing which ushered the arrival of the PC in the late 1980s (Gallagher, 2012). According to Gartner (2012) the enterprise SaaS market is growing three times faster than the market for traditional software products and this trend of 20% annual growth is expected to continue through 2020. IBM (2014) predicts the SaaS industry is expected to grow from US$18.2 billion in 2012 to US$45.6 billion globally by 2017. The growth of SaaS is a major concern for established software vendors and their channel partners as it erodes their market share and future business prospects.

Gallagher (2012) further clarifies the predicament of software vendors and resellers, who view SaaS as representing the greatest challenge to their profitable business model. Using the current model, software resellers boast of mature, stable technology, good market share, ongoing projects, fat sales pipelines and assured source of revenue in the form of ongoing support and maintenance contracts. Faced with the threat of losing business to SaaS competitors, adopting a “wait-and-see” attitude is not an option for incumbent software resellers; they either need to either adapt or face certain extinction.

Despite the bad news, there is a silver lining around the “SaaS clouds”. Some authors (Anding, 2010; Carraro & Chong, 2006b; Hmood & Al-Madi, 2013) have established that SaaS brings opportunities for creating new innovative, assured revenue streams. It also offers incumbent software vendors a chance to penetrate new market segments, provided they can re-invent their business model to take advantage of these opportunities. Those that adapt will have to create new competencies which will not only allow them to ride the wave but enable them to become more competitive and capture market share from those who fail to adapt.

Faced with this stark reality, many software vendors and their VARs globally are adopting the SaaS licensing model in place of the traditional commercial off-the-shelf or on-premise software licensing model (M. A. Cusumano, 2008). The most important driver towards SaaS is its undeniable appeal to customers, who are the ultimate winners (Avangate, 2010).

In the traditional licensing model, software is produced by an Independent Software Vendor (ISV) or development company such as Microsoft, SAP, Oracle or Baan and sold to a customer either directly by the vendor or a VAR / channel partner (Chong & Carraro, 2006a). The authors go on to explain that the customer deploys the software on their premises; hence the use of the term on-premise model.

The costs associated with purchasing hardware, software and other associated infrastructure including professional services required to implement the software are borne by the customer (Dubey & Wagle, 2007). Carraro and Chong (2006b) state that the customer is responsible for ongoing maintenance of the software and has to employ dedicated IT staff with diverse skills and expertise to ensure the software continues to function as required by the business. Alternatively the maintenance of software must be outsourced to another company with required skills. As a result the deployment of software using the traditional model requires a substantial capital investment by the customer (Liao & Tao, 2008).

SaaS is an alternative model of licensing, in which the software is hosted by a service provider who may be the software vendor itself or its nominated channel partner/reseller called a Cloud Service Vendor (CSV). The software is delivered to customers (end users) typically through the Internet (Dubey & Wagle, 2007).

With SaaS, the customer does not have to make a substantial upfront capital investment to acquire infrastructure nor deploy the software and maintain it. Their only responsibility is to pay subscriptions to the service provider hosting the software (Carraro & Chong, 2006b). The subscriptions can be monthly or annually on a pay-per-use basis (Sääksjärvi, Lassila, & Nordström, 2005).

Traditional software vendors have long realised that the increasing adoption of SaaS globally is not just a fad but a trend that will affect the future sustainability of their business (D'souza, Kabbedijk, Seo, Jansen, & Brinkkemper, 2012). Most are gearing themselves to make changes to the technical architecture of their products to make them SaaS-compatible (Chong & Carraro, 2006a). A number of SaaS-based applications from new start-up software vendors have been launched resulting in customers showing preference for the emerging licensing models (Carraro & Chong, 2006b). This development in the market is forcing the traditional software license vendors to re-think their approach to marketing, pricing and delivering enterprise software (Lechesa, Seymour, & Schuler, 2012).

The consequences of a shift to SaaS may be obvious, such as the change in pricing model, but some potential implications may be less obvious, for instance the impact of change in cash flow to resource allocation (Stuckenberg, Fielt, & Loser, 2011). Thus transition to SaaS model comes with both business and technology risks (Avangate, 2010). Stuckenberg et al. (2011) likened the challenges to the proverbial iceberg. The majority of the ice is below the water surface, hidden from view. Taking this analogy to represent the challenge of SaaS adoption, the technical challenge represents the tip of the iceberg and usually receives the most attention. The impact on the business model, which is the bigger challenge is less understood and often underestimated.

### 1.2.2 *Business Drivers for SaaS adoption*

For customers (users of software) the transition to SaaS fundamentally reduces the cost of ownership and provides a better service in the management of IT applications (Carraro & Chong, 2006b). Under the new model the SaaS service provider can share hardware and software infrastructure among many customers using cloud computing model, thus reducing the cost to individual customers through specialization and economies of scale (Chong & Carraro, 2006a). SaaS thus presents an interesting value proposition to customers many of whom are already showing a preference for this model (Dubey & Wagle, 2007).

Apart from reduced total cost of ownership (TCO) of IT applications, other factors driving customer adoption of SaaS include the changing business environment that requires organisations to be agile, responsive and cost-efficient (Verio, 2010). Hmood and Al-Madi (2013) observe that SaaS enables organisations to be more responsive to market opportunities as they do not have to outlay substantial amounts of capital or endure long implementation time-frames to setup IT systems and applications. They further argue that with SaaS, access to the hosted applications will no longer be restricted to the four walls of an organisation but can be through the Internet, thus increasing system availability and staff productivity.

The key benefit of SaaS, they argue is in enhancing the competitiveness of companies in an increasingly globalised world, where contact with customers is sometimes required around the clock. Traditional on-premise software applications were not designed to respond to such challenges. They are complex and time consuming to implement and costly and slow to respond to these fast-changing market conditions (Chong & Carraro, 2006a).

Lastly, Verio (2010) mentions technological changes which have brought about cloud computing, high speed broadband and mobile networks as some of the biggest factors driving the adoption of SaaS. Lechesa et al. (2012) recognizes that previous barriers to adoption of SaaS were due to bandwidth limitations, network access, computing power, response time and fears around availability of the systems. The authors also argue that the increasing adoption of SaaS can be attributed to the growth in deployment of cloud computing and high-speed broadband networks. They conclude that these developments have made it possible to provide on-demand network access to a shared pool of computing resources that can be provisioned rapidly with minimum management effort and service provider interaction, a requirement for a SaaS service. This has made it technically possible to deliver SaaS at a cost affordable to many customers.

### 1.2.3 *SaaS adoption and changes to business models*

A business model refers to the way a business creates, captures and delivers value for its customers by turning market opportunities into profit (Osterwalder, Pigneur, & Tucci, 2005). It refers to those activities, resources and structures including collaboration between internal and external actors that are required to create, capture and deliver value to customers (Rajala & Westerlund, 2007).

The revolution taking place in the software industry is presenting challenges to traditional software firms (Chappell, 2012). Their existing business model and industry structures are challenged. According to Chong and Carraro (2006a) SaaS will revolutionise the software industry by fundamentally changing the way software is developed, bought, sold and used. D'souza et al. (2012) add that the

SaaS model radically changes the software industry by shifting ownership of software, hosting infrastructure and associated professional services from the customer to an external service provider. Software professionals who are inherently aligned towards designing, building and selling software applications are now expected to operate and service those applications too (Gallagher, 2012).

Change is imperative. An increasing number of traditional software vendors are already shifting and implement solutions based on the SaaS model. With this shift software developers are transforming from product companies into service providers (Botteri et al., 2010). This is in line with industry trends where some of the biggest software development companies such as Google, Facebook, Amazon, Twitter, LinkedIn and Salesforce are not recognised as software companies but for the services they provide (Gallagher, 2012).

As the model takes root, new industry players will emerge or existing ones will take up new roles as they try to extend the functionality of SaaS applications. In addition some will seek to provide complimentary services associated with the new model, thus creating a new ecosystem of software and secondary services to potential customers (Stuckenberg et al., 2011).

The same authors predict a significant change in current relationships between the software vendors and customers. Further more questions are also being raised on the future role of existing channel partners such as VARs, systems integrators and implementation consultancy companies, as the SaaS model brings the customer into a direct relationship with the software vendor. These questions require further research on the full implications of SaaS adoption to the existing software industry ecosystem.

Godse and Mulik (2009) predict some software vendors and resellers offering products based on the traditional model may not survive as they face stiff competition from increased use of cloud services and SaaS based products. Stuckenberg et al. (2011) agree with this view and even suggest that some existing players in the traditional model ecosystem face extinction.

As there is a strong possibility of the current business model becoming totally obsolete, change is imperative for everyone in the current software ecosystem.

As acknowledged by various authors (Avangate, 2010; Chong & Carraro, 2006a; M. A. Cusumano, 2008; D'souza et al., 2012) the transition from selling software as a product to SaaS brings about tremendous business and technology changes with far reaching implications for different players in the software value chain and the IT industry as a whole. Most software companies can deal with the technical challenges brought about by this transition as they fall within their domain of expertise. However, the inherent business changes are the most difficult aspect to deal with as internal activities and processes, target markets, target customers, business partners, pricing models and other dimensions of a company's business model are forced to change (Stuckenberg et al., 2011).

### 1.2.4 *SaaS in the South African context*

In the South Africa market, some of the enterprise applications software is sold directly to customers by the primary vendors, but most is sold through a network of channel partners or value added resellers (IDC, 2013). Value added resellers sell software on behalf of the primary vendors and retain an agreed percentage of the license revenue as a commission. Most VARs also generate a portion of their revenue from services associated with implementation and support of the software. The transition to SaaS will profoundly alter these VARs' business model. Most will need to adapt to the changing landscape to remain viable.

As VARs prepare to climb on the SaaS bandwagon, they need to understand how the Software-as-a-Service concept will impact their business model. Secondly, they need to understand the challenges, risks and critical success factors associated with such a transition, in order to increase the chances of successful adoption and mitigate risk associated with a failed adoption. Those that are able to adopt SaaS successfully will be able to go to market faster, respond quickly to customer requirements and reach a wider market (Gallagher, 2012).

Most VARs in South Africa have not prepared themselves for this transition and do not have a framework for what is required to successfully transition to the new model. Recent research suggests that there are multiple implications for vendors and resellers as a result of a transition to SaaS (Stuckenberg et al., 2011). Unfortunately, both existing theory and practice do not provide sufficient information as to the nature of these implications. Without credible information based on theory and practice, any organisation undertaking a transition to SaaS faces a minefield.

## 1.3 Problem statement

### 1.3.1 *Main problem*

**This research was conducted to analyse the implications of adopting Software-as-a-Service on the business models of software Value Added Resellers in South Africa**.

## 1.4 Significance of the study

As many software companies transition to the SaaS model, they need to carefully consider the necessary technological and business changes that will see them convert from product-centric to service companies. Failure to identify and implement these required changes may lead to higher transition costs or poor adoption of the SaaS model, potentially resulting in a loss of business (D'souza et al., 2012).

Most of the available literature and research on SaaS focuses on changes within one domain (either technical or business) and is generally restricted to a limited scope, such as definition of SaaS (Anding, 2010; Carraro & Chong, 2006b; Dubey & Wagle, 2007), its technology architecture, (Chong & Carraro, 2006a; Liao & Tao, 2008), product structure and value proposition (Osterwalder et al., 2005; Schief & Buxmann, 2012) , revenue logic (Mathew & Nair, 2010; Ojala & Tyrväinen, 2011; Sääksjärvi et al., 2005), service delivery and customer relationships (Stuckenberg et al., 2011).

The full implications of the way value added resellers create, deliver and capture value when they transition to SaaS has not yet been sufficiently analysed, hence the full impact on the holistic business model is not fully appreciated.

This study attempts to bridge the gap by contributing to theory and practice and providing an in-depth understanding of the organizational implications of SaaS for software VARs. The findings and knowledge generated will hopefully enable the formation of well-founded recommendations and guidelines for VARs who may wish to develop and operate SaaS solutions. This knowledge may also be relevant to any service-based business models especially companies transitioning from product-oriented model to a service-oriented one. The resultant analysis may provide a deeper insight into why traditional software licensing companies generally struggle with a transition to SaaS.

In addition, since the study on business models draws on knowledge that originates in other disciplines such as marketing, product development and finance, and is applied to the software business, the findings of this research may be exported and used in the theoretical development of the original disciplines. For example, best practices in pricing models or customer relationship management identified in the software business may be exported to enrich the fields of finance and marketing respectively.

Finally, Software-as-a-Service is one of the single biggest trends in the IT industry at the moment. Research and the sharing of experiences on the South African context will assist many companies ride the wave, mitigate the risks and hence minimise failure.

## 1.5 Delimitations of the study

- In this research focus is on line-of-business oriented software applications i.e. how SaaS affects enterprises selling complex business applications software such as Enterprise Resource Planning Systems (ERP), Customer Relationship Management (CRM) or Enterprise Asset Management (EAM) etc. The research does not cover consumer-oriented software applications or Software-as-a-Service applications used by the general public such as SaaS e-mail (Gmail, Yahoo Mail etc.), LinkedIn, Google Docs, Facebook or Dropbox.
- The research mainly focuses on implications of SaaS adoption for the business models of enterprise application software VARs, and not on the technology model or software technical architecture.
- It also focuses only on software VARs and not on other players in the software ecosystem. These are mentioned only where such reference is necessary, but are treated as of secondary importance. The study does not look at implications on hardware suppliers, third-party development and systems integration partners or suppliers of Original Equipment Manufacturer (OEM) software such as Windows Operating Systems or database software.
- Although SaaS forms the software layer of the Cloud Computing stack other areas of cloud computing such as Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) are outside the scope of this research.
- The study is limited to the impact of this software revolution within the South African context.

## 1.6 Definition of terms

**Business Model**

A plan for the successful operation of a business, which identifies the sources of revenue, target customers, required resources, internal activities and details of financing.

**Cloud Computing**

The delivery of centrally hosted computing resources, such as processing power and storage to end users, through the Internet. The provision of resources is not transparent to the user who normally accesses the resource as a service and not a product. The user is charged for consumption of the resources on a variable pay-as-you-go basis similar to the way domestic consumers pay for electricity or water (Dubey & Wagle, 2007)

**On-premise software**

This refers to software deployed on the company's premises using computer rooms, hardware and associated infrastructure owned and managed by the company. This is currently the most prevalent model of deploying software in most organisations (Carraro & Chong, 2006b).

**Software-as-a-Service**

A software licensing and delivery model in which software is licensed on a subscription-basis, and hosted centrally by a service provider. Users access the software on an on-demand basis mainly through a browser interface over the Internet. In this model, the service provider is responsible for developing, hosting, operating and maintaining the software (Carraro & Chong, 2006b).

**Software Ecosystem**

A set of interdependent businesses, collaborating in a shared market for software and services. The businesses function as a unit and interact with each other to co-create value for customers.

**Software Valued Added Reseller (VAR)**

A company that adds features or services to a product and then resells it, usually to end users. The value added is usually in the form of professional services such as integration, custom development or implementation, training or consulting (D'souza et al., 2012)

**Traditional software vendor**

Refers to a supplier of software who charges a once-off amount for the rights to use software and then a percentage of that amount annually to get access to maintenance, upgrades and defect rectification. The customer pays for the software whether they use it or not.

## 1.7 Assumptions

- All respondents answered the questions presented without any bias, prejudice or agenda.
- All information gathered from literature, interviews and documents was conveyed accurately and honestly, as false information might skew the results of the study.
- All respondents reflected their actual perspectives and experiences.
- Research questions evolved during the continuous research process (Creswell, 2014).
- The number of participants taking part in the study was sufficient, and participants had sufficient knowledge, memory and experience to provide relevant, accurate and complete information for the study.
- The experiences and business operating conditions experienced by the respondents are based on conditions within the South African software industry and should be applicable to other companies in the same context.

# CHAPTER 2. LITERATURE REVIEW

## 2.1 Introduction

Chapter 2 focuses on the secondary element of this research which is literature based study and covers theoretical aspects of the key concepts of Software-as-a-Service and the impact its adoption has on existing business models. The first section covers a brief review of the traditional software licensing business model. In order to understand the transition to SaaS and its implications, it is necessary to understand the starting point, which is the traditional on-premise licensing model.

The second section will unpack the concept of SaaS and its key characteristics. This is followed by a brief description of the concept of business models. After the review of a number of business models a decision was made to select Osterwalder and Pigneur's Business Model Canvas for this study. This model allows a holistic analysis of the software business model as it combines all the elements included in different individual business models (Osterwalder & Pigneur, 2010). The Business Model Canvas is comprised of nine building blocks or elements, which represent the different components that make up a business's logic for making money (Stuckenberg et al., 2011). In order to understand the impact of the transition to SaaS, it is important to analyse the changes on each of the individual building blocks or elements of a business model before considering the holistic impact on the entire business model (Rajala, Rossi, & Tuunainen, 2003).

Through the literature review, the researcher has sought to understand the concept of Software-as-a-Service and its implications for business models of players in the software ecosystem. This is compared to the findings of the primary study, which involved multiple interviews on the experiences of a number of software VARs. The concept of business models and its application to the software industry will be discussed, followed by a detailed analysis of the impact of SaaS on the business models, based on previous case studies and research.

## 2.2 Traditional software licensing model

The traditional software licensing model refers to a concept in which software development organisations develop, sell and sometimes implement software on customers' premises (Chong & Carraro, 2006a).

Companies usually sell software as a product and generate revenue from the original sale as well as from regular upgrades (D'souza et al., 2012). Examples are companies such as Microsoft and its Windows software, as well as most Enterprise Resource Planning (ERP) packages such as SAP, Oracle, PeopleSoft and other software packages targeted for the small and mid-market companies. The software license is sold, based on the number of users, the number of processors on the hardware, the number of installations or the number of modules in use. Under this model the interaction between the product licensor and the end customer is generally low (Kontio, Jokinen, Mäkelä, & Leino, 2005).

The diagram in **Fig 1:** shows a high-level representation of the traditional (on-premise) software business model. Channel Partners including Value Added Resellers, will be the focus of this study (section inside green circle).

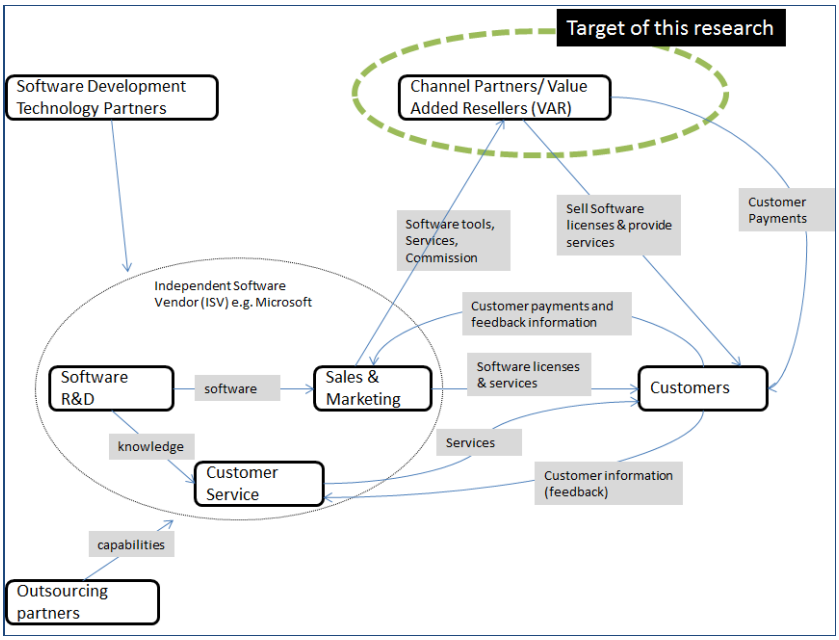



**Figure 1: Representation of on-premise business model**

Source: (D'souza et al., 2012)

The traditional licensing model for software comprises of a number of partners in the ecosystem (D'souza et al., 2012). In addition to software developers, a number of other partners are involved in co-creating value for the end customers. These partners range from providers of software, resellers (VARs), software customization partners, providers of development platforms and tools, consulting companies who implement and train users, and as well as system integrators (Gallagher, 2012). The primary software vendor is responsible for software research and development but shares the responsibilities for other support functions.

Sales, marketing and customer service support are important activities in the software business value chain (M. Cusumano, Kahl, & Suarez, 2006). Channel partners or resellers are sometimes involved in conducting some of these processes and usually have the most contact and interaction with the customer.

## 2.3 Software-as-a-Service (SaaS)

A number of studies have been conducted and papers written on the concept of Software-as-Service. Although there are varying definitions of the concept, a number of authors share a common understanding of the key concepts. Chong and Carraro (2006a) define Software-as-a-Service by placing the major emphasis on its technical architecture; namely where the software application code resides, who owns it and how it is accessed and used by the end-users (customers). This view is shared by a number of authors such as (Dubey & Wagle, 2007; Liao & Tao, 2008; Mietzner, Metzger, Leymann, & Pohl, 2009), all of whom describe this deployment model as bringing benefits to customers. These benefits result from the economies of scale brought about by multiple customers or tenants sharing the same hardware and software infrastructure.

According to these authors SaaS brings a shift of responsibilities. The software vendor or one of its ecosystem partners, called a Cloud Software Vendor (CSV) takes responsibility for hosting, maintaining and operating the software in addition to their traditional role of software development.

The other common feature expressed in this view is that the software is accessed over the internet, commonly through a browser user interface. Another common thread in the definition of Software-as-a-Service is that it involves the transition from selling software as a product to selling a service (Chong & Carraro, 2006a). Thus, software vendors have to transform from being software developers to service providers (Chong & Carraro, 2006a; M. Cusumano et al., 2006; Dubey & Wagle, 2007).

These authors suggest that this transition requires software vendors to change from sales oriented organisations, focusing on individual sales transactions, to relationship-oriented organisations. They can then offer closer customer relationships and ongoing sustainable value to their customers. This then results in a continuous service-based relationship between the software vendor/reseller and the customer.

