ParkMagic

Limerick City Pilot Report

(Customer Ratings)

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Revision History

Version	Issued	Description
1.0		First Issue

1. Executive Summary

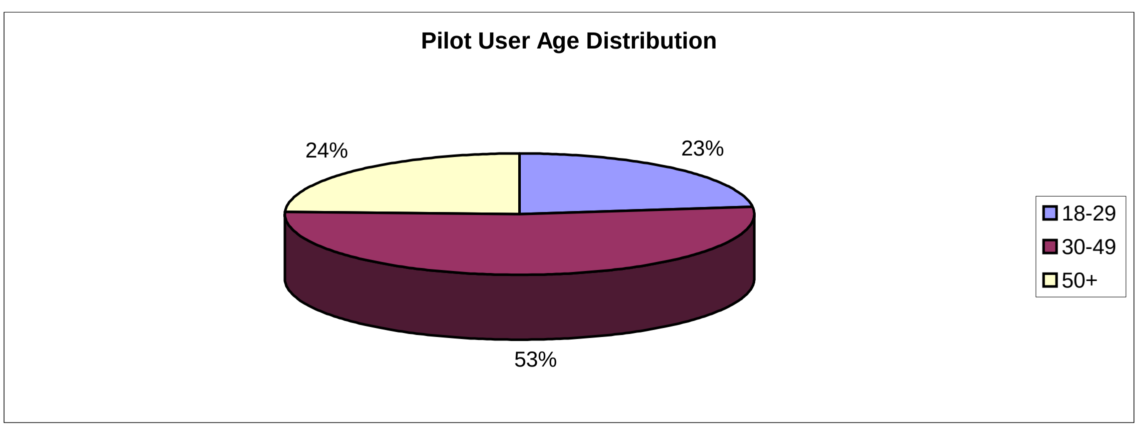
ParkMagic is a company established by Paul Fitzgerald and Philip Hayes (herein known as the promoters). The first product being launched by ParkMagic is a prepaid electronic parking permit for on-street parking. This product enables urban motorists to use a much more user-friendly system to pay for on-street parking. It has the potential to be used anywhere there are existing on-street parking charges, which are presently in many cities and towns across Ireland, the EU and indeed globally, or where these are planned to be introduced in the future.

In order to prove the viability of both the product concept and the product itself, the promoters conducted a full public Pilot in Limerick city in cooperation with Limerick City Council. This pilot was targeted at a range of potential users and closely monitored and evaluated by the University of Limerick Marketing Centre (http://www.marketingcentre.ul.ie). The pilot was conducted in August/September of 2005.

The results are summarized as follows:

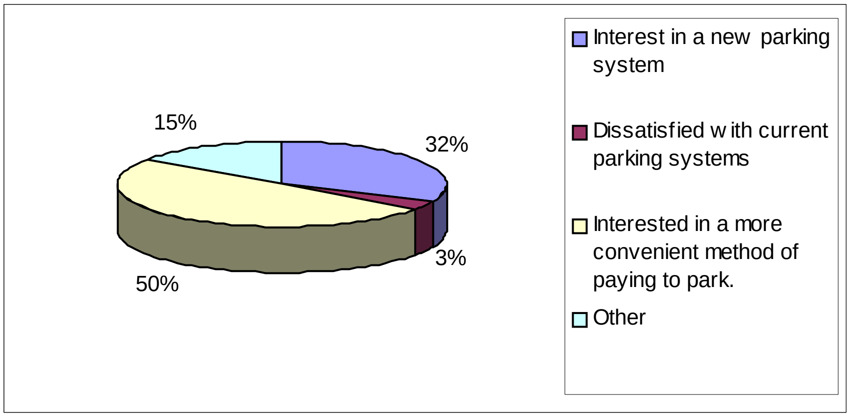
Age profile

Pilot users were selected across all age groupings such that the pilot could be said to be representative of drivers in the area but also selected so no bias towards age groupings who may be considered to be more exposed to mobile technologies was apparent:

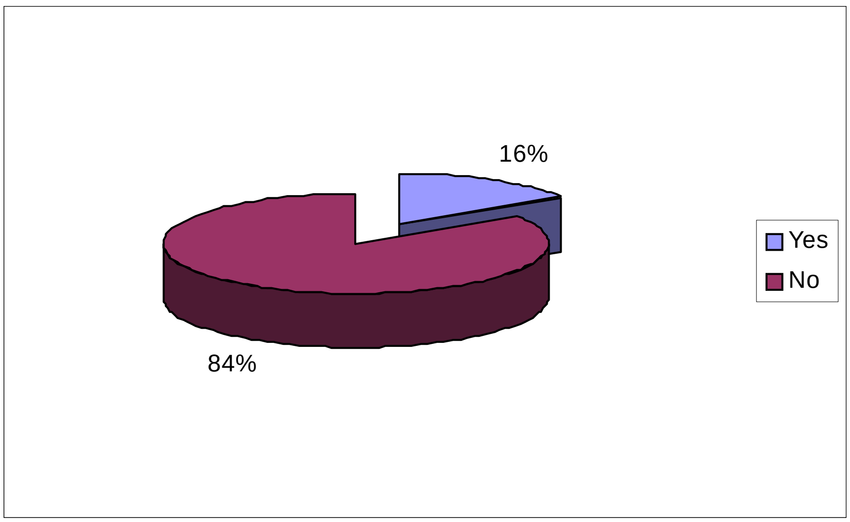


Motivation

Users were asked to comment on what motivated them to participate in the Pilot. Predominantly peoples responses indicated convenience as the main motivator, with the next largest group motivated by curiosity. Of this grouping, post pilot, the majority of these could be seen to have adopted ParkMagic as their preferred method of parking payment.

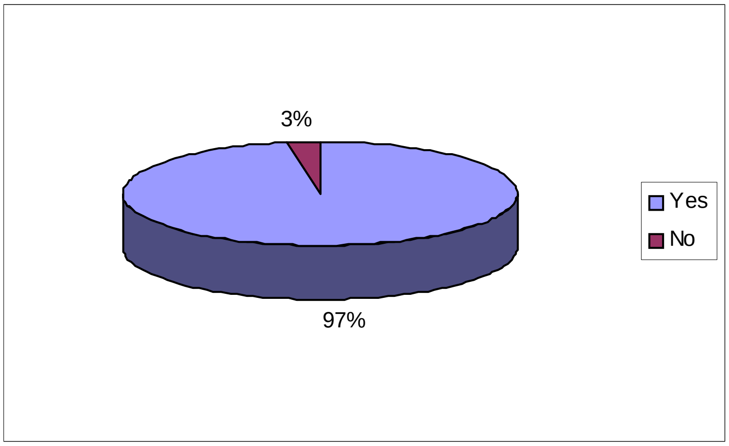


Difficult to use?



84% of respondents reported no difficulties using the service. Of the 16% who experienced some difficulties 64% of these reported their difficulties resolved following a support call or email contact (bringing the total to 94.24%). During the Pilot, several changes were made to the system configuration in order to modify aspects that caused or were suspected of causing user difficulty.

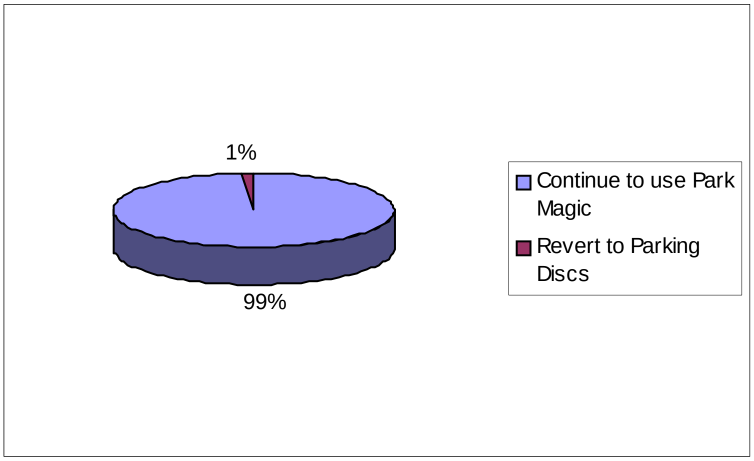
Expectations met?



