# An exploratory study into the potential of using mobile commerce to enhace the management of shopping centres in Gauteng

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**DECLARATION**

"I declare that 'An exploratory study into the potential of using mobile commerce to enhace the management of shopping centres in Gauteng' is my original work and has not been submitted for degree purposes previously; and that all the sources I have used or quoted have been indicated and acknowledged as complete references."

_____.

**Anton van Niekerk**

**30 November 2006**

**Date**

# ABSTRACT

This research is an exploratory study, aiming to investigate whether mobile commerce technologies can assist shopping centre managers in providing value added services to their direct (tenants) and indirect (shoppers) customers, while simultaneously assisting these managers to better manage the day-to-day operations of their shopping centres.

The modern economy is characterised by an increased move towards knowledge workers or the so-called knowledge economy. Consumers are being exposed to new technologies at an ever-increasing rate. As these technologies become part of daily life, individuals will start to look at ways that technology can enhance their lives. Looking at the adoption of technologies such as the Short Message Service (SMS), Multimedia Message Service (MMS) and mobile chat rooms, especially amongst the youth, it becomes evident that technology and more pertinently, mobile technologies by means of cellular phones, are already a part of daily life.

Shopping centres are no different to other commercial organisations. They also need to attract customers and differentiate their services from their competitors. The products offered by a shopping centre revolve around real estate, but more important is the ability to attract consumers (shoppers) into the centre, thereby providing a flow of traffic into the tenants' shops. The old adage of 'location, location, and location' is still very much an important consideration but as more and more shopping centres are built, consumers are starting to see a broader range of choices to consider when deciding which shopping centre to visit. It is no longer a mere choice of convenient location. Patrons expect the correct mix of retailers, providing the needed services; as well as security and a generally pleasant shopping experience. The critical issue for shopping centre management is to ensure that they attract the right retailers, not only so that all stores are occupied, but also to ensure the appropriate mix. How will centre management be able to attract the correct mix of retailers if these retailers are offered better services and higher volumes of patrons in competitor shopping centres? It could

be argued that value added services provided by shopping centres will start to enter the decision criteria for retailers.

A shopping centre, like any other business must ensure that its customers are kept happy. For the shopping centre, this includes maintaining positive relationships with the tenants (direct customers) as well as the shoppers (indirect customers).

It was indicated that a happy and repeat shopper is an important part of managing a shopping centre. It is also important to note that there is a correlation between the shoppers' dwell time and the amount of money they spend. As one of the goals of centre management is to increase the level of shoppers as well as the time they spend in the centre, any concept that will increase either of these should facilitate the management of the shopping centre. It should however be noted that it is critical to ensure that the technologies deployed are acceptable to the target market and do not cause irritation to other shoppers.

The tenants (primary customers) require an environment where they can safely provide their products and services to as many shoppers as possible, while facing as little competition as possible. The shopping centre management therefore attempts to provide them with the required services to ensure that the tenants are in a position to trade safely. In a modern environment, tenants require access to data exchange capabilities in order to ply their trade.

For the theoretical background of the technology, a study of existing literature on the subject in the form of industry articles, web sites and commercially available texts was undertaken. The information gathered in the literature review was then meshed with business management issues discovered during interviews undertaken for this study. This process provided the basis for determining how m-commerce technology can assist in enhancing the management of shopping centres.

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# CHAPTER 1
# ORIENTATION

## 1 Introduction

The modern economy is characterised by an increased move towards knowledge workers or the so-called knowledge economy. Consumers are being exposed to new technologies at an ever-increasing rate. As these technologies become part of daily life, individuals will start to look at ways that technology can enhance their lives. Looking at the adoption of technologies such as the Short Message Service (SMS), Multimedia Message Service (MMS) and mobile chat rooms, especially amongst the youth, it becomes evident that technology and more pertinently, mobile technologies by means of cellular phones, are already a part of daily life. Indeed they are becoming tools that we cannot live without. The question that begs answering is whether these technologies can be used to provide services that will benefit our daily lives, over and above security and interaction with other individuals. Can these devices be used to facilitate commercial activities?

Consumers are becoming used to having more information available to them during the decision making process, indeed they are spoiled by the ever-increasing choice of options. The dilemma for business now becomes finding innovative ideas to capture the attention of consumers, and providing them with the required level of information to enable them to make decisions, before they obtain this information from a competitor, which could also result in purchasing the competitor's product.

Shopping centres are no different to other commercial organisations. They also need to attract customers and differentiate their services from their competitors. The products offered by a shopping centre revolve around real estate, but more important is the ability to attract consumers (shoppers) into the centre, thereby providing a flow of traffic into the tenants' shops. The old adage of 'location, location, and location' is still very much an important consideration but as more and more shopping centres are built, consumers are starting to see a broader range of choices to consider when deciding which shopping centre to visit. It is no longer a mere choice of convenient location. Patrons expect the correct mix of retailers, providing the needed services; as well as security and a generally pleasant shopping experience. The critical issue for

shopping centre management is to ensure that they attract the right retailers, not only so that all stores are occupied, but also to ensure the appropriate mix. How will centre management be able to attract the correct mix of retailers if these retailers are offered better services and higher volumes of patrons in competitor shopping centres? It could be argued that value added services provided by shopping centres will start to enter the decision criteria for retailers.

This research is an exploratory study, aiming to investigate whether mobile commerce technologies can assist shopping centre managers to provide these value added services, while simultaneously assisting these managers to better manage the day-to-day operations of their shopping centres.

## 2 Problem statement

The primary purpose of this exploratory research is to explore whether mobile commerce technology can be used to enhance the management of shopping centres. The basis for the research are the following:

- What are the main problem areas facing managers of shopping centres in the following areas:
    - Issues/Concerns relating to making the shopping centre more attractive to tenants?
    - Issues/Concerns relating to making the shopping centre more attractive to shoppers?
    - Issues/concerns relating to day-to-day operations in the shopping centre?
- What m-commerce technologies are available?
- How can these m-commerce technologies be used to assist in resolving management issues?

## 3 Research objectives

Modern technologies offer an abundance of potential to enhance current approaches to business. The explosive growth in mobile technology space has not had a significant

level of penetration into the South African business scene, other than for use as a telephone.

The objectives of this study is as follows:

- Understanding the complexities involved in the management of a shopping centre, and focusing on the issues that can be addressed with mobile commerce technologies.
- Understanding mobile commerce technologies
- Determining possible application of the technology to the business issues.

## 4 Delimitations of the study

This study will not investigate:

- The commercial viability of implementing the technology
- The adoption of the technology by shopping centre managers
- Issues related to end user adoption
- Designs required for gaining acceptance with end users
- The hurdles to implementation of the technology

## 5 Importance of the study

Studies on technologies typically focus on the technology itself and on issues around adopting that particular technology. To this end, most studies on mobile commerce seem to focus on defining the technology in itself, or on the barriers to adopting the technology.

This particular study aims to take the research to the next level and investigate whether mobile commerce can be implemented to alleviate a particular business issue. The research will focus specifically on shopping centres as the target industry, a business sphere that has rarely been the focus of research in the discipline of technology.

Shopping centre managers should benefit by this research, as it will provide an understanding of how mobile commerce technology can assist them in managing their businesses. The application of the technology could be used in developing a similar

study in other industries. The technology framework, although rapidly changing, would be similar across industries. Application of the technology would differ mainly according to the management problem to be addressed.

## 6 Outline of the research report

This research report is divided into the following sections:

Chapter 2 provides an overview of literature on the topics surrounding mobile commerce, focusing on the development of the technology into a platform that can support mobile commerce.

Chapter 3 provides details of the method followed in conducting the research.

The results obtained from the research are summarised in Chapter 4.

Recommendations and conclusions are summarised in Chapter 5.

# CHAPTER 2
# LITERATURE REVIEW

## 1. Overview

The emergence of a new wave of technologies in the form of wireless and mobile networks and devices has brought into being a new incarnation of the concept of electronic commerce. Implementing and using this technology is sometimes considered to be complex due to the innovative technologies and unique problems presented by this new technology.

## 2 What is mobile commerce?

Differences of opinion exist in the literature regarding the definition of mobile commerce. According to Frollick & Chen (2004) some professionals define m-commerce as all forms of mobile communication with a customer. Others feel that m-commerce should result in some form of monetary gain. Frollick & Chen (2004) introduce the term *mobile information* as 'providing information between a company and a customer or employee via wireless data communication'. They warn about confusing the terms *mobile commerce* and *mobile information*. Although the argument on monetary gain is valid, it can be argued that the end result of successful communication with the customer results either in a purchase decision or in a reduction in cost to service the customer's inquiry. In both cases some form of monetary gain is the outcome.

For the purpose of this research, the following definition will be used: mobile commerce is concerned with the use, application and integration of wireless telecommunications technologies and wireless devices within the business systems domain (Elliot & Phillips, 2004). This definition includes providing information, which Frollick & Chen (2004) argue should be viewed as mobile communication.

In part, mobile commerce can be seen to deliver the right information to the right place at the right time (Siau & Lim, 2003). As such it should provide for the following:

- Access for users to the Internet from any location at any time
- The capability to pinpoint an individual mobile terminal user's location, thereby allowing for filtering of information provided, based on location

- The functionality to access information at the point of need and a needs-based data/information update capability.

The literature views mobile commerce as an extension of the existing concept of electronic commerce (e-commerce). Mobile commerce, however has features not available to traditional e-commerce, such as (Shi, 2004):

- Ubiquity. This is the primary advantage of mobile commerce. Users can obtain any information that they are interested in, whenever they want it, regardless of their location, through internet-enabled mobile devices.
- Reachability. Through mobile devices, business entities are able to reach customers anywhere, at any time. With a mobile terminal, a user can also be available to other people anywhere and at any time. The user can also limit his reachability to particular persons or at particular times.
- Localisation. Knowing a user's physical location at a particular moment also adds significant value to mobile commerce. With location information available, many location-based applications can be provided. For example, with the knowledge of a user's location, the mobile service can quickly alert him when a friend or colleague is nearby. It will also allow a user to easily locate an amenity, for example, the nearest ATM or restaurant.
- Personalisation. Services, applications and an enormous amount of information are currently available on the Internet. The relevance of information users receive is of great importance. Since owners of mobile devices often require different sets of service applications, mobile commerce applications can be personalised to present information or provide services in ways appropriate to the specific user.
- Dissemination. Some wireless infrastructures support simultaneous delivery of data to all mobile users within a specific geographic region. This functionality offers an efficient means to disseminate information to a large consumer population.

According to Shi (2004) a mobile commerce system should comprise the following:

- It should allow end users to perform transactions easily and in a timely manner, and ubiquitously
- It should allow products to be personalised or customised upon request
- It should fully support a wide range of mobile commerce applications for content providers
- Maximum interoperability is desirable because so many technologies are now available and new techniques are constantly being invented for the use of mobile commerce systems
- Programme/data independence is held, that is, changing the system components will not affect the existing programmes/data.
- End-to-end security is rigorously enforced.

## 3 Commercial transactions

As mobile commerce provides a means of executing commercial transactions, it is important to determine the requirements for conducting a transaction. Although this research does not intend to provide an overview of South Africa's commercial laws, it is within the scope of the study to determine the high level requirements of a commercial transaction. According to Siau & Lim (2003) these requirements are:

- Authentication. Each party needs to be able to authenticate its counterpart to make sure the counter party is who he claims to be.
- Integrity. Each party needs to make sure that the received messages are not altered or fabricated by someone other than the counterpart.
- Confidentiality. Each party wants to keep the content of the communication private.
- Non-repudiation. Each party wants to prevent the counterpart from afterwards denying the agreements that he has approved earlier.

**Note**: Parties do not necessarily have to know each other to enter into such a trading transaction.

## 4 Discussion of mobile commerce technologies

Mobile and wireless technologies are becoming more prevalent every day. Cellular telephones were once regarded as a luxury, but are now taking the place of residential fixed line telephones in a number of households. Indeed, the cellular industry is providing connectivity to individuals in South Africa who may never have been serviced by traditional fixed line infrastructure. In the discussion on the development of cellular and wireless network technologies, extensive use has been made of information published by Paterson (2005).

A distinction can be made between cellular-based technologies and wireless technologies. Cellular services are carried over a radio network and are first and foremost meant to be a telephone system. However, like traditional landlines, cellular infrastructure is also able to carry data. As standards and technologies have evolved, the ability of the cellular network to provide data services has developed into providing high-speed data services. It is expected that the revenue generated by cellular operators from voice will decline dramatically and be surpassed by data services. Wireless connections are data services using a variety of technologies specified by The Institute of Electrical and Electronic Engineers (IEEE) 802 standards. With the advent of Voice over Internet Protocol (VOIP), data services are also able to provide voice services. Although both services are wireless by definition and can carry both voice and data, they use different frequencies and network protocols for transmission and currently transmit to very different devices. With ever-converging technologies, however, these kinds of limitations are rapidly disappearing. Devices are becoming available that can support both cellular and wireless networks.

### 4.1 Cellular

The term cellular telephone is misleading, as the device has actually developed from radio technologies and not telephone technologies. This research will not go into the details of the entire development cycle leading up to cellular technology, nor will it focus on standards such as Code Division Multiple Access (CDMA) that are not in use in South Africa. This study will focus on the Global System for Mobile (GSM) standard used in the South African market.

GSM communication was initially developed in Europe during the 1980s, when European operators realised the market potential for cellular and were far-sighted enough to see that the analogue systems used in other countries would not be able to meet future demand and could result in interoperability issues. The lack of standards in European countries was a particularly big issue, as not only were users not able to roam seamlessly between countries in close proximity but the handset manufacturers did not want to produce variants in their models to match the different protocols. As a result of co-operation of governments and industry, an overriding benchmark was created to govern all European cellular operators. GSM is based on a digital system and was commercially launched across Europe from 1991. This standard was subsequently adopted in major Asian markets such as China, and became the widely adopted standard across the globe. It is estimated that out of the 1.5 billion mobile users across the globe, approximately 1.25 billion use GSM networks, compared to 202 million on the CDMA standard. GSM is based on a digital network, operating in the 900MHz to 1800MHz frequency band. It is a circuit switched service where users must dial in to maintain a connection when data communications are desired (Siau & Lim, 2003).

When the first two operators in South Africa (Vodacom and MTN) launched during 1994, they adopted the GSM standard for their networks, ensuring interoperability (roaming) with most networks and the use of handsets from the leading providers. The market in South Africa grew at a rapid pace, prompting government to grant a license to a third operator (Cell C) towards the end of 2001. It is estimated that the South African market had grown to around 23.1 million subscribers by the end of March 2005 (Paterson, 2005).

As the market for voice communications matures, the need for data services is increasing. The first and most successful data service on the GSM networks was the humble Short Message Service (SMS). SMS enables the sending and receiving of text messages to and from mobile phones. Up to 160 alphanumeric characters can be exchanged in each SMS message (Siau & Lim, 2003). SMS can provide simple mobile information services such as news, stock quotes, sport and weather. The uptake of this technology required virtually no marketing effort, but it is estimated that the networks currently switch around 300 million SMS's per month. Additional services

are currently on offer in the South African market, based on SMS functionality. These include data services, sales of ring tones and directory services. A number of banks also make use of SMS technology as part of their mobile banking service.

An attempt was made to provide access to Internet data and e-mail from cellular phones through the Wireless Application Protocol (WAP). WAP was the first commonly accepted standard for using a mobile device to access data over the Internet. It must be understood that accessing data from a mobile device differs in a number of ways from accessing the same data using a personal computer or laptop. The display screens are small, full keyboards are rare and memory capacity is low. As a result of the differences between devices, applications and data must be adapted to each device that is used for access. The WAP protocol is used to access web sites designed for mobile access (Elliot & Phillips, 2004). Although WAP has gained wide acceptance, some would argue that WAP does have a place in the world of mobile commerce. The WAP protocol was originally designed to allow for access over slow networks and to render pages as text on small displays. As access speeds increase with the move towards third generation (3G), and mobile devices are converted into smart devices with better quality displays and browser, the need for WAP seems to be diminishing. A further concern is that the WAP protocol charges per minute for the time the connection lasts, while an always on access service, such as General Packet Radio Service (GPRS), charges based on the volume of the download (Frollick & Chen, 2004). Although it would seem that new technologies such as GPRS will replace WAP, the WAP forum (the body looking after the WAP protocol) is looking at ways to evolve the protocol to play a role in supporting mobile connectivity as demands change.

GSM, also referred to as second-generation networks (2G) was configured primarily for voice and not data. This configuration provided a download speed of only 9 Kilobits per second, which was not conducive to data access; especially since using the WAP protocol to access data was charged by time. The networks therefore had to evolve to newer configurations to allow for faster data rates. The first step in evolving beyond GSM networks involved the move to GPRS, often referred to as 2.5G because it is seen as an enhancement of the 2G networks. GPRS introduced a packet-switched data service, using the existing network infrastructure, which could offer higher access

speeds (estimated at up to 160 Kilobits per second, but in reality around 45 Kilobits per second). GPRS does not send a continuous stream of data over a permanent connection, but works on a packet switching system that uses the network only when there is data to be sent. Although this was not a huge improvement, it did provide an option of using a pricing model based on volume and not time, with the added benefit of being an 'always on' connection (rather than the circuit switched network of GSM that required a dial-in). The access speed of around 45 Kilobits per second, however, did not compare well with the 56 Kilobits connection of a landline-based, dial-up connection. This constraint was not ideal for users who required the ability to download large files or to utilise applications on the network. The migration to Enhanced Data rates for GSM Evolution (EDGE) aimed to overcome this problem. EDGE moves the speed barrier on GSM networks forward to a theoretical 384 Kilobits per second. Achieving this rate does not require replacement of the underlying GSM network infrastructure, but rather makes use of new modulation techniques (Siau & Lim, 2003) This makes EDGE an attractive option both from a cost perspective and a speed to market perspective.

