FASTER AND SAFER PAYMENT, BETTER SERVICE, MORE VALUABLE DATA AND MUCH CLOSER CUSTOMER CONTACT:

THE MOBILE PAYMENTS LANDSCAPE AND ITS OPPORTUNITIES
MOBILE PAYMENTS: THE FUTURE OF PAYMENT

The international payment landscape is changing rapidly. Digital transformation is unsettling relationships. The once unassailable banks and credit card companies are now subject to fierce competition from a new generation of digital service providers, whose mobile banking solutions are often much cheaper, more transparent and more customer-oriented than the services your customers are currently still using.

Through integrating mobile payments, retailers put themselves in a position whereby they can utilise the payment data to better help and inform their customers. This effect can further be enhanced by linking relevant services such as loyalty programmes, personalised offers, purchasing and ordering opportunities, product comparisons and more. What’s more, mobile payment is faster and safer than cash or PIN.

Retailers who, despite all this, haven’t yet taken the plunge into utilising the ‘mobile payment button’, are mainly failing to do so due to lack of clarity in their understanding of this dynamic young sector. Additionally, many enterprises are not able to properly assess the technical implications for their own back end. In practice, these businesses are often losing out. By waiting till the new technology has fully crystallised, they particularly miss out on the often-substantial benefits of engaging with early adopters.
This white paper is dedicated to answering a number of key questions about putting these attractive opportunities into action:

1. **WHAT ARE THE MOST IMPORTANT MOBILE PAYMENT TECHNOLOGIES AND WHAT ARE THEIR BENEFITS?**

2. **WHO ARE THE MOST IMPORTANT PROVIDERS OF MOBILE PAYMENT SOLUTIONS?**

3. **IN WHAT WAY ARE COMPANIES ALREADY SUCCESSFULLY USING IT?**

4. **WHICH SOLUTIONS FIT BEST WITH YOUR DIGITAL-MOBILE STRATEGY?**
1. **WHAT ARE THE MOST IMPORTANT MOBILE PAYMENT TECHNOLOGIES AND WHAT ARE THEIR BENEFITS?**

The new generation of mobile payment possibilities is roughly divided into two different groups: remote **payment** and **proximity payment**.

**Remote payments** can be performed independently of the mobile phone’s location. Something that’s often the case for payment of e-commerce or m-commerce purchases. The necessary software resides online or within an app which enables the user to make online purchases. One of the best known providers of this type of payment is PayPal.

Putting this into action requires the user to share their bank or credit card details with PayPal, who stores them in a secured cloud location. Payments are simple to make by entering a personal code into an online environment secured by PayPal. This means no sensitive (credit card) information is exchanged with the seller, thereby significantly increasing the safety of the transaction. After years of successful online application, this solution is now increasingly being used for online payment.
Another popular method of remote payment is pay-by-text. This requires a user to register by making a one-off payment, after which they can simply log in by texting a ‘payment word’ or code to a designated number. The user doesn’t need to have any funds in reserve or pay any extra costs. The transacted amount is automatically withdrawn from their (bank) account.

Proximity payment requires the mobile phone to make contact with a payment terminal (or other hardware) in the immediate vicinity. Near Field Communication (NFC) technology is often used for this. The vast majority of new smartphones are equipped with a NFC chip these days, as are a rapidly increasing number of outlets (to be covered later in this white paper).

To facilitate these payments, the customer’s phone needs to be linked with their credit card or bank account. Apple developed a user-friendly method for this which has been adopted by a great many competitors. The user simply takes a photo of their credit card, which the payment app draws information from. To make a ‘contactless’ payment, the customer only has to swipe their phone or smartwatch over the payment terminal.

Another widely used method for facilitating both proximity and remote payments is the QR code. This graphic code can be displayed on screen via both the payment terminal and the (credit card linked) mobile phone. Each unique code corresponds with a unique payment for a product or service by a unique customer. Placing the code in front of the scanner enables the administration process for the transaction to be completed.
ADVANTAGE: DATA AND PERSONALIZATION

The integration of mobile payment options enables retailers to take control of an important part of the customer experience, and the essential transaction data which comes out of it. Data through which the brand can more closely link the customer’s purchasing behaviour to their loyalty card. With this knowledge, communications with customers via the app can further be personalised, for example with targeted offers for the most relevant products at the right moment. Additionally, research has shown that the ability to pay via the mobile channel strengthens customers’ motivation to use discount coupons, and vice versa. You can find more information on this topic in MOBGEN’s white paper ‘The Retail App: Ultimate Direct Link With The Customer’.

