



WHITE PAPER

Digital Wallets in Depth: What are They? How do They Work? And Where do Credit Unions Fit in?

Digital wallets are a hot topic in financial services—and with good reason. According to a survey conducted by PayPal™, a whopping 86 percent of us would rather leave our traditional wallets at home in favor of a mobile alternative. As the technology develops and players in this space jockey for relevance, credit unions must position themselves to be leaders, without closing off their options as the market evolves.

It's a confusing space. Consumers may like the idea of a mobile wallet, but awareness of existing products is tentative. There is no dominant brand or category-defining product. Debate rages over who will “own” digital wallet transactions. And though credit unions can and should act now, the question of how looms large.

In this white paper, we examine digital wallets through the lens of what CO-OP Financial Services is calling the “3 E's”—Expectation, Experience and Engagement. Beginning with an overview of what digital wallets are, we'll take a closer look at how digital wallets are moving into the mobile space. We'll examine consumer expectations around these products. Then we'll dive in and see what consumer experiences are like in today's mobile wallet marketplace.

Where do credit unions fit in? We'll make recommendations on how credit unions can get themselves into mobile wallets now, and help sort out which areas to watch going forward.

Finally, we'll consider how this technology might gain real footing as we move forward into the digital future. Once engaged, consumers will almost certainly embrace this mobile alternative. For credit unions, the ultimate challenge is making sure that member engagement with mobile wallets is part and parcel of engaging with their credit unions.

Unpacking the Mobile Wallet

This white paper focuses on mobile wallets, which represent the area of greatest potential growth. Before we delve into what goes into a mobile wallet, though, let's take a step back and consider its familiar predecessor: the online digital wallet. What are digital wallets? BusinessDictionary.com defines “digital wallet” this way:

Software that resides on a buyer's computer and holds digital cash, and a digital certificate with a digital signature, as well as billing, shipping, and payment information for online transactions.

For many, the most familiar example of an online digital wallet is PayPal. Anyone who's made a purchase on eBay has likely used PayPal, and in fact it's become an easy way to pay across a number of online sites. Users set up accounts; enter payment, billing and shipping information once; and use their PayPal “wallet” to shop and pay on a variety of sites.

Mobile wallets offer some of the same functionality, but on a smartphone instead of a computer. Moving the wallet to a mobile device offers more than portability, though. In addition to basic functions like payments and identification, mobile wallets create interactive shopping experiences. So, for example, a mobile wallet might use geolocation to determine where a consumer is shopping, pull relevant coupons and loyalty cards for that store, present cardless payment options, and maybe even facilitate the transaction.

Another commonly cited mobile wallet feature is person-to-person payments. Friends attempting to split a dinner check no longer have to reach for their cash—or ask the server to split the bill between 12 different credit cards. They simply exchange money via their smartphones, using their mobile wallets.

Whether these functions are truly available on today's mobile wallets remains to be seen—and will be the topic of further discussion later on in this paper. But speaking hypothetically, here's a quick "wish list" of mobile wallet features:

- Cardless payments to merchants
- Mobile person-to-person payments—sending and receiving
- Electronic receipts
- Coupons, special offers, loyalty programs
- Geolocation
- Plane or event tickets
- Identification and insurance information

A few additional thoughts to consider: For a mobile wallet to be useful, it has to connect with merchants and other wallets. A great mobile wallet isn't especially great if it doesn't connect with a wide range of merchants—and the individual people one wishes to exchange money with.

Interactivity is also important to the shopping experience. What sets mobile wallets apart from regular wallets is dynamic interaction. Any old wallet with an active payment card in it will enable you to pay for the goods you want to buy. But a mobile wallet will use geofencing to alert you when you're nearing a store for which you have a gift or loyalty card. It shows you coupons and rewards. It may even help you select the best method of payment, based on available credit or your interest rate.

Security is the top concern for would-be users, so this ranks among the most important features a mobile wallet can have. If credit unions can position themselves strategically here, they have an advantage because they are already trusted partners.

A final factor to consider: For credit unions, a good mobile wallet is one that works as part of the financial services package. We'll talk more about how some mobile wallet options threaten to disintermediate credit unions later on. For now it's worth noting that credit unions need to embrace this technology or risk losing wallet share entirely. If mobile wallets are the payment systems of the future, credit unions need to participate.

EXPECTATION: What do consumers want?

Now that we've seen how mobile wallets might work in an ideal world, let's take a peek at what consumers expect from mobile wallets—and how they're using wallets now.

First, a question: Is there actual demand for mobile wallets, or is this a solution in search of a problem? Again, PayPal's Global Study 2013 revealed that 86 percent of Americans would prefer to leave their wallets at home. Top places they want to go wallet-free: the beach, the gym (or wherever they're exercising), the laundromat, the grocery store and restaurants. PayPal also found that 54 percent of Americans say they've been stiffed by someone, most often by friends who intended to split a meal check with them. Mobile payments make these kinds of social bad debts easier to avoid.