Third generation technologies or 3G are a set of mobile technologies that make use of an all new, high technology infrastructure, with networks and handsets, to allow for higher speed Internet access (around 384 Kilobits per second). The technology will further make available features such as live video calls, voice and television broadcasts. Rolling out the new network infrastructure is expensive, as it requires an upgrade to the existing infrastructure. 3G is based on a standard that evolved from the original CDMA standard, which was the competitor standard to the original GSM. Although 3G was supposed to be a worldwide standard, it is actually split among three camps (Paterson, 2005):

- CDMA2000. This standard is an outgrowth of the original 2G CDMA standard and is mostly used outside GSM zones, such as in the Americas, Japan and Korea.
- W-CDMA. Wideband-CDMA is the preferred 3G solution in countries that subscribed to the GSM standard. This standard itself is divided into two variants, namely Universal Mobile Telephone Systems (UMTS) and Freedom

of Mobile Multimedia Access (FOMA). The latter is a standard used in Japan, while UMTS is the prevailing standard in European 3G networks.

- TD-SCDMA. A lesser-known standard developed in China.

Although both MTN and Vodacom initially tested 3G technologies on their networks, Vodacom pushed the introduction of 3G technologies, while MTN initially took a more cautious approach by relying on the deployment of GPRS and EDGE technologies. MTN launched its own 3G services during 2005. Both operators have also launched the next generation of 3G. Vodacom is marketing the product as High Speed Downlink Packet Access (HSDPA), while MTN is marketing the service as 3G Evolved. This technology is estimated to take the data access speed from 384 Kilobits on the 3G networks to around 2 Megabits per second (Paterson, 2005).

### 4.2 Wireless technology

Although wireless technologies have followed a different developmental path from cellular technologies, these technologies are converging. Devices are now available that can make use of either cellular or wireless technologies.

Wireless technologies enable the connection of components or devices without the need for installing physical cabling. This is desirable, not only from an aesthetic perspective, but it also allows for providing connectivity at a lower cost. The distinct advantage of wireless technology is the mobility it affords. Not only do wireless networks allow for connecting of hardware to the Internet or a network of choice at any location (at connection speeds sufficient to make available large files, documents and applications), but they enable the provision of services that may otherwise not be feasible.

Wireless technologies however, are not without challenges that need to be addressed before wide scale adoption can be expected. Although this study does not focus on adoption of the technology, it is important to understand that there are some concerns, such as (Paterson, 2005):

- Security. Wireless transmissions can be intercepted when information is transmitted between the central server and the remote device. Some inroads have been made into resolving this issue, but a lot of work still needs to be done before users will be willing to trust the technology.

- Differing standards. Each of the wireless technologies in use today is built on different standards, which makes interoperability a challenge. Take, for example, a user who switches between a wireless connection to the network and connecting via GPRS. This normally requires switching between devices.
- Power requirements. The power consumption of the portable devices available today results in limited battery life. A battery life of two hours in a portable device that is used to access information is not sufficient. Users will not be willing to recharge the device constantly to maintain access to the network.
- Loss or damage. Mobile devices are more prone to being lost, damaged or stolen.

Wireless communications can be categorised according to the types of wireless networks they use. Typically each form the network takes depends on the area to be covered and the access speeds required to service the user. The following diagram provides a pictorial view of the areas covered by the technologies:

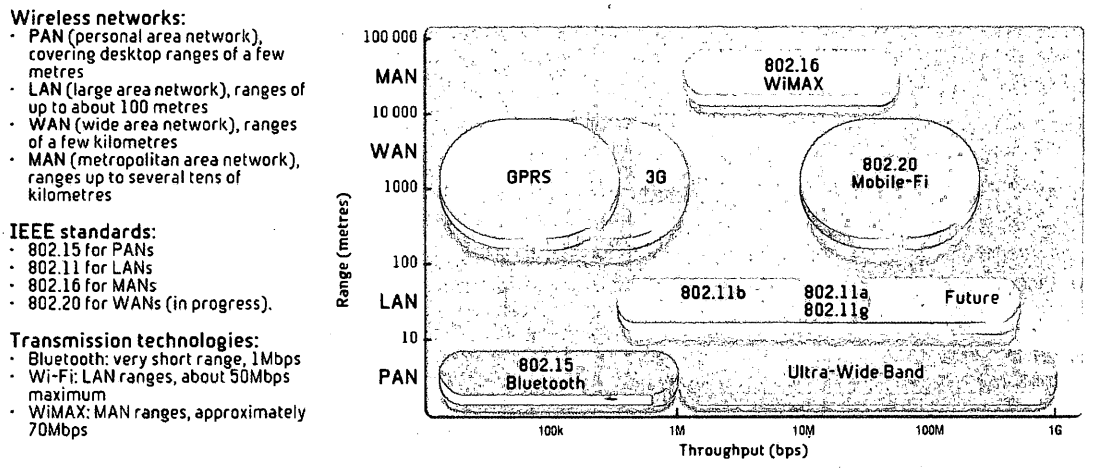



**Figure 1 Wireless standards: Adapted from Paterson (ed). (2005: 104)**

Each of the segments in wireless standards supports a variety of technology options to satisfy a broad range of needs.

The Institute of Electrical and Electronic Engineers (IEEE) is an American organisation that facilitates common standards between industry players. As a result, the IEEE has defined a number of standards to govern the types of wireless networks.

Bluetooth is a short-range wireless standard (up to 10 metres) designed to replace the cables and infrared links between electronic devices, such as printers, PCs and mobile devices (Siau & Lim, 2003). Bluetooth operates on the IEEE802.15 standard, allowing for connection of devices one-to-one or one-to-few at a connection speed of up to one Megabit per second. Although most applications of Bluetooth are intended as cable replacement, applications can include the setting up small networks for sharing of files or playing a particular game. Sharing of files over short distances with a standard, easy to use connection mechanism, can be useful in disseminating information. Although Bluetooth is currently the leader in short-range wireless networking, it is expected to be replaced in the near future by Ultra wideband (UWB), a technology that allows for speeds over 400 Megabits per second (Paterson, 2005).

A Bluetooth network is to be launched in 2006 at the Gateway Theatre of Shopping to ensure communication with customers and retailers (bizcommunity.com, 2006). The article further indicates that this system will enable tenant stores and shopping centre management to offer a variety of communications via cell phone to patrons within the shopping centre. These messages will range from upcoming events to specific special offers in stores. The system can also offer virtual competition registrations and store specific vouchers.

Wireless Fidelity (Wi-Fi) is a wireless network standard that operates in the IEEE 802.11 range. This technology is a short-range wireless network that is typically used by operators to offer hotspots in public areas such as hotels, airports and coffee shops. The 802.11 standard developed through a number of iterations; first the 802.11b standard allowed for 11 Mbs, then the 802.11a standard was released, allowing for up to 54 Mbps. These standards have largely been replaced by the newer 802.11g standard, allowing for access speeds of up to 54 Mbps, with higher security and a longer range. The latest versions of this standard 802.11n and higher introduces plans for speeds up to 100 Mbps. Most Wi-Fi hotspots are set up by commercial businesses such as hotels, restaurants and airports, with some areas covered by Internet service providers such as Telkom (Paterson, 2005).

An issue with Wi-Fi hotspots is that there are no billing arrangements between providers and as such there are no clean hand-offs between overlapping hotspots.

Users are required to re-log on to the new hotspot and make use of a different service provider. As a result 3G seems to have the upper hand in this area, as it allows for clean handoffs across cells, enabling better mobility (Paterson, 2005).

Wimax operates in the 802.16 range and offers long range connectivity, with access speeds expected to be around 200 Mbps. Typically this standard is implemented with a base station that broadcasts to many devices in a large area (Paterson, 2005). Wimax is expected to provide a real alternative to the last mile connectivity, that is currently reliant on the copper cable infrastructure, to bring broadband services to consumers. A number of local providers, including the cellular operators, fixed line providers and Internet infrastrucutre providers have started testing Wimax as alternatives to existing technologies (mybroadband, 2006). Wimax operate in the 3.5Ghz band, offering a restricted amount of resources. It is therefore expected the regulator (ICASA) will have difficulty in keeping everyone happy when allocating bands in the Wimax spectrum. It is also anticipated that services will not become commercially viable in the near future, with the end of 2007 being given as estimated dates by some providers (mybroadband, 2006).

## 4.3 Mobile commerce technologies

### *4.3.1. Wireless telemetry*

Wireless telemetry, sometimes referred to as wireless telematics, allows for the monitoring and analysis of data produced by a remote device by means of wireless technology (Elliot & Phillips, 2004). The Yankee Group defines telemetry as the use of mobile networks for machine-to-machine communications, for example, the remote monitoring of vending machines and parking meters.

### *4.3.2 Voice access to web*

VoiceXML is a mark-up language that allows the creation of a voice-based user interface to web-based applications through telephone-based access (Siau & Lim, 2003).

### *4.3.3 Wireless Coupons*

Wireless coupons can be described as an electronic version of coupons, downloaded onto a mobile device and used for specials or discounts on promotional items (Siau & Lim, 2003).

### *4.3.4 Wireless Kiosks*

Elliot & Phillips (2004) describe a wireless kiosk as using Bluetooth enabled devices to access data from a server (using push or pull access) when the mobile device is within wireless signal range. They further indicate that the data sources have a fixed location, making them 'information kiosks'. These kiosks may store data, but also physical goods such as cold drinks and snacks. Wireless vending kiosks are a specific application of wireless kiosks. These devices allows for ordering/retrieving of and paying for goods using a mobile device as the payment mechanism.

According to Elliot & Phillips (2004) static wireless kiosks can be classified into two main types. The first type is used to relay information about the geography and location- based information surrounding the kiosk. The second type is used to provide information that is more general in nature.

## 5 Location-based services

Location identification technologies are important to certain types of mobile commerce applications, particularly those whose content is varied based on the location of the user. The following methods can be used to determine the location of a mobile device (Elliot & Phillips, 2004):

- Global Positioning Systems (GPS) is a location technology that makes use of a system consisting of satellites orbiting the earth that provide accurate location information (Siau & Lim, 2003). GPS currently provides the most accurate determination of location. It is, however, limited in accuracy when the subject being located is inside a building.
- Mobile Network location refers to the ability to determine the location of a mobile device based on the signal picked up in a network's transmitter cell. The signal is then triangulated to determine the location of the device. Triangulation can be achieved through various methods. The simplest method is called 'Cell of origin', where the network monitors the cell location of all live devices on the network. 'Time of arrival' is a method that makes use of the base station to determine the relative time of arrival of each signal. The Enhanced Observed Time Differential is a more sophisticated method that is similar to GPS, but

makes use of base stations instead of a satellite-based system. The main method used is the Cell of origin approach where the mobile device itself is the primary means of locating the users.

Examples of services based on location technologies available in the South African market include C-Track and services offered by mobile providers to allow for an emergency signal triggered on the cellular phones, which determines the user's last location.

Location tracking services can offer a number of benefits outside of direct marketing. According to Easton (2002) some theme parks in the United States rent out location tracking devices to parents to track their children's location in the park. In the particular case mentioned in the book, the device resembled a watch that could be scanned at a kiosk, which triggered a real-time graphical view of the park showing the exact location of specific individuals.

## 6 Mobile Payment Systems

A number of options exist to implement mobile payment systems. These options include linking the mobile device to credit card-based systems or using the billing infrastructure of the mobile operators.

MasterCard and Visa have linked themselves to standards that will allow for linking personal credit card details to the mobile device. Payments are deducted from the credit card.

Credit card systems are, however, not optimal for high volume low value expenses. For purchases of low value items, such as paying for parking, it may be more suitable to make use of the billing infrastructure of the mobile service provider. Their systems are designed for high volume low value purchases (such as telephone calls). Current services, such as downloading ring tones, already make use of this infrastructure. Consumers are charged for the digital items using Value Added Service (VAS) rates. The mobile operator deducts the rate from the consumer's bill and transfers the money to the provider. Elliot & Phillips (2004) refer to the concept of 'reverse billing', where services are charged to the consumer's telephone account.

Electronic Cash is a further option to enable mobile payments. MTN in South Africa already has a co-operative agreement with Standard Bank through the MTN Banking service. One of the options of this service is to perform cash transfers between MTN Banking customers. According to Elliot & Phillips (2004) electronic cash, or electronic purse are terms used to refer to the value of cash stored electronically on a microchip, smart card or a mobile device. In a transaction using electronic cash, the payment amount is directly transferred from the consumer's device to the retailer's device.

A virtual wallet, according to Elliot & Phillips (2004) allow users to create replicas of their physical wallets by storing their credit card, debit card and membership card information. This information can be sent to a vending machine or point of sale system to arrange for payment.

Easton (2002) discusses another option for mobile commerce enabled payment. A device that was introduced in the United States during 1997 by Mobil (called the Speed pass) consisted of a radio frequency device that could be attached to a keychain. The Speed pass, more commonly referred to as a fob, allowed customers to pay for their fuel in two seconds or less. Payment was executed by waving the fob in front of a reader that would light up to indicate successful payment. The payment was automatically charged to the credit card associated with the fob. The use of this device was then expanded to include paying for video rentals, fast foods, and so on. The underlying technology used was Radio Frequency Identification (RFID). This concept was taken further by a company called 2Scoot, which entered into an alliance with Nokia to incorporate the fob into the faceplates of Nokia mobile phones (Easton, 2002). This approach offers more convenience, as most consumers always have their mobile phones with them. In South Africa a system of smart tags is used by companies such as Engen in the form of an 'eFuel Tag'.

# 7 Business Issues relating to mobile commerce

## 7.1 Privacy concerns

Mobile commerce relies on services that may infringe on the consumer's privacy. Services relying on the consumer's location, for example, can be regarded as infringing on the consumer's privacy as they require continuous tracking of the user.

Transactions may be stored regarding past purchases and information browsed to predict future purchases and personalise the information presented to the user. This information can infringe on the consumer's privacy if it is sold or used for purposes other than the intention stated when the information was originally obtained.

### 7.2 Legal implications

According to Goldstuck (2005) a number of legal and regulatory issues may arise from the vast number of services that may be on offer through mobile commerce. Although there are a number of laws specifically regulating e-commerce, Goldstuck indicates that there are no specific laws and regulations around m-commerce. One could argue that the laws relating to e-commerce should be applied directly to the m-commerce environment, but this approach presents a number of practical difficulties (Goldstuck, 2005). M-commerce technology is developing so rapidly that its legal framework seems to be an exercise in interpreting current laws that could have a general or a specific application to e-commerce. Internationally it seems that the rapid changes to technologies and the typical lag in legislation to keep up with this, is pushing towards a self-regulating environment – this is sometimes referred to as the 'soft law' option (Goldstuck, 2005).

According to Goldstuck, Some of the legislation in South Africa that may be applicable to m-commerce technology includes the:

- Electronic Communications and Transactions Act
- Lotteries Act
- Harmful Business Practices Act
- Films and Publications Act
- Convergence Act
- Regulation of Interception of Communications and Provision of Communication-related Information Act.

For the purpose of this study, only the implications under the Electronic Communications and Transactions Act will be investigated as this Act has a direct impact on the deployment of m-commerce services in shopping centres.

### *7.2.1 Electronic Communications and Transactions Act*

The Electronic Communications and Transactions Act (ECT) was promulgated in 2002, with the following objective:

"To provide for the facilitation and regulation of electronic communications and transactions; to provide for the development of a national e-strategy for the Republic; to promote universal access to electronic communications and transactions and the use of electronic transactions by Small Medium and Micro Enterrises (SMME); to provide for human resource development in electronic transactions; to prevent abuse of information systems; to encourage the use of e-government services; and to provide for matters connected therewith." (Republic of South Africa, Electronic Communications and Transactions Act, 2002)

The Act attempts to take a technology-neutral stance in regulating the general legal treatment of contracting by electronic means, irrespective of which device is used. The ECT Act is based on (Goldstuck, 2005):

- The EC Directive 2000/32/EC on electronic commerce drawn up by the European Union
- The model law on electronic commerce, developed by the United Nations in 1996
- The United Nation's 2001 model law on electronic signatures.

The main principles underpinning the act are as follows (Goldstuck, 2005):

- Technology neutral
- Legal recognition for data messages
- Writing, signature and original document
- Formation, validity, time and place of contracting
- Admissibility of electronic evidence
- Consumer protection
- Enabling the use of digital signatures

The ECT act is an important landmark in the use of electronic means to enter into transactions. Before this act, parties entering into transactions were bound only by written and verbal contracts (Goldstuck, 2005). The ECT Act, for the first time, provides legal recognition to agreements that were reached and concluded through electronic means. Under the Act an SMS, for example, may be regarded as valid, just like a signed paper under earlier legislation (Goldstuck, 2005). Although the Act introduces the use of technology, it does not negate any of the legal requirements covering commercial transactions. The parties must still, for example, satisfy the requirements for establishing a contract. (Goldstuck, 2005)

The Act further aims to provide consumers with unprecedented levels of protection when entering into electronic transactions (Goldstuck, 2005). Should a supplier fail to adhere to any of the logistical and transaction information requirements of the Act, the consumer, under specific instances and in specific markets, would be allowed to cancel the transaction (Goldstuck, 2005). These compulsory conditions can be described as more robust terms and conditions. The Act may, however, have placed unintentional constraints on m-commerce. Under the Act a supplier, for example, must indicate (Goldstuck, 2005):

- Full name and legal status
- Physical address and telephone number
- Membership of any self-regulating bodies to which the supplier belongs or subscribes to, and its contact details
- Any code of conduct to which the supplier subscribes and how the consumer can access the code
- In the case of a legal person, the registration number, the names of its office bearers and its place of registration.

