

## **Pervasive or invasive – managing the customer on the move**

**How mobile e-business will influence future approaches to  
customer relationship management**

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**Key Topics**

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- ***Explores the unique challenges and issues associated with managing customers on the move***
- ***Outlines key developments and trends in mobile e-business and their implications for your customer relationships***
- ***Discusses the impact of privacy and security concerns on a company's mobile e-business strategy***
- ***Draws on real-world case studies and some of the latest research on mobile e-business***
- ***Advocates Customer Relationship Marketing (CRM) techniques and strategies that specifically address customer expectations and requirements in mobile e-business***

**Executive summary**

If we are to believe all the marketing hype, our habits as consumers are about to be transformed by a new generation of mobile technologies that will enable us to connect with a whole range of services, anytime and anywhere.

New Wireless Application Protocol (WAP) phones and other portable wireless devices, when combined with technology advances that support always-on Internet access, are on the brink of becoming altogether more powerful pieces of equipment – both for the user and the marketer.

As well as phones, there is a new generation of Personal Digital Assistants (PDAs), vehicle telematics and even intelligent chips in standard domestic appliances like washing machines and fridges. These pervasive technologies are poised to influence our purchasing decisions by offering far more convenience and better service automatically.

Or will they? Quite how these technology breakthroughs will measure up has yet to be seen. But one certainty is that, as with most new technologies, they will only take-off if and when a critical mass of consumers decide that they really like and want the services that can be facilitated by them.

Despite the uncertainty about how mobile business will evolve, it is a new chapter in e-business development that clearly warrants serious attention from any company with an eye to future success. What sensible business would deliberately ignore tools that could ultimately enable it to offer greater choice, flexibility, accessibility and round-the-clock convenience to ‘woo’ busy and discerning consumers?

Yet companies should not be tempted to launch headlong into new mobile e-business developments without first addressing some serious questions. Consumer concerns about privacy and potential invasiveness should not be underestimated because they could well stop mobile business in its tracks if not properly addressed from the outset.

Basic disciplines such as understanding your customer set and their attitude to and use of mobile technologies is critical. For used inappropriately, there's always the risk that mobile e-business might even jeopardise the thing that companies most want to nurture and protect – the customer relationship.

A sensible approach is to focus on 'permission marketing' – where the consumer sets the rules by which their personal information can be used for marketing purposes. Otherwise companies will run the risk of alienating or irritating potential clients with unwelcome marketing. They may even be breaking the law as regards Data Protection because matters pertaining to use of customer data for mobile-related campaigns are far from clear.

Another ongoing debate concerns the nature of customer relationships conducted via mobile e-business channels. Should companies really be aiming to use mobile e-business to build deeper, stronger, more enduring customer relationships and loyalty? Or are these technologies more suited for superficial, one-off contacts – for instance, location-based services where a customer is sent a special offer because they happen to be in the vicinity of a particular store?

There are broader technology issues to consider as well, relating to the sheer volume of customer data that mobile e-business will generate, plus the need for robust business intelligence solutions to make sense of all of this information and truly leverage its full value.

Clearly, the jury is still out. But few companies can afford the luxury of simply standing by to see how things pan out. By confronting and grappling with the issues that mobile e-business raises and then experimenting with new ideas, there is a very real potential for companies to gain competitive advantages.

**Chapter one – From e-business to mobile e-business**

It's clear that the way in which technologies and services are advancing and from emerging applications, that the mobile telephone and other portable wireless devices are already contributing to a change in thinking about the use of information technology in customer management.

Many companies have made significant headway with e-CRM approaches and tools. Some are already extending the scope of CRM beyond e-business and into mobile e-business territory. The rapidly developing technology of mobile phones – particularly the broadening of the applications supported by them – turns them into wonderful instruments of personal liberation. It also turns them into powerful tools for businesses wanting to catch a consumer's attention.

In fact, mobile e-business is already proving itself as a useful customer relationship tool in industries as diverse as banking and travel. For instance, some online banking customers now opt to have SMS warning messages if their account balance goes below a certain limit. Similarly, some airlines automatically notify valued frequent flyers of any potential flight delays or special offers – all via their mobile phones.

As well as opening up new possibilities to customers for obtaining value, wireless devices enable companies to engage in 'rapid loop closure' – which means instead of waiting for the normal series of interactions required to complete a sale, it can all be done via the mobile instantly, whether or not the customer has access to a PC.

