THE MOBILE PAYMENT REVOLUTION

THE CONSUMER HAS SPOKEN

IMAGINE the ease of walking into your favorite coffee house, store or restaurant and paying with just your smartphone. And imagine the ability to take advantage of the loyalty programs and discounts offered by your preferred credit or debit cards by just tapping your screen or passing your phone near a checkout terminal. Can you fathom a world where you aren't fumbling with your wallet, looking for that right credit card, loyalty card and/or coupon? That is the promise – and increasingly the reality – of the mobile wallet.

Now just imagine what an experience like this can mean for your business. The mobile payment revolution isn't just about giving customers a trendy new way to pay. It's about finding solutions that will deliver new value for the consumer (discounts or rewards for loyalty, for instance), improve their experience and, in turn, drive new and repeat business for the merchant. The mobile wallet is redefining the relationship between consumers, merchants and financial institutions.

According to the Nilson Report, over $15 trillion was funneled through the major credit card networks, including debit cards and prepaid cards. And analysts are predicting a major uptick in the number of people planning to use mobile devices to make payments. Forrester predicts that mobile payments will reach $31 billion by 2016, up from just $6 billion in 2011, a major shift for the credit card processing industry. And IDC is predicting that consumers and businesses worldwide will make more than $1 trillion in purchases from mobile devices by 2017.

With the recession appearing to ease, consumers are spending again and credit card giants, start ups and retailers alike are rapidly looking for new and innovative ways to collect a piece of the multi-trillion dollar pie. For many, the mobile wallet offers tremendous potential to do just that.
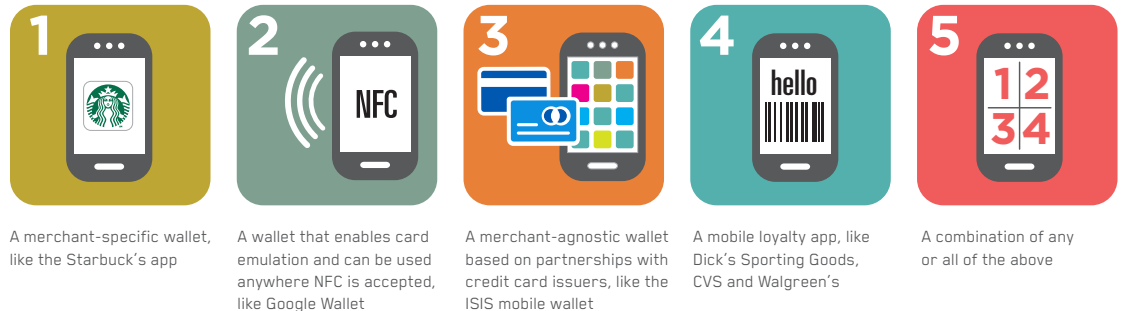
2012 saw some major leaps forward for the payments industry. Between Square, PayPal, Google Wallet, Isis, LevelUp and MCX, the mobile payment wars have just started to get exciting. This report from Merchant Warehouse will provide you with an up-to-date overview of the current state of the mobile wallet market, where the industry is headed, and the key players you should be aware of.

MOBILE WALLET 101. What is a mobile wallet?

Simply put, a mobile wallet uses either a hosted platform or an application on a smartphone to make payments both online and, increasingly, in brick-and-mortar stores. Depending on the provider, mobile wallets can support a number of features and options like loyalty and points programs, coupons, special offers, etc. The benefits of mobile technology, like geo-location, also enable businesses to provide more personalized, targeted and real-time communications and offers, and increase opportunities for cross- and up-sell.

The majority of mobile wallets enable smartphones to connect with a merchant's countertop payment system wirelessly (see the next section for a detailed overview of these technologies).

THERE ARE A VARIETY OF DIFFERENT KINDS OF WALLETS, BUT MOST FALL INTO ONE OF THE FOLLOWING CATEGORIES:

1	2	3	4	5
A merchant-specific wallet, like the Starbuck's app	A wallet that enables card emulation and can be used anywhere NFC is accepted, like Google Wallet	A merchant-agnostic wallet based on partnerships with credit card issuers, like the ISIS mobile wallet	A mobile loyalty app, like Dick's Sporting Goods, CVS and Walgreen's	A combination of any or all of the above

Many companies, unsure of which direction the market is headed, are participating in more than one wallet. For example, Starbucks has its own successful app, but it has also partnered with Square and integrated to Apple's Passbook.

