

# Community research into attitudes towards the use of mobile payment services

## Qualitative research report

JULY 2010



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# Executive summary

## Research background

This report presents the findings of research conducted by GfK Blue Moon on behalf of the Australian Communications and Media Authority (the ACMA) into community attitudes towards the use of mobile payment offerings in Australia.

The Mobile Premium Services Code was registered in May 2009 and came into effect on 1 July 2009. The objective of the Code is to establish appropriate community safeguards and customer service requirements for mobile premium services. A review of the Code will start in July 2010, 12 months after it came into effect.

## Objectives and methodology

The main objective of the research was to better understand the attitudes of teenagers and adults towards the use of emerging mobile payment services, as well as established but basic mobile payment services such as mobile premium services. In addition, the research aimed to better identify if consumers perceive a need for protection and regulation.

An additional objective of the research was to better inform the ACMA in preparation for the review of the Mobile Premium Services Code. The research will also contribute to the ACMA's digital media literacy research program.

The research was conducted by undertaking seven group discussions with adults, each comprising six to eight respondents, and six group discussions with teenagers and young adults, each comprising five to six respondents. The sample took into consideration people's age and their current use of electronic payment methods. The research was conducted in metropolitan and regional areas across New South Wales, Victoria and Queensland.

The qualitative research was preceded by a desktop review of publicly available literature. The ACMA was interested in obtaining preliminary information on:

- > the current mechanisms for mobile payment
- > differences between mobile premium services in Australia and more sophisticated mobile payment services overseas.

The key finding was that there is very little publicly available literature that addresses these questions; this research aims to fill part of the gap.

## Key findings

### Positive attitudes toward current electronic payment systems

Findings from this study indicate that people are generally satisfied with the electronic payment systems that are currently available in Australia. People are motivated to use electronic payments such as debit and credit cards, internet transfers and payment services including BPay and PayPal because they offer convenient, quick methods for making purchases in store and over the internet. People trust and use electronic payment methods because they are confident that a banking institution will have the necessary security measures in place to protect against fraud and misuse of personal and financial information.

### **Low awareness of mobile payment services, but receptive to them**

Currently, mobile payment services are not at the forefront of people's minds and there is relatively low awareness of mobile payment methods. In this research, new mobile payment services were defined as:

- > 'Wave and Pay' or plugging the phone into a device, both of which use Radio Frequency Identification (RFID) technologies
- > 'person to person' transfers, whereby money is instantly transferred from one individual to another by a mobile payment services company that allows individuals to set up an account
- > SMS, which enables a transaction to take place and allows the user to pay in a number of ways such as billing directly to the mobile phone account, credit or debit card, or through a mobile payment services company
- > WAP-based payment services
- > mobile payment services linked to bank or credit card accounts.

In this research, a mobile payment services company is defined as an intermediary that facilitates the transfer of money to individuals or organisations. It is different from a telecommunications company (Telco) in that its primary purpose is to facilitate the transfer of payments.

The majority of respondents were aware of mobile premium services. However, they did not identify them as a type of electronic payment service, but instead regarded them as a means of purchasing digital content such as ringtones for their mobile phone, or a method of voting on TV shows or entering competitions.

Mobile premium services are being used sporadically by a range of age groups, although they are most popular with tweenies (children approximately 8–14 years) and teenagers. Respondents felt these services, particularly the subscription services, were deliberately targeting those age groups who are perceived to be vulnerable, who are more likely to act on impulse and who may not read or understand the terms and conditions.

Overall, respondents were receptive to the idea of future mobile payment services. Most could identify some benefits of using mobile payment services over current electronic methods.

### **New mobile payment services processed by banking institutions are perceived as the most trustworthy**

The research indicated that any new mobile payment service will need to offer some advantages over current payment methods. For example, mobile payment services will need to be easier, more convenient or quicker than current electronic payments. The technology will also need to be easy for people to adopt.

Mobile payment services that are processed by banking institutions, as opposed to those where payments are processed by a Telco or a mobile payment services company, are perceived as more trustworthy. This is because respondents did not believe that Telcos or mobile payment service companies have the same level of guarantees in place to protect against fraud and misuse of personal data as banks do.

The research findings showed that users were more likely to consider payment methods that only give access to limited funds. People felt more comfortable about payments that were linked to a pre-loaded account or that only allowed the user to spend funds they have, such as with a debit card.

### **Opportunities for new mobile payment services lie with ‘on the go’ and ‘instant, anywhere’ transactions**

Frustrations with current electronic payments illustrate that the immediate opportunities lie with ‘on the go’ transactions involving micro-payments and ‘instant, anywhere transactions’. Consumers perceive there to be a real benefit in using mobile payment services in these instances as they would be quicker and more convenient. For example, respondents could see the immediate benefit of using a mobile phone to make micro-payments for items such as newspapers or coffee that they usually buy while ‘on the go’. They felt this would be extremely convenient in lieu of cash when cards are not accepted or there is a minimum spend for payments.

There is also an opportunity for mobile payments to offer transactions that are instant and can be completed anywhere. There was a positive response to the idea of buying tickets via SMS transactions as this method would overcome some of the current frustrations or restrictions resulting from queuing or waiting online. Respondents also saw advantages in being able to use a mobile phone to make ‘person to person’ transfers, whereby money is instantly transferred from one individual to another.

### **Concerns about payment methods rather than the technology**

Despite the majority of respondents being receptive to the concept of new mobile payment services, many also expressed some strong concerns about using these methods. A key concern was that they would not be able to trust payment methods handled by a Telco or mobile payment services company. These were seen as less trustworthy than payment methods handled by banks as they would not necessarily have the same guarantees and safeguards in place to protect financial and personal information.

Respondents had strong concerns about adding payments directly to a mobile bill that was linked to a credit card. They also worried that mobile payment services would involve extra charges from a Telco if it or a mobile payment services company was responsible for the payment method.

Thus, respondents were more concerned about the payment method used than the technology involved in making a transaction (such as RFID technology, SMS or WAP interface). However, some also expressed concerns about using a mobile phone to make transactions for fear of losing it or having it stolen, particularly if the mobile phone gave access to unlimited funds.

### **Three types of adopter categories**

A simplified adaptation of Rogers’s ‘Diffusion of Innovations’ model (1962)<sup>1</sup> reveals three types of adopter categories for the likely take-up of new mobile payment offerings. The ‘Innovators’ and ‘Early adopters’ from Rogers’s model have been combined to form the ‘Potential early adopters’; the ‘Early majority’ and ‘Late majority’ groups have been classified as the ‘Hesitators’; and the ‘Laggards’ category remains the same.

- > ‘Potential early adopters’ were the most likely to take up new mobile payment services as they were open-minded about innovations and technological advances. They tended to be younger in age (18–35) and already using a range of electronic payment methods. This category also included some older families and empty nesters who were highly literate with digital media.
- > ‘Hesitators’ were more likely to follow the lead in adopting new mobile payment methods. They were happy to continue using current payment methods until someone showed them the advantages of changing. ‘Hesitators’ spanned a broad spectrum of ages and socioeconomic groups.

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<sup>1</sup> Rogers, Everett M. (1962) *Diffusion of Innovations*, Glencoe: Free Press.

- > 'Laggards' were strongly resistant to adopting new methods. Given the recruitment criteria, there were very few 'Laggards' in the sample but they included people without children who had less exposure to new innovations and were more likely to come from blue-collar families and regional areas.

'Potential early adopters' showed an interest in mobile payments for 'on the go' and 'instant, anywhere' transactions, suggesting some potential for future broader acceptance. However, this cannot be relied upon as an accurate representation of future demand for mobile payment offerings because 'Early adopters' have previously also adopted failed new technologies.

### **Providers and a regulatory body are expected to protect consumers who use mobile premium services**

Overall, respondents believed that providers of mobile premium services should play a key role in protecting their consumers. A provider of mobile premium services is defined as a company or organisation (including Telcos) that offers mobile premium services as a product or payment service. Respondents felt that providers should supply transparent information to consumers at the time of purchase, via an SMS, about the costs and terms and conditions. They also felt there needed to be a cooling-off period in which consumers could change their mind and cancel the service by sending an SMS.

However, some doubted whether providers would voluntarily offer such safeguards. As such, there was some support for a regulatory body to require they be put in place before a provider could offer a service.

At a minimum, parents expected that further measures could be put in place to protect teenagers who use mobile subscription services. These safeguards should include a cooling-off period and the sending of an SMS stating costs and terms and conditions prior to the user agreeing to subscribe. Parents also identified the need for a system that allows parental control over teenagers accessing these services.

A number of these safeguards are already in place, despite the low awareness among respondents. Many of the safeguards that currently exist do not rely on people being aware of them to be effective.

### **Providers of new mobile payment services are expected to be responsible for protecting consumers**

Respondents believe that providers of mobile payment services—which include the mobile payment services companies, Telcos and banks—should be responsible for protecting consumers by ensuring that security and anti-fraud measures are in place. Consumers would be more likely to trust a payment method if they knew the providers had been proactive in providing security measures.

In order to encourage take-up, providers need to ensure that any payment methods have the same stringent security measures that banking institutions have in place to protect consumers against fraud and misuse of data. Providers could also offer consumers a choice of payment methods and ensure methods that give access to limited funds are available. Lastly, if providers could implement a verification mechanism, such as a pin number, this would be likely to further engender confidence and trust in any new mobile payment service.

### **Regulators are expected to ensure that providers educate the community about new mobile payment services**

There were expectations that regulators should only be responsible for enforcing safeguards if the providers fail to have these in place. Respondents also expected

regulators to ensure that the providers of mobile payment services offer a means of educating the community about the new services.

**Parents expect that parental permission and spend limits are enforced for minors using new mobile payment services**

Respondents expect that, as with mobile premium services, access to any future mobile payment system by minors should require a parent or guardian's permission. Parents would like to be able to ensure they can limit the amount a minor can spend on any emerging mobile payment system.

# Background

## Overview

The Mobile Premium Services Code was registered in May 2009 and came into effect on 1 July 2009. The objective of the Code is to establish appropriate community safeguards and customer service requirements for mobile premium services. The Code includes obligations for advertising, provision of information, service supply, complaint-handling and unsubscribe (opt-out) mechanisms for mobile premium services. A review of the Code will start in July 2010, 12 months after it came into effect.

Mobile premium services are supplied chiefly by way of SMS to or from a number starting with '191', '193–197' and '199'. Mobile premium services also include mobile portals (for example, Vodafone Live and Optus Zoo). The ACMA has identified that the upcoming review and associated negotiation of the Mobile Premium Services Code offers an opportunity to undertake research that explores community attitudes towards current mobile premium services and more sophisticated mobile payment services that are likely to emerge in the future.

## The need for research

The main objective of the research was to understand the attitudes of teenagers and adults to the use of emerging mobile payment services, including mobile premium services. In addition, the research aimed to identify if consumers perceive a need for consumer protection and regulation.

An additional objective of the research was to better inform the ACMA in preparation for the review of the Mobile Premium Services Code. The research will also contribute to the ACMA's digital media literacy research program. To date, there are very few publicly available research studies that explore community attitudes towards mobile payments and, specifically, mobile premium services in Australia. This qualitative research aims to start filling that void.

# Research objectives

## Objectives

The overall aims of the research were to assist the ACMA in understanding the attitudes of adults and teenagers to the use of mobile payment services in Australia, and to identify what is the perceived need for consumer protection and regulation. The research aimed to understand users' expectations and requirements of mobile payment methods.

The specific objectives were to:

- > understand Australians' attitudes to and expectations of electronic payment systems
- > identify perceived advantages and disadvantages of using one form of electronic payment over another
- > explore when various forms of electronic payment might be made and for what purpose
- > identify factors that may impede the use of electronic payment methods
- > identify facilitators for use and other factors that develop confidence in the use of the payment method
- > identify barriers to the use of electronic payment methods
- > identify what factors encourage the trial of new systems and influence perceptions of new services; specifically, understanding what encourages people to try a new service;
- > explore reactions to more sophisticated mobile payment offerings
- > understand attitudes to and requirements for minors' use of mobile payment systems, including:
  - > exploring the expectations of adults for a mobile payment system that may be used by children
  - > identifying what additional attention might need to be given to the authorisation of transactions and to financial literacy for children's use of a future mobile payment system
- > identify to what extent there is a need for consumer protection and regulation of mobile payment services.

# Research methodology

## Overview and rationale for the methodology

GfK Blue Moon conducted a program of qualitative research that consisted of seven discussion groups with adults in metro and regional areas across three states, each comprising six to eight respondents. In addition, discussions with six small groups of teenagers and young adults were conducted in metro and regional areas, each comprising five to six participants. Each group discussion lasted approximately one hour and 45 minutes.