Similarly, vehicle-based telematics can be used to call up emergency breakdown services, while built-in chips in domestic appliances can automatically alert a manufacturer when a part needs replacing – before the customer has been troubled by a broken down washing machine. These are just a few example of how wireless technology can be used by businesses to differentiate their services and gain competitive advantage.

But as market penetration and pervasiveness of wireless-connected mobile devices continues to increase and networks are enhanced for better data transfer capabilities, the complexities and opportunities for businesses in how to apply them are mind boggling.

How will you make money in this new marketplace? What technology and solutions should you invest in? And are your existing CRM strategies and e-business systems adequate enough to support it?

To answer any of these questions requires some insights into the key technology, social and cultural trends, as well as some of the inherent opportunities and risks.

- The rapid rise in household penetration rates for mobile phones makes wireless one of the fastest movers in the history of consumer electronics. (Consumer Electronics Association)
- More than one billion wireless handsets will be sold worldwide by 2004. (IDC)
- 100 million plus handsets will be sold in 2002, up from 55.7 million in 1999. (Cahners In-Stat Group)
- By 2004, 17 per cent of the world's population will be mobile phone subscribers – 70 per cent in industrialised nations
- Buying and selling over the wireless Web will reach \$45 billion over the next five years – 15 per cent of the total projected e-commerce pie. (Merrill Lynch)
- The annual value of goods and services sold over mobile networks could reach \$13 billion by 2003. (Analysys)
- The mobile data market is expected to grow from \$8 billion this year to more than \$25 billion in 2005. (Salomon Smith Barney).

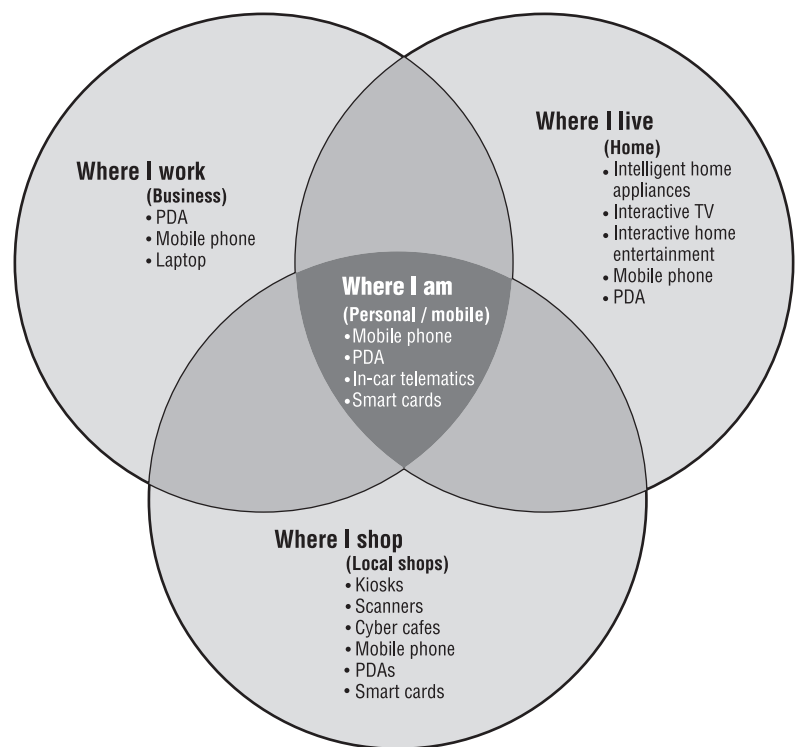
#### **Technology trends**

Mobile phones and other wireless devices have the power and potential to revolutionise thinking on customer management mainly because they facilitate a move away from static e-business computing models to one where convenient access to information and processes – anytime, anywhere – becomes possible.

For businesses this opens new ways to reach and interact with customers. But like any other new technology it also introduces new risks of investing much and gaining little.

It's still early days for this technology and its capabilities are yet to be put to the ultimate test. The ability to surf the Internet as we would from a desktop machine is still some way off. But the race is on. Things are moving quickly and mobile e-business players who can understand the technology advances propelling transformation, who are prepared to experiment with them and try out ideas, could well emerge as the leaders in this space.