We predict that eventually the smartphone will become the mobile wallet and consumers will have a variety of payment and loyalty apps to choose from, depending on which places they visit most and which have the most compelling offers at the time. We don't believe any one single system will rule them all. Think about your own physical wallet right now. You might have a Macy's card, a Capital One MasterCard or Visa, an American Express Gold Card, a loyalty card from your grocery store, and a dozen others. None of those could replace or encompass all the others. Your wallet does the encompassing. And, eventually, we think the smartphone will be no different – a storage space, or wallet, for all your payment and loyalty apps.

But only time will tell. So we will continue to follow the marketplace closely and keep you updated on its evolution.

Technologies driving mobile wallets

The majority of mobile wallets enable the smartphone to connect with a merchant's payment terminal wirelessly with Near Field communication (NFC) or optically with a Quick Response 2D code (QR). For some merchants, the payment terminal is connected or integrated directly with their point-of-sale (POS) system and for others it's a stand-alone device.

While NFC and QR are the predominant technologies driving mobile wallets, we should note that there are a few players taking advantage of "empty hands" technology, like PayPal, that enables account holders to pay at the point of sale by entering a phone number and a PIN, as well as contactless check-in/check-out technology, like that from Paydiant, that leverages a "checkout" token to associate an end user and their payment accounts with a transaction.

Near Field Communication (NFC)

The concept of contactless communication is not new; rather, consumers and merchants have been using and supporting contactless cards for over a decade. Now, with Near Field Communication (NFC), contactless communication has been extended to the mobile device. NFC is a short-range wireless connectivity technology that enables two-way contactless communication between mobile devices, like smartphones or tablets, allowing compatible devices within a few centimeters of each other to communicate. NFC technology requires special hardware for both the user and the merchant.

NFC users process payment transactions directly with their mobile devices. Applications, such as Google Wallet, allow users to store credit card, loyalty card or bank account information in a virtual wallet and then use their NFC-enabled devices to make payments at terminals that accept NFC payments. Service providers worldwide have experimented with NFC technology for ticketing at box offices and public transportation, and many retailers now accept NFC-based payment in addition to traditional credit or debit cards.

Case in point, Walt Disney World just announced it is moving to NFC-based payment, loyalty and admission to improve its customers' in-park experience. Through RFID-enabled rubber bracelets, the NFC system will be able to store payment card information, provide visitors access to rides and tickets and track consumer purchases, activities and even in-park interactions.

Quick Response 2D Code (QR)

A Quick Response 2D code (QR) is a type of two-dimensional bar code designed to have faster readability and greater storage capacity than standard bar codes. A QR code consists of square black dots set in a square grid on a plain white background. Almost any modern mobile device with data capabilities can scan QR codes, either natively or thanks to a third-party application.

Unlike NFC, QR codes do not require additional hardware, but instead leverage the mobile device's existing camera and only require a QR reader app to enable the device to support the technology. There are thousands of free QR reader apps available for the majority of today's smartphones. And in some cases, the QR code can actually reside on the smartphone itself; the merchant simply uses its own scanner at the point of sale to perform the transaction.

In the world of mobile commerce, QR codes are an increasingly common way to process payments remotely. A QR code can be used to store credit card or bank account information for payment access, or it can be linked directly to a reference/token pointing to a payment provider application.

The growing debate over QR versus NFC

There are similarities between NFC and QR technology; both are quite fast and enable contactless communication. However, the debate is heating up over which technology will ultimately triumph.

Proponents for NFC argue that the technology is more flexible than QR, enabling more information to be stored and allowing for changes to be made easily—without requiring a new NFC tag to be created. For example, because NFC can provide two-way communication, merchants can immediately put offers or coupons back on the consumer's smartphone, whereas the Cloud-dependent QR technology would experience a slight delay when performing the same actions. NFC supporters also argue that NFC offers a faster and more user-friendly interaction with simpler and fewer user steps for interaction, as well as more secure transactions.

However, advocates for QR codes have a powerful argument to make when it comes to cost and availability: NFC still requires merchants to upgrade their POS terminals to support NFC technology—a hardware investment many retailers are hesitant make, and many smart-phones are not yet NFC-enabled. When Apple recently launched its iPhone 5 without NFC support, it triggered a debate over whether NFC will ever gain significant traction as a mobile payments option.

> ADVOCATES FOR QR CODES HAVE A POWERFUL ARGUMENT TO MAKE WHEN IT COMES TO COST AND AVAILABILITY.

QR supporters argue that developments in mobile payments are happening so rapidly that it is unlikely NFC will be able to catch on quickly enough, as mass user adoption is still years away. Consequently, they believe that mobile barcodes will drive the mobile payment market because they are very inexpensive to produce and can be scanned by most of the smartphones on the market today.

There are those that believe NFC could have leapfrogged QR Codes if Apple had decided to include NFC in its mobile devices. But that hasn't happened – at least not yet. So for the near term, this battle appears to be evenly split.