Users were queried whether or not the overall service met with their expectations for a convenience driven parking system. An overwhelming 97% responded in the affirmative. The balance, when asked cited factors which could be said to be outside the control of the promoters, such as issues regarding the availability of spaces etc.

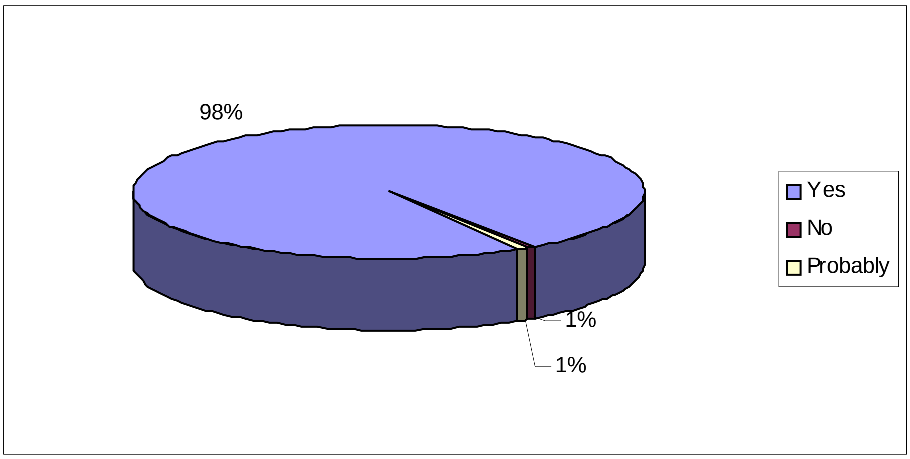
Continue to use?

Recognising that all users have a different mix of motivators and opinions when using a service, the crucial question that can help to determine their opinion 'on balance' is, 'Would you continue to use the product or revert to using the previous system?' When put to Pilot users the overwhelming majority (99%) stated their preference to use ParkMagic.



Recommend ParkMagic?

Another key indice in measuring overall user satisfaction with a product or service is the users inclination not only to adopt the product for their own use but their willingness to act as an ambassador for a product and recommend it to a friend or colleague. Again in this instance Pilot users rated ParkMagic excellently with 98% electing to recommend. The balance (2%) of users cited call costs as the main barrier to recommendation with these users strongly of the opinion that there should be no additional charge other than the parking charge for service.



In a nutshell

Based on the outcome of the Pilot and the realworld data gathered, the Promoters believe that ParkMagic has shown itself to be a service that has mass market appeal and is a viable partner to existing on-street payment systems. This contention is clearly supported by the user data returned from the survey showing usability and convenience levels that clearly meet consumer demand. This conclusion is further supported by the Pilot traffic data report, a companion report to this report which shows traffic and usage levels of the service to be on a par with normal parking usage patterns in the Pilot city thereby indication acceptance of ParkMagic as an 'everyday' solution. This traffic analysis report is available from ParkMagic, however, one key metric of note is that the average everyday use of ParkMagic within Limerick city was in excess of 33%, with one in three ParkMagic users using the service at least once.

2. Introduction

ParkMagic is a company established by Paul Fitzgerald and Philip Hayes (herein known as the promoters). The first product being launched by ParkMagic is a prepaid electronic parking permit for on-street parking. This product enables urban motorists to use a much more user-friendly system to pay for on-street parking. It has the potential to be used anywhere there are existing on-street parking charges, which are presently in many cities and towns across Ireland, the EU and indeed globally, or where these are planned to be introduced in the future.

The promoters are in no doubt whatsoever that with most western European countries experiencing mobile penetration rates in excess of 90% and in some cases over 100% and with the United States and Canada rapidly catching up that most parking users already hold in their hands the most convenient and accessible method for payment. Today that potential is restricted by issues of accessibility, usability, convenience and simplicity and removing these barriers is the one of the main design drivers behind ParkMagic.

The ParkMagic pilot was conducted with two purposes. The primary was to determine public attitudes to paying for parking via mobile phone and most especially to determine the key factors that would motivate those users to use this type of service over and above other more traditional methods. In short, what factors would convert parking payment by mobile phone from the niche service it is today to a mass market service.

The secondary purpose was to determine whether or not the ParkMagic product could fulfil the primary purpose and what changes might be required to improve the product.

In order to determine the most effective roll-out of this proposed product, the promoters arranged a pilot of this product in the mid west of Ireland – in Limerick City in conjunction with Limerick City Council, the local government body with responsibility for street parking management.

This pilot was targeted at a range of potential users and closely monitored and evaluated by the University of Limerick Marketing Centre (http://www.marketingcentre.ul.ie). The pilot was conducted in August/September of 2005. The primary research was conducted with 151 respondents from the Limerick area representing a 48% response rate to the survey. The sample chosen was gender balanced and reflected a statistically representative spectrum of individuals residing in the Limerick area. The main findings of this primary market research included:

Demographics:

- Participants in the pilot consisted of 58% females and 42% males.
- The majority of respondents were aged between 30-49. This age group accounted for 53% of the overall total.
- The majority (65%) of respondents were living in the Limerick area. A further 29% were from County Limerick.
- Approximately 90% of respondents in the pilot are employed.

The Pre-Pilot

- Research was conducted to ascertain the main reasons that people visit the city centre. The main responses included: "work" (41%), "shopping" (39%). Other responses included "business" and "shopping and business" and also "college".
- Research findings indicate that 42% of respondents visit Limerick City on a daily basis. This was followed by 20% of respondents stating that they visit the city 4-5 times a week.
- Over 50% of participants stated that "interested in a more convenient method of paying for parking" was the main reason they decided they wanted to participate in the ParkMagic pilot.

Introduction to ParkMagic

- Over 83% of individuals stated that there first impressions of the ParkMagic product were either excellent or very good.
- Statistics indicate that 93% of respondents stated that the instruction manual that accompanied the product was user-friendly and easy to understand. 66% percent stated that no improvements should be made to the manual.
- With regard to the actual device, results were very positive. In all of the factors that were considered, the majority of participants were "very satisfied" or "satisfied" with the following elements of the device: size of the device; readability of the display on the screen; ease of attaching device to the car; durability of the device; clarity of instructions when you call the system; and finally the clarity of the audio received when you call the system.

Using ParkMagic

- Of the participants that signed up for the pilot, 96% of them had started to use ParkMagic. This consisted of 57% of females and 39% of males.
- Ninety-six percent of respondents stated that ParkMagic was "easy to activate".
- Research findings indicate that the most common parking duration that ParkMagic is used for is 1-2 hours. Forty-two percent of respondents stated this. A further 28% of respondents stated that they would use ParkMagic for 2-4 hours.
- Eighty-four percent of respondents stated that the product was not difficult to use. The majority of the balance having an initial difficulty addressed by a single support call or reference to documentation.

