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User- producer interaction in the Rea Vaya Bus Rapid Transit System in Johannesburg

Khumo Idah Sello

A research report submitted to the Wits Business School in the University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies

Johannesburg, 2017

Abstract

This study investigates the innovation dynamics of the Rea Vaya Bus Rapid Transit (BRT) system using the concept of user-producer interaction in the innovation system, with a focus on user feedback to the producer of innovation. Using a constructivist world view and a qualitative approach of inquiry the purpose of this study was to investigate the extent at which user feedback is currently being utilised as a tool to enhance public sector innovation within a metropolitan city such as the City of Johannesburg (CoJ) Metropolitan Municipality. The Rea Vaya BRT System was the focus of the case study research design methodology and was adopted with objective of seeking to understand the processes adopted by CoJ in the utilisation of user feedback in public sector innovation. The study further sought to understand how a public institution such as CoJ utilises user feedback to improve innovation.

Sampling and data collection procedures occurred through a spatial scale that spans from the bus depot in Dobsonville Soweto (South) towards Johannesburg town (East) which signifies a single trip on the Rea Vaya BRT system bus (C1 route). The data Collection tools included interviews with stakeholders, observation and document analysis to unpack the drivers and barriers that impede the utilisation of user feedback for public sector innovation. The sample selection for the study informants depended on access to official and relevant participants in the CoJ's road and transport department and the Rea Vaya BRT System Bus Operating Company (BOC). User feedback is recognized and collected by the CoJ's road and transport department according to the participants of the study. However, it is not structured and documented because there are no formal processes put in place to collect user feedback and explain how each process work. There is no secondary data on how user feedback is implemented in the Rea Vaya system. The researcher, however, put together a user feedback loop using primary data to understand user feedback processes in the Rea Vaya BRT system. It was from the user feedback loop that the possible barriers were identified to why the user feedback is not fully implemented and does not lead to improving and enabling effective public sector innovation. The possible barriers include: A lack of a user feedback mechanism report; an absence of user feedback plan; an absence of a user feedback implementation; an absence of a user feedback monitoring and evaluation system; competing interests

between the politicians and administrators; user demands that the CoJ road and transport department cannot meet; lack of innovation incentives from the municipality for users; municipal bureaucracy process; lack of relationship between users and the municipality; capacity to deliver and implement user feedback; and negative attitude of municipal officials.

This research has come to the understanding that for innovation to succeed in the city there is a need to change institutional frameworks that allows for the diverse collection of user feedback, that allows for the transparent dissemination of user feedback within the various stakeholders of the CoJ and the department of roads and transport and which allows for the efficient use of state resources that will assist in further unpacking and re-evaluating user feedback.

To conclude this research firmly believes that there should be an adoption of monitoring and evaluation tools into the user feedback processes that the city can utilise as a key measuring outcome-based results of public sector innovation in the metropolitan landscape. Another important finding is a lack of a monitoring and evaluation report that can be used to monitor how user feedback is used and how it can contribute to effective public-sector innovation.

Key words

Public sector innovation

User feedback

Barriers and drivers

Rea Vaya Bus Rapid Transit system

Municipal department

Bus Operation Company and Public institution.

Declaration

I, _____, declare that this dissertation is my own unaided work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

Signature: ……..

On this …… day of ……20 ……..

Name

Dedication

I would like to dedicate this report to my family, my partner and friends, thank you so much for the support throughout the journey. It was not easy however through your words of encouragement and prayers I made it. I will forever be grateful.

GOD BLESS YOU!

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List of abbreviations and acronyms

BRT: Bus Rapid Transit

COJ: City of Johannesburg

BOC: Bus Operation Company

M&E: Monitoring and evaluation

GPS: Global Positioning System

CCTV: closed-circuit television

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Chapter 1: Background to the study

1.1 Introduction

This research report examines the extent to which user feedback is used to stimulate innovation within the public sector. In this chapter, a brief overview of the study, problem statement, aims and objectives of the study and significance of the study are presented. In addition, a brief insight on innovation within the public sector, snapshot of the study areas and brief description of the methodology are also presented in this chapter.

1.2 Context of the study

According the SoCR 2016 African cities are inefficient due to the apartheid legacy, which left most of the urban dwellers living in the periphery in cities with less access to affordable public transport (SACN 2016).As a result the poor urban dwellers continue to spend more time and money trying to access job opportunities. According to (Mtizi 2017), Majority of the urban population is poor and socially excluded. (Mtizi 2017) further alludes to the provision of a safe, accessible and affordable public transport for socio-economic advancement of the South African dwellers, as a solution to correcting social exclusion. Therefore public transport according to (Walters 2013) in South Africa has an important role to play in enhancing urban mobility given the unexpected population growth in urban areas and inequalities.

The public sector in South Africa, as documented by (Nel and Binns 2003) is responsible for catering to the needs of the people by providing basic social and economic amenities, as well as infrastructures such as houses, electricity, portable water supply and reliable means of public transportation at subsidized rates. To achieve this, however, the public sector is expected to work together with citizens in finding efficient and sustainable ways to meet their social, economic and material needs, which could improve the overall quality of life of the South African citizens (Nel and Binns 2003).

1.3 Problem statement

The role of innovation in the public sector as stated by (Moore 1995) has a different context and purpose as opposed to innovation in the private sector. Public sector innovation may be defined as reinvention today but may be defined as adaption tomorrow. While the definition of innovation is dependent on spatio-temporal scale, it also highly

dependent on the social structures that underpin any society over time. Innovation in the public sector is driven primarily to achieve widespread improvements in governance and service performance, including efficiencies, in order to increase public value (Moore 1995). Innovation in the public sector should thus focuses on achieving inclusive development as a response to alleviate the inequalities brought upon marginalised societies by the apartheid legacy.

User feedback serves as an important role in achieving inclusive development in the context of public sector innovation. User knowledge can be harnessed to provide insights and ideas that prompt more effective service responses and add value to service delivery. However, the mechanisms for harnessing user feedback, as Simmons and Brennan 2017 argue, are often not fully understood and their potential are often underdeveloped. Therefore, this study seeks to address this crucial gap by attempting to understand the processes through which user feedback might enable effective public-sector innovation.

This study was carried out in the City of Johannesburg metropolitan municipality. Looking closely at the CoJ's road and transport department to analyse public sector innovation. The CoJ municipality's Bus Rapid Transit System Rea Vaya was used as a case study.

Against this background, this study was guided by the following research questions:

- What processes are necessary or important for user feedback to be recognized and collected?
- How does a public institution utilise user feedback to improve and enable the innovation?
- What are the drivers and barriers to the utilisation of user feedback for public sector innovation?

1.4. Aims and objectives

This study investigates the innovation dynamics of the BRT using the concept of user-producer interaction in the innovation system, with a focus on user feedback to the producer of innovation. The aim of the study was to understand how public institutions, using the Rea Vaya system as a case in point, utilise user feedback to improve and

implement effective and efficient innovation systems within the public sector. The specific objectives of the study were:

- To understand the processes that are crucial for the utilisation of user feedback in the public sector
- To understand how a public institution, utilise user feedback to improve and facilitate innovation.
- To unpack the drivers and barriers that impedes the utilisation of user feedback for public sector innovation.

1.5. Significance of the study

This study will contribute to body of work that focuses on:

- The utilization of user feedback in improving or enabling effective public-sector innovation;
- The processes that are necessary for user feedback to contribute to effective public sector innovation; and
- Drivers and barriers to the utilization of user feedback to effective public-sector innovation.

1.6. Proposition

- User feedback plays a key role in improving effective public-sector innovation;
- International literature experiences can assist in understanding the drivers and barriers of user feedback in public sector innovation in South Africa.

1.7. Some theoretical perspectives on inclusive development and innovation

Inclusive development is a process of structural change which gives voice and power to the concerns and aspirations of otherwise excluded groups. It redistributes, for example, the incomes generated in both the formal and informal sectors in favour of these groups, and it allows them to shape the future of their society through meaningful interactions with key stakeholders (Johnson and Andersen 2012).

Innovation, on the other hand, is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational

method in business practices, workplace organisation or external relations" (Mortensen and Bloch 2005). The Oslo manual, according to Mortensen and Bloch 2005, identifies four types of innovation. They are:

- **Product innovation**: A good or service that is new or significantly improved. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics.
- **Process innovation**: A new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.
- **Marketing innovation**: A new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
- **Organisational innovation**: A new organisational method in business practices, workplace organisation or external relations.

For the purpose of this study, innovation will be looked at from a broad perspective and should not be restricted to an early definition of innovation by Schumpeter's (1934) as referenced in (Halvorsen, Hauknes et al. 2005), that focused on products and processes and finding a commercial application in the private sector. The focus on a broader perspective of innovation is due to the fact that the developmental context of South Africa is characterised by poverty and inequalities (SACN 2016) and therefore became essential to focus on innovations that promote inclusive development. The broad definition of innovation focuses on scope, also include social innovations (e.g. organizational, institutional and political innovations), innovations in services, and innovations in the public sector as well which is applicable to this study (Halvorsen et al. 2005) which are defined below from the Oslo's manual.

- **Collaborative innovation** is a "collaborative approach to innovation and problem solving in the public sector that relies on harnessing the resources and the creativity of external networks and communities (Bommert 2010) (including citizen networks as well as networks of non-profits and private corporations) to amplify or

enhance the innovation speed as well as the range and quality of innovation outcomes“ (Bommert 2010).

- **Social innovation** is “a novel solution to a social problem that is more effective, efficient, sustainable, or just, than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals”(Ross, Mitchell et al. 2012).
- **Inclusive innovation** is defined as “innovation that benefits the disenfranchised, is a process as well as a performance outcome” (George, McGahan et al. 2012).

1.8. Study site and methodology

This research was conducted in the City of Johannesburg’s Road and Transport Department located in the Johannesburg Central Business District. In addition, the research was conducted at the Rea Vaya BRT system Bus Operation Company (BOC) located at the Rea Vaya BRT system depot in Dobsonville Soweto. The City of Johannesburg’s Road and Transport department was chosen because of the department’s responsibility for managing all the stakeholders and departments involved in the Rea Vaya BRT system. The BOC is one of many stakeholders involved in the Rea Vaya BRT system and is chosen because of company’s responsibility for the managing the bus operation (bus service).

A qualitative research method was used to collect data in this study. A Qualitative research method was used to get findings based on the views of the participant in this study. The case study method allowed the study to use multiple sources to answer the research question. Multiple sources (interview participants) include government officials in the City of Johannesburg’s Road and Transport Department and the BOC representatives that are exposed to any feedback received from the users of the systems. Data was collected using interviews, analysing documents, observing and listening to audio material.

1.9. Outline and structure of the research report

This research report comprises of six chapters including this introductory chapter. Chapter two unpacked the literature on inclusive development and innovation and set the

theoretical and conceptual foundations of user's voice in innovation. It also conceptualizes the structural process that occurs within the public sector with regards to collecting and recording user feedback data in the Reya Vaya BRT transport system. Chapter three focuses on the research strategy and methodology. The chapter defines qualitative research method and why it was the preferred method for the study. Also, this chapter explains why the case study method was chosen as the research design for the study.

Chapter four presents the findings from the fieldwork. Chapter five discusses the research findings. Specifically, it highlights the drivers and barriers of using user feedback to improve public sector innovations using the Rea Vaya BRT system as a case study. Chapter five presents conclusions and provides possible recommendations that can aid policy makers to effectively understand the immense role that user feedback can play in facilitating public sector innovations, in the context of South Africa.

Chapter 2: Literature review

2.1. Introduction

To get an avid understanding of the roadblocks that impede the utilisation of user feedback in public sector innovation, a robust review of existing literature was conducted. This was conducted with a view to identify crucial gaps in the literature, which this study sought to address. Against this background, the first section of this chapter provided a more detailed narrative of innovation systems. The second section aimed at highlighting innovations under the current social-economic climate in South Africa. In addition, this chapter also paid delicate attention to the Rea Vaya BRT system, which is the core focus of public sector innovation in this study. The overall aim was to position how the BRT is managed in the CoJ and to understand the various mechanisms that have facilitated the processes of how user feedbacks are generated and utilized to improve the innovation systems in the Rea Vaya BRT system. This led to the identification of theoretical gaps, which this study aims to address below/in the latter chapters/through the theoretical framework model presented in this chapter.

2.2. Innovation systems

According (Heeks, Amalia et al. 2013), Innovation and innovation systems in developing countries are mostly done by large organisations that often focus on exporting markets or goods for high income consumers. These types of innovations systems are often associated with inequality and have little benefit for low income groups which constitute a majority role in developing countries.

The inclusion of all relevant stakeholders in the development of a desired country will most likely result in an inclusive development. According to (Johnson and Andersen 2012) Inclusive development is a “process of structural change which gives voice and power to the concerns and aspirations of otherwise excluded groups. It redistributes the incomes generated in both the formal and informal sectors in favour of these groups, and it allows them to shape the future of society in interaction with other stakeholder groups”. Contemporary urban development in South Africa, seeks to be inclusive by refraining from committing the atrocities of exclusion and inequalities, which was the trademark of the apartheid government. (Ncube, Shimeles et al. 2013) emphasise this point by stating that

that the legacy of apartheid left South Africa with the challenge of constructing a democratic, inclusive and stable society. In the innovation literature, inclusion of all stakeholders in development is what some authors are advocating for see (Utz and Dahlman 2007, Ncube, Shimeles et al. 2013, Heeks, Foster et al. 2014). The advocacy for development is understood through Inclusive Innovation, which is increasingly gaining importance in the policy, practice and academia. Inclusive innovation is concerned with goods and services that are developed for people who have been excluded from the development particularly the majority of the developing countries (Heeks, Amalia et al. 2013). Inclusive innovation according to (Adesida, Karuri-Sebina et al. 2016) focuses more broadly on diffuse interpretation of innovation which include endogenous and low end innovation as being equally critical to economic growth and human development.

Innovation processes have evolved over time to include the engagement of the marginalized communities, thus challenging the linear process of innovation. The Linear model of innovation, as (Padilla-Perez, Vang et al. 2009) explained, starts with basic research followed by applied research and development, and ends with production and diffusion. The drawback with the linear model, however, is that it provides a narrow perspective to innovation by equating innovation to science and technology (Padilla-Perez, Vang et al. 2009).

According to (Adesida, Karuri-Sebina et al. 2016) an innovation system 'is a network of institutions in the public and private sectors whose activities and interactions initiate, import, and diffuse technologies'. Innovation system provides a broader perspective to innovation process and focuses on interactive learning and competence building at different levels. As argued by (Fagerberg, Martin et al. 2013) the broader perspective of innovation puts emphasises on the relevance and importance of the whole innovation ecosystem in innovation. It is acknowledged that a complete spectrum of any innovation system should include multiple stakeholders such as private, government, public, service organizations, tertiary institutions and civil society, to mention few.

Innovation systems acknowledge that feasible and sustainable solutions to any particular issue can be proposed by any stakeholder in the system, which is why huge emphasis is put on stakeholder engagement (Wayne Gould 2012). The systematic perspective

asserts that knowledge, skills, and resources, which are necessary for innovation, tend to be widely distributed across a plethora of organisations (both public and private), and the ability to identify, access, and use these organisations is crucial for innovation. Firms have realized that knowledge, skills, and resources transcend the boundaries of firms. In fact, it is acknowledged that knowledge, skills and resources can be effectively harnessed from both public sector organizations such as universities, research institutes, and other agencies as well as those on the grassroots (Fagerberg, Martin et al. 2013).Thus, the interactions between firms and the aforementioned public sector organisations, including those on the grassroots may be important for innovation (Fagerberg, Martin et al. 2013). In order to achieve the desired results in innovation, however, (Sørensen and Torfing 2011) argue that the process of engaging with all relevant stakeholders must be conducted from the infancy stage of the innovation process up until the project is completed.

2.3. South Africa's socio-economic reality

South Africa's socio-economic reality is characterized by population growth combined with severe inequalities, job losses and economic downfall affecting both the rich and the poor. According to the State of South African Cities Report (SACN 2016), many people residing in cities are excluded from having their voices heard in issues pertaining to their welfare and have limited access to opportunities. More people are moving into cities and therefore making opportunities to formal employment scarcer and as a result there is an increase in poverty, unemployment, overcrowding and social tension (SACN 2016).

There is a unanimous agreement across the literature on the unstable and precarious nature of the South African economy. It is argued that one of the ways to effectively tackle the economic setback currently in the country is through a governance system that will not segregate any public spheres and sectors (SACN 2016). (Adesida, Karuri-Sebina et al. 2016) make a point that the real time implementation of inclusive innovation looks at low end innovation as being highly significant in the socio-economic development of cities. In addition, work has been presented about public sector innovation in other countries such as India, South America and Asia (Venter 2013) which are countries that have the same socio economic characteristics of South Africa and the key theme that is

coming out is that the South African public sector should involve other stakeholder in the development of the country (SACN 2016).The stakeholders that can be identified are the private sector, civil society and knowledge institutions.

2.4. Public sector innovation

The Innovation system is embedded in specific social, political, and economic relationship and it is largely influenced by an institutional context.

The changing nature of global processes, social, economic, political changes, diffusion of information technology requires new ways of managing practices and capacities of government officials, new ways of governing to mobilize resources, and improve individual and organizational responsibilities. Thus, it is important to understand how to improve public sector governance and management to facilitate innovation in the public sector. Innovation requires new management systems by public sector government. New public governance systems are created because of a shift from the traditional public governance stereotypes and value systems, to encourage an interaction between governance institutions and users. New public sector governance becomes innovative policy mechanisms and development of innovation ideas focusing on different types of innovations (Godenhjelm and Johanson 2016).

Some scholars have attempted to distinguish between the different typologies of innovation. (Woodman, Sawyer et al. 1993) for example, differentiated between technical and administrative (‘organizational’) systems of innovations. Distinctions between product, service and process innovations have also been made by (Wolfe 1994). In addition, market innovations (Bessant and Bessant 2003) and strategic innovations (Moore 2005) have also been proposed as other types of innovations. In order words, innovation, either in the public or private sector, will fall under one of the following classifications of innovations:

- Product innovation focus on new products;
- Service innovation focus on new ways in which services are provided to users;
- Process innovation new ways in which organizational processes are designed;
- Position innovation focus on new contexts or users;

- Strategic innovation focus on new goals or purposes of the organization;
- Governance innovation focus on new forms of citizen engagement, and democratic institutions; and
- Rhetorical innovation focus on new language and new concepts (Moore 2005).

2.4.1 Innovation in municipalities in South Africa

South African Local Government Association (SALGA) publication on municipal innovations highlight that the power of collaboration often becomes a success for municipal innovation. This was clear at the Guangzhou international award. The Guangzhou international award for urban innovation is argued to stand out above the rest in understanding innovation at a municipal scale. The award sees innovation as a vehicle for social and political change (SALGA 2017).

A lesson learned from the Guangzhou international award as alluded by SALGA 2017 is that, often local government struggle to meet necessities such as transport, housing and ensuring availability of jobs and collaboration between the public sector and communities bring about social cohesion through joint participation, which benefits communities.

The award gave municipalities an opportunity to showcase how they were responding to service delivery challenges. For the 2016 awards, despite only five cities being shortlisted, immense value can be drawn from taking a look at the shortlisted candidates whose ideas stood and have since been adopted and implemented by the cities (Peirce 2016). The innovations from the five cities were successful because of the following reasons:

Innovation had social impact through encouraging citizen participation which was the strongest theme for cutting through the Guangzhou international awards.

The second benefit is working towards job creation. One of the most pressing issues facing governments and municipalities. Municipalities need to think further than infrastructure development and financial investment into its systems.

The third reason is addressing gender equality, women as majority of public transport users in the city, have little say in the running of a service that directly affects impacts upon them.

2.5. The BRT system in cities - Rea Vaya

The concept of public transport in developing countries, as (Wright 2002) explains, is a state of discomfort for most users as it implies a time consuming, uncomfortable and risky mode of transport. Although the use of public transport is economically favoured, it is losing user engagement especially as developing countries are getting more development; the majority of the population gravitate towards buying their own vehicles as a mode of transport (Wright 2002).