Group discussions were chosen as the methodology for this project as these provide an environment in which ideas and experiences can be exchanged, which is essential in exploratory research. Respondents may have had difficulty articulating motivators and barriers for trialling and using new payment services if asked in one-on-one interviews, but the comments of others in the group often helped individuals to analyse and articulate their own behavioural patterns. Further, when introducing new ideas about services and products, the group situation provides an environment in which comments from others can help individuals find ways to comprehend new ideas.

The qualitative research was preceded by a desktop review of publicly available literature. The ACMA was interested in obtaining preliminary information to assist in scoping the research, covering:

- > the current mechanisms for mobile payment
- > the differences between users of mobile premium services in Australia and more sophisticated mobile payment services overseas.

### Timing of fieldwork

The fieldwork was conducted between 30 November and 2 December 2009.

## Sample

Table 1: Sample of large groups (6–8 participants)

Grp	Electronic payment usage	Age/Life-stage	Gender	SEG	Location
1	Low usage	18–24 yrs; Young adults	Mix	White-collar	Melbourne
2	High usage	25–34 yrs; Pre/Young family		Mix	Melbourne
3	High usage	35–50 yrs; Young/Older family		Blue-collar	Sydney
4	High usage	40–65 yrs; Older family/ Empty nesters		White-collar	Melbourne
5	Low usage	35–50 yrs; Young/Older family		Mix	Wagga Wagga
6	Low usage	25–34 yrs; Pre/Young family		White-collar	Toowoomba
7	Low usage	40–65 yrs; Older family/ Empty nesters		Blue-collar	Brisbane



Table 2: Sample of small groups (5–6 participants)

Grp	Electronic payment usage	Age/Life-stage	Gender	SEG	Location
1	High usage	15–17 yrs; Teens	Male	Blue-collar	Sydney
2	High usage	15–17 yrs; Teens	Female	Mix	Brisbane
3	High usage	18–24 yrs; Young adults	Male	Mix	Toowoomba
4	High usage	18–24 yrs; Young adults	Female	Blue-collar	Wagga Wagga
5	Low usage	15–17 yrs; Teens	Males	Mix	Melbourne
6	Low usage	15–17 yrs; Teens	Female	White-collar	Sydney

## Rationale for sample

The rationale for the variables used to segment the sample is described below.

### Electronic payment usage

To promote positive group dynamics, the sample only included those who are currently using some form of electronic payment method, as this was the segment of the population seen as most likely to start using new mobile payment services.

For the purposes of the research, electronic payment methods were defined as ‘where the value of the payments product and payments’ instructions reside in the information transmitted over an electronic channel<sup>2</sup>. This is in contrast to physical payment methods, such as coins, banknotes or cheques.

Low users were defined as those who:

- > regularly use a fixed phone (landline) to pay for goods and services by providing credit card or banking details, or have the charge for the service added to the phone bill; and/or
- > use internet banking to pay bills and transfer money between accounts and across financial institutions, but do not often use, or have never used, the internet to pay for goods and services outside of their bank.

High users were defined as those who:

- > regularly use the internet to pay for goods and services with a range of organisations, not just via their bank, using their credit/debit card, or other billing mechanism
- > have used BPay, PayPal or Paymate to pay for goods either on the internet or on their mobile phone
- > have used the web browser on their mobile phone to pay for goods and services via credit/debit card or EFTPOS; and/or
- > have used mobile premium services.

The low-user teenager groups included people who did not use any form of electronic payments for goods and services and only ever pay cash or use EFTPOS to make purchases, given the difficulties found during recruitment of these respondents using the above definitions.

<sup>2</sup> 2006, *Exploration of Future Electronic Payments Markets*, Australian Government, Department of Communications, Information Technology and the Arts, June.

The sample included a higher proportion of respondents with 'high-usage' levels of electronic payment services as we hypothesised that these individuals would be early adopters of new mobile payment services and so it was particularly important to ascertain their views.

### **Gender**

The small groups of teenagers and young adults were segmented into gender groups. This was the preferred approach for this age group as it meant the participants would not be distracted by members of the opposite gender and would not feel inhibited when giving their opinions. Overall, segmented gender groups result in more honest responses from young people. The groups with adults comprised an approximately equal mix of men and women.

### **Age**

The sample was segmented according to five different age brackets and life-stages, and included respondents aged from 15 to 65 years as outlined in Table 1 and 2. The 'high-usage' groups of young adults aged 18–24 years comprised gender groups as it was believed that in this age range males and females use very different types of mobile premium services and would be more comfortable discussing the topic in gender groups. However, for those with low electronic payment usage, a mixed group of 18–24 year olds was deemed appropriate.

### **Socioeconomic background**

The sample included a representative mix of those classified as blue- and white-collar. 'White-collar' refers to people in professional occupations, while 'blue-collar' refers to those with occupations that do not require specific tertiary qualifications, such as a trade.

### **Location**

Groups were conducted in three states—New South Wales, Victoria and Queensland—as this reflects the views and behaviours of the vast majority of Australians. The metropolitan groups were held in Sydney, Brisbane and Melbourne. The regional groups were held in Wagga Wagga in New South Wales and Toowoomba in Queensland.

## **Recruitment of respondents**

Respondents were recruited by specialist recruitment companies that regularly partner with GfK Blue Moon. A recruitment screening questionnaire structured around the attitudinal and demographic variables outlined in the sample was used for recruitment (Appendix A).

## **Pre-task and discussion guide**

Respondents completed a pre-task prior to attending the group, in which they were asked to keep a diary of their 'transactions' over the course of two days and record the method of payment for each. They were also asked to 'blue sky' their ideal way of conducting these transactions.

A semi-structured discussion guide was developed and approved by the ACMA prior to use. In order to understand attitudes towards different types of mobile payment services, a number of scenarios were presented to the groups. These helped to stimulate discussion and help understand what participants consider as the most pertinent issues. The scenarios described various realistic situations in which individuals were using different mobile payment services. The scenarios covered a range of different transaction and technology methods, as well as various payment

methods that may be used in new mobile payment services. The scenarios (A–I) are provided in the report under the section ‘Reactions to the specific scenarios’, pp. 31–38.

This broad range of scenarios was chosen as they cover elements of almost any other realistic scenario. The technique enabled new mobile services to be presented in such a way that helped to ‘bring to life’ for the research participants what may be relatively unknown technology. The majority of scenarios were used in each group; however, one scenario involving direct mobile billing, which described the purchase of virtual money, was not shown to the Empty nester groups as it was considered potentially confusing. Instead, these groups were shown another scenario using ‘Wave and Pay’ RFID technology. The discussion guide is found in Appendix B.

# Attitudes to existing payment methods

## Use of electronic payment methods

Respondents in our sample defined electronic payments as those that include using:

- > credit and debit card payments in stores and on the internet
- > internet banking to make transfers
- > BPay to pay bills
- > PayPal—mainly to buy goods on eBay
- > the internet on a mobile to purchase goods.

These different payment methods were mentioned by a majority, with the exception of using the internet on a mobile to purchase goods, which was only mentioned by a minority.

Among the sample, there was widespread use of the various forms of electronic payments. This is not surprising, given that the sample had to engage in some form of electronic payment and, at a minimum, all the adults in the sample had to use phone banking or the internet to pay bills.

## Use across age segments

The research found that adults are using a range of electronic payments for many transactions over \$10. There is an expectation among adults that they should be able to make electronic payments for most purchases over \$10 and they often become frustrated when this is not possible.

Younger adults aged 18–35 years appear to be more commonly using debit cards, EFTPOS cards and cash instead of credit cards. Most explained that they did not trust themselves with a credit card.

*I just don't trust myself with a credit card—it would be so easy to spend what you've not got.*

Teenagers use payment methods differently to adults. Given their age, many use cash as their primary payment method because they often receive cash from family as part of their allowance. Those teenagers with part-time jobs are more likely to use EFTPOS/debit cards as they often withdrew cash from the bank account into which their wages are paid. Those that use EFTPOS are open to doing so for all payments, including micro-payments; there is no sense of embarrassment in doing this, as is found among some adults.

Teenagers are often happy to use their parents' credit cards for internet purchases. In addition, many teenagers use their parents' PayPal accounts to buy goods on eBay. In the majority of cases, these actions are supervised and approved by parents.

## Use by purchase type

Some electronic payments are more typically used by respondents for certain goods or services:

- > Credit cards for larger transactions, as this allows a longer period in which to make the payment and some also use them to obtain loyalty points, such as Qantas Frequent Flyer points.
- > Direct debits for regular payments such as bills or rent.

- > BPay, over the internet or phone, to pay for bills.
- > Internet transfers in a variety of instances such as paying for bills, travel, accommodation, goods and services. The majority of eBay users pay through PayPal.

## **Expectations of use of electronic payment methods in the future**

Respondents expect that electronic payment methods will be increasingly used in the future. Just as current payment methods like debit cards have become the norm, the same is expected to occur for other electronic payment methods. Respondents pointed out that, as interest in internet shopping grows, there will be an increasing need for non-cash transactions. They also believe that companies are promoting electronic payments over more traditional methods, which is encouraging customers to use them. For example, respondents mentioned the fact that, for a time, Telstra was charging consumers who did not pay their bill electronically. Incentive programs linked to credit cards are encouraging use among some people.

Electronic payment methods are becoming more and more convenient as technology advances. For example, some respondents are beginning to use internet banking and shopping on their mobile. As this respondent explained:

*I was just paying my bills on my mobile while I was sitting out there waiting for this group to start.*

Respondents completed a pre-task in which they were asked to think about their ideal payment methods. This 'blue sky' thinking exercise helped to illustrate that people certainly expect payment methods to advance in the near future. There is an expectation that technology will make payments even easier. Some of the creative suggestions that respondents came up with included:

- > one card to pay for everything
- > a barcode encrypted in people's skin that is linked to a payment method
- > fingerprint ID to verify transactions.

These show that respondents are ideally looking for payment methods that are even more convenient and secure than those they currently use.

Only a small minority spontaneously suggested using a mobile payment system, which indicates that this method is not paramount. These individuals believed it would be a useful method, given that nearly everyone has a mobile on them most of the time.

*It would be cool if you could pay with your phone.*

## **Attitudes to cash**

Despite respondents believing that electronic methods would become increasingly used in the future, they also believed that cash would not become a redundant form of payment. It is still used for micro-payments and there are several advantages of using cash. These include:

- > its acceptance in any physical store or other outlets such as ticket and vending machines
- > no minimum spend, unlike with cards
- > no extra fees or hidden charges
- > its availability to all ages
- > the possibility of a quick transaction if people have correct change.

However, respondents recognised that there are downsides to using cash. These include:

- > higher risk as it can be lost or stolen
- > the inconvenience of carrying coins
- > the increased likelihood of spending cash if it is in one's wallet
- > an inability to use large notes in certain instances, such as on public transport
- > fees for withdrawing cash from other banks' ATMs
- > limits on bank withdrawals per month
- > an inability to purchase goods on the internet using cash.

## Motivations for using electronic payment methods

There are a number of reasons why people are motivated to use electronic payment methods, which have become trusted and familiar ways of conducting transactions.

Respondents provided the following benefits:

- > electronic payment is often the quickest, easiest and most convenient option
- > electronic payment is safer than carrying around large amounts of cash
- > internet banking and online transfers provide a means of accessing funds anywhere
- > internet transfers create an easily accessible digital record of transactions, allowing people to keep track of their finances.

For most, the current choice of payment methods on offer in Australia is satisfactory. The specific advantages of using particular electronic payment methods are outlined in Table 3.

**Table 3: Advantages of using specific electronic payment methods**

EFTPOS card/debit card	Credit card	Internet transfer from bank account	Payment service e.g. BPay, PayPal
<ul style="list-style-type: none"> <li>+ Can only spend what is in the bank</li> <li>+ Widespread acceptance</li> <li>+ Can use abroad (incur fees)</li> <li>+ Don't have to carry cash and therefore 'waste' it</li> <li>+ No ATM fees if using own bank ATM (to withdraw cash)</li> <li>+ Use it to pay bills</li> </ul>	<ul style="list-style-type: none"> <li>+ Improves cash flow</li> <li>+ Widespread acceptance</li> <li>+ Can use abroad (incur fees)</li> <li>+ Don't have to carry cash</li> <li>+ Flexible: use it for online and face-to-face payments</li> <li>+ Points from loyalty schemes</li> <li>+ Verification step (sign/pin)</li> <li>+ Guaranteed if credit fraud</li> </ul>	<ul style="list-style-type: none"> <li>+ Convenience—anytime, anywhere (internet on mobile)</li> <li>+ Access funds anywhere</li> <li>+ Transaction is recorded immediately, which brings a sense of control</li> <li>+ Can schedule ahead for payments</li> <li>+ No attached fees</li> <li>+ Faceless</li> </ul>	<ul style="list-style-type: none"> <li>+ Recognised and trusted brand for many</li> <li>+ Good security systems in place</li> <li>+ Widely used</li> <li>+ Almost only option with some companies e.g. eBay (PayPal), Internet/phone banking (BPay)</li> <li>+ Alternative to credit card—no need to pass on personal banking details to online companies</li> <li>+ Faceless</li> </ul>

## **Factors that help to engender trust and confidence in electronic payment methods**

One of the objectives of the research was to understand which factors contribute to trust and confidence in payment methods. Respondents indicated a number of factors (outlined below), and these will need to be present in order to encourage trial of new mobile payment systems.