**We can be connected practically wherever we are**





*Short Messaging Service (SMS)*

A quick and economical way of communicating using a mobile phone or PDA is via SMS, which requires only the most basic handset not even a WAP phone. A lot of new handsets are now offering T9 technology or 'predictive texting', meaning that the mobile will guess the word you are writing. Many companies are already using SMS technology, to send regular updates direct to customer phones.

In fact, the growth of text messaging – particularly among the younger generation is dramatic. There were an estimated 500 million text messages in October 2000 compared to just 14 million in June 1999.

*WAP Phones/PDAs*

WAP is the open industry standard for mobile Internet access. In essence, it is a condensed version of the Internet, offering similar information in a far less detailed format. So WAP phones can permit voice and text messaging, plus Internet access. PDAs – once dismissed by some as glorified personal organisers – have also evolved into devices that can be used for Internet access too.

Other associated developments – always-on Internet access and mobile-based applications – turn the mobile phone and other wireless devices into powerful instruments for both the user and the marketer. WAP lifts the restrictions so customers are free to access a service wherever and whenever they want.

By 2001, Webified wireless phones will surpass connected PCs. (IDC).

By 2004, 70 per cent of cellular phones will have Internet capability. (Gartner).

#### *Telematics*

Telematics have been hailed as the next major wave in vehicle-related technology, enabling both one-way and two-way communication technologies between the car and its environment. Once an automobile is 'wired' to transmit and receive information, the potential to piggyback on those signals with other products and services explodes.

The emergence of telematics for the vehicle has the potential to capitalise on consumer interests in using and expanding the functionality of e-mail, instant information and much more. A pool of technology-savvy consumers, already comfortable using such products and services in other areas of their lives is a key driver for telematics. Another driver is the fact that so many of us spend an increasing proportion of our time in our vehicles. Telematics have the potential to relieve some of the problems associated with the traffic nightmares of commuting.

Telematics already allows car drivers and their passengers to access local traffic or navigation information and find dining or shopping locations. It will ultimately enable on-board Internet use, as well as allow a local dealer to perform a real-time system diagnostic or operating system upgrade on the vehicle; all while you are driving to work.

The list of solutions that could fall under the term telematics is quite large and could include everything from automatic annual vehicle registration or driver's license renewal, to vehicle-theft tracking to automatic traffic control. Perhaps even vehicle-use verification, which could allow insurance, leasing or rental companies to offer discounts to good drivers based on actual usage, instead of the current method of risk-inference derived from driver demographics.

Estimates for the size of the global automotive telematics market range into the tens of billions of dollars by 2010.

Two to three years from now, vehicle location technology could be as big a factor in people's lives as mobile phones and the Internet are today.

A key unresolved issue, however, is whether the driver will be unduly distracted from his or her primary mission – driving – while answering e-mails, finding a restaurant for lunch or cruising the Internet. Research has already revealed some linkage between mobile phone use and auto accident rates – and providers are focusing on vital but problematic technologies such as voice recognition and heads-up displays to attempt to solve the problem.

*i-mode*

In Japan, NTT DoCoMo has launched a mobile information service through which subscribers can access the Internet and receive online services using a WAP phone. Dubbed i-mode this service allows subscribers to receive digital data as well as make regular voice calls.

Besides regular mobile phone functions, the i-mode service includes e-mail, Web access and the ability to receive special content provided by partner companies. E-mail messages can be sent and received from regular Internet e-mail accounts and from other mobile phone-based e-mail users, but the messages are limited to 250 Japanese characters. The key advantage offered by this service is the adoption of the packet transmission system (9,600bps), with the customer being charged only for the data actually sent or received. For example, an e-mail message containing about 15 Japanese characters would cost only ¥1.

Further, Web sites around the world can be accessed with the i-mode service simply by typing in the site's Uniform Resource Locator (URL). Although most graphics and pictures cannot be seen, the receipt of World-Wide-Web (WWW) text through this tiny mobile phone without the hassle of setting up and configuring a computer should prove convenient. Also with packet transmission, the customer will not be charged while reading the Web page text; once the information has been downloaded, reading the data on-screen is free.

NTT DoCoMo is putting special emphasis on the content services available. As of January 22, 67 corporations had announced plans to participate in this service as information providers. Several banks will allow customers to check their balances and two securities firms are participating in the stock information service. Partner airlines and travel agencies will provide flight information and online reservations, and FM radio stations will offer program and music information.