Topping Up

- Research findings indicate that 41% of respondents stated that they had topped up with ParkMagic credit using the IVR method. More females had topped up than males. Seventy-five percent of these respondents stated that it was easy to top up.
- Results indicate that 52% of respondents would prefer to top up by €10 when topping up with ParkMagic credit. However, the promoters are of the opinion, given the rate of consumption of credit during the that a commercial deployment would see this quickly rise to €15 since €10 would result in a inconvenient level of top-up events for users.
- "Pay as you go-topping up in local stores" is the most preferred option as a payment option for topping up for ParkMagic. Approximately 50% of respondents stated this. Topping up by text also proved very favourable with participants. 40% percent of respondents stated this.
- The least preferred option cited by respondents was "just add the charges to my monthly phone bill".
- Many advantages were cited by respondents by using ParkMagic. These included "convenience of being able to park by phone" (90%); "convenience of not having to walk to shop for parking discs" (80%); "no need to search for coins for pay and display machines" (55%); "speed of being able to park by phone" (74%);. The other responses are discussed in the report.
- Results indicate that ~52% of respondents stated that there are no disadvantages in using ParkMagic. By implication, it could be assumed that 48% therefore saw disadvantages, however analysis of the responses clearly indicates that disadvantages cited were clustered in areas such as call charges etc areas which fall within the realm of the launching authority rather than the service itself. Clearly, however, users expressed strong opinions relating to any additional charges that could be encountered when using the service over and above the standard parking tariff. To illustrate, the reader is referred to table 15 (p.30) which outlines the key factors cited.

3. Background & Objectives

The promoters were interested in conducting a pilot in order to ascertain whether ParkMagic would be successful or not and what were the key factors that could convert a heretofore niche service (Parking payment by mobile phone) to one with mass market appeal. The pilot was conducted in the following manner:

An advertisement was placed in the Limerick Leader and the Limerick Post newspapers during the week of the 28th July, asking participants to sign up for participating in the ParkMagic pilot, with the incentive of receiving free parking in the city centre for the period of the pilot. A freephone number was advertised for people to contact a call centre.

The offer was fully subscribed within 2 days of placing the advertisements.

Respondents were asked to complete a pre-screening questionnaire, in order to have a representative sample of the total population in Limerick city. The sample chosen was gender balanced and reflected a representative spectrum of individuals residing in the Limerick area. The individuals were selected so that their reasons, motivations and general attitudes towards parking and parking systems could be examined. .

A total of 310 devices were sent out to the selected candidates, the balance of the 500 units available were distributed to media organisations and employees of Limerick City Council and other local authorities. The pilot commenced once individuals had received the ParkMagic packs.

The principal objectives of the pilot included:

- Establish attitudes of motorists to current on-street parking payment solutions
- Determine practices of motorists when faced with making on-street parking decisions following the pilot
- Determine practices of motorists when faced with making on-street parking decisions following the pilot
- Establish attitudes of motorists to all current on-street parking payment solutions including ParkMagic
- Identify the perceived value of this proposed product amongst motorists

- Determine any factors that would influence potential customers to adopt this proposed product (post pilot)
- Identify potential market demand for the product among pilot participants

Research Methodology

Primary research was conducted in order to examine the objectives that have been set out. Primary quantitative market research was conducted via two consumer surveys – one prior to the pilot and the second to follow up on completion of the pilot. The sampling frame for the research is motorists who took part in the pilot.

The questionnaires used in these surveys varied but were both semi-structured, incorporating mostly closed questions and a limited number of open-ended questions. The questionnaires were designed in consultation with the promoters. The pre-pilot questionnaire was conducted via telephone with the contact centre. The second consumer survey of pilot participants was conducted as a postal survey.

The University of Limerick Marketing Centre analysed all completed questionnaires using specialised data analysis software, allowing for full statistical analysis of responses.

4. Primary Research Findings

Section One: Demographics

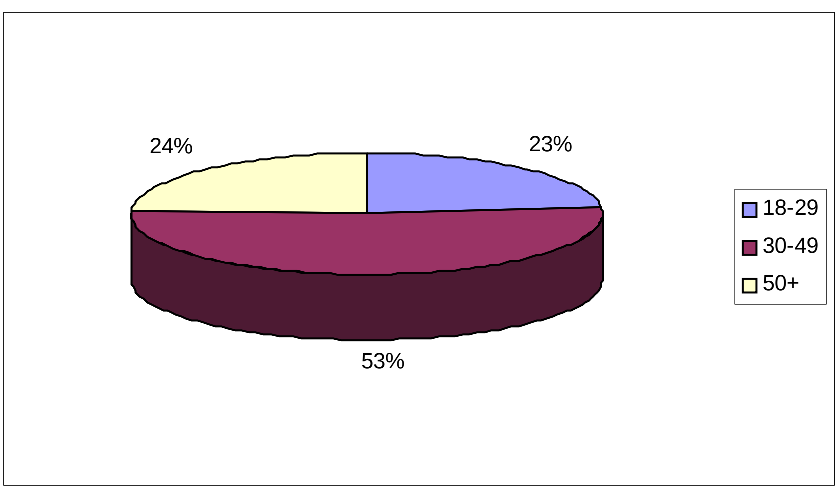
Results indicate that 54% of females and 46% of males signed up for the ParkMagic pilot. The actual number of females that participated in the pilot were 58% and male participants accounted for 42%. These figures are depicted in table 1 below:

Table 1: Gender of Respondents

Gender	Signed Up for Pilot	Participated in the Pilot
Male	46%	42%
Female	54%	58%

Figure 1 below illustrates the age group of the respondents. The majority, 53%, were aged between 30-49. This was followed by 24% of respondents which were in the over 50's age group with the remaining respondents aged between 30-49. This group accounted for 23% of the total.

Figure 1: Age Group of Respondents (n=135)



Cross tabulations were carried out to ascertain the number of male and females in each age group. The results are depicted in table 2 below:

Table 2: Age & Gender

Age Group	Male	Female	Total
18-29 yrs	13	18	31
	9.6%	13.3%	23%
30-49	29	42	71
	21.5%	31.1%	52.6%
50+	15	18	33
	11.1%	13.3%	24.4%
Total	57	78	135
	42.2%	57.8%	100%

Respondents were also asked what area they were living in. The majority of participants in the pilot were from Limerick (65 % approx). A further 29% (approx) were from Co. Limerick. The remaining responses are depicted in the graph below:

Figure 2: Areas where participants are residing (n=135)

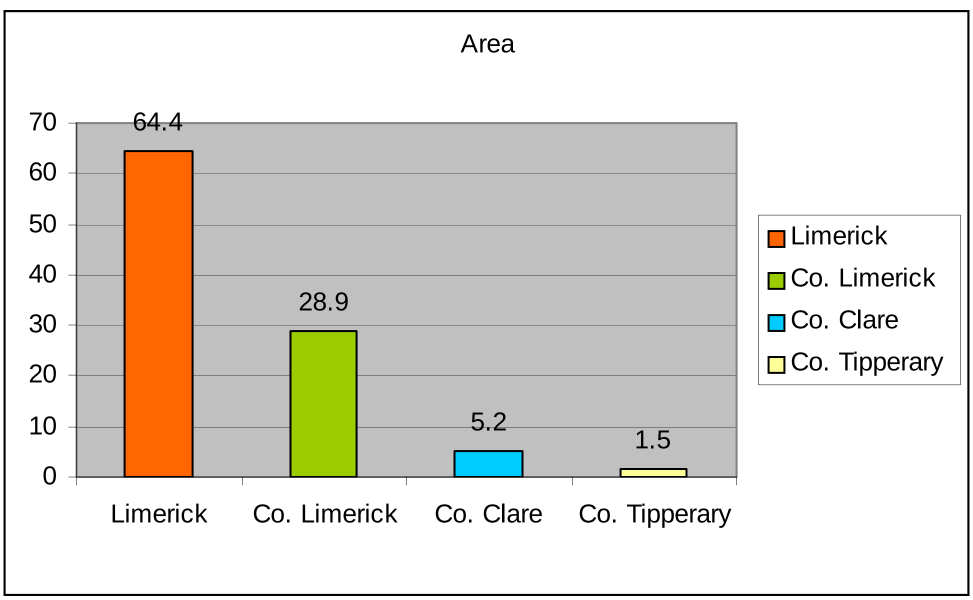


Table 3 below illustrates the relationship between the frequency of visitors to the city centre the area they are residing in. Statistics indicate that of the 65% of respondents residing in the Limerick area, approximately 29% visit the city centre on a daily basis. The remaining responses are depicted in Table 3.