### **Guarantees and safeguards that come with dealing with a bank or trusted company**

People trust electronic payment methods because it is a known fact that transactions typically involve a bank. Respondents understood that banks have stringent security standards in place for purchasing goods in stores and on the internet. They claimed to trust banks, knowing that they provide protection against fraud and the misuse of credit card details and personal and financial information. They were also aware of the possibility of cancelling cards when they are misused. Crucially, respondents understood that they would not be financially worse off should these circumstances arise, due to the banks' provision of guarantees and safeguards. In addition, companies such as BPay and PayPal have also become respected and trusted brands for users because they believe that they offer certain guarantees and safeguards against misuse.

### **Simplicity of the transaction and payment method involved**

If a user can easily understand a concept and it is easy to assimilate into their lives, then they are more likely to trust the method.

### **Educating consumers on how to use new transaction and payment methods**

Educating users on how a new electronic payment works helps to reassure people about the method and has encouraged take-up in the past. For example, some respondents talked about the fact that their bank had offered tuition on how to complete transactions using internet banking when it was first introduced. This helped them to trust the method and engendered confidence.

The factors described above are the key elements that help to engender trust and confidence, although respondents also explained that, over time, as familiarity and positive experiences with a payment method increase, so too does consumers' trust in the methodology.

## **Limitations of using current electronic payment methods**

Despite the benefits of using electronic payment methods, including debit/EFTPOS and credit cards, internet banking and payment services such as BPay and PayPal, respondents also recognised that there are some limitations to their use. The specific limitations of using these electronic payment methods are outlined in Table 4.

**Table 4: Limitations of using electronic payment methods**

Debit/EFTPOS card	Credit card	Internet transfer from bank account	Payment service e.g. BPay, PayPal
<ul style="list-style-type: none"> <li>- Face-to-face only</li> </ul>	<ul style="list-style-type: none"> <li>- Spending more than they can afford—key concern for those aged 15–35</li> <li>- Don't like to feel they owe money to anyone</li> <li>- High fees if don't pay card off each month</li> <li>- Credit card transaction fees</li> <li>- Not available to under 18s</li> </ul>	<ul style="list-style-type: none"> <li>- Fear of hackers</li> <li>- Some are unfamiliar with how this method of payment works and are fearful of finding out</li> <li>- Perception that technology is complex</li> </ul>	<ul style="list-style-type: none"> <li>- Some are unfamiliar with how this method of payment works and are fearful of finding out</li> </ul>

The research findings suggest that solving some of these particular issues presents opportunities for emerging mobile payment services. Respondents spoke about current frustrations in a number of situations, including purchasing tickets for public transport, purchasing goods from merchants and purchasing tickets that have limited availability.

**Frustrations with purchasing tickets for public transport**

*The bus was pre-paid tickets only, which meant that I had to find a ticket kiosk. A pre-loaded card would have helped.*

*I missed the train due to queuing to buy a ticket. Pre-paid tickets that you can top up without queuing would be good.*

*The bus driver wouldn't take a \$50 note and I didn't have any change. I had to go and buy something to break the note.*

**Frustrations with purchasing goods from merchants**

*I was charged a three per cent fee for using my credit card in Aldi ... ideally, I should be able to avoid those fees but still pay by credit card.*

*I went to a small shop and they didn't want to accept a \$50 note ... it would be easier if more people accepted cards.*

*The cinema (Wagga Wagga) doesn't accept cards, so you have to have cash or go to the ATM there to get it. It's a Bank of Queensland ATM, so everyone gets charged a fee.*

**Frustrations with purchasing goods that have limited availability**

*I couldn't buy tickets as they sold out before I could get access to the internet. I didn't want to phone as that would have been too expensive.*

Respondents are particularly frustrated when they are unable to use their card because the merchant does not have the facilities to conduct transactions. They also find minimum transactions frustrating, as this forces them to either purchase more than they wanted to or visit the nearest ATM, which is inconvenient and may result in extra fees.



Current frustrations illustrate potential opportunities for mobile payments in the context of:

- > micro-payments, particularly when the consumer would like to make the transaction quickly and 'on the go'
- > 'instant, anywhere' transactions. In this research, this description covers two types of transactions:
  - > those that allow the consumer to purchase goods in any location
  - > those that allow money to be transferred instantaneously from person to person.

Respondents identified that using a mobile phone to make these transactions could potentially be easier, more convenient and cheaper.

# Current awareness of and attitudes to mobile payment services

## Awareness of mobile payment services

During the group discussions, mobile payment services were rarely spontaneously raised as an electronic payment method. Currently, mobile payment services are not at the forefront of people's minds and there is relatively low awareness of mobile payment methods. This is not surprising given that Australia is behind other countries in Asia and Europe in adopting some of the new services, such as 'Wave and Pay', which uses RFID technologies. In this context, RFID refers to the use of Near Field Communication (NFC) to provide payment details for low-value transactions.

In this research, new mobile payment services were defined as:

- > 'Wave and Pay' or plugging the phone into a device, both of which use RFID technologies
- > 'person to person' transfers, whereby money is instantly transferred from one individual to another by a mobile payment services company that allows individuals to set up an account
- > SMS, which enables a transaction to take place and allows the user to pay in a number of ways such as billing directly to the mobile phone account, credit card or debit card; or through a mobile payment services company
- > WAP-based payment services
- > mobile payment services linked to bank or credit card accounts.

In this research, a mobile payment services company is defined as an intermediary that facilitates the transfer of money to individuals or organisations. It is different from a telecommunications company (Telco) in that its primary purpose is to facilitate the transfer of payments. Please note that we are aware that this list of mobile payment services is not exhaustive.

## Awareness of mobile premium services

Of those mobile payment services spontaneously mentioned, there was greatest recall of mobile premium services; however, recall across the sample was still relatively low.

Yet once the subject of mobile premium services was raised, it became apparent that the majority of respondents knew of these services and how they work. They did not necessarily regard them as an electronic payment method, but rather saw them as a means of purchasing ringtones or wallpapers, entering competitions marketed on TV shows or packaging, and voting on shows such as *Australian Idol*. The majority were wary of these services, particularly those involving '19' numbers, and most seemed to be aware of the pitfalls and the associated premium costs. Many people admitted that they have been caught out by using these services in the past.

*Those subscription services are a rip-off.*

*My credit kept disappearing and I didn't know why.*

## **Attitudes to mobile premium services**

An important component of the research was to understand community attitudes towards mobile premium services. The majority of respondents, including adults and teenagers, said that they have used mobile premium services sporadically in the past. However, there was an overwhelming perception that once a person has had a poor experience with a mobile premium service, they often 'learn their lesson' and never sign up again. This was particularly true for those people who had paid for a subscription service without realising they had signed up to pay for a number of SMSs that they had no control over. They were all extremely wary of the costs involved when using '19' numbers.

Adults believe that mobile premium services are most popular with tweenies and teenagers, whom they consider to be most interested in personalised phone goods, competitions and voting. However, it is evident that a wide range of people aged between 18 and 55 are using these services. Women, in particular, openly claimed that they had used or were using these services for competitions and ringtones. That is not to say that men are not using these services, as several in the group had used or were using them to obtain personalised goods for their mobile, enter competitions and vote.

Respondents believed the services provide frivolous or 'trivial' content. For teenagers, the services are not particularly appealing, especially when there are premium costs involved. These costs are off-putting, both for those paying their own bills and those whose parents pay the bill, whom they know would not approve of the high costs.

Parents and other adults identified that mobile premium services deliberately target vulnerable groups such as teenagers and tweenies, with the content of many subscriptions services particularly relevant to these age groups. They were most concerned about subscription services and the associated costs involved. The services are seen to make money very quickly through the proliferation of messages sent during sign-up and before a user can fully understand what they have committed to. They also recognised that teenagers and young people are more likely to act on impulse and may not read or understand the terms and conditions.

## **Awareness of emerging mobile payment services**

In some groups, respondents were aware of public transport systems that support pre-loaded cards, but there was less discussion of using a mobile to pay for public transport. Where the latter was mentioned, comments were from a few individuals who had seen or heard of this being used overseas in countries such as Japan.

The current understanding of RFID technology is based on what is known about pre-loaded travel cards. Respondents thought that RFID technology would be similar to using a pre-loaded card that is currently available to pay for public transport, such as the Go card in Brisbane or the Oyster card in London. As such, some were confused about how this technology would use a mobile phone to make a payment.

A minority also mentioned that they had heard of using SMS for payments from vending machines overseas, as well as using SMS for parking in Australia and overseas. Given the relatively low levels of awareness, the research findings indicate that there is an opportunity to educate consumers about these emerging mobile payment services.

## Defining transaction and payment methods associated with emerging mobile payment services

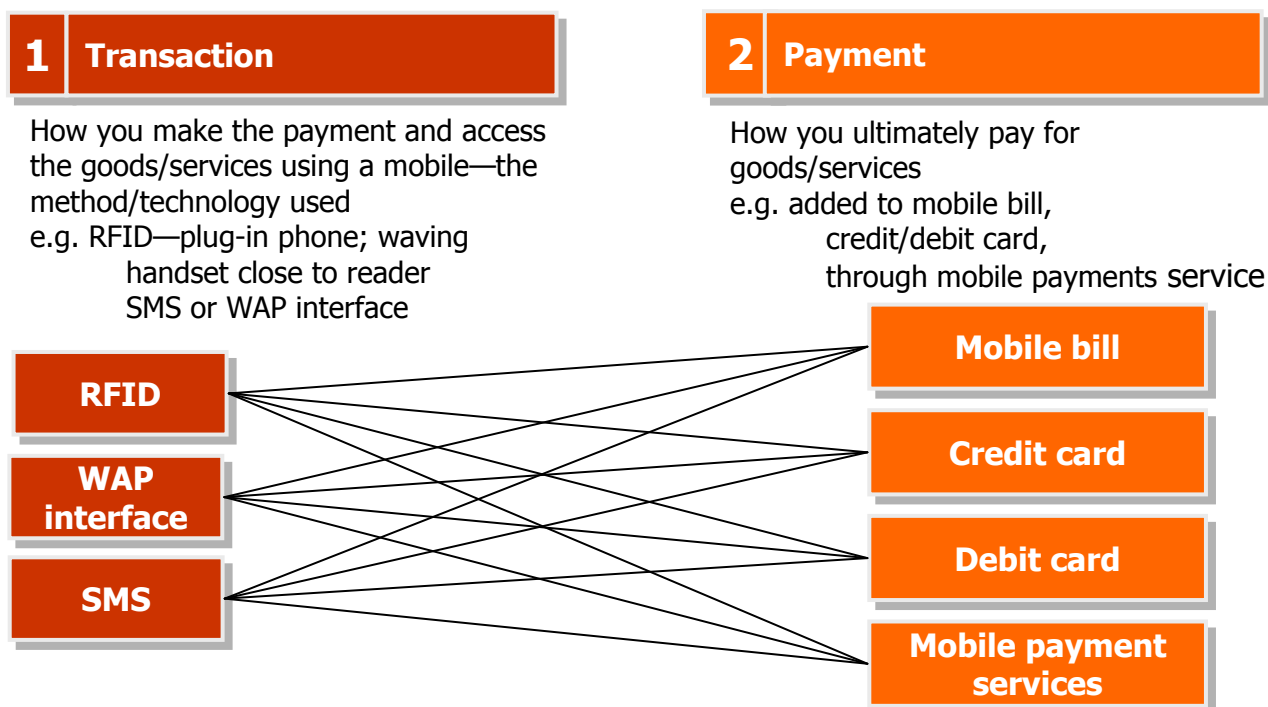
On discussion with respondents, it became apparent that a useful means of evaluating attitudes towards emerging mobile technologies was to consider the transaction and payment methods separately.

Firstly, the method of transaction is defined as the technology that the mobile payment method uses that enables the transaction to take place. For mobile payments, one of the technologies can involve SMS messages to enable the transaction. It can also include the use of RFID, which can enable the transaction in one of two ways. The inbuilt card in a mobile handset can either be 'read' by waving the phone close to a reader or by plugging the phone into a specific device. It also includes payments via WAP interface.