The BRT is an example of public sector innovation and has been implemented in many cities throughout Latin and North America, Southeast Asia, China, Australia, and now increasingly in Africa and India (Deng and Nelson 2011). Wright defines BRT as a bus-based system that operates on a macro-scale to deliver fast, comfortable and cost-effective mobility for citizens. BRT is thought to occupy a niche that is defined as the “best of both worlds” by (Cervero 2013) – it offers speed of the train system and the flexibility of local buses. Deng and Nelson argue that the BRT system has potential for economic, social and environmental development. In the context of South Africa, however, there is a dearth of effective impact analysis, to my knowledge, to ascertain whether user feedback have facilitated or contributed immensely to BRT innovations in fast developing cities like Johannesburg. This study aims to fill the void.

2.5.1 Rea Vaya BRT system

The public transport system in South Africa faces challenges such as road fragmentation due to the legacy of apartheid and this causes problems within the public transport industry (Venter 2013). In response to the state of the public transport industry, the City of Johannesburg metropolitan municipality developed the first BRT system in the country, called the Rea Vaya, which was introduced in 2009 (Venter 2013).

Key Characteristics of the Rea Vaya BRT system, as outlined by (Vaz and Venter 2012), include:

- User friendly;
- Enhanced Transport affectivity;
- Cheaper mode of transport for users;
- Well integrated to over urban economy;

- Promotes Socio-economic Opportunity for users; and
- Geared towards the formalisation of the informal public transport system.

The Rea Vaya system proposes short, medium and long term benefits for the city when taking into cognizance the social, economic and environmental development, and provides a good example of why many African cities should adopt this system (White 2005). (Vaz and Venter 2012) goes on to add that although this system is aesthetically appealing and enhances competition, the issue of informality is a challenge that transcends through the socio-economic demography of the country and puts constraints on financial and human capital. White (2005), however, points out that political will is the most influential and apparent challenge stemming a direct resistance to change from different political interest.

The general consensus with regards to the BRT system is that for the sustainable development of this system to be attained there is a need for the implementation of monitoring processes that are people focused and span from a bottom up approach(Venter 2013). User feedback is the most important measure of BRT success; it helps to identify the strengths and weaknesses of the system that are essential for the proper corrective phase of the project (White, 2005). The scholars identified above have contributed to this literature review and have outlined the importance of an evaluation strategy that should be implemented within the BRT system. This research has identified one of the gaps found within the literature to be a lack of Monitoring and Evaluation (M&E) strategy implementation, more so an ambiguity of the implementation of user feedback generating systems.

2.5.2. The management of the user feedback system throughout the Rea Vaya BRT innovation process and platforms that are used to collect user feedback

The Rea Vaya BRT system is managed by the CoJ's Department of road and transport and the Bus Operation Company (BOC). This part will provide details of the division of roles and responsibilities between CoJ's Department of road and transport and the Rea Vaya BOC in managing the Rea Vaya BRT transport system. The interest of this chapter in the management of the Rea Vaya BRT system is how CoJ road and transport

department collects user feedback throughout the Rea Vaya BRT system innovation process and the platforms used to collect user feedback.

2.5.2.1. The management of the Rea Vaya BRT system

The Rea Vaya BRT system consists of an institutional structure showing all the stakeholders involved in the system which includes city wide technical team, political team, external advisory team and the location of the Rea Vaya team within the institutional structure as outlined by the red box on figure 2.1 below. Figure 2.1 contributes to the understanding of the location of the CoJ road and transport department as the overall manager of the Rea Vaya BRT system (Allen 2013).

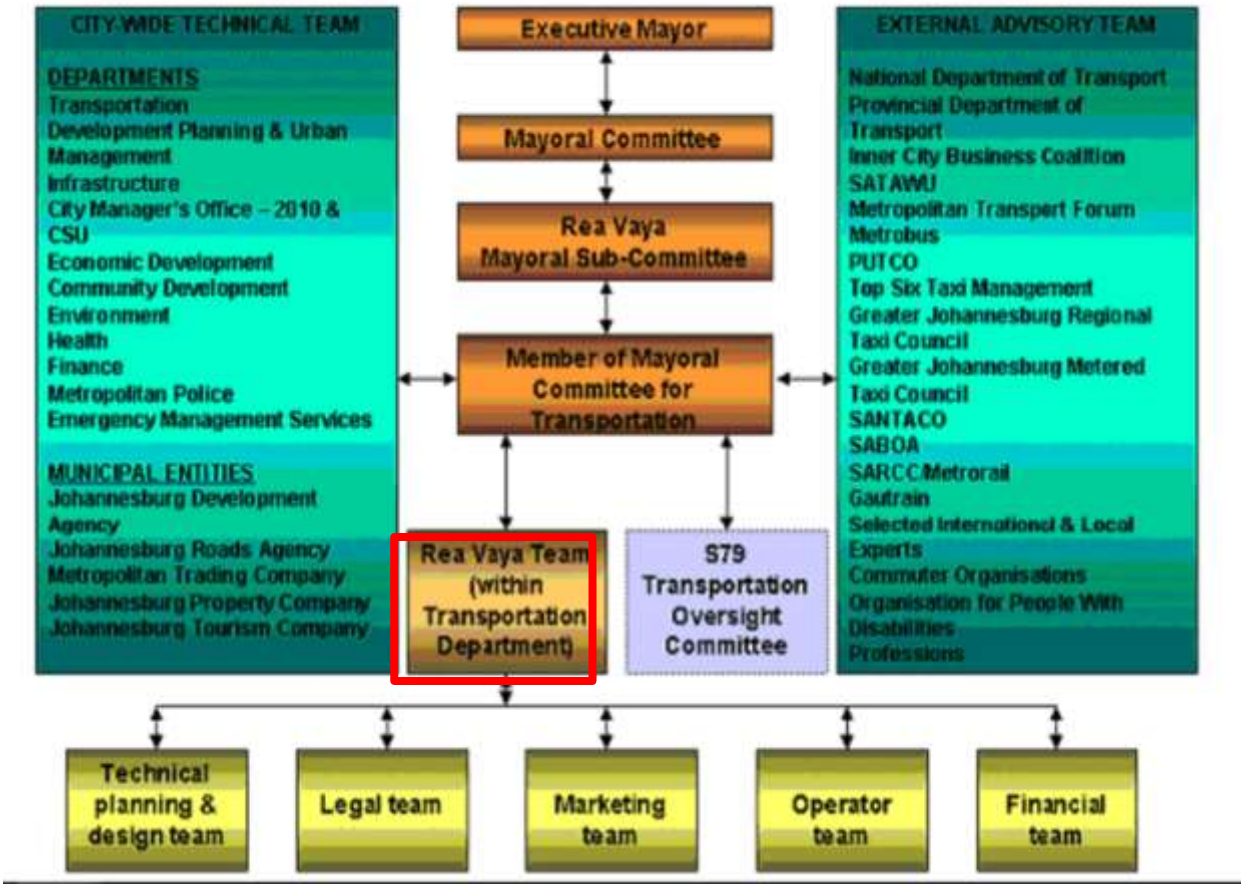


Figure 2.1: City of Johannesburg Rea Vaya institutional structure (Allen 2013)

The management of the Rea Vaya BRT system is done by two organizations namely, the CoJ's transport department and the BOC. The CoJ's transport department owns the buses and the bus system infrastructure with the intention of handing over the buses to the BOC after 5 years post implementation. The BOC is responsible for protecting the interests of the shareholders (nine taxi association which is owned by over 300 people) of the bus system by being part of the planning, negotiating and implementation phases together with the CoJ's road and infrastructure department. Each station is equipped with three security guards, two cleaners, one cashier, one station ambassador and two volunteers (Transport 2009).

The staff employment breakdown is represented by table 2.1 below and can be used as an indication of the number of people responsible for receiving user feedback in the Rea Vaya BRT system. Table 2.1 below is a staff breakdown in the management of the Rea Vaya system between the CoJ's road and transport department and BOC (CoJ 2011).

Table 2.1: Rea Vaya system staff breakdown (CoJ 2011)

BOC	City of Johannesburg road and transport department
Drivers	Ambassadors
Other staff	Cashiers
	Cleaning staff(contracted)
	Security staff(contracted)
	Head office staff
	Rea Vaya Business Unit

2.5.2.2. The role and responsibility of the CoJ's road and transport department in the management of the Rea Vaya BRT system

- Implementing technological products that will assist in the running of the system such as the fare system, GPS for the buses, customer, messaging systems inside the stations and buses, CCTV cameras (SACN 2008).
- Setting the fare prices (Johannesburg 2010).
- Managing the control centre with the CCTV cameras in all the stations and buses and use the information to communicate with staff and drivers (Allen 2013).
- Selecting the bus design and specification (SACN 2008).
- Managing the implementation and regulations of the Rea Vaya BRT system (McCaul and Ntuli 2011, Allen 2013).
- Conducting a scoping study and visiting countries that have implemented the BRT system as part of the study tour such as to Bogotá, Columbia and Guayaquil, Ecuador (Allen 2013).
- Managing the local artist that were responsible for the design and implementation of the Rea Vaya BRT system art (Allen 2013).
- Mobilization of grants and investment to develop the Rea Vaya BRT system (Witting and Wegner 2016).
- Station management (Johannesburg 2010).
- Provision of Johannesburg Metropolitan Police Department (JMPD) for providing law enforcement the Rea Vaya BRT lanes from being used by other motorists and other bus operators (Transport 2009).
- Fare management of the smart card system and the ticketing service (Johannesburg 2010). "The card system has been a complete nightmare, we wanted to use a different system. However, the MMC at that time said we must be unique in the world and be the first in the world to use the bank best card but now most countries have it" (Respondent 7, January 23, 2018).
- Commercial risk of the Rea Vaya BRT system regardless of whether the system makes profit or not (Venter 2013).
- Staff training and development in addition, making sure that there is human capacity for the running of the Rea Vaya BRT system (Venter 2013).

- Provide the employees with customer care service training (CoJ 2011).
- Information sharing city events such as the transport month, public transport summit used to share public transport information and solicit user feedback (CoJ 2009).
- Public transport stakeholder forum is a platform used by the city to improve the CoJ's responsiveness to feedback that come from user forums and members of the public (CoJ 2009).

2.5.2.3. The role of the BOC in the management of the Rea Vaya BRT system

- Employing bus drivers (Johannesburg 2010).
- Operation of the bus service with the bus schedules that are provided by the CoJ road and transport (Johannesburg 2010).
- Training drivers to ensure that the drivers are reliable effective (Venter 2013).
- Servicing buses to make sure that the buses are road worthy (Letsamaiso 2016).

2.6. User feedback collection platforms in the Rea Vaya BRT system

The Rea Vaya BRT system uses different platforms to collect user feedback. The use of the different mechanisms used to collect user feedback are inspired by the CoJ initiative to try reach and make all the users proactive when using the city's roads. Most importantly users are involved in the BRT system because of CoJ's road and transport department's values of accountability, co-operation, respect and Ubuntu (CoJ 2018). This section of the report will focus on the mechanism that the CoJ road and transport department and uses to get user feedback. The following mechanisms are use by CoJ to collect user feedback.

- Scoping study (Allen 2013).
- Social media platforms (CoJ 2012). According to Nomalizo Xabana (2012), "Rea Vaya's senior marketing and public liaison officer, social media were great platforms for sharing and creating awareness among users. Social media allow business to interact directly with customers daily on a more personal level. They enable businesses to engage with their customers, to promote, to ask for feedback, reply to problems and challenge them, she said" (CoJ 2012). The road and transport department received user concerns and feedback through twitter and

facebook. In Adition," said Xabana. Social media are internet-based applications that allow users to create and exchange information. Included are web-based and mobile-based technologies that are used to turn communication into interactive dialogue among organizations, communities and individuals" (CoJ 2012).The department also uses social media for updating users on the bus service (CoJ 2011).

- Suggestion box was introduced by the CoJ an effort to strengthen communication with the Rea Vaya BRT users, collect user complains and compliments (CoJ 2011).
- Rea Vaya BRT system has a mobisite, a platform that allows the city to share information with users via a cell phone internet access (CoJ 2011).
- The Rea Vaya SMS line is also available for passengers to text feedback messages to the city (CoJ 2011).
- The last two user feedback method that the city uses for enquires is a Joburg Call Centre which has Rea Vaya representatives and email address that users can send emails to (CoJ 2018)
- Customer surveys are collected by the city every year to check customer satisfaction (CoJ 2009).

2.7. User- producer interaction in innovation

It is important to study user-producer interactions and relationship in innovation and this is alluded to by Lundvall in his paper named product innovation and user-producer (Lundvall 1985). The purpose of Lundvall's paper is to demonstrate the usefulness of applying a user-producer perspective to innovation. Using a range of different phenomena, the paper demonstrated the complexity of the user-producer interaction in innovation. The interactions show complexity of user needs and assist the producers of innovation in understanding the type of users the innovation will serve. The paper concluded that user-producer interaction works in different ways in different parts of the economy. Lastly, studying the mechanism in the user-producer interactions that are at work regarding innovative actions assist in understanding the innovation process.

2.8. User feedback in innovation

Hoggett's (2003) assessment suggests that, 'the public sector is primarily a site for the enactment of particular kinds of social relations rather than the delivery of goods and services'. Innovation in public services 'is usually not a physical artefact at all, but a change in the relationships between service providers and their users' (Hartley 2005).

Research shows people often have a relatively strong attachment to the public services they use, see them as important, and 'care about' them being done to a standard they find acceptable (Simmons, Birchall et al. 2012). In this way, the legitimacy of user knowledge, whether expressed individually or collectively, lies both in users' informed evaluation of their own needs and their lived experience of the use of public service goods and services (Barnes 2009; Centre for Public Scrutiny 2011;Simmons and Brennan 2016).

User voice can surface from a range of sources, and through various mechanisms (Simmons, Birchall et al. 2012). Users choose the channel for voicing their concerns based on issues in a context (Simmons et al. 2012; Simmons and Brennan 2013).

The linking nature of the leadership involved, risk management and innovations, the role of Information and Communication Technology (ICT) and social media and Support of and co-creation with end-users are important in understanding the innovation process in the public sector. End users have been observed to be involved in the social aspect of public sector innovation (Powell and Grodal 2005). However, this does not mean their voices are heard when implementing or improving public sector innovation (Powell and Grodal 2005).

According to Sørensen and Torfing (2011), users are involved in public sector innovation to gain new services ideas, to reduce cycle time or for the improvement of user relations. Users are can also be involved in the ten stages of innovation to be part of the innovation process from planning to completion. Users are also involved in the innovation continuum which Powell and Grodal (2005) described as active and passive involvement. Public sector innovation research according to Powell and Grodal, 2005 indicate that ideas, experience and insights comes from taking into consideration users voices which are often weakly institutionalized. The research further states that innovation needs to be a

process of co-creation with users. It is from this statement that authors such as Lowndes et al, (2001) and Bekkers, 2012 in Powell touch on the passive involvement of end-users, which is simply a process of conducting research from the end users through data mining methods such as surveys and the information gathered from end users is used by the public sector to develop new services or improve existing services. According to Mulgan (2009) in Powell and Grodal (2005) the second type of involvement from users is active involvement where the users are knowledge sources through their experience and their ideas can be incorporated by including them in a participation method. In summary the authors emphasize the point that users are important in public sector innovation for it to be a success. The other involvement of users includes the modes of involvement which are used to collect the user input, examples of user inclusion modes are interviews, focus groups, workshops, etc. (Sørensen and Torfing 2011).

2.8.1. Conceptual framework model

The conceptual framework in figure 2.2 was used to understand the relationship between users and producers of public sector innovation. This study looked at users and producers (public institution) of innovation in producing improved public-sector innovation. The conceptual framework in figure 2.2 shows a multidimensional system process of user feedback. The feedback loop between input and output shows the direction of public sector innovation and outlines that the Input of public sector innovation produces the output of improved Innovation due to user feedback. The throughput, which is of focal significance to this study, is focused on stakeholder engagement. The two variables studied are users and producers in public sector innovation. User feedback will be the result of the stakeholder engagement, which will ultimately inform the output of an improved public-sector innovation due to user feedback. The conceptual framework will assist in unpacking the research question of this study.

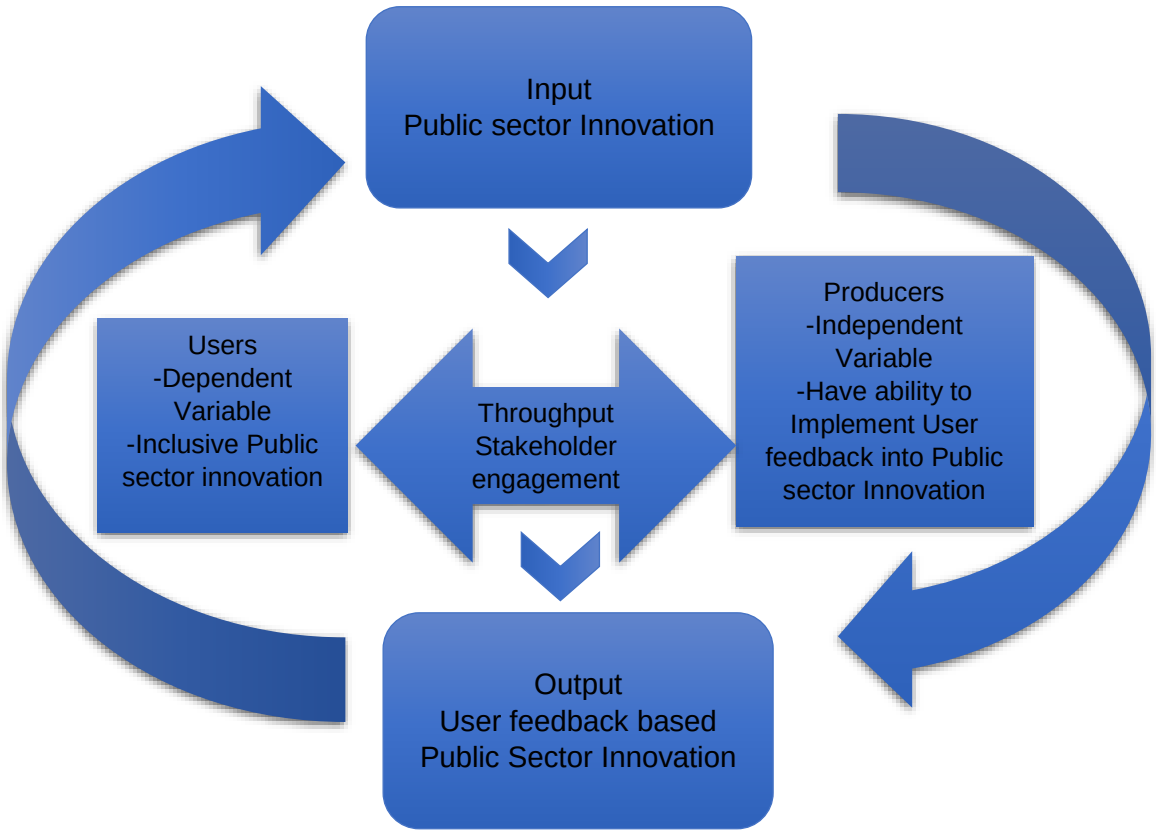


Figure 2.2: The conceptual framework model for the study

2.9. Conclusion

This section unpacked existing literature on user prodder interaction in innovation; innovation process, implementation of user feedback and the barriers to user feedback in innovation. This chapter provided information in relation to how the Rea Vaya BRT system is managed by the CoJ's department of road and transport and the BOC. It is evident from the information provided in this chapter that the CoJ transport road and transport department is responsible for managing most of the components of the system including the collection of user feedback throughout the Rea Vaya BRT system innovation process and designing the platforms used to collect user feedback. This chapter showed how CoJ road and infrastructure department collects user feedback using different platforms throughout the Rea Vaya BRT system innovation process and mentioned the platforms used to collect user feedback.

This chapter also identified crucial gaps within the literature on innovation. After unpacking the literature, the dearth of user feedback in contributing towards effective public-sector innovation, was identified as a major theoretical gap. It is important to note that International scholars have discussed the barriers and drivers of public sector innovation. However, there is scanty evidence, from a developing world perspective, on the role of the use of user feedback in facilitating effective and efficient public-sector innovation. Lastly, this research has identified the gap found within the literature to be a lack of M&E strategy implementation, more so an ambiguity of the implementation of user feedback generating systems.

Chapter 3: research methodology

3.1 Introduction

This chapter discusses the research methodology of the research report. The research methodology will clearly outline how the knowledge generated from the previous chapters will be used to further substantiate the theoretical gaps that this research aimed to fill. In other words, the research methodology used served as a guiding tool for the implementation of the research questions and testing the research propositions. The research methodology was guided by three key themes, which are research approaches, research methods and research designs. These are important because they give perspective to the research questions and objectives, and they played a significant role in determining the outcome of this research (Maxwell 2012).

