Mobile Payments

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Preparing your business for mobile payments

When you think of mobile payments, the image conjured is of consumers tapping their smartphones at a POS terminal, picking up their purchase and walking out. You won’t be wrong in imagining that. In 2010 the New York Metropolitan Transport Authority (MTA) allowed commuters to wave or tap their smartphones and credit cards at the turnstile for a ride. The smartphones and cards were equipped with a special chip that enabled contactless payment using near-field communication (NFC) technology. The card used NFC to connect with the turnstile and complete the payment. Paying at a grocery store, a gas station or a medical clinic would be no different. NFC technology creates a network connection limited to a range of 20 cm. The short range effectively lowers security risk. The MTA experiment was a success. A complete roll out of the project is expected by 2015.

There are several examples of mobile payment successes now available across the world. The MTA success is indicative of two facts in the mobile payments space. One, that we are moving from debates and experiments around mobile payments to launching them for use on scale; Two, frustratingly, mobile payment adoption is sluggish. This means we have a while to wait before we see the history of payments transformed; but, as we will see, the wait isn’t going to be too long.

Mobile payments have captured industry attention. At the moment there is buzz, there is excitement, there are initiatives and innovations and there are investments in mobile payments. But, equally, there are inhibitors. Examining the two factors – the technology at play for the various payment mechanisms and the barriers to adoption -- allows us to understand where your business must focus to stay on top of the mobile payments trend. This will ensure your business has a high level of preparedness to leverage the trend and deploy mobile payments even as early as this year itself.

Forrester forecasts that US mobile payments will reach US$90 b in 2017, a 48% compound annual growth rate (CAGR) from the US$12.8 b spent in 2012. We believe that 2013 will mark a turnaround as consumers seek value and merchants are compelled to meet customer expectations.

The consumer-merchant dynamics will largely decide which technologies and processes come out winners and which will be laggards. As smartphone adoption grows, new use cases will fuel explosive innovation in the mobile payments space.
Defining Mobile Payments

You could do one of several things using a mobile phone that amounts to a transaction. You could order goods and services over a mobile phone, but choose to make payments by means such as cash, check or credit/debit card. You could transfer money (to anyone) using a mobile network, as is popular in many parts of Africa where banking services remain underdeveloped and access to checks and credit cards is limited. You could make a bank-to-bank transfer of funds. You could make a purchase and let your network provider bill you for the goods along with your monthly mobile bill. Alternately, you can also have a “wallet” with your network provider or any third party that holds your funds through which payments are debited. Or you could simply load your mobile phone with “cash” from an ATM and directly spend it at a merchant.

Essentially, mobile payments are related to the transfer of funds in return for a good or service and where the mobile phone is an intrinsic part of the initiation, transfer and confirmation of payment. The payer’s location is immaterial to the transaction. The payer need not be mobile or “on the move”.

The definition of mobile payments brings several players into the equation (see Figure 1 for the Mobile Payments Ecosystem). Payment networks, card issuers, acquiring banks and POS makers see mobile payments as an extension of their product portfolio. Those in the traditional mobile ecosystem such as operators and device makers see new revenue and customer loyalty opportunities. Alternative payment providers seek to fill a market gap. Everyone is hoping that they will be able to slice off a piece of the mobile payments pie for themselves. However, everyone may not win in equal measure.

Figure 1: Mobile Payments Ecosystem
Benefits and opportunities in mobile payments

All players in the mobile payments ecosystem are raring to go. Everyone stands to gain (though, as already pointed out, not equally):

**Financial Institutions/ Banks/ Credit and Debit Networks:** These have payment authorization, processing systems and infrastructure in place. They also have existing account holders and can improve the velocity and volume of business. They can value add by making targeted offers to their customer base.

**SIM/ Handset Manufacturers:** SIM and device manufacturers can influence networks to opt for their chips/ devices that offer consumers better access to mobile payment services thus ensuring increased sales and market share.

**Mobile Network Operators (MNO):** MNOs have a growing base of subscribers. The strength of these subscribers offers the MNO an opportunity to partner with banks and FIs to increase revenues even as MNOs bring better value to their subscribers.

**Consumers:** Consumers are comfortable with mobiles as a multi-application device. They now want to extract more value from their devices. A number of their bank accounts, wallets and payment cards can be dematerialized and transferred to the mobile device.

**Merchants:** POS mobile payments provide faster checkout and the ability to send real time/ customized marketing messages and offers to the consumer. Mobile payments can also lower the cost of transactions (compared to existing channels).

**Alternate Payment Providers:** These have a subscriber base for their own payment processing (e.g. Paypal). Their linkages to social networks give them the ability to seed and grow social mobile commerce.

It is self-evident that with such a vast number of players, the complexity of platforms and systems that must interact to enable mobile payments is overwhelming. In addition, there is a lack of agreement on revenue sharing between key players. Both these need to be resolved. Building common platforms and revenue sharing models will help mobile payments gain traction with consumers.

There is adequate evidence of the advantages of mobile banking. Banks, networks, software and application developers have already demonstrated to consumers that mobile banking has numerous advantages and is indeed safe, secure and simple to manage. The mobile payments industry must replicate the success shown by the mobile banking segment.