According to (M. A. Cusumano, 2008; Sääksjärvi et al., 2005) and other authors who have done studies specifically around the pricing model, Software-as-a-Service can also be defined based on its pricing policy, which is on a subscription basis rather than that of a once-off purchase. The authors further explain that SaaS pricing is usually based on time and usage (volume) dependent subscription fees.

The continuous maintenance and support fees, which are common in traditional Software-as-a-Product model, are now included in the subscription fees. In this model, the customer continues payments for as long as they are subscribed to and are entitled to access the service (Stuckenberg et al., 2011).

While different studies and research offer various definitions of the concept of Software-as-a-Service, there are some features that are common to almost all definitions.

The characteristics which define the concept, and features prominently in the definitions by many authors (Chong & Carraro, 2006a; M. A. Cusumano, 2008; D'souza et al., 2012; Dubey & Wagle, 2007; Lechesa et al., 2012) can be summarised as follows:

- Reference to its deployment model – i.e. software is deployed and hosted by the service provider as opposed to being hosted on-premise by the customer.
- The offering of a service instead of the traditional software as a product.
- The subscription pricing model which replaces the once-off payment followed by annual support and maintenance fees of the traditional model.

Based on the above definitions, it is apparent that the Software-as-a-Service model is significantly different from the traditional model. It requires vendors and other ecosystem partners to change their business model, acquire new competencies and adapt as the market forces continue to change (Carraro & Chong, 2006b).

**Fig 2** illustrates the main differences between the SaaS model and the traditional approach.

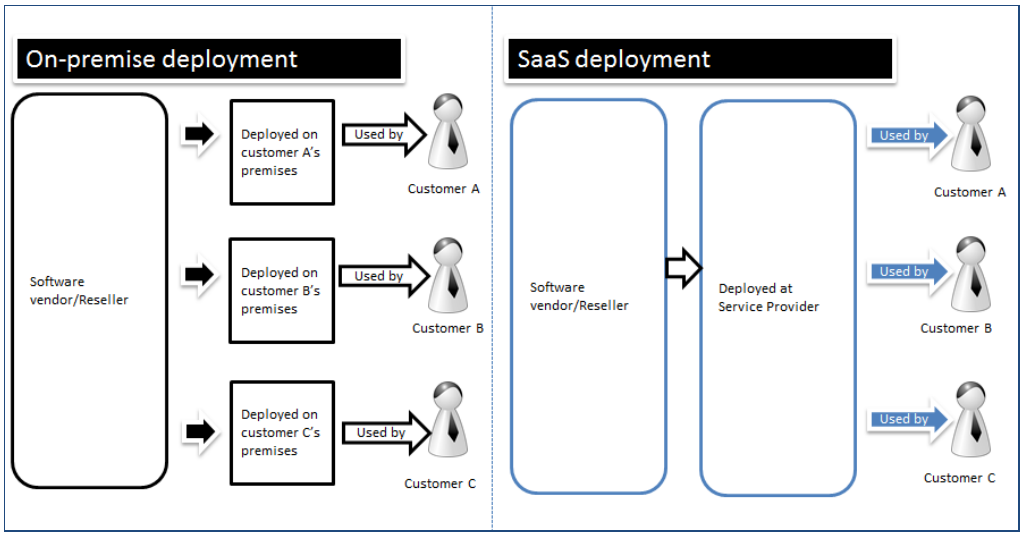



**Figure 2: Summary of differences between SaaS and Traditional Model**

Source: Author's illustration

## 2.4 What is a business model?

There is some confusion in the definition of the word business model in both theory and practice (Osterwalder et al., 2005). In both academic circles and industry, the word business model has been used interchangeably to refer to components of the business model, real operating business models or change models (Linder & Cantrell, 2000).

Osterwalder et al. (2005) defines business model based on a combination of the meaning of each word. According to WorldNet 2.0, each word is defined as follows:

- Business – the activity of providing goods and services involving commercial, financial and industrial aspects.
- Model – a simplified description and representation of a complex entity or process.

Based on a combination of the two definitions above, Osterwalder et al. (2005) define a business model as a conceptual tool containing a set of objects, concepts and their relationships which represents the business logic of a firm.
The concepts and relationships allow a simplified description and representation of the value a firm provides to its customers, the activities they conduct to provide this value and the financial implications of those activities. Teece (2010) agrees with the earlier definition of business model and adds that a business model is the manner by which enterprises deliver value to their customers and sell that value at a profit. The two authors also share the view that business models reflect management's views of their customers' needs and how the enterprise can be organised internally to meet those needs. The business model is directed at a focal organisation but it can include an organisation's business partners or business network (Fielt, 2011).

According to Linder and Cantrell (2000) companies exist by choosing an effective business model and executing it well. They survive by changing the business model at a pace that matches the changes in their markets. They further argue that business models wear under pressure from competition, technological change and market shifts. Mazhelis et al. (2013) share the same view by arguing that a business model is a dynamic concept in which a change in one element results in a change in other elements. They support the view that established businesses face conflicts, challenges and trade-offs when they go through a transition to a new business model. Examples of these conflicts include relationship conflicts between different partners in the ecosystem, as well as the threat of cannibalizing the existing businesses as part of the change process (Markides, 2006). Changing the business model requires changing the organizational structure and activities as these may be incompatible with the new model (Teece, 2010).

A business model framework describes the elements that make up a business model as well as the relationships between those elements. One of the most prominent business model frameworks is the Business Model Canvas first proposed by Alexander Osterwalder (Osterwalder & Pigneur, 2010). The Business Model Canvas summarises the nine main building blocks of business models identified by most authors in related literature. Thus, it is a suitable model as a summation of what many authors identified as the components of a business model (Osterwalder & Pigneur, 2010)

This research will use the Business Model Canvas framework of Osterwalder and Pigneur (2010) due to its wide application and support, having been co-developed by 470 practitioners. It is also generic enough to reflect both the traditional on-premise software business and the SaaS business model (Stuckenberg et al., 2011). The match with both business models allows the researcher to describe, visualize and assess the changes from one business model to another using a common framework (Osterwalder & Pigneur, 2010).

This makes this model a valid means for exploring and comparing the influence of Software-as-a-Service on the existing business model. The study will be simplified by considering the impact of SaaS on each of the nine building blocks then subsequently considering the impact from a holistic, integrated perspective.

### 2.4.1 *The Business Model Canvas*

Osterwalder and Pigneur (2010) describe the Business Model Canvas as consisting of nine building blocks. **Fig 3** illustrates the nine building blocks, what each one represents in the model, as well as the relationship between the different model elements.

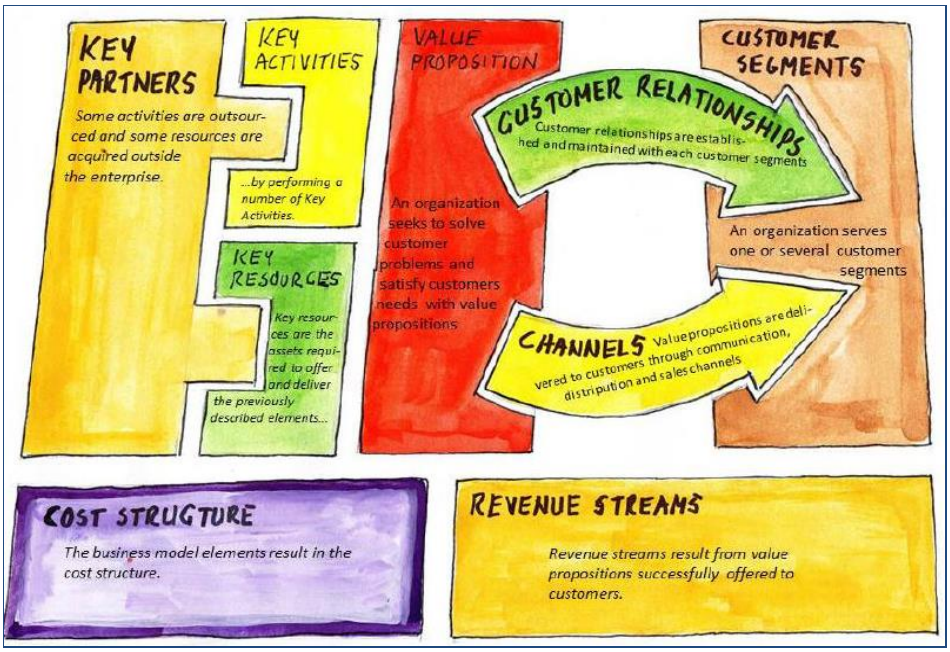



**Figure 3: Business Model Canvas Framework**

Source: http://oshanassyprojects.com/ retrieved on 03 July 2014

An explanation of the meaning and interrelationship of the nine different elements of the Business Model Canvas follows:

According to Osterwalder and Pigneur (2010) in their interpretation of the Business Model Canvas originally developed by Osterwalder (2004), the heart of any business model is a profitable **customer**. In order to serve customers better a business must decide which **customers segments** to serve and which ones to ignore, and then design a business model according to the specific needs of the **target customers**.

Once a target customer is identified, a business must then come up with a **value proposition**, which is the bundle of products and services to satisfy that customer's needs. A **channel** strategy then defines the means by which the business will interface with its target customers to distribute its products and services, raise awareness about its offerings and provide after sales support.

In order to ensure a sustainable business, each company must decide on the nature of the relationship it wants to establish with each target customer segment. **Customer Relationships** start at customer acquisition and are developed to ensure customer retention and to increase the chances of selling more products and services to the same customers. **Resources** are important to every business model. In order to meet the needs of its customers, each business requires certain **key resources** to meet its value proposition, reach markets, maintain relationships with its customers and generate sustainable revenue streams.

**Key activities** are the actions necessary to turn resources into customer value. Key activities differ from one business model to another. For example, for a software company such as Microsoft, its key activity would be software development yet for DELL which specialises in manufacture and distribution of PCs, its key activity would be supply chain management (Gallagher, 2012).

In today's business environment companies are becoming more and more interconnected. **Partnerships** are necessary in any business to optimise the business model by reducing risk or to facilitate the acquisition of resources, which either the business cannot produce internally or does not have. These partnerships can be in the form of supplier-customer relationships, joint ventures, strategic alliances or agency relationships.

**Costs** are incurred by any business in the delivery of its value proposition. These result from such activities as creating and delivering customer value, maintaining customer relationships and acquiring resources. **Cost structures** are important to any business model as they determine how a business can compete in the market. In some businesses, such as airlines, cost structures can be the source of competitive advantage.

Finally Osterwalder and Pigneur (2010) conclude that if customers are the heart of a business model, **revenues** are the arteries that keep vital supply lines required to keep the business ticking. A business model can choose between transaction-based revenue streams or recurring revenue from ongoing payments for continued supply of services.

## 2.5 Implications of SaaS for the Software business model

The advent of Software-as-as-Service brings both technological and business changes (Chong & Carraro, 2006a). These authors posit that due to the inherent technical nature of software vendor organisations, comprising of people with technical training and a technical orientation, the technology changes usually get the lion's share of attention, yet the more important challenges in the business domain usually go unnoticed and receive scant attention.

The move to SaaS goes to the heart of what it means to run a software business; changing target customers, internal business processes, sales processes, pricing, business partners and much more (M. A. Cusumano, 2008).

Sometimes the impact of these changes is so big, the software vendor is forced to change its organisational structure in order to align with the new business requirements (Avangate, 2010). The transition to SaaS requires fundamental changes to the organizational structure, business process and networks in all the major areas shown in **Fig 4**.

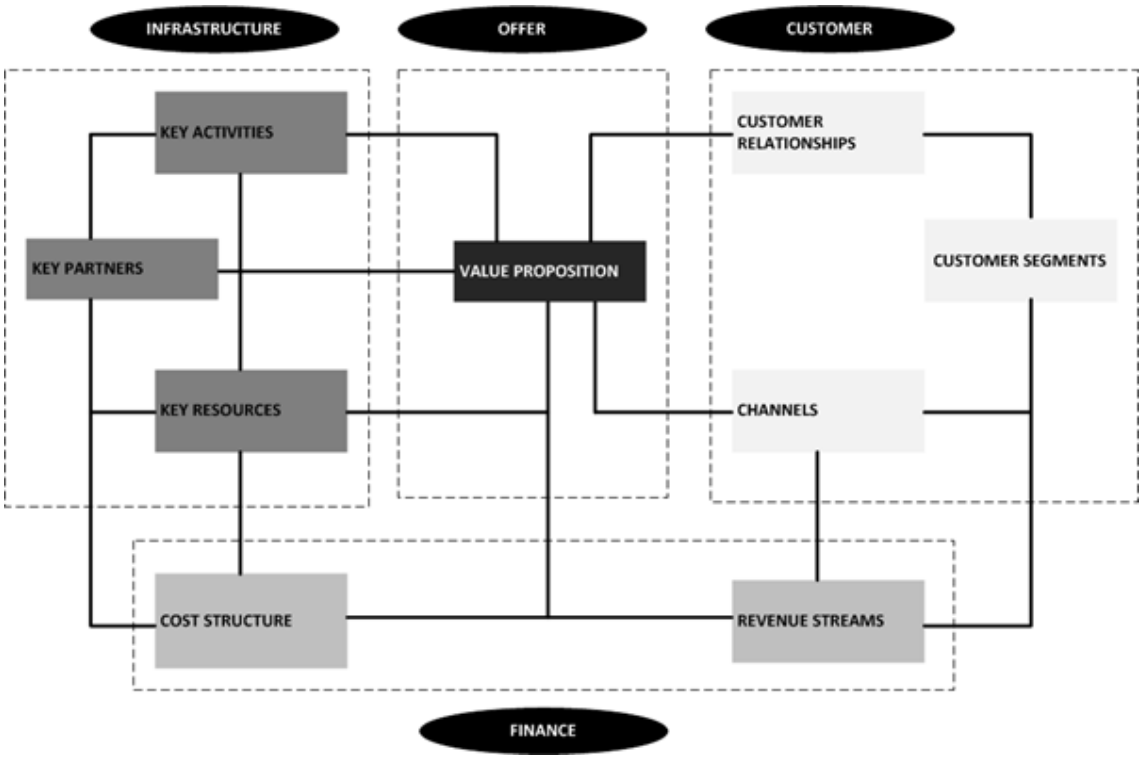



**Figure 4: Business Model Canvas Business Areas**

Source: Adapted from Osterwalder and Pigneur (2010)

The nine building blocks in the Business Model Canvas can be grouped into four main business areas as shown in **Fig 4.** The implications of a transition to SaaS for a company can be viewed holistically by considering the impact on the four main business areas. The impact on each of the building blocks within the four business areas is analysed below:

### 2.5.1 *Key Partnerships*

New partnerships are required to create and extend an organisation's capabilities and resources in order to offer a new business model (Gallagher, 2012). Due to the limitation of financial resources, an organisation may not be in a position to purchase all the resources required to establish the new business model. It usually has to partner with other organisations as suppliers or in an outsourcing or collaborative arrangement to acquire the necessary resources or expertise.

Through partnerships, an organisation can deliver value quickly and reduce risks, as well as costs of the transition. The emergence of new partners, who need to work together seamlessly to provide common services to customers creates a new ecosystem. Due to the inter-dependence of different partners in the value creation, contractual arrangements are required rather than dependence on market organisation (Stuckenberg et al., 2011).

### 2.5.2 *Key Resources*

In the traditional on-premise model, software vendors and resellers only concentrate on their core business, which is software development and distribution (Chong & Carraro, 2006a). With SaaS, the software is the service and comes packaged with different layers of architectural components, which all need to be managed (Anding, 2010). The SaaS provider needs to invest in and develop additional expertise and resources in the form of cloud computing and network infrastructure, service delivery infrastructure and monitoring tools as their role changes to that of managing service level agreements (Gallagher, 2012). The customer in this model does not care how the different layers are managed but only requires the service for which they pay a subscription. Thus a transition to SaaS requires the service provider to acquire additional resources, skills and expertise. This requires a paradigm shift from their original business model (Vijayaraghavan, 2013).

### 2.5.3 *Key Activities*

Due to this increasing role, the service provider finds itself having to perform more activities. These include hosting the service, delivering the services, monitoring, billing and service assurance (Chong & Carraro, 2006a). This requires a significant investment in infrastructure, skills and expertise which were not necessary in the old model (Gallagher, 2012). Some of the activities can be outsourced, resulting in the creation of new business partners and an addition to the ecosystem (Chang, Wills, & De Roure, 2010)

A closer relationship between the reseller and the customer is required, to understand the customer's business requirements, to assure service availability. The new relationship calls for new activities, business processes and communication channels to be established in order to continue to deliver to the required service level agreements (Gallagher, 2012). These changes require the software reseller's role to change drastically in order to align with the new business model. An example of a change in activities and processes can be shown by the change in the sales process as illustrated in **Fig 5,** which compares the difference in the various stages of the sales cycle for both SaaS and on-premise applications.

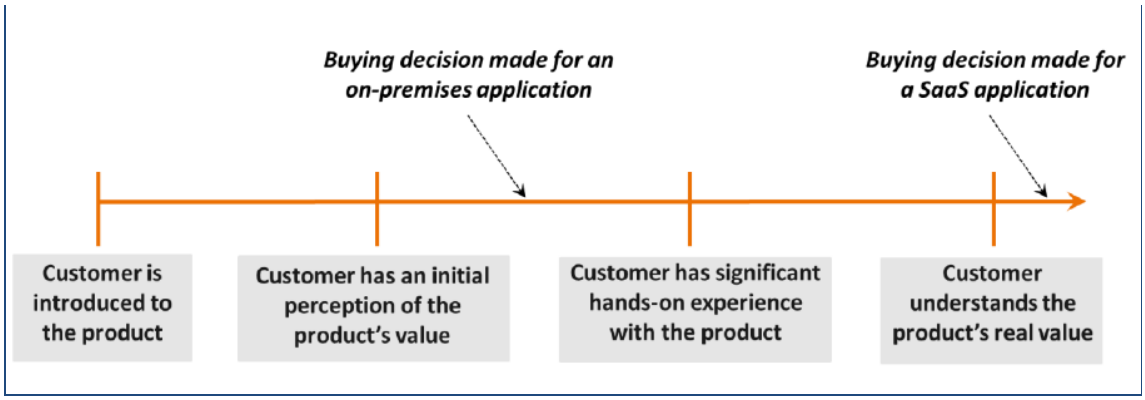



**Figure 5: Sales cycle SaaS vs. On-premise application**

Source: (Chappell, 2012)

According to D'souza et al. (2012) when a vendor or reseller moves to SaaS, there are differences in the sales process. These differences pertain to when a customer makes a buying decision, what they know about the product, as well as what they know when they make a decision and how the firm works with partners.

According to Chappell (2012), in the traditional licensing model, the vendor sales team makes an effort to get the customer to understand the benefits and value they will enjoy from using the software. Vijayaraghavan (2013) supports this view and further adds that the customer does not have the option of deploying the software and seeing how it works before buying, due to the high initial infrastructure costs required. The customer thus must put forward a substantial, upfront investment in the form of software licensing fees, required infrastructure and implementation fees before they can start enjoying any value from the investment. Only after a lengthy implementation period, does the customer know whether the software really offers business value. According to Chappell (2012), reducing this risk is one of the main attractions of SaaS. In SaaS, the customer has the opportunity to evaluate the product or commit to a low number of users and only increase this once they are convinced of the value that the software brings to their business.

Thus, in order to deliver SaaS solutions, existing software VARs need to acquire a new set of key resources, key partners and engage in new key activities to align with the demands of the new business model. These capabilities can be viewed as the infrastructure component of the business model or the business structure. This infrastructure may not exist or may not be adequate in the old model. As it tries to acquire these capabilities, competencies and resources, the organisation needs to reorganise internally and realign with other external organisations.

**Proposition 1**

**As a consequence of a transition to SaaS, software VARs will significantly change their business infrastructure in order to successfully deliver on the new model.**

### 2.5.4 *Value Proposition*

As a software reseller moves towards SaaS, its value proposition changes from being technology-centric, offering products and product features, towards being service-oriented and offering application availability, security and fitness-for-purpose (M. A. Cusumano, 2008). According to Verio (2010), Software-as-a-Service vendors differentiate themselves from traditional software vendors by bundling software and services into one offering that customers have to pay for, i.e. the customer pays for service availability and not for different isolated components of the service. The SaaS VAR or service provider also offers lower implementation costs, quicker deployment options and automatic updates to the software with minimum disruption to service availability (Lechesa et al., 2012).

This is a paradigm shift from the traditional on-premise model where the customer has to pay for different components and deal with many service providers (Carraro & Chong, 2006b). Implementation in the traditional model takes several months. Upgrades involve large-scale and costly rip-and-replace projects, which generally involve the same effort as new implementations, not to mention the disruption to business activities which accompanies such projects (Lechesa et al., 2012). Thus as companies transform towards SaaS, the major value proposition becomes a lower total cost of ownership and hassle-free user experience in the form of “service” not “software” (Chappell, 2012). By using SaaS applications customers can concentrate on their core business (Hmood & Al-Madi, 2013)

SaaS introduces new dynamics in the way software is distributed and offered to customers. Software vendors and resellers are required to transform from being developers and sellers of software to service providers. This transition promises many benefits to customers of enterprise software. The change from selling a product to selling a service, from once-off payment to pay-as-you-use basis, from hosting on-premise to central hosting brings a completely new value proposition (offer to customers).