This research looked at the key themes within the research that determined the outcome of this study. The methodology sought to funnel through the knowledge gaps by instilling research concepts that help narrow down the objectives of this study. That is to say, this section will move linearly from the broad conceptions of research to the narrow processes of the research methods (Maxwell 2012).

There are three key themes that will be highlighted in this chapter namely research approaches, research methods and research designs. These are important because they give perspective to the research questions and aims. To guide the researcher in this research, journey this chapter will consist of five sections that will highlight the above mentioned key themes and will further go on to discussing the role of the researcher in this study. This is what sets the qualitative methodology apart from other approaches. This research method will require an understanding of the internal public-sector complexities, realities and opinion from the multiple actors. Using multiple actors this research will unpack the complexity of the research questions and will add strength to what is already known through previous research. Lastly, this methods section will contribute greatly towards the methods body of knowledge and would allow for scholars to replicate.

3.2 Research Approach

The research approach is a plan of how the research methodology was conducted and is guided by the research design and the research paradigms. The research approach consisted mainly of two types of research methods; qualitative and quantitative research. Simply put qualitative research is words and quantitative research is numbers. The difference between these two types of research is based on the research approaches that are stated above, where qualitative would require case studies and quantitative will require experiments (Maxwell 2012). The methods applied to each research are different; qualitative would include data collection through observation, whereas quantitative would collect data on instruments (Maxwell 2012). For this research, this study placed focus on the qualitative research approach. The qualitative research method is used to guide the research question by wanting to unpack the theoretical understanding of how public institutions may use user feedback to enable or improve public sector innovation that is effective. The researcher interviewed 7 respondents, the number of participants depended on availability and the willingness to answer interview questions as per is table 3.1 below and the interview transcripts (appendix 1). All the interviewees are kept anonymous and the reason for this are provided in the participant information sheet (appendix 2) and therefore will be referred to as respondents. The interviews were semi structured and made use of an interview guide with questions for the City of Johannesburg's road and transport department and the Bus Operation Company see appendix 3.

Table 3.1. Research participants

Participant number		Company	Place interviews	Date interviewed
1		CoJ's road and transport department	Johannesburg Road Agency	10 January 2018, 14:00-14:30pm
2		Bus Operation Company	Rea Vaya bus depot, Dobsonville	17 January 2018 10:00am - 10:30 am
3		City of Johannesburg's road and transport department	Johannesburg road agency	21 January 2018 13:00pm - 13:20 pm
4		Bus Operation Company	Johannesburg road agency	23 January 2018 13:00pm - 13:30 am
5		CoJ's road and transport department	Johannesburg Road Agency	15 January 2018, 14:00pm - 14:30pm
6		City of Johannesburg's road and transport department	Johannesburg road agency	22 January 2018 10:00am - 10:20 am
7		Bus Operation Company	Rea Vaya bus depot, Dobsonville	23 January 2018 08:00pm - 08:30 am

The research paradigm is a view of the world from the lens of the researcher. There are four paradigms that are recognised within the literature namely post-positivism, Constructivism, transformative and pragmatism (Maxwell 2012). For answering the research questions, this research study employed a social constructivist paradigm. This paradigm is based on the need to understand the social realities that people face (Maxwell 2012). This then means that this paradigm is informed by the lived experiences of people and this causes the researcher to look for a broad and complex means to understand these world views rather than to narrow them down to simple categories.

The objective of using this research approach is so that the findings of this research will be based primarily on the views of the participants with regards to the topic of this research study. The questions asked to the participants were broad, to allow the participants to construct their own view of a situation. These views are dependent of the socio-economic dynamics of the area that have changed over time.

The researcher's main goal was to create an understanding of the different views that have been presented by participants and link them to a greater body of knowledge.

More importantly in this research paradigm the researcher should acknowledge and interpret how their own experiences have shaped their views and thus their approach to research analysis.

3.3 Description of Research site

Johannesburg was founded when gold was discovered in the 1880s (Beavon, 2001). The first designs of the roads and city structured where structured in to be narrow and small with the intention that the gold rush would not last for long. Undoubtedly as it stands the economy of Johannesburg took a shift from gold mining to industry focused (Bubeck et al, 2014). The socio-economic shift in the 1960's has since led to increased labour and job demands which has led to the overcrowding of the city and has given rise to the concept of informality within the economic and social space.

The role of transport in Johannesburg

Johannesburg was constructed in a way that is open and accessible to people coming into the city and has remained accessible till date (Walters). The state of the city has seen

a shift of the economy to the peripheral north and has the city decaying within it. Beavon, 2001 asks then if transportation improvements could be the innovation that the city needs to be a self-sustaining city of the Johannesburg metropolitan. Due the current state of the city as discussed in the literature review, the improvements include safe and affordable transport that is inclusive to all people.

The public transport of the City of Johannesburg is of interest, the history of the country has resulted in segregation, clear majority of the population are situated in areas far away from the city centre (jobs, hospitals, shops) (Walters 2013). The public transport innovation such as the train and taxis were introduced as subsided services to make up for the lack of access for these communities mostly situated in the South western townships of Johannesburg (Soweto).

As the city develops, providing efficient transport systems to communities has become a central focus of governments and as a response to this issue the decision makers introduced innovation concepts such as BRT systems such as Rea Vaya in Johannesburg and Mycity in Cape Town. (Bubeck et al, 2014). The focus of this research is in the BRT systems put in place in the Johannesburg Metropolitan Municipality. The Rea Vaya was implemented in 2009 and spanned from the south west of Johannesburg to the north eastern part of Johannesburg (Soweto to Ellispark) (Walters, 2013)

For this study the researcher focused on the bus route C1 (See figure below) that travels from Rea Vaya depo to Ellis park. The target population and sampling occurred within this space, as it signifies a route that many users use and is a research site that allows the researcher to participate as a user of the system so as to effectively record data both as a participant and an observer.



Figure 3.1: Ellis Park east route to Dobsonville (ReaVaya 2018)

3.4 Research Design

Researcher Robert K. Yin defines the “case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin 2013).

Case study is a research design that allows for the researcher to illustrate and tackle complex issues and is a type of research design meant to handle holistic in-depth data collection. The role that the case study plays becomes increasingly significant when it comes to social impact issues such as public-sector innovation.

The case study research design finds precedence and is more recognised and used because of the apparent limitations that the quantitative research has towards a holistic approach to engaging with real time issues that are apparent in the present day (Zainal 2007). The case study allows for a full observation and analysis of the research topic (Tellis 1997)

Yin 1984 discusses the three types of case studies namely, exploratory, descriptive and explanatory. This research focused on an exploratory case study. Exploratory case study explores occurrences within the data that is of interest to the researcher and the research asks. It seeks to broaden the research questions to allow for the flexibility of research structure to change accordingly (Zainal 2007). Case studies are advantageous in that the analyses of data are conducted using the context in which it is used, within a situation in which the activity that is being studied occurs in (Yin 1984), unlike quantitative experiments where there needs to be an isolation of the activity to focus on a few numbers of variables.

The case study sought to understand how user feedback can enable or improve the Rea Vaya BRT system as an effective public-sector innovation. The case study method allowed the study to use multiple sources to answer the research question. The multiple sources of the study included government officials in the City of Johannesburg and the Rea Vaya BRT managing company and workers in the system that are exposed to any feedback received from the users of the systems.

3.4.1 Researchers Role

The main characteristic of qualitative data is that it is an interpretive type of research. The researcher is thus having to be continuously be in contact with the participants and this introduces different issues such as ethics and bias which will in turn affect the qualitative process that the researcher did. It is significant that the researcher be able to identify these issues such as culture, bias, values, experience and gender that shaped the research process and outcome.

Drawing from my experience in interviewing city officials the assumption was that they might withhold some of the relevant information especially if it paints the municipality in a negative way because they fear for their jobs. As a solution to this problem was that all the participants remained anonymous and I advised all the participant at the beginning of the interviews not to answer questions that they don't feel comfortable to answer. As per the participant information sheet (attached as an appendices), which was used as a background to my research the participant were informed that" Your participation is voluntary, you may refuse to answer any questions that make you uncomfortable, and you may withdraw at any time without penalty or loss. You will receive no payment or other incentives for your participation" (Sello 2018).

3.4.2 Target population and Sampling procedure

The main characteristic of qualitative research was to decisively select the research site and the participants. The selection of the population and sampling procedures do not have to be large or selected randomly as it is done in qualitative research (Creswell, 2012), rather the sampling procedures must be those that will best enable the researcher to understand the research aim and research questions. It from this purposeful selection that the research sites and population sample was selected because of the roles that each sample group represents. The BOC play a role in the operation of buses, while the CoJ's department of roads and transport are the producers and decision makers of the Rea Vaya BRT system. These groups both have the means to collect, implement and manage user feedback to improve the BRT innovation system

The sample size and sample selection of the study will dependent on access to official and relevant participants. The Rea Vaya BRT system is in the City of Johannesburg

therefore all the participants of the study are in the municipal offices in Johannesburg and in the bus depot of the Rea Vaya BRT system. The research site is a span from Dobsonville bus depot to the CoJ's department of roads and transport which signifies a single trip on the Rea Vaya bus (C1 route above). It is within this span that the target population was identified and sampled. The two areas of research require different sampling frames. The bus depot is easily accessible and open to the public, while the CoJ's department of roads and transport requires access by observing protocol and setting up meetings with the relevant people.

The sampling procedure occurred in multiple stages. The multiple stage sampling procedure required that there be a clustering of the population sample into groups and then interview individuals from that stage (Creswell, 2012). This was done by first isolating the different stakeholders within the Johannesburg BRT system. The CoJ's department of road and transport and the BOC were singled out as the two clusters that will be sampled. From there the relevant people were identified through a linear procedure, were one participant would refer the researcher to the other participant and so forth. The sampling procedure at the department of roads and transport was done in a non-probabilistic manner that the respondents were chosen according to access and availability.

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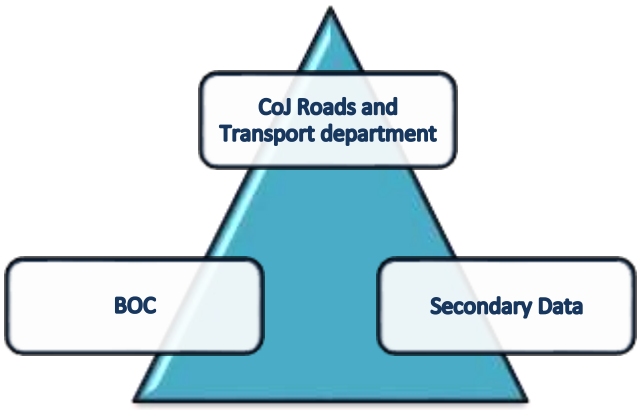


Figure 3.2: Potential interviewees for the study (Sello 2018)

The above population and sampling pyramid show the vertical acquiring of data. The triangulation of data was required to further understand the research questions of this research study.

3.5. Data Collection Tools

For a qualitative research, the data collection process is one that requires that researchers collect multiple forms of data. These include interviews, observations, focus groups, questionnaires, audio recordings and pictures to name a few. These data type all required that the researcher spend a long time in the field engaging with the natural setting of the study focus points (Lincoln and Guba 1985). For this study, the researcher undertook the following type of data collection tools; Observation, Interviews and document analysis.

Observation: Qualitative observations entail the researcher taking notes of the behavior and actions of the respondents. The researcher records the data in an informal and unstructured way that will be guided by the interview guide as attached in appendix 2. The researcher can assume the role of a participant or non-participant in the observation process. The researcher can then ask open ended questions to the participants to allow the participants to shape their responses freely.

Interviews: The interview process occurs through different mediums, they could be face to face, in focus groups or telephonic interviews. Interviews were used to understand how public institutions utilize user feedback to improve or enable effective public-sector innovations. In addition, the interview method deepened knowledge and informed the study (Rossman and Rallis 2003). These interviews were semi-structured and involved a few numbers of questions to have the participant lead the trajectory of the line of questioning freely according to their own views. The significance of open-ended questions was so that the researcher can be able to extract motivations, barriers and enablers of user feedback in public sector innovation. The interview guide is attached as an appendix at the back of the report)

Document Analysis: The qualitative research methodology also involves collecting data through qualitative documents. These documents form part of the secondary data

collection process and include policy papers, public publications, government reports and private emails or letters.

Audio Materials: These include audio recordings, the use of websites and e-materials and social media information.

3.6. Data Recording Procedure

- Ethical clearance and explanation to participant
- Use of voice recorder to record data and note taking
- Note heading (date, setting, interviewer and interviewee)
- Use Interview Guide (See appendix 2)
- Transcribing data daily
- Categorizing Data for Analysis (Interview Log)

3.7. Data Analysis

The methodology discussion consists of an analysis section because it is important that a data analysis methodology be specified according the research approach that has been implemented in the research methods. Data analysis occurs simultaneously with data collection. The intention of having a data analysis methods section is to breakdown the data collected and then bring it back together to formulate the themes that speak to what has been derived from the data collected in the field.

3.7.1. Data Analysis Steps

This research report followed the following data analysis steps:

Step 1: Collection of data (Interviews, observation, audio, document)

Step 2: Transcription of data

Step 3: Reading through the data and organizing it

Step 4: Creating a code for the data (Separating according to pattern found in data)

Step 5: Pulling out themes from the data

Step 6: Integrating the themes with regards to the research design (case study design)

Step7: Linking the themes to research questions

Step 8: Validity through triangulation of literature, secondary data and primary data

3.8 Methodological Reflections

Drawing from my experience in interviewing city officials is that they might have withheld some of the relevant information especially if it paints the municipality in a negative way because they fear for their jobs. Sometimes I would set up an interview with the municipal official and when I get the municipal offices I would not find them. This frustrated me a lot, however I would go around the municipal office to ask for another relevant person. Sometimes I would set up time with the respondent for an interview and on the day of the interview I get to their office and have a user to deal with on the phone and I would have to reschedule the interview. This made me feel sorry for myself because of the time that I have wasted due to the fact that scheduling an interview is a lengthy method and I had to wait few days before I received permission. As time went by I realised that if I ask the head of the department and manager to help me set up interview it was easier and quicker than if I do it myself. I also noted that some of the respondents got angered by some of the question raised by the research, especially people that are not decision makers due to the fact that they think they have solutions however they are not allowed to implement without management's approval.

Using a sectorial case and one municipal department to understand how user feedback can enable or improve effective public-sector innovation. Using one municipal department assisted me to better understand what really happens in governing a municipal project that has external stakeholders and other department's involvement in the Rea Vaya System. I thought that it will be easy to understand how Rea Vaya works as I thought the project is managed by the CoJ's road and transport department and the BOC only to realise that there are many other stakeholders that form part of the Rea Vaya system. Using the CoJ's road and transport department as the managers of the Rea Vaya system assisted in obtaining the relevant information because the of department's sole responsibility of receiving user feedback. The BOC does not collect user feedback however it implements user feedback related to bus operation after receiving it from CoJ's

road and transport department. BOC is a good example of one of the departments involved in the Rea Vaya system.

Most of the interviewees work for the municipality or they are contractors of the municipality and might withhold information. In addition, the information obtained from the interviews needed more validation because most of the Rea Vaya system official reports on user feedback are not open to the public and therefore I relied more on primary data. The managers of the Rea Vaya system assisted in validating the information shared by the participant with some information coming out to be inconsistent and having to ask another manager to validate for me.

Chapter 4: Data and findings

4.1. Introduction

It is evident that the CoJ's road and transport department collect user feedback on the Rea Vaya system from the start to the completion of the project and when the system is running. CoJ's Transport and Road Department has put in place a mechanism of collecting and recording user feedback. This chapter uses empirical evidence collected using the qualitative research method stated in chapter three to answer the research sub questions of utilization of user feedback in improving and enabling public sector innovation. This chapter is organized using a user feedback loop (figure 4.1) to share empirical evidence according to the following themes: 1)User Feedback mechanisms; 2)Division of user feedback; 3)CoJ's road and transport department; 4)Rea Vaya Stakeholders; 5)Workshops of User feedback; 6) Stakeholder Meeting; 7)Dissemination of information to generate department specific response; 8) Implementation; 9)Barriers; 10)Drivers; and 11)Monitoring and Evaluation.

4.2. User feedback collection process

Figure 4.1 below is the researcher's illustration of how user feedback is collected and processed within the CoJ's Road and Transport Department. The CoJ's Road and Transport Department has user feedback mechanism in place that are / is used by the department to solicit user feedback. The user feedback manifests itself as complains, suggestions and compliments. This section will use the empirical evidence collected, includingusing interviewees to understand the user feedback mechanisms that City of Johannesburg's Road and Transport Ddepartment has in place .

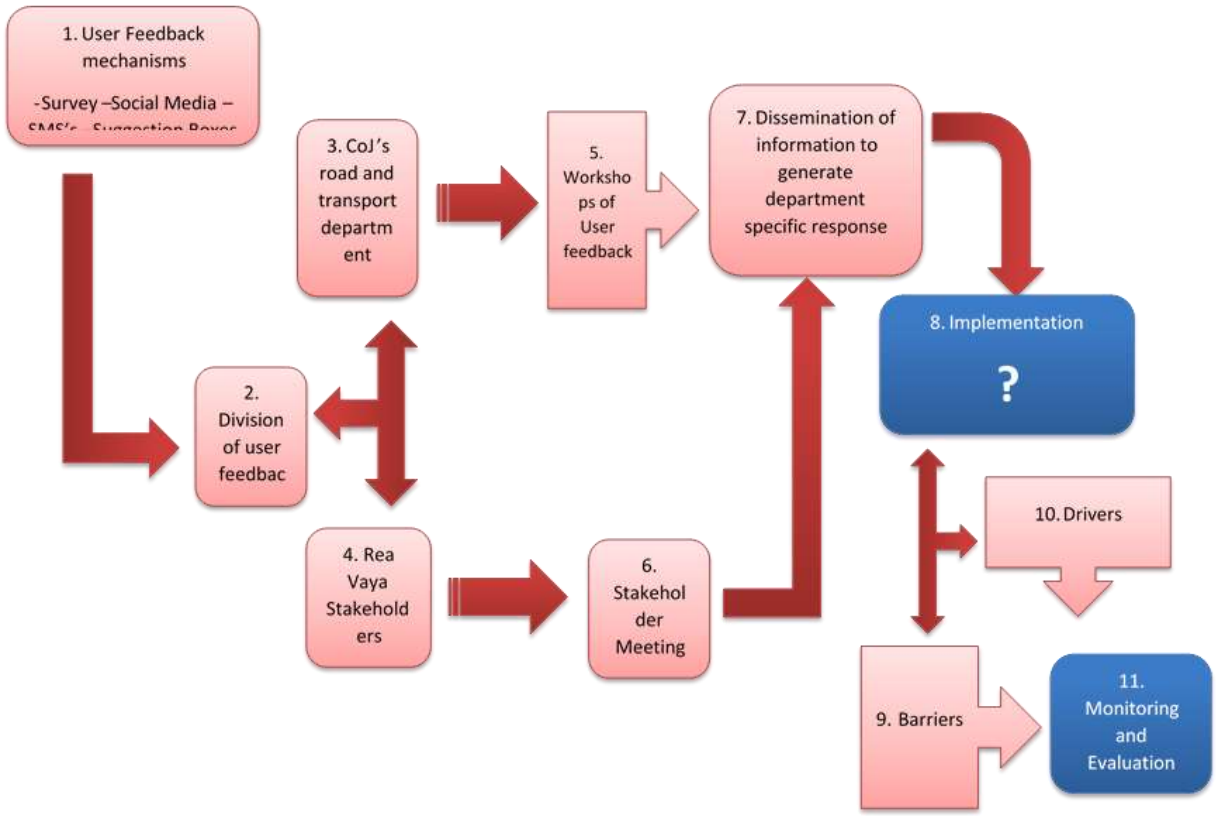


Figure 4.1: feedback loop (Sello, 2018)

4.2.1. Social Media

This is what the respondents said about social media as a user feedback mechanism:

Social media platforms such as facebook and twitter are used as one of the platforms that CoJ's Road and Transport Department use to solicit user feedback. Results from the field reveal that:

"There is facebook, twitter, SMSs and suggestion boxes as a form of communication with commuters" (Participant 6). "Social media was introduced after the implementation of the Rea Vaya system and each management company is responsible for responding to feedback related to their roles and responsibilities." "Social media was introduced after the implementation of the BRT Rea Vaya system" (Participant 6).

