



# WHAT IS THE VALUE OF MOBILE PAYMENTS?

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## **Introduction**

Mobile payments keep on generating widespread attention. Research shows that the use of mobile phones for making payments is growing and will continue to grow in the years to come. Many mobile payment trials and deployments, mostly around Near Field Communications technology, are taking place across Europe.

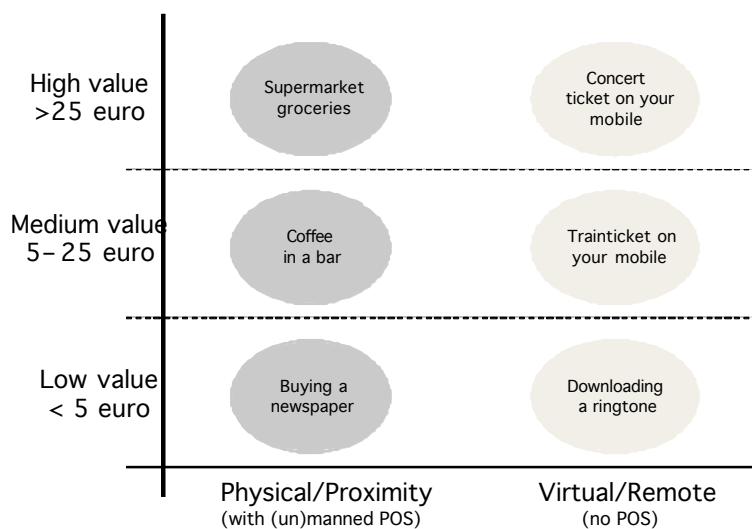
Mobile payment changes the conditions of competition in the payment market, enabling new – non-financial service – entrants to offer payment capability, consequently impacting the traditional market ownership of the banking sector. Also, it creates new business opportunities, primarily in the development of value-added mobile services.

In this article, we aim to bring some clarity to the mobile payments landscape. Where does the value of mobile payment lay for consumers, who benefits from it, and what are the critical success factors for mobile payments to break through? The findings are based on analysis of multiple mobile payments pilots and initiatives around Europe.

## A. The mobile phone: a new actor in the payments play

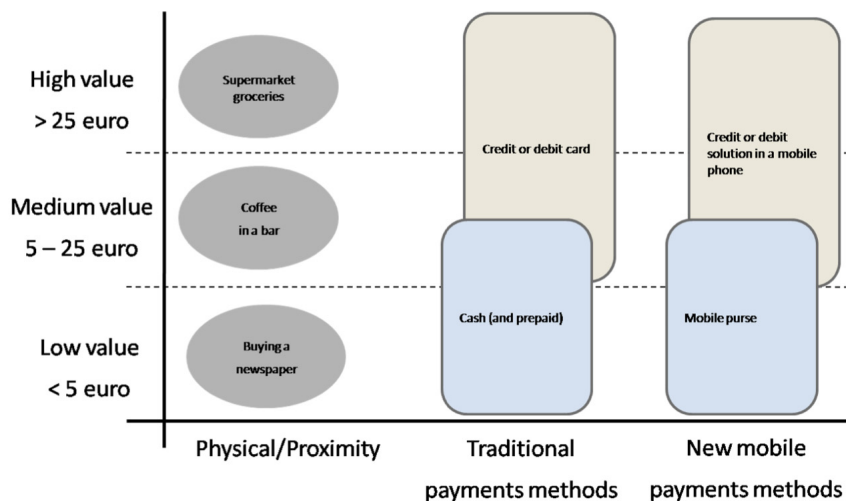
### A.1. The changing payments landscape

Thanks to the rapid advancement of new technologies, the mobile phone – or any similar device that can communicate *Over-The-Air* – has the potential to become a multi-purpose payment tool. The table below provides an overview of the various purchase situations in which the mobile phone could be used as a payment medium, covering the offline (physical) world and the online (virtual) world.



The purchase situations named above present different payment needs and offer specific opportunities for the various players that are active in the mobile payment market. Low value virtual payments (lowest right quadrant) are in most cases facilitated by the telecom provider. The market for higher value virtual transactions (the two higher right quadrants) is still open and offers interesting opportunities for the development of new payment applications and additional services, such as 'virtual' train and concert tickets. Banks as well as telecom providers might find benefit in this market segment.