**Proposition 2**

**As a consequence of the transition to SaaS, the software VARs will begin to offer a completely new value proposition to customers.**

### 2.5.5 *Revenue and pricing*

Just like traditional licensing, it is possible to make money with SaaS applications (Gallagher, 2012). The way SaaS applications are priced is different from traditional licensing, and affects the rate of revenue accrual and the margins achievable (M. A. Cusumano, 2008). According to Sääksjärvi et al. (2005), pricing for SaaS applications is often broken down into three main categories namely:

- Subscription pricing which is the most common pricing model. In this model, pricing is usually based on per user per month, with some vendors' charges being based on per device per year.
- Per unit pricing involves charging per transaction, per unit of storage, per connection or based on some measure of usage of the system.
- Freemium pricing is a system in which usage of the service is free and the vendor gets revenue from internet advertising. Such products as Gmail are based on this model.

Stuckenberg et al. (2011) add a different dimension by explaining the difference in how on-premise and SaaS applications accrue revenue over time. The graph in **Fig 6** shows the pattern of SaaS revenue accrual over time. An explanation of the trends in revenue accrual through the life-cycle of both SaaS and on-premise software models follows showing the key differences between the two models.

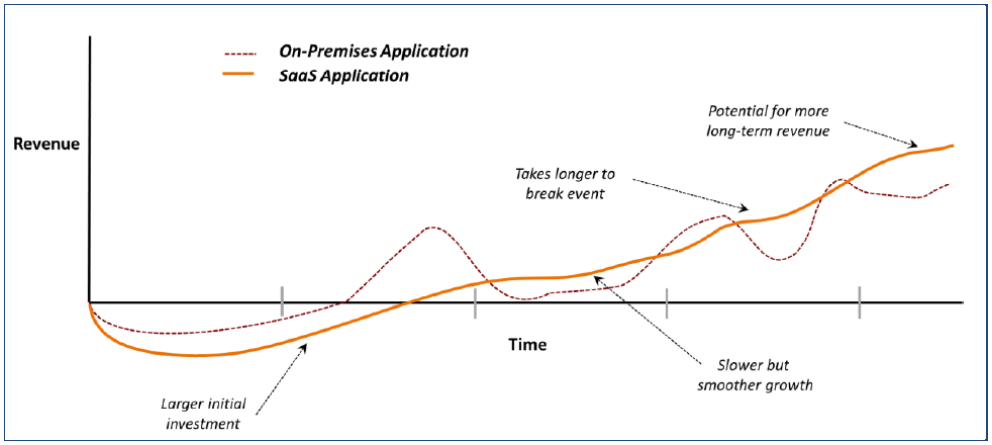



**Figure 6: Revenue accrual - On-premise versus SaaS model**

Source: (Chappell, 2012)

Figure 6 shows that initially a SaaS business usually experiences a bigger negative cash flow. This is to be expected, since SaaS typically requires an initial capital outlay in the form of infrastructure to host the application (Chong & Carraro, 2006a). According to Chappell (2012), the vendor might initially suffer a net capital outflow, as the money spent building the infrastructure is more than the revenue inflow while customers are being acquired.

As the software lifecycle matures, SaaS brings slower but smoother revenue growth, provided the vendor does not suffer from customer churn (customers not renewing their contracts). This is in contrast to the on premise model, where revenue is not predictable but fluctuates with each sales transaction when upfront license fees are received or due to business cycles. The challenge of the slower revenue growth with SaaS is that it may take longer to break-even. This may pose serious challenges to resource allocation, business operational activities and capital investment plans (Chappell, 2012).

With SaaS, revenue is not generated through license sales but through the sale of services, in the form of recurring subscriptions. Consulting services associated with implementation, configuration and customization of the solution form the other leg of the revenue logic. The acquisition of new resources, partners and the engagement in new activities may result in costs which were not common in the traditional business model.

As small amounts of regular monthly subscriptions replace large, once-off, irregular revenue inflows from software license sales, the business's cash flow will be impacted and the allocation of financial resources to business activities may need to be reviewed. The changes in revenue inflows and cost structure will fundamentally change the financial logic of the business.

**Proposition 3**

**As a consequence of the transition to SaaS, the financial logic of software resellers' business will significantly change.**

### 2.5.6 *Target customers/customer segments*

According to Stuckenberg et al. (2011), a software reseller might adopt a SaaS product to more effectively reach customers in its target market. An example is a Customer Relationship Management (CRM) system that is deployed in the cloud. A CRM reseller selling on-premise products may add a SaaS CRM to its portfolio in order to defend its market share against new SaaS-only products. An example is Microsoft Dynamics CRM, which created Microsoft Dynamics CRM Online to defend its market share against competitor products (Carraro & Chong, 2006b). Another example which has been noted recently is Microsoft's launch of its Office365 strategy. This has been introduced to defend its market share against Google's Google Docs, which is offering document management in the cloud to challenge Microsoft's dominance in document management software on desktops.

Due to the lower entry-price point of most SaaS products, they generally allow smaller organisations that could not afford the high capital requirements of on-premise systems to use application software (Lechesa et al., 2012). Thus, a software vendor, which traditionally targeted large enterprises, might find itself attracting smaller companies when it starts offering SaaS (Chong & Carraro, 2006a). This contention is supported by Gartner (2012), which shows small-to-medium enterprises as leading the pack in the adoption of SaaS. This does not mean however, that SaaS exclusively targets the smaller customers.

A look at the website of leading SaaS vendor Salesforce shows that a number of leading global corporations such as Toyota Motor Corporation, Coca-Cola, American Red Cross, GE Capital and KLM Dutch Airlines are among its customers (Salesforce, 2014).

According to Gallagher (2012), a number of SaaS vendors have had to segment their offerings to cater for a wider customer base. As an example, they have created a “basic package” with a lower subscription and offering only basic features targeted at smaller customers. A “premium” or “enterprise” version of the same software is available for larger enterprises. This contains more features, such as the ability to create individual customizations. This enterprise version is usually priced at a higher level than the basic package.

The segmentation of services supports the view that offering SaaS enables a reseller to provide its service to wider range of customer segments. In addition, the fact that most services such as advertising, activation, support and training can be offered online  enables the resellers to reach a wider customer base without increasing the number of customer support staff (Botteri et al., 2010).

### 2.5.7 ***Channels***

Sales Channels can be divided into two main categories, namely direct channel and indirect channel. The key feature in SaaS is the use of the internet and related technology in the delivery of the core service (Sääksjärvi et al., 2005). The internet is also used for other secondary functions such as service support automation, communication regarding service provision, training and facilitating collaboration between customers and the service provider using webcast or other online forums (Stuckenberg et al., 2011). According to D’souza et al. (2012) the direct contact between the service provider and the customer is likely to diminish the role of other channel partners such as resellers, support services and system integrators. This is a hotly contested view.

There are two main schools of thought on what the SaaS channel strategy is and should be. One school whose main protagonists are (Botteri et al., 2010; D'souza et al., 2012) believe in the power of the internet and argue that SaaS will result in a one-to-one relationship between the SaaS vendor and the customer. This eliminates all other intermediaries such as systems integrators, VARs and consultancy companies from the value chain.

The more pragmatic SaaS analysts (Carraro & Chong, 2006b; M. A. Cusumano, 2008; Gallagher, 2012; Hmood & Al-Madi, 2013; Liao, 2010) believe the ecosystem currently existing under the traditional on-premise model will still have a role to play, albeit with some minor reconfiguration under the new SaaS model. They argue that it is impossible for software to sell, implement and support itself even with the power of the internet. They believe the different ecosystem partners will still have a role to play in the different customer segments, to co-create value for the customer in collaboration with the software vendor or primary SaaS service provider.

### 2.5.8 ***Customer Relationships***

In SaaS, the full responsibility for the service and all architectural components that form the service, lies with the service provider. Meanwhile, the role of other downstream providers in the channel becomes of secondary importance (D'souza et al., 2012). According to Hilkert, Wolf, Benlian, and Hess (2010), as more SaaS providers proliferate in the market, all offering solutions that can be deployed quickly with low initial capital investment, the costs of switching between different service providers will be significantly reduced in a SaaS model. The lower switching costs will force service providers to invest more in customer relationship to ensure customer intimacy. In the traditional model, the relationship was more transaction based and customer service was left to other downstream channel partners, who were more in contact with the customer (Chong & Carraro, 2006a). The on-premise model favours a "hunting approach" to customer relationship management while SaaS requires more of a "farming approach" (Botteri et al., 2010)

SaaS changes the nature of the relationship between software reseller and the customer and the way resellers interact with customers. The life-blood of a SaaS business is retained customers, while the customer is dependent on the SaaS provider for the smooth running of its business operations. New innovative means of reaching and servicing the customer are required to improve the service efficiency and effectiveness. This calls for a review of customer contact points and channels to reach the customer as well as the nature of the relationship with the customer, given that customer satisfaction is critical to the success of a SaaS business.

**Proposition 4**
**The adoption of SaaS will create a closer, direct relationship between Software resellers and customers, and the exclusion of other intermediaries.**

## 2.6 Research propositions

Evidence from the literature in this chapter indicates that adoption of SaaS by software VARs has implications on all the nine building blocks of The Business Model Canvas framework (Stuckenberg et al., 2011). The following propositions have been outlined from the literature.

- **Proposition 1:** As a consequence of a transition to SaaS, software VARs will significantly change their business infrastructure in order to successfully deliver on the new model**.**
- **Proposition 2:** As a consequence of the transition to SaaS the Value Added Resellers will offer a completely new value proposition (offer to customers).
- **Proposition 3:** As a consequence of the transition to SaaS, the financial logic of software resellers' business will significantly change.
- **Proposition 4:** The adoption of SaaS will create a closer, direct relationship between Software resellers and customers, and the exclusion of other intermediaries**.**

## 2.7 Impact of transition on business models - Summary

Based on the information gathered during literature review, both the on-premise and SaaS models have been mapped onto the Business Model Canvas Framework. Fig 7 and Fig 8 highlight the main changes which occur as a result of the transition to SaaS.

Fig. 7 shows the traditional software reseller's business model mapped onto the Business Model Canvas.

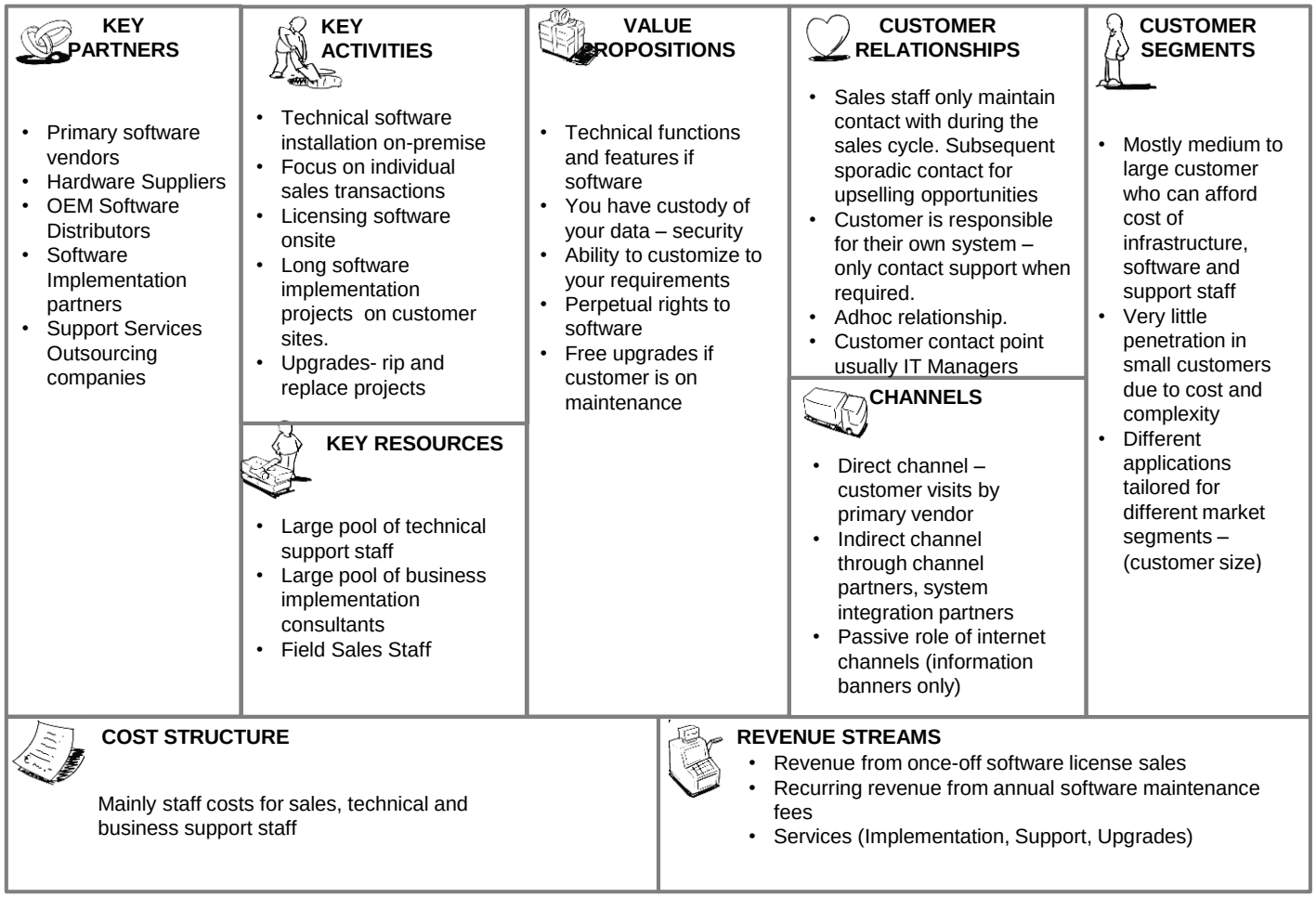



**Figure 7: Business Model Canvas Mapping – Traditional (On-premise) Model**

Source: Author's illustration adapted from (Osterwalder & Pigneur, 2010)

Fig 8 shows the business model, after the transition to SaaS, mapped onto the Business Model Canvas

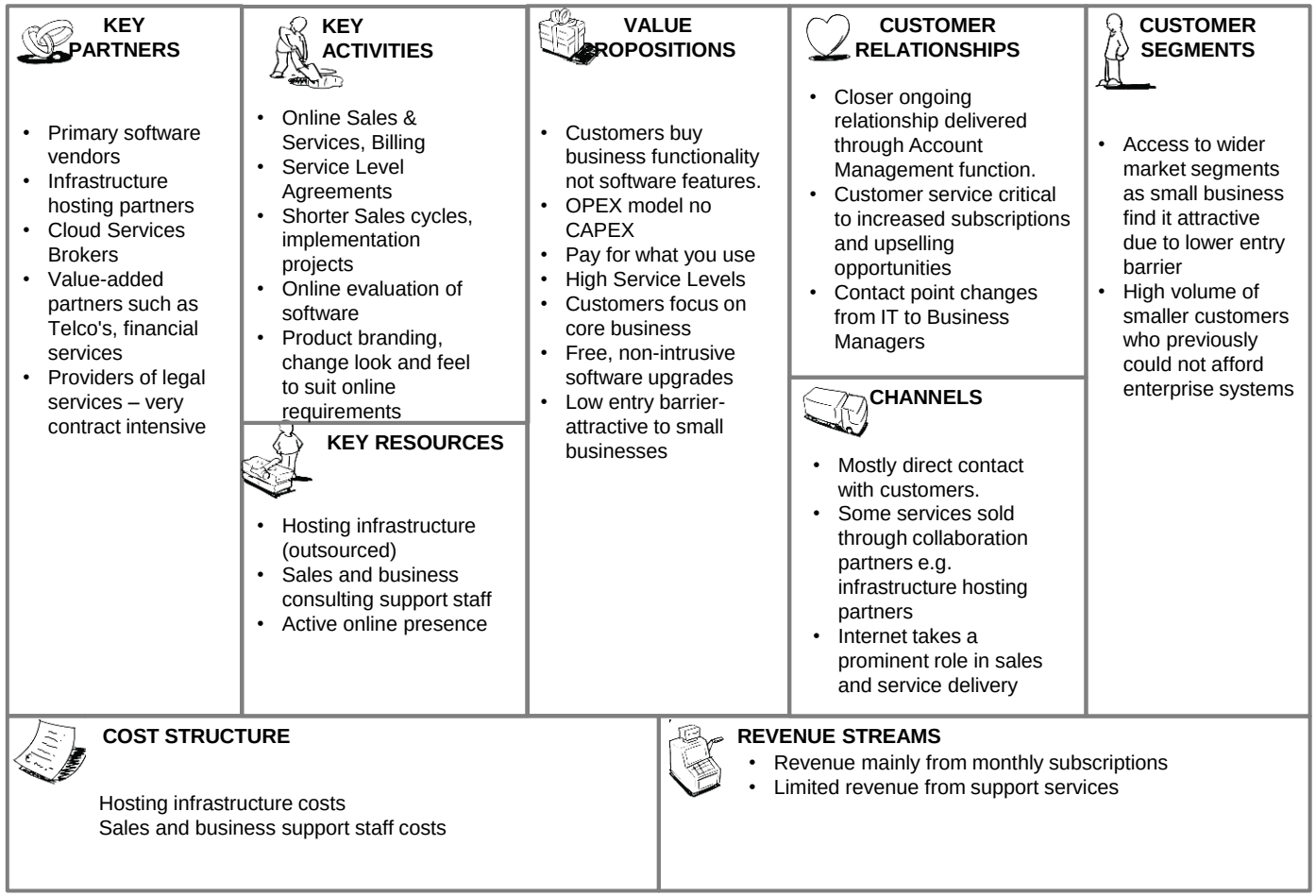



**Figure 8: Business Model Canvas Mapping – SaaS Model**

Source: Author's illustration adapted from (Osterwalder & Pigneur, 2010)

## 2.8 Conclusion of Literature Review

The literature review sheds some light into the Software-as-a-Service concept and clearly articulates the differences between the traditional on-premise software license model and the Software-as-a-Service model by comparing the views of different authors and researchers on this subject. Since SaaS is a relatively new concept the background information provided the basis on which to analyse the concept further and understand its implications on the existing business model.

A study of the Business Model Canvas framework of Osterwalder and Pigneur (2010) and subsequent mapping of both the traditional and SaaS business model onto this framework provides a basis for further analysis of the implication of SaaS on the business model. By analysing the impact of SaaS on each of nine building blocks of the Business Model Canvas based on the perspectives of different authors, a picture is beginning to emerge on the questions which need to be explored to answer the research problem

Thus, the literature review as a source of secondary data for this research has provided a good basis on which to approach the primary component of the study, which will be an exploratory research on various South African software Value Added Resellers (VARs) that have successfully adopted the SaaS business model. **Table 1** summarises some important perspectives, as well as authors who provided valuable insight into the relevant topics in this research.

**Table 1: Recap of main points of literature review**

| Topic | Main References |
|---|---|
| What is SaaS and how does it differ from the traditional model? | (Carraro & Chong, 2006b; Chong & Carraro, 2006a; Dubey & Wagle, 2007) |
| Definition of Business Models and its application | (Osterwalder & Pigneur, 2010; Osterwalder et al., 2005; Stuckenberg et al., 2011) |
| Selected framework –Business Model Canvas | (D'souza et al., 2012; Osterwalder, 2004; Osterwalder et al., 2005; Stuckenberg et al., 2011) |
| Implications of SaaS on Business Model of a Software reseller | (Chappell, 2012; M. A. Cusumano, 2008; Gallagher, 2012; Osterwalder & Pigneur, 2010; Stuckenberg et al., 2011) |

# CHAPTER 3. RESEARCH METHODOLOGY

This section covers a description of tools and methods that were used in collecting and analysing data for this research. It explains the choices made in selecting certain methods and techniques, as well as highlighting problems, limitations and weaknesses associated with some of the techniques used. A review of the research design and research instruments applied, followed by a discussion on the validity and reliability of the research is also covered.

To understand and answer the research question, extensive studies and research was conducted. Qualitative research using primary interviews, literature review, internet sources on industry publications, as well as reviews of previous studies on the same subject were used to understand the SaaS phenomenon, as well as its impact on different aspects of the software industry in South Africa.

## 3.1 Research methodology /paradigm

**Fig 9** summarises the overall approach, techniques and methods used for this research. A detailed description of the research methodology follows.