The Act specifies that the consumer must also be able to store information relating to the contract. If the supplier does not abide by the rules contained in the act, the consumer may be able to cancel the transaction.

The requirements on data displayed are obviously not achievable based on the limited storage, bandwidth and display sizes associated with mobile devices making use of SMS's to conduct transactions.

A section of the ECT Act is formulated as a code of conduct, stating that a service provider who belongs to a recognised industry representative body (with a code of conduct) may obtain some statutory protection. The Wireless Service Provider Association (WASPA) was formed in 2004, with the support of Cell C, MTN and Vodacom (Goldstuck, 2005). This body aims to promote good practices, undertake industry lobbying and provide soft laws to govern their actions. The code of conduct of WASPA covers a broad range of issues, including spam, adult services, subscription services, display of pricing, terms and conditions, and competitions (Goldstuck, 2005). The code makes provision for rapid changes to be implemented as changes occur in the technology and the market (Goldstuck, 2005).

# CHAPTER 3
# METHODOLOGY

## 1 Introduction

This research is intended to provide an exploratory study into the use of mobile commerce technology within the context of enhancing the management of shopping centres. The format is therefore to undertake a study of the available technologies and to determine the day-to-day management issues faced by shopping centre managers. The information on available technologies is then applied to the management issues to determine whether mobile commerce technology could address the issues.

It should be clear that the intention of the study is not to determine:

- Whether the technology in itself is mature enough for implementation
- Whether it would be feasible to adopt and implement the model
- Whether the end user will actually adopt the use of the technology.

## 2 Research design

### 2.1 Research methodology

For the theoretical background of the technology, a study of existing literature on the subject in the form of industry articles, web sites and commercially available texts was undertaken. The information gathered in the literature review was then meshed with business management issues discovered during interviews undertaken for this study. This process provided the basis for determining how m-commerce technology can assist in enhancing the management of shopping centres.

The researcher did not find previous academic research that focused specifically on the application of m-commerce technologies.

To define the business issues faced by shopping centre managers, the study used a qualitative approach to gather the required information from these managers. The interviewer made use of a semi-structured questionaire to guide the interview. This guided approach was used to facilitate consistency in the interviews and to ensure that all the relevant areas were covered.

## 2.2 Target population and sampling frame

Sampling is based on the idea that by selecting some of the elements of a total population, conclusions can be drawn about the entire population (Cooper & Schindler, 2003). In designing a sample, the researcher can use either probability sampling or non-probability sampling to determine the representation of the sample (Cooper & Schindler, 2003). Probability sampling is based on the concept of random selection, involving a procedure that will ensure that each element of a population is given a known (non-zero) chance of being included in the sample (Cooper & Schindler, 2003). With non-probability sampling, the sample is not random and could therefore be subjective (Cooper & Schindler, 2003).

As this was an exploratory study aiming to determine high level needs that are typical of managing a shopping centre, probability sampling was not required. This study therefore made use of non-probability sampling.

Purposive sampling is a non-probability sample technique that conforms to certain criteria (Cooper & Schindler, 2003). Purposive sampling can be either judgement sampling or quota sampling. Judgement sampling occurs when a researcher selects specific sample members based on some criteria (Cooper & Schindler, 2003).

The target population of this study included regional and super-regional shopping centres operating in Gauteng. Shopping centres are classified as follows by the South African Council of Shopping Centres (Broll Property Group, 2002):

- Super Regional as a centre with floor space in excess of 100 000 square metres.
- Regional shopping centres as a centre with floor space of between 50 000 and 100 000 square metres.

Contact details for the shopping centres were gathered from the online yellow pages.

Regional and super-regional shopping centres were selected as the population, as the researcher assumed that they would face more pressure to address management problems, due to their size. Further, there could also be additional factors in play stemming from their size, such as large volumes of consumers, a higher volume of

more demanding tenants, parking constraints resulting in crowded terminals when paying for parking, and the use of escalators and elevators.

As this was an exploratory study that was conducted under constraints of time and budget, the sample taken was relatively small. The researcher expected that the daily operations, and therefore the management problems, would not be substantially different from one shopping centre to the next. The sample elements included in the study were based on convenience and the availability of each shopping centre manager for an interview.

The targeted shopping centres were:

- Brooklyn Mall (Regional)
- Westgate (Super Regional)
- Eastgate (Super Regional)

### 2.3 Measurement Instrument

Questionnaires can range from structured to completely unstructured and can contain the following three types of measurement questions (Cooper & Schindler, 2003):

- Administrative questions
- Classification questions
- Target questions.

Administrative questions are used to identify the participant, interviewer, interview location and the conditions of the interview. These questions are typically asked before the interview, and are useful if the need arises to identify possible sources of error (Cooper & Schindler, 2003).

Classification questions usually record socio-demographic variables that will allow for the grouping of participants' answers to reveal patterns to be studied (Cooper & Schindler, 2003).

Target questions address the issues under investigation and can be structured (providing a fixed set of choices) or unstructured (providing a frame of reference for the answers without limiting the response) (Cooper & Schindler, 2003).

The type of interview is also an important consideration in the question structure. In unstructured interviews, it is the interviewer's task to encourage the participants to talk (in depth) about the particular topic (Cooper & Schindler, 2003). The in-depth interview encourages a participant to provide as much information as possible in an unconstrained environment, with the interviewer using a minimum of prompts and guiding questions. When more focused in-depth interviews are used, the interviewer uses a set of guiding questions to promote discussion and elaboration by the participant. During these kinds of interviews, the researcher will guide the direction and coverage of the topic (Cooper & Schindler, 2003).

This research study made use of semi-structured interviews. A list of questions was defined for use during the interviews to facilitate validity. The instrument was divided into the following main areas:

- Issues/concerns relating to making the shopping centre more attractive to tenants
- Issues/concerns relating to making the shopping centre more attractive to shoppers
- Issues/concerns relating to day-to-day operations of the shopping centre.

No existing measurement instruments could be found that could be applied during this research. The researcher therefore designed an instrument with questions covering the main areas above.

Interviews were recorded on tape with the permission of the interviewee and transcribed. In instances where the interviewee refused to have the interview recorded, the researcher manually recorded the answers as part of the interview. Interviews were then transcribed and e-mailed to the respondents to check for validity.

### 2.4 Data analysis

The researcher reviewed the interview data to condense the results into common areas of concern for each of the categories in the questionnaire. The summary of the results took into consideration only the common problem areas that were evident from the majority of the respondents, combined with the ability of the technology to resolve

the particular issue. Issues that did not come up in the majority of the interviews were assigned a lower level of importance, with the possibility of being discarded.

## 2.5 Form of the results

The results of this study take the form of a summary of the major concerns uncovered during the research and suggestions on applying the information presented in the literature review on mobile commerce technologies to the business concerns.

# CHAPTER 4
# RESEARCH RESULTS

## 1 Introduction

Shopping centres provide the infrastructure and facilities for tenants to trade and have a contractual relationship with the tenants who rent space in the centre. The tenant is therefore the primary customer of the shopping centre management. On the other hand, the tenant's primary customer is the shopper. The shoppers must first move through the shopping centre before they reach the tenant. Shoppers are therefore indirect customers of the shopping centre, as neither the centre nor the tenants would have a reason to exist without the shopper. From that perspective, it is important for the shopping centre management to understand the needs, desires and wants of shoppers, as this will allow them to ensure that shoppers are kept happy and continue to patronise the shopping centre.

From the research, it would appear that the demographics and the needs of the shoppers who frequent the shopping centre have a major impact on the shopping centre. This affects not only the planning of facilities, programmes and the tenant mix, but has a direct impact on the level of technology that the shopping centre needs to deploy to enhance the shopper's experience.

Results indicated that a loyal and repeat shopper is an important part of the business of managing a shopping centre. A further point of importance that was raised is that there is a correlation between a shopper's dwell time in the shopping centre and the amount of money spent. As one of the goals of centre management is to increase the number of shoppers and the time they spend in the centre, any concepts that will facilitate this should improve the management of the shopping centre.

The respondents to the research included one regional and two super-regional shopping centres. The South African Council of Shopping Centres classifies shopping centres as follows (Broll Property Group, 2002):

- Super Regional as a centre with floor space in excess of 100 000 square metres.

- Regional shopping centres as a centre with floor space of between 50 000 and 100 000 square metres.

All the shopping centres indicated that they had CCTV systems in place that were primarily used as a method of ensuring safety and security in the mall. The CCTV system is a complex computer-based system that allows digital images to be recorded to a hard drive. Cameras were also used as a re-active measure if an incident had taken place. The camera focused on the incident to record the situation that followed.

## 2 Summary of findings

### 2.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

**What are the main areas that will make a shopping centre more competitive?**

All the respondents agreed that the competitiveness of a shopping centre is first and foremost a result of the tenant mix. The consensus was that the national stores found in all the major centres do result in shoppers visiting the centre, but that the independent tenants or non-franchised stores are the ones who differentiated the shopping centre, as they are difficult to replicate elsewhere. These tenants provided the "vibe" in the shopping centre. The national stores do not offer differentiation, as shoppers can visit these stores in any other shopping centres as well. It is important to achieve a healthy mix and balance between the number of independent stores and the number of national chain stores that are represented in the centre. This allows the shopper to go to one destination and not only get what they want from the national stores but also get the individuality they get from the independent stores.

The other main areas of competitiveness are provided by the environmental factors and the location of the shopping centre. If the location is not convenient, even the best tenant mix will not provide an incentive for shoppers to travel to the shopping centre on a regular basis. The environmental factors include security, appearance, cleanliness, available parking, convenient access and the quality of the experience the shopper has on visiting the centre. It is important to ensure that the equipment that the shopper interacts with is functioning. For example, a quick way to frustrate shoppers is to have parking payment systems that don't work. Although it is inevitable that equipment will

fail at some stage due to high usage, inoperability must be kept to a minimum and faulty equipment should be repaired as quickly as possible.

The respondents indicated that shoppers would not necessarily visit a shopping centre due to the unique technologies deployed in the centre. Shoppers visiting the centre are focused, not on technology but on seeing, feeling and experiencing what is on offer.

**How do you determine the appropriate mix of tenants for the shopping centre?**

Although the business of managing a shopping centre is about renting out the space, one of the respondents specifically indicated that it is more important to find the appropriate tenant (one who will complement the existing tenant mix) rather than just have the space rented out. Although the other respondents did not directly indicate this, there is no reason to doubt that the same principle applies in all shopping centres. The right tenant mix is critical to the success of the shopping centre. From the responses, it seems that the tenant mix is determined by what is on offer in other shopping centres, by studies into the demographics of the shoppers and based on surveys conducted with shoppers to determine their wants, needs and desires. A further consideration is to minimise duplication of tenants within a category, based on calculation of the number of square metres, as well as the total area occupied by a category (such as jewellers) as a percentage of the total floor space. Supply and demand is taken into consideration, as it is important to ensure that the tenants are successful and do not face undue competition from other vendors in the same centre. It is interesting to note that most respondents indicated having multiple tenants in the same category does not necessarily increase competition. Shoppers often park on the side of the shopping centre they want to visit and do not go into the other areas. As result they are often unaware of competitors offering similar products in the same shopping centre.

**Do you provide a call centre for tenants?**

Communication between the tenant and the shopping centre management is vital to maintaining good relationships and to allow for information to be transferred and complaints to be logged. In all instances, the shopping centre management was available in the centre during normal hours of operation. Calls could be placed to the shopping centre management during these hours or communication could take place

in person at the shopping centre management office. Communication after the normal hours of operation was provided through a control room that is manned 24 hours a day.

The respondents indicated that they also had facilities that allow the tenants to send an e-mail communication to the centre management. One respondent specifically indicated that the tenants hardly ever use the e-mail channel for correspondence.

**Please discuss the importance of providing marketing facilities in the centre for the tenants.**

In all cases tenants contribute a percentage of their basic rental to a marketing fund. The intention is for the money to be used to market the centre as a whole and to create awareness of the shopping centre as well as events that are planned. When events are executed, it is important to create a marketing scenario where customers can buy, it is no use if they just come and look at the show and then leave again.

Marketing of both the national and independent tenants' businesses are mostly done by the tenants themselves. Once shoppers are attracted to the centre through the combined efforts of the tenant and the shopping centre, it is up to the tenants to attract the interest of the shoppers. This can be done through effective use of the display area in the shop and the signage outside the shop. One of the respondents indicated that a tenant should attract a shopper's attention within three seconds of passing by his shop front. If the tenant does not succeed in doing this, the opportunity to sell is missed. With thousands of people passing the shop front, the tenant must devise an attractive reason for the shopper to come into the shop. If a shopper stops and looks at a shop front, the tenant has a 50 percent chance of a sale. If the shopper enters the shop the chances of a sale increase by another 25 percent, with the final 25 percent determined by product and service. Shop front marketing is therefore very important for marketing the tenant's goods. From the responses it seems that any advertising offered in the centre should not distract the shoppers' attention and focus from what is actually offered in the shops to what is promoted in the advertising media. Tenants should however, employ any device that enables them to speak to a customer the moment he passes the shop, without being a nuisance or causing disruptions for other shoppers or neighbouring tenants.

All the shopping centres have a PA system and a music system throughout the centre. These systems allow for music as well as adverts for branding to be broadcast. Most respondents indicated that these systems are available to the tenants to increase brand awareness, not for product; remembering that broadcasting should not disturb the ambiance that the shopping centre tries to create. The use of this system allows an enterprising tenant on one side of the centre to sell sunglasses, for example, to the people who frequent the other side of the centre. People are creatures of habit and they do not generally move through the entire shopping centre. They have their normal areas that they go to – there are shoppers who will have shopped in a particular centre for years but only go to one section and have never even wandered into another section. Through broadcasting shoppers may receive information that will move them into another section.

One of the respondents indicated that tenants have mixed emotions about a centre providing them with assistance and marketing facilities. This respondent mentioned a focus group facility, where tenants have the opportunity to meet and discuss marketing issues, but that these sessions are not well attended. This suggests either that the tenants are happy with the existing marketing thrust of the shopping center or that they are not interested in improving their own marketing efforts.

Marketing is typically prescribed at store level for the larger tenants and therefore they are restricted in their creative use of opportunities available through the centre.

One respondent indicated that billboards are available in the common areas, but that these are not rented out to tenants, but to national brands.

**Discuss the mechanisms used to provide tenants with a system that allows for registering and distributing information on special offers.**

Most of the respondents indicated that the Public Address (PA) system is available to tenants to alert shoppers of their brands.

Two of the respondents indicated that the tenants are allowed to make use of the shopping centre website to communicate their special offers. The systems are updated through the management offices. Tenants communicate information that is to be published to the centre management, who will update the relevant web site or add the information to be broadcast over the PA system. It would appear that this creates an

additional burden on the admin staff that forms part of the shopping centre management. It also requires that the tenant visits the shopping centre management office or telephones the details to them. One respondent indicated that the web channel that is available to the tenants is not utilised as well as it could be.

**Does the shopping centre have a website?**

All the shopping centres have a website, but they differ in the amount of information on the tenants that are allowed to be published on the site. Some allow the tenants to add information on their products, while others only allow information on the tenants themselves, with no product related information.

**Are tenants provided with space on the website to promote themselves/their goods? Please explain.**

Although all the shopping centres have a web site, not all allow the tenants to market their goods through this channel. All the centres include information about the tenant stores, but not all allow them to market more than their branding. Some centres allow the tenants to include information about the store as well as the goods they sell and the current special offers. The centres that do allow for this indicated that it is not utilised as well as it could be. One respondent indicated that the web site is only useful if it is kept up to date all the time. Most of the centres indicated that the best way to accommodate the tenants is to provide links to the tenant's own web sites in the shopping centre's site.

The shopping centre website is mostly used to market the shopping centre and to provide information regarding the activities that are planned in the centre.

**What mechanism is used by the tenants to provide sales figures for the shopping centre?**

The rental charge of a shopping centre is based on a charge that is calculated using the annual turnover of the tenants. The actual charge is based on a trading density calculation that is calculated based on revenue per square meter.

The tenants provide monthly information on their turnovers that are used for statistical analysis to see, for example, which categories are performing better than others, and

where the growth areas are. Anchors have to provide audited turnover figures on an annual basis.

The turnover figures are provides by hand (using a tear of slip on the rental statement), fax, e-mail or telephone. One respondent indicated that it would make sense to have a system that provides a website where the tenant can log into a private area where they can submit the information.

**Do you provide wireless network access to tenants?**

None of the shopping centres provide wireless network access to tenants. All provide facilities such as panic buttons in each shop, cameras linked throughout the centre and smoke detectors. One respondent indicated that each of these devices have its own wires in the ceiling. The tenants also have their own communications (e.g. Telkom) and the connections to the satellite systems for credit card processing, television facilities and internal radio stations (e.g. internal Mr Price radio station). A lot of data flows through the centre. It was indicated that some of the tenants would not want to share the same infrastructure due to confidentiality.

**How do tenants log complaints with the shopping centre?**

All centres make use of the manned management office and the control room to provide facilities for tenants to communicate complaints to the centre. These complaints can take the form of a verbal complaint, telephonic, fax or e-mail. It would appear that the e-mail channel is not frequently used.

**What value added services do you offer tenants?**

The overall response in terms of additional value added services mostly revolved around providing services that create an environment in which the tenants can trade. It revolves around creating an environment for shoppers to feel safe and comfortable, resulting in the shopper experiencing their visit to the centre as an outing.

One of the respondents indicated that they offer training courses and consistently communicate with the tenants as to what they believe will enhance the shopping experience. Advice is also offered when requested.

## 2.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers

**Please discuss the facilities offered for shoppers to communicate with the shopping centre.**

All the respondents provide manned information kiosks in the shopping centre that is used to assist shoppers, distribute pamphlets, as well as to communicate complaints and suggestions back to the shopping centre. Telephonic channels fax, e-mail as well as walk in facilities to the shopping centre management is provided. One respondent indicated that each one of our cleaners and security guards are frequently contacted by shoppers to obtain information such as finding out where shops are.