Table 3: Frequency of visitors from various areas

	Limerick	Co. Limerick	Co Clare	Co Tipperary	
Daily	36 26.7%	14 10.4%	5 3.7%	1 .7%	56 41.5%
3-4 times per week	15 11.1%	5 3.7%	1 .7%		21 15.6%
4-5 times per week	17 12.6%	10 7.4%		1 .7%	28 20.7%
More than 5 times a week	11 8.1%	5 3.7%			16 11.9%
2-3 times a week	5 3.7%	4 3.0%			9 6.7%
once a week	2 1.5%	1 .7%			3 2.2%
2-3 times a day	1 .7%		1 .7%		2 1.5%
Total	87 64.4%	39 28.9%	7 5.2%	2 1.5%	135 100%

Respondents were also asked to state their current employment status. The majority of participants are employed. Table 4 below illustrates the findings of the research:

Table 4: Current Employment Status of Respondents (n=135)

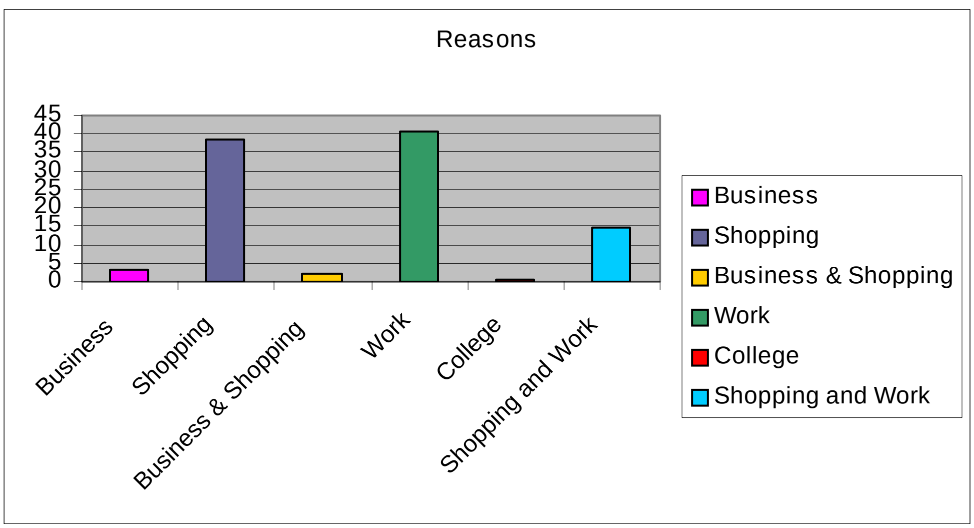
Employment Status	%
Employed	90.4%
Not Employed	8.1%
No answer	1.5%

Section Two: The Pre-Pilot

Before being selected for the pilot, respondents were asked numerous questions with regard to visiting the city centre. Respondents were asked the reasons they would usually visit the city centre, how often they would visit and how many parking stays they would usually have over the period of a week.

Figure 3 below illustrates the main reasons why individuals visit the city centre. Research findings indicate that the balance between worker and shopper visitors to the city centre for "work" purposes was almost equal with 41% of participants citing 'work' as their reason for visiting and 39% of respondents stating "shopping purposes" as their main reason for visiting the city. Other responses cited are depicted in the figure below.

Figure 3: Reasons why individuals visit the city centre



Respondents were also asked to comment on the frequency of which they would visit the city centre. The following responses were received.

Table 5: Frequency of visits to the city centre

Frequency	Total	Percent
Daily	56	41.5
2-3 times a day	2	1.5
Once a week	3	2.2
2-3 times a week	9	6.7
3-4 times per week	21	15.6
4-5 times per week	28	20.7
More than 5 times a week	16	11.9
Total	135	100%

Results indicate that approximately 42% of respondents visit the city centre on a daily basis. An additional 20% of participants stated that they visit the city centre 4-5 times per week and a further fifteen percent 3-4 times a week. Approximately 12% of respondents stated that they visit the city centre "more than 5 times a week". Similar to this, respondents were asked, how many times a week they would use a parking system in the city. Responses included the following:

Table 6: Number of times a week individuals use a Parking System in the City Centre

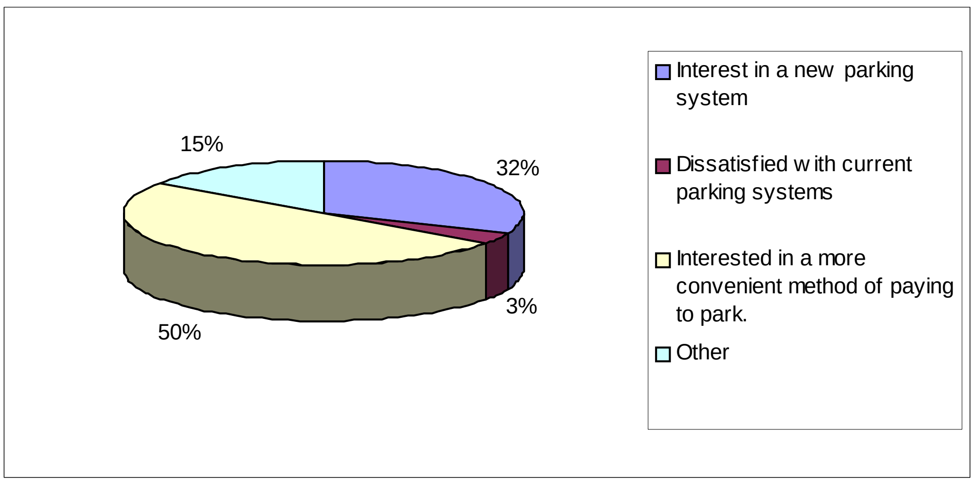
Number of times a parking system is used	Total	Percent
once a week	4	3
twice a week	4	3
three times a week	11	8.1
four times a week	25	18.5
5 times a week	20	14.8
six times a week	67	49.6
Daily	4	3
Total	135	100%

Approximately 50% of participants in the pilot are using parking systems 6 times a week.

Section Three: Introduction to ParkMagic

Respondents were asked what initially encouraged them to participate in the ParkMagic pilot. As depicted in figure 4, the majority of respondents stated that they were interested in a more convenient method of paying for parking. Other responses included "interest in a new parking system". Dissatisfaction with current parking systems also encouraged individuals to participate in the pilot.

Figure 4: Factors encouraging individuals to use ParkMagic



As evidenced in the table above, 15% of respondents stated that they wanted to participate in the pilot for "other" reasons. Of the 15% of respondents approximately 3% of them stated that they just wanted to avail of the free parking offer. An additional 1% stated that they felt that the current parking system in place is "slow, inefficient and time consuming". The remaining 11% stated that they participated in the pilot for the all the options that were outlined on the questionnaire, namely "interest in a new parking system"; "dissatisfied with current parking systems" and also "interested in a more convenient method of paying for parking".

Cross tabulations were carried out to ascertain the relationship between the gender of respondents and the reasons that initially encouraged them to participate in the ParkMagic pilot. Research findings indicate that of the total that stated they were "interested in a new parking system 32% (n=38), 18.8% of them were female and 9.8% were male. Of the 3.8% that stated they were dissatisfied with current parking systems (n=5), results indicate that approx 3% were male respondents and 0.8% were female. Of the approximate 50% who stated that they were interested in a more convenient method of parking, 28% of these female and 23% males. The remaining respondents that stated “other” reasons, 5.7% were female and 6.8% were male.