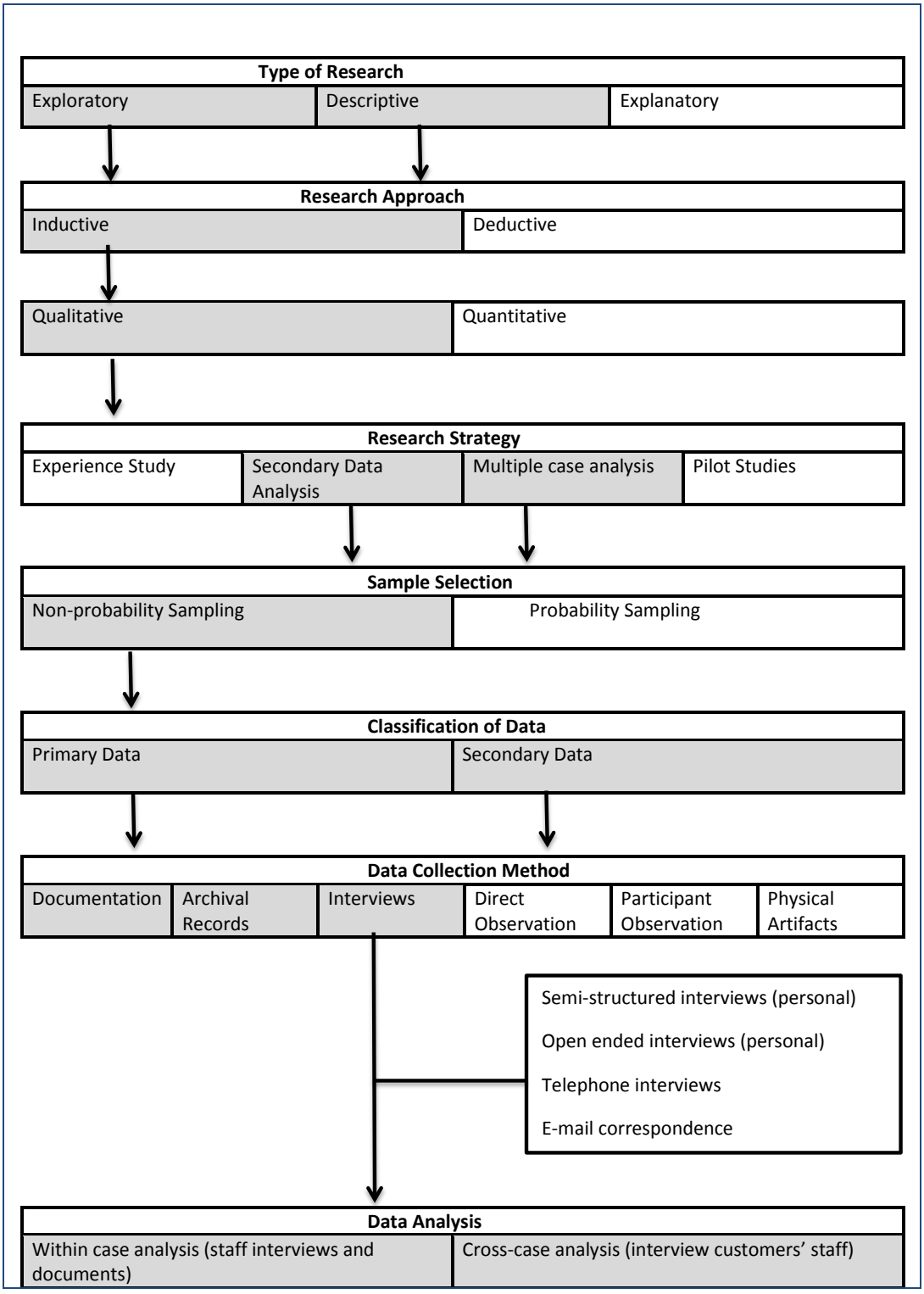



**Figure 9: Research Design Methodology Summary**

Source: Author's illustration

The overarching aim of this research was to explore the experiences of South African software resellers during transition to the Software-as-a-Service licensing model, as well as the implications for their business models.

To achieve this objective the experiences of a number of South African enterprises, who have successfully undergone such as transition were analysed. Interviews were conducted with selected members of their management, who have played key roles in the transition. Using qualitative, exploratory, multiple case approach allowed the researcher to analyse the experiences, activities and perceptions of the individuals in the selected organisations within the particular context of the study (Yin, 2003). An exploratory case approach involving many organisations was considered particularly suitable for answering the question “What are the implications of adopting SaaS on the business models of software VAR?” (Creswell, 2014).

There are two major approaches to conducting qualitative research, namely inductive and deductive research (Merriam, 2014). According to the same author, inductive research focuses on building theory from findings obtained from research activities such as interviews, observation and surveys. Meanwhile, deductive research involves testing a hypothesis and confirming an existing theory from the findings. This research involved exploring Software-as-a-Service and its implications for the business models of software resellers who adopt it. Since the data collected from the research was analysed in order to form theory about the implications of SaaS, therefore the research approach used can be classified as inductive.

A qualitative research approach was considered appropriate as it allows for use of multiple data sources and data collection techniques such as interviews, audio, documentation collection and observation (Eisenhardt, 1989). Qualitative research also allows the use of open-ended questions, which evoke responses which are rich and explanatory in nature and sometimes unanticipated by the researcher (Merriam, 2014).

## 3.2 Research Design

As previously mentioned, qualitative research was considered more appropriate for this kind of study, as it assisted the researcher to gain more understanding of a phenomenon about which little information is known (Creswell, 2014). It aided the researcher to understand how participants interpreted their experiences and how they used their perceptions to create a view of the world (Merriam, 2014). In these cases, the implications of Software-as-a-Service for the business models of a number of software VARs in South Africa are unknown, as the concept is still new and in early adoption phase.

The format of the research included an initial study of related literature and encompassed a review of previous research on the same subject. This provided some background information on SaaS and its implications for a number of players in the software ecosystem. This was followed by a pilot interview with a software industry subject-matter expert on SaaS. The insights from the subject-matter expert allowed the researcher an overview of the current state of SaaS globally and in the South African market, as well as the implications for the organisations who had pioneered its adoption. In addition to providing the background, which was helpful in the formulation of interview questions for other participants, the information gathered from this pilot interview was also used for triangulation purposes.

The primary research was conducted in the form of direct, face-to-face semi-structured interviews with twelve managerial staff members from eight organizations that have successfully launched SaaS services. To gain an all-round view of the implications of SaaS for these organizations' business models, four other interviews were conducted with representatives of companies which have partnered with these organizations in delivering the service, their customers, as well as other providers and experts required during the transition. Sixteen interviews were conducted in total. All interviews were approximately 30-45 minutes long, and each was audio recorded, transcribed and analysed.

Interview questions were informed by the research question as well as the theoretical information derived from the literature review and the review of previous cases related to the subject of this research.

The questions were carefully structured to cover all nine elements of the Business Model Canvas (Osterwalder & Pigneur, 2010). **Table 2** shows a summary of the interview schedule and a record of the interview process.

**Table 2: Summary Interview Schedule**

| Participant No. | Company | Role | Audio Minutes | Transcript Pages |
|---|---|---|---|---|
| 1. | A | Partner of SaaS provider/ Subject Matter expert | 35.32 | 10 |
| 2. | B | Partner of SaaS Provider | 39.3 | 9 |
| 3. | C | VAR/SaaS provider | 33.32 | 9 |
| 4. | C | VAR/SaaS provider | 35.36 | 10 |
| 5. | C | VAR/SaaS provider | 40.39 | 8 |
| 6. | C | VAR/SaaS provider | 30.55 | 9 |
| 7. | D | VAR/SaaS provider | 48.45 | 13 |
| 8. | D | VAR/SaaS provider | 32.00 | 9 |
| 9. | D | VAR/SaaS provider | 36.00 | 10 |
| 10. | E | VAR/SaaS provider | 36.30 | 8 |
| 11. | E | VAR/SaaS provider | 48.06 | 13 |
| 12. | F | VAR/SaaS provider | 43.00 | 7 |
| 13. | G | VAR/SaaS provider | 37.06 | 8 |
| 14. | H | VAR/SaaS provider | 37.14 | 11 |
| 15. | I | SaaS Customer | 30.00 | 8 |
| 16. | J | Legal Adviser to VAR/SaaS provider | 23.57 | 6 |

Secondary data was also collected from the organisations' internal company documents, brochures, websites and sales collateral. This information was used to compliment information collected using primary sources and also for triangulation purposes.

## 3.3 Population

The target population for this study comprises of people from both practice and academia. Potential respondents from practice include senior managers in charge of sales, strategy, finance and operations, working for software value added resellers and associated services providers, in South Africa. Those from academia include software industry analysts and academics with a special interest in the South African software industry.

## 3.4 Sample

In order to understand the impact of SaaS on the business models of software license resellers, a number of organisations, which have recently adopted SaaS, were identified. In line with the scope of the research and given the limitation of resources, only Johannesburg-based software companies who are software value added resellers, representing a number of primary software vendors, were selected. The participants included senior managers from selected companies, whose business involves sales and implementation of complex enterprise solutions such as ERP, small business applications such as small accounting packages and enterprise document storage solutions. The participants' organisations should have had experiences in transitioning one or more of their software products to a SaaS solution or should be in the process of doing so. The researcher did not have ready access to any software industry analysts or relevant people from academia; hence the sample was drawn largely from IT industry practitioners.

The software products represented also covered a wide range of functional domains from large ERP systems, enterprise HR and Payroll solutions, Enterprise Asset Management and CRM. Small enterprise collaboration tools such as hosted document management, hosted e-mail and hosted voice communication solutions we also included.

The selection of the companies and participants for the research was based on purposeful and convenience sampling strategy (Creswell, 2014). Selection of companies was based on two main criteria. Firstly, they had to be South African-based software resellers. Secondly, the transition needed to have recorded some degree of success based on the number of existing subscribers, contribution to revenue or having established a good brand name in the market. Applying these criteria would add value to the research by providing implications based on successful cases.

### 3.4.1 *Sampling method*

There are two main sampling techniques namely, probability and non-probability sampling (Creswell, 2014). In probability sampling every element in the population has a known non-zero chance of being selected while in non-probability sampling units are selected based on personal judgement and convenience (Zikmund, 2003). The non-probability technique based on convenience was used for this research. The researcher works in the software industry and could easily access participants with rich experience in similar transitions through his professional network, hence participant companies and interviewees were chosen based on ease of access to the researcher.

This sampling technique is considered suitable as it ensures better access to respondents, most of whom belong to the researcher's professional network (Creswell, 2014). The fact that a number of the identified respondents were known to the researcher helped in ensuring their willingness to participate and candidly share information on their experiences and perspectives. A number of the participants, being current practitioners in this software industry, showed an interest in the subject of the research. Some have requested that results of the research be shared with them for use in their competitive strategy initiatives.

Twelve participants from existing software VARs that have implemented SaaS, a subject-matter expert, a technical partner of one of the VARs, a customer whose organisation is using SaaS solutions from three of the participating VARs and a legal advisor to some companies which have implemented SaaS solutions were interviewed. This brings the total number of participants to sixteen representing eight different organisations.

This sample provides 360 degrees-view of the business model, by providing the views of people who work for software resellers, their business partners, customers as well as service providers outside the software value chain. The sample size is considered adequate by the researcher as increasing the sample size is considered unlikely to bring additional insights to the research question (Merriam, 2014).

## 3.5 Summary of participants' organisations

**Company A**

Company A is a Cloud Services Provider that employs 15-20 people. It provides infrastructure hosting services to a number of companies in the public and private sectors in South Africa. They have invested in hardware and associated software to create a modern state-of-the-art Cloud Infrastructure where both end-user companies and service providers offering SaaS services can take up hosting space for a monthly fee. A number of companies offering SaaS services are hosted in Company A's Cloud Environment. Company A has also collaborated with Company D to build an online CRM system which is offered to both small and large enterprises on a SaaS basis. Company A has outsourced most of the technical activities required to manage the Cloud environment to company B. The Managing Director of Company A is considered to be an industry authority on SaaS, hence provided valuable input as the subject-matter expert.

**Company B**

This organisation employs 150-200 people and provides IT Management Services on server operations, networking and data security to a number of companies, mainly on an outsourcing basis. They provide their services onsite at customers' premises or remotely. They manage the entire technical operations for Company A's Cloud environment, and are responsible for maintaining agreed service levels with customers on infrastructure availability, reliability and data security. Although they are separate entities, companies A and B belong to the same group of companies and have a close co-operation, within which they offer end-to-end hosted infrastructure services to customers. Company B also does the infrastructure technical managed services for a number of SaaS vendors, hence is seen as a strong partner in the SaaS delivery value chain. The representative from Company B provides valuable insights as a technical partner to a SaaS provider.

**Company C**

Company C, with 100-150 employees, is a channel partner of Infor, the fourth largest software vendor in the world. Apart from selling software licenses based on the on-premise model, Company C also provides one-stop services for all Infor products. Such services include system implementation and after-sales support. They have recently converted one of the products, an Enterprise Asset Management application to the SaaS model. They now operate a hybrid model, comprising of both the on-premise (perpetual license model) and SaaS models.

**Company D**

Company D is one of the biggest Microsoft channel partners in SA with 200-300 employees. It provides a full range of value-added services on Microsoft products, including license sales. Traditionally, their business revolved around sales and services for on-premises software. When Microsoft launched a major SaaS initiative, the service was not launched in South Africa due to concerns around bandwidth and connectivity challenges. Company D responded by building SaaS solutions in collaboration with two SA-based Cloud Services providers and then on-selling the service to South Africa customers.

Since Microsoft has now launched their Office365 based SaaS products in SA, Company D has started experiencing competition for their custom-build SaaS offering. In response to this competition they now operate a hybrid model, offering on-premise solutions, SaaS offering based in their private cloud hosted in SA, as well as Microsoft's SaaS solution, hosted in Europe.

Company D's primary focus is now on adopting Microsoft's Office365 SaaS business model and selling the service to its customers for a commission.

**Company E**

Company E is a channel partner of Syspro, a South African based vendor of ERP software for small and medium sized organisations. It employs 100-120 professionals, sells software and provides associated services to customers, mainly in South Africa. Recently, with the launch of SaaS offerings by Syspro in America and Europe, Company E has set up a SaaS service in collaboration with a major data centre service provider for South African customers. Thus company E continues to sell both on-premise software as well as SaaS and associated services.

**Company F**

Company F, an employer of between 150-200 IT professionals, is a reseller for Sage-Pastel, a global supplier of accounting software and ERP solutions for the small to medium enterprises. Company F decided to focus on the entry level accounting solution and has extended its reach by appointing partners in the rest of Africa. With the emergence of SaaS, Company F launched its own SaaS product based on one of the on-premise accounting solutions it represented. The product has recorded phenomenal success and is now sold through other channel partners such as banks and Telco service providers. The SaaS product has seen company F sign-up customers from outside South Africa most of whom subscribe directly.

**Company G**

Company G is a Microsoft Channel partner employing between 20-30 IT professionals. Its main business involves selling Microsoft licenses and associated services. Its services are offered exclusively on an outsourcing business model.

Recently Company G decided to venture onto SaaS and acquired hosting space from a major data centre provider. They went on to build solutions providing online document management, hosted telephony and e-mail services, which are all sold on a SaaS basis. Company G's model is unique in that they have negotiated for licenses with major vendors and built customized products based on this software. The packaged applications are then offered to customers on a SaaS basis. Company G only pays the original software vendors based on licenses actually consumed by subscribing customers.

**Company H**

Company H is reseller of enterprise HR and payroll solutions. It employs approximately 70 people. Until recently they have distributed and implemented software at various customers (on-premise). Due to demand from their customers, they started offering a hosted solution, which they have now moved to a data centre service provider as a full multi-tenant SaaS solution. The SaaS solution is offered as Software-as-Service or Business-Process-as-a-Service where customers pay for business transaction services e.g. customer pays a monthly subscription per employee for HR or Payroll processing.

**Company I**

Company I is a large IT Services Group, employing close to 9000 people, and listed on the Johannesburg Stock Exchange. The company has grown largely through acquisition and is now ranked as one of the biggest providers of IT services and technology solutions in Africa. The company chose to use SaaS for all except the core mission critical applications, which cannot be deployed as SaaS due to security or regulatory reasons. Company I currently uses 3 SaaS solutions offered by companies C and D. This company's CIO has been selected in this research to provide a customer's perspective.

**Company J**

Company J is a small legal firm, employing approximately 5 people. It provides IT related legal services to a number of IT companies. They specialize in Software License Agreements, Project Services Agreements, as well Service Level Agreements. They play a major role in advising IT companies on legal aspects of services, including SaaS. They have worked with companies such as B, C and D and are also the legal adviser to Company I.

## 3.6 The research instrument

A combination of semi-structured and open-ended questions was used for the interviews. An interview script was used to ensure standardization of questions across all interviews (M. Huberman & M. B. Miles, 2002). Semi-structured questions were considered appropriate for interviews with most participants from the software VARs as it offered the flexibility to elaborate further in cases where respondents differed on perceptions (Merriam, 2014). This same approach was used for the customers' representative, although the set of questions for this participant was tailored to solicit information on his experience as a consumer of the service.

Open-ended questions were used during interviews with the subject-matter expert, the technical partner and the legal advisor. The choice of this research instrument was to give these respondents enough freedom to explore the subject from different angles while encouraging spontaneity in their responses (Merriam, 2014). This approach is considered appropriate as it eliminates possible bias that a structured questionnaire might introduce to the responses (Creswell, 2014).

## 3.7 Procedure for data collection

In research, there are two types of data namely primary data and secondary data. Primary data is collected first hand by the researcher through interviews, surveys and observation while secondary data makes use of already collected information (Creswell, 2014). In this research both primary and secondary data were used. Primary data was collected through interviews with selected participants from different companies.

Secondary data was collected through literature review, IT industry publications and other documents, including internet sources on the subject of the study, in order to get basic knowledge of the subject. Secondary data on the activities of the organisations whose employees participated was also sourced from internal documents, their respective websites and public media. Secondary data is considered a useful source of information or views, which respondents may not disclose during interviews (Zikmund, 2003).

There are a number of interview techniques such as personal face-to-face interviews, telephonic interviews, e-mail and other electronic methods. Personal interviews were used for this research, as the subject under study was considered to be rather complex, requiring lengthy interviews of approximately 45 minutes and the opportunity to clarify views and perceptions (A. M. Huberman & M. B. Miles, 2002).

The advantage of personal interviews, in this case, is that they allow the researcher to ask questions using different dimensions and clarify responses in real-time. Face-to-face interviews also allow the ability to use visual aids and collect information from non-verbal communication such as body language (Zikmund, 2003). In this research interview data was captured using a simple digital voice recorder. Field notes were also taken by the researcher to capture his interpretation of the meaning behind the words, as well as other non-verbal communication such as body language (M. Huberman & M. B. Miles, 2002).

The voice recordings were transcribed to allow for easier classification and analysis.

## 3.8 Data analysis and interpretation

The process of data analysis in qualitative research involves making sense out of text and image data (Stake, 1995). It involves activities such as sorting and presenting data, and interrogating it to understand its hidden meeting (Creswell, 2014).

According to Merriam (2014), in qualitative research data collection and analysis occur simultaneously. It begins with the first interview or the first document read. Emerging insights lead to more questions being asked or the search for more documents and information. The same author further explains that data analysis involves making sense out of data through a process involving consolidating, reducing and interpreting what the interviewees have said, as well as what the researcher has seen or read. She concludes that the main objective of data analysis is to find answers often called categories, themes or findings, to a research question.

Inductive data analysis strategy, where collected data is grouped according to categories in the selected framework, in this case the Business Model Canvas was applied (Creswell, 2014). This was followed by analysis of the data. An exploratory data analysis approach was used to describe data in a form which is easy to understand. Open coding was used to identify constructs appearing in the data and document the properties of such data (Merriam, 2014). Any common themes that fitted the different categories in the Business Model Canvas were identified and mapped to the individual building blocks of this model.

The transcription of audio recordings into text to allow easier analysis was outsourced to a specialist in the field. The researcher used the approach to transcribe and analyse interview data simultaneously for the following reasons:

- The summary of each transcript and follow-up questions was sent to the interviewees to verify the researcher's interpretation and to ensure that the participant's perspectives had been captured accurately, a technique called member checking (Zikmund, 2003).
- A timely review of the completed interviews and analysis of emerging themes provided the opportunity to revise and refine follow-up questions.
- A preliminary analysis allowed for determination of whether data collected covered all expected themes from the framework, as well as whether there were any new concepts emerging, which the researcher might be interested in.

An iterative process of data collection, coding and interpretation was used resulting in a final interpretation and presentation of different findings in different display formats. The diagram in **Fig 10** illustrates the approach to data analysis used in this research.

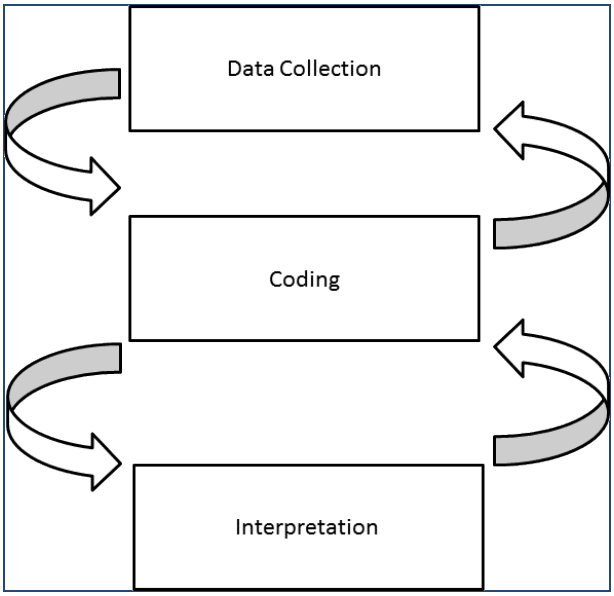



**Figure 10: Data Analysis Procedure**

Source: Adapted from (M. Huberman & M. B. Miles, 2002)

Different techniques within data display and analysis were used to analyse the exploratory data. First data reduction technique was used to summarise the data obtained from interviews. Data display was then used to organise the data that had been reduced into visual displays. According to M. Huberman and M. B. Miles (2002) raw data is much easier to draw conclusions from when reduced. In this research fifty-six (56) different codes / themes were identified and mapped to the nine building blocks of the Business Model Canvas.

Six codes were identified as emerging as they appeared consistently in most interviews responses. The emerging codes were linked to a new theme -"factors driving SaaS adoption". **Fig 11** shows the different codes and how they were grouped into nine different categories, representing the nine building blocks of the business model canvas. Different colours were used to visually identify the different themes.