The shopping centre website is used to communicate information to both the tenants and shoppers.

**Do you make use of electronic information boards?**

None of the respondents made use of electronic information boards. One respondent indicated that the biggest problem with electronic boards is maintenance and people damaging it. All respondents indicated that they know that facilities such as touch screens are available. These technologies are constantly being looked at, but have some inherent concerns, such as the following:

- Used for advertising as well as providing information. This provides too much information on one device and reduces its usability.
- Shoppers are not really using the boards
- Only allows one person at a time access to the information.
- Used for additional services such as providing daily horoscopes. The younger generation then spends a lot of time interacting with the board, looking for all this information resulting in others not getting the opportunity to use the board.
- May not fit in with the profile of the shoppers frequenting the shopping centre.

One respondent indicated that they are pretty conservative, and like the tenant information board as a flat thing, normally colour coded and simple. He further

indicated that they don't think the customer base is so high tech that they will want the board to be electronic, although he also indicated that he must admit it is changing on a daily basis.

It appears that the consensus is that most shoppers quickly pick up where particular shops are and know how to get there. The younger generation does not seem to make use of the directory boards. They tend to have more time to window shop. They know where the shops are. The more mature shoppers often don't have time to shop around and go to the shops they know.

When prompted about an option to provide a facility that utilises a cell phone to provide this capability, one respondent indicated that if you go with a cell option that is charged for (referring to a service where you sould use an SMS interaction with the network that will be charged for by the operator), shoppers might not use it. If the shopping centre pays for the use of the facility, the young people might use the facility for all sorts of things, leading to a high cost to the shopping centre. The respondent further indicated that from an economic point of view it is not likely to generate substantial additional turnover for the shops in the centre, to increase the revenue to a point where the additional costs can be recovered.

The respondents also did not feel that the use of electronic information boards will differentiate the shopping centre and that shoppers will not necessarily choose to go to a particular shopping centre purely because of this.

**Please discuss the importance of providing shopping centre layout maps to shoppers.**

All the respondents indicated that it is important to provide shopping centre layout maps to shoppers. All the shopping centres have them in place, using traditional boards. One respondent indicated that: "You can make it interesting, if something exists where tenants can advertise easily. The most expensive part of using these boards for advertising could be artwork, as you would get someone outside to do it. It would be nice if a tenant could sit in his shop and could do his own artwork and send it via the network to this board – provided there is space available." The respondent further pointed out that the tenants in the centre are traders with little time to explore technology.

**How are the centre layout maps updated when occupancy changes occur?**

The centre maps are set up to allow for changes to be made quite easily without having to redo the entire board. All respondents indicated that changes in tenancy do not typically occur that frequently, some indicating that this happens typically every month or two. Most of the respondents indicated that the boards are typically updated once a quarter, with one indicating an update is done once a month.

The current boards are not updated to reflect tenants that are closed for renovation or for stock takes, as this would require too many updates. One respondent indicated that it could be useful to update the board with status information on tenants such as closed for renovation, stock take, etc. as it would reduce some of the shopper's frustration when finding that a shop is closed and allowing them to look for alternatives. The respondent indicated that the biggest challenge would be to keep the board updated and to get the information from the tenants. Another respondent indicated that the information about renovations is posted in the particular shop long before the renovations start, to make shoppers aware of it.

One respondent indicated that as part of getting the basic service right, you need to make sure that the plans that you have got is a user friendly plan. He further indicated that the system they have at the moment is not a very user-friendly system, and that they are busy changing it. He indicated that most people prefer to rather ask someone for directions on how to get from point A to point B as opposed to reading the plan on the directory board.

**Would access to wireless network facilities enhance the shopper's experience of the shopping centre?**

All the respondents indicated that wireless network facilities are provided by tenants in the shopping centre. These services are typically provided in the sit down facilities such as restaurants and coffee shops and allow shoppers to access the Internet. One respondent indicated that he would like to extend this service throughout the shopping centre, as they need to try and increase the dwell time in the centre. Dwell time is directly proportional to the amount of money the shopper spends. More facilities offered to increase the dwell time would therefore be beneficial. Another respondent indicated that they are not sure that the shoppers will use their laptops anywhere other

than in the restaurant facilities. This view does not take into consideration that PDA's and cell phones can also be used to access the Internet. They went on to say that shoppers have not relayed dissatisfaction with the absence of such a service.

The centres also tend to have boosting antennas installed by cellular providers, as the concrete and steel used in the shopping centre construction negatively impact on the signal strength from outside antennas. These installations are done by the cellular providers and have nothing to do with the shopping centre.

**Please discuss your services around locating missing persons in the shopping centre.**

Although all the respondents indicated that from time to time children do wander off from their parents it does not happen frequently. They indicated that it is easy to see when a child is lost. When the security sees a lost child they immediately take him to the centre management offices and an announcement is made over the PA system. Typically the parents quickly realise what has happened and they are quite easy to spot. Security will then take them to the centre management office to meet up with the child. All respondents indicated that it remains the parents' responsibility to ensure their kids are safe.

When prompted about a tag device that can be rented on a day-to-day basis, one respondent indicated that he has seen such technology before, but that it would probably not be necessary as children are typically located quickly. Another respondent indicated that tracking devices would possibly not work, as it may be abused in the sense that the parent might let the children run off purely because they know they will find them later. That would mean that the child is not under the supervision of the parent, which means the child will start running around, bumping into things, bumping into people and that would cause irritation in other shoppers. He went on to indicate that there are also facilities that need to be used properly, for example, escalators that the children may not necessarily use properly which could lead to injuries. It is more important to make sure that children are accompanied by adults and have adult supervision.

**Please discuss the benefits that a shopper loyalty programme would provide.**

All the respondents indicated that a shopper loyalty programme would be beneficial. It is however difficult to provide such a facility in the shopping centre. Specific shops, such as Edgars and Mugg&Bean find it easier to provide a customer loyalty programme, especially the stores that offer credit facilities, as they are able to register the customers in a database. For a shopping centre where the shopper is not the primary customer, it is more difficult. The respondents did however indicate that for the staff and tenants it is possible to identify shoppers that frequently use the shopping centre and that these shoppers are rewarded from time to time. It must be noted that it would be difficult to distinguish between regular shoppers and the high value spenders (as this information is not made available by the tenants). One respondent indicated that they had a promotion during their birthday celebration where they handed out vouchers randomly to shoppers that could be identified as regular shoppers. However, these people needed to be convinced to accept the vouchers. Their fear was: "What's the catch, what do you want from me to give me this money?" When the shoppers were told that they needed to provide their name and telephone number to allow for verification of receipt, they were hesitant to provide their details.

One respondent indicated that they have seen technology they were impressed with, that was launched at another shopping centre. This technology makes use of facial recognition. If the face is connected to a name, it could welcome the shopper. If the shopper opens an account with a tenant, they could take a photo that can be used. This will allow for better one-on-one relationships with the customers. It is however difficult to get the tenants to share the information they have on the shoppers with the shopping centre. The respondent indicated that he believes that in America the tenant's tills are linked to centre management. This allows management to know of every sale that goes through. If this data is available, a database could be built with the customer detail. He went on to indicate that it would be nice to know who your best customers are and to possibly reward them with free parking tickets or vouchers.

**Please discuss the use of shopping centre vouchers.**

All the shopping centres make use of shopping centre vouchers. Vouchers are important, as they provide the indirect customer with an opportunity to shop at any shop in the shopping centre. It also offers them the opportunity, especially nowadays

when it is becoming more difficult to buy a present for somebody (because you tend to buy what you like and not what they want), to provide a gift where the receiver can choose what he or she wants to buy. This coupled with the fact that coming to the festive season everybody runs out of time, it is an ideal opportunity to buy a voucher and give it to the person and then they can use that money for whatever purposes they want.

The vouchers are in fact a revenue stream for the tenant, which is what the shopping centre wants to achieve. Vouchers are provided at a cost to the shopping centre, as shoppers can use it for the full face value.

Paper-based vouchers can be considered as being equivalent to cash, and is therefore difficult to manage. The shopping centres all indicated that they have good systems in place to manage the vouchers. However, one of the respondents indicated that their main business is about collecting rentals and that they are not really geared for managing large volumes of vouchers. They are looking at outsourcing their vouchers to a credit card-based system. The responded continued that it is a pity that they have to move away from the vouchers, as a physical voucher is better than giving a person a credit card. It is also a pity, as the only similarity between the tenants is their credit card machine that is connected to financial institutions. If you had loyalty card or something that could talk to the individual tenants on the basis that it is not expensive, then there is a huge opportunity. But to get the tenants to talk to a central system that is cheap is a problem. A card that can store customer information such as his behaviour and buying patterns that allows you to communicate with the shopper would be beneficial.

When prompted on whether an electronic voucher would work, a respondent indicated that people are very suspicious of things unless it is tangible. Coming back to the profile of the shoppers: Unless they can see, feel and touch the voucher, there will be a certain degree of resistance towards it. Ideally a system that removes the burden of managing the equivalent of large volumes of cash, while allowing for the physical voucher to remain inactive until it is issued would be ideal.

Another respondent is in the process of moving across to the credit card-based system. It is a credit card-based system that requires money to be loaded on the

physical card. The card is not issued to a specific person and can be re-used or passed on to someone else. A concern was raised with the fact that the card is a Visa or MasterCard linked card. The card can therefore be used at any merchant that accepts these cards, whether they are in the shopping centre or not. This will defeat the purpose of issuing the voucher in the first place, as a gift voucher's purpose is to ensure that the purchase is made at the shopping centre.

### 2.3 Issues/Concerns relating to day-to-day operations in the shopping centre.

**Do you make use of monitoring systems to test for maintenance issues on escalators, elevators, etc.?**

One of the shopping centres makes use of devices that alert them to maintenance issues to some extent. The main reason for not using the devices more readily seem to be incompatibility to the older equipment installed when the shopping centre was built. As the equipment gets replaced, these devices are implemented. The respondent indicated that these devices electronically alerts the relevant people in the event of a breakdown occurring, and even a door opening for that matter. The signal can be sent to multiple users. As they do most of their maintenance in house, they have a facilities manager as well as a technician that is always on stand by. In the event of a device such as a generator becoming faulty, a message is sent to both the facilities manager as well as the technician.

The other two centres do not make use of these devices at present, but both indicated that it would be valuable to have any device that will allow for a quicker response to a maintenance issue. When, for example, an air conditioner stops it takes approximately 45 minutes before the shopping centre becomes uncomfortable. It would be nice if by that time you were there to fix it. It will however take a large capital investment to put these systems in place. One respondent, that did not have these devices in place, did indicate that they make use of systems to facilitate energy management. These systems are used to reduce maximum demand when your air conditioning starts in the morning. It regulates the electricity available to start the units. These work very effectively.

All the shopping centres have smoke detectors that are linked to security control

**Please discuss the importance of tracking shopper's movement through the shopping centre, for example, which entrances are used?**

All the respondents indicated that it is very important to know the volume of traffic in the shopping centre, which doors are used and what the traffic flow in the centre is at which particular time of day/night. All the centres have systems at every door to monitor shopper volumes, as well as on elevators and escalators to track the vertical movement of shoppers. These devices make use of beams that allow for counting people, with built-in capabilities to distinguish, for example, when two people walk in next to one another; distinguish between adults and children as well as identifying when a trolley breaks the beam. These devices are connected to the management office to allow for getting a view of the number of people per hour, per day, per week, per month, per year. The devices track only feet; it does not distinguish between age, gender or race. These attributes are determined through the use of surveys. One of the respondents indicated that they have additional devices in certain areas of the shopping centre as well to track the movement of people. Another indicated that they have additional devices outside some of the national stores.

**Please discuss any issues with payment facilities for parking.**

All the shopping centres operate some form of paid for parking facilities. All seem to be in agreement that parking is a grudge purchase for the shopper and that it creates irritation in the shoppers when they have to queue to pay for parking or when the equipment is inoperative. One respondent feels that shoppers would probably be willing to pay more for parking if they did not have to queue.

There are three traditional payment methods, which are referred to as:

- Pay on entry makes use of a flat rate parking fee that is paid on entry to the parking area.
- Pay on exit makes use of a manned payment facility where the shopper pays for the parking at the boom before leaving the parking.
- Pay on foot makes use of a payment voucher that allows payment at a machine before the shopper returns to his car. At the exit, he inserts the payment voucher to open the boom.

One respondent indicated that the entire system is migrating to a pay on foot system. The reason most are moving to pay on foot is to take away the human factor. The whole idea is to alleviate the congestion at the exit, when an argument occurs at the exit. With pay on foot, once you have your ticket you hardly ever get congestion at the gate. He is also of the opinion that there is huge income potential for the landlords in the parking garage, especially if it can be combined with other services such as, for example, a valet service where you can park in front of the entrance (pre-arranged) and they take your car away for a full valet and charge R200. Once you are ready your car is delivered at the entrance. People would be willing to pay for these services.

One of the shopping centres indicated that they do not make use of the pay on foot system, but have elected to stay with the pay on exit system. The reason being that their personal touch goes long way to facilitating the customer loyalty that they have. As you exit the parking, you have a person that greets you and takes the money from you and gives you change. You are still going to queue at the exit, as there will be some cars waiting there. At least you have that personal interaction as opposed to just interfacing with a machine, which often does not accept the new coins or may be out of order. It is highly frustrating to interact with a machine, at least a person can apologise if the equipment is down. With a machine people just tend to get more frustrated as it is just a machine. It may be more viable to go with the machine, but in terms of our basic service that we are offering, we are not in favour of moving to pay on foot.

Most machines seem to take only up to R20 notes, as it is too expensive to accommodate bigger notes. A responded indicated that he attended a presentation by the South African mint that showed the mint is looking to change the currency in some form once a year to fight fraud. This will create a problem for the person managing a parking garage to keep up with it, as it is expensive to replace the readers to accommodate the new currency. When new coins are introduced, machines need to be updated; the necessary equipment is not always readily available. It seems that one of the shopping centres (not part of the study) make use of a system with a card that can be loaded with currency. Using a credit card would be an option, but it would be expensive.

Machines can break down and cause capacity issues. It is however managed through the use of service contracts that should ensure that this sort of thing is absolutely minimised. Changes in patterns, when a machine breaks down can be determined quickly and contingency plans put in place. One of the issues, for example, is a power failure. Most machines have UPS's in them. Coins that are damaged also present a common problem.

To alleviate the problem with queues the machines have to be spread to alleviate the congestion. If the queues get too long you have to provide additional machines. Cinema's, for example, provides an interesting problem. Payment machines may have no one to use them for hours, yet when a movie comes out there may be insufficient capacity to serve all the shoppers.

The tenants also feel that the money the shopper pays in parking is a loss in turnover to them.

Meters in the machines have to be reconciled manually between reports from the machines and the computers and audited on a monthly basis, leading to an additional cost of managing the machines.

**Do you provide kiosks for distributing items to shoppers?**

Only one of the respondents currently has vending type machines in place, but is in the process of having them removed. The devices that are in use in the shopping centre are used to take passport photos, create drawings of people or engrave bracelets. The shopping centres are in agreement that these machines create more trouble than it is worth. The machines operate in the shopping centre, but the owners (tenants) are not available. When a machine breaks or does not operate as it should the shopping centre management has to take the complaints. When the centre management cannot resolve the issue, the shoppers get upset. A general complaint with regard to stocked machines is that the owners do not restock the machines, which leads to unhappy shoppers. One respondent indicated that he couldn't really see the benefits of having these machines to the shopper. Another indicated that these vending kiosks detract from what the tenants are all about. There is also the risk that they may compete with the existing tenants. The tenants must be more creative in providing such facilities as part of their shops. For example, nappies in the baby store.

**Do you make use of information systems to provide management reporting?**

All the shopping centres make use of information systems, both to report financial information to the owners and managers as well as for internal reporting on shopper volumes, and turnover growth per category.

The centres have property management systems that deal with management of the tenants and leases. One of the centres indicated that they also load the electricity consumption by meter into the system to bill the usage to their tenants.

Information on the levels of shoppers, trading density per category and sales growth can be supplied to tenants on request. However, care should be taken with any information that is distributed, as this information can easily get into the hands of competitors in other shopping centres. The information could also inadvertently provide sensitive information to competitor tenants in the centre.

**Please discuss any other day-to-day operational issues you face in managing the shopping centre.**

One respondent indicated that a typical day starts with a meeting with contractors to report back activities and problems of the previous day that are then dealt with. Once a month a report is produced and board meetings held.

A major concern is the extensions and renovations to the shopping centre as well as tenant installations. The shop turns into a building site, while shoppers move through the mall. The noise creates a disturbance in the ambiance, therefore work is done at night (where possible). Installing new tenants and renovating a shop is a problem.

One respondent alluded to smarter management of crime issues. He indicated that they do not quite have the communication processes in place, which will provide the information to allow them to be more pro-active with regards to it. If, for example, a bank in the area surrounding the centre were robbed it would be nice to be able to get the information to our centre security so that we can assist and be on the lookout. If another centre close by were robbed, it would be good for us to know to allow us to beef up our own security to be on the lookout. That would help us as centre management.

# CHAPTER 5
# DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

## 1 Introduction

A shopping centre, like any other business must ensure that its customers are kept happy. For the shopping centre, this includes maintaining positive relationships with the tenants (direct customers) as well as the shoppers (indirect customers).

It was indicated that a happy and repeat shopper is an important part of managing a shopping centre. It is also important to note that there is a correlation between the shoppers' dwell time and the amount of money they spend. As one of the goals of centre management is to increase the level of shoppers as well as the time they spend in the centre, any concept that will increase either of these should facilitate the management of the shopping centre. It should however be noted that it is critical to ensure that the technologies deployed are acceptable to the target market and do not cause irritation to other shoppers.