Participants in the pilot were asked what were their first impressions of the ParkMagic product. The survey results that were received were very positive in this regard. Table 7 below depicts the results:

Table 7: First impressions of the product (n=148)

First Impressions	Total	Percentage
Excellent	61	41.2
Very good	62	41.9
Good	21	13.9
Fair	4	2.7
Poor	0	0
Total	148	100%

Evidently, results indicate that over 83% of individuals stated that there first impressions of the product were either “excellent” or “very good”. An additional 14% (approx) stated that there first impressions of the product were “good”. Only 2% stated that the product is “fair” with no respondents stating that the product was “poor”.

Research findings indicate that of all respondents that stated that their first impression of the product was “excellent” (41.2%), 20.5% of both male and female were of this opinion (n=61). Similar results emerged with regard to first impressions of the product being “good”. Approximately 8% of both male and females stated this. Of the respondents whose first impressions were “very good” (41.9%), 27% were female and 15% male. With regard to the age group of respondents, results show that a higher percentage of participants aged between 30-49 stated their first impression of the product was either "excellent" (22.7%) or "very good" (18.2%) compared with the other age categories.

Respondents were asked to comment on the instruction manual that accompanied the pack. They were asked if the manual was user-friendly and easy to understand. Results indicate that over 93% of participants stated that "yes" it was. Only a minority of 7% stated that the instruction manual was not user-friendly and not easy to understand. Furthermore, participants were asked whether they felt improvements should be made to the instruction manual. Sixty-six percent stated that no improvements should be made while the remaining thirty four percent of participants suggested a variety of amendments many of which were addressed by an updated manual issued and distributed to participants during the course of the pilot.

Participants were asked to indicate their level of satisfaction with regard to a number of factors relating to the ParkMagic device. Overall the research findings in all respect were very positive. Overall results indicate that only 3% of respondents were "very dissatisfied" with the six categories of ParkMagic that were examined. Participants were asked to rank their level of satisfaction with regard to the size of the device; readability of the display on screen; ease of attaching the device to the car; durability of the device; clarity of instructions when individuals called the system and the clarity of the audio received. The results are depicted in table 8 below:

Table 8: Level of satisfaction with the ParkMagic Device

Factor	Very satisifed	Satisified	Neither satisfied or dissatisfied	Dissatisfied	Very dissatisfied
Size of the actual device	66.2%	25.8%	4.6%	3.3%	0%
Readability of the display on screen	46.7%	38.7%	7.3%	7.3%[i]	0%
Ease of attaching device to car	61.2%	29.9%	1.4%	6.8%	0.7%
Durability of the device	58%	33.6%	5.6%	2.8%	0%
Clarity of instructions when you called the system	65.5%	28.4%	2%	2.7%	1.4%
Clarity of the audio received when you call the system	60.4%	30.9%	4%	3.4%[ii]	1.3%

It is evident from the table outlined above that in all categories participants were very satisfied with all the elements of ParkMagic that were examined.

Section Four: Using ParkMagic

Participants that had signed up for the pilot were asked whether they had actually used the device. Results indicate that 96% of them had. Of the 96% that had used the product, cross tabulations indicate that 57% of these were females and 39% male participants. Only 4% had yet to use the product.

Individuals that had started using ParkMagic were asked was it easy to activate. Results indicate that 96% of respondents stated that "yes" it was. Approximately 55% of these were females and 41% males (total=96%). Only 4% of them stated that it was not easy to activate and they were then asked to specify the reasons for this. Some respondents stated that there were some problems initially but these were addressed by the support service. Many users who had reason to use the support service received outstanding support and assistance and commented on this fact. The various comments made included "when I had a problem, it only took an engineer 15 mins to get to me"; "customer service were great"; "had initial problems but received a text to inform me that there was a problem".

Respondents were asked what parking duration they would normally use ParkMagic for. Figure 5 illustrates the results:

Figure 5: The Parking Duration that ParkMagic is normally used for

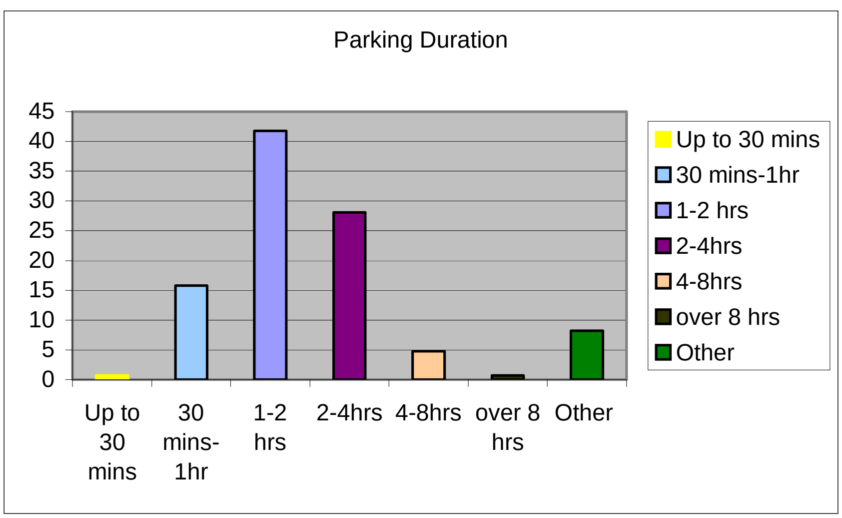
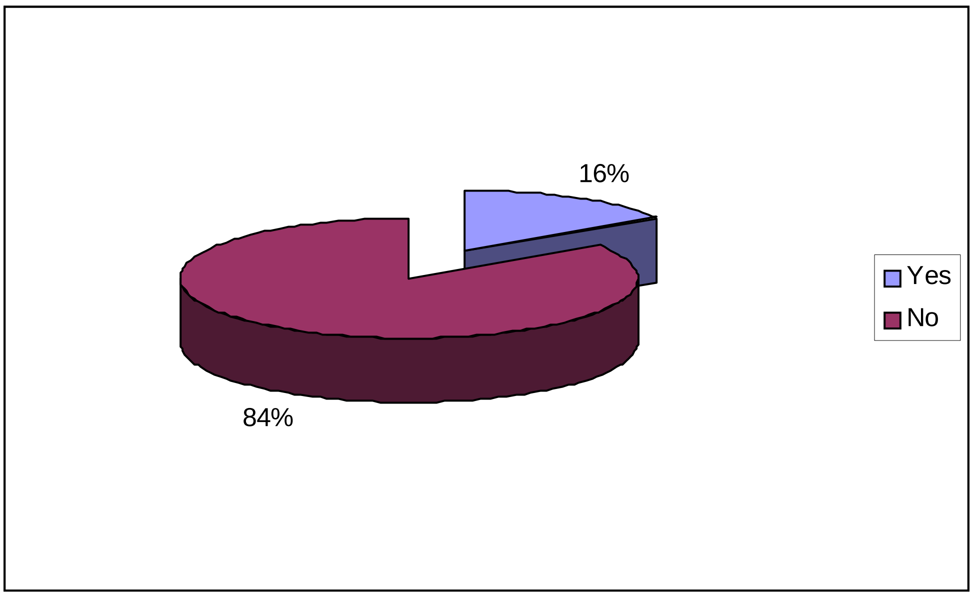


Figure 5 indicates that the most common parking duration that ParkMagic is used for is 1-2 hours, with approximately 42% of respondents stating this.

Participants were asked when they were first using ParkMagic, did they find it difficult to use. Eighty four percent of participants stated that the product was not difficult to use. Figure 6 illustrates the results:

Figure 6: Was ParkMagic difficult to use?



Of the 84% of individuals that stated that ParkMagic was not difficult to use, cross tabulations indicate that 50% of these were females and 34% male (total=84%).

Of the 16% that stated that it was difficult to use initially, an analysis of the calls to the ParkMagic support centre indicated the majority of these initial usage difficulties related to "I have started the meter but how do I stop it?" Using ParkMagic there is no need to 'stop' the meter and once explained to respondents the outcome indicated that 64% of these callers considered that they did receive enough support and assistance in this single contact in helping them to use ParkMagic.