MOBILE WALLET	EXAMPLES OF MOBILE WALLETS	PAYMENT TRANSMISSION	CURRENT MANUFACTURERS SUPPORTING STANDARD
QR	Passbook, LevelUp, kuapay	Visual representation on device screen, read by payment terminal. Phone must be unlocked and active to render QR code.	In theory, all current Smartphone manufacturers can display a QR code on the device screen.
NFC	ISIS Pay smarter, Google wallet	Proximity of NFC-enabled device to reader. Depending upon mobile wallet configuration, payment can still be transmitted while phone and screen is locked	HTC LG Samsung Sony Motorola

PLAYERS IN THE MOBILE WALLET MARKET LANDSCAPE

The following section offers an overview and comparison of some of the businesses making investments in the mobile wallet space today. As you will see, the key players range from card issuers to telecom companies to online advertising giants to new technology innovators.

GENERAL DESCRIPTION

The PayPass Wallet offers tap-and-go, NFC-enabled payments that work via PayPass-enabled (NFC) phones, cards, key fobs, or mobile tags at over 441,000 locations worldwide. MasterCard's PayPass Wallet is an open solution, and allows consumers to add their Visa, American Express and Discover cards, whether credit, debit or prepaid.

PayPass Wallet Services has three components.

PayPass Acceptance Network: Includes both online and contactless payments, and gives merchants a consistent way to accept electronic payments across multiple channels. NFC payments can be made in-store by tapping your mobile phone, and a new PayPass online element lets you check out at a retailer by clicking a PayPass button.

PayPass Wallet: Enables banks, merchants and partners to white label their own wallets.

PayPass API: Allows partners to connect their own wallets into the PayPass network, and lets those partners use MasterCard's checkout, fraud detection and authentication services to allow their customers to make purchases wherever PayPass is accepted.

VALUE TO MERCHANT

According to MasterCard's website, the PayPass wallet offers the following benefits to merchants:

▶ Adding the PayPass Wallet checkout button to a merchant's shopping cart gives online shoppers a faster, easier way to checkout.

▶ Faster transactions and increased turnover
- Quicker than contact and cash
- Signature or PIN is not required under the floor limit
- No need to print, sign, or handle paper receipts

▶ Cash displacement: Reduced costs per transaction due to cash handling, security, and transportation costs

▶ Reduced operational costs: Less equipment wear and tear (no contact); Paper receipt not required for Low-value Payment (LVP) unless requested by the customer

SUPPORTING MERCHANTS & FINANCIAL INSTITUTIONS

**The mobile wallet is accepted at over 441,000 locations worldwide.
A number of larger retailers are onboard including:**

American Airlines and Barnes & Noble. Both merchants will incorporate the PayPass Online checkout button on their websites, and American Airlines will go a step further and integrate PayPass Wallet into its own mobile application. Other merchants committed to the solution include Jagex, JB Hi-Fi, MLB Advanced Media (MLB.com), Newegg, Runningshoes.com, TigerDirect.com and Wine Enthusiast Companies. Several banks are on board too, including Banesto, Bank of Montreal, Commonwealth Bank, Citibank, EURO6000, Fifth Third Bank, Grupo Banco Popular, Grupo BBVA, ICBA, Intesa Sanpaolo, Metro Bank, National Bank of Canada, PSCU, RBS Citizens Financial Group, SEB Kort AB Sweden, Sovereign Bank, Swedbank Sweden and Westpac.

OPTIONS LOYALTY, OFFERS AND DISCOUNTS

The company has future plans to facilitate delivery of targeted offers, coupons and enhanced loyalty programs.

HARDWARE REQUIREMENTS

NFC enabled terminals

GENERAL DESCRIPTION

Google Wallet is a mobile payment system that allows users to store credit and debit card information and make payments through NFC technology. The core of Google Wallet is a free mobile app compatible with mobile devices that feature NFC capabilities and special Secure Element chips to encrypt financial information. Google's new Cloud-based version of the wallet supports all credit and debit cards from Visa, MasterCard, American Express, and Discover; allowing consumers to use any card when they shop in-store or online with Google Wallet.

VALUE TO MERCHANT

According to Google, its mobile wallet offers merchants the following benefits:

▶ Drive the right traffic to your store: Push offers to shoppers who are actively searching for your products in your area. Customers can save your offers with Google Wallet, then redeem them in-store—enabling you to analyze online marketing against in-store purchases.

▶ Retain more customers: By storing loyalty cards on their phones, Google Wallet provides your customers with a convenient way to carry them. Partner with Google to boost participation in your existing loyalty programs, or build new, targeted, and effective loyalty initiatives.

▶ Better serve your customers: Paying with Google Wallet is faster and more convenient. Instead of fumbling for cards, cash, and coupons, your customers can simply pay with the tap of their phones.