"The benefits of using social media in the Rea Vaya BRT system according to the interviewees is brought by the fact that communication between the user and the city can

be two way and the benefit of the user in getting real time feedback. ICT and social media are vital because it's instantaneous and an immediate communication but also allows for two-way communication. Often it is thought that communication is: city government or the operator or talking to the user. However, social media allows for two-way communication and it enables one to spot out the user problems and deal with them in real time. A hinderance in getting real time feedback is when it takes more than three days to respond to queries on their facebook page and a twitter account. Reacting to this assertion, a participant stated that; The problem is that people responding on social media are not the decision makers and so often the kind of answers they get feel like a post office" (Participant 3).

ICT and Media is vital because it's does not only is it instantaneous and immediate communication but also allows for two-way communication and often we think communication is city government or the operator or talking to the user but rather it allows for two way and enable one spot out the user problems and deal with it (Respondent 7, January 23, 2018).

Another participant pointed out that "People get real time feedback but it's pointless to have a facebook page and a twitter account and take three days to respond. The problem is that people responding on social media are not the decision makers and so often the kind of answers they get feel like a post office (Respondent 6, January 22, 2018)

It can therefore be argued that the participants are aware of the presence of social media as a user feedback mechanism even though the participants' views differ on how social media is used.

"As a user you feel involved because there is an interactive platform, in terms of social media and all that you can think of and also stations have communication platforms through a centralized place which we call the Operating Control Centre (OCC)" (Participant 4).

It is evident that social media as a user feedback mechanism is popular and was mentioned by most of the municipal officials.

4.2.2. Customer satisfaction survey

Survey as a user feedback tool has been used by the city every year to collect user feedback and to check if the users are happy either with the systems prices, and other factors affecting users. Users always have different views as far as the prices are concerned. One of the users stated that:

“One of the first survey the city did showed that the users were price sensitive, so a user will go use a taxi if it is cheaper. Majority of people using the system are professionals and students because we do a customer survey each year” (Responded 1).

Most users are students and professionals because the Rea Vaya routes are located close to two major universities in Johannesburg and around economic hubs and provincial hospitals.

“We conduct surveys to test whether our implementation process has been fully completed and if there is something that is left behind then we will definitely fill it in. So, we devise a marketing strategy, to survey our passengers, interviewing them and come up with the results. The same implementation process must be tested. How is it going to be tested? Through a market survey or customer survey. This is done by interviewing the people from different areas and come back with the results” (Responded 2).

“The city relies on customer satisfaction surveys as a method of collecting user feedback with the intention of reaching a benchmark of up to 85% participation. However, the 2007 survey was just below the benchmark percentage. Our benchmark is 85% but likely to not achieve it, we get less up to 82% but now it went down to 70%” (Respondent 1, January 10, 2018).

Inability of the CoJ in not achieving the benchmark of 85% was mentioned in the conclusion of the survey and it is because the users say they do not see implementations from the 2016 survey and hence a less participation in 2017.

“What is useful from the customer survey is that information about overcrowded buses are obtained and recommendations for extra express buses are made. When we receive the user feedback from the survey we don’t necessarily put together an innovation plan, however, we introduced the Vaya mojo app which is a passage information App. When

the planning of the system started, there was no survey asking the opinion of users in the BRT system or transport system. The world cup that was hosted in South Africa needed a good transport system to facilitate movements during this period which was also considered as a legacy because it succeeded in South America. One of the first survey the city did showed that the users were price sensitive, so a user will go use a taxi if it is cheaper. Majority of people using the system are professionals and students because we do a customer survey each year" (Responded 1).

It is evident that the CoJ relies on the customer satisfaction survey for collecting most of the user feedback and most of the municipal officials are aware of it.

4.2.3. SMSs, website, and posters and pamphlets

Most users of the BRT system use SMSs as a preferred method of communication given the lack of the CoJ's effective use of social media. However, the CoJ says the preferred method of communication is expensive for the city. Interview discussions with users show that:

"The *preferred method of communication which most people prefer is SMSs which is expensive for the city" (Respondent 1, January 10, 2018).*

It is evident that the users of the BRT system prefer SMS as a feedback mechanism as per the customer satisfaction survey presented in appendices 1 however it does not seem to be the case for CoJ and it will be interesting to understand why CoJ introduced SMS to the users if it cannot sustain and afford it.

The 2017 survey (appendix 3) showed no results for user's interest of using a website as a preferred method of communication.

Another important and preferred method of communication are posters and pamphlets which obtained 4.52%. Interview conversation with responded 2 reveal that:

"Ehh, we do have for instance our own website and where people can get in touch with us because we are the operating company. We are the people who should be contacted when something goes wrong" (Respondent 2, January 17, 2018).

From the quote above it is evident that the BOC have a website that people can use as for user feedback even though the BOC is not responsible for receiving user feedback.

4.2.4. User forum

According to the customer satisfaction survey, users of the Rea Vaya BRT system include scholars, students, users working full time and part time, house wives or retired people, and unemployment users.

This is what the respondents said about user forum as a feedback mechanism:

“One of the pre planning platforms mentioned in the interviews was a user forum which the CoJ normally has for all the city’s different transportation systems however for the Rea Vaya BRT system the user forum was not as efficient as the other transportation system and therefore was left out because (1) it was used by users for political to raise political issues. At the beginning we had a discussion on whether or not we should have a user forum because metro bus has a very active user forum but quite friendly it is used as a political forum because how do you organize users, Putco also has a user forum but people who go there have nothing to do, users are a very difficult consumer group. The city also realized that the user forum was not a full representation of all the users and therefore did not serve its objective because not all types of users were represented. Most consumer groups are very hard to be representative, most people don’t participate therefore it is very hard to get a user forum (Respondent 1, January 10, 2018).

“So, we had a session with community representatives, where we started to talk about the things you have space to influence. So, for example a three-hour debate and discussion on whether there should be toilets in Rea Vaya stations for commuters or not. The Metro bus user forum and Gauteng transport user group were representatives of users, we set up a vast consultative structure to explain what the thinking was behind the project”. ……. People voted, for their preferred buses routes. From the conceptualization of the project right through to the day of launch, there was constant interaction with user representatives (Participant 3).

“After the community representative meetings, the CoJ organize the consultation meetings with the communities and the meeting is chaired by the Member of Mayoral

committee (MMC) of the CoJ's road and transport department. "Then we do a customer / community forum and talk to the group and inform them about the Re Vaya planning and operation routes (Participant 5).

Most of the respondents were aware of the user forum as a feedback loop that was implemented during the planning phase of the Rea Vaya system and acknowledged the important role that the forum played in getting user feedback.

4.2.5. City events related to transport

This is what the respondents said about city related events as a user feedback mechanism:

"We particularly used transport month to go out listen to, engage with community members (Respondent 1, January 10, 2018).

Only one respondent mentioned city events as a user feedback mechanism and this might be because of the respondent's role and experience in the transport department.

4.2.6. Staff that manually collects user feedback

This is what the respondents said about manual collection of user feedback by staff as a user feedback mechanism:

"We need staff that can educate the people on the importance of their involvement and participation in the system to get enough feedback so that at the end of the day we don't dictate to people the service that we think is good for them (Participant 4).

This user feedback mechanism does not seem to be existing however one respondent felt that it is important to consider it to fully collect user feedback.

4.2.7. Focus groups and community workshops

This is what respondents said about focus groups and community workshops as a user feedback mechanism:

"In 2012, we revised the ITP and there were requirements from the national government that said when planning transport system, you have to have views of the users. And

eventually we had workshops and we asked people to draw pictures and we had focus groups" (Respondent 7, January 23, 2018).

Only one respondent mentioned focus groups as a user feedback mechanism and this might be due to the respondents' experience and their role in the Rea Vaya system.

4.2.8. Radio station

This is what respondents said about radio as a user feedback mechanism:

The CoJ made use of radio station to receive feedback and complains on the Rea Vaya BRT system "We use the radio station as a communication forum and receive live complaints and give feedback" (Participant 5).

Only one respondent mentioned radio station as a user feedback mechanism and it was surprising that other traditional media platform such as newspaper articles and television were not mentioned.

4.2.9. Suggestion box

This is what respondents said about suggestion box as a user feedback mechanism:

"Each Rea Vaya station is equipped with a suggestion box that is collected every week and all the feedback is consolidated in a report. Suggestion boxes are collected every week and followed up with reports. Every bus station has a suggestion box with an allocated individual in charge and filter it back to the commuter" (Respondent 5, January 15, 2018).

"Suggestion box implementation was trying to accommodate those who do not have access to cell phones etc. (Respondent 6, January 22, 2018).

You fill in your detailed complaint on paper with specifics like time and place, Due to the procedure of taking up the complaints, suggestion box feedback is after 7 or so. facebook and twitter is immediate" (Respondent 3, January 21, 2018, January 23, 2018).

"The turnaround is 72 hours for the suggestion box. We have 5000 commuters and 200 complaints approximately. Different employees are designated for different communication platform to deal with complaints. Every day we have roving stuff who collect the complaints at the station every day and the reconciling of financial documents"

(Respondent 5, January 15, 2018). And there seem to be mixed feedback on the effectiveness of the suggestion box as a method of collecting user feedback by the interviewees" (Participant 6).

Each Rea Vaya station is equipped with a suggestion box that is collected every week and all the feedback is consolidated in a report. Suggestion boxes are collected every week and followed up with reports. Every bus station has a suggestion box with an allocated individual in charge and filter it back to the commuter" (Participant 5). As it stands the suggestion box is the only user feedback method that does not require a cell phone. "Suggestion box implementation was trying to accommodate those who do not have access to cell phones etc." (Participant 6).

The suggestion box was mentioned by most of the participants even though the participants have mixed observations about the suggestion box.

4.2.10. Operation Control Centre

This is what respondents said about operation Control Centre as a user feedback mechanism:

"The Operation Control Centre (OCC) is one of the real time platforms for user feedback due to the centre's ability to see through CCTV cameras on what is happening in all the stations. As a user you feel involved because there is an interactive platform, in terms of social media and all that you can think of and also stations have communication platforms through a centralized place which we call the Operating Control Centre (OCC) (Participant 4)

"All the stations have an audio system that the users can speak to and can be seen and had in the OCC however the system is more effective if there is an ambassador at each station. There was a lot of concern in understand user perspectives, in actual fact there was meant to be an ambassador to listen to, in real time, user feedback to be a link between the station and the control centre to oversee problems at the station" (Participant 3).

"The OCC is also used for complex issues in the system by different stakeholders "If there are deeper issues we refer them to control centre" (Participant 5).

The OCC seems to be seen by the respondents as a user feedback mechanism even through communication from the OCC is one direction, from the CoJ's road and transport department to users and not vice versa.

4.3. Division of user feedback (step 2 of the feedback loop)

4.3.1. Division of user feedback (step 3 and 4 of the feedback loop)

The division of user feedback is done by the CoJ's road and transport department

This is what the respondents said about the CoJ's road and transport department:

"The city collects the information, there is a dedicated service and marketing department within the city that deals with such thing" (Participant 4).

From the quote above it is evident that inside the CoJ's road and transport department there is a department that manages user feedback.

4.3.2. Rea Vaya stakeholders (step 5 of the feedback loop)

After receiving user feedback from all the user feedback platforms, the CoJ's transport department divides the feedback according to the roles and responsibilities of the CoJ roads and transport department and other Rea Vaya stakeholders including the BOC. The road and transport departments then send information to the relevant organisation and departments.

This is what the respondents said about the Rea Vaya stakeholders:

"First Capture and analyse according to the department. Then send it off to the relevant departments" (Respondent 3, January 21, 2018, January 21, 2018).

"We get user feedback from the city of Johannesburg, especially information related to bus schedules so that we can change accordingly and give the information back to the city and they will communicate that information back to the users" (Respondent 3, January 21, 2018, January 23, 2018).

From the quotes above it is evident that there are other stakeholders and departments that are responsible for implementing user feedback.

4.4. Workshops on user feedback (step 6 of the feedback loop)

This is what the respondents said about workshops on user feedback.

“I present it to the staff meeting and we have discussion about it, I present it to my managers and then they went away to a workshop to try get solutions, but it is hard” (Respondent 7, January 23, 2018)

From the quote above it is evident that the Road and transport department conduct workshops that ensures that all the employees are sensitized on user feedback.

4.5. Stakeholder meeting (Step 7 of user feedback)

Stakeholder meetings are held regularly by all the relevant stakeholder of the Rea Vaya BRT system to resolve challenges and discuss user feedback.

This is what the respondents said about stakeholder meeting:

“I am coming from a meeting where all the role players were in one room where we were sharing all the challenges and taking decisions. Collection of user feedback was one of the agenda items discussed amount other things” (Participant 4).

From the quote above it is evident that Rea Vaya system has any stakeholders and departments responsible for the running of the system and this shows the complexity of the governance of the Rea Vaya system.

4.6. Dissemination of information to generate department specific response (Step 8 of user feedback)

Step 7 of the user feedback loop corresponds with step 5 in terms of workshops that are held with the staff to present findings on user feedback are however there is no procedure in place from the department on how to generate departmental feedback to the users.

This is what the respondents said about dissemination of information to generate department specific response:

“I present it to the staff meeting and we have discussion about it, I present it to my managers and then they went away to a workshop to try get solutions, but it is hard” (Respondent 7, January 23, 2018)

Information on the results of customer survey is shared using the existing user feedback mechanisms. “Publish on the website, put a press release out, I make sure that the staff understands it, we wanted to use it for performance management, but it is not that accurate” (Respondent 7, January 23, 2018).

From the quotes above it is evident that within the CoJ’s road and transport department, there are managers that deal with specific components of the Rea Vaya system and this shows the complexity of how a BRT system is run.

4.7. Implementation (Step 9 of user feedback)

This is what the respondents said about implementation of user feedback:

Information related to road and transport department is dealt with in the following ways:

After receiving user feedback related to lack of information about the Rea Vaya BRT system the CoJ’s transport department developed a passenger information. “When we receive the user feedback from the survey we don’t necessarily put together a plan and innovate, the only thing we did in the past is the Vaya mojo app which is a passage information App” (Respondent 7, January 23, 2018).

After receiving ideas from the user feedback platforms, the CoJ’s transport department cannot implement most of the ideas because of the city’s tender process. “There are a lot of people that had great ideas and they try to sell the ideas to the city and I can’t get involved in that because of tender processes and I can’t accept bids, that is another thing that really hampers innovation in the city and in LG because you can’t, if someone comes with a good idea you can’t contract that person they have to go on a public tender process” (Respondent 7, January 23, 2018).

The quotes above are evidence that not all the respondents understand how user feedback is implemented post workshops and stakeholder meetings.

4.8. Barriers to user feedback in improving and enabling innovation in the Rea Vaya system

4.8.1. Feedback received from the users

To understand the barriers to the city not using user feedback to improve and enable the Rea Vaya system, below is some of the user feedback that the department receives:

- Challenges with the card payment system being offline

  “Sometimes the staff at the station wants to steal the money because they don’t have lunch money they will say the system is offline even if it is not offline then they force you to buy paper tickets and for us the paper ticket is not electronically monitored so they can easily take money from the customers” (Respondent 7, January 23, 2018).

  “The card payment cannot be changed because it received political buy in and it is the first to be used in the world. “We were the BRT system in the world to have a bank-based system and hence the hustle and struggle” (Participant 5). “There is a lot of reasons for off line, sometimes our servers are full, and they would crash and make the system to be offline. The city’s IT and procurement process are long meaning that we cannot change the IT to fix the system” (Respondent 7, January 23, 2018).
- Staff behaviour

  “Second is the station staff behaviour and complaints and the third is driver behaviour especially speeding. Even though often they are not speeding but because of they are on dedicated lanes” (Respondent 7, January 23, 2018).

  “There are complaints about the drivers and one of the big complaints is the method of payment for BRT users (system down)” (Respondent 5, January 15, 2018).
- Overcrowded buses, late buses and no arrival of busses

  “Top three complaints are the busses are too full, late and no arrival of busses at all” (Participant 5).

"What is useful from the customer survey is that information about when the bus is overcrowded, and we can put in extra express buses" (Respondent 7, January 23, 2018).

"The Rea Vaya system is not rigid in nature it constantly changing in response to customer demands. For example, when customers need an earlier bus or late bus we have to alter the bus schedules to accommodate that" (Participant 4).

- Extension of bus routes to other areas

  "There is interest in the users for CoJ to extend the bus routes to areas that are currently not part of the Rea Vaya BRT system bus routes. There is usually a request for the expansion of the service by most users" (Participant 3).

  "The popular suggestion is the extension of routes but it's not that easy to do so because of the planning procedures" (Respondent 5, January 15, 2018).

  "Suggestions and ideas are welcomed but not all ideas can be implemented. The barriers to implementing ideas for example, the Protea Glen Station commuters want to extend the route but this difficult because it was not initially in "One of the innovative ideas suggested by commuters was to have a separate school bus to avoid congestion and safety for the students but at this point it's not feasible because Rea Vaya is a rapid and therefore caters for everyone" (Responded 5).

- Station design

  "Even with the Rea Vaya station, when we had those sessions with potential users there was big push back against the architects and the design team. So, initial the design was given, were actually bricks but users suggested they wanted to see through the station and that is how the art was inspired for the stations" (Participant 3).

  "Users picked out the problems the design team didn't notice lie "you've put the wheelchair space from a distance instead of first access". We modified the design based on that users said to us through that outreach" (Responded 3).

- Local knowledge

  "There was a pastor that called in at 702 complaining about the danger of the Rea Vaya station in her area for the children. We got back to her and she explained to

us that the designers build the Rea Vaya on reserves leaving no sidewalks for pedestrians. People continue walking where they historically walked and there was a danger of someone getting run over" (Participant 3).

- Lack of innovation incentives for users
  "There was another guy who really was an innovator and I had asked the city to subcontract the guy, but he did not want to sell his IP to the city and then he went to complain to the MMC that the department was not taking her serious" (Respondent 7, January 23, 2018).

From the quotes above, it is evident that the municipal officials are aware of the complaints, suggestions and what is needed to make sure that user feedback improves the Rea Vaya system. However, it seems that it is not easy to implement the suggestions and complains due to the complexities and beau racy processes in the Rea Vaya system

5.8.2. Barriers to using user feedback from the respondents

This is what respondents said about barriers to using user feedback in enabling effective Rea Vaya BRT bus system.

- Lack of management in practising the Rea Vaya BRT system's values
  "In many instances management has lost touch with some of the initial reasons to why the system was put in place" (Respondent 3, January 21, 2018, January 21, 2018).
- Lack of relationship with users
  "The key issue is that, it doesn't matter what platform you use to elicit user feedback, it's the attitude in which you use to enter the relationship with users" (Respondent 3, January 21, 2018, January 21, 2018).
- Lack of culture to involve Users in the planning of the transport system
  "Do you see users as an irritation or do you see users as the core reason for the existence of your department and your service? For me that is where there was a big mismatch between how the political office viewed the importance of user feedback, user communication and administration". It's that fundamental culture shift in an organization that says the reason our existence is to provide services to communities and that's why we are here. The biggest barrier taking on board user

views is a poor attitude from municipal officials when you start off with a presumption and when that is your departure point, then you don't treat users with as important stakeholders who are the actual reason for the existence of your job. It's about getting that mind-set right, and that the pure reason for your job is to provide service for the user, then you won't see them as an irritation (Respondent 3, January 21, 2018, January 21, 2018)

- Capacity to deliver and implement user feedback immediately

  "Given the nature of the project, the infrastructure span and get people understand why it can't get to an area overnight is a big issue" (Respondent 3, January 21, 2018, January 21, 2018).

- Lack of proper use of ICT and media in user feedback

  "People get real time feedback but it's pointless to have a facebook page and a twitter account and take three days to respond. The problem is that people responding on social media are not the decision makers and so often the kind of answers they get feel like a post office (Respondent 6, January 22, 2018)

- Assumptions and attitude of municipal officials in thinking that they know what users want and not soliciting customer feedback

  "The first I can say is that the BRT system was well marketed in communities it's currently serving, and the fact that it was fit for purpose in terms of travel speed something that has always been a problem around Joburg and other urban areas, and traffic congestion" (Respondent 3, January 21, 2018, January 23, 2018).

  "At a big level it was more about perceived latent desire unlike than conscious desire. When someone does not have a job, they are willing to get any job but as soon as they get it they start complaining, it is the same as Rea Vaya users. (Respondent 1, January 10, 2018.