Section Five: Topping Up

Participants were asked whether they had yet topped up with credit on ParkMagic. Results indicate that 41% of respondents had topped up using the IVR method at time of survey. The remaining 59% stated that they had not yet used the IVR top up facility. Research findings indicate that more females had topped up compared to male participants. Of those respondents that had topped up (41%), 75% of them stated that it was easy to do so. Only 15% stated that they found it difficult to top up.

These respondents were asked why they perceived the top-up process to be difficult. Of those who indicated it was difficult to top up, results indicate that 33% of participants said that the difficulty in topping up was the "inconvenience of having to go to the shop". The remaining 66% stated "other" reasons. These are outlined in Table 10 below:

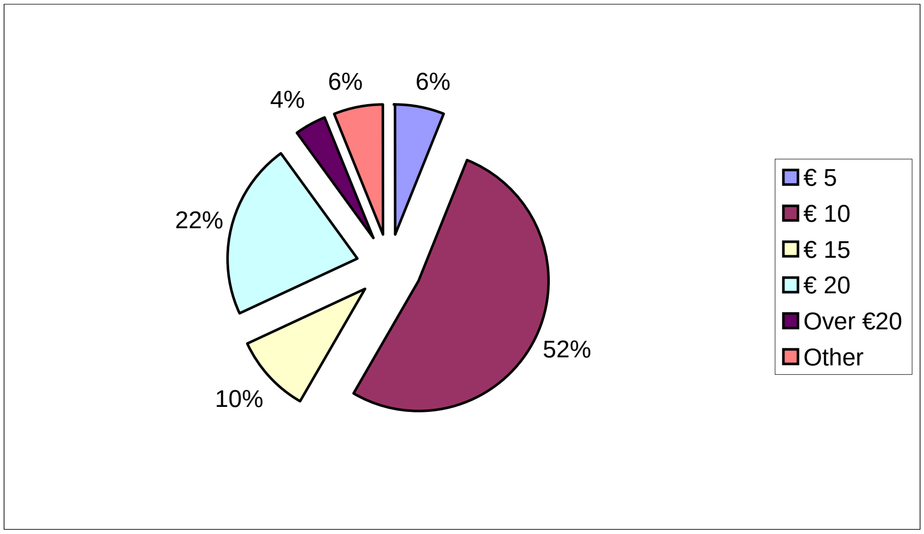
Table 10: Reasons the top up procedure was difficult

Reasons
The shop staff were not familiar with the product
The phone would not accept my PIN and had to get assistance*
Was advised by the shop that I visited that the top up machine was not working
It would not allow me to top up-kept saying that time was up*
I was using the code on the voucher-was not aware that I had to redeem this in a shop*

Items marked * above had the same cause. During the pilot period, users were issued with coupons as a subsitute for cash in order to purchase credit at participating stores. These coupons were numbered and in some instances were mistaken for credit voucher numbers. Since they were not, in fact, valid credit voucher numbers the system correctly rejected them. This possibility for error was eliminated with a documentation update during the pilot, however it should be noted that in commercial use cash not coupons are used thus removing any possibility for confusion

Figure 7 depicts customers top amount preferences for ParkMagic.

Figure 7: Top-up amount preferences for ParkMagic



Evidently, the most preferred top up amount for ParkMagic credit is €10, with 52% of participants stating this. This was followed by 22% of respondents stating that they would preferably top up with €20. Ten percent of respondents stated that they would top up by €15. Approximately 6% stated that they would prefer to top up by either €10 or €15 (2.3%) or €5 or €10 (3.8%).

Further research was conducted to ascertain the preferred top up amount by frequent visitors to the city centre. Evidently, by all participants the preferred top-up amount is €10 and results indicate that in all cases examined, this proved to be the most preferred top up option. The findings correlating city visit frequency with top up amount preference are depicted in table 11 below:

Table 11: Preferred top-up amount by frequent visitors to City Centre

Frequency	€5	€10	€15	€20	Over €20	€10 or €15	€5 or €10	
Once a week		1 33.3%		1 33.3%			1 33.3%	3 100%
Twice a week		3 75%		1 25%				4 100%
Three times a week		5 71.4%		1 14.3%			1 14.3%	7 100%
Four times a week	4 20%	8 40%	3 15%	3 15%		1 5.0%	1 5.0%	20 100%
5 times a week		12 63.2%	1 5.3%	5 26.3%		1 5.3%		19 100%
Six times a week	3 4.8%	35 56.5%	6 9.7%	13 21%	2 3.2%	1 1.6%	2 3.2%	62 100%
Daily	1 25%	2 50%	1 25%					4 100%
Total	8 6.7%	66 55.5%	11 9.2%	24 20.2%	2 1.7%	3 2.5%	5 4.2%	119 100%

With regard to the top up procedure, respondents were asked to rank their preference of payment options for topping up. They were asked to rank these on a scale of 1-6, with 1=most preferred option and 6=least preferred. Table 12 depicts the outcome (note that some respondents indicated more than one first or second choice etc. In this event each choice was given equal weight).

Table 12: Preferences of Payment Options

Factor	1s	2nd	3rd	4th	5th	6th
Pay as you go-topping up in local stores	49.6%	19.3%	7.6%	8.4%	7.6%	7.6%
Topping up by text	39.4%	25.7%	16.5%	10.1%	4.6%	3.7%
Topping up using a bank ATM	19.4%	17.5%	30.1%	14.6%	9.7%	8.7%
Billed to your credit card monthly	7.4%	6.3%	16.8%	18.9%	24.2%	26.3%
Top-up via the Internet using a credit card	11.5%	16.7%	9.4%	26%	19.8%	16.7%
Just add the charges to my monthly phone bill	13.3%	5.1%	7.1%	10.2%	23.5%	40.8%

The clear preference of respondents is for over the counter prepaid top-up with ATM or other on-street anonymous mechanisms. Credit card based payment ranked lower at ~19%, with billing through a cellular carrier the least preferred option

Section Six: The Future of ParkMagic

Participants were asked to state the advantages of using ParkMagic. They were given a variety of options to choose from which are outlined in the table below. Participants were also given the option to state other advantages.

Table 13: Advantages in using ParkMagic

Advantages	Total	%
Convenience of being able to park by phone	136	90.1%
Convenience of not having to walk to shop for parking discs	121	80.1%
No need to search for coins for pay and display machines	83	55%
Speed of being able to park by phone	112	74.2%
Ability to top up your account credit in stores & by other means	81	53.6%
Other	21	13.9%

The "other" advantages that were cited are depicted in the table below:

Table 14: Other Advantages of Using ParkMagic

Other Advantages
Less time and litter/Eco Friendly
Can be difficult to find disks-ParkMagic has eliminated this problem
No more rubbing off panels and checking for dates on discs
Being able to extend parking hours if you are delayed in returning
Topping up by text

Respondents were asked an open question whether they could see any disadvantages in using ParkMagic. ~52% saw no disadvantage, the majority of the balance considered call charges or call charge related issues to be a disadvantage (17.6% of balance) with the balance of other items scoring higher that 1% of respondents listed in table 15 below:

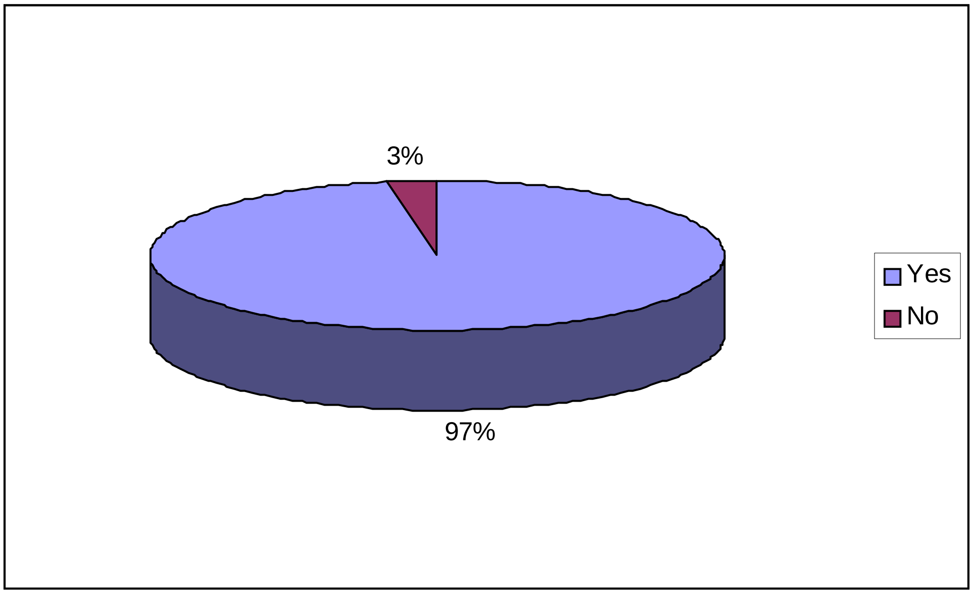
Table 15: Disadvantages of Using ParkMagic

Disadvantages	Percent	Comment
only one phone can be used	5.3	Up to 6 phones can be used but this function was not advertised in the pilot. Clearly, it is a customer demand and one ParkMagic already meets
the device could encourage people to break into cars	5.3	This is an issue which is covered in the user manual supplied to every user and also in all press communications. In any launch it is important that the public message is clear that the devices are worthless and hold no credit.
the limited amount of shops to buy credit at present	1.8	Only a disadvantage during Pilot where the number of outlets was restricted
cut out the need to go to the shop just topup by txt	2.6	It is indicative that different users have different needs and the system must cope with all. In reality the service cannot 'cut out' the shops since ~40% of users stated a preference to use such stores.
you always have to make sure you have credit in you phone[iii]	8.8	
you must have a mobile phone	2.6	Yes. ParkMagic is a mobile service and was never intended otherwise
phone charges the more you use the more you pay	8.8	This can be easily eliminated by use of a freephone number. This decision is for the parking authority to make when launching a service
Total Yes (responses over 1%)	**35.2%**	

Disadvantages were also cited by respondents with regard to the possibility of system errors and the consequent risk of an undeserved ticket. While such incidents can occur with any system it should be noted that throughout the Pilot the incidence of failed parking calls for reasons of non connection/congestion etc was less than 1 in 5000 or (~0.0002%). All reported problems were resolved by advising the customer on what action to take.

Participants were asked whether their expectations of ParkMagic were met. Results were very positive in regard to this. Figure 8 below illustrates the results:

Figure 8: Were your expectations of ParkMagic met? (n=146)

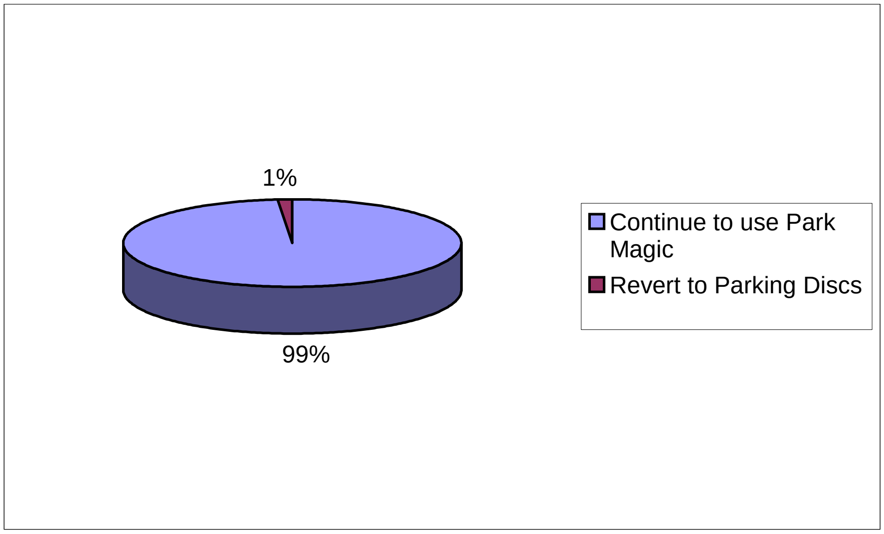


Research findings indicate of the 97% who stated their expectations had been met 55% were females and 42% males. With regard to the age group of the respondents that stated this, 50% of them were aged between 30-49.

Of the 3% of respondents that stated that their expectations of ParkMagic were not met, they were asked to specify the reasons for this. Individuals stated that there is a fear of technical errors if the system is down and that fear is not present if discs are being used. Another respondent stated that the "sound was very low when you call to park your car"[iv]. It was also stated that there "should be a warning when the credit is running low"[v]. Other responses included "we have 2 cars and kept forgetting it" and also "ParkMagic is very good but it was very difficult to find a space to park". Both of these factors are outside the control of the ParkMagic team.

As well as being asked whether their expectations for ParkMagic were met, individuals were asked whether they would continue to use this product after the pilot or would they revert to parking discs. Figure 9 below depicts the research findings:

Figure 9: Would you continue to use ParkMagic after the pilot?



Cross tabulations were carried out to ascertain whether more males or females would continue to use this product. Statistics indicate that of the 99% who will continue to use ParkMagic approximately 57% are female and 42% are male. It should be noted, however, that none of the male participants would revert back to using parking discs, but 1.5% of females stated they would. Statistics indicate that of the 99% total that would continue to use ParkMagic, 51% of these aged between 30-49 would continue to use ParkMagic, 22% of the 18-29 age group and 25% of the over fifties (Totaling ~99% rounded).

Further cross tabulations were carried out to ascertain whether individuals who had found ParkMagic difficult to use initially would continue to use it or revert to parking discs. Of those that had difficulty with the product, approximately 96% of them stated that they would continue to use it. Only a minority of 4% (1 respondent in the reduced sample) of those who had difficulty using ParkMagic stated they would revert to parking discs. Table 16 below illustrates the results:

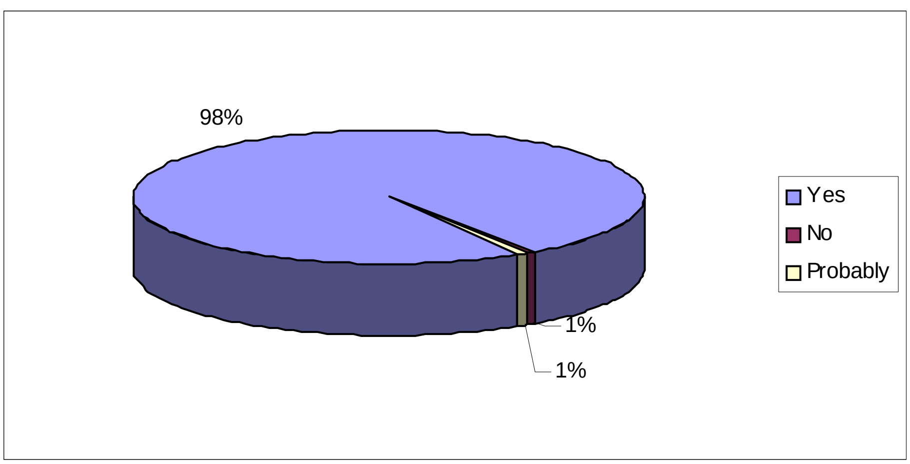
Table 16: Difficulty using ParkMagic & Continuing to use it

Difficulty	Continue to use ParkMagic	Revert to parking discs	Total
yes	22 95.7%	1 4.3%	23 100%
no	120 99.2%	1 .8%	121 100%
Total	142 98.6%	2 1.4%	144 100.0%

Participants were asked to specific the reasons why or why they would not continue to use ParkMagic after the pilot. The responses cited for continuing to use ParkMagic are as follows :"convenience"; "handy for short trips to town otherwise I would have to use car parks" "easier than trying to find a disc" "ease of use". Other people stated that they would continue to use ParkMagic if it "was available to use nationwide". Humourously, one respondent stated he would continue to use ParkMagic because if he did not he "would park illegally".