ADVANTAGE: SPEED AND SAFETY

Speed and safety are the main benefits of mobile payment. The latter of these is guaranteed by using so-called ‘tokens’, which are a unique code generated by the phone instead of sending bank or credit card details. This sensitive information is stored in the cloud or in a secure part of the phone. Because a token can only be used for a single transaction, it is of no value to fraudsters who may try to intercept the transmission.
On top of this, an increasing number of telephone manufacturers are introducing forms of biometric security for facilitating payment transactions. Apple, Google and Samsung are all equipping their mobile payment solutions with means such as fingerprint recognition systems. Microsoft’s ‘Windows Hello’ uses the camera to perform face or iris scans. Chip manufacturer Qualcomm is developing a system which uses ultrasound to scan fingerprints and, at the same time, is able to recognise whether blood is actually flowing through the finger. Abuse via a copied fingerprint is thereby impossible.

Another great security benefit of mpayments is the fact that the payments provider now remains in 24/7 contact with its ‘digital payment cards’, whereas previously this contact only happened when the card was used in an ATM or other online payment terminal. This makes it possible for the payment provider to run continual fraud-detection analyses (e.g. payments made abroad when the account holder hasn’t travelled anywhere) and, when necessary, immediately block the account or reopen it in case of an error.

The ability to pay with one tap (‘one touch payment’) considerably quickens the payment process. Analysts expect its implementation for e-commerce and m-commerce purchases will significantly increase conversion rates. Although at the time of writing no large-scale research is yet available to validate this, various users (including AirBnB) are reporting conversion increases of tens of percent thanks to the elimination of complicated payment procedures at the end of placing orders.
2. WHO ARE THE MOST IMPORTANT PROVIDERS OF MOBILE PAYMENT SOLUTIONS?

The global market for mobile payments in 2014 was valued at 329 billion dollars. Researchers expect compound annual growth of over 23 percent over the next five years. This would bring the total market of mobile payments up to 2,849 billion dollars by 2020. It is therefore little surprise that a great many service providers have become involved in this new market. Here follows an overview of the most important players.

Apple Pay was launched in October 2014. While this is not the first mobile payment solution to come on to the market, its introduction by the world’s largest tech company is seen by analysts as a significant turning point. For now, Apple Pay is only available in America and (since July 2015) in the UK. At the time of publication, no clear information was yet available about a further European roll-out. In the meantime, over 1 million American locations currently accept Apple Pay, partly thanks to support from over 2,500 banks and credit card companies including Visa, American Express and Mastercard.

In addition, Apple Pay is also used in a few dozen apps for in-app purchases, as well as by other things such as an increasing amount of Coca Cola vending machines. There is currently a total of over 120 million NFC-ready iPhone 6s in use and, according to analyst estimations, some 4 million Apple Watches. With the ability to pay by watch, they see a great deal of promise when it comes to opportunities for making mobile payment even more user-friendly.
According to payment processor Adyen’s Mobile Payments Index, Apple’s iOS had 65 percent market share in the first quarter of 2015. Which is a decrease of 4.5 percent compared to the previous year. According to Apple themselves, two thirds of all contactless payments made in America via Visa, Mastercard and American Express during the first half of the year were performed with Apple Pay.

Back in 2011 Google launched its Google Wallet, which includes the Google Checkout online payment system. This payment app uses NFC technology. Through linking with its own Gmail email service, users are also able to transfer money via email. In February 2015 Google linked its Wallet with the competitor Softcard from large telecom companies AT&T, T-Mobile and Verizon. This resulted in the May 2015 launch of Android Pay, which is supported by Visa, Mastercard, American Express and Discover.

The new payment solution is built in to the Android operating system, so there is no longer any need to download an app or activate it with a PIN. For the moment, Android Pay can only be used in America, at around 700,000 outlets. Around 40 million American phones work on a version of Android (Androïd KitKat or later) into which the payment solution is integrated. According to market researcher IDC, 78 percent of the total 334 million smartphones distributed in the first quarter of 2015 were equipped with it.