  "Nobody gets suggestion box because nobody uses it" (Respondent 7, January 23, 2018).

- Municipal policies that make assumptions on behalf of users

  "The ITP was able to show that there is demand and therefore an assumption that users will switch from taxis to the BRT system. It was also assumed that people

will want a superior choice but, users switched because the city took the taxis away and because it was cheaper. We also have a list of users' biggest issues, users are not really saying they want BRT, they want affordable and safe public transport. You cannot say BRT is a demand for people the same way housing is a demand for people" (Respondent 7, January 23, 2018).

- Pressures of hosting an event

  "When the planning of the system started there was no survey that said to users what do you need in the BRT system or transport system, instead it was a World cup and the bus system looked like a good thing to use to move people around during the world cup and as a legacy project, and plus it was working in South America" (Respondent 7, January 23, 2018).

Lack of resources and internal issues between different stakeholders that lead to the municipality not to implement user feedback and focus on other pressing issues.

"The biggest barrier is capacity in terms of resources including assets such as the buses because people may need a bus every two minutes within pick hour and given the buses that we have it is not easier to implement. Another barrier is the arrangement of between people who were affected(mostly taxi industry) and the city which came with terms and conditions through contractual obligations as who needs to be hired and to first make sure that taxi drivers that were affected by the bus system are absorbed so in itself it can tell that capacity in terms of human capital expertise therefore you are not getting the most experienced or suitable people for the job because you have to comply with some of the arrangement. On the other side it is good because you are empowering people" (Respondent 3, January 21, 2018, January 23, 2018).

- Lack of resources for collecting user feedback

  "Currently I think it is relatively expensive to get the accurate feedback because you only get it from people who are technology savvy or are in social media and have access to email because that is where most of the feedback comes from" (Responded 4, January 23,2018).

From the quotes above it is evident that the municipal officials are aware of the barriers to user feedback being used to improve the Rea Vaya system which led to the following drivers presented in 5.8.

4.9. Drivers of using user feedback in improving the Rea Vaya BRT system

This is what the respondents said about using user feedback in improving the Rea Vaya BRT system:

- Political support for the involvement of user feedback
  "Firstly, I think, you needed the political wolf saying, "we want users involved" and we want their voice" (Respondent 3, January 21, 2018, January 21, 2018).
- Technical expert that listens and understand users
  "You needed the technical expert that was able to listen to what users were saying and translate that in some way or another form into the system" (Respondent 3, January 21, 2018, January 21, 2018).
- Constant two-way communication about the changes in the system
  "As the implementation started to roll-out the issues around the phasing from paper ticket system to the smart card system, which again we pushed for focus groups with users to say, "what should the communication look like to enable you to understand this transition" (Respondent 3, January 21, 2018, January 21, 2018).
- Technology that enables the management to update the users about the bus system.
  "CCTV cameras and the camera are live therefore you can see what is happening in all the stations, the BRT routes to see if everything is up and running. So even if a bus is delayed the people at the OCC are able to see that the bus is delayed and if the bus drivers have challenged they contact the OCC to inform them" (Respondent 3, January 21, 2018, January 23, 2018).
  "80% of the system's success depends on ICT like bus monitoring, being able to communicate with the drivers, to see what is happening in the stations and routes and take informed decisions. 80% of the successful operation depends On ICT and also, we get customer satisfaction because of technology because we are able to respond to their needs: (Respondent 3, January 21, 2018, January 23, 2018).

"ICT and Media is vital because it's instate nous and immediate communication but also allows for two way communication and often we think communication is city government or the operator or talking to the user but rather it allows for two way and enable one spot out the user problems and deal with it (Respondent 7, January 23, 2018).

- Staff that manually collects user feedback.
  "We need staff that can educate the people on the importance of their involvement and participation in the system to get enough feedback so that at the end of the day we don't dictate to people the service that we think is good for them "Participant 4.
- National department legislation that governs transport.
  "In 2012, we revised the ITP and there were requirements from the national government that said when planning transport system, you have to have views of the users. And eventually we had workshops and we asked people to draw pictures and we had focus groups" (Respondent 7, January 23, 2018).

From the quotes about is it evident that the municipal officials are aware of what needs to happen for user feedback to be implemented however the suggestions are not documented and implemented.

4.10. Monitoring and evaluation

There is currently no system in place that monitors the implementation of user feedback and evaluates the outcomes of user feedback.

4.11. Conclusion

In conclusion this chapter utilised data and findings collected using the research methods in chapter three to address the research questions and sub questions asked in chapter 1. Chapter 4 clearly stated the role and responsibilities of the CoJ's department of road and transport visa vee the other stakeholders including the BOC and showed the complexity of the division of roles and responsibility in managing the Rea Vaya BRT system. In addition to the above this chapter also provided user feedback mechanism that are used in the Rea Vaya BRT system to solicit user feedback with some methods

being successful than others. It is against this background that this chapter focused on the user feedback loop in the Rea Vaya system to state the processes followed after receiving the user feedback and the barriers and drivers of user feedback in improving and enabling Rea Vaya to be an effective public-sector innovation. User feedback implementation plan and user feedback monitoring and evaluation system are the two gaps identified in this chapter.

Chapter five: discussion

5.1. Introduction

This chapter discusses the key findings from the fieldwork. This chapter is divided into five sections. Section one discusses the processes that informs how Rea Vaya management team collects user feedback. This section also discusses the effectiveness of the various user feedback mechanisms that Rea Vaya management team employs to collect user feedback. The second section of this chapter critically explores the ways in which user feedback is utilised to enhance innovation by Rea Vaya system. This section also sheds light on the ways in which vital information is disseminated in order to generate specific responses. Section three highlights the drivers, and barriers to the effective utilisation of user feedback in Rea Vaya system. The fourth section will look at gaps within the data that is collected, and the last section will conclude on the chapter.

It is through the five sections that the researcher will state the gaps, but more so allude and suggest to the reader on what should happen in the future in terms of public sector innovation within the body of knowledge. Figure 5.1 below is a graphic representation of chapter 5.

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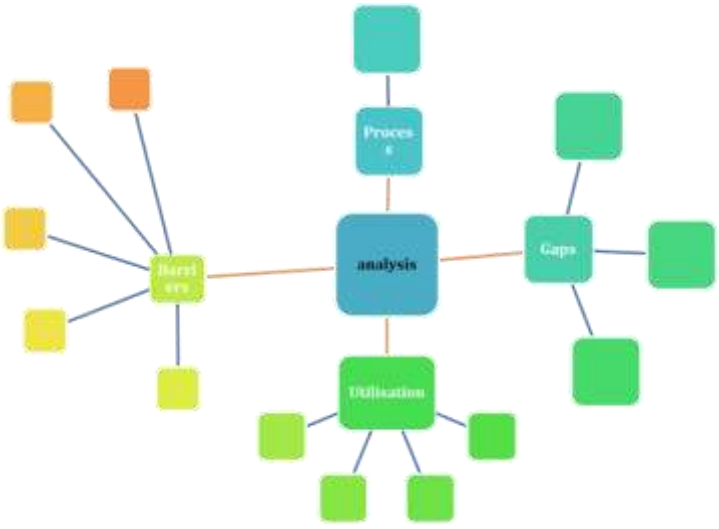


Figure 5.1: graphic representation of the analysis chapter (Sello 2018)

5.2. Processes that inform how Rea Vaya collects user feedback

The CoJ road and transport department has mechanisms put in place to collect and recognize user feedback. As alluded to earlier on in chapter two, the CoJ transport department has a stepwise guide for obtaining user feedback, which can be found on the Rea Vaya website. The website is used as a central system for sharing information related to the Rea Vaya bus service including user feedback mechanism that can be used by the end users to give feedback regarding their overall satisfaction with the services provided by Rea Vaya. Contrary to the user feedback mechanism shared on the Rea Vaya website, the research participants underlined other feedback mechanisms that were not documented on Rea Vaya website. Figure 5.2 shows the Rea Vaya user feedback mechanisms that are formally recognized in the Rea Vaya BRT website and the feedback mechanism that the respondents alluded to. The mechanisms used to obtain user feedback on the Rea Vaya webpage are not fully explained, and there is no clear guidance on when to use any particular user feedback mechanisms and more importantly, under what circumstances.

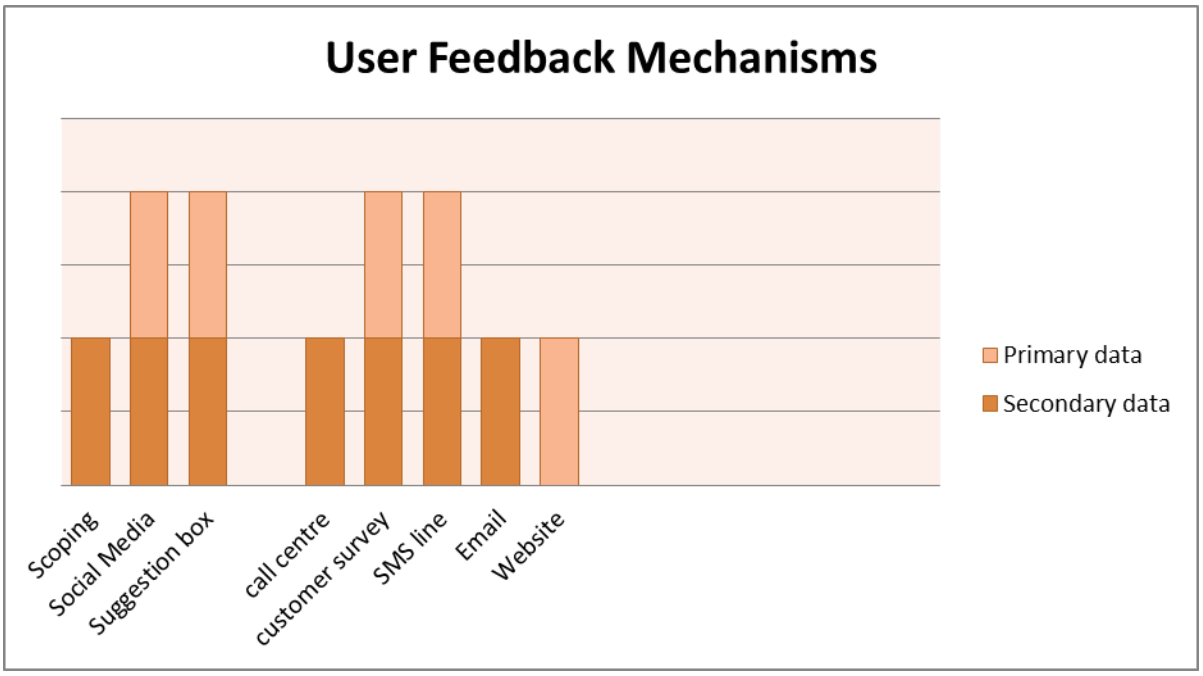


Figure 5. 2: user feedback mechanism from primary and secondary data (Sello 2018)

5.2.1. Social Media

Most of the respondents alluded to the fact that social media platforms such as twitter and facebook have been used by Rea Vaya as a mechanism to collect user feedback. The use of social media stems from pressure from the end users, given the ease at which social media platforms can be used to air one's view. Similar observations have been made by both (Ubisi 2016), (Picazo-Vela, Gutiérrez-Martínez et al. 2012) and (Whiting and Williams 2013) respectively. They argued that the use of social media platforms has significantly revolutionised how end users express their views and opinions regarding services provided by public sector**.** The result also revealed that the use of social media platforms provided an efficient two-way communication channel between the users of the Rea Vaya system and CoJ, the custodians of the Rea Vaya system.

In spite of social media platforms as an effective and efficient vehicle to obtain end user feedback, however, it has its downside as well. The drawback with social media platforms is, in part, due to the enormous expectation that response to queries are lightning fast. Consequently, if users do not get an immediate response, the participants might be quick to conclude that the entire purpose of using the social media has been defeated (Picazo-Vela, Gutiérrez-Martínez et al. 2012). As evident in the result, CoJ road and transport department takes a lengthy spell of time to respond to end user queries, with some queries taking time and waiting for stakeholder meetings and other departments Reponses to get a viable response.

The reasons for the delated response from the CoJ's road and transport department might be because user feedback is received by the CoJ's road and transport however the department is not solely responsible for all the components of the Rea Vaya system. For example, the CoJ's metro police department is responsible for providing JMPD on site and only when the road and transport department holds a monthly Rea Vaya stakeholder meeting social media user feedback is discussed with other department. The second reason for the delayed social media response, as stated by one of respondent, and understands the system well is because the receiver of the user feedbacks, from CoJ road and transport department, is someone who is not a decision maker. The recipient's duty is to escalate the feedback to the management team for them to act upon. (Picazo-Vela, Gutiérrez-Martínez et al. 2012) refers sees this delay as a risk associated with social

media under organisational structure and process where the manager's support is needed before responding to social media user feedback. Kraemer & King, 2006; West, 2005 in (Bretschneider and Parker 2016) refers social media internal decision process in the public sector as a bureaucratic process contributing to a lag of use of social media in public sector.

The delayed response to social media feedbacks, I argue, can be attributed to a lack of user feedback mechanism guideline report by CoJ's road and transport department that underlines when to use any specific mechanism. For example, due to the Rea Vaya system having other departments responsible for other components of the system, the CoJ's road and transport department cannot respond to issues outside their roles and responsibilities. Furthermore, they only share the feedback with the other departments in a meeting held once a month. In this regard a lesson can, be learned from U.S. federal government on how they deal with social media delays caused by highly regulated vetting processes coming from having different departments responsible for a single project. Currently social media is located in the CoJ's road and transport department which is not responsible for all the components of the Rea Vaya system and therefore placing social media responsibility in the public affairs office and making sure that knowledge experts are located in subunits can remove the hurdle delayed social media response (Mergel 2013). In addition the creation of a social media director can assist in setting up institutional norms that will serve as social media policy and provide strategic guidance on how to support the on the day to day administration of social media platforms in the Rea Vaya system (Mergel 2013).

5.2.2. Suggestion box

Most of the respondents highlighted suggestion box as a feedback mechanism. The suggestion box is used for comments, enquiries, complaints or compliments. Suggestion box is collected every week and compiled into a report. Suggestion boxes are placed in all the Rea Vaya stations. There is a contradiction of the actual collection of the suggestion box with one respondent saying the turnaround feedback time for a suggestion box is 72 hours however how is this possible given that one respondent has alluded to the fact that the suggestion boxes are collected every week and compiled into a report. Another crucial observation, from one respondent is the scepticism of the

usefulness of suggestion box. This statement raises a pertinent question, which is whether or not the CoJ's has a guideline on the type of feedbacks that the suggestion box is used to collect, given the collection time and guideline on how often feedback should be collected from different platforms. The other suggestion is that the CoJ's road and transport department evaluates user feedback mechanism to check if there are still relevant when new ones are introduced.

5.2.3. Call centre

The call centre as per the Rea Vaya website may be used for general enquires. Call centre as a user feedback mechanism was only acknowledged in the secondary data but not by the respondents. Perhaps, this is because of the respondents past experiences from users that come with the challenges of calling a municipal call centre that caters to all the services that the municipality offers. It could also stem from the lack of finances needed to do so given that the call centre is not a toll-free number. In this regard, a respondent to a Rea Vaya news article, commented:

"They gave me the number I should call, the call centre, the phone was just ringing, no one is answering, even if you go to the call centre the people are not ..." (ENCA, 2013).

The advantage of using a call centre to obtain user feedback comments, according to (Bennington, Cummane et al. 2000)is that it provides swift response to queries. However, the Rea Vaya call centre is part of the CoJ call centre which caters for all the services that the city offers. This means that enquiries need to be taken up with the Rea Vaya representatives and this is done by selecting Rea Vaya from a list of options provided and that can cause responding. Currently on the Rea Vaya website, there is no explanation of how the end user is expected to use the call centre as an effective user feedback mechanism.

The lack of information on the call centre as a user feedback mechanism denies the user information such as operation time for the call centre and explanation on what general enquiries mean. In addition, the turnaround time for enquires that cannot be dealt with on the phone is missing given interdepartmental roles in the Rea Vaya system. General enquiries can mean a lot of things including information related to the bus routes and schedules, smart card information, safety etc. CoJ's road and transport department needs

to have an official document containing all the user feedback mechanism in the Rea Vaya system and a set of guidelines on how the call centre works including operation times and the types of general enquiries that can be forwarded using the call centre.

Respondents view the customer survey as a user feedback mechanism that gives a sense of whether the customers are happy with the service and secondly to collect user complaints. This might be the reason why users are now reluctant to participate in the customer survey due to the user realizing that they have raised comments over and over however there is no improvement coming from the feedback. The other reason for the users to be reluctant in participating in the customer survey may be due to the lack of the CoJ's road and transport department not doing follow up communication on how they will respond to the complaints raised in the survey. A customer survey is an effective user feedback mechanism it should be noted that it is performed once a year and only allows users to give feedback with limited plan of responding to the user complaints in the survey. The survey helps the city understand user feedback however it does not encourage two-way communication between users and the CoJ due to the fact that the survey is collected once a year and it does not include response from CoJ's road and transport department.

5.2.4. Customer satisfaction survey

Customer satisfaction survey is collected by the city every year to check if the customers are still satisfied and happy with the Rea Vaya service. The use of customer satisfaction survey was acknowledged by all the respondents. Customer satisfactory survey seems to be the most preferred method by the CoJ's transport and road department because of the ability of the survey to give user profile information such as the user's economic status, age, and what the user likes about the Rea Vaya system, amongst other things. The other information that the customer survey gives is the users preferred method of communication for user feedback. According to 2017 customer satisfaction survey (CoJ, 2017) the users of the Rea Vaya system were reluctant to participate in the 2017 survey due to the fact that they did not see any meaningful changes implemented from the 2016 survey that they participated in. This is alarming because it can be argued that the results of the 2016 survey did not give due consideration to user feedback.

In addition, there is no communication from the city on how the results of the survey will be implemented. This then questions the reasons to why the city conducts the customer survey if the there is no communication back to the users on how the feedback will be used to improve the Rea Vaya system. Is a survey a tick box process that the city needs to do to show that users are involved in the Rea Vaya system, or it is a platform used to collect user feedback that will be used to improve the system? Currently, I argue that the latter reason for the collection of user feedback as a tick box is the case. According to the (Qureshi and Rowlands 2004) it is inappropriate for users in the public sector to be referred to as customers because public sector is concerned with using limited resources and achieving a balance between competing interests of society as compared to private sector's worry of increasing demands and profit. Therefore, the use of a customer satisfaction survey in the public sector must be reviewed by the CoJ's road and transport department given that not all the feedback can be implemented because of the competing interest of society and budget constraints from the public sector.

5.2.5. SMS line

SMS, as a user feedback mechanism, was acknowledged by two of the respondents. However, there is no information on how the SMS line works and the types of complaint that needs to be sent via the SMS. In addition to the above, there is also no information about the response turnaround time for the SMS platform. According to the customer satisfaction survey, most preferred method of communication by the Rea Vaya users is SMS (74, 98 % of users prefer using SMS) (CoJ, 2017) which may be due to users knowing the exact charge rate per SMS. SMS, I assert, gives end users the space to voice out their opinions and complains, which makes the end users believe that they are contributing towards the betterment of the Rea Vaya system.

According to the respondents, the CoJ's road and transport department is aware of SMS being the preferred method by the users as per the customer satisfaction survey. However, their response was that it is expensive for the city to carry out SMS as a user feedback mechanism. This inherently raises a pivotal question – why the municipality introduced the SMS line to users if it cannot be used due to the SMS being expensive? The CoJ road and transport department need to do a feasibility study and test advantages and disadvantages of a user feedback mechanism before completely rolling it out. This

will allow the CoJ's road and transport department to monitor and evaluate the user feedback mechanisms before implementing it wholesale.

5.2.6. Email

Email was acknowledged by the respondents and on the Rea Vaya, we page. Indeed, email offers a formal platform to raise complains, comments and compliments and that users have access to the internet. However, there is no explanation, on Rea Vaya's website, on how to use email, what type of user feedback is used for and there is no indication of response turn around. This might be caused by the fact that there is no user feedback mechanism report that serve as a guideline on how email as a user feedback method can be used by users, specify the type of user feedback that this platform will collect and provide the turnaround time for response. In addition to the user feedback report the municipality should consider a monitoring and evaluation report that can assist with monitoring the implementation of the user feedback. In addition, ensure that the people receiving user feedback in the CoJ's road and transport department understand how the email as a user feedback mechanism work, implemented and assist the municipality in using user feedback to improve the Rea Vaya system.