At the moment, there are a number of diverse technologies and processes that enable mobile payments. Each has a use case that adequately justifies the technology. For the purpose of simplicity, mobile payments can be broken down into two broad categories. Both are outlined below (see Figure 2 for Mobile Payment Categories):

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**Figure 2: Mobile Payment Categories**

- **Browsing**
  - Many browser types, e.g. Safari, Android, Blackberry, Internet Explorer Mobile

- **Direct Carrier Billing**
  - Buying ring tones, games
  - Mobile purchases billed through carrier billing

- **Messaging**
  - Short Message Service
  - Multimedia Messaging Service

- **Apps**
  - Many operating systems, e.g. Apple iOS, Android, Blackberry, Windows Mobile

- **Bar Codes**
  - Display bar code on handset
  - Scan using handset camera

- **Mobile as Point of Sale**
  - Use mobile device to process card transactions (e.g. Square)

- **Authorization Codes**
  - Unique Alpha numeric code (pin)
  - Single-use dynamically generated PIN

- **Near Field Communication (NFC)**
  - Contactless sticker
  - Memory card
  - NFC-enabled handset
Use cases can range from paying for digital content to making payment for non-virtual goods and non-service. For each, the appropriate payment method can be used.

As a business that has already deployed mobile payments or is building a strategy around mobile payments, what should be the key considerations? Security and privacy are paramount. Without these two central attributes of a payment system, consumer trust is unlikely to build. The secondary considerations should include simplicity of use and universality. The more familiar the system is, the easier it is for consumers to consider and adopt. Leveraging existing behavior and usage patterns ensures quick and painless adoption. Universality, achieved partially through an emphasis on using standards and open technologies for interoperability, ensures that your business can manage B2B, B2C, P2P and global payments. The speed of the transaction -- and the cost at which it is completed -- should be acceptable to the consumer and merchant to ensure success.

Going Beyond Mobile Payments

The approach to mobile payments cannot be isolated. It must embrace the idea of mobile commerce in order to be successful. This means that a mobile payment system must be integrated with a number of other systems and processes that make up a complete transaction. At the front-end of the mobile commerce construct is the merchant environment. This is where a consumer makes a decision to purchase a product or service. The payment can be initiated through a payment gateway, a POS terminal, or a remote payment engine. The payment must then deal with a number of sub-processes that include User Management, Offers and Loyalty Programs, Transaction Processing and Servicing. Each one of these has an external interface with which the system must interact, authenticate the customer and update the customer’s records (see Figure 3 for a Functional Mobile Payment Architecture).
The Barriers to Adoption

Despite the relatively clear picture which appears to indicate that mobile payments could easily become the next game changer, adoption has not matched expectations. The key reason is the lack of common standards. This has been aggravated by the fact that merchants have been unable to create compelling models that offer greater conveniences than existing modes of payments.

Mobile payments do present several advantages to the consumer. Education around these is slowly building:

**Convenience:** Consumers can monitor and control spends better using a mobile device (can check account details before a purchase)

**Flexibility:** A mobile device can consolidate several cards and other payment methods including a mobile wallet

**Real time:** A mobile device delivers timely alerts on transactions and account details

**More innovation:** Several loyalty programs are now linked to mobile subscriber numbers. This means the loyalty program balances can also be combined with mobile payment methods.

On the merchant side adoption has been sluggish because NFC payment terminals are expensive. This is being set right by global majors like Citi, MasterCard and Visa promoting chip-based cards. As a consequence, we can expect merchants to adopt NFC sooner rather than later. For merchants, mobile payments also unlock the ability to target offers, promotions and coupons at customers. This means growth in business. Forrester says that the impact of these factors will be that proximity payments (NFC) will witness fast growth. The report from the analyst says that proximity payments will reach US$41 b by 2017, making up one half of all mobile payments *.

The Future of Mobile Payments

The future of mobile payments is not difficult to guess. Much of it is obvious. First, smart phone saturation and usage (social networking, banking, etc.) suggests that consumers are ready for mobile payments. Consumer comfort is a major driver in new money management processes. In addition, technology today is mature and security standards are enabling safe mobile transactions. From a consumer’s perspective and from a regulatory perspective, this is very reassuring. But more is on the way by way of security. Stringent mobile payment solutions around cards, that meet regulatory requirements to address fraud, are being rapidly deployed worldwide. These mobile solutions are offering small businesses– who until now did not have the infrastructure for card payments – the ability to accept payments in a variety of ways, anytime anywhere.

It appears unlikely that the business environment will wait for every retail outlet and business to upgrade their hardware or adopt a single standard. Consumers are impatient. They won’t wait. They will simply begin to transact with merchants who offer the most convenience.

Resources:


*bid
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Kedar has over 16 years of industry experience in Client relationships, Business Development, Strategy Consulting, Architecture, Design & Delivery, with over 4 years focused specifically in the Mobility space. He has successfully led several large & complex mobility initiatives for key customers across different industries. He specializes in Mobile Strategy, Cross Platform Solutions & Mobile Payment Solutions.