This article will primarily focus on mobile payments in the Point of Sale context, where the mobile phone is used as a payment initiation tool in the physical world (left side of the table). It is here that the mobile phone faces a more specific challenge, namely that of the existing payment methodologies. The graphic below sets out the payment methods that we currently use in the POS context and shows their alternatives from a mobile perspective:



When used for physical transactions, the mobile phone simply replaces cash or plastic credit/debit cards, while the interbank back office payment infrastructure remains unchanged. Logically, the higher the transaction value of a mobile payment, the more security is required to mitigate the risks.

#### A.2. Mobile payment in POS environments: technologies

The mobile POS payment solutions listed above – mobile wallet, mobile credit and mobile debit solutions – can be implemented through different channels, the most relevant ones being:

- SMS :

This solution is text-based and potentially insecure. Using it in combination with a prepaid mobile wallet is the best way to reduce the risks. The consumer adoption of SMS is high because all phones support the technology and all consumers know how to use it. Because of relatively long transaction times, SMS is most suitable for payments at unmanned POS and in all other situations where there are no queues (for example at small merchants, to pay for supermarket home deliveries, etc.)

- Near Field Communication (NFC):

NFC is the most promising technology and is suited for different purposes. NFC is a very short-range wireless standard that enables a smart mobile device to interact with its surroundings, making a connection between the physical world of the POS and the virtual world of the mobile wallet. The smart radio frequency identification (RFID) chip enables the phone to be used as a mobile wallet, providing a prepaid, debit or credit payment method. It is suitable in almost all POS situations and customers perceive it as being even faster than their traditional payment cards. Consumer

adoption is hard to predict and depends on wide range of conditions, such as the availability of NFC chips for mobile phones.

Other channels such as USSD (unstructured supplementary service data) and WAP (wireless application protocol) will not be considered here.

## B. Mobile payment in POS environments: the business case

What are the benefits of mobile payments for the different mobile payment players? Or: why does it make sense for banks, telecom operators, card issuers and payments service providers to invest in mobile payment initiatives? The table below provides a basic overview:

Banks	Telecom operators	Card issuers	PSP's
<ul style="list-style-type: none"> <li>Reduce costs: cash, credit voucher and card handling are expensive and will decrease if the mobile phone takes over the role of cash.</li> <li>Generate revenues from additional interchange fees (contactless transactions instead of cash)</li> <li>Differentiate from competitors and create a stronger brand experience.</li> </ul>	<ul style="list-style-type: none"> <li>Increase customer retention by offering mobile payment as a value-added service and enhance brand experience.</li> <li>Access new revenue streams through margins on payment transactions.</li> <li>Increase Average Revenue Per User (ARPU) thanks to more data traffic and extra services like Over The Air application</li> </ul>	<ul style="list-style-type: none"> <li>Generate revenues by managing financial flows from mobile payments.</li> <li>Marketing benefits: brand experience, differentiation and customer retention.</li> </ul>	<ul style="list-style-type: none"> <li>New business opportunities in the area of mobile payment and related value-added services.</li> </ul>

<ul style="list-style-type: none"> <li>• Generate revenue from new value-added services.</li> </ul>	<p>management.</p> <ul style="list-style-type: none"> <li>• Generate revenue from new value-added services.</li> </ul>		
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Clearly, what can be an opportunity for one player; can be a threat for the other. New players such as start-up payment service providers see interesting business opportunities and show up in the mobile payment market, menacing the traditional role of the banks within the payment infrastructure, specifically in the consumer market.

For the banks on the other hand, most mobile payment innovations are replacing current payment methods and do not hold the promise of new business. However, they need to invest in mobile payment, in order to address the risk of losing current business and revenues to new competitors. Additionally, banks face the threat of market entrance by non-financials in the payment market. Multi-national or, large national retailers that have financial and mobile products are in an ideal position to benefit from the launch of their own mobile wallet and payments capability. They already have better data on their customer base than that possessed by the financial institutions.

The momentum for mobile payment is there, bringing interesting business opportunities for all market players. Thanks to developments like SEPA/EMV for example, POS terminals might be replaced by innovative technology, including NFC. Also, several ticketing trials in public transport sector across Europe, are an interesting base for mobile payment to grow on.