Other information providers will offer daily updates of news and weather – and customers can get access to restaurant guides, train timetables and NTT's Town Pages (Yellow Pages). Other companies plan to provide fortune-telling and online games. Subscribers can also register for a message service, providing periodic reports on the latest news and stocks. All these services can be accessed simply by pressing the little 'i' button on the i-mode phone.

### *J2ME*

Java<sup>™</sup> 2 Platform, Micro Edition (J2ME Platform) is a set of Java development tools that specifically addresses the vast consumer space, covering the range of extremely tiny commodities such as smart cards or pagers all the way up to the set-top box, an appliance almost as powerful as a computer. Like the other editions, the J2ME platform maintains the qualities that Java technology has become famous for: built-in consistency across products in terms of running anywhere, anytime, over any device; portability of the code; leveraging of the same Java programming language; safe network delivery. Applications written with J2ME technology are upwardly scalable to work with the J2SE and J2EE platforms .

With the delivery of the J2ME platform, companies have access to a complete, end-to-end solution for creating state-of-the-art networked products and applications for mobile e-business. J2ME technology enables device manufacturers, service providers and content creators to gain a competitive advantage and capitalise on new revenue streams by rapidly and cost-effectively developing and deploying compelling new applications and services to their customers worldwide.

#### *Bluetooth*

Bluetooth is a technology specification for short-range (up to ten metres) wireless connection using low-cost transceiver chips to be embedded in mobile PCs, smart phones and other portable devices. It provides three voice and data channels via a one-to-one connection with built-in encryption and verification.

Bluetooth offers an economical method for seamlessly integrating arbitrary devices with the phone – for instance, location-based devices in the home, the shopping mall or on an aeroplane. Bluetooth will deliver a connection with a growing variety of access points, including the Internet via mobile devices.

#### *Wireless wallets*

Ericsson is currently piloting a wireless wallet, which will be on the market by 2002 – capable of connecting to smart cards in the wallet and make secure transactions online and offline. Bluetooth technology will eventually allow cards to transmit and receive data via a mobile phone.

#### *Smart cards*

Today smart cards enable far more than cashless payment. They can function as an identity card, check us into hotels and be used as a room key.

#### *Location-sensing*

Location sensing equipment is capable of providing information about a mobile phone user's physical location or the location of a particular vehicle, providing the ability to deliver location-based services.

### *3G*

Third Generation (3G) is the next generation of wireless technology. Multimedia 3G networks transmit wireless data up to two megabits per second, making the integration of voice, data and video possible. The fundamental benefit of 3G is speed – the ability to transmit and receive digital data at rates more than 35 times faster than today's fastest dial-up personal computer modems and more than 200 times the speed of most current hand-held wireless data devices.

According to research company Phillips Group-Infotech, 3G products are projected to grow from a virtually non-existent market to a \$63 billion annual market in five years. However, there are still major technical, commercial and regulatory hurdles to overcome before true 3G phones become a reality.

### *Always-on technology*

Technologies such as General Packet Radio Service (GPRS) permit faster Internet access and continuous connectivity. These so-called 2.5 Generation (2.5G) networks offer always-on connectivity. This means that wireless devices are connected to networks even when unattended.

### **Social and cultural trends**

Gender and generation will play a significant role when it comes to acceptance and usage of new mobile technology services, as well as willingness to pay for them.

SMS messaging, for example, is a feature that's predominantly favoured by young people – the 'thumb-skills' generation. The remarkable power of the text message in youth culture was illustrated last summer in Ibiza, where daily bulletins alerted clubbers to the whereabouts of the next rave. Young people are also more accustomed to paying for desired services – pay per view television, for example, or personalisation features for their mobile phone handsets.

On the downside, Consumer Electronics Association (CEA) Market Research focussing on telematics revealed that consumers in the 55 and over age bracket might not be so easily won over by new technology – a reality-check for sales expectations which underlines the notion that not all products and services are destined for universal penetration.

Accessibility and social inclusion is another factor. In fact, more than any other technology the mobile phone is relatively inexpensive and therefore widely accessible, so mobile e-business could become virtually ubiquitous in the developed world. A large chunk of recent mobile phone purchasers fall in the 18-34 age range, lower income bracket and represent a relatively diverse ethnic mix, according to a recent market research carried out by the CEA.