**Emerging codes for theme 00 – driving factors for SaaS adoption**

**Table 3: Emerging codes**

| | | |
|---|---|---|
| Technology trends | Competitors | Additional revenue stream |
| Market demand | Push by primary vendor | Access to new market |

| | | | | | |
|---|---|---|---|---|---|
| 07 | Infrastructure costs | 09 | Pricing model | 09 | Revenue sharing |
| 02 | Implementation | 02 | Educating the customer | 02 | Establish the model |
| 02 | Rebranding | 02 | User experience/online experience | 09 | Annuity revenue |
| 03 | Low cost of ownership | 07 | Non-tradition channels | 07 | Online presence |
| 06 | Business Skills | 07 | Direct channel | 07 | Loss of services revenue |
| 06 | Technical Skills | 04 | New customer contact point | 05 | Large customer |
| 06 | Legal Experts | 04 | Ownership of customer relationship | 06 | Support infrastructure |
| 01 | Reputable infrastructure provider | 07 | Channel conflict | 01 | System integrators |
| 01 | Cloud providers | 09 | Profitability | 07 | Telco/Cell phone Network providers |
| 03 | Focus on core business | 02 | Customer support | 07 | Banks |
| 02 | Collaboration with other parties | 03 | Quick time to value | 01 | Hosting partner |
| 03 | Data security | 02 | Hybrid model | 01 | Primary vendor |
| 06 | Private cloud | 05 | Small customer | 07 | Channel partners |
| 02 | New contracts | 05 | Complex ERP | 02 | Online banners |
| 04 | Customer life time value | 08 | Operating costs | 09 | Margins |
| 04 | Service Level Agreements | 02 | Customer Service | 03 | Opex. Vs. Capex |
| 02 | Upselling | 05 | SME Customers | 04 | Continuous Relationship |
| 05 | Enterprise Customer | 05 | Simple application | 05 | Complex application |
| 06 | Hosting Infrastructure | 02 | Face-Face meeting | | |

**Figure 11: Coding and Data Analysis**

Source: Author's illustration

The different themes were then mapped onto a chart which diagrammatically illustrates the Business Model Canvas in **Fig 12**. Different themes were recorded in the respective section of the Business Model Canvas using different coloured sticker notes to produce a good visual display.

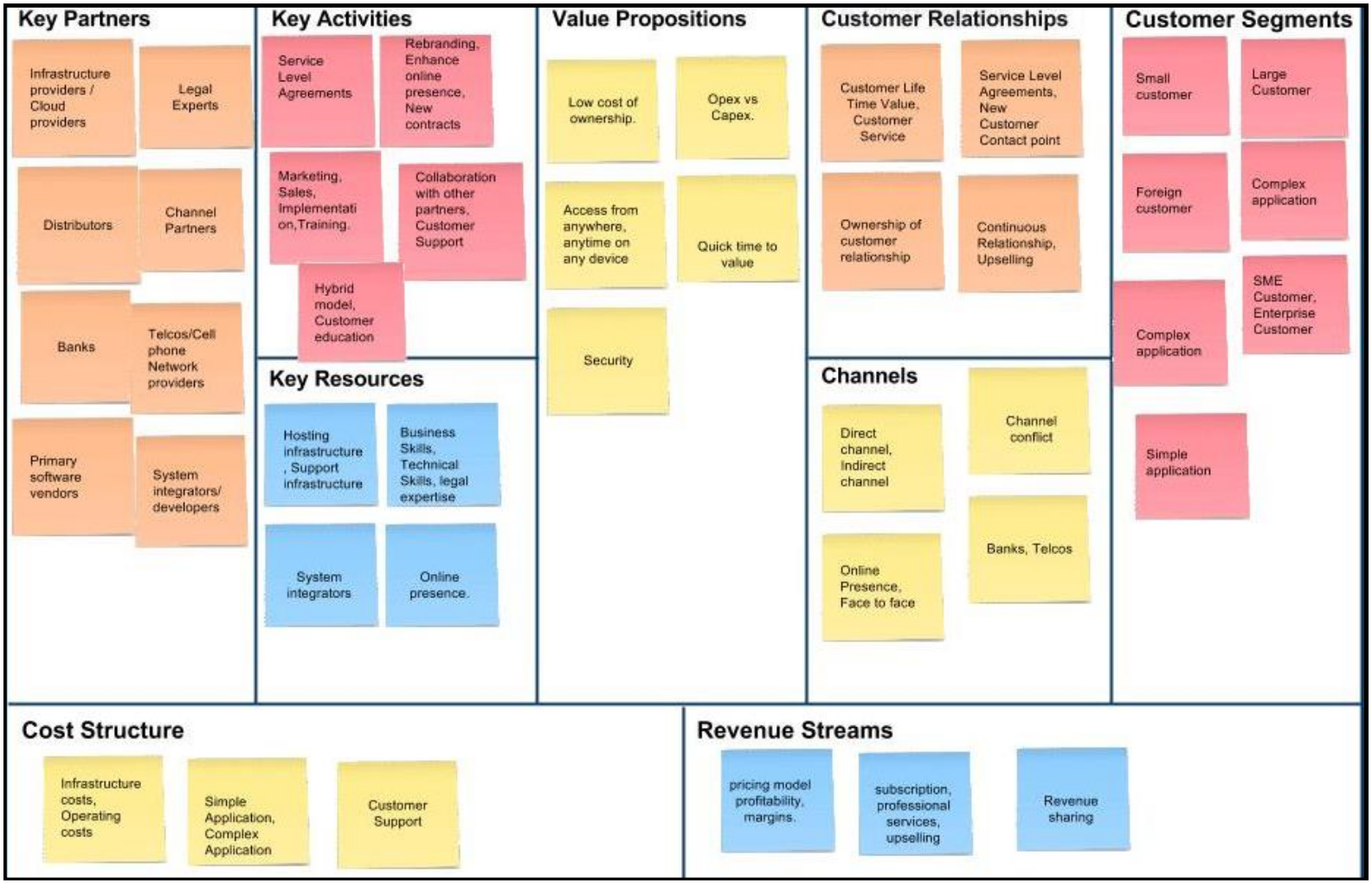



**Figure 12: Mapping codes to Business Model Canvas**

Source: Adapted from (Osterwalder & Pigneur, 2010)

## 3.9 Limitations of the study

- One of the limitations of this research is the data collection method used. According to Mason (2002) a major drawback of the interview method is that it depends on the participant's ability to recollect, articulate and recollect. This ability may vary between different participants with some not being able to recollect their experiences or articulate their views on a particular experience. Thus some important information may be lost due to failure of human memory.
- There are limitations due to insufficient resources, both time and money. These limitations affected the sample size. It would have required more resources and time to conduct this research over a large sample size. The results obtained represent the view of the few people interviewed and relate to the context of only a handful or organisations. For this reason the findings reflect the views of the selected organisations at the time and may not be a true reflection of the entire industry.

## 3.10 Validity and reliability

The objective of all research is to produce valid and reliable knowledge in an ethical manner. In an attempt to improve validity, certain procedures were taken to ensure that the findings are accurate. Reliability involves ensuring research methods are consistent across the different research subjects (Creswell, 2014). Unlike experimental research, where validity and reliability are determined before the commencement of the actual research, rigour in qualitative research comes from the researcher's continued presence in the field, their interaction with the participants and triangulation of data (Merriam, 2014).

### 3.10.1 *External validity*

External validity looks at the extent to which the findings of the research can be applied to other situations, or what is referred to as generalizability (Merriam, 2014). According to (M. Huberman & M. B. Miles, 2002), there are two aspects of generalizability namely internal and external. Internal generalizability refers to whether the same findings can be applied when the same event or situation happens in the same environment, e.g. the case companies.

External generalizability refers to the applicability of the same findings in a different organization, country or geographical location. While it is expected that the findings are relevant in the event that the case organisations decide to do a similar transition for one of their software products, it may not be possible to expect the same findings to apply in a different company or geographical location. The sample size would need to be increased and the research conducted for companies of various sizes, product portfolio and geographical location before applying external generalizability.

### 3.10.2 *Internal validity*

To ensure internal validity, triangulation was used to obtain data from different sources. Primary data was obtained through interviews with management from the different organisations, partners, a customer representative and a subject matter expert. This was complimented by secondary data from the different companies' internal archives, the literature review and the review of similar research.

Member checking as proposed by Creswell (2014), was used to determine the accuracy of qualitative findings. The data and interpretation of findings, as presented in the final report, was taken back to the participants to confirm whether they felt the findings were a true reflection of their views, as expressed during the interviews. Creswell (2014), also recommends more time should be spent in the field to ensure a better understanding of the phenomenon and context, which will ensure better level of accuracy in the research subject.

The researcher currently works in the software industry and has a good level of understanding of current trends and the dynamics of this industry. Findings were circulated amongst colleagues and peers and the subject matter expert to get comments on the plausibility of the findings. Finally an audit trail in the form of a detailed account of methods, procedures and decisions made during the research was maintained as a record of how the research was carried out.

### 3.10.3 ***Reliability***

Reliability is concerned with whether the findings of this research can be replicated in different circumstances (Merriam, 2014). This requirement was fulfilled by preparing a question guide for use during the semi-structured and open ended interviews. This was done to ensure consistency in the nature of questions presented to different participants.

### 3.10.4 ***Ethics***

Wits Business School requires that any research conducted on human subjects be evaluated and approved by the Ethics Committee. In order to meet this requirement an application was made to obtain clearance for this research from the Ethics Committee and the researcher was only able to proceed after approval by this committee.

A consent form was presented to each of the participants and the purpose and motive of the research, as well as their rights during the interview process, were also explained. The participants were assured of their privacy and anonymity and assured that none of their responses could be traced back to them. This requirement was fulfilled by the use of pseudonyms for both participants and their organisations during the data collection, analysis and presentation of findings.

## 3.11 Demographic profile of respondents

**Table 4: Profile of respondents**

| Participant code | Organisation code | Participant Category | Role in organisation | Organization size (employees) | Nature of Business | Solution offered on SaaS | Years in current company | Years in Software Industry |
|---|---|---|---|---|---|---|---|---|
| 1 | A | Subject Matter Expert (SaaS) | Managing Director | 15-20 | Cloud Services Infrastructure Provider | Infrastructure as a service (IAAS<br>Platform as a Service (PAAS) & SAAS | 3 | 20 |
| 2 | B | Ecosystem Partner of VAR/SaaS provider | Executive in charge of Enterprise Architecture | 150-200 | Managed IT Services | Outsourced services on IT infrastructure, platform | 2.5 | 25 |
| 3 | C | VAR/SaaS provider | Sales Director | 100-150 | Sales & Support of Business Applications Software | Enterprise Asset Management (EAM) | 8 | 44 |
| 4 | C | VAR/SaaS provider | Services Director | 100-150 | Sales & Support of Business Applications Software | Enterprise Asset Management (EAM) | 14 | 27 |
| 5 | C | VAR/SaaS provider | Account Manager | 100-150 | Sales & Support of Business Applications Software | Enterprise Asset Management (EAM) | 15 | 32 |
| 6 | C | VAR/SaaS provider | Technical Manager | 100-150 | Sales & Support of Business Applications Software | Enterprise Asset Management (EAM) | 13 | 25 |

| Participant code | Organisation code | Participant Category | Role in organisation | Organization size (employees) | Nature of Business | Solution offered on SaaS | Years in current company | Years in Software Industry |
|---|---|---|---|---|---|---|---|---|
| 7 | D | VAR/SaaS provider | Chief Operations Officer | 200-300 | Microsoft Channel Partner | Customer Relationship Management (CRM) | 4 | 25 |
| 8 | D | VAR/SaaS provider | Sales Manager | 200-300 | Microsoft Channel Partner | Customer Relationship Management (CRM) | 3 | 14 |
| 9 | D | VAR/SaaS provider | Projects Manager | 200-300 | Microsoft Channel Partner | Customer Relationship Management (CRM) | 1.5 | 9 |
| 10 | E | VAR/SaaS provider | Business Development Executive | 1000-1200 | Sales & Support of ERP software for SMB market | ERP software | 20 | 34 |
| 11 | E | VAR/SaaS provider | Pre-Sales Manager | 1000-1200 | Sales & Support of ERP software for SMB market | ERP software | 2 | 22 |
| 12 | F | VAR/SaaS provider | Divisional Manager | 3000-4000 | Sales & Support of Accounting, Payroll and ERP software for the SMB market | ERP for the SMB market | 7 | 16 |
| 13 | G | VAR/SaaS provider | Managing Director | 20-30 | Managed Services /SaaS provider | Customised SaaS solutions for Mail, Document Storage and Communications | 8 | 12 |
| 14 | H | VAR/SaaS provider | Business Development Manager | 50-75 | SaaS reseller for HR/Payroll solutions | SaaS and on-premise HR/Payroll | 3 | 35 |
| 15 | I | Customer of D using SaaS CRM solution | CIO | 8000-9000 | Large IT services Group listed on JSE | Using Microsoft CRM in the Cloud (deployed by G, H & I's company) | 8 | 37 |
| 16 | I | Legal adviser to companies A,B,C,D | Managing Partner | 2-5 | Legal Advisers to a JSE-listed IT Services Group | Legal Services | 8 | 14 |

# CHAPTER 4. PRESENTATION OF RESULTS

## 4.1 Introduction

This section presents the findings of this research. Primary data was collected from semi-structured interviews and secondary information was obtained from sources such as companies' websites, contract documents, proposals and project documents. In the following section some of the implications which were mentioned by the different interviewees are highlighted. Only important statements from the interview transcriptions are presented to emphasise certain points.

Different interviewees all of whom participated in a transition to SaaS in different companies shared their views and experiences. The results indicate that although there are similarities in experiences and perceptions of different participants, some differences also exist. Different companies, facing different circumstances followed different approaches in adopting SaaS, hence experienced different challenges resulting in different implications in some cases.

### 4.1.1 *Drivers for SaaS adoption in South Africa?*

Although this falls outside the scope of this research, i.e. exploring the implications of adopting SaaS for software value added resellers in South Africa; most participants expressed common views on what drove their organisations to adopt SaaS. An understanding of these factors helps provide an insight into the different enterprises' strategies, actions, motivation and business logic. For this reason, the researcher considers this to be pertinent background information, which should be treated as an emerging theme during analysis of the interview transcriptions.

A common reason given by both software resellers and customers is that many have realised the global trend towards the adoption of cloud computing and the delivery of IT applications and services via the Internet.
Service providers want to be early adopters of this trend in order to defend their market share and lock out competitors. Customers, who have learnt about the lower implementation costs and total cost of ownership (TCO) of SaaS solutions, want to adopt this option to cut costs. Customers are said to be demanding a SaaS option whenever they go to market looking for an enterprise solution. One of the interviewees summed this as follows:

***"The main driver behind this development was demand from our customers who obviously had been following trends on on-demand software and started demanding for such services. We were also mindful of developments in the market and had been watching competitors launching similar products. As a management team we decided the time was right for us to introduce this product in the market" – Participant 12, Company F***

The trend towards cloud computing and SaaS has seen most companies rushing to establish a SaaS offering in one form or another, so they find themselves ready when the trend takes root in the market. The majority of the companies mentioned a need to have a presence in the market to "test the waters"

***"The one thing is you've got to start, that's basically my only recommendation if you think you are going to do it, - start; reason being - it's what they call unknown unknowns, there is going to be things that you know you don't know but then some things will come out from the woodwork those things that you didn't know, you don't know and that you have to deal with. The only way you will learn about that is by doing it. Obviously you are going to have technical skills to deal with that but as I said that would be my only recommendation. If you think this is what you are going to do just start, even if it's small because that is how you are going to learn. This market is all about doing it and learning while you are doing it." – Participant 10, Company E***

The general sentiment expressed by most interviewees is that at this stage most South African software VARs are not focusing on financial gain from SaaS. They still consider the traditional perpetual licensing model as their main

source of revenue, but have started SaaS initiatives so they are ready if and when it becomes mainstream technology.

***"We are happy with results so far. We did not set out to measure success in terms of the profitability or financial rewards rather but in terms of ensuring the business model is accepted and established in the market" Participant 12, Company F***

A number of software valued added resellers (VARs) interviewed take the cue from their primary software vendors. In some cases, for example partners in the Microsoft Channel are pushed by Microsoft which has adopted an aggressive SaaS strategy. Partners who do not promote Microsoft's new SaaS offerings risk their customers being taken away by other Microsoft partners who do, or by Microsoft itself since it has come up with an attractive value proposition through its Office 365 product suite.

***"….Now we are exposing SaaS, in fact we are pushing the customer in that direction and if we don't, they are going to go there in any case. I won't mention names but one of the other large IT companies in the country just lost 4000 users from hosted exchange that they were using on their own private cloud and Microsoft swept them from under their feet and put them onto Office 365. The customer was furious with Microsoft and took them to task and Microsoft's response was why didn't you sell it to them, it was there, you are the Microsoft partner you should have sold it…" Participant 7, Company D***

The trend towards SaaS is moving at a very fast pace. Although on-premise software license sales are still growing, SaaS is growing at a faster rate (M. A. Cusumano, 2008). The South African VARs, like all software resellers world-wide, have awoken to the fact that SaaS will be the software distribution model of the future. They have started in small ways to establish the model in different forms.

In some cases the primary vendor has a mature model, which channel partners can copy and implement. In most cases, the primary vendor's SaaS strategy is still not clearly defined. In such cases, VARs have gone ahead to innovate and develop their own model in response to changes in the South Africa market.

Having looked at the driving factors for the transition to SaaS, the study will now focus on the implications to the business model of existing VARs; how this transition is changing the way they create value for their customers and what changes they have had to implement to make this transition successful. Using the Business Model Canvas framework, the impact of transitioning to SaaS on each of the nine building blocks of the Business Model Canvas was analysed. One participant summed the imperative for companies to change:

***"…We were also aware that as much as our customers were demanding on-demand software, online, they did not know what it meant to run software online nor were they ready. The same applied to our existing technology partners who were all part of our value creation in the market. The prospect presented real opportunities but we had to change both internally and externally to meet the challenges associated with this transition…" Participant 12, Company F***

### 4.1.2 *Impact on customer segments*

A commonly held view is that SaaS gives resellers more access to the small and medium enterprise (SME) customers, since it lowers the cost barrier to adopting software applications. From this research, most of the companies interviewed generally deliver IT solutions to the large enterprise sector. Naturally they have approached customers in their target market and offered SaaS solutions. The majority of these resellers did not notice any increase in the uptake of their SaaS offerings by SME companies, for the simple reason that the products they offer are too complex for the SMEs and also because they have not specifically targeted that market segment.

Some large enterprises and financial institutions that have adopted SaaS have opted for local South African resellers that host the applications locally in private cloud environments. Regulations and governance requirements in most large enterprises place restrictions on the deployment of company information outside the borders of South Africa.

These restrictions have driven the adoption of SaaS solutions offered by local South African resellers and tended to lock-out large international SaaS vendors who host one instance of the software in international datacentres, usually in America or Europe. A number of participants mentioned legal restrictions as a factor which worked in their favour when large South African enterprises went to the market looking for SaaS solutions. These restrictions are driving the adoption of SaaS by large vendors using local South African resellers.

***"…now South Africa does not have a safe harbour agreement with any other country. Take Europe for instance, if you take Microsoft, they host their Office 365 and all their cloud services in Ireland and in one or two other sites in Europe, that data goes into those data centres there …they are outside our borders and we do not have a safe harbour agreement with any of those countries. The USA and the Euro Zone have a safe harbour agreement in terms of data etc. but we don't. So with our POPI Act one needs to be very careful how that could impact South Africans in terms of taking data and putting it outside of our borders…" Participant 15, Company I***

Those VARs whose products are generally simple, easy to deploy and available at a low price point are more suited to the smaller organisations. These resellers have recorded a rise in the uptake of their SaaS offerings from smaller customers, including sole business owners and some in the informal sector. One company mentioned that due to its online advertising it has recorded an increase in subscriptions from customers outside South Africa, particularly the rest of Africa and the Middle East.

***"Traditionally, the product that we took online has always been targeted at small / medium customers and start-ups including individual business owners. We are still attracting the same market and have seen a spread in terms of geographical market. In the past we could only reach customers outside SA through partners but we have now seen some direct subscriptions from the rest of Africa and Middle East. Our partnership with banks and cell phone network providers has also brought a new profile of customers with an increase in the number of individual business owners and some customers from the informal sector, who are now forced to use the software as a condition for obtaining a loan from the bank" – Participant 12, Company F***

The views expressed by different participants show that the complex products which are generally targeted at medium to large enterprises, appear to still be out of reach of the SMEs, even when they are made available on SaaS. There is no visible increase in the number of SMEs adopting these products.

Large South African enterprise customers have generally shied away from SaaS solutions hosted by international primary software vendors such as Microsoft, Oracle, SAP and Amazon, preferring to be hosted locally by South African SaaS resellers. On the other hand, the simple SaaS solutions such as accounting packages, simple CRM, payroll, collaboration and communication tools have recorded increasing adoption by SME customers, including those from outside South Africa, when deployed as SaaS solutions.

### 4.1.3 *Impact on the value proposition*

The key value proposition identified by most resellers is that SaaS reduces the total cost of ownership for IT solutions and allows customers to focus on their core business. Participants agree that they have observed that customers who adopt SaaS no longer spend huge amounts of capital purchasing software licenses and associated infrastructure to run software on their premises. In addition, most confirmed that such customers were able to reduce or totally eliminate any onsite IT staff, as support for the application becomes the responsibility of the service provider. Thus, the main attraction of SaaS mentioned is that it converts what was mainly a capital expenditure (capex) cost to operational expenditure (opex), which many customers find preferable.

***"It is fairly recent …because it started… because historically we've always sold it as software on premise solution but now what we are finding is that I think in terms of affordability, there are certain clients who haven't got the cash to spend on the product upfront, and it's also saving them on the resources that they need, both from setting up the hardware infrastructure and the software licensing for them and the staff having to do back up and running the IT side of things …" Participant 14, Company H.***

This view was also supported by a customer whose organisation has been using different SaaS solutions from companies B, C and D.

***"….I would say you know what, I don't have to worry about the hardware, memory, storage and all those things, I pay for an application and expect it to be running 24/7 and whatever happens in the background, I don't care and I'm quoted an amount to say R100 per user per month and that is all I'm going to pay, and whatever escalations that are built into the agreement on an annual basis. If the hardware fails, it needs upgrade, the software needs upgrading, the OS needs upgrading etc., as the end user I will never have to worry about that and that is where the ease of using a software as a service comes into play, because you don't really have to worry about any of those things, you pay for a service and you want to see that service up and running day in day out without interruption…" Participant 15, Company I***

According to some participants, SaaS delivers value to customers in the form of quick time to value, as the solution is already deployed. Simple business applications, which do not require a lot of configuration and customisation, can be activated in a shorter time frame. This is an attractive proposition to customers who want to start using the software to create value in their business as soon as possible.