Secondly, it is important to consider the payment method, defined as the method by which the end user ultimately pays for the goods or services. Payment methods include billing directly to the mobile phone account, adding the payment to a credit card, paying a bill by debit card or paying through a mobile payment services company. In this research, a mobile payment services company is defined as an intermediary that facilitates the transfer of money to individuals or organisations. It is different from a Telco in that its primary purpose is to facilitate the transfer of payments.

According to the researchers, it is important to think about transaction and payment methods separately, given that it is likely that the end user will be able to use different payment methods with different transaction methods. For example, transactions involving SMS may allow the user to pay in a number of ways such as by billing directly to the mobile account, credit or debit card, or even through a mobile payment services company (see Figure 1).

Figure 1: Potential for using different payment methods with different transaction methods



## Opportunities for new mobile payment services

From discussions with respondents about the scenarios, the findings imply that the key opportunities for mobile payment services lie with 'on the go' transactions involving micro-payments and 'instant, anywhere' transactions. Overall, respondents were receptive to the idea of new mobile payment services.

### Opportunities for 'on the go' transactions involving micro-payments

Respondents could see the immediate benefit of using a mobile phone to make micro-payments, particularly for items that they usually pay for while 'on the go'. These items included public transport tickets, newspapers and coffees. Respondents explained that using a mobile phone with an in-built card that communicates with a reader using RFID would be particularly convenient in lieu of cash when cards are not accepted or there is a minimum spend. Respondents assumed that they would be less likely to have to queue to make payments as the transaction could be completed more quickly. They also assumed that this method would allow them to spend only what they need to, as there would be no minimum spend requirement. In addition, they assumed that they would be able to forego ATM charges, thereby making an assumption that there would not be an equivalent mobile payment service charge.

*Sounds great for parking or public transport, when you're on the go and often haven't got change for the machine.*

*It would be really convenient when you haven't got cash as you always have your mobile on you.*

*This would overcome some of those frustrations like not being able to use your EFTPOS card because of minimum spends.*

### Opportunities for 'instant, anywhere' transactions

The other opportunity for new mobile payment services lies with 'instant, anywhere' transactions. People responded positively to two different examples of these transactions. The first involved transactions using SMS, which would allow the consumer to purchase goods in any location, given that the majority of people carry their mobile phone with them at all times. The second example involved using a mobile phone to make 'person to person' transfers. In this example, money is instantly transferred from one individual to another, with the transfer facilitated by a mobile payment services company. Many parents could see this latter example as being extremely useful in emergency situations, as currently there is no way of instantly transferring money to anyone, except by cash.

*It would be helpful in emergencies when you need to transfer money instantly.*

*If it really is instantaneously then it would be an advantage.*

*If you could buy tickets on your phone it would be much better than having to constantly retry online.*

The findings suggest that the initial acceptance among the community will be for 'on the go' transactions involving micro-payments and 'instant, anywhere' transactions. However, respondents talked about the fact that, as with all technologies, as people become more comfortable with the new methods they are likely to be more accepting of mobile payments for a broader range of transactions. For example, they talked about the likelihood of eventually using their phones to pay for larger transactions in stores, and for paying restaurant and household bills.

## Factors that will help to engender confidence in new mobile payment services

The scenarios helped to reveal that mobile payment services must offer some advantages over current payment methods and engender trust for take-up to be considered. Mobile payment services will need to offer the same motivating factors

that currently encourage people to use electronic payments before users are likely to consider them.

The scenarios (A–I) are provided in the report under the section, ‘Reactions to the specific scenarios’, pp. 31–38.

### **Convenience, ease and speed**

Mobile payment services that are more convenient, easier or quicker than current electronic payments are likely to be well received. Respondents reacted positively to scenarios G and H (using RFID) as they recognised that this technology is likely to speed up the transaction process. Scenario D was also received particularly positively as respondents perceived it to be a quick and convenient method of purchasing tickets that they may otherwise have missed out on.

### **Easy technology for people to adopt**

The technology will need to be easy for people to adopt. Respondents recognised that using mobile premium services and SMS to transfer funds is an extremely easy method of payment. For example, many respondents were positive about using premium mobile services to make charitable donations (scenario A). They also felt that the ‘Wave and Pay’ technology appeared to be extremely straightforward to adopt in scenarios G and H.

### **Guarantees in place**

The scenarios illustrated that users will only trust mobile payment services if they know that the provider has guarantees in place to protect against fraud and misuse of financial and personal data. For this reason, respondents trusted the payment method in scenario G, which links the payment to a credit card, as they believe that banks have greater levels of guarantees in place than Telcos or mobile payment services companies.

## **Current concerns about mobile payment services**

Despite the majority of respondents being receptive to the concept of new mobile payment services, they also expressed some concerns about using these methods. The strongest of these concerns were linked to the method of payment that would come with the service, as opposed to the transaction and technology involved. The key concerns associated with payments included the fact that people perceived that:

- > payment would involve a Telco or mobile payment services company, who are regarded as less trustworthy than a bank
- > it could involve adding payments to the mobile bill, which is perceived as a form of ongoing credit
- > Telcos are likely to charge extra fees.

### **Concern about involvement of a Telco or mobile payment services company**

Respondents expressed strong concerns about mobile payment methods that rely on a Telco or mobile payment services company, whom they trust less than a bank to have in place the same level of guarantees against fraud and protection of personal and financial information. Many were concerned that these companies would not be accountable for their actions should any fraudulent activities take place—unlike the banks, which people understand and recognise are regulated.

Moreover, respondents believed that mobile phones would be less secure and more susceptible to viruses, when compared to a computer with anti-virus software.

*Phones aren't as secure as say the internet I know my computer has so many security programs like anti-virus software on it.*

Thus, there was felt to be an even greater need for Telcos to have more security measures in place.

### **Concern about Telcos or mobile payment services companies charging fees**

Another factor that contributed to respondents' distrust of Telcos was their previous negative customer experiences over billing and extra charges. They felt there would almost certainly be extra charges involving payments to the mobile bill or payments through a mobile payment services company. People assumed that fees similar to those charged for mobile premium services would apply for payments involving SMS. There was a particular concern that each payment would require several SMSs to be sent, which would be costly. This was in contrast to the assumption that mobile payment services that use debit or credit cards would not involve any 'extra' costs.

### **Concern about payments that are added to a mobile bill or account that is unlimited**

Many respondents expressed strong concerns about payment methods that give access to unlimited funds. For this reason, adding payments to a mobile bill appeared to be a dangerous way of allowing people to have access to an unlimited form of credit.

*It's like handing a credit card without a limit to everyone.*

Those with post-paid mobile phones expressed concerns about overspending and felt that they could quite easily forget what they had purchased if it was added to their mobile bill. Those with pre-paid mobile accounts felt that it could potentially be inconvenient if payments were being made regularly as they would need to constantly recharge their phone.

People felt that it would be more difficult to manage their finances if transactions were added to their mobile phone bill. They did not believe it would be as convenient as internet banking, which currently allows them to easily monitor their spending from their bank account and linked debit and/or credit cards. Parents also believed that if teenagers used this method of payment, they may begin to undervalue money, given that they would not be physically handling notes and coins.

*Teenagers need to see money to understand the value of it. To me it's very dangerous.*

In contrast, people favoured those methods where a limit on the amount could be imposed; for example, with a pre-loaded account, using a debit card with limits, or being able to set limits on linked debit or credit cards.

### **Concerns over perceived risks of using a mobile phone for transactions**

Overall, there was less confusion and uncertainty about how the transaction, as opposed to the payment method, would work. The most frequently cited concern was losing or having one's phone stolen, which was seen as a potential means of giving someone direct access to their bank account. Some expressed concern that it may not be as easy to freeze and close the account as it currently is with bank accounts and credit cards. Respondents were most concerned about payments that would not require a verification step, such as asking for a pin number. As they understood it, if they lost their phone this would allow someone to have instant access to unlimited credit.

Some respondents expressed practical concerns associated with the payment transaction and technology. These people saw their mobile phone as a simple device that they use to call and occasionally SMS people. When presented with the

scenarios, this segment of respondents regarded several of the new mobile payment systems and technologies as overcomplicated.

For example, they were concerned that they would not be able to make any transactions if the phone battery ran out. Concerns were also raised over the technology involved. For example, some felt they may be able to accidentally spend money by swiping their phone too close to a reader in the scenarios involving RFID technology (scenarios F, G, H). They also believed that any payment methods involving plug-in devices (as in scenario F), may bring with them issues like viruses. A minority of respondents who were not confident in using SMS believed that SMS-based transactions would be too difficult and time-consuming (scenarios A, B).

## **Specific attitudes to technologies and payment types**

Although some of the findings are listed in other chapters of the report, the next section provides a useful summary of attitudes to technologies and payment types covered in this research.

### **Transaction/technology type**

#### **Attitudes towards RFID technology**

Respondents were extremely positive about the concept of using RFID technology to enable mobile payments (scenarios F, G, H). In this context, RFID refers to the use of Near Field Communication (NFC) to provide payment details for low-value transactions. For respondents, it appeared to be a 'futuristic' and 'cool' method of making payments. They felt this method would enable them to make 'on the go' transactions involving micro-payments more quickly and easily than current methods and would mean that they would no longer have to ensure they carry cash.

They believed it would also allow them to only pay for what they want, as opposed to spending a minimum amount. People recognised that this technology is likely to only be feasible in metropolitan areas where there is sufficient demand to cover the costs of infrastructure. For example, many people we spoke to in regional areas were sceptical that this would ever be adopted in their towns.

*Maybe in Japan, but not Toowoomba where we only have 100,000 people.*

They expressed some concerns about RFID technology, but overall it appeared that these were not strong enough to prevent them from wanting to use this technology if it were to become available in Australia. The key concern was if they lost their mobile or had it stolen, people would be able to make transactions freely, as this method does not require any type of verification step such as a pin number.

They also queried certain aspects of the technology, such as being able to accidentally spend money by swiping merchandise they do not want. They were also concerned about obtaining viruses by plugging their phones into technology.

#### **Attitudes to using SMS to make payments**

Some of the scenarios respondents were shown involved making payments by sending SMS. The majority of our sample would be comfortable and know how to send SMS to complete a transaction. Only a minority who do not currently send SMS explained that they would find this method too difficult.

Respondents were aware that current mobile premium services use this methodology. Although people reacted extremely negatively to the subscription mobile premium services that involve high costs, in some instances they understood that sending an SMS to make a payment could be useful. For example, they recognised that mobile premium services can present useful opportunities, such as allowing people to donate to charity via SMS (scenario A) or purchasing tickets (scenario D). They responded



particularly positively to those transactions that ask the user to confirm by SMS and agree to the transaction before it happens (as in scenario D).

Many people also reacted positively to the concept of using SMS to transfer money from one person to another (scenario E). They felt that this offered them a new method of transferring payments instantaneously that is currently not available in Australia. Parents and teenagers could see the advantages of using SMS for ‘instant, anywhere’ transactions in emergency situations.

## **Payment type**

### **Attitudes to payments involving a pre-loaded or stored account with a mobile payment services company**

The scenarios helped to illustrate that people responded most positively to those payment methods where a limit on the amount could be imposed; for example, a pre-loaded account with a mobile payment services company (scenario E). People perceived this method to be a safer form of payment, as it would only allow the user to spend the money they had placed in the account. They could also see the advantages of the user feeling in control of the payments, given that money is loaded onto an account beforehand.

As this method bypasses banks, it was felt that it could be useful for adults, as well as teenagers who may not have access to banking services and who are too young to obtain a credit card. For example, several teenagers and young people pointed out that they would like their debit card or a stored account to be linked to those transactions made using RFID technology.

However, there were hesitations with this payment type as some people were unsure whether they would be able to trust a mobile payment services company. These individuals questioned the guarantees that these companies have in place. For them to consider adopting this payment type, the company would have to offer the same guarantees as a bank.

### **Attitudes to payments that are added to a debit card**

Adults and teenagers responded positively to the concept of payments being added to their debit card, because it offers them the certainty that they can only spend what is available in the account (scenarios F and I). People also assumed that payments involving debit or credit cards would not incur any extra charges, unlike payments involving direct billing or a mobile payment services company, where they assume the companies will charge certain fees.

People also responded positively to the idea that adding payments to a debit card is likely to involve a verification step (scenario I). People valued the importance of being able to confirm a transaction by entering a pin number to verify the user. In scenario F, which involves a linked debit card, some parents commented that this would be a useful means of monitoring their children’s spending.

### **Attitudes to payments that are added to a credit card**

Adding payments to a credit card evoked mixed reactions among adults. Those who were comfortable using credit cards felt that it would be a useful and simple means of making payments. However, there were several younger adults (18–35) who did not own a credit card and do not trust themselves with one. They would not be happy using a mobile payment system that was linked to a credit card out of fear of getting into debt.

### **Attitudes to direct mobile billing**

The scenarios illustrated that people were generally wary about payments involving direct mobile billing. As explained above, this is because adding payments to a mobile bill appeared to be a dangerous way of allowing people to have access to an unlimited form of credit. In addition, people also felt that it would be more difficult to manage their finances if transactions were added to their mobile phone bill.