Three respondents said that most of the user feedback comes from email. It is confusing because if users prefer SMS as their user feedback mechanism, why is it that the respondents say that most of the user feedback comes from the users? This is perhaps because most of the end users don't sent user feedback, if the preferred method of user feedback is SMS therefore the municipality is not receiving the bulk of the user feedback.

5.3. Utilization of user feedback in innovation

When the city of Johannesburg road and transport department receives user feedback it follows three processes that are not documented in the official document, to utilise and factor in the feedback when making decisions. The department (1) divides the feedback and, (2) hold a user feedback workshop (3) share the user feedback with the other Rea Vaya stakeholders.

5.3.1. Division of user feedback

A lack of an official report on the division of user feedback did not allow the researcher to do an analysis of information from the respondents and official municipality documents/

however the information on the division of user feedback comes from the interviews the following can serve as suggestion to the CoJ's road and transport department. There is a need for an official document that can be used as a guide to understand how division of user feedback is done by the municipality and a monitoring and evaluation report that will serve as a tool of monitoring if the CoJ's road and transport department follows the right steps to share user feedback and if the processes put in place are effective.

5.3.2. Workshops of user feedback

Currently the workshop of user feedback, according to the respondents, is that the head of the department of the CoJ's road and transport department presents all the user feedbacks collected by the department to the managers, and the managers go away for to formulate responses. The challenge with asking the managers to go away and formulate responses on their own is that all the managers will follow different solution mechanisms to formulate the responses. Consequently, there will not be uniformity on how responses are formulated. Also, there is a high percentage that the responses will be thumb sucked and formulated according to the personal experience and knowledge of the Rea Vaya managers. The other concern about asking managers to formulate responses on their own is that when a manager leaves his/ her position they leave with the institutional knowledge. A lack of a response formulation mechanism will might contribute to a delayed response by managers and therefore delayed responses to the users by the CoJ's road and transport department.

An official report needs to be developed by the CoJ's road and transport department on the objectives of user feedback workshops, the content discussed in the workshops, an indication of participants needed, the format of the workshop, the reporting on the workshop and a monitoring and evaluation tool that can be utilized to check if the workshop achieves its primary objectives. In addition to this a standard guide on how managers can formulate responses need to be drafted by the city to support managers in formulating responses and also find a better way of supporting managers to come with user feedback in workshops, share ideas on responses and formulate responses together this will assist in coming up with many solutions and allow the manager to utilize the best response.

5.3.3. Rea Vaya stakeholders and stakeholder meetings

Upon the receiving of user feedback, all of the respondents argue that the City of Johannesburg's road and transport department divides the user feedback according to the roles of the different departments involved in the Rea Vaya system illustrated by (Allen 2013) in figure 2.1 . However, there is limited official information from the municipality on the roles and responsibilities of the different departments and stakeholders in the Rea Vaya system. The reason for this might be because the Rea Vaya website only focuses on the CoJ's department of road and transport and the BOC in the management of the system.

It was one of the respondents that the researcher was made aware of stakeholder meetings that are held regularly by the CoJ's department of road and transport to separate user feedback according to the roles and responsibilities of different departments and stakeholders in the Rea Vaya system. This might be because there is an assumption between the stakeholders that they totally understood their roles and responsibilities. Therefore, the need to document the process is deemed inconsequential. Secondly, the researcher's assumption is that the might be because there is an internal document that stipulates the roles of other departments in the Rea Vaya system that is not open to the public. In addition to the aforementioned, I argue that it is because there are meeting minutes that come out of the stakeholder meetings, which documents the user feedback discussions between the stakeholders that is unavailable to the general public. The other assumption the researcher makes is that maybe the official document that informs the user feedback meeting between the stakeholders is prepared by the CoJ's road and transport department and shared only with the stakeholders involved and is used by the meeting as reference.

In light of the above, there is a need for the CoJ's road and transport department to provide the public with information on the division of roles and responsibilities of other departments. This will make the users understand why some of the issues, complaints and suggestions on the Rea Vaya system take long to resolve. In addition to the above, it might also assist in sharing the minutes of the meeting on user feedback with the general public to show transparency and as an indication that the user feedback is taken serious by the municipality.

5.3.4. Dissemination of information to generate department specific response

The dissemination of information to generate department specific response was obtained in the primary data and not the secondary data therefore there are no official reports on the Rea Vaya website explaining how this process is done, how often and when, how it is monitored and evaluated to check if it delivers on the objectives. The CoJ's road and transport department needs to put together a process on how dissemination of information to generate department specific response can be done, indicate the objectives of this process, indicate the departments involved, the time frames for the response, how to generate specific response, introduce a monitoring and evaluation tool that can check if the process document is achieving its objectives.

The dissemination of information to generate department specific response was acknowledged in the primary data with indication of what it entails, what is needed, who is needed, what are the time frames and what are the expected outcomes from this process. This might be because there is an assumption that the different departments know what is expected of them, know the process that they can follow to generate the response, know the time frames and last, they know the specific outcomes. The challenge with assuming that all the department know how to generate response is that there is no uniformity on formulating the response and if new people join the departments that are responsible for the Rea Vaya system more time is spend trying to figure out how this process is done instead of providing response to user feedback. The CoJ's road and transport department needs to provide a report containing guidelines on how the different departments involved in the Rea Vaya system can generate response and the department needs to be able to monitor and evaluate if the dissemination of information allows the other departments to generate information.

5.4. Drivers and barriers of user feedback to innovation

The drivers and barriers of user feedback to innovation are obtained by understanding how user feedback works in the Rea Vaya system mapped out by the user feedback loop (see Figure 4.1.). It is evident that the CoJ's road and transport department collects user feedback as per the secondary and primary data in chapter 4 and 5. User feedback is received by the CoJ's road and transport department. Upon receiving user feedback, the CoJ's road and transport department engages in a process that divides the user feedback

into two parts, one part is about user feedback that belongs to the their department and the other part is about user feedback that belongs to other stakeholders involved in the Rea Vaya system. Following the process of dividing user feedback, the CoJ's road and transport department holds an internal department user feedback workshop where the head of the department discusses the feedback with his or her managers responsible for the different components of the Rea Vaya system. Parallel to the user feedback workshop with the Rea Vaya stakeholders to present user feedback received. The user feedback workshop held by the CoJ's department of road and transport and the Rea Vaya stakeholder meeting generate user feedback information that is disseminated on to other departments involved in the Rea Vaya system for them to come up with user feedback responses. This section will provide an analysis on how the user feedback is implemented by analysing the primary and secondary data and identity possible drivers and barriers of user feedback for effective public sector innovation and user feedback is monitored and evaluated.

5.4.1. Implementation

Implementation of user feedback is not documented in official municipal documents. This might be because there is no implementation plan for user feedback from the CoJ's road and transport department and the researcher assumption is that user feedback is dealt with in an ad hoc way. The lack of use secondary data on user feedback implementation has denied this section of the report to analyse secondary data together with primary data on implementation of user feedback.

The implementation of user feedback is limited according to the primary data. According to the respondents, user feedback that has been implemented over the years is linked to the CoJ's road and transport department increasing user feedback platform such as introducing SMS and social media. The CoJ's road and transport department might have increased the user feedback platforms because of the need to understand what the users are saying about the Rea Vaya system and not necessarily to implement user feedback.

User feedback is not implemented not because of the city does not collect it however because the city does not have a plan to innovate and implement user feedback, this

information was obtained from the respondents. The questions coming from this observation is why does the CoJ's road and transport department spend money and put in place user feedback mechanism and not have a plan on how it be used to improve the Rea Vaya system. Secondly if there is no plan on how to implement user feedback the researcher assumed that there is no monitoring and evaluation system to make sure that the feedback is implemented and generates information that can be used to better the Rea Vaya system. Does the CoJ's road and transport department put out user feedback mechanism as a front for users to think that they are welcomed and involved in improving the Rea Vaya system?

The analysis of the primary data information led the researcher in suggesting that the CoJ's road and transport department needs a user feedback implementation plan that can serve as a guide on what the department can do and how to implement user feedback. A user feedback implementation plan must be accompanied with a monitoring and evaluation strategy that will ensure that the CoJ's road and transport department is held liable for the implementation of user feedback and evaluate if the user feedback is used to improve and enable the Rea Vaya system.

5.4.2. Barriers and Drivers

The analysis in attempted to answer research sub question 1 and 2 will assist in identifying the barriers and drivers of user feedback for effective public sector innovation. The following are the barriers to user feedback not contributing to an improved Rea Vaya system.

- A lack of a user feedback mechanism report that will explain to the users on the different types of platforms that they can choose from and how the platforms work. This will assist in making sure that the users do not give up on providing user feedback that contribute to the improving user feedback.
- An absence of innovation plan that will guide how the user feedback can contribute to the improvement of the Rea Vaya system.
- An absence of an implementation plan that will be used as a guide to implement user feedback.

- An absence of a monitoring and evaluation system that sees through that the user feedback is followed through until it is implement because some of the loop whole in
- Disjuncture between what the politician wants and what the administrators suggests, for example the Rea Vaya administrators suggested that the card system does not work however because the card system was selected by the politicians as a preferred method of payment and was the first to be used by the Rea Vaya system in the world.
- The City of Johannesburg procures the Rea Vaya system for the planned routes and therefore user feedback suggesting that the system extents routes is challenging for the city to implement because of constrained financial resources.
- The respondents mentioned lack of innovation incentives by the CoJ's municipality as a barrier to user feedback related to ideas and suggestion.
- Municipal bureaucracy process such as the tender process was also mentioned by the participant as a barrier to implementing user feedback,
- Lack of management in not practicing the Rea Vaya BRT system's values of cooperation with users and management thinking that they know what the users want.
- Lack of relationship with users is also a barrier to user feedback because if users don't feel that they are contributing to the Rea Vaya BRT system they will not participate in giving the user feedback as mentioned in the secondary data.
- The seems to be a confusion between the respondents on whether or not the city involved users in the first phase of the Rea Vaya system and most respondents seem to agree that users were not involved in the first however they were involved in the second phase. The researcher picked that a lack of culture to involve users in the planning of the transport system might be a barrier to implementing user innovation in the planning of the Rea Vaya system
- The municipal official's attitude towards the users of the Rea Vaya system is also a possible barrier to implementing user feedback, one of the municipal official said that users are an irritation.

- Capacity to deliver and implement user feedback immediately can also be a barrier to user feedback, the CoJ's department of road and transport department collects user feedback but whether or not they have capacity to implement it terms of both human and resource capacity is a barrier.
- One respondent made a point and said user feedback cannot be implemented because the people that receives user feedback such as social media are not decision makers and therefore they will have to wait for management to respond which might be too late. The barrier to user feedback that needs urgent attention is the CoJ's road and transport department's user feedback process.
- Assumptions and attitude of municipal officials in thinking that they know what users want and not soliciting customer feedback
- Municipal policies that make assumptions on behalf of users as opposed to the municipality asking people if they want BRT system and their opinion about it.
- According to the respondents the Reya Vaya system was introduced as a transport system that will assist carry people for the 2010 World Cup there the pressures of hosting an international event resulted in the City not to get user feedback about the system.
- During the Rea Vaya negotiations between the CoJ's road and transport department and the taxi industry, contractual agreements were put in place including absorbing the former taxi drivers and operators. This resulted in a skills gap in the Rea Vaya system due to lack of a not having staff that have a specialized skill in understanding user feedback and implementation. Therefore, internal stakeholder issues and contractual agreement can be seen as a barrier to implementing user feedback.
- The disjuncture between the users' preferred method of providing user feedback such as an SMS as per the secondary data and lack of resources from CoJ's road and transport department in response to the user's preference. The barrier to implementing user feedback is that if users prefer using SMS and the municipality is not responding to the SMS, users will think that their feedback is ignored and therefore they will not participate in user feedback anymore.

- Users participate in user feedback mechanism such as a customer satisfaction survey. One of the concluding remarks coming from the survey is that users do not want to participate because the suggestions and complains raised by the previous survey are not implemented. From this the researcher identified two barriers to user feedback, one barrier is response from the municipality on why they cannot implement some of the user feedback and secondly having user feedback mechanisms that are one direction such as customer satisfaction survey that allows the users to give feedback but not the municipality to respond. Lastly to understand the critiques of a user satisfaction survey for public sector services visa vee private sector.

The following are drivers to Implementing user feedback

- Politicians play a big role in public sector projects therefore having political support for the involvement of users and for user feedback will enable the implementation of user feedback.
- In trying to resolve the skills gap in the Rea Vaya system, hiring a technical expert that listens and understand users can lead to the implementation of user feedback.
- The CoJ's road and transport department needs to acknowledge that communication is a two way and implement user feedback mechanisms that allow for such.
- In addition to the existing user feedback mechanism there was a suggestion from the respondents on having staff at each station to manually collect user feedback.
- Having a user feedback plan, implementation plan and making sure that it is monitored and evaluated to achieve and enable an effective Rea Vaya system.

5.4.3. Monitoring and Evaluation

The secondary and the primary data did not make mention of a monitoring and evaluation strategy. This might have been a result of the CoJ's road and transport department not having a user feedback collection and implementation plan and therefore the department has nothing to evaluate. The monitoring and evaluation plan will assist the municipal department in making sure that all the processes in the user feedback loop such as user

feedback mechanisms, division of user feedback, CoJ's road and transport department, Rea Vaya stakeholders; workshops of user feedback, stakeholder meeting, dissemination of information to generate department specific response and implementation have clear objectives, process and outcomes that can be monitored in terms of making sure that they are implemented and evaluated to make sure that they have achieved the objectives, implemented as agreed and yielded the results and outcomes that were planned.

5.5. Conclusion

This chapter presented the findings that came out of the analysis. The methodology was used to collect secondary and primary data and from a method of triangulation the researcher was able to come up with the above analysis.

The key findings of the analysis came up through four themes namely process of recognizing and collecting user feedback; the implementation of user feedback; the barriers and drivers of user feedback; and through the gaps that have been identified in the Rea Vaya system and the theory on innovation. This was done through connecting and linking the research sub questions to the methodological process mainly observation.

From the themes above the researcher identified theoretical gaps and gaps in the Rea Vaya system coming out of the analysis. The theoretical gaps include no literature that focuses on how user feedback can contribute to effective public sector innovation. The practical gaps in the Rea Vaya system include a formal process of processing, implementing and monitoring and evaluating user feedback. The analysis also put forward some recommendations on how to address both the theoretical and Rea Vaya system gaps in in order for the report to contribute to the body of knowledge in innovation and in improving the BRT system.

Chapter 6: conclusions and recommendations

6.1. Introduction

The purpose of this research report was to investigate the extent to which user feedback is used to improve and facilitate effective public sector innovation using the Rea Vaya BRT system as a case study. This was achieved by, firstly, understanding how user feedback is utilized by Rea Vaya management team. Secondly, I unpacked the processes that are necessary for user feedback to contribute to the effective enhancement of innovations in Rea Vaya. Thirdly, I identified the possible barriers and drivers of the utilization of user feedback in the Rea Vaya system. Major findings, recommendations and suggestions for future research will be discussed in this chapter.

6.2. Major findings

This research was done using the qualitative research approach which assisted to unpack the theoretical understanding of how the public sector may use user feedback to improve and enable effective public sector innovation. The objective of using a qualitative research method was to capture the research findings, which were primarily based on the views of the respondents with regards to how user feedback may be used to enable and improve public sector innovation. A social constructivist paradigm assisted in understanding the social realities that respondents faced. The case study method as a research design allowed the researcher to collect information on user feedback in the Rea Vaya system using multiple respondents in order to understand the collection of user feedback, utilization of user feedback and barriers and drivers of user feedback in public sector innovation. Observation, interviews, document analysis and audio material were used to enable the researcher to triangulate and provide analysis of the thesis.

Secondary data presented in chapter four provided the researcher with the opportunity to analyze existing documents on the Rea Vaya system using the CoJ's official reports and the Rea Vaya website. The primary data collected using interviews provided the researcher with the opportunity to get undocumented information on user feedback in the Rea Vaya system presented in chapter five. It was from the secondary and primary data that the researcher was able to triangulate and provide a comprehensive and detailed analysis.

In the context of Johannesburg's Rea Vaya system, there is a stakeholder engagement that happens between the users and the CoJ's road and transport department. However, it does not yield the desired output of a significantly improved Rea Vaya system. This is because of the barriers that come with the implementation of user feedback in the Rea Vaya system. In light of the above, the researcher has sort to revise the earlier stated proposition to include the findings of the data collected to answer the research questions that were posed from the proposition.

The reason why the use of user feedback does not improve or enable effective public sector innovation is because the producers of innovation do not have the ability to implement user feedback. Another reason is because there are not enough throughputs put in place to generate user feedback. Therefore, the result of this is that it hinders user feedback from contributing to effective public sector innovation.

User feedback is recognized and collected by the CoJ's road and transport department according to the participants of the study. However, it is not structured and documented because there are no formal processes put in place to collect user feedback and explain how each process work. There is no secondary data on how user feedback is implemented in the Rea Vaya system. The researcher, however, put together a user feedback loop using primary data in order to understand user feedback processes in the Rea Vaya system. It was from the user feedback loop (see figure 4.1.) that the possible barriers were identified to why the user feedback is not fully implemented and does not lead to improving and enabling effective public sector innovation.

The possible barriers include:

- A lack of a user feedback mechanism report;
- An absence of user feedback plan;
- An absence of a user feedback implementation;
- An absence of a user feedback monitoring and evaluation system;
- Competing interests between the politicians and administrators;
- User demands that the City of Johannesburg road and transport department cannot meet;

- Lack of innovation incentives from the municipality for users;
- Municipal bureaucracy process;
- Lack of relationship with between users and the municipality;
- Capacity to deliver and implement user feedback; and
- Negative attitude of municipal officials.

Gaps in the user feedback process was done using the user feedback loop. Some of the gaps identified are that firstly, there is no user feedback report that indicates the processes followed to collect, process and implement user feedback. Secondly, there is no time allocated to the different processes in the user feedback loop and there is no user feedback implementation plan. Thirdly, there is no monitoring and evaluation guide that monitors and evaluates all the components of the feedback loop and the process of the feedback loop. This implies that there is a discrepancy in how the municipality collects and implements user feedback. The suggested processes will assist in improving the use of user feedback in enabling and improving the Rea Vaya system. In addition, it can also be used by the other cities that have implemented the BRT system in South Africa and in the world.

The research findings of the report contribute to the broader theoretical debate on innovation, in that this research has sufficiently illuminated the drivers and barriers impeding the utilization of user feedback in improving and enabling an effective public sector.

Table 6.1: Barriers and drivers of innovation in the public sector with additions on barriers and drivers of user feedback to enable and improve public sector innovation

Barriers of public sector becoming an innovative institution	Drivers and Barriers of the environment in which innovation happens	Drivers and Barriers of Innovation process	Drivers and Barriers of adapting innovation process	Drivers and barriers to user feedback in innovation
The social and political demands in which government institutions are located. The legal compliance of the country Government systems and public policy Relations between different stakeholders in the country	Political barriers coming from the political setting Lack of human and financial resources and incentives for the existing human capacity. Lack of assurance that users will accept the innovation	Leadership direction responsible for the innovation Support and user driven creativity Risk management and innovations The role of ICT and social media	"Allocation of resources and the characteristics of the adopting organization" The role of opinion leaders, innovation champion and knowledge intermediaries Characteristics of diffusion and adoption and technology transfers as an innovation learning process	User feedback collection mechanism guide User feedback process plan User feedback implementation plan User feedback monitoring and evaluation plan

6.3. Recommendations

Looking at the barriers listed above the following are recommendations to enhance user feedback in innovations as well as overcoming barriers that impede effective utilization of end users feedback during innovation.

Having political support for the involvement of users and for user feedback will enable the implementation of user feedback.

In trying to resolve the skills gap in the Rea Vaya system, hiring a technical expert that listens and understand users can lead to the implementation of user feedback.

Use user feedback mechanism that allow two-way communication between users and producers of the Rea Vaya system.

Have staff at each station to manually collect user feedback.

Having a user feedback plan, implementation plan and making sure that it is monitored and evaluated to achieve and enable an effective Rea Vaya system.