▶ Google Wallet-enabled merchants will also be featured on the "where it works" map.

▶ Google does not charge fees for accepting payments via Google Wallet either in-store or online.

NUMBERS OF ACTIVE USERS

It is estimated that 50,000 to 100,000 people have downloaded the software, but only a small percentage use it.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Currently, you can use Google Wallet in-store anywhere contactless (NFC) payments are accepted, at over 200,000 merchants across the United States.

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

Disclaimer: Please note that the following information regarding specific wallet providers was consolidated from the companies' own marketing materials.

▶ Customers can store loyalty cards on their phones

▶ Merchants can push offers to shoppers and customers can save merchants' offers with Google Wallet, then redeem them in-store—enabling merchants to analyze online marketing against in-store purchases.

▶ Customers will continue to earn rewards points for purchases through their card issuer's credit or debit card rewards program (such as gas, grocery, and restaurants purchases, and overall spending), if applicable.

▶ There are "Featured Offers" which are native to Google Wallet and appear in the Offers tab of the mobile application. These featured offers apply to just a few merchants at present.

▶ Google Wallet has the ability to store coupons and other special offers. Electronic coupons can be stored and used by tapping the phone to the receiver. Google Offers will be used to support virtual coupons that can be found on Google Search, Google Maps and Google Shopper. Prepaid Google Offers may also be purchased from the Google Offers hub.

DATA MADE AVAILABLE TO MERCHANT

There are rumors that Google is planning to offer customer transaction data for a fee.

HARDWARE REQUIREMENTS

NFC enabled terminals

GENERAL DESCRIPTION

A national mobile commerce venture backed by AT&T, T-Mobile and Verizon, Isis is a software-based wallet mobile payment solution that organizes credit and debit cards, loyalty cards and special offers in one free app. Mobile payments are contactless using NFC. The app can store card information for three major credit card issuers: American Express, Capital One and Chase. So far, Isis has only been launched in Austin, Texas and Salt Lake City, Utah.

VALUE TO MERCHANT

According to Isis, the Isis Mobile Commerce Platform represents a new way for merchants to engage with customers through mobile payments now, and mobile commerce (offers and loyalty) in the future. By supporting contactless payments through the Isis Mobile Wallet, you provide your customers a more convenient way to pay, and you will be well positioned to integrate offers and loyalty programs in the future. Isis can enhance existing merchant marketing programs and payment offerings.

To date, mobile commerce offerings have been fragmented into individual applications. Isis is designed to integrate shopping and paying into one application, providing merchants with a mobile opportunity to grow and strengthen consumer relationships and to leverage additional sales opportunities. Isis will offer merchants new competitive value and the opportunity to build more customer loyalty, increase customer engagement and mobilize existing loyalty cards, offers and other promotional programs.

NUMBERS OF ACTIVE USERS

The number is still quite small, as the mobile wallet has only been launched in two cities. But the company says the typical Utah Isis customer follows five different merchants using the wallet's loyalty card and coupon features, and a customer who signs up for a business' loyalty program tends to visit that business twice as often as a regular customer.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

1,000 participating merchants to date

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

▶ Isis is compatible with participating loyalty cards, which can be linked to the mobile wallet and automatically redeemed by the appropriate merchants.

▶ The Isis Mobile Wallet automatically stores and organizes the user's mobile coupons and other deals. Users can access these deals through the Wallet Directory, which includes special offers, current events information and messages from participating businesses.

▶ Isis is also compatible with quick response (QR) codes and automatically stores offers when those codes are scanned.

HARDWARE REQUIREMENTS

NFC enabled terminals

Passbook

GENERAL DESCRIPTION

Passbook is a virtual file folder for all that paper you accumulate in your wallet: tickets, boarding passes, coupons loyalty cards, etc. You can add passes to Passbook through apps, emails, and websites from participating airlines, theaters, stores, and more. Then you can scan your iPhone or iPod touch to check in for a flight, get into a movie, and redeem a coupon. You can also see when your coupons expire, where your concert seats are, and the balance left on your coffee house card. Wake your iPhone or iPod touch, and passes appear on your Lock screen at the appropriate time and place – like when you reach the airport or walk into the store to redeem your gift card or coupon. And if your gate changes after you've checked in for your flight, Passbook will even alert you to make sure you're not in the wrong terminal.

Passes are only officially designed to work on iPhones and iPod touches running iOS 6. Android users can participate by downloading PassWallet from the Android marketplace.