In particular, in scenarios in which payments were made for goods that did not interest them, direct mobile billing was regarded even more critically. For example, the concept of purchasing virtual money for a computer game using direct mobile billing was not favoured by any age group (scenario C).

However, the scenarios illustrated that in situations where the user could see the method of payment to be particularly advantageous, they would be willing to have these payments added to their mobile bill. For example, in scenario D, involving the purchase of tickets, the majority of adults and teenagers would be happy to have the payment added to the bill, as it would allow them to purchase the tickets before anyone else and avoid queuing or waiting on the internet. Respondents also explained they would be more open to one-off and infrequent purchases being added to their mobile bill, such as purchasing tickets or donating to charity, as these can be more easily tracked.

# Likely adoption patterns of new mobile payment offerings

## Rogers's 'Diffusion of Innovations' theory

In order to consider the likely adoption patterns of new mobile payment offerings, the research explored some attitudinal commonalities across the groups. Rogers's 'Diffusion of Innovation' theory (1962)<sup>3</sup> is a useful means of exploring these attitudes as it explains how, why and at what rate new ideas and technology spread.

This theory explains that there are five stages to the adoption process:

1. Knowledge: an individual is first exposed to the new idea but has not been inspired to investigate further.
2. Persuasion: the individual becomes interested and actively seeks out information about the innovation.
3. Decision: an individual weighs up the advantages and disadvantages and decides whether to adopt or reject the innovation.
4. Implementation: an individual will begin to use the innovation to a varying degree, depending on how useful they feel the innovation may be.
5. Confirmation: an individual will finally decide whether they want to continue using the innovation.

Figure 2 identifies that in terms of adoption of new technologies, there are five segments into which people can fall:

### 'Innovators'

The 'Innovators' make up the smallest category and include people who are the first to adopt a new idea or technology. They tend to be open-minded, younger in age and come from the highest social groups.

### 'Early adopters'

The next group to adopt a new idea or technology is the 'Early adopters'. These people are also typically younger in age and have a higher socioeconomic status.

### 'Early majority' and 'Late majority'

Most people fall into the 'Early majority' or 'Late majority' categories. These people will only adopt a new technology after 'Innovators' and 'Early adopters'.

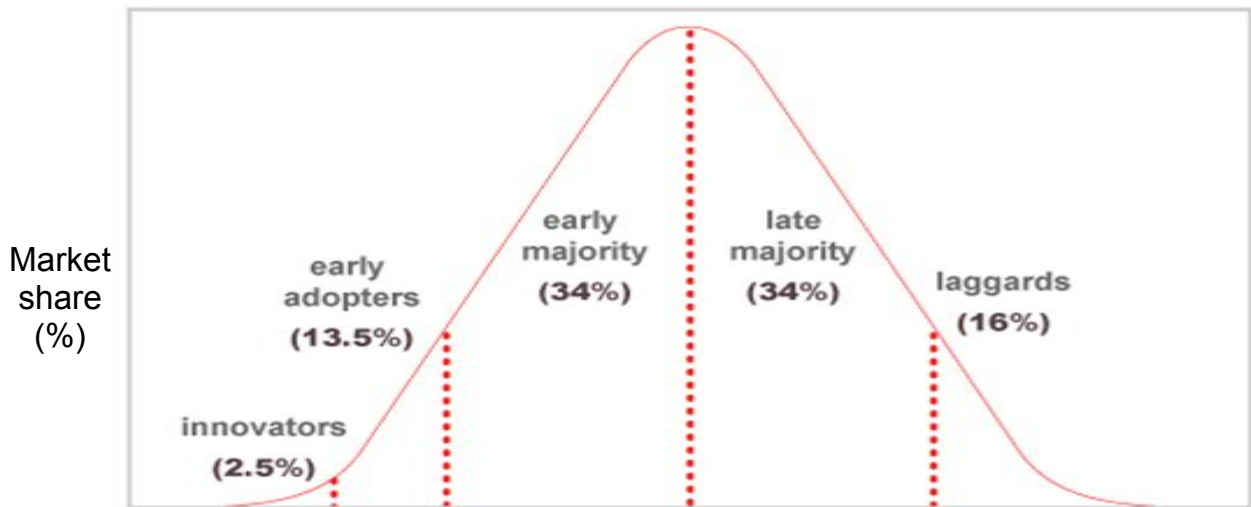
### 'Laggards'

Laggards are the last to adopt a new idea. They typically have an aversion to change, tend to be older in age and are from lower social groups.

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<sup>3</sup> Rogers, Everett M. (1962) *Diffusion of Innovations*, Glencoe: Free Press.

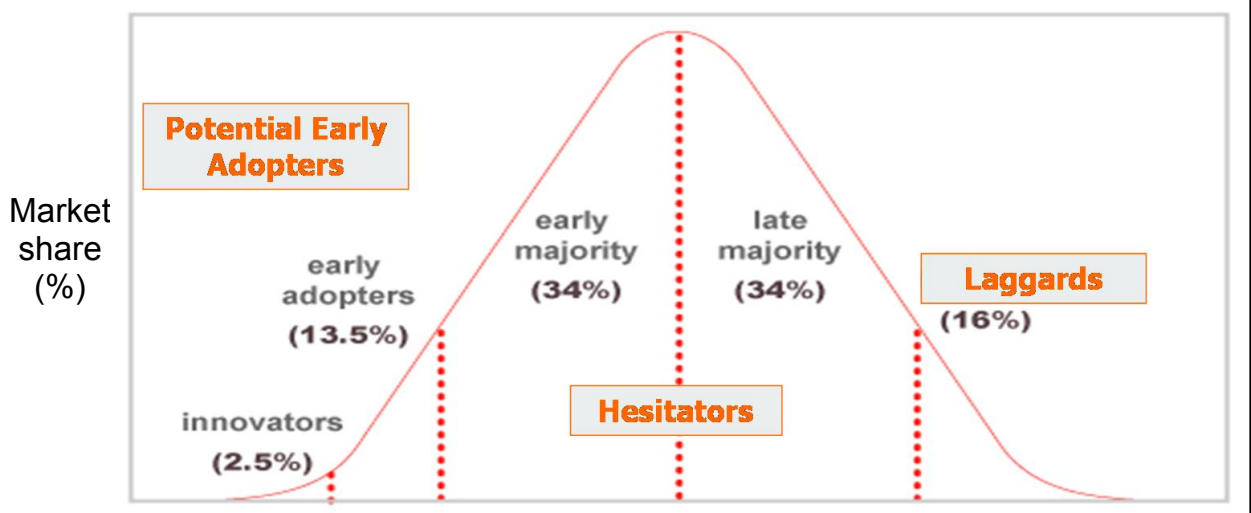
Figure 2: Rogers's Diffusion of Innovations model



(Rogers, Diffusion of Innovations Model 1962)

Given that the research looked at the broad concept of mobile payment offerings, as opposed to one specific innovation, simplified adopter categories were identified, as illustrated in Figure 3. The 'Innovators' and 'Early adopters' from Rogers's model have been combined to form the group 'Potential early adopters'. The 'Early majority' and 'Late majority' have been classified as the 'Hesitators'. The 'Laggards' category remains the same.

Figure 3: Adapted Diffusion of Innovations model



When discussing future innovations in qualitative research, respondents often find it difficult to identify whether they are likely to adopt them. According to Rogers's model, 'Early adopters' are the best barometer to future attitudes and take-up of an innovation. 'Potential early adopters' showed an interest in mobile payments for 'on the go' and 'instant, anywhere' transactions, which suggests some potential for future broader acceptance. However, this cannot be relied upon as an accurate representation of future demand for mobile payment offerings, as in the past 'Early adopters' have also adopted failed new technologies.

According to the model, successful innovations have particular intrinsic characteristics that are likely to encourage people to adopt them. These characteristics include the fact that they have to be a vast improvement from previous technologies, non-complex and easily assimilated into someone's life. The technology needs to be readily available and easy to experiment with. Rogers also noted that the more visible innovations will create talk among the community, which is likely to encourage take-up. Respondents recognised that mobile payments for 'on the go' and 'instant, anywhere' transactions are likely to share many of these characteristics. Reactions from each of the three identified segments are outlined below.

### **'Potential early adopters'—reactions to new mobile payment systems**

'Potential early adopters' were extremely open to using new mobile transaction and payment methods. They were open-minded about innovations and technological advances, and having to use the technology did not concern them. Many of them were already using a range of electronic payment methods, such as internet transfers or paying for goods or bills through PayPal or BPay.

For them, new mobile payment services and technologies appeared to be non-complex. They explained that they would be willing to use the payment systems as they recognised that the benefits outweighed existing methods. They could see that using these services would allow for a quicker, easier and more convenient method of payment.

*Swiping your phone to pay for coffee would be so quick and easy—that's a winner.*

'Potential early adopters' were typically younger in age. Some teenagers and younger people (18–35) fitted into this category. They appeared to be most accepting of new mobile payment methods as they have grown up using a range of different transaction and payment options, and they understand how the payment method and technology involved would work. However, this category also included some older families and empty nesters who were highly literate with digital media. These respondents tended to be from higher socioeconomic groups and metro areas.

### **'Hesitators'—reactions to new mobile payment systems**

'Hesitators' would follow the lead of the 'Potential early adopters' in adopting new mobile payment methods. This segment would be happy to continue using current payment methods until someone showed them the advantages of changing. They expressed some concerns over the payment methods, particularly those involving direct mobile billing or a mobile payment services company. Essentially, they would be happy to play 'follow the leader', and would only follow once any initial issues that 'Potential early adopters' unearthed were resolved.

Many 'Hesitators' were late adopters to internet banking and internet purchasing, and very few were using electronic payment methods such as BPay or PayPal. 'Hesitators' spanned a broad spectrum of people, including a variety of age ranges. Some of the teenagers and young people fitted into this category. Given their exposure to electronic payment systems, some were very savvy, but sceptical about some of the mobile payment methods:

*I'd want to wait until any risks from fraud or high costs had been exposed.*

*I'd wait before jumping on the bandwagon.*

Some of the older families and empty nesters expected that they would follow suit and adopt the new mobile payment methods after their children had. There was a sense that eventually they would have to adopt the payment method to keep up with society. 'Hesitators' tended to include people from a range of socioeconomic groups, in both metro and regional areas.

### **‘Laggards’—reactions to new mobile payment systems**

The ‘Laggards’ were strongly resistant to adopting new methods, giving the impression that mobile payments could not be trusted, and are overcomplicated and non-compatible with their daily lives.

*Phones aren’t very secure and this method of having to create an account to pay someone seems overcomplicated.*

They tended to be focused on maintaining the status quo and would be happy to continue with current payment methods that they are comfortable with. They were still somewhat circumspect about making payments on the internet and were only just beginning to do so. They were not completely confident and familiar with the technology yet, and were more comfortable using other electronic payment methods and phone banking.

‘Laggards’ are typically older in age. There were very few in our sample, given the recruitment criteria, but they typically included low users who were mainly using phone banking or face-to-face methods for paying bills, rather than internet banking or shopping. In our sample, ‘Laggards’ tended to include those people without children who have less exposure to new innovations and were more likely to come from blue-collar families and regional areas.

# Reactions to the specific scenarios

This section explores the specific reactions to each of the nine scenarios respondents were shown. The scenarios were read out to the respondents and are included below. Their reactions have been summarised, and the benefits and concerns that arose from each scenario listed, together with the transaction and technology used and the method of payment. Respondents were also asked to suggest other potential applications using this technology or payment method.