Participants were asked whether they would recommend ParkMagic to someone else. Figure 10 below illustrates:

Figure 10: Would you recommend ParkMagic?



As indicated in the figure above, 98% of respondents stated that “yes” they would recommend this product. Only 1% of respondents stated that “no” they would not and a further 1% said they “probably” would.

The final question asked of respondents was based on their experience of the product to date, is there anything that they feel ParkMagic could do to improve itself and the service that it offers. There was numerous and various responses to this question. Responses with regard to balance notification; freephone; unit features; concessions and offers; outlets where ParkMagic credit is available; multiple callers; topping up and the usage of this product nationwide were cited in the research findings. It should be noted that over 11% of participants stated that no improvements could be made to the product. Individuals stated that they “are happy with the product at present”; “I just can’t see how you could can improve this product”; “get this product launched quickly”; “excellent service…..no improvements are needed” and “this product more than meets my needs”.

5. Conclusions

As stated in the introduction, the ParkMagic pilot was conducted with two purposes. The primary was to determine public attitudes to paying for parking via mobile phone and most especially to determine the key factors that would motivate those users to use this type of service over and above other more traditional methods. In short, what factors would convert parking payment by mobile phone from the niche service it is today to a mass market service.

The secondary purpose was to determine whether or not the ParkMagic product could fulfil the primary purpose and what changes might be required to improve the product.

The pilot experience clearly showed an unmet demand by consumers for a mobile parking solution but not for a solution that fails to deliver on several key demands.

Usability.

In a mass market application, there can be no assumptions about technical capability on the part of the users. From the pilot, whose user population was a gender and age balanced representation of the parking public in the Limerick city area several factors and research findings indicated that 99% of participants would continue to use ParkMagic after their initial pilot experience. Of those respondents who had difficulties using ParkMagic initially, approximately 96% of them stated that they would continue to use the product.

Ease of Payment.

To date, the majority, if not all mobile parking payment applications deliver credit card payment as the primary payment option. It is overwhelmingly clear from the pilot that this is not what users want. They want prepaid or text/atm topup and failure to deliver these will condemn a service to a market niche. The drivers behind this demand may be the fact that in the Irish and most European markets (Scandinavian market excepted) prepaid is the defacto mechanism for mobile payment and is effectively what people know and are comfortable with. Apart from allowing individuals personal cost control, this mechanism is largely anonymous, thus there are no entry barriers, no form filling and no divulging of personal data all of which have been proven in the mobile world to inhibit service uptake.

Accessibility

As noted above, the demand for prepaid is high, although not exclusive, prepaid with text/atm accounting for more than 90% of payment first preferences. A common denominator for both of these methods is that they do not require the user to divulge any personal or financial information to the parking authority thus removing the need for form filling or any other barriers to user adoption of the service.

ParkMagic was designed as an anonymous service on the premise that users simply do not want to divulge personal data and will automatically gravitate to anonymous systems.

Of the participants that had signed up for the pilot, 96% of them had started using the service, with 96% of those stating that it is easy to activate (i.e to register). It should be noted that of the 4% of respondents that stated experience difficulties in activatation, these stated the support they received was outstanding leading to a resolution of their difficulty.

The Statistical analysis of the pilot also delivered data supporting the following conclusions:

Motivation

Fifty percent of respondents stated that they were initially encouraged to use ParkMagic as they were "interested in a more convenient method of paying to park". A further 32% stated that they were interested in a new parking system". Although 82% of people were interested in a new way of parking, only 3% of respondents stated that they were dissatisfied with current parking systems. Although only 3% of respondents stated that they were dissatisfied with current parking systems, statistics indicate that 80% of respondents wanted to avoid walking to retail outlets for discs and 90% wanted the convenience of being able to park by phone, thus implying that there is a higher level of dissatisfaction with current parking systems. In summary, perhaps the most striking message from users is a demand for convenience with a decreasing level of tolerance for systems which do not deliver user convenience.

The ParkMagic Product

Results indicate that results with regard to first impressions of the product were outstanding. Eighty-three percent of respondents stated that they thought the product was "excellent" or "very good". Cross tabulations that were carried out indicated that of the respondents that stated that their first impressions of the product were fair, they would still continue to use the product and would recommend it to somebody else. Further positive results were received with regard to the instruction manual that accompanied the ParkMagic device. An overwhelming 93% of respondents stated that it was user-friendly and easy to understand.

Top Up habits

Research findings indicate that 41% had topped up with ParkMagic credit using the IVR method at time of survey. Seventy-five percent of these stated that it was easy to top up with most preferred top up amount is €10. "Pay as you go-topping up in local stores" is the most preferred option as a payment option for topping up ParkMagic followed by Text Top Up. It is interesting to note that, with the exception of ParkMagic, these topup methods are not generally used by other parking systems yet they are the methods most demanded by users

Advantages of ParkMagic

Many advantages were cited for using ParkMagic but the common theme behind these advantages is user convenience. Over 90% of participants stated the "convenience of being able to park by phone" is a major advantage. Eighty percent stated that "the convenience of not having to walk to shop for parking disc" is another advantage. Forty-eight percent of respondents stated that there are no disadvantages in using ParkMagic. This is a very significant response and the clear message from respondents is convenience, convenience, convenience.

Expectations of ParkMagic

Users carry with them a set of expectations for any product, different users placing different weight on different product features. However, the question "have your expectations been met" provokes users to 'average' their expectations across all individual aspects of a product that they consider important. In the case of the pilot ParkMagic product an outstanding 97% of participants stated that their expectations were met. Of the 3% of respondents that stated that there expectations were not met by ParkMagic, the factors affecting this are outside the control of the ParkMagic team e.g. "difficult to find a car space" and "we kept forgetting it".

In A Nutshell

Based on the outcome of the Pilot and the realworld data gathered, the Promoters believe that ParkMagic has shown itself to be a service that has mass market appeal and is a viable partner to existing on-street payment systems. There is indeed significant untapped demand for mobile enabled parking that is both accessible and convenient. These contentions are clearly supported by the user data returned from the survey showing usability and convenience levels that clearly meet consumer demand. The conclusions are further supported by the Pilot traffic data report, a companion report to this report which shows traffic and usage levels of the service to be on a par with normal parking usage patterns in the Pilot city thereby indication acceptance of ParkMagic as an 'everyday' solution. This traffic analysis report is available from ParkMagic, however, one key metric of note is that the average everyday use of ParkMagic within Limerick city was in excess of 33% with one in three ParkMagic users using the service at least once.

6. Acknowledgements

ParkMagic and the Promoters would like to acknowledge the participation and support of Limerick City Council, Ireland in this Pilot. In particular thanks is due to the staff and management of the office of the Director of Service, Transport, Limerick City Council whose help and cooperation during the Pilot is greatly appreciated.

[i] The Display font size has been increased and bolded since this survey was conducted

[ii] Audio levels were increased during the pilot in order to address this issue

[iii] This comment refers to prepaid call credit in the users phone. The point these respondents wished to make was that in order to call the service you also needed call credit in the phone. This is true if the user wishes to make any call not just a parking call

[iv] Note: the audio levels were increased during the pilot

[v] This functionality was introduced during the pilot