NUMBERS OF ACTIVE USERS

There is no firm number, but here are a couple of impressive data points:

Sephora's "Beauty Insider" rewards card was added to 20,000 users' Passbooks within the first 24 hours of its availability. That number has since jumped to 375,000. Downloads of American Airlines' app, which launched the day Passbook went live, skyrocketed in the 10 days after Passbook launched, bringing the airline an additional 1 million downloads. Now about 20,000 passes are served each day, and the company has 1.5 million active users of the service.

SUPPORTING MERCHANTS & FINANCIAL INSTITUTIONS

Apple already has partnerships with a large number of airlines, retailers, and venues, including:

American Airlines, Fandango Movies, Live Nation, Lufthansa, MLB.com At Bat, Sephora to Go, Ticketmaster, Target, DunkinDonuts, Walgreens, Starbucks and many more.

OPTIONS LOYALTY, OFFERS AND DISCOUNTS

Merchants can offer Passbook-integrated coupons through Coupons.com, the Coupons.com iOS application, other vendors or on their own. A user simply clicks on a coupon they like and it's created and stored in Passbook.

Users can also download some merchants' rewards card at the same time they download the merchant's app into Passbook.

HARDWARE REQUIREMENTS

QR/2D readers

GENERAL DESCRIPTION

Sprint Mobile Wallet is a product that aggregates payment methods and makes them available as one-click payment options on a user's mobile phone. It allows merchants to provide their Sprint customers with an easy way to pay for goods. The user will set up an account (username, password, PIN) with Sprint Mobile Wallet and then register each desired payment method with Sprint Mobile Wallet. When the user shops on his/her mobile phone and proceeds to pay for a good or service, Sprint Mobile Wallet will present the registered payment methods as payment options at the time of checkout.

VALUE TO MERCHANT

Sprint's mobile wallet enables the following benefits to its merchants:

▶ Save money and get it fast. Sprint Mobile Wallet uses traditional payment methods that cost significantly less and settle funds to your account in hours, not months.

▶ Simple and Easy Checkout Flow. Since your customers simply log in to use information they've already enabled with Sprint Mobile Wallet, they save time by completing transactions in fewer steps.

▶ Help customers feel safer with the Sprint Brand, so they buy more. Buyers prefer to pay with Sprint Mobile Wallet because their customer information is kept safe.

▶ Sprint Mobile Wallet allows merchants to add a simple and secure payment option to their existing mobile commerce application. Utilizing Cardinal Centinel, all payment processing is centralized irrespective of the payment method used by the buyer, thus providing the merchant with a simple integrated solution.

SUPPORTING MERCHANTS & FINANCIAL INSTITUTIONS

According to Sprint's website, there are currently seven merchants that support its mobile wallet: SkyMall, Wine Enthusiast, Wine Express, Dungarees, The Fire Store, OroLatina, and Scentiments.

GENERAL DESCRIPTION

Unlike other mobile wallets that require NFC, Square Wallet allows you to pay with your mobile device through a mobile app. When shopping the user simply browses the Square directory to find a business and then taps the "Pay Here" button to pay with their name. When it is time to pay the user simply tells the merchant their name. The merchant will see your name and a picture of you on their register, and can then accept your payment with the simple tap of a button. Customers automatically receive a push notification when the payment has gone through. You can swipe on that notification to view your receipt and will have the option to leave a tip.

The wallet also has a hands free checkout option that allows users to make a purchase with a favorite local merchant without having to take out their mobile device at all. When you are within 100 meters of the merchant, your photo will appear on their register automatically and you can check out with just your name. One of the advantages of using Square Wallet is that you don't have to top off a pre-paid card. Each transaction is pulled from a stored debit or credit card.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Approximately 250,000 merchants accept the Square wallet. Last year, Square announced a deal with Starbucks to make it possible to pay with Square's app in 7,000 Starbucks stores. Starbucks itself also has its own mobile app that customers can use to pay for coffee and gain rewards points. But the Square integration will make mobile payments much more useful for customers because they can use the app in other locations.

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

Merchants accepting Square may choose to offer loyalty programs to reward their customers. These loyalty programs may be linked to the customer's Square Wallet account.

Square recently launched a new service tied to its Square Wallet program designed to let anyone purchase a gift card for friends or family at any of the more than 250,000 businesses nationwide that accept Square Wallet. The recipient would then redeem the value of the gift using Square Wallet on their own device. The service allows recipients to store the value directly in Square Wallet, or to print out a QR code that they can bring into the merchant if they don't have an account.

DATA MADE AVAILABLE TO MERCHANT

Hardware Requirements Users need to download a mobile app onto their smartphones. Square Wallet is available on a large and growing collection of popular smartphones. The app is compatible with iOS and Android devices.