Figure 4: Mobile Premium Services scenarios

Scenario A	Scenario B
<p><b>Lorna is watching TV and sees an advertisement for a bushfire relief appeal run by a well-respected charitable organisation. Seeing that one of the options for donating to the appeal is to text a key word to a 19 number to donate a set amount, she chooses the amount she wishes to donate and sends the text as instructed. She then receives a confirmation of her donation, which also triggers the cost of the donation to be registered against her phone bill.</b></p>	<p><b>Cassandra is flicking through her favourite magazine and sees an advertisement for an SMS chat service. Cassandra sends an SMS with the advertised keyword to a 19 number and is sent a text in return asking her to confirm her consent to enter into a subscription arrangement, whereby she is sent two 'profiles' per day. Each profile costs \$4 plus \$4 per message received/sent until she decides to send 'STOP' and cancel the subscription. She sends another text to confirm her wish to join and then exchanges several messages, also billed at \$4 per message, to set up her profile and begin to receive and send messages from/to the profiled members. The messages are billed to her next mobile bill.</b></p>

Figure 5: Scenario A—Mobile Premium Services

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Instantaneous—capitalises on impulse</li> <li>Convenient</li> <li>Charity does not need to chase up as payment is immediate</li> <li>Reputable charity meant people trusted it</li> <li>Most are comfortable sending SMS</li> <li>One off—cost known</li> </ul>	<p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Risk is of donating more than someone can afford because person is acting on impulse and emotion</li> <li>Payment on mobile bill—possibility of having an unlimited credit card</li> <li>As it is a 19 number, could be a scam—i.e. being charged for several SMS</li> <li>19 number = premium costs</li> <li>Difficult to monitor finances having payments on mobile bill (as well as credit/debit cards)</li> <li>Charity would have personal details</li> <li>Third-party charges?</li> <li>No receipt?</li> </ul>	<ul style="list-style-type: none"> <li>One-off purchases e.g. ordering takeaway food e.g. vending machine purchases</li> <li>Home (TV) shopping</li> </ul>

Figure 6: Scenario B—Mobile Premium Services

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Some subscriptions can be personalised:             <ul style="list-style-type: none"> <li>receive the information you want at the times you want/need it</li> </ul> </li> </ul>	<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Currently not all services allow people to personalise them</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>No control over costs as company determines how many SMS they send</li> <li>Previous negative experiences</li> <li>Unsure who is getting personal details</li> <li>Payment on mobile bill—possibility of having an unlimited credit card</li> </ul>	<ul style="list-style-type: none"> <li>Personalised services to receive specific information at specific times e.g. road traffic daily before leaving work e.g. sports score updates e.g. daily weather forecast</li> <li>Evident that the charge per SMS would need to be significantly lower to be considered</li> </ul>



Figure 7: Scenarios C and D—Direct mobile billing

Scenario C	Scenario D
<p>Alex is playing his favourite virtual football game and needs to buy credits to purchase a new player. He chooses the pay by mobile tab within the game and is re-directed to a secure payments site. He buys virtual money for several Australian dollars, selects his mobile network and enters his mobile number. The service then sends a message to his mobile handset asking him to confirm the transaction and he replies 'Y' to confirm. His virtual money bank is instantly updated and the cost is added to his next mobile bill.</p>	<p>Erica and three of her friends want to see a band that only have one Sydney show. It's expected that the tickets to the gig will sell out quickly and people have begun to queue at ticket agents days before the tickets go on sale. Erica has found out about a new mobile application that will allow her to buy the tickets by sending a text to a phone number. She is then sent a text back asking her to confirm the number of tickets and agreed price. If this is correct she then texts back with instruction to buy. The tickets are then sent to her phone as a text, including the booking number, which she then shows at the door to get into the gig on the night. The value of the tickets is then debited from her pre-paid phone account or added to her next bill.</p>

Figure 8: Scenario C—Direct mobile billing

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Instantaneous</li> <li>Confirmation of amount is a positive</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Secure payments site sounds more secure than using premium services</li> <li>Expectations that it would be safe from hackers</li> <li>Don't need a credit card to pay for goods online</li> </ul>	<p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Payment on mobile bill: -possibility of having an unlimited credit card</li> <li>Seems more complicated than PayPal i.e. confirmation via SMS</li> <li>No verification protocols to identify user</li> </ul>	<ul style="list-style-type: none"> <li>Other internet shopping</li> <li>Face-to-face purchases</li> </ul>

Figure 9: Scenario D—Direct mobile milling

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Received positively as people perceive there to be a real benefit i.e. ability to get tickets before others as it is a new application</li> <li>Convenient as it is an 'on the go' transaction:               <ul style="list-style-type: none"> <li>don't have to be in a particular place</li> </ul> </li> <li>Quick, saves queuing on the phone/internet</li> <li>Reassured by the confirmation step</li> </ul>	<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Phone battery flat on the night</li> <li>Proof of purchase if phone is lost/stolen?</li> <li>Mobile coverage patchy in regional areas, concern of SMS getting through</li> <li>Systems would jam if everyone was doing it</li> <li>Concerns about deleting SMS accidentally</li> </ul> <p><b>Payments:</b></p> <ul style="list-style-type: none"> <li>Added to mobile bill:               <ul style="list-style-type: none"> <li>-but more likely to be accepted as it is likely to be a one-off transaction</li> </ul> </li> <li>Charges for the SMSs</li> <li>Concern of scammers—how would you know tickets are fake if only have SMS—thought to be easy to replicate</li> </ul>	<ul style="list-style-type: none"> <li>Any tickets: music, theatre, art galleries, movies</li> <li>Other internet shopping</li> <li>Real world purchasing</li> </ul>

Figure 10: Scenario E—Person to person transfers using a mobile payment services company

**Scenario E**

**Robin has previously registered with a mobile payments company in which he can effectively load money onto his mobile phone via a linked account to be sent to retailers or individuals when required. Robin is at home and tied up with his two young children when he discovers a plumbing emergency. He arranges for the plumber to service the job then pays the plumber by entering in the plumber's mobile number and the amount owed to the plumber. Within seconds, the plumber receives confirmation that this payment has been transferred and issues a receipt to Robin.**

Figure 11: Scenario E: Person-to-person transfers using a mobile payment services company

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Using in lieu of cash—convenience factor</li> <li>Payment is instantaneous for receiver</li> <li>User has control because loaded money onto account beforehand</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Bypasses banks                             <ul style="list-style-type: none"> <li>-useful for younger people who haven't got access to banking services</li> </ul> </li> <li>No need to access cash</li> </ul>	<p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>No bank involved—some found it confusing/overcomplicated</li> <li>Unsure if company has same stringent safety measures in place for security/personal details</li> <li>Would it be widely accepted?</li> <li>No pin or verification step</li> </ul>	<ul style="list-style-type: none"> <li>Emergency situations i.e. parents giving children access to funds</li> <li>Budgeting as a set amount is put in place in the linked account:                             <ul style="list-style-type: none"> <li>- only useful if broad take-up by suppliers of goods and services</li> </ul> </li> </ul>

Figure 12: Scenario F—RFID technology

## Scenario F

**Sally and Chrissy (both 15) have permission from their parents to go on a shopping trip one Saturday. For lunch, they decide to eat at a popular burger chain. They take a seat and plug their mobile phones into a device installed at each table. They then point to their choice on the specially coded menu provided. They confirm the cost of the transaction and the charge is recorded against a linked debit card which their parents have pre-loaded to cover these types of transactions. When their meals are ready, the system sends a message to the girls' phones and they go up to the counter to pick up their purchases.**

Figure 13: Scenario F—RFID technology

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>• Futuristic, intriguing, aspirational new payment method: it's cool</li> <li>• Avoids queuing</li> <li>• Faceless</li> <li>• Confirmation of cost of transaction</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>• Pre-loaded debit card has a control element to it—parents can see what children are buying/limit spending</li> </ul>	<p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>• No security verification measure</li> <li>• Seems complicated—wouldn't using a debit card just be easier?</li> <li>• Teenagers won't appreciate the value of money as they can't see it</li> </ul> <p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>• How would the technology work for all phones?</li> <li>• Damage to technology</li> <li>• Security and virus concerns of plugging phone into technology</li> <li>• Due to the costs of technology, would the costs of goods go up?</li> <li>• Replaces jobs</li> </ul>	<ul style="list-style-type: none"> <li>• Restaurants/cafes</li> <li>• Buying groceries</li> <li>• Only useful if broad take-up by suppliers of goods and services</li> </ul>

Figure 14: Scenarios G and H—RFID

Scenario G	Scenario H
<p><b>Kylie regularly uses her mobile phone to pay for her morning coffee and newspaper. She has a credit card software application downloaded to her phone, which means all she has to do is swipe her phone over the shop's 'reader' with the corresponding software. The purchases are then charged back to her credit card account.</b></p>	<p><b>Damien catches a train home from the city, swiping his mobile phone over a reader built into the turnstiles at entry and exit points, and thereby deducting the fare from his credit card. When Damien arrives at the station closest to his house it is pouring rain so he hails a cab. Upon reaching Damien's destination the driver rings up the fare and he pays the driver by swiping a mobile phone handset over a reader that the cab driver has installed. The cost of the cab fare also is deducted from a linked credit card.</b></p>

Figure 15: Scenarios G & H—RFID

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>• Quick, convenient to swipe mobile</li> <li>• No need for loose cash</li> <li>• Useful if wallet is stolen</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>• Greater level of trust as payments are linked to credit card and not mobile bill:               <ul style="list-style-type: none"> <li>- greater trust in banks</li> <li>- limited credit</li> </ul> </li> <li>• However, involves micro-payments so some would not mind if payments were added to mobile bill</li> <li>• Some level of familiarity e.g. preloaded travel cards; NFC for travel payments abroad</li> </ul>	<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>• Could become a target as phone seen as more valuable</li> <li>• Uncertainty of technology: e.g. spending accidentally by swiping</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>• Linked to credit card</li> <li>• Assumption that it is only available to over 18s as credit card is required</li> </ul>	<ul style="list-style-type: none"> <li>• Micro-payments in lieu of cash</li> <li>• Any form of transport: taxis or public</li> <li>• Small goods that are purchased regularly e.g. coffee, newspaper, magazines</li> <li>• Groceries e.g. to speed up express lane</li> <li>• Only useful if broad take-up by suppliers of goods and services</li> </ul>

Figure 16: Scenario I—Linked account with pin

**Scenario I**

**Lucy receives a text that contains a summary of her latest electricity bill with a WAP and website link she can follow to see the full statement. She is given the option of entering a pin to confirm she wishes to pay the bill and on doing so the amount is charged to her debit card, which is linked to her mobile phone.**

Figure 17: Scenario I—Linked account with pin

Benefits	Concerns	Other relevant applications
<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Some feel that the user is in control:               <ul style="list-style-type: none"> <li>can choose when to pay the bill</li> </ul> </li> <li>Simple and easy</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Linked to debit card—can only spend what user has</li> <li>Pin to confirm—more secure</li> <li>Ability to monitor statement</li> <li>More environmentally friendly—no paper bills</li> </ul>	<p><b>Transaction:</b></p> <ul style="list-style-type: none"> <li>Charges for SMS?</li> </ul> <p><b>Payment:</b></p> <ul style="list-style-type: none"> <li>Some believe you can't schedule payment</li> <li>No confirmation that you have paid</li> <li>Concerns about high internet costs—checking statements</li> <li>Concerns that providers may overcharge:               <ul style="list-style-type: none"> <li>will people really take the time to look at full statement if payment is able to be completed so easily?</li> </ul> </li> <li>Some not confident about using internet on phone</li> </ul>	<ul style="list-style-type: none"> <li>Any bills</li> </ul>

# Expectations for regulation

## Expectations for consumer protection regarding the use of mobile premium services

Given people’s concerns about mobile premium services, respondents felt that providers of such services could offer a number of possible safeguards to address these concerns. A provider of mobile premium services is defined as a company or organisation (including Telcos) that offers mobile premium services as a product or payment service.

Table 5 lists these possible safeguards below. The key suggestion was for the costs and terms and conditions to be explicitly stated at the time of purchase. Respondents also felt that there needed to be a cooling-off period if consumers changed their mind and the method of unsubscribing should be as simple as sending one SMS.

**Table 5: Possible safeguards a provider could offer to address consumer concerns about mobile premium services**

Segment	Concern	Possible safeguards a provider of mobile premium services could offer to address consumer concerns
All	<ul style="list-style-type: none"> <li>Extra charges, particularly with subscription premium services</li> </ul>	<ul style="list-style-type: none"> <li>All costs need to be clearly visible and easy to comprehend</li> <li>Ensure consumers understand costs cannot come out of cap</li> <li>With subscription premium services, terms and conditions need to be explicitly expressed at time of purchase</li> <li>Need to have a cooling-off period</li> <li>How to unsubscribe should be explicitly communicated at time of purchase and available any time thereafter</li> <li>Needs to be easy to unsubscribe (e.g. one SMS)</li> <li>Ensure bill payer’s permission for those under 18</li> </ul>

Respondents doubted whether the providers of mobile premium services would offer the safeguards of their own volition. The perception was that providers are currently operating as businesses that deliberately target vulnerable groups such as tweenies and teenagers, and are essentially out to scam people. As such, there was some indication that respondents believed a regulatory body should *require* that those safeguards referred to in Table 5 be in place before a provider can offer services.

## Parental concerns and expectations about minors’ use of mobile premium services

Parents were adamant that some of these safeguards be put in place to protect teenagers who use mobile subscription services. They agreed that a cooling-off period to compensate for users acting on impulse would be helpful. They also felt that providers should send a free-of-charge SMS prior to the user agreeing to subscribe that states the terms and conditions and provides information on costs, as well as an SMS that explicitly states how to unsubscribe.

Many parents also identified a need for a system that allows parental control over teenagers accessing these services. They suggested processes that ensure that an adult’s consent or the bill payer’s permission is sought prior to a teenager using a mobile premium service. Parents explained that it would be helpful to be able to limit a

minor's access to certain services, just as they can limit access to certain websites on the internet.