The tenants (primary customers) require an environment where they can safely provide their products and services to as many shoppers as possible, while facing as little competition as possible. The shopping centre management therefore attempts to provide them with the required services to ensure that the tenants are in a position to trade safely. In a modern environment, tenants require access to data exchange capabilities in order to ply their trade.

## 2 Solution overview

Mobile commerce can be seen to deliver the right information to the shopper, at the right time and in the right place. This can be achieved as follows:

- Provide the ability to access the Internet from any location, at any time
- Ability to pinpoint a mobile terminal's location, thereby allowing for the filtering of information based on the location
- Functionality to access information at the point of need.

Some of the features that distinguish mobile commerce from electronic commerce include:

- Ubiquity. Users can get any information that they are interested in, whenever they want it, regardless of their location.
- Reachability. Customers can be reached anywhere, at any time through mobile devices.
- Localisation. Location-based applications are provided to filter information that is presented to the user.
- Personalisation. This provides relevant information to a specific user.
- Dissemination. Some wireless infrastructures support simultaneous delivery of data to all mobile users in a specific location. This offers the capability to disseminate information to a large consumer population.

In the Internet era, it should be possible for shoppers to access the Internet from anywhere, to compare the offerings of one vendor to another. Such services will allow shoppers to make more informed decisions. Within the context of a shopping centre, it should be possible for the shopper to access the shopping centre website to determine whether a tenant in the shopping centre offers a specific product and whether the price is competitive. With the modern capability of mobile networks and mobile devices, accessing the Internet from a mobile device becomes a distinct possibility. Modern cellular networks offer high-speed access services that start from GPRS, to the newer and faster services offered via 3G and 3.5G (HSDPA). More and more mobile devices have embedded support for these higher speed network access services.

## 2.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

The main areas that make the shopping centre more competitive relate to the tenant mix and the general environment.

Although the introduction of mobile commerce technologies could provide a competitive advantage when promoting the shopping centre to potential tenants, it would be an indirect advantage. From the analysis it would appear that the differentiation factor in the tenant mix is the independent stores, which are typically

smaller and may not be willing to pay the higher rentals that would be associated with the additional services provided by a mobile commerce enabled environment. The smaller tenants may also not be as familiar with the technologies and may therefore be reluctant to make use of it.

Mobile commerce technologies may, however, result in improvements to the general environment and experience the shopper has when visiting the centre. It is important, though, that the technology should not result in an irritation to the shopper and should be evaluated based on the target market. Environmental factors that impact on the shopper include security, appearance and how quick it is to enter and exit the parking facilities. Interacting with the devices used by the shopping centre, such as parking payment facilities should be easy to use and should be functioning.

The penetration of cellular telephones into the South African market allows for using these devices for more than mere telephone calls. The potential use of mobile payment systems for parking will be discussed in a later section of this document.

Communication between the tenant and shopping centre management typically happens in person through the shopping centre management offices, or by means of the telephone. The tenant pays for telephone services. With the new generation telephones that allow for Voice over Internet Protocol (VOIP) and a seamless mechanism to make use of either cellular network or wireless network facilities, it may be beneficial to provide wireless network access throughout the centre to allow tenants to call the centre management by means of wirelessly enabled mobile telephones. The cost of providing such a service may, however, be prohibitive unless there is also added value in other areas. Current indications are that tenants do not make use of existing technology-based solutions such as e-mail. It is likely that the main reason for this is that the tenants do not necessarily have e-mail facilities in their stores. An additional mobile technology channel that could be exploited is using the popular SMS service to send information to the centre management offices, where an SMS server can receive the messages and route them appropriately. Although SMS is currently limited to 160 characters, it could assist in providing a channel for communicating information to the centre management at any time of night or day. This could include turnover figures or alerts on something that may have happened in the centre. SMS

messages are cheap. SMS services could be supplemented with the MMS service, that allows for sending more text and also multimedia files such as pictures.

Although call centres were not in place at any of the shopping centres, it would be possible to automate certain tasks, such as calling in to provide monthly turnover figures through the use of VoiceXML. VoiceXML is a mark-up language that allows for creating a voice-based user interface to web-based applications by making use of telephone-based access.

Marketing facilities offered by the shopping centre are based on providing marketing of the shopping centre in general and not the individual tenants. Some of the shopping centres offer the ability to market branding over the PA system, some also allow for promoting goods through the web site. Updating these systems with the relevant information is, however an administrative function that is performed by the shopping centre management.

Interactive voice facilities (such as voiceXML) and SMS facilities to register the information with the shopping centre would ease the administrative burden on the centre staff. Care must however be taken to ensure the tenants do not take advantage of these automated facilities to market their goods outside of the agreed-on terms. At the moment the advertising in most of the shopping centres is aimed at branding and awareness and do not cover products. Shoppers can now also make use of mobile devices such as cellular telephones and Personal Digital Assistants (PDAs) to access information on the web. This would allow them to log on to a shopping centre website to search for a particular store, view special offers or search for a store that sells a particular product. It would also be possible to log onto a competitor's information to compare prices while shopping for a particular item. Constraints on these facilities include the size of the screen the user has available to display the data and the differing standards between the handset manufacturers. A wireless enabled web application server would be required to translate the web pages to a format that could be displayed on the particular wireless devices.

In addition, the shopping centre could provide a service where information on excess stock items could quickly be loaded onto the central server, for shopper access. Alternatively the information can be sent to subscribed users by means of an SMS

service. Subscribed shoppers can set up their profiles and the type of items they would be interested in receiving information on. This would allow for filtered information, thereby reducing levels of possible irritation. Allowing shoppers to subscribe (and equally importantly, unsubsribe) to the service is important, as the absence of such a mechanism would constitute spamming and would be in breach of the ECT Act. If a subscription service is provided, it is important to take measures to ensure controlled access to shoppers' private information. Protecting the privacy of shoppers is a critical element in providing mobile commerce services.

Additional services to the cinemas could be provided to allow for uploading messages (via SMS) to a central server for broadcasting to shoppers, for example, reduced price movie tickets for a show about to start. This could assist in selling more tickets.

Shopping centres hold events that are aimed at attracting more visitors to the centre. The events are typically advertised in the centre as well as on the website. Technologies that can bring these events to the attention of shoppers, provide updates on the events, as well as allow shoppers to determine the location of a specific event could be useful. Again, this information could be offered on mobile devices. In the event of a change in the agenda for an event, or the location of an event, shoppers could be sent a message (via SMS) to alert them about the change. Alternatively shoppers could log onto the wireless portal and download the new information. Mobile technologies allow for expanding these services not only to facilitate events, but also to set up competitions that make use of the mobile devices to enter.

Care should be taken that the media offered to deliver messages to shoppers do not detract from the marketing activities and shop front displays offered by tenants.

All centres indicated that they have web facilities, but not all open these facilities to allow tenants to market themselves and their goods. The preference seemed to be to link the tenant's own site into the shopping centre website. This is probably more applicable to the national stores that typically have their own, hosted web sites. The independent stores, which as indicated before are what differentiate the shopping centres, often do not have their own web sites and may not be able to afford the infrastructure and maintenance costs associated with a web site. On the other hand, the shopping centre cannot provide such a service if it will result in a significant

increase in administration costs, without recovering these costs from the tenants. A solution that allows the tenants to interact easily with the web site to execute the updates themselves could be beneficial to both parties. A limitation of mobile commerce is that the information sent to the access device must be adapted to meet the limitations in screen size and differences in standards between devices. This requires an additional server component that may not be supported by the typical Internet web server. A mobile or wireless application server must form part of the deployment. The Internet hosting provider of the tenants may not provide this additional service. It could make sense for the shopping centre to provide hosting services for both Internet as well as Mobile Internet facilities, at a nominal fee to the independent stores. Such a service could differentiate the shopping centre, which would attract the right independent tenants and raise the barriers to exit for the independents. As the independent stores provide the main differentiating factor this could be a critical service to provide, even if it is done at a loss.

All the shopping centres require a monthly submission of turnover figures to the shopping centre. These figures are provided using manual procedures including telephone, fax and in some cases a paper-based system. A system that can make use of SMS or voiceXML capabilities would allow the tenants to submit their information easily. An important criterion would be to ensure the privacy and security of the data submitted.

None of the shopping centres provide wireless network facilities to the tenants. A number of services such as panic buttons and smoke detectors are provided, all of which make use of a wired infrastructure. National stores and Financial Services institutions may not be prepared to make use of a shared network infrastructure for security reasons. With the current age of information systems forming an important part of an organisation network, access is typically a critical element. This includes linking the computers in the store to a national network, as well as making use of services for credit card processing. The current wired infrastructure takes time to install, slowing down tenant installation and relocation of tenants within the centre. A wireless network facility would facilitate these activities.

Services such as the ones mentioned under this heading, are aimed at making it more attractive for tenants to open stores in the shopping centre, by providing more value added services and assisting the tenants in reducing their own costs and administrative requirements. The services could also facilitate an increase in the number of shoppers visiting the shopping centre, providing an increase in the opportunity for tenants to increase their sales and profits, resulting in more affordability of mobile technologies.

## 2.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers

Communication facilities for shoppers to communicate with the shopping centre are important to obtain feedback on events, feedback on services offered and complaints. This feedback currently takes the form of telephone calls or shoppers visiting the centre management offices. Mobile technology is probably already in use to a degree, as shoppers can make the telephone calls from their cellular telephones while they are in the centre. High levels of communication from shoppers using this mechanism is however not ideal, as it requires staff to engage with the customer. Unanswered calls, and numbers that are engaged due to capacity constraints are also not ideal, and will raise the irritation level of the shoppers. Interactive services such as voiceXML or easy to use services such as SMS would allow for accommodating higher volumes of messages, with little impact on staff. An easy to use interface could further assist in obtaining more feedback on events that are held, as shoppers may be more inclined to provide feedback via SMS than to fill in forms or stand in queues in the shopping centre management offices. Feedback could also be solicited by offering competitions where one of the SMS respondents is randomly selected for a prize. The additional feedback received could assist centre management in determining whether an event was successful and could also help in determining the types of events shoppers want to see in future.

Shoppers may also want to communicate with the centre to obtain information on stores, including their location. Although electronic information boards are not used by any of the centres, these boards could be useful in providing information to shoppers, including advertising and store locations. Care should be taken not to provide these

boards in areas where they will detract the shoppers' attention from a tenant's shop front. Concerns raised around these systems include maintenance issues and people damaging the boards. Another concern includes the amount of information and the services that are made available through these boards. For example, only one person can access the information on the boards at a time. If this information is of such a nature that it leads to the younger generation interacting with it all the time, this will detract from its usefulness.

A service that makes use of cellular telephones and PDAs to access information boards would eliminate the problem of only one person at a time being able to access the information, as well as the concern around people damaging the device. The service should be provided at no cost to shoppers, as a cost would dissuade the shoppers from using it. These boards can be accessed from a mobile device using a network protocol such as Bluetooth. Services based on this protocol are however restricted to a 10-metre radius from the Bluetooth server. Another option could be to make use of wireless network infrastructure (Wi-Fi) that would allow accessing the information from any place where coverage is provided. A concern with the latter is that not all mobile devices offer wireless network facilities, while most offer Bluetooth connectivity. The cost of providing the infrastructure would be borne by the shopping centre, to be recovered from the rental income. Although the shopping centre managers did not feel that such a service would differentiate the shopping centre, it could be considered a factor that contributes to the shopping experience. Providing boards that can be accessed from a wireless device, offering static information is referred to as static wireless kiosks as discussed under the heading 'Wireless Kiosks' in the literature review. These kiosks can either provide general information or can provide information about the geography and location based information surrounding the kiosk.

All the respondents indicated that it is important to provide shopping centre maps. The maps are provided in traditional flat format. Although the maps are typically updated once every three months, they are not necessarily out of date, as the tenancy does not change on a frequent basis. The shopping centre layout maps could however be changed to provide additional services such as information on stores being closed for renovation or stocktakes. The main concern with such a service is maintaining up-to-

date information. The tenants would therefore need a user-friendly system to submit relevant updates. Another issue with centre maps is that they are located in fixed areas within the centre. A system that allows for accessing the maps using a cellular device from anywhere in the centre could enhance the shoppers' experience. Shopping centre maps such as these is another example of wireless kiosks.

An additional facility could be provided through the use of location tracking of a shopper's cellular phone. Over and above the ability to locate stores, this service could provide guidance to shoppers on the route to a particular tenant. Location tracking can be performed by the cellular providers, through the use of methods such as triangulation, described under the heading 'Location-based services' in the literature review. This approach would require an investment from the cellular providers. An alternative is to make use of Bluetooth servers. A Bluetooth network has a range of approximately 10 metres. The 'cells' that the shopper is in would therefore be small enough to approximate their location. A constraint with this approach is the limitation of the Bluetooth networks around seamless handovers between servers to maintain continuous connectivity. An additional concern is around the number of shoppers who have the Bluetooth function on their telephones switched on. It is important to note that not all shoppers would find using a new technology easy. The system should therefore be user- friendly.

Wireless network facilities were provided by some tenants inside their establishments in all of the shopping centres that responded. These facilities are typically provided only in the sit- down areas. One respondent indicated that it could make sense to provide the service in the rest of the centre. With the advent of cellular telephones and Personal Digital Assistants (PDAs) that support Internet browsing through a wireless network connection, these services could enhance the shoppers' experience. PDAs or telephone devices could be used by shoppers to access the shopping centre network or to access the Internet to obtain competitive pricing while shopping in the centre. Such services could facilitate the sales cycle of the tenants. Mobile devices can access the Internet using GPRS services in most areas at a speed that would be acceptable to most users. New generation telephones, coupled with the rollout of faster services, using the 3G and HSDPA (3.5G) capability of the networks could lead to an increased usage of these devices to access information. Modern handsets and PDAs also

support the use of wireless networks (Wi-Fi). The latter service could be provided by the shopping centre, with no charge to the shoppers, while the operator-based services (such as 3G) would be accessed at a charge to the shoppers.

The boosting antennas installed by the cellular providers could be used to provide location-based services in the shopping centre. A shopper's position can be determined through techniques such as triangulation (as discussed in the literature review under the heading 'Location Based Services'). These services could be used to provide reports on the shoppers' movements in the shopping centre. The service could also be used to provide location aware advertising, such as an SMS that advertises a special offer when a shopper walks past a specific store.

Locating and tracking missing persons did not seem to be a concern at the shopping centres. Devices that allow for tracking individuals, such as children could provide an additional income stream to the shopping centre. Shopping centre management, as discussed in the chapter on 'Research Results' feel that providing services for tracking children in the shopping centre could have negative consequences that does not warrant the additional benefits. Technologies in this area are therefore excluded as a possible benefit of mobile commerce.

As with any other business, loyal and repeat shoppers are an important part of ensuring the shopping centre's success. It is, however, difficult to establish a loyalty programme, as many shoppers are not willing to share their details with the shopping centre. It is therefore not possible to determine who the repeat shoppers are and what the amount of money is that they spend in the centre. The current 'loyalty programmes' are based on the tenants and shopping centre staff being able to identify the regular shoppers in person. The shopping centres do from time to time provide these shoppers with rewards, such as shopping centre vouchers. One of the centres indicated that an attempt to provide shoppers with vouchers led to their motives being questioned. Shoppers did not want to share their details with the centre, even for the purposes of verifying receipt of the vouchers. A registration process where the shopper formally joins a loyalty programme could be beneficial. A registered shopper could then be issued with a device, such as a fob (described under the heading 'Mobile Payment Systems' in the literature review), that would allow tenants to beam the amount spent

to the device for registration on a central database. This information could then be used to calculate reward points to provide the shopper with parking vouchers or shopping vouchers. Tenants may, however, resist providing information regarding the amounts spent by individual shoppers. Using the shoppers' mobile telephones as a fob device would be beneficial, as this would negate the need for the shopping centre to provide devices at their cost. Bluetooth connectivity between the tenant's point of sale device and shoppers' mobile phones could provide the needed infrastructure to transfer required information.

All the shopping centres indicated that shopping centre vouchers are important. Shopping centre vouchers provide the indirect customer (shopper) with an opportunity to shop at any shop in the shopping centre. They also provide the shopper with the opportunity to buy vouchers as gifts.

Paper-based vouchers are used in some of the shopping centres. These are an administrative burden, as it is difficult to manage large volumes of vouchers. Security is a concern with the vouchers, as they can be regarded as equivalent to cash. A system that allows for a voucher to remain without value until it is issued to a person would be preferable. Some shopping centres are moving to a credit card-based system, but these systems have inherent concerns. As the credit cards are Visa- or MasterCard-based, they could be used at any shop that accepts these cards, even outside of the shopping centre. This defeats the purpose of providing a shopping centre voucher. Electronic tokens could be used as shopping centre vouchers. These tokens can be loaded onto the shopper's fob device (if they are registered) or as a file on a cellular telephone. The file can be stored as part of a virtual wallet as discussed under the heading 'Mobile Payment Systems' in the literature review. Centre management was, however, concerned that shoppers would be suspicious of an electronic voucher, as they are not tangible. This would, however, depend on the profile of the shopper. The younger generation might be more inclined to adopt this type of technology. An electronic voucher of this nature could however be an issue if bought as a gift. Presenting someone with a gift in the form of an electronic token sent to a mobile phone does not have the same interpersonal value as a tangible item such as a paper-based voucher. An alternative solution could be using paper vouchers with an

embedded radio frequency tag to be activated once the voucher is issued. This technology is, however, outside the scope of this investigation.