In some countries, 'pay as you talk' schemes offer zero rental cost, with low phone purchase price – opening up a market of less affluent pensioners, housewives and children. Leveraging this, a scheme in Japan offers people free calls if they agree to listen to a 30-second advertisement.



As well as age and gender, nationality may hold some sway. Some countries have been slower to adopt mobile technologies, for instance the US. Nor does the UK look good, with countries such as Italy, Finland and France proving far more innovative for mobile-based applications.

What this suggests is that the winners with mobile e-business will be those that understand demographics, regional and national differences and young adult psychology.

#### **Opportunities and risks**

It's the convenience of mobile business that is arguably its greatest benefit. Being able to supply information to a customer via their personal wireless device liberates individuals and gives companies a way to offer them more choice and better service.

For the marketer, wireless technology allows the real possibility of managing relationships with customers anywhere and anytime. It's the ultimate tool for quick and efficient notification, problem avoidance and complaint resolution.

But as well as enormous potential to be tapped, there is the possibility of unleashing chaos.

*Pervasive or invasive?*

Concerns have been voiced over the loss of privacy with e-business but in mobile this will explode. Already there are location-based services that can help you out in many ways once your location has been tagged. There are also systems that could locate your friends in an area and advertising systems that can automatically tell you about offers on items, which have interested you in the past as you pass a particular shop.

All in all a fantastic facility but the privacy question centres on who needs to know where you are and what you are doing and why should anyone have information about your typical movements? The information is commercially valuable but do individuals want to provide it?

It may be very interesting for me to know that there is a fellow Liverpool fan just a block away when I am in the South of France. But if I am the other person whose information is being passed on to somebody else, I would probably like to be informed before hand and to stay in control. Employers, friends and also enemies may have an interest in accessing information concerning my location. But letting anybody have access to it could make me feel vulnerable and less inclined to subscribe to location-based services.

This threat – perceived or real – could seriously hold back mobile e-business developments.

The facile solution is to turn the device off, but what if you need to have it on for other reasons? Instead companies need to establish a mobile e-business strategy that enables them to deliver value to the customer not irritation or worse – and to use customer data without abusing trust.

#### *Security*

Security is another major concern. Always-on technology increases the window of opportunity for intruders to gain access to mobile devices remotely and is less likely to be detected by the mobile owner – particularly when the device is not being actively used. Since mobile devices generally have limited security features built-in sensitive corporate or personal data may be disclosed. End to end security can best be implemented using a combination of infrastructure, processes and organisation.

#### *Back-end systems*

Many companies are already unable to cope with the sheer volume of unstructured enquiries and complaints stimulated by the Web. Some have even resorted to closing down their e-mail access because of this.

So what happens when customers are wandering around our stores and decide to give us some feedback or make a sales enquiry? What use is a response if it comes long after they have left? Failure to structure inbound communication and build some processes to handle it rapidly will simply exacerbate problems when catering for mobile customers too.

Companies need to consider how they intend to manage and leverage large quantities of customer information in real time. Are your back-end systems up to the challenge?

*Consumer acceptance*

For a mobile phone to enhance customer management, it has to be a smart wireless device that will allow customers to check e-mail, feed in data remotely, use the Internet, locate nearest points of service, express preferences to suppliers, provide electronic purse facilities especially for micro-payments, ticketing, receive customised sales and service information, control any household automation, call for help such as breakdown services, download music or games and so on – in other words, a pervasive mixture of electronic organiser, a personal computer, alarm, remote control and a mobile telephone to boot.

The real danger is that the above is merely a wish list describing things that can be done. It's very supplier oriented. More pertinent is whether customers will want these functions and how companies will use them to improve customer management.

Taking into account all of these opportunities and concerns it is evident that mobile e-business winners will share certain attributes relating to privacy and security, service content, price of service and reliability.

But is the technology ready to deliver this? Will WAP phones take off? How are companies going to charge for the new services? What is the value proposition for the customers? Because one thing is clear – they won't embrace the new service unless there's something in it for them.

A lot of soul-searching, debate and experimentation are required. Certainly technology per se will not deliver all the answers. Ultimately the customer will decide and consumer acceptance will depend not just on the technology but also on the ability of companies to manage mobile e-business customer relationships in a profitable and effective way.