Some of the suggestions from respondents included:

- > banning access to '19' numbers for mobiles belonging to those under 18 years
- > requiring that parents apply a pin that has to be entered prior to agreeing to the service
- > seeking permission from parents by sending an SMS to the parent's mobile asking for verification, prior to a minor using a premium service.

The last safeguard would be difficult to implement given that telecommunication providers or suppliers of goods and services do not know whether a mobile belongs to a minor or not. Nevertheless, this suggestion highlighted that parents feel strongly that there should be a system that allows them to be in control of teenagers accessing these services.

It is interesting to note that most of the desired safeguards listed in Table 4 already exist or, in the case of an ability to bar access to '19' numbers for mobiles, will shortly exist. This illustrates that the community is not aware of what safeguards currently exist for mobile premium services and suggests there is an opportunity to better educate the community on these safeguards.

## **Expectations of the role of providers for protecting consumers in regard to future mobile payment services**

The research also aimed to identify community attitudes to the role they felt mobile payment service providers and regulators should be playing to encourage take-up of future mobile payment services. In this context, providers of mobile payment services refer to mobile payment services companies, Telcos and banks.

It was evident that it will be more important to address consumers' concerns about the payment methods involved, as opposed to the transaction type and technology in use. Respondents were more fearful and distrusting of particular payment methods, such as direct mobile billing or using a mobile payment services company, where a bank is not involved.

This is not surprising because, as with all innovations, many people are sceptical at first. For example, when internet banking first emerged onto the market people were sceptical and concerned about the security and guarantees that would be in place. However, the majority of respondents explained they have now adopted internet banking because the banks have the guarantees and high levels of security required for consumers to trust the systems. It appears that people are likely to be more accepting of mobile payment systems that are backed by guarantees and high levels of security, just as they accept payment systems operated by the banks that are backed by similar protections.

Respondents believed that the providers of mobile payment services should be responsible for protecting consumers. They felt that providers should engender certainty by offering the security and protection against fraud that is necessary to encourage take-up. They would be more likely to trust the mobile payment service if they knew the provider had been proactive in providing security measures as this would demonstrate the legitimacy of the offer.

Respondents also felt that providers of mobile payment services should be responsible for educating consumers—it would be helpful if they could highlight the potential concerns and issues that could arise with each payment service and educate the community on how to protect itself. Given that 'Potential early adopters' tend to be



teenagers and young adults who may not be aware of the safeguards to look for, providers need to ensure consumers are informed about potential pitfalls.

Respondents were asked to suggest specific safeguards that providers of mobile services could offer to address consumer concerns. These included both practical measures and suggested areas that could be targeted in education campaigns. Table 6 outlines the key concerns, which segments each of them relates to and suggestions for potential safeguards.

**Table 6: Suggested safeguards a provider could offer to address consumer concerns about mobile payment services**

Segment	Concern	Safeguards a provider could offer to address consumer concerns
All	Lost/stolen phone and no verification of ID	<ul style="list-style-type: none"> <li>• Being able to immediately cancel mobile billing account</li> <li>• Including a verification step e.g. PIN/security question to use the phone</li> <li>• Ensuring expenditure is capped</li> </ul>
Hesitators Laggards	Uncertainties over the practicalities of each type of transaction e.g. swiping phone accidentally or virus from 'plug-in' technology	<ul style="list-style-type: none"> <li>• Security measures in place to protect consumers from accidental swiping or viruses</li> </ul>
All	Unlimited expenditure if payments are charged to mobile bill	<ul style="list-style-type: none"> <li>• Address the issue of unlimited expenditure: cap in place               <ul style="list-style-type: none"> <li>• ensuring consumer is told if limit is close to being reached/has been reached</li> <li>• preventing future use when limit has been reached</li> </ul> </li> </ul>
Hesitators Laggards	Personal and financial data passed onto third parties	<ul style="list-style-type: none"> <li>• Ensure details are only passed onto the necessary parties</li> </ul>
All	Fraud—from hackers or scams	<ul style="list-style-type: none"> <li>• Security measures and levels of guarantee are of a similar standard to that offered by banking institutions</li> </ul>
Hesitators Laggards	Lack of receipt	<ul style="list-style-type: none"> <li>• If charged to mobile account, need to be able to use bill as proof of receipt</li> </ul>

## Expectations of the role of regulators for protecting consumers in regard to mobile payment services

Respondents expected regulators to play a dual role with regard to future mobile payment services. Firstly, it was expected that regulators should only step in and enforce safeguards if the provider claims to have particular safeguards in place, but fails to implement them. For new mobile payment services, consumers do not expect a regulatory body to be responsible for demanding that safeguards be put in place

before a provider offers services. This is because there is an expectation that people would not even trial emerging systems unless safeguards were guaranteed by the provider. A provider guarantee of safeguards legitimises the safety and security of the new technology and payment system. If a regulator had to force providers to comply with safeguards prior to them offering a service, this would highlight the risk that the provider may be trying to 'scam' people.

The second role regulators are expected to play with regard to future mobile payment services is ensuring that providers educate the community about new mobile payment services. In addition, respondents believed that regulators should ensure consumers are aware there is a regulatory body to complain to, should providers fail to enforce the safeguards they claim to have in place.

## **Parents' expectations of the role of providers and regulators in minors' use of emerging mobile payment services**

As with mobile premium services, parents' key concern about teenagers using future mobile payment services is to ensure that they would be able to limit the amount a minor can spend. For this reason, payment methods involving capped or stored value accounts were particularly favoured.

Some parents felt that these payment methods would actually help to manage their child's expenditure as they would be able to limit what their children could spend for a particular time period. Some even saw it as a way of monitoring their children's spending.

*I currently give them cash and I never know what they spend it on, but this would allow me to have a record.*

There was an expectation that all future mobile payment services should require the bill payer's or parent's permission prior to a minor using the service. For this reason, respondents felt that similar safeguards recommended for mobile premium services should be applied for new mobile payment services. These included:

- > banning access to services for those under 18 until explicit permission is given by an adult or bill payer
- > seeking permission from parents for use of certain services by sending an SMS to the parent's mobile asking for verification
- > allowing parents to apply a PIN.

In the groups, parents questioned whether a regulatory body would be able to guarantee any of these processes be put in place for new mobile payment services. However, parents assumed that these would be safeguards that they could suggest Telcos implement once the need becomes apparent. For example, some parents explained that, just as they can implement processes that enable them to use filters on the internet to block their children from certain websites or limit access to certain channels on pay TV, in time they expect they would be able to do this for their child's use of mobile payment services. As was previously explained, although some of these processes may be infeasible in practice, they are some of the safeguards sought by respondents for particular scenarios.

There appears to be two roles that a regulator should play in minors' use of these emerging mobile payment services. Firstly, regulators should be responsible for identifying if the Telcos could offer the technology that will allow parents to limit access by their children to these services if they choose to. If this is possible, regulators should ensure that providers communicate the availability of this to parents.

Secondly, regulators should be responsible for ensuring that providers educate parents and their children about the possible 'pitfalls' of emerging mobile payment services, and what they should look for to receive reputable and legitimate services with appropriate safeguards.

# Findings and recommendations

## Summary of findings

Findings from this study indicate that people are generally satisfied with the electronic payment systems that are currently available in Australia. People trust and use electronic payment methods because they know that methods involving a bank will have the necessary security measures in place to protect against fraud and misuse of personal and financial information.

There is low awareness of new mobile payment services, though the majority are aware of mobile premium services. These were being used sporadically by a range of age groups, though they are most popular with tweenies and teenagers. Respondents felt these services, particularly the subscription services, are deliberately targeting these vulnerable age groups, who are more likely to act on impulse and may not read or understand the terms and conditions.

Overall, respondents were extremely receptive to the idea of future mobile payment services. Most could recognise benefits of using mobile payment services over current electronic methods. The research indicated that any new mobile payment service must offer some advantages over current payment methods. Mobile payment services will need to be more convenient, easier or quicker than current electronic payments. The technology will also need to be easy for people to adopt.

Mobile payment services that are linked to banks and trusted branded companies, as opposed to those where payments are processed by a Telco or mobile payment services company, are likely to be perceived as more trustworthy. This is because respondents believe that banks have guarantees in place to protect against fraud and misuse of personal data. The research findings showed that users are more likely to consider payment methods that only give access to limited funds. Respondents felt more comfortable about payments that were linked to a pre-loaded account or payment methods, such as a debit card, which only allow the user to spend existing funds.

Frustrations with current electronic payments illustrate that the immediate opportunities for mobile payment systems lie in 'on the go' transactions involving micro-payments and 'instant, anywhere transactions'.

Despite the majority of respondents being receptive to the concept of new mobile payment services, they also expressed some strong concerns about using these methods. These included:

- > using payment methods that rely on a Telco or mobile payment services company, who are less trusted than a bank to process the payment
- > adding payments directly to the mobile bill, which was likened to an unlimited credit card
- > adding extra charges to mobile payment services if the Telco or mobile payment services company is responsible for the payment processing.

Respondents felt that the key safeguards that providers of mobile premium services need to put in place were:

- > the supply of transparent information about the costs and terms and conditions at the time of purchase
- > a cooling-off period in which consumers can change their mind and be able to cancel by sending a single SMS.

The supply of information about costs, terms and conditions, and cooling-off periods are currently in place and form part of the Mobile Premium Services Code. Suppliers offer a cooling-off period via a double opt-in process, which is a procedure requiring a consumer to confirm their intention to purchase the service separately from the initial request for service.

Notably, there was relatively low recognition that suppliers provide information about the costs and material terms at the time of purchase, and that a cooling-off period exists. This low awareness was not surprising given that the requirement in the Code for a double opt-in had only been in operation for a few months at the time of the focus groups.

Some people doubted whether providers of mobile premium services would offer the safeguards of their own volition. As such, there was some indication that people believed a regulatory body should require these safeguards be put in place before a provider can offer a mobile premium service.

Respondents believed that providers of mobile payment services (comprising mobile payment services companies, Telcos and banks) should be responsible for protecting consumers by ensuring that measures to provide security and prevent fraud are in place. Consumers would be more likely to trust a payment method if they knew the providers had been proactive in providing security measures.

There were expectations that regulators should only be responsible for enforcing safeguards if the provider claims to have these in place but fails to do so. Respondents also expected regulators to ensure that the providers of mobile payment services offer a means of educating the community about new mobile payment systems and highlight any potential pitfalls.

## **Researchers' recommendations**

Based on learnings from adoption of mobile premium services and the current findings, the researchers' recommendations are as follows:

1. There is an opportunity to raise awareness of the safeguards that currently exist for mobile premium services when their effectiveness specifically depends on consumer awareness and when it helps to build trust and confidence in the payment system. Providers of mobile premium services should be responsible for supplying this information to consumers.
2. There is a need to raise consumer awareness of emerging mobile payment systems so that people are aware of any potential pitfalls that may arise with them. It is expected this would predominantly be through education from the providers themselves, who include mobile payment services companies, Telcos and banks. Regulators could ensure that this occurs.
3. Providers will need to ensure that any payment methods have the same stringent security measures that banking institutions have in place to protect consumers against fraud and misuse of data.
4. There is a need to offer payment methods that give access to limited funds, as this is likely to encourage take-up.
5. Implementation of a verification mechanism will likely engender confidence in any new mobile payment services. A common current example of a verification mechanism is a pin number.
6. Providers of new mobile payment services should be responsible for implementing the safeguards that address consumers' concerns.
7. Regulators should only intervene to enforce safeguards if a provider of the new mobile payment service claims to have particular safeguards in place but fails to do so.

8. If feasible, there may be a need to ensure that all future mobile payment services allow parental control over use of these services by under-18s.

# Appendix A

## ACMA PREMIUM MOBILE PAYMENT OFFERINGS RECRUITMENT SCREENER

Hello. My name is \_\_\_\_\_. I work for \_\_\_\_\_, a market research company. I am looking for people to take part in a market research study for the Government which looks at people’s attitudes and usage of different methods to pay for goods and services. There are no right or wrong answers, and all points of view are welcome.

We need people to take part in a group discussion / in-depth interview on \_\_\_\_\_ at \_\_\_\_\_.

We will be talking to people within three states in Australia and will focus on individuals with particular characteristics in each area. We therefore need to ask some questions to ascertain whether you are eligible to take part in a discussion in this area.