6.4. Future Research

Using this research as a base the scholars can delve deeper in public sector innovation by conducting the following future research:

The researcher discovered that the BOC is one of the stakeholders amongst the many stakeholders and municipal departments that are involved in the Rea Vaya system. Therefore, it is important, by virtue of research, is to understand how key stakeholders and other departments not just within CoJ but South Africa in general utilise user feedbacks to upscale public sector innovations.

Researchers can also look into the processes that inform the collection, implementation, monitoring and evaluation of user feedback in contributing to effective public sector innovation.

Another key future research needs will be to compare the use of user feedbacks, in enhancing innovations, in different rapid transit systems such as Gautrain and BRT in order to understand the difference between user feedbacks in different rapid transit systems.

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Appendixes

Appendix 1: interview transcripts

Date: 10 January 2018

Venue: Johannesburg Road Agency offices

Time start: 14:00pm

Time end: 14:30pm

Interviewer: Khumo Sello

Respondent 7, January 23, 2018: City of Johannesburg's road and transport department

Interviewer: How are users involved in terms of improving the BRT system?

Respondent: When the planning of the system started there was no survey that said to users what do you need in the BRT system or transport system, instead it was a World cup and the bus system looked like a good thing to use to move people around during the world cup and as a legacy project, and plus it was working in South America.

There was no feasibility study however there was a scoping study that got the mayoral permission and started doing detailed planning and the was an ITP.

The ITP was able to show that there is demand and therefore an assumption that users will switch from taxis to the BRT system. It was also assumed that people will want a superior choice but actually, users switched because the city took the taxis away and because it was cheaper.

One of the first survey the city did showed that the users were price sensitive, so a user will go use a taxi if it is cheaper. Majority of people using the system are professionals and students because we do a customer survey each year.

So, at the high level I would not say that users influenced the planning of the system.

I am not sure, because when the system started if they had focus groups however for the other phases there were no focus groups.

In 2012, we revised the ITP and there were requirements from the national government that said when planning transport system you have to have views of the users. And eventually we had workshops and we asked people to draw pictures and we had focus groups.

We also have a list of users' biggest issues, users are not really saying they want BRT, they want affordable and safe public transport. You cannot say BRT is a demand for people the same way housing is a demand for people. Recently there was a survey done, and criticism about BRT is that the stations are far apart (500m) unlike with the taxis you can short left. In Soweto it is even worse because the stations are a km apart from each other meaning that people have to walk for a km.

At a big level it was more about perceived latent desire unlike than conscious desire. When someone does not have a job, they are willing to get any job but as soon as they get it they start complaining, it is the same as Rea Vaya users. In the beginning they are happy about everything buy now when they get used to the system they complain. And the question is having we used user feedback? At the beginning we did have a discussion about whether we should have a user forum because metro bus has a very active user forum but quite friendly it is used as a political forum because how do you organize users, Putco also has a user forum but people who go there have nothing to do, users are a very difficult consumer group. Most consumer groups are very hard to be representative, most people don't participate therefore it is very hard to get a user forum. We never had an organized user forum. The best way we get customer feedback is through the customer survey which initially we got a service provider and then we conduct in house, we do it every June each year and gives us results. Our benchmark is 85% but likely to not achieve it, we get less up to 82% but not went down to 70%.

BRT was a very innovative project and we took a lot of risks, for example none of the messaging systems in the stations work that show customers when the next bus is arriving for the last 4 years. We never asked passengers if they wanted it, actually passengers don't need it because the bus comes regularly. We didn't really need it and we spend so much money and the technology is sensitive. These days you can actually get it on the phone when the next bus is coming.

The card system has been a complete nightmare, we wanted to use a different system however the MMC at that time said we must be unique in the world and be the first in the world to use the bank best card but now most countries have it. However other countries have sophisticated systems where you can use any card such as a woolies card, but it will be difficult for South Africa to implement it.

Because we have this best bank card and in Soweto they are always digging up and stealing cables, when electricity goes down the system will also go down. Sometimes people think they are stealing the copper cables and they end up stealing fiber cables. There are lots of reasons why the card system gets offline. Sometimes the staff at the station wants to steal the money because they don't have lunch money they will say the system is offline even if it is not offline then they force you to buy paper tickets and for us the paper ticket is not electronically monitored so they can easily take money from the customers.

There is a lot of reasons for off line, sometimes our servers are full, and they would crash and make the system to be offline. The city's IT and procurement process is long meaning that we cannot change the IT to fix the system.

When we receive the user feedback from the survey we don't necessarily put together a plan and innovate, the only thing we did in the past is the Reya Vaya mojo APP which is a passage information App. I pushed that from the beginning and there are were a lot of people that had great ideas and they try to sell the ideas to the cities and I can't get

involved in that because of tender processes and I can't accept bids, that is another thing that really hampers innovation in the city and in LG because you can't, if someone comes with a good idea you can't contract that person they have to go on a public tender process. There was another guy who really was an innovator and I had asked the city to subcontract the guy, but he did not want to sell his IP to the city and then he went to complain to the MMC that the department was not taking her serious. At least I managed to get a contract for the Vaya moja App which it was hard to get, and we did it as part of Eco mobility and then we extended the contract. There is no incentive for innovation in the city.

Interviewer: What do you do with the customer survey information as a department?

Respondent: Publish on the website, put a press release out, I make sure that the staff understands it, we wanted to use it for performance management, but it is not that accurate. I present it to the staff meeting and we have discussion about it, I present it to my managers and then they went away to a workshop to try get solutions, but it is hard. There is no money therefore you can't tender anything and there won't be improvements.

Interviewer: Are they mostly complaints?

Respondent: They are not really complaints; the biggest complaint is about the smart card system being offline. Second is the station staff behaviour and complaints and the third is driver behaviour especially speeding. Even though often they are not speeding but because of they are on dedicated lanes.

What is useful from the customer survey is that information about when the bus is overcrowded, and we can put in extra express buses. Now we have buses like the C6 that turns around at Milpark so that it reduced overcrowding.

We look at customer feedback and also number of people in a peak time. Also helps us understand our market. We also look at information on how long have people been using the system, for example 7 years and more is less than any number therefore it means people have come and gone and also number of new people coming and you can see that most use mini taxis.

Also, the main problems with the system that we can improve on, like limited buses where people think when you standing on the bus it is overcrowding. Also shows the preferred method of communication which most people prefer SMS which is expensive for the city.

The sample is up and down, I would not say that there is an improvement in safety but that is what people are saying.

Nobody gets suggestion box because nobody uses it. The buses were changed, from window designs and having air conditioner. Gautrain refused to remove their buses on the Parktown route because they argue that their buses have air conditioner.

Date: 15 January 2018

Venue: Johannesburg Road Agency offices

Time start: 14:00pm

Time end: 14:30pm

Interviewer: Khumo Sello

Respondent 5, January 15, 2018: City of Johannesburg's road and transport department

Interviewer: How are users involved in the planning of the Rea Vaya BRT bus system?

Respondent 5, January 15, 2018: Phase 1 CA (From CBB to Alex, to Sandton and Greenstone -) We start with planning with consulting company by identifying the routes and do counts to see how many people will be at the bus stops. Then we do a customer / community forum and talk to the group and inform them about the Re Vaya planning and operation routes. This is done as a form of a political forum through the MMC of Transport, Executive Director of Transport, operations and marketing team.

Interviewer: What processes are used to involve users in the Rea Vaya BRT bus system?

Respondent: Concerns of the community is listened to. For instance, business owners are concerned about the traffic flow along the Louis Botha route in relation to parking etc. We try and answer all the questions as best as we can and give proper feedback in a report form. There are a lot of protests as well. The plan takes 5 years to implement, it takes about a year to have the buses and funding for the buses is also another time - redistricting factor.

Interviewer: How are users involved in the Rea Vaya system as a public-sector innovation?

Respondent: We use the radio station as a communication forum and receive live complaints and give feedback. I they are deeper issues we refer them to control center. Every bus station has a suggestion box with an allocated individual in charge and filter it back to the commuter. Top three complaints is the busses are too full, late and no arrival of busses at all.

Interviewer: Are there complaints about the driver? There are complaints about the drivers and one of the big complaints is the method of payment for BRT users (system down). How does the municipality utilize user feedback on Rea Vaya BRT bus system?

Respondent: It is important, if you don't get good service you won't go back. There are a lot of competitors as well like the taxi industry, therefore we really like to retain our customers. "Our slogan is fast, reliable and safe" we are fast because it's a rapid system and we dedicate lanes to control traffic.

Interviewer: At which point were users involved in the Rea Vaya BRT system? How does user feedback enable Rea Vaya BRT bus system?

Respondent: The current system works well; all the communication forums are available, and you can use them.

Interviewer: How often do you collect the complaints in the suggestion box?

Respondent: Every day. We have roving stuff who collect the complaints at the station every day and the reconciling of financial documents.

Interviewer: What are the details of the suggestion box, the extent of the detail?

Respondent: You fill in your detailed complaint on paper with specifics like time and place. Due to the procedure of taking up the complaints, suggestion box feedback is after 7 or so. facebook and twitter is immediate.

Interviewer: What happens to ideas that are suggested in the suggestion box?

Respondent: There aren't many of those. The popular suggestion is the extension of routes but it's not that easy to do so because of the planning procedures. The negations become an important procedure in the planning of Rea Vaya. For instance, we need to negotiate with the taxis for a fair deal in this transit business as their business is at loss too. We pay the operators 1km per travel. There are independent and private. The Rea Vaya brand and the product is the city of Johannesburg as well as the roads, stations and infrastructure. On the other hand, the operators own the buses. The city buys the buses and they pay us back

Date: 17 January 2018

Venue: Rea Vaya bus depot, Dobsonville

Time start: 10:00am

Time end: 10:30 am

Interviewer: Khumo Sello

Respondent 2, January 17, 2018: Bus Operation Company

Interviewer: Ya but this should be a very simple flowing interview, feel free to not speak to the questions and like…….

Respondent: Ya Okay

Interviewer: Give me broader feedback. Uhm so I will start with the processes in terms of the Rea Vaya. So, my research report focuses on how could public institutions such as a municipal sector or municipal department utilize user feedback to improve or enable effective public sector innovation. Ya, so that's the broader research question which is divided into sub questions that I will ask you now.

Respondent: Okay

Interviewer: So, the first question is what processes are put in place to include users in the Rea Vaya System?

Respondent: What we, we are actually doing here at Rea Vaya, is to make sure in the first place is that our commuters or our passengers of the communities are conveyed you know in a, a very safe, reliable transport system. That we are given a dedicated lane to render our transport system that is not interfered with any mode of transport like the taxis, like the Putco's and other buses. What is the reason for doing that? In order for us to make sure that our people are conveyed or are transported in a very safe way, also in a very fast way to reach their destination. That is the main aim.

Interviewer: Mmmmh

Respondent: Ya

Interviewer: And then how are you involving users in that processes? So, me as a customer of the system, how do you make sure when you're planning, when you are executing, when you are implementing. How is it that you are making sure I feel involved, in being part of the system?

Respondent: What we are doing, there is what you call census. What we do is we first take census and we determine the flow of passengers. We identify the flow of passengers from point A to point B. In each and every segment or in each and every area where the

people are living. So, we, we, we hire people to take census to determine the flow of passengers. From there we are able to schedule our bus service according to times, with the flow of passengers. So it will involve you for instance, because the people who will be taking the census will be interviewing you to say where do you stay, how did you come to this bus stop or to this station, where are you working, what time do you start working. If you are there at 6o'clock and your only time of work starts at 8 then it's not good.

Interviewer: Okay

Respondent: We must make it a point that if we pick you up at 7:30 then you will reach your destination at ten to eight. Then you will have ten minutes from where you have been offloaded to your place of work. So, we take census we do a feasibility study, a thorough feasibility study on how our passengers are flowing. So, we interview all the people at various stations, in various bus stops to find out what are their actual interests in terms of the passenger transport. So that in itself will give us an answer to say we need to schedule a bus let's say from Diepkloof to city of Johannesburg our running time will be thirty minutes. Then we know, that if you start your work at 8 then maybe we can pick you up at half past seven. Maybe we can pick you up at quarter past seven. So we interview the people, the people give us feedback and then we will implement according to the people, the way they, according to their interest.

Interviewer: Mmh

Respondent: Ya

Interviewer: So, so when does the, so I am assuming from the feasibility study, it means that it's done pre-planning so when you are planning they are involved. And then throughout other phases, like when you are implementing, after you have implemented, when they are using the buses, how do you involve them again and how do you get the feedback again?

Respondent: Immediately when we have started with the implementation process, then our stakeholder relations will get in touch with the communities, with the passengers to find out in terms of customer satisfaction we do what we call customer survey. We will do the survey just to test whether our implementation process has been fully completed and if there is something that is left behind then we will definitely fill it in. So we will do a marketing strategy, it's a marketing survey of our passengers, interviewing them and come up with the results. So, in other words the minute we implement our our services. The same implementation process must be tested. How is it going to be tested? Through a market survey or customer survey. We will do the survey interviewing the people from different areas and come back with the results.

Interviewer: Mmh

Respondent: Ya

Interviewer: Mmh

Respondent: Ya

Interviewer: Okay so is it possible for me to get the customer surveys and the marketing surveys?

Respondent: Ya I can arrange it for you

Interviewer: Okay okay. And then uhm. So, I was going to, the next question was going to ask the mechanisms that you use so I have noted that you say that you have a customer satisfaction survey and a customer survey. Then how often do you do them?

Respondent: Man. We can do it maybe once in a year

Interviewer: Once a year?

Respondent: Yes, once a year

Interviewer: And then with your routes, which phase, this is phase?

Respondent: This is 1B

Interviewer: 1 B. Which means the one from, is it the one from Dobsonville to CBD?

Respondent: Ya

Interviewer: Okay and Thokoza is part of it?

Respondent: And Thokoza is part of it, Ya.

Interviewer: So, the whole of Soweto and?

Respondent: Ya

Interviewer: And then so after doing the survey, do you take the information and present it back to the municipality?

Respondent: No, no after taking the survey, we analyse it ourselves, internally

Interviewer: Okay

Respondent: And and send it to and thereafter taking it to the city to say listen we need some changes on this route, eh eh eh our operating times must change from this time to this time. You know it is some sort of a consultation process with them. From there they will change their schedule according to the customer demand.

Interviewer: Okay, so that's very important. So as an operation company what is your role visa vi what's the city's role?

Respondent: Our role is to transport people to the city

Interviewer: Okay

Respondent: According to the schedules supplied to us by the city

Interviewer: So, you own the buses, or the city owns the infrastructure?

Respondent: The buses are owned by the city

Interviewer: So, you are involved with the operations. Including the people, people that work at the stations, so you are responsible for them as well?

Respondent: Ya

Interviewer: Ooohhh Okay

Respondent: Ya

Interviewer: And then you get the information you analyse you take it back to the city to consult to say this is how you can improve

Respondent: We are on probation during our trips or our shifts. Because according to the information before us, is that the people can be moved from this time to that time on that route on that route on that route. So, according to customer demand, because the main thing is to make sure that there is customer satisfaction

Interviewer: Ohhh okay, so that is your objectives as the operating company?

Respondent: Ya

Interviewer: Okay, with the surveys that you do, do you normally find out any good ideas that can be implemented that the customers are giving back.

Respondent: Yes, yes because you are talking to the people themselves and the people will tell you this us that is coming at 6 o'clock is not the right time. Because you will have to wake up at 4am in the morning and we only start working at 8 o'clock, please we need a bus for 7 o'clock. So, you must supply your service according to customer demand.

Interviewer: It makes sense because I was, I couldn't understand what the role of the operation company visa vi was the role of the department.

Respondent: Ya

Interviewer: So what you are saying is that the buses or the infrastructure is owned by the city the only thing ….

Interrupted by the respondent

Respondent: But what I going to happen is after five years, the buses, even this year, late this year we start with the process of transferring ownership of the buses from the city to the BOC, to the share holders

Interviewer: So, in terms of the designs, the technology in the bus at the moment it's the responsibility of the city

Respondent: It's with the city

Interviewer: So your surveys don't touch on that they only touch on the service

Respondent: That's right!!

Interviewer: Oh okay, that is clear now because one of the things that I was asking myself is so with your company , the operations company, do you also have social media that belongs to you not the city, do also have social media people under you like facebook twitter and

Respondent: Ehh, we do have for instance we do have our own website and all these where people can get in touch with us because we are the operating company. We are the young people who should be contacted when something goes wrong

Interviewer: With the service of the bus?

Respondent: With the service of the bus

Interviewer: Do you get complaints via that website, do you get…

Respondent: That's right

Interviewer: Then how do you deal with the complaints

Respondent: No no we, our stakeholder relations responds to that. Ehh sometimes we, we do people do come in and say they listen I have been complaining about this and this and this but we didn't get any response, so that you come in and you talk to them particularly our operations manager and say listen we will look into that and once that has been approved by the city then we will implement.

Respondent: Mmh

Interviewer: Okay so in terms of, Okay I hear you. So, in terms of the five year plan that you were saying the buses will be now transferred to or will be moved from the city to the operations company. How far are you with the five years plan? Is it now into the third or second

Respondent: We are now on the third year

Interviewer: This is now the third year? So you waiting two more years before you transfer everything

Respondent: Ya but we must start with the process now

Interviewer: Okay, so when you transfer, you transferring everything like the infrastructure, the stations will be the ones.

Respondent: No no the buses

Interviewer: Only the buses?

Respondent: Only the buses

Interviewer: But the schedule and everything else will still come from the…

Respondent: The city

Interviewer: So do you have any plans in terms of the technology that is in the buses. How to improve it. Like I use the BRT and I realized that the screens are not working inside the buses

Respondent: Ya

Interviewer: Uhm…The card service is a disaster especially when it is always offline. Uhm so those are the responsibilities that will not be moved to the cities like the paying system

Respondent: Ya, we are for instance for your information involving a very international, it's a global company with regards to digital information…

Interviewer: Okay

Respondent: Who is going to look into our systems and see where we can make some improvements.

Interviewer: Okay

Respondent: Ya

Interviewer: Ehh in terms of the buses, the systems inside the buses

Respondent: The systems from our our tags, is there at the stations, also the technology that is with the city and see how can we marry the two and make sure that we improve in terms of running time. Because sometimes people can take plus minus 15 to 20 minutes while they are being, when they getting into the buses. So, we need something very fast that can improve the situation 12:53

Interviewer: Mhhm. Ya. So at the moment the paying system is with the city?

Respondent: It's with the city ya

Interviewer: The only thing that…

Respondent: But we are already involving the digital company that will come to us and see where we can make some improvements

Interviewer: Do you have a terms of reference for that already or is it something that you are still building onto. It's still something that you are thinking…….

Respondent: No no no, we are still building on it

Interviewer: Oh okay, but as it stands, the only thing that will be transferred except the marrying of the two, is the buses. And then the card system, paying of the card system. You are still looking into its something that you are outsourcing.

Respondent: We are still working with the city. Ya

Interviewer: Okay, I am seeing two different things now. I'm seeing the product section which is the buses and the tags. And I am seeing the service part of it, which is the operations whether the buses come on time. Okay. Would you say that, uhm, your websites and the social media component plays a role in the Rea Vaya System?

Respondent: Very! Very! That's the way of communicating with our people. It's a marketing tool for us

Interviewer: Okay and then maybe…

Respondent: Because we cannot be such a big company and we are not known. It must be known to the public. And the only to do that is through this, ehh ehh, website and some other media facilities. Ya.

Interviewer: So they do help in improving the BRT system?

Respondent: They do help. Ya.

Interviewer: Okay, uhm. So if you had to refer me to some other people that I need to speak to in your organisation who would you say would be the relevant person?

Respondent: I will refer you to the operations manager

Interviewer: Okay, is he around though?

Respondent: He is around but we are going to have a meeting now.

Interviewer: Okay maybe give me, so so, when do you think I should do? Should I send you and email on msh so that you can connect me with

Background response: I think it's best to send an email

Interviewer: Okay, can I please get your email address

Background response: His email address is [redacted] his name is [redacted] he is the operations manager.

Interviewer: I would also like to speak to the stakeholder relations person.

Background response: That's me

Respondent: That's her

Date: 22 January 2018

Venue: Johannesburg road agency

Time start: 10:00am

Time end: 10:20 am

Interviewer: Khumo Sello

Respondent 6, January 22, 2018: City of Johannesburg's road and transport department

Interviewer: How are users involved in the planning of the Rea Vaya BRT bus system?