### **Chapter 2 – mobile e-business has its own rules for CRM**

Given all of these factors and possibilities, mobile e-business could well turn conventional thinking about customer management on its head - requiring companies to rethink and adapt their CRM strategies to ensure interactions with customers via mobile technologies are mutually valuable and viable.

One of the central ideas of CRM is giving better service to higher value customers. This idea is premised on the notion that it costs more to provide better service and therefore this better service should be reserved only for higher value customers.

But can mobile e-business really provide a new channel for nurturing on-going, long-term, expensive to maintain customer relationships – as per business-to-business (B2B) customer management? Is customer retention and loyalty really the issue? Or do the technologies lend themselves to more spontaneous and ephemeral customer interactions.

The penetration, ubiquity and immediacy of the mobile telephone means that certain buying habits will become highly time and location dependent. This will to a certain extent act against longer-term relationship management. It will be very easy for customers to be fundamentally promiscuous, buying for the best value now and here rather than from a trusted brand. So what mobile consumers may really want are more superficial contacts to satisfy immediate needs.

*‘Top Vanilla’ customer management*

In the ‘Top Vanilla’ approach to managing customers a best of breed offer is made to all customers. The ‘flavour’ is designed to appeal to as much of the target audience as possible. Needless to say, this could be highly effective in the context of mobile e-business. Also it could still be combined with more specialist CRM approaches to address more highly valued customers – as per the SMS flight information services offered exclusively to frequent flyers by airline companies. Offers via the mobile phone can be made to all customers with a very low communication cost. However, best offers can be reserved for those considered to be the best customers.

*Addressing the questions of privacy and security*

As mobile does become more pervasive and we are able to do more with it, we must be aware of the backlash from users if they feel that too much information about them is being passed around. Responsible access to information must be respected.

Judging by the way many companies handle customer privacy at present, though, this could be one area where mobile e-business falters. Throughout Europe, a high percentage of companies are not even compliant with the Data Protection Law and often only through audit discover the full extent of the customer data they hold. In addition, companies regularly fail to record the declarations made to customers when they submit personal data.

Such practices are risky in the context of mobile e-business. Even if the laws relating to privacy and trust for mobile e-business are fuzzy, your business practices should not be. By far the easiest way to deal with complex issues like privacy and security is to consider them as an intrinsic part of any mobile service or implementation right from the outset.

Permission marketing and context-defined marketing provide an answer by putting the consumer in control. Any new services should be designed in a way that allows the customer to decide exactly how their personal data can be used, what they want to receive and when, via their mobile phone. Mobile phone customers are likely to expect a configuration choice that allows turning off completely all location information to certain applications and a granular choice of granting location information to certain applications. The complete suppression of location information should be easy and user friendly to change.

Security issues at stake for businesses and individuals are no less important given that many existing mobile devices have very little native security and are constrained in terms of memory, processor speed and storage capacity. The challenge to be addressed is in developing robust security technologies that protect the confidentiality of information required by your business and your customers.

Get this right and you will generate more sales and please your customers. Get it slightly wrong and the mobile e-business model will fail, you'll risk aggravating customers and your investment will be in vain.

*Managing and leveraging customer data*

The ability to gather, collate, store, analyse, clean and make accessible large amounts of customer data for a variety of purposes is essential if companies are to 'know' their customers better and deliver winning mobile e-business services to them.

Poor database management and insufficiencies in back end infrastructures could prove to a major area of exposure when attempting to get customer relationship management right in the context of mobile e-business.

*Understanding the costs*

As well as providing convenience and ease of use, mobile e-business services need to be efficient and cost-effective. Managing the price of services downwards will be tricky because everyone wants a slice of the action – the Telco, gateway, content supplier, credit card company, retailers and so on.

Also some of the traditional financial appraisal models, such as payback over long periods and net present value were designed for a time of greater stability, where cost-benefit analysis could be predicted with greater ease. As one chairman put it: "What's my return on e-commerce? Are you crazy? This is Columbus in the New World. What was his Return On Investment (ROI)?"

Enterprises will need to act with stealth in abandoning unsuccessful projects, while being dynamically capable of scaling up solutions and services that prove to be successful.



*Delivering excellent content and reliable services*

While service content is critical to encourage consumers to embrace mobile e-business services, the ace won't lie here because like all commodities – and particularly those subject to the whims of the young – popularity can be short-lived and fashions come and go.