### 2.3 Day-to-day operational issues

When shoppers visit a shopping centre they expect an environment where the equipment operates as expected, including environmental systems such as the air conditioning and systems such as elevators and escalators. Some of the shopping centres make use of devices (or wireless telemetry systems) that monitor equipment for failures. Most indicated that these devices would be useful but that they are often not compatible with the older equipment that was installed when the centres were built. The monitoring devices would electronically alert maintenance staff in the event of a breakdown occurring. One respondent indicated that any device that would allow a response to events such as the air conditioner failing would be beneficial. With an air conditioner failing, it typically takes approximately 45 minutes before the environment becomes uncomfortable. It would be beneficial if the technicians could respond when the device failed rather than waiting for the problem to be reported by uncomfortable shoppers.

Telemetry devices can be installed to monitor equipment. In the event of a breakdown, an SMS could be sent to the maintenance technicians and the shopping centre management to alert them to the breakdown.

Tracking the movement of shoppers in the centre is important as this provides the information that is needed to manage the shopping centre. All the shopping centres made use of foot counters at entrances, points of vertical movement (such as escalators and elevators) and at points throughout the shopping centre. The devices make use of beams that allow shoppers to be counted. The devices are connected to the centre management office to provide a view on the number of people per hour, and per day who visit the centre. As rentals can be higher in areas with high foot traffic, it is important to know which areas carry the highest volume of traffic. The information is also critical in planning facilities such as parking.

Each cellular telephone has a unique number that can be used to identify the device when connected to a cellular network, or through a Bluetooth network. Bluetooth networks have a radius of approximately 10 metres, allowing for tracking the 'cell' the

shopper is in. A limitation of the Bluetooth approach is that the technology does not support seamless handovers from one Bluetooth server to the next. When a user moves from one 'cell' to the next a new connection is established. Any application, such as an interactive map, that is running on the mobile device would need to re-establish a connection to the network. This could result in limitations to some applications that are deployed to run on the handset, but could work for tracking the shopper's movements in the shopping centre.

In addition to Bluetooth tracking, shoppers could be tracked by means of a cellular phone network. Cellular operators instal booster towers at the entrances to the centres. These towers could be used to determine the location of cell phone users by means of triangulation. Knowing the location of the shopper would allow the sending out of location sensitive information. These messages could, for example, be sent to advertise open seats at the movie theatre when a shopper moves into the cinema's vicinity, within a short time of the movie starting.

Tracking shoppers through their cellular phones is, however, limited to shoppers who have a cellular telephone with them. This will exclude children and some teenagers. Using the Bluetooth approach requires that the Bluetooth functionality on the shopper's phone is switched on. A small minority of shoppers will have the Bluetooth functionality switched on. Although cellular phones would not provide information on the shopper's age, gender and race, this is no different to the systems in use at the moment. The additional benefit over the existing systems is that shoppers' movements can be tracked to a higher level of precision. Current devices are located in specific areas where counts are obtained, but movement between these counters is not monitored.

All the shopping centres make use of paid for parking facilities. All seem to be in agreement that parking is a grudge purchase for shoppers. Some indicated that the quickest way to irritate a shopper is to have problems with the equipment that is required to pay for parking, or to have queues at the facilities. Two of the three shopping centres made use of pay-on-foot facilities, where the shopper pays at a machine in the centre and makes use of the parking ticket when exiting the parking area. One centre makes use of the pay on exit approach. With pay-on-exit, the

shopper is issued with a ticket when entering the parking zone. A person at the exit accepts payment and provides change.

The pay-on-foot parking payment system makes use of machines that must be updated when money changes. To implement the required changes to machines that will accommodate the new money is typically expensive. One respondent indicated that the South African mint is looking to make frequent changes to the money they produce in order to combat fraud. This will raise the cost of ownership of these machines.

The main requirement around payment for parking is to provide an easy-to-use system that minimises congestion, reducing levels of irritation for shoppers. An additional concern is managing the money in the machines. Apart from security issues, the money must be manually reconciled with the counters on the machine.

Options, such as discussed in the literature review under the heading 'Mobile Payment Systems' can be used to assist the shopping centre management. Frequent shoppers who are registered at the centre could provide their credit card details as part of the registration process. They could be issued with a device such as a fob. When these shoppers enter the parking facility they swipe the device at the ticket-issuing machine. This registers the time of entry. On exit, they swipe the device at the exit machine, which registers their departure time. The money owed can then be deducted from their credit cards, either daily or at the end of the month. Howeve, credit card issuers are not geared up for managing the potentially large volumes of low value transactions that would result from such an approach. An alternative mechanism is to make use of the cellular handsets, using cellular providers to bill the client as part of their normal monthly billing cycle. With reverse billing, as this approach is referred to, the cellular operator deducts the payment from a client's telephone account and pays the money to the vendor (shopping centre). Such an approach requires a mechanism to register the arrival and departure time of the shopper. This could be accommodated through the use of an electronic file that is time-stamped and sent to the shopper's telephone when entering the parking facility (using a Bluetooth network). When a payment instruction is issued, the shopper sends an SMS that is charged at VAS rates to a particular number. The payment is recorded and a return SMS generated to the

parking system. When the shopper exits, the machine at the boom gate can compare the unique identification number of the telephone to the list of payments received to confirm payment. This approach could require an increase in parking tariffs to allow for the fee charged by the cellular operators. A further limitation is that individuals who do not have a cellular phone would not be able to pay for parking, unless the traditional alternative is also provided to accommodate their needs.

As indicated in the section of the literature review discussed under the heading 'Commercial transactions' it is clear that commercial transactions such as payment for parking should provide the following:

- Authentication. Each party should be able to authenticate its counterpart to make sure that the counterparty is who he claims to be.
- Integrity. Each party needs to make sure that the received messages are not altered or fabricated by someone other than the counterparty.
- Confidentiality. Each party wants to keep the content of the communication private.
- Non-repudiation. Each party wants to prevent the counterpart from afterwards denying that he approved earlier.

The user of the cellular phone can be authenticated through the use of a password, combined with the unique identification of the sim card. The system to pay for parking should provide the above, but should also comply to the code of conduct as implemented by the Wireless Applications Service Providers Association (WASPA).

The shopping centres in the study do not make use of vending machines, as it seems to be more trouble than it is worth. This is mostly due to owners not being on site to ensure the machines are functional and stocked. Shopping centre management then has to deal with the issues. If they cannot assist, the shopper becomes unhappy with the shopping centre. Telemetry devices that monitor the stock levels in the vending machine and monitor the functioning of the machine can assist in making the machines better suited to operation in a shopping centre. In the event of a breakdown, or a low stock level, the owner can be alerted to repair the machine or restock it. It would

however appear that these machines would not be welcome in the centres, as it is also felt that they detract from the tenants' business.

All the shopping centres make use of information systems to report financial information to owners and for internal reporting on shopper volumes, turnover growth per category, etc. The centres have property management systems to manage leases and occupancies. No reporting is provided to the tenants. Some information can be made available on request, but the information is typically sensitive and is not readily distributed.

The current reports are generated on a monthly basis, which results in re-active management. A system that makes use of real-time information updates could assist in moving to a more pro-active management approach. Tracking user movements using mobile devices could, for example, be displayed on a central dashboard. Tenants could be alerted to an increase in shoppers in a particular area. Tenants may then decide to reduce the prices on specific items, or to change information on sale items advertised in their display window. Such an action may lure more shoppers into the shop, which could result in increased sales.

## 3 Conclusion

A number of options are available for using mobile commerce technologies within a shopping centre environment. Care should be taken that the shoppers are not distracted by the technology, but that the technology is used to create an atmosphere that is conducive to the shopper spending more time in the centre. The technology can certainly enhance some of the services offered by the centre, such as payment facilities for parking, providing access to information on tenants and providing information regarding products on offer.

Before mobile commerce services are implemented, a study should be conducted to determine whether shoppers and tenants feel that the technology would benefit them. The impact of the technology should be carefully evaluated to ensure that it would not have a negative impact on the shopping centre.

Care should be taken to ensure compliance with laws and codes of conduct that govern mobile commerce in South Africa, as discussed in the literature review under the heading 'Business Issues relating to mobile commerce'. User privacy issues,

electronic agreements, charging for content and the type of content that can be made available is governed by means of, amongst others, the ECT Act and the code of conduct of the Wireless Service Provider Association (WASPA).

## 4 Recommendation for further study

This research report is aimed at exploring the possibility of using mobile commerce technology to assist the management of shopping centres. It is suggested that the technologies be investigated for suitability. Changes to the South African telecommunications landscape should be taken into consideration.

It is assumed that the younger generation will be more inclined to adopt the use of mobile commerce technologies and may even drive the adoption in the next few years. The younger generation grew up with IT technologies and would therefore be more comfortable using these types of technologies. The target market for shopping centres is changing, as the younger generation starts to become more economically active. The shopping centre should take this into consideration and should start to analyse what this generation deems to be important environmental factors. It is suggested that research be conducted into end user adoption of mobile commerce technologies and what the impact of demographics on the adoption would be.

# CHAPTER 6
# ARTICLE FOR PUBLICATION

The article for publication is included in a separately bound document, as per the request.

## APPENDIX A
## QUESTIONAIRE

### 1 Administrative questions

Date:..... Interviewer:.....

Participant:.....

Shopping centre:.....

Owner of the shopping centre:.....

### 2 Classification questions

Shopping centre type: Convenience, Community, Regional, Super-regional

### 3 Target questions

### 3.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

1. What are the main areas that will make a shopping centre more competitive?
2. How do you determine the appropriate mix of tenants for the shopping centre?
3. Do you provide a call in centre for tenants?
4. Please discuss the importance of providing marketing facilities in the centre to the tenants
5. Discuss the mechanisms used to provide tenants with a system that allows for registering and distributing information on special offers.
6. Does the shopping centre have a website?
7. Are tenants provided with space on the website to promote themselves/their goods? Please explain (for example, how often updated?)
8. What mechanism is used by the tenants to provide sales figures to the shopping centre?
9. Do you provide for wireless network access to tenants?
10. How do tenants log complaints with the shopping centre?

11. What value added services do you offer tenants?

### *3.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers*

12. Please discuss the facilities offered for shoppers to communicate with the shopping centre.
13. Do you make use of electronic information boards?
14. Please discuss the importance of providing shopping centre layout maps to shoppers.
15. How are the centre layout maps updated when occupancy changes occur?
16. Would access to wireless network facilities enhance the shopper's experience of the shopping centre?
17. Please discuss your services around locating missing persons in the shopping centre.
18. Please discuss the benefits that a shopper loyalty programme would provide.
19. Please discuss the use of shopping centre vouchers

### *3.3* Issues/Concerns relating to day-to-day operations in the shopping centre

20. Do you make use of monitoring systems to test for maintenance issues on escalators, elevators etc.?
21. Please discuss the importance of tracking shoppers' movements through the shopping centre, for example, which entrances are used?
22. Please discuss any issues with payment facilities for parking.
23. Do you provide kiosks for distributing items to shoppers?
24. Do you make use of information systems to provide management reporting?
25. Please discuss any other day-to-day operational issues you face in managing the shopping centre.

## APPENDIX B
## INTERVIEW RESULTS

### Westgate

### 1 Administrative questions

**Date:** 21 September 2006 **Interviewer:** Anton van Niekerk

**Participant:** Kobus Steenekamp .....

**Shopping Centre:** Westgate .....

**Owner of the shopping centre:** Owned by Consortium, managed by Motseng Property Services .....

### 2 Classification questions

**Shopping centre type:** Convenience, Community, Regional, **Super-regional**

### 3 Target questions

Total size approximately 106 000 square metres in gross letable area (excludes common area). Approximately 6 000 parking bays.

### 3.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

**1. What are the main areas that will make a shopping centre more competitive?**

The main differentiator is the tenant mix. National stores like Edgars are available in most shopping centres. The difference comes from letting to the independent (individual) guys that are privately owned and managed. You cannot duplicate them. These shops create a vibe in the shopping centre.

The rest of it is based on the appearance, the parking, how quick it is to come in and get out as well experience the shopper has when he visits the centre. This ranges from the toilets, cleaning, parking and even to the surface of the tiles. If the tiles are slippery it is uncomfortable to walk and tires the shopper.

**2. How do you determine the appropriate mix of tenants for the shopping centre?**

The appropriate mix is determined by comparison to other shopping centres. Also look at a calculation of the total square metres occupied by a category such as jewellers and the number of tenants in the category as a percentage of total. Supply and demand is also taken into consideration, as too many tenants in a category create competition, thereby splitting the cake. It is a very fine balance that must be maintained. It is however interesting that having multiple tenants in the same category does not necessarily increase competition, as often shoppers will park on the side of the shopping centre they want to shop in and do not go into the other area.

**3. Do you provide a call in centre for tenants?**

Have a control room that is manned 24 hours a day. During the day complaints come in to the receptionist at the management office. After hours it is routed to the control room.

**4. Please discuss the importance of providing marketing facilities in the centre to the tenants.**

Always leads to huge discussions. A percentage of the basic rental goes to a marketing fund. This money is used to market the centre as a whole. It is a big signs marketing to create awareness. Do not necessarily need more feet, but needs to tell the market what is going on at the shopping centre. It is important to create a marketing scenario where customers can buy, it is no use to just come look at a show and then leave again. The whole purpose is to create an environment for them to come and buy.

Biggest marketing comes from the tenants, nationally as well as individually. The big thing for a tenant is the masses coming through the centre. There is huge sings in the shop fronts. If you do not get a shopper within three seconds of passing by your shop front, you miss him. Thousands of people pass you shop front, you have to create something that can attract the person to come into the shop. If a person stops and looks at your shop front, you have a 50 per cent chance of a sale, if you can get him to come into the shop you can add another 25 per cent and then only 25 per cent is determined by product and service. If you get him into your shop you can sell. If he comes in he is ready to buy, and all you then have to do is to have the proper product and service. The shop front in marketing is very important. The tenant himself provides

this marketing. Some centres are putting televisions in the mall to provide information to customers. This however takes focus away from the shop front, which is not acceptable. Tenants should however use any device that allows them to speak to the customer the moment he passes the shop, without becoming a nuisance and cause disruptions to the shoppers or neighbouring tenants.

The other way of marketing is to do cross marketing. For example, displaying shoes in a dress shop on the other side of the shopping centre that do not sell the shoes. Customers can then be referred to the shop that sells the items.

**5. Discuss the mechanisms used to provide tenants with a system that allows for registering and distributing information on special offers.**

Make use of the PA system that has speakers over the total common area. Tenants can inform shoppers of specials through this system by logging into a computer to log information on specials and for branding. The information is loaded at the management offices.

Billboards are available in the common areas, but these are not rented out to tenants, but to national brands.

**6. Does the shopping centre have a website?**

Yes

**7. Are tenants provided with space on the website to promote themselves/their goods? Please explain (for example, how often updated?)**

Tenants can provide their information on the website. A photo of each shop is also available on the site. It is a huge field that is not tapped, but the site has to be kept alive through frequent updates.

The best way is to have links to the individual shop's website from the shopping centre website, otherwise it becomes too big and cumbersome to open.

The website is updated on a weekly basis, as it is also used to update information about current marketing that we are busy with and to remove things that have happened in the past. Must not leave information on a promotion dates that is already past on the site, but could leave information on successful promotions on.

**8. What mechanism is used by the tenants to provide sales figures to the shopping centre?**

Rental is calculated based on annual turnover.

Anchors have to provide audited turnover figures three months after their year-end. A percentage of this is calculated to determine the basic rental. If this is higher, they would then pay in any difference. This reduced the occupation costs on a monthly basis

Revenue figures are collected between the 7th and 15th of the month, to be used for statistical purposes and to see the growth in the centre, as well as which categories perform the best. These figures are obviously not audited, but do collect the tenant's turnover. Rental is only calculated on annual turnover figures, not the monthly figures.

Figures are provides by hand, fax, mail or telephone. It would make sense to have a system that provides a website where the tenant can log into a private area where they can submit the information. A lot of data is available that is not used properly. The website could also be used this to also distribute data back to the tenant. Obviously confidentiality is important and care should be taken not to distribute sensitive information.

**9. Do you provide for wireless network access to tenants?**

No, but we do have panic facilities in each shop, cameras linked throughout the centre, smoke detectors and so on. Each these devices have its own wires in the ceiling. The tenants have their own communications (e.g. Telkom) and the connections to the satellite systems for credit card processing, television facilities and internal radio stations (e.g. internal Mr Price radio station). A lot of data flows through the centre. Some tenants would not want to share the same infrastructure due to confidentiality.

**10. How do tenants log complaints with the shopping centre?**

Have a control room that is manned 24 hours a day. During the day complaints come in to the receptionist at the management office. After hours it is routed to the control room.

**11. What value added services do you offer tenants?**

Try to create an environment for shoppers to feel safe and comfortable. It must be an outing and experience for the shopper to come to the centre. This is indirectly for the tenants. Create promotions and activities to bring shoppers to the centre.

### 3.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers

**12. Please discuss the facilities offered for shoppers to communicate with the shopping centre.**

2 kiosks in the mall that shoppers can use to communicate complaints and suggestion back to the centre. Have a marketing campaign for a competition using SMS.

**13. Do you make use of electronic information boards?**

Do not make use of electronic information board. The biggest problem with electronic boards is maintenance and people damaging it. Do know that there is a lot of stuff available in the market, such as touch screens. Look at that constantly, but think that the angle used on these is wrong, as they look to provide advertising on it and at the same time try to give information. Pretty conservative, like the tenant information board as a flat thing, normally colour coded and simple. Don't think the customer base is so high tech, although must admit it is changing on a daily basis. For example, 3g networks is everywhere. Sure technology will change dramatically, but do not have a lot of information. It is more about where the tenants are and providing facilities to locate shops. But these things are not really used, as people know where they want to go. Pick up quickly where they want to go and where the shops are.