***"Realistically I can switch you on, and you are up and running in under an hour" – Participant 7, Company D.***

Another participant also weighed in with the benefits that SaaS resellers put on the table when selling SaaS solutions:

***"Online, always-on product, mobile, reliability. Service not product features. Connect from everywhere, on any device connected to the internet. Lower total cost of ownership" – Participant 12, Company F***

Customers are also attracted by the prospect of buying business functionality and not technology. For those who may have concerns about their data being stored offshore, South African based SaaS providers offer them data storage in secure a private cloud in a data centre within South Africa.

As much as SaaS offers a solid value proposition to most companies, participants agree that it is not a panacea for all problems and not suitable for all software applications. The more complex products, such as tier-1 ERPs like SAP, Oracle and similar products require a high degree of customization and take longer to implement, which negates most of the benefits expressed in the value proposition of SaaS. Such products, it appears will continue to be deployed on-premise.

***"..I think some products probably won't lend themselves to a SaaS model and some definitely will. I really think that an ERP model is way overdue. ERP is a difficult software to host and to manage and to maintain and administer and for resellers to be able to deploy it on a 3, 4, 5 user basis in a cost effective way is difficult…"-Participant 4, Company C***

There are also customers in vertical industries, such as financial services which currently prohibit hosting of data by third parties. Applications that are tailored for such industries exclusively are not ideal candidates for converting to SaaS.

***"There are some sort of regulations around banking licenses and things like that. Probably government is not going to necessarily allow data to be offshored they term it data sovereignty, data sovereignty will either be in South Africa in particular industries and businesses… but for others it is of less importance …"Participant 2, Company B***

The results highlight the views of most participants on the importance of understanding the true value proposition for each SaaS offering, and knowing which market stands to benefit from that value proposition. The benefits of SaaS are different for different software applications, industries and markets. Knowing which applications to convert to the SaaS model can be the difference between a successful transition to SaaS and failure.

### 4.1.4 *Impact on the channels to market*

Because SaaS software is delivered on-line, it is widely expected that SaaS providers would use online channels to market, support and deliver associated administrative services at all customer touch points. This research revealed that in addition to using the internet as a major means of interacting with customers directly, some SaaS providers continue to use traditional face-to-face customer visits. Some products are far too complex to be delivered exclusively on the web.

***"…You are not getting a person selling a suit off the rack here; you've got to know about the business. Our best sales people around the world are all over 40 because they spent a lot of time with products or they spent a lot of time with the business…" - Participant 10, Company E***

The choice between using the internet media as a form of direct channel and one-on-one customer visits seems to be dependent on the complexity and price point of the SaaS application. The results show that simple, easy-to-use products which come at a low price point are more likely to be distributed through the Internet, with some subscribers requiring minimal support from the provider (self-service).

***"….There are customers who sign-up for our products and do everything all by themselves without seeking any assistance from our channel partners or ourselves…" Participant 12, Company F***

Yet for complex applications such as ERP there will still be a lot of direct human interaction throughout the service life cycle from sales, implementation and after-sales support.

***"…The business analysis, the scoping, modelling, the training, roll out, the system build, all of those things will still happen and that's the core of the consulting business..."- Participant 4, Company C***

Some resellers, who provide simple transactional solutions such as accounting packages, hosted storage, document management and e-mail solutions, have found it easier to complement their efforts by using indirect channels to market. They have appointed other intermediaries who sell their solutions on their behalf. This is much easier with simple SaaS solution, as opposed to complex ERP-type solutions, because the solution does not require a lot of expertise to sell or support. The value proposition can be easily articulated by third-parties with minimum training.

In some instances, South African resellers have started using non-traditional partners from other vertical industries that do not traditionally participate in the delivery of IT solutions. A number of VARs interviewed now partner with banks and cell phone network providers (Telco's), who provide data centre facilities to market their products to their client base. Another attraction of these partners is their customer base which presents a lucrative untapped market for the SaaS resellers.

***"…We have also managed to establish partnership with a reliable hosting partner as well as establish new channels of selling the software via commercial banks and cell phone network providers who offer our software bundled with their core products. Our partnership with Standard Bank, MTN and Safaricom in Kenya has proved to be very successful and resulted in additional revenue through channels that did not exist before…" – Participant 12, Company F***

Complex application solutions such as ERP or enterprise HR solutions, tailored for medium to large enterprises, require business knowledge to articulate their value proposition. The level of expertise required from the sales cycle, complex configuration to customizations during implementations, as well as during life-cycle support, makes it difficult to appoint intermediaries from non-traditional channels. Potential channels partners need to invest in hiring experienced staff with knowledge and experience of similar products and business processes. These kinds of products are commonly delivered mainly through direct channels, in the same way as on-premise products.

These findings highlight the fact that the more complex a business application solution is the less attractive it is to be delivered as a SaaS solution.

***"We go directly. We've recently tried to use additional parties, who are then incentivized to actually bring us leads and help us close the business, so they are kind of channel partners, but because our product is a very comprehensively customizable product, you actually need to know not only the product very well but you need to know the human capital management. You need to know the business very well and it is not a simple business because it does change so there are legislative changes not only with the Receiver of Revenue but the Department of Labour and the SETAs. All of those then can affect your product, so it's not just a drop and run, you've got to really engage and make sure that everything is updated all the time. So using channel partners …..you know we will see how it goes" – Participant 14, Company H***

In both simple SaaS and complex SaaS solutions, resellers usually use their websites to show-case their services and to initiate contact with the customer. Once a prospective customer has registered an inquiry, subsequent contact is done through traditional, direct face-to-face contact.

***"No, I do have interaction with the sales, what happens is they log themselves on the Vodacom site as free trial or whatever it is which sets off a workflow to notify a sales person and that sales person then picks up the phone and phones me and says "Can you come with me to see this customer?" But the intention is to put them on the Vodacom CRM site …." – Participant 7, Company D***

An interesting development, identified by most participants, is the prevalence of channel conflict between the VARs and the primary software vendors, as well as between VARs and other downstream intermediaries they may have nominated to sell their services in different markets. An example of conflict between channel resellers and primary vendors occurs when the reseller goes ahead to create a SaaS offering even though the primary software vendor has not yet approved a SaaS strategy. This creates a situation where the reseller is trying to push a SaaS product yet the primary vendor is still enjoying the lucrative margins from the old model resulting in the primary software vendor imposing restrictions on the resellers' SaaS endeavours.

Channel conflict can also exist when the primary software vendor is trying to push a SaaS product, yet the reseller is more motivated to sell the old on-premise product where margins and sales commissions are more lucrative. An example of such conflict was observed in the Microsoft channel in South Africa. Microsoft has launched its SaaS offering, branded CRM Online as part of the Office365 suite, hosted internationally at its data centre in Europe. This is in direct conflict with private SaaS offerings that a South Africa reseller has built in conjunction with local hosting partners.

***"… In other words, if I can be blunt, we built, let's call this a R100K piece of architecture let's say with a R100K worth of services into XXX's cloud to on-sell to our customers and now from 1 October, Microsoft will do it better, cheaper, quicker, more integrated, more reliable, more backup, more disaster recovery and more seamlessly than we can ever do it…."- Participant 7, Company D***

#### 4.1.5 *Impact on key activities*

Although most resellers interviewed in this research are making efforts to embrace the SaaS model, a lot of their software business still comes from the traditional on-premise (perpetual license) sales. Their organisational structure and daily activities are still configured to deliver on-premise software and associated services.

With the shift to SaaS, most resellers are trying to adapt to the new model. At the top of the changes taking place is the realisation by resellers that they are now selling an online product and the arena of most activities now has to shift to the internet. Resellers have had to revamp their online presence, including implementing new internal transactional processing systems to align with the requirements of delivering an online service.

***"…We have had to revamp our online presence to ensure our products and services are readily accessed on internet search engines and online banners. While in the past we kept a passive website to advertise our products and services, we have had to engage with internet optimisation specialists to ensure our websites can easily be found and listed in any search for associated products…" Participant 12, Company F***

The transition from perpetual licensing rights to pay-per-use rights also requires a lot of work to be done in re-writing existing license agreements, contracts and customer services level agreements. One of the participants, a legal advisor to a Group of companies in the IT services industry summed up the mammoth task involved:

***"…I guess it's something that the operational guys have got their head around but it's quite a new legal concept to us... trying to unbundle… because... that is what we do in the circumstances, unbundle what the legal rights and obligations were when you had a perpetual license that was sold to a customer, to an end user. The end user would then implement, choose a company to implement and then they would just carry on basically paying maintenance until they didn't want to use it anymore and then the maintenance would end, to now this concept of having a monthly right as it were ..so a periodic right to be able to use the license which can expire at any time or has no set lifetime. And I guess from a legal perspective we've tried to cover all our basis in terms of keeping both parties protected, including the software vendor because that obviously opens it up to difficulties…" – Participant 16, Company I***

This view was also corroborated by a number of service providers, one of who summed it up as follows:

***"…The nature of online business requires a great deal of work on legal documents, contracts and SLAs. Although we used to do sales agreements, we now have to spend a great deal of time negotiating SLAS with customers…" - Participant 12, Company F***

A lot of effort is required to configure internal resources to align with the new model, ensuring efficient collaboration with customers, the primary software vendors and other technology partners in the value chain. The introduction of new channel partners belonging to different vertical industries also brings in the requirement to align resellers' internal processes with the new partners.

***"The demands of delivering software that offered an online user experience meant that our staff had to be trained to appreciate the demands and needs of an online user. Our support processes were also re-aligned in line with this new reality. Most of our customers made inquiries online and expected all inbound and outbound transactions with us to be efficient,***

***instantaneous and accurate. Because of the high demand for accurate, instantaneous information, we had to invest in our internal processes and systems and ensure they are integrated to be able to supply the kind of service required by online customers. By introducing an online product we also realised that we were not only targeting customers in SA alone but started getting subscriptions from the rest of Africa and in the Middle East and overseas. This brought another challenge – our support was only configured to work during SA working ours yet we now had customers who expected experience 24x 7service. Our new Business partners such as banks and cell phone companies operate 24x7 call centres. Since they had become part of our channel they were handling 1st line support for our products, with our team providing second line support. These partners generally have demanding customers who expect service round the clock. We had to reconfigure our support team to suit the new customer requirements and those of our new business partners". – Participant 12, Company F***

#### 4.1.6 *Impact on key resources*

The transition to SaaS requires software resellers to not only provide the software but to host it and operate it. This brings a new challenge. Most of the participants working for the software resellers interviewed acknowledged that their organisations did not have hosting facilities or deep technical skills to deliver an online solution at the service levels demanded by customers. Except for a few, who on-sell solutions hosted by the primary vendors in overseas data centres, a number of local resellers had to partner with local data centre providers to provide a hosted infrastructure for the SaaS application.

In some cases, the SaaS provider had to pay for hosting space upfront, for software licenses as well as spending a great deal delivering their own application configuration (professional services) expertise to build a SaaS solution that could be offered to customers. This created a significant upfront investment, which the resellers hoped to recover from customer subscriptions. A certain level of scale is required before the capital investment can be recovered.

***"…In other words if I can be blunt we built, let's call this a R100K piece of architecture let's say with a R100K worth of services into EOH's cloud to on sell to our customers…" Participant 7, Company D***

In some instances, some software resellers enter into win-win revenue sharing deals with hosting partners, in order to minimize the upfront investment required.

***"One of our channels is ...we built the Vodacom business solution site for CRM. So Vodacom partnered with XXX and I personally built it for them and that was CRM in the cloud for Vodacom" – Participant 7, Company D***

Some resellers, who needed to customize the SaaS offering to enhance its online look-and-feel, found they had to acquire additional software development expertise and third-party software licenses to achieve their requirements.

***"…One of the things we wanted to change was the whole user experience and online experience. Our team of developers, who had been used to the old product did not understand the modern user experience and look- and- feel we need to introduce in order to meet the requirements of online software. In addition, they did not have the technical expertise to develop a modern user interface that could be deployed on multiple devices and multiple technologies. We had to hire some additional skills…"***

For resellers providing complex ERP software, the expertise of the existing sales team cannot be easily replaced. In such cases, the same team that sold on-premise software, needed to polish up their skills to articulate the new value proposition for on-line software. The transition to SaaS for complex products does not necessarily require a new calibre of sales staff. Business knowledge and ERP experience is far more important than the aesthetic properties of the solution.

***"You are not getting a person selling a suit off the rack here; you've got to know about the business. Our best sales people around the world are all over 40 because they spent a lot of time with products or they spent a lot of time with the business. You don't just hire someone because you've got a different solution, it's understanding the business requirement that's***

***going to make the solution seen to be valuable, not the fact that it's hosted." – Participant 10, Company E***

Contrary to the above assertion, some participants whose SaaS products are simple, easy-to-use-and-deploy applications found out that user experience is more important to their customers than product features. In such cases, they realised some additional skills were required in their existing the sales teams.

***"Our sales team, particularly, had been used to marketing our products based on the technical features of the products e.g. how many accounts you could have in the chart of accounts, transaction volumes, ability to do batch transaction etc. In the online model, we understood that customers were less interested in specific features but more with their online experience. With most users preferring a convergence of user experience between consumer-grade and enterprise transaction user experiences, we realised the need to introduce fresher, younger members in the marketing team, people who understood and appreciated the whole social, mobile user experience and who could help our customer appreciate the value of this new online experience. We went out looking for young, tech-savvy graduates to joining our sales team" – Participant 12, Company F***

In other instances, some resellers found they needed less of technical skills. With a move to SaaS, technical skills are now outsourced to the hosting partner. SaaS resellers realised that they now needed to reduce their technical staff and increase the number of business solution oriented consultants, as they sought to concentrate on their core business and add more value to their customers through solution consulting.

***"…No, if anything, I need less technical resources because I don't need technical staff to do an installation. What I do need is only a bit of a Microsoft licensing specialist in O365 because O365 comes in a hundred flavours and to understand how to break it up you need a licensing specialist. So, we use the licensing specialists from the XXX Microsoft partner, that's George's business, and we use their staff to help us actually propose and quote because we don't know all the differences between E1, E3 and E5 models and office online and exchange line. They are all too complicated to actually understand you need that experience. So, it means that you can trade your technical skills for business solution skills"- Participant 7, Company D***

### 4.1.7 *Impact on key partnerships*

The observed patterns indicate that the transition to SaaS results in a significant reconfiguration of the partner ecosystem. It results in the emergence of some new partners who did not exist before, while some partners, who played a significant role in the on-premise model, become redundant or take a less significant role. From the perspectives shared by a number of participants, when resellers need to host their SaaS solutions locally (in South Africa), they enter into partnerships with local data centre providers. None of the SaaS providers interviewed have invested in hosting facilities as the cost is prohibitive and most do not have the expertise to deploy and operate such infrastructure. Those who started with their own hosting facilities are switching to large data centre providers, who provide private cloud facilities, as they have the expertise and economies of scale to deliver a better service.

***"Actually we used to have our own hosting facilities and now we are outsourcing them as well… because even for ourselves, when we looked at the cost of hosting ourselves vs. outsourcing and keeping your infrastructure up to date, we decided that we would actually look at the hosted solution as a potentially more cost effective solution" – Participant 14, Company H***

The decision to enter into partnerships with large data centre providers means the software reseller outsources all the technical infrastructure management functions. This includes technology partners, who provide associated software and services such as hardware vendors, network management vendors and other specialists.

***"I don't need my hardware vendors anymore ……. I don't need that anymore. My distributors of software …. Group, Coms Tech I don't need them anymore, well I don't need them as much because I'm still going to get Office 365" – Participant 7, Company D***

The relationship with hosting partners can be in different forms. The information gathered from the different interviews shows different forms of the partnership.

The first is an outsourcing agreement where the software reseller pays monthly subscriptions for hosting space (infrastructure as a service) and deploys its SaaS own solution. They would then sign a back-to-back agreement with the hosting partner to provider certain guarantees on service availability and reliability. The SaaS provider would handle all communication with the end-user customers, as they are the face of the service to the customer. The customers may not even know where the data is hosted and do not have a relationship with the hosting partner.

***"We are actually paying the hosting provider for the space that we occupied and the security services and there's a whole lot of other things that come with it. Because, also, I think companies historically…. the service providers who are giving hosting have traditionally done hosting of web, you know …their websites have been used for hosting. So even for some of the service providers when you looking at hosting the whole infrastructure and what's involved with that, it's also quite interesting because again we have to have back to back agreements so the whole legal contractual negotiations come into play…" – Participant 14, Company H***

The other form of partnership involves a closer relationship, where the reseller enters into collaboration with the hosting partner. They co-create a service and deliver it to the market as a single entity. In some cases, the hosting partner takes a key role in marketing the SaaS solution and handling the relationship with the end-user customer. Meanwhile, the software reseller operates in the background providing software application support, as part of the data centre service provider's support team.

***"We actually did the same for the Vodacom Business; we collaborated with Vodacom Business in getting their CRM platform infrastructure up to speed for them to host their CRM customers….." – Participant 8, Company D***

When resellers create their own SaaS offerings, based on the original on-premise product, they sometimes have to engage with other experts. These include system integrators or software developers, who build the necessary add-on components and user-experience associated with an online offering.

***"…Our team of developers who has been used to the old product did not understand the modern user experience and look-and-feel we need to introduce in order to meet the requirements of the online user. In addition, they did not have the technical expertise to develop a modern user interface that can be deployed on multiple devices and multiple technologies. We had to outsource some additional skills…" - Participant 12, Company F***

Additional partnerships are also established with providers of legal services as initially, this transition involves drafting new legal documents to define the service and the framework of the relationship with the customers.

***"…Yes that was sort of a start-up cost for us in getting all the contracts and paper work sorted out but I think it's a small price to pay for getting the business kick started…" – Participant 4, Company C***

### 4.1.8 *Impact on revenue streams*

The major change brought about by a transition to SaaS is that huge upfront payments for software are now replaced by monthly subscriptions which are comparably smaller.

***"…Long-term monthly subscriptions have a positive impact on assured revenue in-flows although short-term an emphasis on subscriptions may impact revenue inflows with possible impact on resource allocation and cash flows…." –Participant 12, Company F***

This view was shared by almost all participants. This change brings about a significant change in the business model as it affects the way sales people are incentivised, as well as the resource allocation to all business operations. It even changes the way business managers need to account for revenue and profitability, as well as the way they measure and monitor performance of their operations.

The key source of revenue in SaaS is monthly subscriptions, paid when customers sign-up for the service. As long as customers are happy with the service, this revenue is assured.

In addition, there is revenue from value added services which the reseller will provide. This includes such things as training, implementation of new functionality, customization and integration to other solutions, whether in the cloud or on-premise. The amount of services work varies depending on the complexity of the SaaS offering. It was observed that for simple products where one instance of software is deployed for a large number of customers and the solution requires a minimum amount of customizations, the services revenue is actually reduced. The emphasis is on volumes; signing up more customers, more frequently. The more customers that sign-up to use the standard product, the higher the volume of subscriptions, thus building the scale required to cover fixed costs and make the SaaS service itself more viable. At the extreme end of simple products, one reseller mentioned that one of their solutions is almost a self-service product.

***"…There are customers who sign-up for our products and do everything all by themselves without seeking any assistance from our channel partners or ourselves. Where service is good, we do not often hear from customers except to check that their subscriptions are up to date. We think that the same impact is being felt by our partners. The overall impact is the decline in services revenue such as training, consultancy … "– Participant 12, Company F***

At the other end of the scale, resellers of complex solutions such as ERP or enterprise HR /Payroll solutions have not noticed any decline in professional services revenue. Their products are typically complex and require a different set-up / configuration for different customers. While they may be deployed on a SaaS basis, the setup and implementation time-frame does not change, so the services revenue is still high.

The portion of services revenue lost is that involving technical setup and installation of the solution which is very common for on-premise deployments, but most resellers do not consider this core to their business.

***"….I don't necessarily see the implementations being quicker. Actually getting the software up and running, in other words available to the customer that will go much quicker. There may be a small loss in terms of the time that it will take to install the software at a customer site but that's a very small portion of the actual implementation project. The business analysis, the scoping, modelling, the training, roll out, the system build, all of those things will still happen and that's the core of the consulting business. It's just the technical stuff that happens prior to the implementation project which is the installation of the software, that is almost no time at all involved because the infrastructure is still there…" – Participant 4, Company C***

For value added resellers, who received revenue from associated products and services, there is trade-off between losing revenue from activities that are now being discontinued and replacing this with new revenue streams or more revenue from concentrating on core business.

***"…So initially you think that you are losing and yes, you are losing, you are definitely losing your revenue stream but it comes back to the question of ...you are trading off one revenue stream for another to be the best service provider of CRM in the industry or to at least unlock value. So yes, you are not getting that hardware, you are not getting maintenance and certainly you are not getting the SLA anymore but you are getting something else….." – Participant 7, Company D***

Pricing is a key component for the emerging SaaS providers. Resellers who have come up with their own SaaS offerings have found pricing to be a sticking point. Building a SaaS solution requires putting together a number of products and services such as hosting facilities, software, services, custom development and sometimes third-party licenses from different vendors. Some of the partners in the value chain may have different business models making it difficult to combine the different costs and come up with accurate pricing for your product. A number of resellers have reported losing revenue or customers due to inaccurate pricing.