Reliability will be more pertinent because the convenience of mobile e-business depends on around the clock access. Once familiar with instant access the mobile user becomes an intolerant creature. Consumers will simply change their loyalties at the drop of a hat if a service isn't functioning.

**Chapter 3 - Developing a customer strategy for mobile e-business**

How companies adapt their current CRM vision or develop new customer management strategies to leverage the possibilities of mobile business is critical. In developing a strategy for managing customers on the move, businesses need to cover the following areas:

**Know your customer**

Use of mobile business gives companies opportunities to get to know their customers even better and keep renewing their knowledge about them. It also enables companies to stay in touch with customers, with timely relevant communications, ranging from promotions to useful information. It can be used to identify quickly when customers are not being served well and react, as well as to identify their needs – often before the customer realises them – and fulfil them quickly.

In order to prioritise areas where mobile customer management might be used, it may be useful to consider how customer needs are evolving as per the following checklist:

- What are your customers doing at any stage of the sales or service cycle that might benefit from instant or messaged contact – away from the computer?
- How do customer needs vary according to different types of customer? For example, what are the needs of different family members – parents, teenagers and young children?
- How do customer needs vary according to your existing relationship with them? Are they a new customer, an existing customer, a high value customer or even a dissatisfied customer?
- What are the different scenarios of the value of information to customers – nice to know, immediate value, catastrophe avoidance, reinforcing contact?
- How does the existence and continued progress of wireless technologies combine with the availability of data models, databases and rapid e-business development tools to facilitate the fast deployment of new applications that bring customer value?
- On what basis should a company choose which application to develop and why will it be valuable to customers?

**Make privacy and security a priority**

It's both a social issue and a challenge to define the rules about who has the right to access whose position information and for what purpose. The complexity of the issue is increased by the fact that with mobile commerce we travel across borders. Without going into the details of Article four of the EU Data Protection Directive, it seems inevitable that questions will arise as to which countries laws should be applicable.

Data protection and permission marketing need to be revisited in the context of mobile e-business, not conveniently overlooked or regarded as something that's already been dealt with in other customer management contexts. Ultimately, customers should be given the power to define the parameters.

**Tackle the infrastructure issues**

Any customer management strategy for mobile e-business needs to focus on business intelligence. To handle increased volumes of customer data, companies need to assess if their back-end systems and databases are up to the challenge.

Similarly, they need to ensure they have the skills and tools to develop and deploy new services fast. If these are not available in-house, partnerships with responsive and skilled technology suppliers will be essential.

**Experiment with proof of concept projects**

To capture the high-ground with mobile e-business companies will need to experiment and not be afraid to scale up or down depending on the results and to forge partnerships with suppliers who understand the technologies and can help them define areas of their business and identify consumer services that can be transformed with mobile e-business to deliver real business value.

**Chapter 4 – mobile e-business in action**

**Lakeside shopping centre**

Shopping via the mobile has taken on a new look at the Lakeside Shopping Centre, where 150 retailers have experimented in a project to send text messages to the phones of shoppers who sign up for the service. They receive hourly messages – for instance, a free coffee at Costa Coffee, or ten per cent discount on a purchase over £50 at Dixons. Teenagers are the prime targets as they are time-rich, cash-poor, like using mobiles and keen to try novel ideas. They can also collect ‘ZagPoints’ each time they respond to a message and receive 500 points for signing up. Each point is worth 1p and can be redeemed for pre-paid mobile vouchers. Reebok offered a free pair of £50 trainers to the first 15 customers presenting the relevant ZagMe message in store. Teenagers are also likely to tell others about such a service. The users of the service disclose a few basic demographic details such as age and gender. Time-limited messages score the highest success rates, as they generate a sense of excitement. Free donuts for the next half-hour – who could resist?

**Singapore's smart solution**

In Singapore, Gemplus has provided smart card technology for the world's first commercial launch of a mobile phone e-purse reload service by MobileOne and Network for Electronic Transfers. The CashCard, an electronic purse smart card, is widely used by motorists and other consumers in Singapore to pay for road tolls and other small value purchases. The new service gives users more flexibility and convenience in reloading their CashCards as and when they need to. All they need is a dual slot mobile phone, a smart ATM card and a Personal Identification Number (PIN). In addition to reloading, customers can use the service to check the balance in their cash cards and view a history of previous transactions. Future applications include a service that will enable MobileOne customers to pay their bills using their mobile phones.