**14. Please discuss the importance of providing shopping centre layout maps to shoppers.**

You can make it interesting, if something exists where tenant can advertise easily. The most expensive part of these boards could be artwork, as you would get someone outside to do it. It would be nice if a tenant could sit in his shop and could do his own artwork and send it via the network to this board – provided there is space available. It is interesting though that the tenants in the centre are traders with little time to explore technology. For some shops, even learning about a POS system is a challenge (apart from anchors), they know about what is happening in their shops without the need for

fancy systems such as stock control systems. The traders tend to not have time to get involved with marketing.

**15. How are the centre layout maps updated when occupancy changes occur?**

The boards are updated quarterly, on average around every second month there is a new shop. So you would typically always be outdated.

Would be useful to update the board with status information on tenants such as closed for renovation, stock takes. But you must have someone to drive it, must be live (like the website). Would take out some frustration with the shoppers, finding that a shop is closed and getting alternatives. At the end of the day the biggest challenge would be to keep the board updated and to get the information.

**16. Would access to wireless network facilities enhance the shopper's experience of the shopping centre?**

Wi-Fi is already there and the guys are using it, but it is not provided by the centre. We have cells installed from the cell providers due to the concrete and steel. They upgrade their signal, but we are not involved in the technology.

**17. Please discuss your services around locating missing persons in the shopping centre.**

It does not happen often, but you do get children that get lost – but only for an hour or so. It is the parent's responsibility to look after their children.

When prompted about a tag device that can be rented on a day-to-day basis: It can be done and have seen such technology before. However, it is amazing how quickly parents find their kids. The security guards also quickly pick up when a kid is lost by his behaviour. They are also picked up on the cameras in the mall. The kids are then taken to the control room. Also quickly pick up the parents, as they start running when they realise what happened. All the guards are on radio. When the kids are taken to the control room, the guards are notified and the parents are located. The technology would be more useful if the kids get lost forever.

**18. Please discuss the benefits that a shopper loyalty programme would provide.**

Have seen technology that was impressed with. Was launched at Cresta, using facial recognition. If that face is connected to a name, it could welcome the shopper. If the shopper opens an account with a tenant, they could take a photo that can be used. Think the future is going to be this one on one customer relationship such as used by kalahri.net. that know your preferences when you log in.

Believe in the states the tenant's tills are linked to centre management. Allowing management to know of every sale that goes through. If this data is available, a database could be built with the customer detail. Contractually will have to fight with tenants to get this information. Locally it is difficult to get customer data from tenants, as they are reluctant to share this information. It would be nice to know who is my best customer and what they spend and to then treat them appropriately. Cannot give them discounts, as this is the tenants business, but can give them, for example, vouchers or free parking tickets.

**19. Please discuss the use of shopping centre vouchers.**

Do make use of shopping centre vouchers. Apart from theft managing the vouchers is not an issue. Our main business is about collecting rentals. We are not really geared for managing vouchers; it is busy moving into a direction where we outsource it to Tutuka with a visa credit card. They will handle the whole process. In the old days, a person would buy a physical voucher where the money will lie in our bank account. When a voucher is redeemed at a tenant's shop the shopping centre must give him his money back. It is a simple process, but the volumes are a problem. It is moving away from this, but it is a pity as a physical voucher is better than giving a person a credit card. It is also a pity, as the only similarity between the tenants is their credit card machine that is connected to financial institutions. If you had loyalty card or something that could talk to the individual tenants on the basis that it is not expensive, then there is a huge opportunity. But to get the tenants to talk to a central system that is cheap is a problem. A card that can store the customer information and his behaviour, that allows you to communicate with the shopper would be beneficial.

### 3.3 Issues/Concerns relating to day-to-day operations in the shopping centre

**20. Do you make use of monitoring systems to test for maintenance issues on escalators, elevators, etc.?**

Currently not at the shopping centre, but have seen some fancy systems that informs you of, for example, the air conditioning stopping before the tenant even phones you. This will allow you to react quicker. It takes approximately 45 minutes before it becomes uncomfortable. It would be nice if by that time you were there to fix it. There are systems in place that do these things, but the older shopping centres require a huge capital investment to put this in place. Systems are in place to facilitate energy management, for example, to reduce maximum demand when your air conditioning starts in the morning. It regulates the electricity available to start the units. These work very effectively.

**21. Please discuss the importance of tracking shoppers' movements through the shopping centre, for example, which entrances are used?**

Very important. We have systems at every door and escalators have beams. All connected to a pc in the management office. Can see all the time where the flow of traffic goes. It tracks only feet; it does not distinguish between age, gender or race. That we determine through research.

**22. Please discuss any issues with payment facilities for parking.**

It irritates people to pay for parking, especially if they have to stand in a queue to pay. They would probably be willing to pay more if they did not have to queue.

Have various systems, such as pay on foot (used at the centre), pay on exit and pay on entry (flat rate). The whole thing is moving to pay on foot. There is huge income potential for the landlords in the parking garage. There is potential to charge more, but it is one of the biggest irritations. People do pay for car guards, but if you can create an environment where they are not there people may pay more. There is a huge opportunity, for example, a valet service where you can park in front of the entrance (pre-arranged) and they take your car away for a full valet and charge R200. Once you are ready your car is delivered at the entrance. People would be willing to pay for service. Most machines take only up to R20 notes, as it is too expensive to accommodate bigger notes. Interesting that a presentation at the mint is looking to change the currency in some form once a year to fight fraud. It creates a problem for the person managing a parking garage to keep up with it.

Can see patterns very quickly when a machine breaks down. One of the issues, for example, is a power failure. Most machines have UPS's in them. Coins that are damaged are a problem. When coins are changed it costs a large amount of money to change the readers in the machines (for the cost of the shopping centre). Queues is a problem, have to spread the machines in such a way that queues are managed. If the queues get too long have to provide additional machines. Cinema's, for example, is interesting, you always have a problem. For hours there is no one, then the movie comes out and you need four or five machines.

The reason most are moving to pay on foot is to take away the human factor that is the biggest problem. The whole idea is to alleviate the congestion at the exit, when an argument occurs at the exit. With pay on foot, once you have your ticket you hardly ever get congestion at the gate.

At Clearwater mall they make use of a system with a card that can be loaded with currency. It would be beneficial to be able to load the card over the Internet. Would be nice if you could use your credit card more, but that is very expensive.

**23. Do you provide kiosks for distributing items to shoppers?**

We try not to, as these vending machines create pollution. Must be careful not to allow them in the mall. It is all nice and well to provide the vending machines, but when they are empty management take the brunt of it – becomes another complaint to deal with. Our main business is rent and management of the property, we are not entrepreneurs. We try to stay away from these individual businesses. Cannot really see the benefits to the shopper. Must be more creative in providing these facilities, more as part of the shops. For example, nappies in the baby stores. Make it much more interactive with the tenants.

**24. Do you make use of information systems to provide management reporting?**

Huge pack is done at the end of the month. Have a property management system that deals with management of the tenants and leases. Load on a monthly basis the electricity consumption by meter and allocate costs that are billed to tenant and provide statements. Also have systems to manage, among others, fire and panic buttons.

Report on total financials, debtors, budget variance. Key performance indicators cover tenant relationship, to marketing, to operations (cleaning, security etc.) and vacancies.

**26. Please discuss any other day-to-day operational issues you face in managing the shopping centre.**

Typical day starts with a meeting with contractors to report back activities and problems of the previous day that are then dealt with. Once a month a report is produced and board meetings held.

A major thing is the extensions and renovations to the shopping centre as well as tenant installations. The shop turns into a building site, while shoppers move through the mall, so you cannot just make noise during the day – have to do it over night. It is a problem to install new tenants.

## Eastgate

### 1 Administrative questions

**Date:** 19 September 2006 **Interviewer:** Anton van Niekerk

**Participant:** Errol Taylor .....

**Shopping Centre:** Eastgate .....

**Owner of the shopping centre:** Liberty Property Group.....

### 2 Classification questions

**Shopping centre type:** Convenience, Community, Regional, **Super-regional**

### 3 Target questions

South African Council of Shopping Centres classifies a super-regional as a shopping centre with gross letable area in excess of 100 000 square metres.

Gross letable area approximately 100 000 square metres.

Without shoppers there would not be a shopping centre or a tenant. From a shopping centre manager point of view there are 2 primary customers. First primary customer is obviously the tenant as we have a contractual relationship with the tenant who rents space in our shopping centre and we have to provide him with the facilities as in accordance with the rental they are paying. The tenant's primary customer is the shopper, but the shopper has to first come through the mall before he gets to the tenant. Shopper is therefore an indirect customer but almost as important as the tenant who pays the rent. From our point of view it is essential to understand the needs, desires and wants of the shopper, because in that way we can then provide the right tenant mix, the right type of tenant to make sure the shopper continues to patronise the shopping centre, resulting in the tenants being successful and therefore the shopping centre being successful.

We do use marketing surveys and shopper behavioural studies at frequent intervals to ascertain the demographics of the shopper, what their needs and requirements are and we try and establish what their perception of the facility is that we are offering them in terms of the centre as a whole. That helps and guides us in terms of our planning

and programming going forward to make sure that we retain the shoppers as much as possible. To us a loyal and repeat shopper is important, as well as a shopper that spends more time in the shopping centre, because there is a correlation between dwelling time within the centre and the amount of money that they spend.

Over and above that you also have CCTV systems that are primarily used as a pro-active method to ensuring safety and security in the mall. As well as a re-active measure when an incident has taken place. Try to focus the cameras on the incident to record the situation that follows. The CCTV system is quite a complex system; mostly the systems are computer-based with pc's. It is no longer the analogue system where you record onto a video recorder with big tapes. It is all stored on the hard drives and can be downloaded. Do not use it to analyse behaviour as the centre has a common area of approximately 18 000 square metres with on average in excess of 2 000 000 people per month. You would need a number of people and a number of cameras to be able to monitor the people to see what they are doing.

### 3.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

**1. What are the main areas that will make a shopping centre more competitive?**

Most important is the tenants that you have. If you have the right tenant mix you will continue to attract the shoppers who will want to buy the products offered by those tenants. You will find that in South Africa at this point in time you have very few holding companies offer a diverse shopping experience, but they are all on a national basis. For example, you have the Edcon group and within the group you have the likes of Edgars, Red Square, Edgars Active, Jet stores. You will find that most shopping centres you go to have these shops and the Edgars here and in Sandton is the same Edgars. That is not the differentiating factor from a shopper point of view, because no matter which shopping centre you go to you will find these stores. The differentiating factor is provided by the independent stores. These are the boutique type stores or the smaller type of stores, which are not franchised, or national chains. The secret is to get a healthy mix and balance between the number of independent stores and the number of national chain stores that you have. So that the shopper can go to one destination

and not only get what they want from the national stores but also get the individuality they get from the independent stores.

Secondary factors are related to your location. Even if you have the best tenant mix and you are not conveniently located you will not get people travelling there on a regular basis. We are very well located, near the freeway etc. So it is the traditional old retail saying of location, location, and location.

Then come the hygiene factors, like does the place look nice, is it clean do you have the security and so on. All of these play a role in order to maintain and retain your loyal customers. But primarily it is about the offering that you have in terms of tenant mix, can the customer get what they want from your shopping centre without having to go elsewhere.

**2. How do you determine the appropriate mix of tenants for the shopping centre?**

You need to study your shopper and find out what their needs are.

**3. Do you provide a call in centre for tenants?**

Do not have a call centre as such but we do have a management office. The management office is open for the duration of the time during which the centre has to trade or the tenants have to trade. Obviously the tenants all have telephonic contact with the centre management in terms of any problems they may have. In case of emergency they have facilities to contact us to get assistance. This is besides the fact that we have a web site as well as e-mail addresses, so communication with the tenants or for them to contact us is certainly not a problem.

**4. Please discuss the importance of providing marketing facilities in the centre to the tenants.**

We have an MCM (Music Content Management) facility. That is the music that gets played over the PA system. The MCM system allows us to set up a play list and also adverts that come on. We offer that opportunity for our tenants to sell branding (not product) over the system. This allows an independent tenant the sells, for example, sun glasses in one side of the centre to the people that frequent the other side of the centre. People are creatures of habit they do not go through the entire shopping

centre. They have their normal areas that they go to and you will find shoppers that have shopped here for years but only go to one section and never wander into another section. With this facility you may get information that will get you to wander to another section.

The owners of the shopping centre have steered away from using internal advertising. Shoppers do not necessarily remember the billboards that they see in the centre. Also remember that the primary objective of the tenant having a display in the widow is so that he can capture and attract the attention of the shopper as they walk past in terms of the merchandise offered in the shop window. As soon as you put in extraneous advertising materials up you are detracting from the shopper's attention and focus in terms of what is offered in the shops to what is offered on the billboards. Obviously everyone in the capital society is out to make money and any form of additional revenue is considered and advertising like that is an additional form of revenue. The question is trying to find a balance between getting more short term revenue at the expense of your tenant not getting a sale because the shopper is watching some fantastic advert and not looking at the shop window or going into the shop.

**5. Discuss the mechanisms used to provide tenants with a system that allows for registering and distributing information on special offers.**

Discussed under a different question

**6. Does the shopping centre have a website?**

Yes

**7. Are tenants provided with space on the website to promote themselves/their goods? Please explain (for example, how often updated?)**

Not really no, it is left to the tenants web site for them to do on their own. One of the reasons we do that is that it is difficult to be perceived as unbiased by the smaller tenants who maybe cannot afford to pay for certain things where the bigger stores can afford to pay. We don't really do any product advertising on the website. The website is merely to do with the shopping centre and what the shopping centre has to offer. Not with what the tenants in the shopping centre has to offer.

Surveys indicate that shoppers are already suffering from information overload. Facilities are available to, for example, SMS a word and code to a number and get a call back. The information we are getting from the shoppers is that the do not really want that sort of facility so we will not be implementing it. You need to look at the profile of your shopper and provide the appropriate service.

**8. What mechanism is used by the tenants to provide sales figures to the shopping centre?**

Every tenant that comes in has business to run. The tenant needs to look at their business and understand the percentage their rentals need to be relative to their income. That determines the rental you can afford and the rental the centre can charge. What determines that is the trading density of the shopping centre? We collect the revenue figures of all our tenants on a monthly basis. We can then establish what category of shop is performing at what rand turnover per square meter. If you take a jeweller shop, for example, their turnover figure is quite high, based on the product they sell and the floor space they require is quite small. As a result their trading density is quite high. If you apply the norm of percentage rental to turnover you get a much higher rental. If you apply the same principle to a shop like checkers, the picture changes, as they need a larger area.

Revenue figures are received on a monthly basis, with the tear of slip that is provided on the rental statement. There is also an e-mail address where they can send it to as well as facilities to phone it through.

**9. Do you provide for wireless network access to tenants?**

No

**10. How do tenants log complaints with the shopping centre?**

Come to the management office, telephone and e-mail facilities are provided.

**11. What value added services do you offer tenants?**

One just has to look at service. In general service levels seems to be dropping. We try and do the basics right. We value our customers, which are the tenants. Unless you do the basics right and provide good service levels, tenants would renew their leases.

### 3.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers

**12. Please discuss the facilities offered for shoppers to communicate with the shopping centre.**

Website, telephone as well as manned information desks, our management offices and each one of our cleaners and security guards are frequently contacted by shoppers to find out information such as where shops are. These are all communication facilities we have available.

**13. Do you make use of electronic information boards?**

We had a look at it, but due to the profile of our shoppers the timing is not right. We have a number of directory boards throughout the centre. If you look at who frequents the boards it is not the younger shopper. They tend to have more time to window shop. They know where the shops are. Your more mature shoppers often don't have time to shop around.

One of the features of the directory board is to provide additional information board. In as much as they can even offer your horoscope. What you will find is that the juvenile element starts to hog this facility to find the additional things that the service offers and they loose focus on what it is actually meant for. Plus it is only a single user, so only one person can operate it at once, whereas with the normal directory board you can have three people looking to try and find where a shop is on the map. At this point in time we will not be going that route.

If you go with a cell option that is charged the young people may hog the facility, which the shopping centre would have to pay. From an economic point of view it is not likely to generate substantial additional turnover for the shops that we have, which would be beneficial to the tenant to allow us to recover the cost in terms of additional turnover revenue.

Also not sure that it will differentiate the shopping centre and that shoppers will choose to go to one shopping centre and not the other, purely because of this.

**14. Please discuss the importance of providing shopping centre layout maps to shoppers.**

Our tenancy does not really change on a frequency smaller than a month-to-month basis. These facilities are updated on a monthly basis. Certainly if a tenant is closed for renovations or stock taking, or is moving this information is not reflected on the boards, not to sure that the digital boards currently display this information either. Again, as part of getting the basic service right, you need to make sure that the plans that you have got is a user friendly plan. The system that we have at the moment is not a very user-friendly system, we are busy changing it. To a large extent the type of facility you have also dictates as to whether people find it user friendly or not, and a lot of these systems are not user friendly. Plus a number of people cannot read a plan. They do not have the ability to understand the direction and where a shop is, they would rather ask someone for directions on how to get from point A to point B as opposed to reading the plan on the directory board.

A lot of the modern facilities provide touch screen capabilities to facilitate searches for shops.

**15. Would access to wireless network facilities enhance the shopper's experience of the shopping centre?**

We do offer wireless Internet facilities, which are in the process of being installed at the moment. This facility is for shoppers and tenants. You could, for example, go and sit in the Mugg&Bean and work on your laptop and access the Internet. At this stage we are focusing more on the sit down type restaurant facilities, so it would cover mainly the areas where you can sit down in a restaurant and order a meal, but ultimately I would like to extend it throughout the centre.

We need to try and increase the dwell time in the centre, as it is directly proportional to the amount of money the shopper spends. The more facilities you offer to have a shopper stay longer, the better for us.