1. Do you or any of your close relations, work in any of the following industries?

Market research	1	<b>TERMINATE</b>
Advertising, marketing, public relations	2	
Media and journalism	3	
Australian Communications and Media Authority	4	

2. When was the last time you took part in a group discussion or depth interview? (Write in)

<b>TERMINATE IF LESS THAN 6 MONTHS AGO</b>

3. Which of the following age ranges to you fit into:

14 or under	1	<b>THANK &amp; CLOSE</b>
15-17	2	<b>SEE QUOTAS</b>
18-24	3	<b>SEE QUOTAS</b>
25-34	4	<b>SEE QUOTAS</b>
35-40	5	<b>SEE QUOTAS</b>
40-50	6	<b>SEE QUOTAS</b>
50-65	7	<b>SEE QUOTAS</b>
66+	8	<b>THANK AND CLOSE</b>

4. If you have any children, which category do they fall into?

No children	1	<b>SEE QUOTAS</b>
Pre-school age	2	<b>SEE QUOTAS</b>
Primary school aged	3	<b>SEE QUOTAS</b>
Aged 12-14	4	<b>SEE QUOTAS</b>
15-17	5	<b>SEE QUOTAS for GPS 9,10,11,13</b>
18+	6	<b>SEE QUOTAS</b>

Recruiter note: Groups 9 & 11 should have 5 respondents who have at least one child aged 15-17 years. Other respondents should have children outside this age range.

Groups 10 & 13 should have 4 respondents who have at least one child aged 15-17 years. Other respondents should have children outside this age range or have no children living at home at all

5 Which of the following statements apply to you:

(Recruiter note - if a respondent says yes to one statement in high usage, they are a high user even if they also respond to the low user statements. Low users cannot respond positively to any of the high user statements).

Please note statements 7-9 all indicate usage at the extreme end of the continuum where people have engaged with mobile payment services.

A minimum of 2 respondents in the high usage standard size groups for those pre/Young families. Older Family and empty nester groups must have used mobile premium services i.e. answered statement 7 with regard to usage

A minimum of 4 respondents in the teens and young adults groups must have used mobile premium services i.e. answered statement 7 with regard to usage

Usage Definition of electronic payment methods	Statement		
Non User	I don't use any form of electronic payments for goods and services i.e. I only ever pay cash or use EFTPOS at the shops	1	<b>THANK AND CLOSE FOR ADULTS FOR KIDS – RECRUIT FOR LOW USAGE GROUPS</b>
Low Usage	I regularly use a fixed phone (landline) to pay for goods and services by providing credit card or banking details, or the charge for the service being added onto the phone bill; and/ or	2	<b>RECRUIT AS LOW USER</b>
	I use internet banking to pay bills and transfer money between accounts and across financial institutions, but do not often or have not ever used the internet to pay for goods and services outside of my bank.	3	



High usage	I regularly use the internet to pay for goods and services with a range of organisations, not just via my bank, using my credit / debit card, or other billing mechanism; and / or	4	<b>RECRUIT AS HIGH USER</b>
	I have used BPay/PayPal or Paymate to pay for goods either on the internet or on my mobile number; and/or	5	
	I have used the web browser in my mobile phone to pay for goods and services via credit/ debit card or EFTPOS and/ or	6	
	I have used my mobile to access information or entertainment services including, for example, ringtones, wallpapers, games, music, horoscopes, news subscription services via SMS, competitions, voting lines for TV shows or information services such as traffic reports. The items can be requested and delivered via SMS/MMS and a premium charge is added to my phone bill. Users can also request the items using the Internet and payment occurs via SMS (NB These are called mobile premium services)	7	
	I have used my mobile phone to purchase goods and services with the costs being charged to my phone bill or phone credit; and/ or	8	
	I regularly purchase goods and services through my mobile phone with the charge being directly linked to my credit/ debit card or other account established for this purpose	9	

6. Record Gender:

Male	1	<b>AIM FOR APPROXIMATELY 50:50 IN EACH MIXED GROUP</b>
Female	2	

7. What is (or was) your occupation? (Record job and SES)

White collar	1	<b>Higher SES</b>
Upper white collar	2	
Blue collar	3	<b>Lower SES</b>
Unemployed	4	

**SEE QUOTAS**

8. What was your highest level of education you attained?

Primary school	1	<b>AIM FOR A MIX</b>
Secondary school	2	
Tertiary education (i.e. university degree)	3	
Post graduate qualification	4	

9. We need to ensure we include a representative sample of the population in our study. How would you describe your family's ethnic background? **READ LIST AND CODE ANY THAT APPLY**

Aboriginal or Torres Striates Islander	1
African	2
Asian	3

Australian	4
Eastern European	5
Latin American	6
Middle Eastern	7
North American	8
Northern European	9
Southern European	10
Other (please specify)	11

**SEE QUOTAS**

10. Do you ever speak a language other than English at home?

Yes	1
No	2

**SEE QUOTAS**

11. We also need to ensure we include a representative sample of the population, with regard to disabilities. Do any of the following apply to you?

You have sight problems not fully corrected by glasses or contact lenses	1	<b>SEE QUOTAS</b>
You have a mobility related disability e.g. arthritis, walking with a stick	2	<b>SEE QUOTAS</b>
You have hearing problems	3	<b>THANK &amp; CLOSE</b>
You have speech problems	4	<b>THANK &amp; CLOSE</b>
You have difficulty learning or understanding things (e.g. learning disability)	5	<b>THANK &amp; CLOSE</b>
You have another type of disability – please specify	6	<b>CHECK WITH GfK BLUE MOON</b>

**QUOTAS**

For each standard group 8 respondents should be recruited to achieve 6-8 respondents and each group will last up to 1 ¾ hours.

For each mini group 6 respondents should be recruited to achieve 4-6 respondents and each mini group will last up to 1 ¾ hours.

Each telephone depth will last between 45 minutes and an hour.

Exclude:

- those who work in the usual industries as well as government departments
- anyone who has taken part in a group discussion in the last 6 months
- those under 14 yrs and 66+ years
- those not using any kind of electronic payment methods

**Within each group:**

Ensure approximately 50:50 men and women in each mixed group.

See sample table for which ages fit into which lifestages.

With regard to disabilities, aim for 2 in total (0-1 per group) with some disability within the pre-family and family (older and young groups). Aim for 2 in total (1 per group) with a disability across the older family/empty nesters groups.

Ensure a representative mix of ethnic backgrounds and those who speak a language other than English at home for the area that each group is being conducted in

**Across all groups:**

**QUOTAS FOR USAGE LEVELS OF ELECTRONIC PAYMENT SYSTEMS (Q5)**

If only answered statements 1 and 2 then recruit as a low user.

If answered any of statements 3- 8 then recruit as a high user.

Ensure we have a mix in each groups of the different ways people are using electronic payment methods as defined in the statements.

Please note statements 7-9 all indicate usage at the extreme end of the continuum where people have engaged with mobile payment services. 2 respondents in the high usage standard size groups for those Young/Older Family and older family/empty nester groups must have used mobile premium services i.e. answered statement 7 with regard to usage

**QUOTAS FOR PARENTS AND AGES OF CHILDREN**

With regard to lifestages 'young family' respondents are defined as a parent with at least one child of primary school age or younger.

'Older family' is defined as a parent with at least one child of secondary school age. Aim for a mix of ages of children within each group.

Empty nesters are those having no children living at home under the age of 18.

Groups 9, & 11 should have 5 respondents who have at least one child aged 15-17 years. Other respondents should have children outside this age range.

Groups 10 & 13 should have 4 respondents who have at least one child aged 15-17 years. Other respondents should have children outside this age range or have no children living at home at all.

Please ask respondents to complete homework.

# Appendix B

## DISCUSSION GUIDE

### 1 Introduction (5 minutes)

Introduction of research topic and aims

Researcher to explain anonymity, recording etc

Respondents to introduce self:

name

family set up – children/siblings and ages

occupation/school year

interests

### 2 Review of homework task and establishment of current payment methods for different transaction types (10 minutes)

Moderator to list on board and group transaction payment types.

What types of transactions did you make over those two days?

How did you pay for these transactions?

Did any issues arise? Were there any circumstances where the transaction was found to be frustrating?

### 3 Attitudes to current electronic payment methods (10 minutes)

What different electronic payment methods are you using?

Which are you using most often? Infrequently?

Moderator to list the perceived advantages and disadvantages of each payment option? (Leave mobile payment services to last if raised)

What are the essential elements that each of these payment option must have if you are to use them?

What is it about each of these payment methods that makes you want to use them? i.e. you know that they will work? Compare and contrast between the different options.

What makes you wary about using electronic payment systems? (Probe: unknown brand merchant, bad reputation, past experience, uncertainty, concerns for security, fear of fraud/ fear of extortionate fees etc)

What stops you from trying other methods of electronic payment systems? (Probe with: lack of understanding of system, lack of access, awareness; bad reputation).

### 4 Ideal type of payment methods (10 mins)

Revisit the homework, and ask them about the Blue Sky ideal methods of payment for everyday transactions they came up with.

Why these? Advantages? Disadvantages?

How did you hear about these methods?

Are there any further thoughts of the design / features on any of these? (as a group)

### 5 Awareness of mobile payment methods (10 minutes)

If mobile payment methods (i.e. premium SMS based transactional payments, direct mobile billing, mobile Internet payments, contactless Near Field Communication or person to person transactions e.g. Obopay) have not been raised previously, ask:

Are you aware of the possibility of using their mobile to pay for different products and services?

What is your immediate reaction to this as a possibility?

Does anyone currently use their mobile or an app on their phone to pay for anything? (Note if anyone identifies use of mobile premium services within this).

*[Moderator to note for their information: mobile premium services are those services where the cost of sending/ receiving an SMS or MMS to or from a service is charged at a premium rate – in Australia these services are to/from nos starting with 191, 193, 194, 195, 196 197, 199.]*

If so, how does it work?

How do you know this information? Have you used any useful sources of information?

What influenced your decision to use that mobile payment service? Did you have any issues at first? How did you overcome these?

If no-one is using any mobile services, how do people think these payment methods may work?

For those non-users, what factors have influenced your decision not to use mobile payment services?

Level of interest (at this stage?) Why/ why not?

## **6 Reactions to different mobile payment services explained via scenarios (40 minutes)**

Explain that we are going to look at a range of scenarios that use different types of mobile payment mechanisms, for different products. These are designed to provide a real world example of the way such an offer might work.

Moderator to introduce scenarios one at a time (rotated order), holding them up on boards and asks respondents to rate each scenario on the self complete on a scale of 1-10 in terms of how interested they would be in using this type of mobile payment, where 1 is not at all interested and 10 is extremely interested?

### **Hand out self-complete.**

Immediate reaction to the mobile payment system being used?

Perceived benefits of the system being used?

In which other situations or types of transactions do you imagine you might use this payment method for (remind the scenario is just an example)? Why would this system work for those types of transactions?

Would they use it for small item payments (e.g. public transport) or larger payments?

What concerns do you have? (Probe: security, excessive fees; knowledge of how to use it; unknown brand; trust, confidence)?

Are there any other barriers besides areas of concern? (additional fees (eg small transaction fee), interoperability issues, take up by vendors; awareness of offering, difficulties understanding the system; inertia to adopting new technologies)

Is there anything you don't understand about the way the payment system works?

What would you need to know get you thinking about using this system?

What features would a service need to have to be considered? (Probe: security function; protection of personal data; trusted brands)

**Having seen all the scenarios ask the following questions:**

Which are their highest rated payment service?

What would encourage you to try a new service?

As a parent, which, if any would you allow your children to use?

**7 Current usage and perceptions of mobile premium services (10 minutes)**

If not raised already, highlight how mobile premium services are just one type of mobile payment method in Australia.

What mobile premium services are you aware of?

(Moderator to create a list of the services people associate with mobile premium services).

Which of these services have you ever used? As a one off or as a continuous service?

Get those that have used the services to explain how mobile premium services work if it has not already been discussed

What encourages you to use these services?

How do you find out about these services?

Are there any barriers to using any of these services?

Do you have any concerns about using any of these services? Which ones?

**For teenagers:**

How do you find out about these services?

For users, do friends/family know you are using these services? If no, why not?

Do you think there are enough safety measures in place for teenagers using these services?

**For parents only:**

As parents are there any specific concerns regarding teenagers using premium mobile services?

Are their children using these services?

Should there be any extra safeguards in place for teenagers using mobile premium services? E.g. ensuring they have the bill payer's permission?

What do you think should be done to safeguard against these concerns?

How could/ should the transaction of those under 18 be authorised?

As parents what do you think about teenagers' use of the other mobile payment options we looked at in the scenarios? (i.e. direct mobile billing, NFC contactless method; person to person transactions using mobile/RFID technology)

Could there be any better safeguards in place?

**Regulation needs in regards to mobile payment services(10 minutes)**

Should there be safeguards / regulations in place for the types of mobile payment services we have discussed? Why are they necessary? For which particular services?

As parents, do they expect there to be specific safeguards/regulations in place for children using mobile payment services? (e.g. authorisation of transactions from parents; greater education)

Who should implement those safeguards?

What are the arguments for not having regulations? (e.g. stifling of technology)

**Thanks and close**

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