### **C. Consumer & merchant adoption of mobile payment technology in the POS environment**

In the end, it is the scale of the mobile payment solution and the resulting transaction volumes that will determine if the solution can deliver the expected extra revenue streams. Therefore, adoption by a wide group of consumer is of critical importance. Both research and trials show that consumers consider the mobile phone as a valuable payment and value-added services tool.<sup>1</sup> For example, the majority of consumers that participated in the C1000 trial in The Netherlands clearly were enthusiastic:

- 68% indicated the mobile phone as being their preferred payment method, against 10% for traditional debit cards.
- 51% cited speed and ease of use as the main benefits.
- 94% would recommend NFC services to others.
- 49% would buy a mobile phone with NFC capability if more NFC services would be available, also in other stores.
- 78% indicate that they would not be willing to pay for mobile transactions; 22% would be willing to pay if they could use their mobile phone to pay at different locations.

Of course, the C1000 pilot created a full NFC ecosystem and only involved one merchant. In real life, merchant adoption will have a large impact on the success of mobile payment. Therefore, retailers will need to see the added value of mobile payment in the removal of cash from transactions, delivering benefits to their bottom line, such as a reduction in their business insurance and cash processing costs. Evidently, they will not participate in any service where their costs increase out of proportion to any savings that may be made through implementing a new payment capability.

The consumer, in his turn, is prepared to change his purchase and payments patterns only if he perceives there to be added value from this change, that is: if it makes life easier. This is the main challenge for mobile POS payments to be adopted: they have to prove their added value in comparison to the existing, comfortable, solutions that are already used. In the end, payments will always be seen as a commodity. In this context mobile payment should be considered as an enabling technology, not a value-added service in itself. Mobile payment can only be successful if it is more convenient to use than traditional payment methods. Fast, simple and secure are keywords. But, this is not enough. When conducting pilots and experiments with Mobile Payments the set-up of the eco-system is not often considered part of the trial as this is key to future role-out and all parties business case.

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<sup>1</sup> See for example:  
Gartner, 'Dataquest Insight: Mobile Payment 2006-2011', February 2008,  
[http://www.gartner.com/DisplayDocument?ref=g\\_search&id=608108&subref=simplesearch](http://www.gartner.com/DisplayDocument?ref=g_search&id=608108&subref=simplesearch)  
Juniper Research, 'Mobile Payments: Strategies & Markets, 2007-2011', July 2007,  
<http://www.juniperresearch.com/shop/viewreport.php?id=88>

One way for mobile payment to offer added value is by fully replacing and even surpassing the function of our traditional wallet, making it redundant. Unfortunately, this scenario can only become reality sometime in the more distant future, when the majority of merchants and other points of sale invest in the necessary infrastructure to handle mobile payments and when consumers own the required mobile (NFC) device.

In the meantime, those use cases and situations where NFC services can significantly increase user convenience need to be identified. Examples could be: parking, public transport, self-service scenarios, travel, etc. These types of applications can be a step-up for the introduction of the mobile phone as a multi-purpose payment device. For example, in a first stage a wide range of services can be created in a specific context (e.g. public transport), or in a closed system (e.g. airline business traveler segment), within which mobile payment forms a single component. In a second stage, usage can expand to other markets through customer demand for the convenience that mobile payment delivers.

Payment is only one application of NFC services. Ideally NFC is also used at other steps in the commercial value chain, thus making the whole purchase process faster and more efficient. To take the fast food sector as an example: during last year's Mobile World Congress in Barcelona, Oberthur and Airtag presented their NFC Mobile Kiosk.<sup>2</sup> The principle is simple: the consumer composes his order using an application on his mobile phone, he then holds it against an NFC device in the restaurant, his order is automatically placed and he then pays for it with his mobile phone. An additional advantage: in this case NFC not only is a payment tool, but also becomes an interesting marketing tool!

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<sup>2</sup>Mobile-nfc.com: 'Oberthur et Airtag présentent une solution NFC pour la Distribution, le NFC Mobile Kiosk', 21 February 2008, <http://mobile-nfc.com/distribution/oberthur-et-airtag-presentent-une-solution-nfc-pour-la-distribution-le-nfc-mobile-kiosk/>

## **D. Conclusion**

Many challenges still need to be confronted for mobile POS payments to become a broad success in Europe. However, continuing projects and trials show that there is plenty of potential. By taking a gradual approach, choosing the right focus when introducing a mobile payment solution, paying attention to the eco-system and business models, and combining this with a high dose of creativity to think of value-adding services, the basic conditions for success are fulfilled.

### **Colophon:**

This article is a contribution by Logica

It has been written by Arlette Broex, Management Consultant and Ruth de Vulder, Management Consultant, with the support of Roel Wolfert, Group Director Payments, Gerben Mak, Innovation Director, Michel Bayings, Management Consultant and John Copping, head of mobile banking UK.