**17. Please discuss your services around locating missing persons in the shopping centre.**

It is not really a value add, it is part of the basic service. In a centre, people are bound to be se separated. When it happens the child is taken to reception and the parents are called over the PA system.

Tracking devices would possibly not work, as it may be abused in the sense that the parent might let the children run off purely because they know they will find them later. That means that the child is not under the supervision of the parent, which means the child will start running around, bumping into things, bumping into people and that is not what we want. That causes irritation in the other shoppers. There are also facilities that need to be used properly, for example, escalators that the children may not necessarily use properly which could lead to injuries. It is more important to make sure that children are accompanied by adults and have adult supervision.

**18. Please discuss the benefits that a shopper loyalty programme would provide.**

The likes of places like Edgars and Mugg&Bean is easier to provide a customer loyalty programme, especially the stores that offer credit facilities. It is easy for them to build up a database. For a shopping centre where the shopper is not our primary customer, it is a little more difficult. However, the people in the shopping centre that are here everyday can start to identify regular shoppers. We do on occasion reward these shoppers. We had a promotion on our 25th birthday where we handed out vouchers to people randomly to shoppers we could identify as regular shoppers. The strange thing was that we had to convince these people to take the money. Their fear was: "What's the catch, what do you want from me to give me this money?" When we said that we needed their name and telephone number so that we could verify that the voucher was given to you, a lot of them were hesitant to divulge their telephone number. It is quite interesting to understand the dynamic of the shopper, from the point of view of there are no free lunches, and when they do get something it is in exchange for something.

**19. Please discuss the use of shopping centre vouchers.**

Vouchers for us are quite important from the point of view that it provides our indirect customer with an opportunity to shop at any shop in the shopping centre. It also offers then the opportunity, especially nowadays when it is becoming more difficult to buy a present for somebody (because you tend to buy what you like and not what they want). Coupled with the fact that coming to the festive season everybody runs out of time, it is an ideal opportunity to buy a voucher and give it to the person and then they can use that money for whatever purposes they want.

The vouchers are in fact a revenue stream for the tenant, and that is what we want. We want our tenants to have an increase in turnover. It is an additional facility, which we believe, had we not provided we could have lost a certain amount of revenue to the tenant.

Vouchers are provided as a cost to the shopping centre, as shoppers can use it for the full face value.

When prompted on electronic voucher: People are very suspicious of things unless it is tangible. Coming back to the profile of our shoppers: Unless they can see, feel and touch the voucher, there will be a certain degree of resistance towards it. Ideally I would like to have a system. Apart from cutting down forests to provide a paper- based system, the vouchers are almost as good as cash. To administer piles of cash is not a great thing. Would certainly appreciate some sort of electronic system which would whilst it is not activated be worthless, but once activated would provide the shopper with the necessary value they need. Without having to chop down trees and having an administrative nightmare of having piles of cash.

### 3.3 Issues/Concerns relating to day-to-day operations in the shopping centre

**20. Do you make use of monitoring systems to test for maintenance issues on escalators, elevators, etc.**

Yes. A shopping centre such as this one, which is 28 years old. Comprises of the equipment within the shopping centre, which are 28 years old. Back then, these technologies did not exist. Finding compatibility between, for example, the air conditioning plant, or the electrical facilities that we have with 28 years ago is problematic. As we replace the equipment with new equipment it is in our interest to incorporate this. Part of the facilities is covered, but there is a vast component that is not covered.

These devices electronically alert us to a breakdown occurring, and even a door opening for that matter. The signal can be sent to multiple users. We do most of our stuff in house, we have a facilities or technical manage as well as a standby technician, whom is either working or on standby. If a device such as a generator becomes faulty, a message is sent to both the facilities manager as well as the technician.

**20. Please discuss the importance of tracking shoppers' movements through the shopping centre, for example, which entrances are used?**

It is essential for us to know exactly which entrances a shopper use, how many people go through a particular entrance at which particular time of the day/night. There are counting mechanism located at every entrance, which can identify the number of people per hour, per day, per week, per month, per year etc. As well as interflow measures that are located in strategic positions along certain malls to calculate the flow of traffic, as well as on the escalators and elevators, which determine the vertical flow of the shoppers. It is measured quite accurately.

**21. Please discuss any issues with payment facilities for parking.**

Undercover parking is paid for, open is free. Only reason covered is paid for is that it costs money to provide and there has to be a return on investment.

There are three traditional payment methods, which are referred to as:

- Pay on entry.
- Pay on exit.
- Pay on foot.

At this shopping centre, we do not have pay on foot. We have elected to stay with the pay on exit. The reason being that our personal touch goes long way to facilitating the customer loyalty that we have. As you exit the parking, you have a person that greets you and takes the money from you and gives you change. You are still going to queue at the exit, as there will be some cars waiting there. At least you have that personal interaction as opposed just interfacing with a machine, which often does not accept the new coins etc. And it is just highly frustrating. At least a person can apologise if the equipment is down, with a machine people just tend to get more frustrated as it is just a machine. It may be more viable to go with the machine, but in terms of our basic service that we are offering, we are not in favour of moving to pay on foot.

Paid for parking is a grudge payment for the shopper. The tenants also feel that the money the shopper pays in parking is a loss in turnover to them.

**23. Do you provide kiosks for distributing items to shoppers?**

We have 4 machines at the moment, but they are in the process of being taken out. They are not vending machines, but provide facilities such as taking a passport photo or having a drawing done, or engrave a bracelet. It is not working for us, therefore they are going. These machines are rented through a tenant. The tenant rents the space. The machine is here, the tenant is not here. Whenever the machine breaks or does not work properly the shopping centre management gets the complaint, not the tenant. If we cannot resolve the issue, shoppers become unhappy with the shopping centre. It is also not a high revenue per density business.

**24. Do you make use of information systems to provide management reporting?**

Management reporting other than from a tenant point of view, such as turnover per month, as well as an annual set of account signed by the auditor. There is no other management reporting by the tenant. Between the owner of the centre and the management there is substantial reporting that is to be done in terms of the performance. That is always done through the internal reporting structure and processes.

If the tenants require information on levels of shoppers etc. the tenants can ask for it. Ultimately we would not like our information distributed to other centres. You will find that a lot of the tenants are in other centres as well. One needs to try and maintain a balance, which can be difficult.

The information on visits, foot traffic and so on is used internally. It is fundamental to monitor this on a regular basis, even on a day-to-day basis for that matter.

**25. Please discuss any other day-to-day operational issues you face in managing the shopping centre.**

Crime does impact on us. We do not quite have the communication processes in place, which provides the information to allow us to be more pro-active with regards to it. If, for example, a bank in the area surrounding the centre were robbed it would be nice to be able to get the information to our centre security so that we can assist and be on the lookout. If another centre close by were robbed, it would be good for us to know to allow us to beef up our own security to be on the lookout. That would help us as centre management.

**Confidential**

## 1 Administrative questions

**Date:** 21 September 2006 **Interviewer:** Anton van Niekerk

**Participant:** Confidential .....

**Shopping Centre:** Confidential Mall (Pretoria) .....

**Owner of the shopping centre:** Owner GrowthPoint Properties. Managed by Investec Properties Group .....

## 2 Classification questions

**Shopping centre type:** Convenience, Community, **Regional**, Super-regional

## 3 Target questions

### 3.1 Issues/Concerns relating to making the shopping centre more attractive to tenants

**1. What are the main areas that will make a shopping centre more competitive?**

Predominately what is important to us is that the shoppers experience with us is favourable. When I say favourable, favourable from the point of view that when they use parking equipment. Is the parking equipment functioning without problems. The quickest way to frustrate shoppers is to have parking equipment that is not functioning. Which is almost an inevitable thing when you have 800 000 shoppers coming through, somewhere the machinery is likely to fail. When I say that you may have 5 shoppers out of 800 000 that has a bad experience, if that is the ratio then you are fine, as the largest majority has enjoyed it. Ours is more of an experience that when they are here, their feeling is a positive feeling with regards to the ambience, with regards to the cleanliness of the shopping centre. With regards to the sense of do they feel safe, with regards to things like the toilet facilities. Do they find toilets that have toilet paper in them. It's the overall feeling, is it a good feeling. Is it a feeling that you are feeling so flustered, because it is not open and spacious and clean that you want to get in and get out as quickly as possible. Little things like colour have an enormous impact on the way that people feel. So it is not a matter of saying that we've got a unique technology feeling. Because if you look at as much as what we have progressed in society, there are still many people out there that when they are on a shopping mission their minds are not on technology, it is on about seeing, feeling, experiencing what is on offer.

Cleanliness is critical, security is critical. Operations issues like parking equipment and the functioning of it.

**2. How do you determine the appropriate mix of tenants for the shopping centre?**

You ensure that there is a minimum duplication, where possible. Certainly my policy has that I will rather leave a shop vacant for longer to get something that is going to compliment the tenant mix than slap in a tenant for the sake of getting the revenue but long term it is going to be to the detriment of the existing tenants. That is the first and foremost.

**3. Do you provide a call in centre for tenants?**

We have an office that is manned 7 days a week and all calls are routed through centre management. If an issue becomes serious you would sit down and have a meeting. I can honestly say that if I look at e-mail I hardly ever get correspondence on issues via e-mail. I think it is probably because we are manning the office almost 365 days a yea, that avenue is there to liaise directly with us. Some tenants, but not all have access to e-mail.

**4. Please discuss the importance of providing marketing facilities in the centre to the tenants.**

It is expected, as it is a regional shopping centre. It is a shopping centre where activities.. Shoppers are not going to come to Brooklyn because there as balloons and buskers, in fact it will frustrate them, but we do have activities, which do certainly increase foot traffic. For example, the wine festival, the made in South Africa. Tenants do have to contribute to a promotion fund and obviously they want to see something for it. But there is always a debate between activities and just enhancing the brand awareness, doing radio and newspaper advertising. I think there is value in it, as we have seen an increase in foot traffic when we have certain activities.

Tenants have mixed emotions about it. We have focus groups where we give them the opportunity to come in and discuss marketing issues. I don't think we have had one set of meetings where they actually attended. It could be indicative of two things. They could be either happy with what is happening or they couldn't be bothered. It is a phenomenal opportunity to get them to display their own goods and get exposure but

often it is an enormous task to get them to participate. Then when you pose the question: what is your marketing strategy or what is working for you; they don't know what you are talking about.

More the smaller independents, because the bigger guys are prescribed. There are marketing strategies in place for the bigger tenants, but sometimes that also hinders them as a vendor may be very creative and want to do something but is prescribed from head office and he is limited to what he is allowed to do.

**5. Discuss the mechanisms used to provide tenants with a system that allows for registering and distributing information on special offers.**

We have a website that is dedicated to this. They are allowed at any stage to bring to our attention anything that they may be having or things that are available. But there once again it is not nearly utilised as well as it could be. Website is updated all the time by the marketing person.

Updates can be provided any way the tenants wanted to.

**6. Does the shopping centre have a website?**

Yes

**7. Are tenants provided with space on the website to promote themselves/their goods? Please explain (for example, how often updated?)**

Yes. Tenants can promote themselves and the availability of goods on the website. Website is updated all the time by the marketing person.

**8. What mechanism is used by the tenants to provide sales figures to the shopping centre?**

Verbally. If have not received the figures by a certain date, we also have a standard form that is sent out to ask for the relevant figures. Rent is based on an annualised figures, but receive figures monthly. The monthly figures are used to monitor the turnover to determine where there is growth or no growth, as well as to compare tenants in the same category to see how they perform in relation to the others and then to calculate the turnover rent. You can also see whether there is an increase in their turnover when a particular promotion was held.

**9. Do you provide for wireless network access to tenants?**

No.

**10. How do tenants log complaints with the shopping centre?**

Complaints are logged verbally or in writing. They are aware that there is an e-mail address but I seldom have it registered in that format. Would say that the most utilised form is telephonically.

**11. What value added services do you offer tenants?**

We have things like training courses. We consistently communicate with them as to what we believe will enhance the shopping experience. It is a very personalised relationship, so cannot say that the relationships we have with the tenants facilitate renewals, it is a service that we offer. They are not dealing with an outside brokerage firm, they are dealing with the management team who is intricately aware of where they are at, their circumstances etc.

Certainly we offer free advice. If anyone ever asks us to come in and look at what is wrong with my business and what I could be doing. Very often you offer that advice when it is not requested, but it is often perceived as negative feedback rather than constructive feedback.

We offer we whatever the tenants needs are within reason. We are here to implement suggestions that are within reason and can be accommodated within budget.

We also protect their interest, which is a service that we offer. We protect their interest where people step outside their product range. I would then have to address that when they sell products that are outside of the prescripts of the lease. Without duplicating the tenants and tenant mix where a service is already catered for.

**3.2 Issues/Concerns relating to making the shopping centre more attractive to shoppers**

**12. Please discuss the facilities offered for shoppers to communicate with the shopping centre.**

All of the facilities we offer to the tenants are available to the shoppers. As I say we have lists of VIP shoppers, we have a monthly exchange that we send to the VIP shoppers as well. Which keeps people posted on what is happening within the mall. That exchange is also available on the website.

VIP shoppers are somebody that the tenants inform us that they are here on a very regular basis (4 or 5 times a week), or people that we physically see. Start identifying them without them even making themselves known.

**13. Do you make use of electronic information boards?**

No. Have manned kiosks in the shopping centre, for the provision of information. Also distribute pamphlets at these kiosks.

**14. Please discuss the importance of providing shopping centre layout maps to shoppers.**

Hugely important and they are already in place on all the levels and various areas within the mall. Information kiosks can also assist shoppers when needed.

These boards are updated all they time, as soon as you had quite a few changes in the tenant mix, the tenant mix is now established so it won't be changed, have no vacancies for three or four months. Would say that every 3 months is an accurate figure.

Boards are not updated with changes in status, such as closures for renovations. The information is put out in the shops long before the time, so shoppers can be aware of it. Not physically changed on every board, because there is so much that is happening all the time that to keep everyone posted you will have an encyclopaedia of information on the board. You consistently have people upgrading, consistently have consolidation or expansions at any given point in time, even when the centre is fully let.

Very often updates to a board is only done in a particular area where there is sufficient space to change. Seldom redo everything, as there is space to make changes on the board.

**15. Would access to wireless network facilities enhance the shopper's experience of the shopping centre?**

Some of the tenants have installed it in their own shops, for example, if you go to Mugg & Bean you can sit and work on your laptop. That facility is already there where the tenants have done it themselves. Not sure that people will sit and work on computers anywhere else than in restaurant facilities, but it should enhance it. Certainly can say that over and above what is in place, have not had shoppers that relayed they are

dissatisfied with the fact that there is not more access to it. Have not had negative feedback from the community.

**17. Please discuss your services around locating missing persons in the shopping centre.**

We have a PA system that is used to announce when there is a lost person in the shopping centre.

**18. Please discuss the benefits that a shopper loyalty programme would provide.**

Loyalty programme that offers rewards would make sense. We get feedback from the tenants on regular shoppers but the shoppers are not really rewarded. We are not aware of the amount spent by a shopper; there would be value in knowing that and then looking at how it can be rewarded. Do not currently have a loyalty programme. Have tried the Tutuka loyalty programme many years ago, but that never worked.

**19. Please discuss the use of shopping centre vouchers.**

Make use of vouchers, have a manual system at the moment with printed paper vouchers, but are looking at going electronic. No major issues with the paper vouchers, as we have a very tight system in place. Only issue is really the labour issue when you sell large volumes.

Electronic system being looked at is Tutuka. It is a credit card-based system that requires money to be loaded on. Different systems are available where it can be reloaded or disposed of. Concern is that as it is a credit card, it is linked to either MasterCard or visa. You can therefore make use of the card elsewhere, thereby defeating the object. A gift voucher's purpose is to ensure that the purchase is made at the shopping centre. As it is a visa card, the card can be used wherever visa is accepted.

When prompted: If it was possible to use and electronic system, with an electronic file, indicated that it would be difficult to manage, as you have to be able to prove where it came from. A voucher system is open to abuse, need to have a physical thing even if it is a credit card, to show proof of the value loaded on.

**3.3 Issues/Concerns relating to day-to-day operations in the shopping centre**

**20. Do you make use of monitoring systems to test for maintenance issues on escalators, elevators, etc.**

Have smoke detectors linked to security control, fire is linked. Do not necessarily have an alarm that is linked to an escalator that will resound in the control room if it is to stop working.

Anything that can alert you to something that has gone wrong sooner than what it would have taken to physically pick up that an escalator or lift is not working would be valuable.

**20. Please discuss the importance of tracking shoppers' movements through the shopping centre, for example, which entrances are used?**

Have got foot counters at all entrances and are positioned outside national stores as well. These devices have formulas to calculate when people walk next to each other, whether it is a child or whether it is a trolley that broke the beam.

Important to look at which parking is used, traffic flow and capacity. You also charge different rent in different areas, also do charge different rentals depending on the volumes of people.

**21. Please discuss any issues with payment facilities for parking.**

Pay on foot mechanism is used.

Meters are reconciled manually between reports from machines and the computers and audited on a monthly basis.

When new coins are introduced, machines need to be updated.

Machines can breakdown and cause capacity issues. It is however a managed thing, as you have service contracts in place that should ensure that this sort of thing is absolutely minimised.

**23. Do you provide kiosks for distributing items to shoppers?**

We do not have vending kiosks, as it detracts from what the tenants are all about.

**24. Do you make use of information systems to provide management reporting?**

Systems are computer-based that provide monthly reports for the owners of the building. Other management reports include reports around foot traffic and so on. These reports form part of the management pack.

**25. Please discuss any other day-to-day operational issues you face in managing the shopping centre.**

The other operational issues are more of a hands on, manual, person-to-person kind of thing.

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