***"From the onset we did not invest enough time to understand the pricing mechanics of the model. This resulted in inappropriate pricing and unnecessary time wasted in disagreements with partners on revenue sharing. In some cases some partners refused outright to carry this product because they felt it didn't not contribute enough to their revenue…"- Participant 12, Company F***

Where third-party software has been purchased to build a SaaS offering, the SaaS vendors face the risk of pricing being affected by foreign currency fluctuations. The SaaS vendor cannot easily adjust pricing since customers are tied to long term subscription contracts. Thus, for some SaaS solutions, both locally built SaaS solutions and those provided by the primary vendors and hosted internationally, foreign currency fluctuations are a threat to subscription revenues.

***"….All of this is done in dollars so our biggest risk is the dollar, the exchange rate hits us very hard because in the cloud utility computer space you have to advertise the price and you have to stick to it. You can't keep on going back to the customer you are selling a mailbox for R50 a month and the rand/dollar goes up and our profit drops to R4 a mailbox, we just have to suck it up….." Participant 13, Organisation G***

Resellers representing SaaS vendors with a mature SaaS strategy did not express having any major problems with pricing, as the primary SaaS vendor already has this worked out. The channel partners know what their share of the revenue is and how they can earn more incentives by signing up more customers. In such cases, the resellers can increase their revenue through selling more subscriptions, as well as upselling on value added services.

***"….by me being the Partner on Record (POR, I get my rebates and my commissions so Microsoft pays me according to a contract, and as a Microsoft Partner, I automatically get that. In terms of seamlessness, once I am appointed the POR, then the rest just happens kind of seamlessly. Yes you've got to go to the partner portal and check out the rebates and if the money comes through and so on and we've got to allocate it etc., but it's fairly seamless after that. If I increase or decrease your service offering from X user account to X plus a 100 or reduce it to X minus 100, Microsoft handles that variance for us. If I upsell you, you are on office standard and I put you to professional, then they up my commissions and if I reduce you they bring it down. So there is all of these step ups and step ins, all built into the licensing model, which you need a degree just to understand but with that being said, it works…." – Participant 7, Company D***

### 4.1.9 *Impact on customer relationships*

SaaS resellers have found that forging closer relationships with customers is critical to success of this model. Success is measured not only by acquiring a new customer but keeping that customer, as the long-term value of monthly subscriptions is what defines business sustainability. Resellers have realised the need to invest more in internal skills, processes and personnel to provide the best overall service to customers.

***"…We have noticed that when we provide a reliable service and high availability we don't hear a lot from customers …..they just pay their subscriptions"- Participant 12, Company F***

Secondly, most resellers mentioned the need to shift the nature of the relationship and point of contact with the customer from being a technical discussion to a business relationship. This has implications at many levels. Firstly, the entry point to the customer is shifting away from the CIO or IT Manager to the Business Managers. What this means is that the SaaS provider has to ensure their customer facing staff understand the customer's business and can articulate the value brought by the SaaS solution in the in the business managers' own language.

***"Some of the big transitions for us, as management services, is getting our service delivery manager's client facing people to move away from being technology focused and services only and starting to become advisors to a client and value added members of the clients team. So, we need our service delivery team to be able to have almost business level discussions with the client and not technology level discussions. So, there is a mind-set change, it is not "I've got the latest server and it goes really quickly..", it's "What is it that that server does for you, what does it do for your business and is there a better, quicker, faster way of doing that for your business…"" – Participant 2, Company B***

### 4.1.10 *Impact on cost structures*

The impact on the cost structure are a result of changes to other building blocks of the business model. The observations from participants who have built their own SaaS solutions in private cloud environments is that they have invested substantial amounts on hosted infrastructure capacity. Sometimes they have had to purchase software licenses upfront (where the primary software vendor has not agreed to a pay-per-use model involving revenue-sharing). Other costs include paying for third party licenses such as database software. In addition, they have invested a fair amount of their services to build up a SaaS solution that is ready for customers to use. This represents a fairly substantial upfront cost, which will need to be recovered from customers. This upfront investment presents a significant risk for the SaaS reseller. They would have to achieve a certain level of economies-of-scale before the model can break even and yield profits.

***"….What cost me R200K, just to put the infrastructure... I'm going to have to recover over the next… I don't know how long to recover that cost…"- Participant 7, Company D.***

Contrary to the above scenario, those resellers selling a primary vendor's SaaS solution that is hosted in a public cloud do not have to incur any upfront costs. Their only cost comes in the form of incentives for sales staff (cost of sales). They are able to sign on a new customer without incurring any upfront costs, which makes the value proposition very attractive to both the reseller and the customer.

***"….Microsoft have balanced the revenue model. If you consider that I have no operational costs and I have no capital costs either, that saving actually far outweighs the reduction in margin. So then no capex, no opex vs the reduced margin makes it more feasible and profitable for me to go the SaaS model…" – Participant 7, Company D***

By outsourcing the technical infrastructure component, SaaS providers have an opportunity to cut down on technical staff, thus reducing their fixed costs as technical staff are mostly used during implementation projects and only sparingly on an ongoing. The resellers can swap this fixed cost for the cost of employing business oriented consultants and sales people, who can add more value by increasing subscriptions and providing value added consulting services.

***"When I take people on, I take people on because of the business solution qualification not because of the hardware capability and technical skill, that's not my job to do. I want to now focus on core competency, which is how can I give you the best value added solution in CRM and how can I unlock more value now that I don't have to worry about hardware, software, security and backup recovery. I can unlock more benefit from you and I can steer you towards taking add on modules, integration into voice, integration into share point because I don't have to think about how I am going to do it and the opportunity cost for me of setting it up and then you don't take it, now I just client one tick box and you are in…" – Participant 7, Company D***

## 4.2 Summary of the results

The following section shows the summary of results highlighting implications of a SaaS transition for each of the nine elements of the Business Model Canvas.

### 4.2.1 *Customer Segments*

- Large customers in need of SaaS in SA are attracted to local SaaS providers by regulatory and governance restrictions which prohibit data storage outside SA.
- Simple SaaS solutions targeted at the small business sector have registered significant penetration in the small and medium business sector, including customers in other geographical locations (the rest of Africa and Middle East).

- There is little evidence of adoption of complex SaaS products such as Tier-1 ERP (e.g. SAP, Oracle, Microsoft), by the small and medium business sector due to complexity of products.
- There is a common practice of resellers selectively targeting new customers for SaaS to avoid cannibalising existing customers.

### 4.2.2 ***Value Proposition***

- Results from the research show that in reality most SA SaaS providers have not yet achieved the scale required to deliver the cost benefits promised by SaaS.
- Most SaaS providers have had to invest upfront in infrastructure, with a view to recovering the cost from customer subscriptions over time. Due to low adoption rates of SaaS solutions, the cost-efficiencies have largely not been realised by end-user customers.
- Other benefits, such as one version of software for all customers (economies-of-scale), have still not been realised because the customer mind-set needs to be changed. Customers still prefer individually customized solutions.
- Providers also still enjoy services revenue from lengthy implementations, as a result they have not given customers the benefits of quick implementations.
- Some mature SaaS products, such as CRM, simple accounting software and hosted collaboration solutions, have made strides in delivering quick time to value (switch on within hours)

### 4.2.3 *Channels*

- The direct channel approach using the internet and face-to-face customer visits is the most common method. Increasingly resellers are using the internet for marketing, advertising, collaboration and customer support, in order to reduce cost of customer contact and increase efficiencies.
- The existing structure of most businesses is still configured to provide the on-premise product using old channels and partners (indirect channels).
- As new partners emerge, new indirect channels are appearing some from non-traditional channels such as banks (Standard Bank, FNB etc.), Telco's (MTN, Vodacom) and datacentre providers
- Emergence of new channels partners who normally target B2C market has seen some new forms of marketing and advertising methods not commonly used in traditional IT applications which are largely B2B.
- Channel conflict has been acknowledged between some resellers and the primary vendors where one party still prefers to promote SaaS with the other party preferring to preserve the lucrative old model or vice-versa.

### 4.2.4 *Customer Relationship*

- Thanks to lessons learnt from outsourcing services in the old model, most resellers have made significant progress in establishing closer, more continuous relationships with customers.
- Account Management and Service Delivery Management functions have been created to ensure more continuous contact with customers and create a relationship focused on "farming", not just "hunting"
- New customer contact points have been established within the customer organisation, with resellers spending more time with business managers, not only IT Managers as in the previous model.
- Customer success is now more important for a SaaS provider as it leads to more use of the system or business expansion which usually leads to more subscription and upselling opportunities.

- Some conflict exits where resellers collaborate with hosting partners to deliver service. The partner responsible for Infrastructure is usually best placed to deal with 1st line support, hence becomes more involved with the customer. This challenges the old order where the Application Service Provider feels they should own the relationship.

### 4.2.5 ***Revenue Streams***

- Due to the low adoption rate of the SaaS model, subscription revenue alone is not yet sufficiently lucrative to make the model sustainable.
- Existing players are still dependent on after-sales services revenue.
- There are serious challenges in implementing accurate pricing including revenue sharing with partners.
- Innovative forms of subscription pricing such as variable subscription-based-on-use have not yet been explored. Long term opportunities for additional revenue streams have still not been explored as players are still trying to understand the new model.
- There could be a possible leakage of revenue due to inaccurate pricing
- No fremium pricing models where the application portal can benefit from advertising revenue, were noted.

### 4.2.6 ***Key Resources***

- Infrastructure and operational (service) related capabilities are required to extend the capabilities of SA software resellers in the existing business model.
- Most resellers do not have these in-house, they collaborate or outsource to reliable infrastructure hosting partners.
- In some cases, system development expertise is required to enhance the online experience of the software or to integrate to third-part applications.
- Legal expertise is required initially to prepare the legal framework and services agreements governing the changed relationship with customers.

- In South Africa most SaaS solutions are hosted in private cloud environments.
- Resellers have to invest in hosting capability which increases their upfront costs.
- Some privately hosted SaaS environments face competition from primary vendor hosted applications, even before they have reached break-even point on subscriptions.

#### 4.2.7 ***Key Partnerships***

- New partnerships with cloud hosting partners, system integrators and other value added partners are emerging.
- The nature of the partnership requires closer collaboration, joint value creation and sometimes revenue sharing.
- Some old partnerships become redundant e.g. hardware resellers and software distributors.

### 4.2.8 ***Key Activities***

- Resellers have had to re-write contracts to cover the new relationship with customers, including the responsibilities of the reseller to guarantee service availability, reliability and security.
- There is also a need to implement new internal systems and processes to ensure closer collaboration with new valued added partners and customers
- Providers are moving towards delivering automated interfaces for most customer facing transactions such as marketing, sales (subscriptions sign-up), training, support and billing.
- The smaller, less complex SaaS applications are more amenable to automated, self-service type transactions.
- Complex ERP type SaaS applications are handled in pretty much the same way as the old on-premise solutions.
- Due to their complexity, a lot of human, face-to-face interaction is required from sales, implementation and training for the more complex SaaS solutions.

### 4.2.9 ***Cost Structure***

- The major cost for most SA software resellers comes in the form of hosting infrastructure and associated software.
- In some cases, where the primary vendor has not yet approved a SaaS model, the reseller has to pay upfront for software before signing up customers on SaaS.
- In a few cases, where resellers are selling vendor operated SaaS solutions (acting as brokers) e.g. Microsoft Office365 solutions, such costs do not exist.
- As the adoption of SaaS increases and most private SaaS platforms achieve economies-of-scale, the cost per user will decline resulting in better margins for resellers.

# CHAPTER 5. DISCUSSION OF THE RESULTS

## 5.1 Introduction

In this section the four main propositions will be reviewed in order to compare the research findings with the literature review. The implications of SaaS for the four main business areas of the summarised Business Model Canvas will be analysed. Discussions will be extended down to the level of changes in the building blocks that make up the four business areas. Finally, the discussion will look at how the findings address the research question.

## 5.2 Changes in the business infrastructure (Proposition 1)

The research found little evidence of the first proposition in the South African context. Contrary to literature and trends recorded elsewhere, which proclaim the arrival of a “SaaS revolution”, the impact of SaaS adoption has not reached significant proportions in the South African software industry. All the participants pointed out that although a lot of efforts have been made to introduce SaaS offerings in their businesses, the adoption rate by customers is still very low. All the participants mentioned that SaaS revenue still contributes less than 5% of their companies’ total revenue. This may explain why most South African resellers still maintain the old business structure, which is configured to deliver perpetual license (on-premise) software.

In some cases, minor changes have been implemented, such as changes to existing internal business processes and procedures, staff roles and the branding of products. This may indicate that SaaS revenues are not yet significant enough to justify massive changes to business infrastructure and wide ranging organizational restructuring. Secondly, it appears both the traditional value added resellers and their primary vendors still find the old model very financially lucrative. For this reason, the old infrastructure is still required to support that model.

From the views expressed by some participants, it seems South African software resellers, taking a lead from their primary vendors prefer to proceed cautiously with the introduction of SaaS. They prefer an evolutionary approach rather than a drastic revolution. A number of participants emphasized the need to avoid cannibalising their existing customers. This challenges the views expressed in literature and previous findings where SaaS adoption is seen as a means to gain more market share, lock- out competitors and defend existing market share.

There are some indications of intentions to change, in order to align with the demands of SaaS customers. Some notable changes include measures by some companies to strengthen their account management / customer relationship management functions. Some strides have also been noted in companies' efforts to revamp their websites and general online presence. Some changes have been implemented to enhance customer service infrastructure, processes and systems, but these are minor compared to the major changes mentioned in the literature review.

Even where some changes have been implemented, these still operate under the same management structure that offers on-premise software. None of the participants interviewed mentioned their organisations going as far as creating a dedicated business unit to look after the SaaS offerings, let alone spurning a new separate company focused on SaaS. For now it seems most resellers are happy to "test the waters" and pick up the little revenue that flows in the form of monthly subscriptions while learning the ropes until the primary vendors have given them a clear direction on their SaaS strategy.

The few software resellers whose primary vendors have a clear SaaS strategy, seem to still be stuck in the adoption phase, where the main challenge is changing the mind-set of the internal staff and other partners to embrace the model. Most resellers interviewed still have other businesses which had been configured to compliment the on-premise model.

Such complimentary businesses include IT hardware sales businesses, OEM software, system development and integration. A revolutionary approach to the adoption of SaaS would cannibalise these business overnight and create problems in the old model.

From the interviews, it would appear that most resellers have learnt some value lessons from their initial SaaS ventures. The challenge ahead is to implement these changes and reconfigure the existing business structure which was built for distributing and implementing software, into one that can deliver software as a service.

In summary the implications on the building blocks that make up the infrastructure business areas follow.

### 5.2.1 *Discussion of implications pertaining to Key Partners*

Partnership with infrastructure providers agrees with the literature, however, the model has not matured enough to include system integrators and third-party add-ons. These are still considered as separate service providers on an outsourcing basis. Third-party products are not yet integrated into the core SaaS product and as such, are not yet part of the subscription fee.

### 5.2.2 *Discussion of implications pertaining to Key Resources*

Due to the low adoption rate of SaaS, most resellers prefer to use the outsourcing model to extend their resources and capabilities. This creates problems of alignment in some cases, as the outsourcing parties may be following different models. The enhancing of the Account Management function and creation of the Service Delivery Management role seems to agree with literature; organisations are focusing more on customer relationship management, transforming from “hunters” to “farmers”.

### 5.2.3 *Discussion of implications pertaining to Key Activities*

Some signs of the intention to change business activities to align with requirements of SaaS exist, but are hampered by slow levels of adoption. Most organisations currently seem to be using this as a learning venture, not a serious strategic move. The nature of new activities being adopted by companies agrees with what has been mentioned in the literature and previous cases, but the scope is still limited

## 5.3 Changes in Value Proposition (Proposition 2)

Evidence from this research points to the existence of two main categories of SaaS solutions which offer different value propositions. The simple SaaS solutions such as small accounting packages, offer cost benefits and quick time-to-value. Most providers of SaaS have tried to further reduce costs at different points of contact by automating most transactions from sales, evaluation, training, support, invoicing and billing. The elimination of costly human interaction reduces the operational costs of delivering SaaS resulting in low total cost of ownership to customers. The more automated the processes are the cheaper it is to deliver the service per user.

On the other end of the scale, for complex SaaS solutions such as ERP or enterprise CRM, the solution cannot be deployed quickly due to the requirement for configuration and customizations. The complexity of the solution also requires human interactions at different stages of the value chain resulting in higher cost per user to deliver the service. The high customization requirement means the service cannot be deployed in full multi-tenant architecture, thus taking away the benefit of economies of scale which reduces cost per user. The only value proposition that service provides can offer in this category is the ability for customers to eliminate infrastructure costs and lT staff thus allowing them to focus on their core business.

Although most large customers worry about the security of cloud hosted solutions, the true fact is that ERPs, which are hosted in cloud environments are much more secure that most on-premise environments, as they stand to benefit from standards established in most data centres and the expertise that a data centre service provider is able to achieve.

Thus the full value proposition mentioned in literature is noticeable on the simpler, low cost SaaS solutions. As one transitions the scale towards larger more complex applications, the benefits diminish and the business model tends to look more like the on-premise option, except that it is hosted by the service provider. Most resellers who have deployed the complex SaaS solutions have tended to collaborate with large cloud service providers to reduce the risk of investing in their own infrastructure.

The difference in value proposition between the complex and simple solutions confirms the theory that not all products can and will be converted to SaaS. South African resellers who recognise this fact can avoid costly mistakes by not forcing products which do not readily lend themselves towards SaaS. This calls for South African resellers to closely consider the value proposition for each product, in the different market segments, before considering converting it to SaaS. Ignoring this may result in costly or unsuccessful transitions.

The difficulty with literature is that it assigns a blanket value proposition for all SaaS solutions. Yet in this research, it is apparent that there are different value propositions depending on the product category, customer type and market segment.

## 5.4 Changes in financial logic (Proposition 3)

The literature review mentions two main revenue streams for the SaaS business model, namely subscriptions and professional services. The findings from this research are in partial agreement with some of the trends mentioned in the literature, but there are still some substantial gaps, which can be attributed to the low maturity level of this business model in the South African market.

Most resellers mentioned the use of subscription pricing based mainly on user numbers. The complexity of determining pricing models has been identified by all participants interviewed. As they are still grappling with understanding and implementing accurate pricing for the basic model, most have not yet started to explore other value added pricing models. Such pricing models as usage based subscription, pricing for specific functions and features and multi-tiered pricing, where pricing escalates from the basic service level to premium service levels could create additional opportunities. As most resellers are not yet comfortable with the accuracy of their existing pricing calculations, they still prefer to earn most of their revenue from professional services.

Most SaaS solutions offered are still implemented in the same way as the on-premise model as resellers fear losing services revenue. This challenges literature which sees SaaS as a model which reduces time to value and the cost of adopting business applications solutions. Because of the bottleneck created in implementation (longer time frames), most resellers are not able to switch on more users to their services. As a result they are not able to reach the scale where subscription revenue alone can make the service sustainable. There are still more challenges to be overcome on the revenue model, such as revenue sharing with partners who collaborate with software resellers to co-create value, pricing for third-party add-ons such as integration connectors. These challenges slow down growth of this model thus affecting efforts to attain the scale required to make it profitable.

Revenue recognition is also an observed challenge. Most resellers interviewed pointed out that they were still accounting for revenue earned from SaaS business in the same way as that from the traditional business. None of the businesses have implemented any special metrics (measures) to monitor key performance indicators for the SaaS business. Key ratios such as Customer Life Time Value, Customer Acquisition Cost and Customer Churn Rate are not being monitored or tracked. The use of management techniques and dashboards designed for the old model may present risks for management when the SaaS model starts contributing a significant share of total revenue.

Thus while resellers have mastered the basics of charging monthly subscriptions for service a lot of effort needs to be applied to increase the ratio of subscription revenue to services in line with literature which states that subscription revenue is the life-blood of a SaaS model. As the model matures, managers should start measuring SaaS model on its own, using the correct metrics for this model.

The costs for setting up SaaS solutions are still too high for South African resellers. Results show that South Africa is still in the early phase of SaaS adoption where service providers have to invest in infrastructure to create their own solutions which can be sold to customers on a SaaS basis. This results in high set-up costs for SaaS providers. The preference for customized solutions by local customers also means the SA SaaS providers cannot implement a multi-tenant architecture (one instance of software for many customers). With this approach the cost-efficiencies associated with a multi-tenant SaaS deployment will continue to elude SA providers for now. These obstacles, together with low levels of adoption make it difficult to achieve low cost per user which would attract smaller customers to SaaS solutions. The high levels of initial capital investment make SaaS a risky business model, with low margins. The low returns are likely to worsen the adoption problems as sales staff will not feel particularly motivated to sell this model.

In summary the implications on the building blocks that make up the financial business areas are presented below:

### 5.4.1 *Discussion of implications pertaining to revenue streams*

The contribution of services revenues far outweighs the subscriptions revenue contrary to literature which proclaims subscriptions as the lifeblood of the SaaS business model. Resellers are deliberately pushing this ratio in order to benefit from service revenue to compensate for low subscription levels. This scenario is not sustainable in the long term and might result in the loss of customers to new SaaS providers, who promise low subscriptions, quick implementations and low overall total cost of ownership.

### 5.4.2 *Discussion of implications pertaining to cost structures*

The need for resellers to invest in infrastructure up front increases risk and reduces margins, which makes it difficult to grow the model. Some effort needs to be applied to educating customers to understand that SaaS can be adopted as standard without customizations. The increasing deployment of standard SaaS solutions in a multi-tenant architecture will lower the cost per user thus increasing the margins on this model.

## 5.5 Changes to Customer Interaction (Proposition 4)

Most of the implications on customer relationships, channels and segments identified in the literature review were also observed in the customers' cases in this research. Participants confirmed that their companies realised that customer service is the difference between failure (the non-renewal of subscription by customers or churn) and success (the renewal of subscriptions) and upselling of more services. This can be attributed to the fact that most software resellers had already started offering outsourcing services to their customers on the on-premise model, so already had structures and processes in place for providing good customer service.