Respondent: Social media was introduced after the implementation. There is facebook, twitter, SMSs and suggestion boxes as a form of communication with commuters. Suggestion boxes are collected every week and followed up with reports. These reports are important in finding solutions for the problems. Suggestions and ideas are welcomed but not all ideas can be implemented. The barriers to implementing ideas for example, the Protea Glen Station commuters want to extend the route but this difficult because it was not initially in the planning. One of the innovative ideas suggested by commuters was to have a separate school bus to avoid congestion and safety for the students but at this point it's not feasible because Rea Vaya is a rapid and therefore caters for everyone.

Interviewer: What processes are used to involve users in the Rea Vaya BRT bus system?

Respondent: The turnaround time of 72 hours for the suggestion box. We have 5000 commuters and 200 complaints approximately. Different employees are designated a different communication platform to deal with complaints. Suggestion box implementation was trying to accommodate those who do not have access to cellphones etc.

Interviewer: What support does municipal department require to capture user feedback for the Rea Vaya BRT system?

Respondent: Fix the departmental issues like the card systems and customer training.

Interviewer: How does the city's department of transport process and analyze user feedback?

Respondent: First Capture and analyses according to the department. Then send it off to the relevant departments.

Interviewer: What support does a municipal department need in order to receive user feedback for the Rea Vaya BRT system?

Respondent: Budget constraints is one of the major problems. Despite this there are enough resources for the operation of the system.

Interviewer: What role does ICT and media play in user feedback about the Rea Vaya system?

Respondent: Helps with the interaction with commuters and there is a database of commuters. This enables for better communication about any changes at the bus stations.

Date: 21 January 2018

Venue: Johannesburg road agency

Time start: 13:00pm

Time end: 13:20 pm

Interviewer: Khumo Sello

Respondent 3, January 21, 2018, January 21, 2018: City of Johannesburg's road and transport department

Interviewer: How were users involved in the planning of the Rea Vaya System?

Respondent: There are numbers of ways the users were involved. The National Department does national household travel surveys. On a municipal level user complained about the time spend commuting, quality of service and cost of transport Metro bus user forum and Gauteng transport user group were representatives, we set up a vast consultative structure to explain what the thinking was behind the project. In the first instance the muting of the project was a response to the kind of historic issues that communities had been raising about public transport. The issue I raised earlier about PUTCO was actually the city's attempt to respond to people and saying but how come into so many years into democracy, the municipal bus system is not servicing township areas and why does it continue to service historically white suburbia. But then of course once we introduce it, the minibus sector saying: "how dare you come in here and take away bread of our table?" And it was really that context, that the discussion on Rea Vaya as alternative transport but a dignified one and linking areas that where historically disadvantaged. The user voice has always been core to the conceptualization of the project.

Interviewer: After receiving user feedback, how did you utilize it? What were the mechanisms put in place?

Respondent: It was throughout the project. The challenge with the Rea Vaya project was that, we were trying to explain an infrastructure project to people who couldn't imagine this idea of stations in the middle of the road. Buses that run at whatever frequency and so forth. So, we had a session with community representatives, where we started to talk about the things you have space to influence. So, for example a three-hour debate and discussion on whether there should be toilets in Rea Vaya stations for commuters or not. He cultural sensitivities around, if you put a single toilet that is not separated for gender what are the implications of that, so everything up to that level of detail, including for example delivery on the buses ……. People voted, for their preferred buses routes. From the conceptualization of the project right through to the day of launch, there was constant interaction with user representatives. Obviously not all potential users were spoken to but there lots of community consultation because JDA was managing the infrastructure

components of the project, we still had JDA separate consulting to the community and reporting back to us.

Interviewer: Why do you think the municipality needed the user feedback?

Respondent: The system is for users, ultimately yes the operator engagement took up a lot of our time because the need to transition for bus operators to become owners of the system. Operators where brought to the table to improve services for the users for now and the future and the fact that mini bus taxis are a really important component of mass transit but can they be the backbone of the mass transit system, in a city that was urbanizing as quickly as Johannesburg? The answer was categorically that they can't so if make them call to the ownership but being able to build this backbone of a mass transit system, that is not about now but very futuristic in its outlook. But also what would a mass transit system look like that is affordable to existing users but also attractive to draw people out their private cars to public transport.

Interviewer: If you had total look at the support the municipality needed to capture user feedback, what would say they needed?

Respondent: Looking back at 2006, technology wasn't where it is now, a lot of the session where face to face sessions. We particularly used transport month to go out listen to, engage with community members. Firstly I think, you needed the political wolf saying "we want users involved" and we want their voice. You needed the technical expert that was able to listen to what users were saying and translate that in some way or another form into the system. You need resources an understanding that for instance your commuters are working people and use public transport to go to work, so setting time outside working hours to give these commuters are voice. Face to face interaction played a very important role in the final conceptualization and delivery of the project.

Interviewer: In terms of the when the system was not running, how were users involved?

Respondent: There was tension between myself and the department. I requested for a user forum but by then each station had a feedback box, which I'm not sure if they still being utilized. As the implementation started to roll-out there issues around the phasing from paper ticket system to the smart card system, which again we pushed for focus groups with users to say "what should the communication look like to enable you to understand this transition". There was a lot of concern in understand user perspectives, in actual fact there was meant to be an ambassador to listen to, in real time, user feedback to be a link between the station and the control center to oversee problems at the station. The whole system is meant to be around the user experience and what an experience where you minimize user complaints because the system was just running the way it's meant to run. In many instances management has lost touch with some of the initial reasons to why the system was put in place. For instance, multiple doors in the stations mean, you don't have busses queuing to actually get people to enter from a single door.

In terms of the barriers what support does the municipality need, okay I think you've touched on the support of technology that is existing now rather than in 2006/7

The key issue is that, it doesn't matter what platform you use to elicit user feedback, it's the attitude in which you use to enter the relationship with users. Do you see users as an irritation or do you see users as the core reason for the existence of your department and your service? For me that is where there was a big mismatch between how the political office viewed the importance of user feedback, user communication and administration.

Interviewer: What would say are the barriers to municipalities getting that user feedback and implementing it?

Respondent: There is a big disjuncture between users of our services and officials as providers of the services. The biggest issue is which point do you as the provider of the service put yourself into the shoes of the user because as a user you want a particular level of service but as a provider you are taking a different approach; it's a job and now I have to go home its 5 o'clock. But as a user you would want someone to be on the other side when you call in the evening. It's that fundamental culture shift in an organization that says the reason our existence is to provide services to communities and that's why we are here. If I'm a car capped official running public transport how do I ever understand what's happening on the road?

Interviewer: In terms of the ideas, that were coming from users, what do you think the barriers for implementing them in a municipal department are?

Respondent: There is usually a request for the expansion of the service by most users. Given the nature of the project, the infrastructure span and get people understand why it can't get to an area overnight is a big issue. But I'll give you an example outside Rea Vaya where user feedback was very useful and important. If you've seen those grey commuter shelters, the city was meant to roll out 1400 of those shelters over a two-year period and the city wasn't paying anything for it. It was company a company that was going to put advertising on these commuter's shelters and they were going to roll them out. So, what we did was we built a little prototype of what this commuter shelter was going to look like. We went to Ghandi Square and rail station, because these were not specific to any mode, we wanted to speak to taxi commuter, to metro bus commuters, PUTCO commuters to say this what the commuter shelter is going to look like and feel, what do you think? Users picked out the problems the design team didn't notice lie "you've put the wheelchair space from a distance instead of first access". We modified the design based on that users said to us through that outreach. Even with the Rea Vaya station, when we had those sessions with potential users there was big push back against the architects and the design team. So initial the design were given, were actually bricks but users suggested they wanted to see through the station and that is how the art was inspired for the stations. The biggest barrier taking on board user views is a poor attitude from municipal officials when you start off with a presumption and when that is your departure point, then you don't treat users with as important stakeholders who are the

actual reason for the existence of your job. It's about getting that mindset right, and that the pure reason for your job is to provide service for the user, then you won't see them as an irritation. There was a pastor that called in at 702 complaining about the danger of the Rea Vaya station in her area for the children. We got back to her and she explained to us that the designers build the Rea Vaya reserves leaving no sidewalks for pedestrians. People continued walking where they historically walked and there was a danger of someone getting run over.

Interviewer: What role does ICT and media play in feedback?

Respondents: ICT and Media is vital because it's instate nous and immediate communication but also allows for two way communication and often we think communication is city government or the operator or talking to the user but rather it allows for two way and enable one spot out the user problems and deal with it . People get real time feedback but it's pointless to have a acebook page and a twitter account and take three days to respond. The problem is that people responding on social media are not the decision makers and so often the kind of answers they get feel like a post office

Date: 23 January 2018

Venue: Rea Vaya bus depot, Dobsonville

Time start: 08:00pm

Time end: 08:30 am

Interviewer: Khumo Sello

Respondent 7, January 23, 2018: Bus Operation Company

Interviewer: How are users involved in the Rea Vaya system?

Respondent: It is a difficult question because we are private company and Rea Vaya directly deal with customer complaints. Even if they come through to us we still refer them to Rea- Vaya stations. And if Rea Vaya receives complaints in relation to us they bring it through to us.

Interviewer: What is your side of business?

Respondent: It is just to run the system and operate the busses. We don't deal with advertising, we don't deal with crises communication

Interviewer: What does operations include? What does running the system mean for your responsibilities?

Respondent: We implement the bus schedules from the city to the drivers. The running of the busses is from the city, we just operate them in terms of the drivers

Interview: When it comes to the feedback you get from the city, what do you do with it?

Respondent: The operations manager deals with the issue if it can deal with it in house.

Interviewer: From your operations point of view, how would you say users are involve?

Respondent: I am not sure on that part, the operator manager would be in a better position to answer that question. The main department here is the operations department

Interviewer: So you appoint your own bus drivers?

Respondent: Yes

Interviewer: And the other staff?

Respondent: Also the other staff, except the staff at the station who are employed by the city. The city maintains the stations. We employ our own bus drivers and cleaners at the depot. It's very complicated because you never know where to draw the line. We are responsible for servicing our busses.

Interviewer: Who owns the busses?

Respondent: The city for five years, our contract with the city was from…..we started operating as Litsamaiso in 2015 on our own. In 2013 we were still operating under PIOTRANS.

Interviewer: What is Pio-trans?

Respondent: When the BRT system started Pio-trans was the first company and refer to it as 1A and we are the second company to be contracted by the city to run the Rea Vaya bus system phase 1B.

Interviewer: collect user feedback, what support would you need to do that?

Respondent: It's good for us to get user feedback even if it is not meant for us, it also affects us. We have high level meetings with the city for feedback, in order to improve our services

Interviewer: As an operating company, at which point were uses involved in the system. I understand you only joined Rea -Vaya after implementation, was it before the busses started running or after?

Respondent: I think it was before, because the passengers have always been there before the Re- Vaya system. They are the ones who consume the services so they have always been involved in phase 1A.

Interviewer: In terms of the user feedback, the ones related to operations is send to you, so what mechanisms are there for you to consider that user feedback? When you receive it what do you do with it?

Respondent: If it has to do with buses being lay, then if it concerns us, so we deal with it in house. (All operations start at Thokozo Park). Delays are also caused by motorists who use the Rea Vaya lanes. In Hillbrow, the motorists don't obey

Interviewer: In terms of ideas from the users, do you implement some of the ideas?

Respondent: Yes we do. See how best we can implement them

Interviewer: If the ideas are not feasible, what are the barriers?

Respondent: They are out of our control. The efficiency of Rea Vaya is out of our control

Interviewer: what are these barriers?

Respondent: Ja no hey, I can't think of any. Operations manager can answer better because he deals with the city directly.

Interviewer: Why do you think the city decided to have an operations bus system company?

Respondent: For transport effectiveness. To provide people with efficiency

Interviewer: If that's the point of efficiency, why did they choose to outsource only the operations company?

Respondent: It's the complexity of the entire system, the taxi drivers felt that bring the Rea Vaya bus system was going to interfere with their business and loose business. For the system to work, they had to make sure they involved the taxi industry. It would have been more efficient if the city insourced the operations system. We are basically here to handle the interest of shareholders.

Date: 23 January 2018

Venue: Johannesburg road agency

Time start: 13:00pm

Time end: 13:30 am

Interviewer: Khumo Sello

Respondent 3, January 21, 2018, January 23, 2018: Bus Operation Company

Interviewer: What processes are put in place to include users in Rea Vaya BRT system?

Respondent :The first I can say is that the BRT system was well marketed in communities it's currently serving, and the fact that it was fit for purpose in terms of travel speed something that has always been a problem around Joburg and other urban areas, and traffic congestion. As a user you feel involved because there is an interactive platform, in terms of social media and all that you can think of and also stations have communication platforms through a centralized place which we call the Operating Control Centre (OCC). Whatever happens in the stations including abnormalities/compliments they can be channelled through the centre and we are able to see from the control centre? So the OCC is like a central point where all stakeholders get the necessary intervention on passengers out there. Look at the control centre like you are looking at the airline control centre, it can tell you whether you will be delayed or not. It is a room and it is based in Johannesburg Road Agency on the 3rd floor and it is equipped with CCTV cameras and the camera are live therefore you can see what is happening in all the stations, the BRT routes to see if everything is up and running. So even if a bus is delayed the people at the OCC are able to see that the bus is delayed and also if the bus drivers have challenged they contact the OCC to inform them.

Interviewer: As a user how does the control center help me?

Respondent: There is an audio visual interactive system where the user is notified if there are abnormalities in the system, traffic congestion and as a user you will be able to control your time and take alternative transport and even within our own system we have other alternative buses that us different routes to get to town.

Interviewer: Who receives the social media information?

Responded: The city collects the information, there is a dedicated service and marketing department within the city that deals with such things.

Interviewer: As operations how do you get user feedback?

Respondent: We get user feedback from the city of Johannesburg, especially information related to bus schedules so that we can change accordingly and give the information back to the city and they will communicate that information back to the users.

Interviewer: At which point was the user involved in the system?

Respondent: The users are constantly involved because through the communication channels they raise their concerns and there are suggestions, recommendations through the service development and marketing department. The Rea Vaya system is not rigid in nature it constantly changes in response to customer demands. For example when customers need an earlier bus or late bus we have to alter the bus schedules to accommodate that. Firstly after getting the suggestions we go out and investigate if it is possible and then adjust the schedules accordingly.

Interviewer: How do you process the feedback?

Respondent: There are different stakeholders within Rea Vaya system, for example we have people who deal strictly with safety and security and some service are outsourced however we form a team. I am coming from a meeting where all the role players were in one room where we were sharing all the challenges and taking decisions. Collection of user feedback was one of the agenda items discussed amount other things.

Interviewer: The suggestions that are coming from the users are they implementable?

Respondent: Mostly they are, remember our main concern is getting the users to their destination on time. The difficulty in the system is when you have people who are currently not served by our system, people who want the system in their areas which involves additional infrastructure which is not something that can be implemented over time given the implications. But when we talk about the current users all their ideas are implementable.

Interviewer: What are the barriers to implementation some of the suggestions and ideas?

Respondent: The biggest barrier is capacity in terms of resources including assets such as the buses because people may need a bus every two minutes within pick hour and given the buses that we have it is not easier to implement. Another barrier is the arrangement of between people who were affected(mostly taxi industry) and the city which came with terms and conditions through contractual obligations as who needs to be hired and to first make sure that taxi drivers that were affected by the bus system are absorbed so in itself it can tell that capacity in terms of human capital expertise therefore you are not getting the most experienced or suitable people for the job because you have to comply with some of the arrangement. On the other side it is good because you are empowering people.

Interviewer: What is the role of ICT in the Rea Vaya BRT system?

Respondent: 80% of the system’s success depends on ICT like bus monitoring, being able to communicate with the drivers, to see what is happening in the stations and routes and take informed decisions. 80% of the successful operation depends On ICT and also we get customer satisfaction because of technology because we are able to respond to their needs.

Interviewer: What support does the BOC need in order to collect user feedback?

Respondent: Currently I think it is relatively expensive to get the accurate feedback because you only get it from people who are technology savvy or are in social media and have access to email because that is where most of the feedback comes from. But I am imaging a person who does not have access to that we need other ways that are accessible for them to give feedback. Like manual feedback outside of the suggestion box that are placed in the station. We need staff that can educate the people on the importance of their involvement and participation in the system to get enough feedback so that at the end of the day we don't dictate to people the service that we think is good for them.

Appendix 2: Participant information sheet

PARTICIPANT INFORMATION SHEET

User producer interaction in innovation: Rea Vaya Bus Rapid Transit system in Johannesburg

Greetings

My name is Khumo Sello and I am currently a part time student studying towards a Masters of Management in Innovation studies in the school of Management at Wits Business School. I am currently investigating the extent in which user feedback is used in public sector innovation using the City of Johannesburg's Rea Vaya Bus Rapid Transit system. The purpose of the study is to investigate the extent in which user feedback is used in public sector innovation.

I am inviting you to be part of the study through a one-to-one interview process. The research target group are City officials and the Rea Vaya BRT operating company employees, you have been selected to participate in this study due to your employment status.

The interview will take no longer than 30 minutes of your time. The arrangement of the venue and time for the interview is flexible to your suitability and availability; however, ideally the place and time would be at your area of work. I am also required to receive permission letters from your employers, should there be a need.

During the course of the interview you will be asked questions regarding your experience with the management of the Rea Vaya BRT system and user feedback in the bus system.

The interview will be recorded by the use of hand written notes by the researcher upon each question answered on the interview guide as well as the use of an audio recorder through preapproval by you.

Your participation is voluntary, you may refuse to answer any questions that make you uncomfortable, and you may withdraw at any time without penalty or loss. You will receive no payment or other incentives for your participation.

Your participation will be completely anonymous and you will not be personally identified in the final report. You will be referred to by the use of a pseudonym name with information of the relevant years of practice. Your organization's name will be documented generically in the following ways - Municipality, Private Sector, Provincial Government and any other general description.

The results of the interview and your personal views will not be linked to you in the final report. In the event that I use direct quotations from this interview, please note that your identity will not be revealed. Any comments that you make that you deem "off the record"

or similar, will not be quoted. Further, any information that you share will be kept confidential and can only be accessed by me on a password protected laptop. There are also no foreseeable risks associated with your participation.

The research undertaken is solely for academic purposes and once completed will be available electronically and can be accessed publicly on the Wired Space platform.

If you have any questions, concerns, or comments or if you would like a copy of the final report, please feel free to contact me at 321890@students.wits.ac.za or my supervisor's email address at gecik@yahoo.com (0114076409).

I thank you for your time and interest in this research. I am looking forward to your participation.

Appendix 3: interview guide

INTERVIEW GUIDE

KHUMO SELLO

	Municipal Officials	Operation managing company	Other…
Research question: *How could public institutions such as a municipal sector department, utilize user feedback to improve or enable effective public-sector innovations?*			
a) **Processes**: Why, what (mechanisms, stages, etc.), when, how, …	How are users involved in the planning of the Rea Vaya BRT bus system? What processes are used to involve users in the Rea Vaya BRT bus system? How are users involved in the Rea Vaya system as a public-sector innovation? How does the municipality utilize user feedback on Rea Vaya BRT bus system? At which point were users involved in the Rea Vaya BRT system? How does user feedback enable Rea Vaya BRT bus system? What user feedback mechanism are utilized	What processes are put in place to include users in Rea Vaya BRT system? How are users involved in the Rea Vaya system as a public-sector innovation? At which point were users involved in the Rea Vaya BRT system? How does user feedback enable Rea Vaya BRT bus system?	

	on Rea Vaya BRT system? When does the municipality use user feedback to improve Rea Vaya BRT system?	What user feedback mechanism are utilized on Rea Vaya BRT system? When does the municipality use user feedback to improve Rea Vaya BRT system?	
b) **Utilizations**: What (mechanisms), how (examples), who, …	Why does the municipality involve user feedback in Rea Vaya BRT system? What support does municipal department require to capture user feedback for the Rea Vaya BRT system? How does the city's department of transport process and analyze user feedback?	How does the city's department of transport process and analyze user feedback? In what ways are users of the system contributing to improving the Rea Vaya BRT bus system?	
c) **Barriers**:	What support does a municipal department need in order to receive user feedback for the Rea Vaya BRT system?	What role does ICT and media play in user feedback about the Rea Vaya system?	
d) Ideas	What does the department do with the	What does the department do with the	

	information received from users about the Rea Vaya BRT system? What role does ICT and media play in user feedback about the Rea Vaya system?	information received from users about the Rea Vaya BRT system? What role does ICT and media play in user feedback about the Rea Vaya system?	

Appendix 4: Customer satisfaction survey