Payment processor Adyen’s Mobile Payments Index indicates that Android had 34.9 percent market share in the first quarter of 2015. This is almost five percent more than in the previous year. At the time of publication, several rumours were circulating about the imminent launch of Android Pay in the UK. No clear information was available at that point about the further roll-out into Europe. Meanwhile the still-current Google Wallet has been transformed into an app for peer-to-peer payments, like the similar Venmo app from PayPal (more on this below).
Online payment service PayPal was taken over 13 years ago by eBay, but became an independent market entity again in July 2015. It now has 162 million active users. In addition to closer cooperation with Amazon and other large e-commerce players, the independent PayPal is fully committed to developing its own mobile payment solution. The digital payment service has made various large acquisitions to bolster this intention.

In 2013 it spent 800 million dollars purchasing Braintree, which looks after online and mobile payments for innovative players such as AirBnB, Über, HotelTonight, Fab.com and others. Braintree itself had previously taken over Venmo, an app primarily used in America which enables millions of friends and (business) associates to make group payments in places such as bars and restaurants. Paydiant, which was taken over in March 2015, develops things such as payment technology for retailer apps.

**MERCHANT CUSTOMER EXCHANGE (MCX)**

MCX produces the CurrentC app, which provides a dedicated payment solution for an alliance of large American retailers including Target and Walmart.

More information about dedicated payment solutions used by retailers and others follows later in this white paper. Although it was not previously of interest to PayPal, in April 2015 the company made it known that they’re also hard at work on a payment solution based on NFC technology.
At the time of publication, Samsung Pay was only available in South Korea. It is, however, expected that this payment app will soon be launched in America, Europe and China.

In addition to Samsung already fitting NFC chips into its phones, at the start of 2015 the South Korean company took over American payment technology developer LoopPay. LoopPay’s Magnetic Strip Technologies (MST) will also enable Samsung Pay to be used via ‘traditional’ payment terminals.

Of the approximately 25 telephone manufacturers who use the Android operating system, Samsung has by far the greatest market share. The entire new Galaxy-6 series is NFC-ready and, thanks to the acquired MST, can also be used at 30 million existing credit and debit card terminals. At the end of July 2015, Samsung announced its embarkation on a new close cooperation with MasterCard which will enable fast launch of its payment solution in Europe.

Most mobile payment solutions work via a link with users’ credit card details. Credit card companies have been working hard over the past few years to make this process as safe as possible. MasterCard developed its MasterCard Digital Enablement Services (MDES) for this. This platform facilitates both remote and proximity (‘contactless’) payments for parties such as Apple and Samsung, aided by the tokens mentioned previously in this document. To facilitate the fast growth of in-app purchases, in February 2015 MasterCard also launched its MasterPass online payments platform.
EMV is a payment standard which came about through a partnership between MasterCard, UnionPay, Discover, JCB, American Express and Visa. Tokenization’, which is widely used in mobile payment solutions, is incorporated in this. In November 2013 Visa also launched its own online payment solution V.me in America and various European countries including Spain, France, Poland and the UK. In May 2015 V.me’s reach was significantly extended through a partnership with a collection of large banks and retailers. Alongside this, Amex Express Checkout for fast online payments also provides American Express members with an Amex Mobile app.

In addition to these established parties, Square and iZettle are two successful start-ups who also need to be mentioned in this context. Both provide a handy reader which can easily work via a mobile phone to enable collection of payments via credit and debit cards. Thanks to the minimal investment these require, they are a particularly interesting solution for smaller enterprises.

**Digital payment providers.** Following in the wake of the big tech players is a wave of young enterprises whose core business is developing and marketing innovative digital payment technology. Good examples of these alongside the aforementioned Braintree are fellow-Americans Stripe and UK-based Zapp and Paym. The payment technology developed by Stripe is used by Apple, Facebook, Twitter and others to facilitate payment via a single tap (‘one touch payment’). Marketplaces such as Kickstarter and Lyft also use Stripe Connect to offer provision of fast universal payment.

Zapp, from England, was founded by payment processing company VocaLink, one of the largest European parties in processing transfer and card-related payments. Zapp recently secured agreements with, among others, Barclays, First Direct, Nationwide, Santander and Metro Bank to handle their digital payments, while retailers
including J Sainsbury, Asda, Thomas Cook and Shop Direct have also got in to bed with them. Compatriot Paym, which arose from the banking and construction sector, also makes use of VocaLink’s infrastructure, but facilitates payment using the customer’s mobile phone number as their bank account. Over 90 percent of all UK banks support this mobile payment solution.

The aforementioned mobile payment solutions, along with a host of others, are currently competing heavily for customer preference. MOBGEN doesn’t expect, however, that a clear winner will emerge, but that multiple mobile payment solutions will co-exist and be used by consumers. MOBGEN would encourage the immediate international roll-out of mpayment services such as Apple and Android Pay. These both make use of a standard payment infrastructure, so that shouldn’t be an obstacle.