With the onset of SaaS, this function only needed to be strengthened, as the service culture had already been established in most businesses. A significant gap between the literature and the identified practice is the absence of tools to monitor the usage of the SaaS solutions by most SaaS providers. The literature identifies information from such tools as critical to the understanding of customer usage patterns. Such knowledge could help identify future customer requirements, such as customers who use the system the most and can be considered candidates for upselling, while customers not using the system could be treated as possible defectors. Being armed with such vital knowledge could assist service providers to provide proactive services to their customers.

A major challenge identified by some participants was the need to align customer service practices between partners who collaborate to co-create value in offering a SaaS solution. An example is a software reseller that has collaborated with an infrastructure hosting provider in the delivery of a SaaS solution. In order to deliver a seamless service, the two would need to align their support practices and customer engagement procedures so the customer can only see one service provider. The observed practice is that different service providers still have arms-length relationships, even when they collaborate to provide a single service to customers. This tends to affect the overall quality of service to the customers, as no single party takes responsibility for service levels.

Another observed practice is that traditional technology partners such as hardware and operating systems and database software suppliers, are increasingly taking a back seat role. The same situation also faces software distributors, whose future seems precarious as the SaaS model takes root. As the model becomes mature, the jury is still out for other partners such as professional services firms, whose role was to provide implementation and application support services only. It would appear these organisations need to re-evaluate their roles and offer more value added services. Alternatively, they could partner with existing software sellers to become brokers for the SaaS service, earning commission for generating leads, as well as getting a share of the services business.

With subscription pricing there is less revenue to share, as well as sufficient commission to motivate sales staff and partners to sell the product. Most South African resellers prefer the direct channel, while the model is still establishing itself in the market. Some traditional downstream resellers do not find the model attractive enough to invest resources in selling it. Thus the direct channel seems to be the more preferred route to market. This is in agreement with literature, which mentions that SaaS results in more direct interaction between a service providers and customers, thus cutting out a number of intermediaries from the value chain.

As different partners seek to collaborate to co-create value, the challenge in these partnerships is to align processes, cultures and practices of organisations from different vertical industries, different business models and revenue logic to deliver a seamless service to the customer. At the moment, most of the partnerships are still arms-length supplier-customer relationships but as the model takes root, these partners are going to have to find ways of collaborating with each other to co-create business strategies and offerings to customers, including revenue sharing to everyone's satisfaction.

One of the benefits mentioned in literature is the ability for SaaS resellers to tap into the customer base of their partners and have their partners sell and market their products. There is ample evidence to show that some organisations have already started implementing such practices with significant success. One of the partners has recorded significant business coming from their partner who is a major bank pushing their SME customers to buy a SaaS accounting system as part of a loan deal. This enables the bank to access the customer's financial records and monitor their progress as part of a small business mentorship deal. The same benefits have been observed in a partnership with major cell phone network providers, where some small business customers have signed up for a SaaS solution marketed by the cell phone provider who is also the hosting partner.

In summary the implications on the building blocks that make up the customer interaction business areas are presented below.

### 5.5.1 *Discussion of implications pertaining to customer relationships*

Most resellers seem to have inherited a good customer service culture from their services outsourcing business. This infrastructure and expertise is being refined to deliver even better service in the SaaS model. The absence of systems and the tools to monitor customer usage limits capacity of feedback mechanisms which provide intelligence to enable proactive customer relationship management.

### 5.5.2 *Discussion of implications pertaining to Channels*

Partnership with non-traditional channel partners has brought customers from those channels. Closer co-operation is hampered by differences in business models, cultures, and strategies. This is an area that needs further effort as different business models converge to offer unified services to common customers.

### 5.5.3 *Discussion of implications pertaining to Customer Segments*

Contrary to literature which says SaaS adoption results in resellers assessing the smaller customers who could not afford enterprise applications, the SA examples studied offered scant evidence of smaller customers adopting complex ERPs that are currently offered on SaaS. Big customers adopting SaaS currently favour South African SaaS providers as opposed to foreign providers who host applications outside SA. Most participants targeting the enterprise market, seem to still target the same segments as their products are designed for that market segment.

## 5.6 Conclusion of discussion on the observed implications

The exploratory research, as well as literature review, has revealed the implications of adopting Software-as-Service for the business models of some South African software resellers. The results highlight some notable differences as well as similarities between the literature and the observed trends in South Africa, as recorded in the research findings. The research also highlights some commonly observed trends, as well as common challenges which must be overcome. It exposes the critical success factors required to successfully transition to Software-as-a Service.

Using the Business Model Canvas has been useful to this research, as it allowed an integrated analysis of the impact of these changes at the elementary building block level. By combining related model elements into the four main areas of a business model, a more holistic, business level view of the implications can be obtained.

South African organisations adopting SaaS products and business models are changing, but the scale of changes is clearly limited by the low level of adoption. Most participants agree that although the current footprint is still very low, the lessons learnt are valuable and will help organisations reduce risks, as they continue to grow the model in the South African market.

# CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

## 6.1 Introduction

This chapter concludes the research by answering the research question, summarising the research's contributions, as well as assessing the limitations of the study. Finally the chapter concludes with suggestions for further research.

## 6.2 Conclusions of the study

The objective of this research was to evaluate the implications of a transition to Software-as-Service for software value added resellers in South Africa. Using the Business Model Canvas framework as a theoretical lens, the impact of adoption of SaaS by software value added resellers was analysed using qualitative data collection and analysis techniques, as well as from information gathered in the literature review.

The research provides evidence that the software industry is going through a shift in how technology is being sold and delivered to end-users. The resultant business model changes the relationship between the primary software vendors, channel partners, third-party service providers and the end-user clients. Thus, adopting the Software-as-a-Service concept has implications on all the nine elements of Business Model Canvas framework. In the South African context, the scale and scope of changes required has not yet been fully realised as most companies are still in the initial phases of adoption of the SaaS business model. This can be attributed to a number of factors:

Firstly, most software resellers interviewed still operate a hybrid model with a large portion of their business still coming from the on-premise (perpetual license) software business model. A number of participants indicated that their organisations are introducing SaaS in a controlled way, being careful not to cannibalise their existing lucrative business based on the on-premise model.

Secondly, the lower subscription revenue received from SaaS is not sufficient to be shared among many different partners in the value chain. This leaves the burden of building, marketing and deploying SaaS solutions in the hands of the resellers, with little assistance from an established channel, which does not feel motivated to carry the new product. Added to this, the conservative nature of the South African market, challenges in connectivity infrastructure and the resistance to change by some resellers, who are still enjoying good margins from the old model, have all hampered efforts to make SaaS a mainstream business model in South Africa. Despite these initial setbacks, most participants agree that SaaS will definitely become the software distribution model of the future.

Based on the experiences of the different companies that participated in this research, there are major changes required as the adoption of SaaS by South African companies gathers momentum. The results show that most South African resellers have taken an initiative to build their own SaaS offerings in private cloud environments, hosted by local cloud infrastructure service providers. This is mainly in response to concerns raised by most South African customers about the legal implications of hosting data outside the country.

The decision to build their own SaaS environments may have negated some of the SaaS benefits on cost and economies of scale and hence slowed down the adoption rate in South Africa. Most SaaS solutions deployed involve complex enterprise applications such as ERP and CRM, which have traditionally been targeted at the enterprise sector. The deployment of such solutions has not seen an increase in the number of smaller businesses adopting such products in the cloud. The less complex applications, which are targeted at the smaller businesses, have recorded the most success in terms of subscription numbers. Software resellers offering such products have seen the most significant changes in their business models. Going forward, it appears the more complex enterprise products will not easily lend themselves to be deployed on SaaS, yet the smaller, simpler applications do provide a good value proposition.

There are mixed signals coming from the primary software vendors about their direction on SaaS. This has resulted in different South African resellers taking different approaches to implementing SaaS solutions. Some of the approaches include building own SaaS offerings based on the primary vendors' core product (where the primary vendor does not have a SaaS strategy). Other resellers who have opted to act as SaaS service brokers, selling the primary vendor's SaaS offering which is hosted in a public cloud. There are a number of different models in between. The impact on the business model depends on the SaaS model adopted and the extent of its adoption by customers.

The research has highlighted fundamental changes. The resellers' focus is changing from selling and supporting packaged applications to winning and retaining long-term client loyalty, through delivery of quality, reliable, cost-effective services that generate recurrent revenue. As a result of this, resellers are driven by the need to deliver efficient services, end-to-end business processes, closer co-operation not only with customers but also with other service providers who co-create the value delivered to customers. The transition to SaaS calls for a more direct relationship, with a long term orientation, between the software reseller and the customer.

Finally, the transition brings a new approach to partnership, including co-creation of value, integration of processes between different parties, as well as revenue sharing in some cases. The closer co-operation will not be realised through market organisation, but requires tight contractual agreements between the different parties to ensure the rights and responsibilities of each party are clearly defined.

This research has helped expose some of the key elements of a SaaS business model, which do not normally receive much attention. The most commonly discussed aspects of SaaS include the value proposition, channels and pricing. By using this holistic model, it has brought to the fore important but less visible parts of the SaaS business model such as key activities, customer relationships and partnerships. The changes in these domains are very important since they are at the core of how a software reseller transforms into a service provider.

The current study was limited in terms of the number and scope of software products and companies covered. The number of interviews conducted and the people interviewed was limited to those who could be accessed through the researcher's networks. The research findings showed the full implications on different elements of the business model of only those companies that participated. A deeper understanding of the implications could be obtained by considering resellers of all the major application solution vendors in South Africa such as SAP, Oracle, Microsoft, Sage, Infor and the representatives of applications targeted at the small business sector. Such measures could have improved the external validity of this research.

During this research, an interesting question arose from views raised by a number of interviewees. Most participants acknowledged that they are still using the same business structures and methods of accounting and reporting SaaS revenue as those used for the perpetual licensing (on-premise) business model. The changes and differences between the two business models as highlighted in the findings of this research show that they are fundamentally different.
Using tools meant for one business model to manage a new, emerging business model is akin to flying into a new territory with the wrong navigation instruments!

As the SaaS business model becomes main stream, there is a strong call for these resellers to understand key performance indicators and develop appropriate reporting metrics in order to appropriately manage business performance in this new model

## 6.3 Recommendations

The findings of this research contribute to the existing body of knowledge, as they highlight implications of SaaS adoption, challenges faced and critical success factors, which are not yet addressed in current research on the subject. For those in practice, the results highlight potential problems that those contemplating a transition to SaaS are likely to face. They create an awareness of potential conflicts, risks and challenges, which allows prospective adopters of SaaS to prepare accordingly. South African software resellers can use the results of this research as a blue-print on how to undertake a successful transition to SaaS. For existing practitioners who are grappling to solve challenges in their transition to SaaS, the results can provide lessons learnt, as well as provide a template that can be copied, with minor changes specific to a company's environment, instead of spending precious time re-inventing the wheel.

As the adoption of SaaS gathers momentum in the South African market more software value added resellers will find it necessary to offer this model, for various strategic reasons. Although this research has added weight to the view that SaaS is not the solution for all customers and not necessarily the best deployment approach for all applications, the adoption of SaaS is certainly on the rise. This is a result of various strategies by software vendors and demand by customers. Any South African software reseller still focussed on selling on-premise software today has only one choice - Get ready to meet the challenges of SaaS. This report will provide a starting point by providing a high-level view of the road ahead and by sharing the experiences of other players, who have travelled the road before.

## 6.4 Suggestions for further research

While this research has provided useful guidelines on how South African software resellers can prepare themselves to launch new SaaS initiatives, new questions have arisen as to whether managers in practice, have the necessary processes and management tools to effectively measure and monitor the performance of a SaaS business.

Most tools and management dashboards developed to monitor and manage a software sales business are based on the old model where managers track the number of units (licenses) sold and hours of consulting revenue generated. As SaaS becomes main stream and increasingly becomes the preferred application delivery method in the market, management needs to understand the key metrics required to manage performance of a SaaS business.

Further research is required to understand the key factors or metrics required to measure the performance of various elements of the SaaS business model.

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# APPENDIX A

**Actual Research Instrument**

**Transition to the Software-as-a-Service model in South Africa – Interview Questions**

Demographic Questionnaire – To be completed for each interviewee

| | |
|---|---|
| **Role in the organisation** | |
| **Company** | |
| **How many years have you been in the organisation?** | |
| **How many years of ICT experience do you have?** | |

**A. Open-ended questions – Interview with Subject Matter Expert on SaaS Proposed Script**

Hello, thank you for agreeing to participate in this interview. The objective of this research project is to explore the experiences of software Value Added Reseller when it decides to transition some or all of its products to the Software-as-Service (SaaS) licensing model. The focus will be on the implications to the business model of such an organisation when it transforms to being a SaaS provider. I am interviewing you as a subject matter expert on SaaS. I hope you can share your knowledge and expertise on the current global trends on SaaS as well as the state of the SaaS landscape in South Africa. I am particularly interested to know how adoption of SaaS would change the software partner ecosystem in South Africa.

With your permission, I would like to record this conversion. It is my promise that your identity as well as that of your organisation will remain confidential. The interview will take approximately 45 minutes.

Do you have any questions? Can we start the interview?

I will start by asking some background questions:

A1. Why did you take a special interest in SaaS?

A2. Can you share the current global trends on the adoption of SaaS?

A3. Who are the winners? Who are the losers?

A4. Is South Africa ready for SaaS? Why?

A5. How does SaaS change the dynamics and structure of the Software industry?

A6. Is SaaS a viable business model for software resellers?

A7. Do you foresee a time when all on-premise licensed products will disappear?

A8. What advice would you give to a software license VAR deciding to adopt SaaS?

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## B. Semi-structured Interview Guide – Interview with management of software VAR.

### Proposed Script

Hello, thank you for agreeing to participate in this interview. The objective of this research project is to explore the experiences of software Value Added Reseller such as your organisation when it decides to transition some or all of its products to the Software-as-Service (SaaS) licensing model. The focus will be on the implications to the business model of such an organisation when it transforms to being a SaaS provider. As you share your experiences we would like to understand the kind of challenges you faced as well as what changes you had to implement as an organization to accomplish this transformation. I am interviewing members of the management team of Company X, who were deeply involved in either a strategic or operational role in the transition to SaaS. With your permission, I would like to record this conversion. It is my promise that your identity as well as that of your organisation will remain confidential. The interview will take approximately 45 minutes.

Do you have any questions? Can we start the interview?

I will start by asking some background questions.

I have chosen your organisation for my case study because your organisation has adopted SaaS for some of your flagship products.

B1. Can you tell me why your organisation decided to make this decision to deliver SaaS solutions to the market?

   a. Was it a difficult decision to make?
   b. Why do you say so?

B2. What was your specific role in this project?

   a. What were the objectives of this project?
   b. What was your role expected to deliver towards the objectives of the project

B3. Do you think this project was a success?

a. How successful was it?
b. Did your organisation set success criteria at the beginning?
c. What was it?

I would now like to ask some questions about your experiences from the time the decision was made to go SaaS, during the implementation and when considered the implementation phase to be complete.

B4. Can you describe to me what preparations or planning your company did before initiating this project

a. In terms of changes to the organisational structure and staff?
b. In terms of IT infrastructure?
c. In terms of ensuring buy-in from other stakeholders (staff, customers, partners)?
d. Mobilising financing for this project?
e. Any other preparations you would like to emphasize?

B5. What new processes, procedures or operations did this transformation being?

a. How did your staff?
b. Customers?
c. Business Partners? adapt to these changes
d. What were some of the challenges, or obstacles you came across?
e. How did you and your team execute the implementation to meet project goals?
f. Based on your experiences what would you say are important factors that an organisation must address effectively in order to successfully transition to SaaS.

Now I want to ask you something that you or your team did not do but you think is important to the success of this project.

B6. What are the areas that if improved could lead to greater success of this project?

B7. What would you say is your value proposition to your customers on the products that have transitioned to SaaS?

a. How is it different from the old model?

B8. Is there any change

a. in the profile of target customers? Can you please explain?
b. In the way you distribute your products and interface with customers?
c. The nature of your relationship with your customer on SaaS? Are there any differences with the way you used to relate to customers in the old model? Why?

B9. What new resources have you had to acquire in terms of infrastructure, equipment, and staff in order to meet your obligations under SaaS? How did you go about acquiring these resources?

B10. What new competency did you discover you now required? How did you go about acquiring this competency?

B11. Where there any changes to your relationship with existing business partners? In what way?

B12. Did you have to engage any new business partners in this model? Which ones? And Why?

B13. Are you making money from your SaaS product?

B14. Describe how you are making money in this model?

B15. Would you move more of your products towards SaaS? Why?

## C: Semi-structured Interview guide – Interview with representative of customers

Hello, thank you for agreeing to participate in this interview. The objective of this research project is to understand your experiences on the service provided by XX Company since you started subscribing for use of their SaaS application. As you share your experiences we would like to understand your perceptions about XX Company's application offered on a SaaS basis. I am interviewing you as a representative of XX Company's service who has consumed services provided by this company. With your permission, I would like to record this conversion. It is my promise that your identity as well as that of your organisation will remain confidential. The interview will take approximately 30-45 minutes.

C1. How long have you been using XX's SaaS solution?

C2. Why did you decide to go SaaS?

C3. What is different using this solution under SaaS?

C4. Many people say SaaS provides a lower cost of ownership for IT than traditional model. In your experience using XX Company's service for the past X years would say this is true? Please explain?

C5. How would you describe your relationship with XX Company?

C6. What are the main benefits of using XX's software on SaaS model for your organisation?

C7. Are you happy with the service provided by XX Company?

a. What is good about it
b. What would you advise them to change?

C8. What were your main concerns before subscribing to SaaS?

a. How has XX Company addressed those concerns

C9. Would you renew your subscription when it becomes due? Why?

C10. If XX offered another SaaS service would you consider it? Why?

C11. Would you consider SaaS services from another provider? Why?

# APPENDIX B

**Consistency matrix**

**Problem statement:** To analyse the implications of Software-as-a-Service adoption on the business model of a software Value Added Reseller (VAR) in South Africa

**Note:** *No sub-problems have been stated as the researcher wants to do an exploratory study on the holistic implications of a new concept without being constrained by sub-problems. The researcher will mention key concepts that the research has to unpack in order to understand and answer the research question.*

| Sub-problems | Literature review | Propositions | Data required | Data collection | Analysis method |
|---|---|---|---|---|---|
| **Concept1**<br>Understanding the traditional license model concept vs. the SaaS license model concept. Appreciate the main differences | Chong and Carraro (2006a)<br>(Carraro & Chong, 2006b)<br>(Verio, 2010)<br>(M. A. Cusumano, 2008)<br>(Dubey & Wagle, 2007)<br>(Lechesa et al., 2012)<br>(Liao, 2010)<br>(Liao & Tao, 2008)<br>(Avangate, 2010) | N/A | Question A1<br>Question A2<br>Question A3<br>Question B1<br>Question D2 | Qualitative case study approach as primary research and literature review as secondary<br>Open-ended interview questions for subject matter expert<br>Semi-structured interview questions for Case study management employees and customer staff<br>Observation of interviewees and taking notes | Inductive Qualitative Analysis using the following techniques:<br>Thematic Content Analysis on two levels namely Descriptive Analysis and Interpretive Analysis<br>Audio recordings of interviews will be transcribed to text.<br>Manual coding will be used |
| **Concept 2**<br>Understand the concept of Business Models leading to an appreciation of Business Model Canvas Framework<br>Use of the Business Model Canvas to describe the software business | (Osterwalder, 2004)<br>(Osterwalder et al., 2005)<br>(Rajala et al., 2003)<br>(Rajala & Westerlund, 2007)<br>(Schief & Buxmann, 2012)<br>(Osterwalder & Pigneur, 2010) | N/A | Question A3<br>Question A6<br>Question A7<br>Question A8<br>Questions B1 to C1 | Qualitative case study approach as primary research and literature review as secondary<br>Open-ended interview questions for subject matter expert<br>Semi-structured interview questions for Case study management employees and customer staff<br>Observation of interviewees and taking notes | Inductive Qualitative Analysis using the following techniques:<br>Thematic Content Analysis both Descriptive and Interpretive<br>Framework Analysis (reading, transcribing, finding themes, coding, charting, mapping and interpretation<br>Audio recordings of interviews will be transcribed to text.<br>Manual coding will be used |

| **Problem statement:** To analyse the implications of Software-as-a-Service adoption on the business model of a software Value Added Reseller (VAR) in South Africa | | | | | |
|---|---|---|---|---|---|
| **Sub-problems** | **Literature review** | **Propositions** | **Data required** | **Data collection** | **Analysis method** |
| **Concept 3**<br>How does adoption of SaaS impact the business model of a Software vendor or Value Added Reseller? What are some of the experiences that a vendor or VAR has to undergo during such a transition? | (Mazhelis et al., 2013)<br>(Botteri et al., 2010)<br>(Chappell, 2012)<br>(Churakova & Mikhramova, 2010)<br>(M. A. Cusumano, 2008)<br>(D'souza et al., 2012)<br>(Gallagher, 2012)<br>(Linder & Cantrell, 2000)<br>(Osterwalder et al., 2005)<br>(Rajala & Westerlund, 2007)<br>(Stuckenberg et al., 2011)<br>(Sukow & Grant, 2013) | NA | Question A5<br>Question A6<br>Question A7<br>Question A8<br>Questions C1-D11<br><br>Questions E1-E11 | Qualitative case study approach as primary research and literature review as secondary<br>Open-ended interview questions for subject matter expert<br>Semi-structured interview questions for Case study management employees and customer staff<br>Observation of interviewees and taking notes | Inductive Qualitative Analysis using the following techniques:<br>Thematic Content Analysis both Descriptive and Interpretive<br>Framework Analysis (reading, transcribing, finding themes, coding, charting, mapping and interpretation.<br>Audio recordings of interviews will be transcribed to text.<br>Manual coding will be used |