LevelUp

GENERAL DESCRIPTION

The LevelUp mobile application for iPhone and Android allows registered users to securely link their debit or credit card to a dynamic QR code displayed within the app. To pay with LevelUp, users scan the QR code on their phone at LevelUp terminals located at local businesses who accept LevelUp as a form of payment.

VALUE TO MERCHANT

LevelUp's mobile wallet offers the following benefits:

- 0% payment processing fees

- Access to a unique suite of campaigns designed to attract new customers and convert them into loyal customers

- Increase average ticket price: Customers who use LevelUp spend more money per visit than those paying with cash or credit.

- Attract new customers: Customers who pay with LevelUp in-store go on to recommend new customers for you on Facebook. Every time a Facebook-connected customer pays with LevelUp, they generate a unique post referencing your business. On average each post generates 80 views and one new customer per post.

- Increase loyalty and visitation: Research shows customers who pay with LevelUp come back quicker

- Co-marketing opportunities and programs like:
  - New user rebate: LevelUp rewards merchants with a rebate each time a new customer transacts with that business through the wallet
  - Employee rewards: LevelUp pays a merchant's employees $5 for every customer they get to download and pay with LevelUp
  - Promotional materials: LevelUp produces free, high-quality promotional materials merchants can use to activate their customer base in-store and online, including email blast templates, website elements, in-store signage, promotional cards, etc.

NUMBERS OF ACTIVE USERS

Has over 1,000,000 users

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Over 5,000 participating retailers

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

- Offers the ability to tie rewards to payments

- Every merchant that accepts LevelUp as a form of payment, offers monetary savings to users. Users are given "First-Time Visit Specials" the first time they make a transaction at the merchant's location. Users can also unlock "credit" to a merchant's store after spending a certain amount at the merchant's location.

DATA MADE AVAILABLE TO MERCHANT

If a merchant chooses to leverage LevelUp's campaigns you can gain access to powerful analytics that let you know exactly how many customers you drove, when they came in, what they spend, if they came back and how often. You can see an exact ROI on your customer acquisition efforts. Or, you might choose to run a loyalty campaign to increase customer engagement and return-rate.

HARDWARE REQUIREMENTS

QR reader devices and NFC coming in 2013.

GENERAL DESCRIPTION

PayPal has chosen to distinguish itself from the mobile wallet market, calling its offering an 'empty hands' digital wallet. The wallet works by allowing users to link their PayPal accounts and pay for purchases by entering their phone number and PIN code into the retailer's existing point-of-sale terminal; no smartphone required. The service also offers price comparison and shopping list tools and support for coupons and offers from retailer partners. One interesting feature is that the PayPal wallet allows customers to change their method of payment after they make a purchase. For example, a user could pay for an item using a MasterCard, take it home, and then later log in to his or her PayPal account to switch the payment method to Visa instead without any additional fee.

SUPPORTING MERCHANTS & FINANCIAL INSTITUTIONS

Over 17,000 merchants now support in-store payments using PayPal, including large national retailers like Home Depot, Abercrombie & Fitch, Advance Auto Parts, Aéropostale, American Eagle Outfitters, Barnes & Noble, Foot Locker, Guitar Center, Jamba Juice, JC Penney, Jos. A. Bank Clothiers, Nine West, Office Depot, Rooms To Go, Tiger Direct and Toys "R" Us. And through its new partnership with Discover the company hopes to bring that number to seven million this year.

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

- Customers can sign up for alerts about offers when they are in close proximity to a favorite merchant. For example, when walking past a favorite coffee shop a customer might get a push notification with a discount on coffee.

- Users can compile a wish list of products. For example, if they're compiling a grocery list they'll be alerted of the coupons available for the items on that list when they enter a vendor that accepts PayPal payments.

- Merchants can chose to reward customers who accumulate points for purchases and check-ins.

HARDWARE REQUIREMENTS

The PayPal mobile wallet uses an alternative approach to NFC or QR. Users can pay at PayPal-enabled terminals using a PayPal credit card or typing in a PayPal pin. This means users don't need to own NFC-enabled phones and partner merchants only need a software upgrade to their terminals in order to begin accepting PayPal.

GENERAL DESCRIPTION

With the Dunkin' Donuts mobile app, users can pay for goods with their smartphone. The app creates a virtual Dunkin' Donuts card, which can be filled by transferring the value of an existing physical Dunkin' Donuts Card or it can be funded through a credit card or PayPal transaction in the app. When it comes time to pay, users select which virtual card they want to use and the app presents a QR code, which is scanned by an employee. The amount is deducted from their balance immediately after the purchase.