**An intelligent approach to laundry**

In a pilot focusing on the virtual control of washing machines in an apartment building, IBM has teamed up with appliance manufacturer Miele to demonstrate an intelligent approach to laundry. Equipped with Internet firewall servers and GSM wireless communications, the machines are linked to the Internet and Miele intranet. Users can reserve washing times in advance via the Internet or a WAP phone. As soon as the washing cycle is finished, the tenant is notified via SMS message. If there is a mechanical or other problem, the building custodian and the Miele call centre are immediately notified by SMS message and the defective machine is deactivated until replacement parts – ordered via the Internet – are received and the machine is repaired.

**Driving mobile e-business forward**

Ford and Qualcomm have jointly launched a new company operating under the name Wingcast. Wingcast will use positioning technology to notify emergency services automatically when a car's airbags deploy.

This is one example of the many different applications that can be deployed using vehicle telematics. In Singapore it is now possible to pay your parking fines at your car, using a WAP phone. In the US, just-in-time insurance is being trialled. Premiums are set dynamically depending on the route you take for a journey and even the amount of traffic on the roads. The US Government is looking at using similar information as a way of managing public safety.

In the Finnish forests, tractors are fitted with wireless sensors that assess the size and density of trees being processed. These sensors then use Global Positioning Satellite (GPS) links to the collection base to automatically define optimal routes and vehicle loads for the trucks coming to collect the chopped wood.

Telematics will soon be standard in all cars opening up possibilities to deliver new and more convenient servicing process for drivers. For instance, their car will be able to automatically transmit data about servicing, initiating quotations from several providers, booking times and collection times. Drivers can then be prompted to book a replacement car and reminded of the service appointment. Finally they can be messaged via their mobile phones once the car is ready for collection.

### **Chapter 5 - An action plan for mobile e-business**

While there is no definitive roadmap for mobile e-business or guarantee of success, companies will have to venture into this new territory if they are to seize the potential benefits it can deliver.

The following checklist covers all the key issues that companies should be addressing to plan a way forward:

- How can mobile e-business be leveraged to improve operational efficiency and effectiveness?
- How can it be used to drive up revenue growth?
- Could the pervasiveness of mobile e-business threaten or further enable an existing business model?
- What white space opportunities exist?
- Are there new ways to leverage existing assets and relationships to create new value for new or existing customers?
- What partnerships need to be formed?
- How will branding and marketing be affected?
- What pervasive solutions and services should be adopted – and when?

### **Conclusion**

Mobile technologies and new mobile business models are evolving almost day by day. It's something we have to learn to live with and leverage, as it's unlikely to go away. Inevitably there will be surprises. Equally new solutions will be emulated by competitors very quickly. Revenues will be hard to predict, implementation costs difficult to quantify. Also there are the uncertainties about consumer acceptance.

That said, customer will have expectations as regards mobile e-business and these must be met, if not exceeded by businesses. While mobile e-business is not the only avenue for customer management in future, it is an important one and will rapidly become part of everyday life and business as usual. So businesses need to start now in developing new strategies for customer management in the mobile e-business world.



**About the author**

Professor Merlin Stone is an Executive Consultant with IBM's Business Innovation Services team, focussing on the Finance Sector. He is also the IBM Professor of Relationship Management at Bristol Business School – one of the leading UK centres for academic research into relationship marketing and e-business. He is a director of QCi Ltd., specialists in customer management consulting and assessment, and suppliers of CMAT – the Customer Management Assessment Tool (software and benchmarks for assessing a company's CRM performance), for which IBM is a leading agent.

His consulting experience covers many sectors, including financing services, utilities, telecommunications, travel and transport, retailing, automotive, energy and IT. His research is published in a series of IBM-sponsored briefings – Close to the Customer, published by Policy Publications.

Merlin is the author of many articles and 18 books on marketing and customer service. The latest are 'Up Close & Personal – CRM @ Work' and 'Customer Relationship Marketing', both sponsored by IBM.

As well as being a founder member of the Institute of Direct Marketing, Merlin is on the editorial advisory boards of leading customer management journals. He also co-ordinates the IBM-sponsored Customer Management Group, a club of large customer database users, services suppliers and academics.



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