Section 4 provides more information about selecting solutions which best fit individual strategies together with consumer requirements and preferences.
3. IN WHAT WAY ARE COMPANIES ALREADY SUCCESSFULLY USING IT?

A number of front runners from various sectors are already putting the new mobile payment solutions to good use in generating added value for customers. In most cases they’re doing this by integrating the capabilities within their own app. In particular, retailers, airlines, hotel chains and the restaurant sector are deploying their apps as the ideal channel to enter and deepen relationships with customers, especially regular ones.

Incorporating a payment function into apps serves a number of goals. In addition to providing improved convenience, it also enables the app to generate valuable payment data which, in turn, enables accurate mapping of customer (purchasing) behaviour. What’s more, the combination of payments, loyalty and personalised offers generated through the app appears to be an extraordinarily powerful method of increasing customer engagement and loyalty.
Starbucks is the undoubted retail sector leader when it comes to mobile payments. Back in 2009 the coffee chain introduced an app which enabled customers to pay by placing an on-screen-displayed barcode in front of a scanner. According to Starbucks themselves, over 13 million customers use the app to perform 16 percent of the 47 million weekly transactions. This puts ‘mobile sales’ in 2014 at over 1.5 billion dollars, an amount which will probably double within 2 years.

For every payment made via the app, Starbucks automatically adds the associated loyalty points (‘stars’) to the customer’s digital account. These are immediately visible on the home screen. At the same time the user can see how many points they need for a reward, or to reach the next level in the loyalty programme. Upon reaching specified totals of points, the customer also receives notifications about things such as the ability to redeem their points for free food or drink. This can be done simply by having the barista scan the app-generated barcode.

Many other client-focussed businesses, such as those in the air travel and hospitality sector, look enviously at the success of the Starbucks app. The Hilton hotel chain’s HHonors app makes it possible for guests to both pay for and choose their own hotel rooms, as well as selecting additional amenities and services. Hilton also currently provides the option to use a phone as the room key. The guest no longer needs to check in, but can go straight to their room and get in to it via their mobile phone.

Research by the Intercontinental Hotel Group (‘Creating moments of trust – The key to building successful brand relationships in the Kinship Economy’ - 2014) shows that 59 percent of 7,000 travellers surveyed responded very positively to this personalised service. Over half (54 percent) of all those surveyed felt better valued as a guest.
Those travelling with British Airways can do more with the airline’s app than just book and pay for flights. They can also view flight information, select and reserve seats, download boarding passes, receive notifications and passwords for using the lounge wifi, collect loyalty points and immediately spend them on booking new flights. According to market researcher PhoCusWright, in 2015 one in five European and Asiatic travel bookings will be made and paid for via tablet or smartphone.

This figure stood at 11 percent in 2013, whereas one year before it was just half of a percent. PhoCusWright predicts that the number of mobile bookings in America will rise to 25 percent in the coming year, an increase of 10 percent on the year before. Along with this, mobile payments will become increasingly common during the flight. Research by specialised payment provider Worldpay indicates that acceptance of in-flight mobile payments will rise by 36 percent in the coming two years.

Thanks to the in-app payment function recently introduced by oil producer Shell, customers in England can now pay directly at the pump simply by scanning a code displayed on the pump. It’s a first for the international retail sector, which is expected to quickly see this embraced by others. The in-app generated loyalty card can also be viewed as a QR code, thereby eventually making the plastic loyalty card a thing of the past.

By making use of visual cards which are set up according to personal preference, users can very easily see informative summaries of recent purchases, accumulated points or related information. What’s more, points and other credits can quickly and easily be redeemed via the phone. Including for personalised, time-sensitive and location-dependent offers. This can manifest, for example, as an offer for a favourite sandwich, at the exact moment when the customer drives into a petrol station.
Data, speed, efficiency, safety and transparency are the most important advantages of the new mobile payment solutions. These factors ensure significantly increased convenience for all concerned. What’s more, analysis of valuable (payment) data enables businesses to get to know their customers increasingly better. The combination of mobile payments, loyalty and personalised offers, together with this, presents a powerful way to increase engagement between customers and businesses.
But which payment solution is most suitable for your business? And what is the best way to make it available to your customers, while also fitting in with your existing infrastructure?
The following steps are essential in determining this:

1. **ANALYSE THE CUSTOMER JOURNEY**

2. **ANALYSE THE EXISTING USE OF MOBILE PAYMENT IN YOUR (GEOGRAPHICAL) AREA AND CUSTOMER SEGMENTS**

3. **FORMULATE THE BUSINESS CASE**

4. **ANALYSE THE CAPABILITIES WITHIN YOUR EXISTING INFRASTRUCTURE**

5. **OPTIMISE THE CUSTOMER EXPERIENCE OF MOBILE PAYMENT**
1. ANALYSE THE CUSTOMER JOURNEY

Accurately map your customers’ journeys by focussing on the various touch points where the opportunity to make mobile payments provides them with a more pleasant or efficient experience. Consider linking related functions into the app, such as a loyalty programme or (personalised) offers. Make sure the customer’s convenience and perception always remains central. For example, your app could help them avoid long queues at the till or having to mess around with paper coupons to claim discounts. Or it can make sure they don’t forget to take advantage of interesting offers, or eliminate the need to perform a separate transaction to collect loyalty points.

2. ANALYSE THE EXISTING USE OF MOBILE PAYMENT IN YOUR (GEOGRAPHICAL) AREA AND CUSTOMER SEGMENTS

Selecting the best payment method(s) for your business should be done with close consideration for your customers’ preferences. Established markets in Europe, America and places like Hong Kong and Singapore generally prefer solutions which are linked to existing bank accounts and credit cards. A good example of these is Apple Pay, which will shortly be rolled out internationally. A host of other bank-facilitated solutions such as the British Zapp and the Dutch iDeal are also available alongside this. In emerging markets such as China, Indonesia and large parts of Africa there’s a clear preference for separate mobile wallets, which often work according to a pre-pay model.
3. FORMULATE THE BUSINESS CASE

As already discussed, businesses have a plentiful choice of ways to create added value through offering mobile payment options. Customers who don’t need to queue for so long and who can more easily benefit from attractive offers are, for example, likely to spend more than average with the business concerned. And with that, also comes the extra revenue generated by easier online purchasing. According to research by the American pharmacy chain Walgreens, multi-channel customers spend on average six times more than those who only shop in-store.

“Flexible mobile interaction capabilities which, above all, seamlessly integrate with our in-store experience, automatically lead to more frequent purchasing and larger share of wallet”, say the researchers.

Elements for building the business include:

• Obtaining and utilising valuable data
• Higher conversion from communications and/or offers
• Cost savings over traditional communication
• Faster and more efficient payment handling
• Shorter queues at the till
• Lower transaction costs
• Higher purchase frequency and share of wallet
• Increased traffic
4. **ANALYSE THE CAPABILITIES WITHIN YOUR EXISTING INFRASTRUCTURE**

Before mobile payments can be integrated, the existing digital infrastructure needs to be analysed and the integration capabilities of the chosen payment solution(s) mapped out. The impact on the customer journey also needs to be taken into account at this point. This should lead to the desired payment solution(s) and associated architecture of the digital platform(s). The safety of the chosen solutions and compliance with established security requirements is an important aspect in this phase.

5. **OPTIMISE THE CUSTOMER EXPERIENCE OF MOBILE PAYMENT**

The integrated mobile payment solution must manifest as a perfect user experience. Realisation of a good mobile ‘user interface’ and ‘user experience’ design is therefore crucial for the solution’s success. Associated services such as offers, vouchers and loyalty programmes also need to be designed for mobile use, to perfectly fit the customer journey.
CONCLUSION

In this white paper, MOBGEN has provided insights into the landscape of this technology and the steps to take for correct integration. Waiting for a universal mobile payment solution is not an option because it simply won’t happen. Multiple mobile payment solutions will co-exist and be used by consumers.

The integration of mobile payment solutions can add a great deal of value to a successfully realised app channel connecting directly with your target group. A solid mobile strategy and business case are also essential points to start from. Alongside this, it’s crucial that the app performs optimally in all circumstances and the right tools are used to successfully roll out and maintain it internationally.
MOBGEN is an abbreviation of Mobile Generation. The optimal combination of technology, strategy and creativity within the mobile channel has been our main driving force since we first started out in 2009. All the experts, technology and knowledge we’ve amassed since then are brought together with this specific goal.

In the rapidly changing mobile landscape, at every turn we come up with innovative new answers to the central question: How do you optimally use the mobile channel to establish and deepen valuable customer relationships? MOBGEN is happy to help your business find the best possible answer to this question.

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