VALUE TO MERCHANT

Moving to mobile payments gives Dunkin' Donuts more insight into the purchase habits of its users and allows the company to build a closer relationship with its customers. And by enabling gifting right from the mobile app, Dunkin' Donuts is making it easy for people to buy more gift cards.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Available at most of its 7,000 U.S. locations

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

▸ Offers and loyalty within the application

▸ Users can send mobile gift cards to each other via the app

▸ Integration with Apple Passbook

HARDWARE REQUIREMENTS

QR

GENERAL DESCRIPTION

The Starbucks mobile wallet is based on a mobile app that is tied to the Starbucks debit card account users fill periodically or automatically.

NUMBERS OF ACTIVE USERS

Their mobile app payments total 26 million now, accelerating at a current rate of around three million per month.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Supported at over 9,000 Starbucks locations

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

▸ Enables customers to earn Stars in the My Starbucks Rewards™ program

▸ Earn free beverages, food and upgrades

▸ For Apple users, seamlessly provides free 'download of the week' offers, connecting the user directly with their iTunes account

HARDWARE REQUIREMENTS

QR

GENERAL DESCRIPTION

V.me is a digital wallet—currently online only, which stores not only your Visa card information, but also your MasterCard, American Express and Discover cards. In the future, Visa plans to introduce a mobile payments element to the service by leveraging NFC, QR codes and "other technology," which would allow you to tap your phone to a secure reader at the point-of-sale in order to pay for your purchase, scan a QR code or perform some other type of interaction. Visa will also include a location-based offers service with V.me, that will likely use geo-tagging to identify customers most visited locations, and market offers accordingly.

VALUE TO MERCHANT

Trusted brand; no registration on each site (single login)

SUPPORTING MERCHANTS & FINANCIAL INSTITUTIONS

Over 50 financial institutions are supporting the launch of V.me, which accepts non-Visa cards in its wallet, too. The company says that it has now signed up over 50 financial institutions to its platform, including two of the largest retail banks, PNC and U.S. Bank. It also has 23 merchant partners participating, with some of the bigger names including 1-800-Flowers, PacSun, Shoebuy.com, Buy.com, and MovieTickets.com, for example.

OPTIONS FOR LOYALTY, OFFERS AND DISCOUNTS

Merchants' discount offers can be sent to participating consumers' mobile devices

HARDWARE REQUIREMENTS

Currently online only; Visa plans to introduce a mobile payments element to the service by leveraging NFC and QR codes

GENERAL DESCRIPTION

Lemon offers a mobile application that serves as a place to hold all the cards you would normally carry around in your physical wallet, including credit and debit cards, ID cards, gift cards, store loyalty cards, and more. The wallet is designed to store digital backups of cards, and, in the case of a lost wallet out in the real world, Lemon also provides a service which will help users automatically cancel their cards. In addition, it offers other wallet-related features like a barcode-scanning option for some store cards and loyalty cards, receipt tracking, card balance updates, and more. The app uses the camera feature of the user's smartphone to capture an image of a card or even a receipt and digitizes it (recognizing characters and figures). Lemon Wallet works with iPhone, Android and Windows Phone.

In October, the company launched a platform called "Lemonade" (the "ADE" stands for Application Development Engine) which provides developer tools for app developers, merchants and brands for making what they call "smart cards" - interactive cards that can communicate with users, display card balances, spending alerts, power loyalty programs, and more.

VALUE TO MERCHANT

Third-parties using the Lemonade platform to develop "smart cards" will be able to see how many consumers already have their cards installed, and will be able to then use the platform to interact with those users. The Lemonade developer dashboard provides anonymous user data showing user demographics, spending habits and redemption analytics, so card providers can better understand customer behavior, segmented by country, currency, favored merchants, age, gender and purchase categories.

NUMBERS OF ACTIVE USERS

Lemon now has over two million users who store an average of five cards, two of which are payment cards, within its application. And these users return once per week on average.

SUPPORTING MERCHANTS AND FINANCIAL INSTITUTIONS

Lemon personalizes a user's rewards based on their spending habits. Users can link their accounts and earn merchant rewards or automatic cash back when they use their cards in selected stores.

"Smart cards" can also be used as mechanisms to allow the card providers to communicate with users, letting users send messages, respond to surveys, receive offers, discounts, and more. Other card add-ons might include integrated loyalty programs, coupon tracking tools, or price comparison tools.

DATA MADE AVAILABLE TO MERCHANT

See Value to Merchant section above

HARDWARE REQUIREMENTS

QR

GENERAL DESCRIPTION

Merchant Customer Exchange (MCX) was created by a group of the nation's leading merchants with a singular purpose: offering consumers a customer-focused, versatile and seamlessly integrated mobile-commerce platform. Development of the mobile application is underway, with a focus on a flexible solution that offers merchants a customizable platform with the features and functionality needed to best meet consumers' needs. The application will be available through virtually any smartphone.

VALUE TO MERCHANT

Retailer/merchant-controlled wallet with data accessible only by the individual retailer/merchant

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The company is led by merchants such as 7-Eleven, Inc.; Alon Brands; Bed Bath & Beyond Inc.; Best Buy Co., Inc.; CVS/pharmacy; Darden Restaurants; DICK's Sporting Goods; Dillard's, Inc.; Dunkin' Brands; Gap Inc.; HMSHost; Hobby Lobby Stores, Inc.; Hy-Vee, Inc.; Lowe's; Meijer; Michaels Stores, Inc.; Publix Super Markets, Inc.; QuikTrip Corporation; Sears Holdings; Sheetz, Inc.; Shell Oil Products US; Sunoco, Inc.; Target Corp.; Wakefern Food Corp.; Wal-Mart Stores, Inc.; and Wawa. Combined, these participating member merchants already serve nearly every smartphone-enabled American on a weekly basis, giving MCX the unique ability to offer a mobile-commerce solution that truly works for consumers.

HARDWARE REQUIREMENTS   PLANS

To use QR codes as the heart of its cloud-based payment app

It's about More than a Wallet

The mobile wallet is about so much more than just processing payments. Its true value lies in its potential to completely transform the customer experience and enhance relationships between retailers and their customers. Unlike the traditional retail experience that separates the advertising, communication, payment, loyalty, offer and discount experiences, the mobile wallet has the ability to integrate all of those touches through a single device, or interaction, providing a far more relevant, positive and enticing customer experience.

Through capabilities like targeted marketing, customer acquisition, check-ins, integrated loyalty programs and retention strategies, the mobile wallet gives merchants, financial institutions and wallet developers the opportunity to tap into new marketing and revenue generating opportunities.

One of the most exciting potential benefits of the mobile wallet for many marketers is the promise of data – access to an invaluable source of customer and transaction data that they can leverage to improve future marketing efforts like advertising, discounts, loyalty programs, campaigns, and other value-added services. Mobile wallet data is unique in that it offers marketers data across a multitude of areas, including customer preferences and behavior, retail history, loyalty program engagement, etc. Not all mobile wallets offer access to this data and there is much debate over data security. But some, like Google Wallet, recognize the attraction. The company has said Google Wallet will not charge interchange fees to merchants, and instead many predict the company plans to charge merchants for customer data reports.

> MERCHANTS CAN TAKE ADVANTAGE OF MOBILE WALLET CAPABILITIES TO PROVIDE A HIGHLY TAILORED AND PERSONALIZED EXPERIENCE TO THEIR CUSTOMERS.

Merchants can take advantage of mobile wallet capabilities to provide a highly tailored and personalized experience to their customers. Because every mobile device is connected to a single individual with a unique profile and history, merchants have the opportunity to deliver offers and communications that are relevant, attractive and timely at the individual customer level.

The mobile wallet also enables merchants to combine the ease of mobile payments with integrated loyalty and rewards programs. With consumer expectations high and competition at every turn, marketers can engage and retain these customers by delivering a complete shopping experience—one that includes transactions, loyalty redemption, and ongoing relevant communication, both before and after a purchase.

FOR EXAMPLE, imagine a woman is at the mall running errands when she passes her favorite coffee house. Because she previously downloaded the vendor's mobile wallet onto her smartphone she receives a real-time discount offer from the merchant (which has identified her close proximity through the mobile device's geo-targeting capability). Because the mobile device is unique to the woman, the merchant was also able to deliver an offer tailored to her preferences. She chooses to take advantage of the coupon, redeeming the offer with her mobile device at the same time she pays for her item with her smartphone. Because the woman is enrolled in the merchant's loyalty program, she is also able to collect points on the purchase – which she can redeem at a later date using her smartphone. As the woman leaves the shop, the merchant sends a follow-up communication thanking her for her business and loyalty along with the e-receipt.

For both the consumer and the merchant, this revolutionary new way of interacting, communicating, paying and redeeming is clearly a win-win situation.

SO WHERE IS THE MOBILE WALLET MARKET HEADED?

A survey conducted by the Carlisle & Gallagher Consulting Group found that 48 percent of the respondents are interested in a mobile wallet. And the group predicts that by 2017, half of today's smartphone users will be using mobile wallets as their preferred payment method. The market is clearly growing, and an increasing number of vendors are getting in the game, confident that the mobile wallet will deliver on its promises. It is clearly a dynamic and exciting marketplace! We will continue to observe its evolution and report our findings back to you in a future report.

48 percent of the respondents are interested in a mobile wallet

That leaves 100% potential for anyone entering the mobile payments arena.

48% **50%** **100%**

By 2017, half of today's smartphone users will be using mobile wallets as their preferred payments method.