Consumers might want the utility of a mobile wallet, but they're unsure how to get it. According to a Spring 2013 CMB Consumer Pulse study, "The Mobile Moment: Barriers and Opportunities for Mobile Wallet," only 50 percent of consumers surveyed even knew what a digital wallet was. Of those who were familiar with mobile wallets, a slim 22 percent looked forward to adopting one.

Lack of awareness leads to lack of usage. Thus, mobile wallets haven't really exploded on the scene yet. Only 16 percent of CMB Consumer Pulse respondents had used a mobile wallet in the past six months. Another 22 percent expected to try one in the next six months. And the biggest group—62 percent—said they neither used nor planned to use a mobile wallet in the next six months.

FAMILIARITY VS. USAGE



Source: CMB Consumer Pulse, Spring 2013: The Mobile Moment: Barriers and Opportunities for Mobile Wallet

Apparently, there is a gap between the large number of consumers who expect to abandon their regular wallets and the minority who are ready to try one out now. What's the problem? The chart below indicates what consumers told CMB Consumer Pulse about why they haven't tried using a mobile wallet.

To summarize the chart, consumers expect to like this technology, but a raft of concerns, spotty awareness and low usage stand in the way of adoption. In its report, "Forecast: Mobile Payment, Worldwide, 2013 Update," Gartner, Inc. predicts 245 million people worldwide will use mobile payment technology this year, generating \$235 billion in transactions. By 2017, Gartner expects the ranks of mobile payment users to reach 450 million, with \$721 billion in transactions. But this is assuming that the gap between consumer expectation and experience will narrow, allowing this technology to grow into its potential.

EXPERIENCE: How Mobile Wallets Work Now

That said, mobile wallets aren't entirely a technology of the future. They are, in fact, here now. What is the state of the art in mobile wallet technology? Who are the players to watch? And what kinds of experiences are consumers having with the available products?

Unfortunately, the current mobile wallet experience is uneven at best. If there's a theme to this space, it's disagreement. How so? There is, for starters, little consensus on what a mobile wallet actually is. Our earlier "wish list" of mobile wallet features is precisely that: Actual features vary from wallet to wallet. There's also no dominant brand in this field. Even worse, many of the biggest players are completely unknown to the average consumer.

Ambivalence plays out even in the technology that drives mobile wallets. A split exists between near-field communications (NFC) and cloud-based apps. Here's a brief overview of the debate:

NFC offers contactless communication between a consumer's device and a merchant's POS terminal. Familiar examples of this technology at work are Visa® payWave and MasterCard® Paypass™. If you've used this technology—or if you've seen the terminals in stores—you've seen NFC in action.

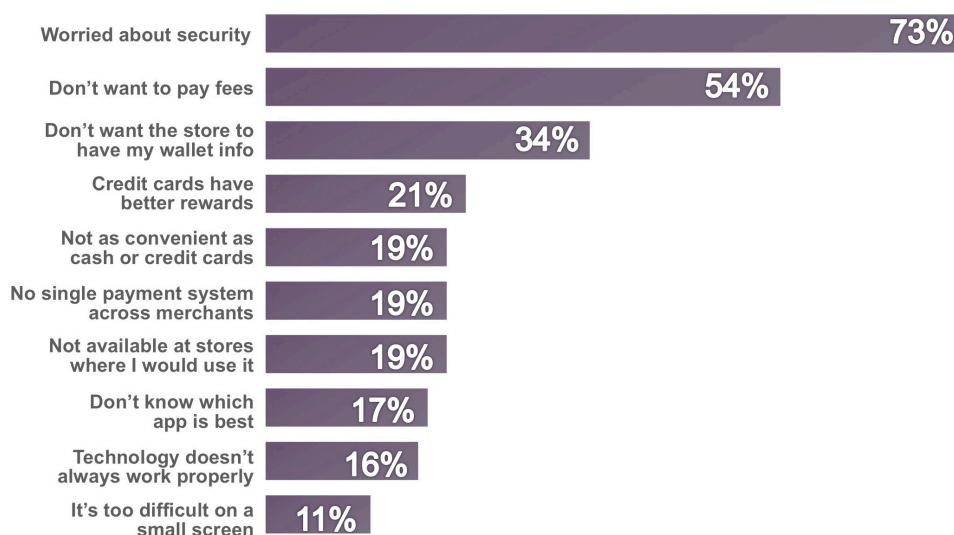
On the other side of this debate are cloud-based apps. Where NFC operates via a chip embedded in the consumer's device, apps store information in the cloud, bypassing NFC altogether.

Which product is superior? The best answer is probably, "It depends." NFC advocates love their technology. Because it houses the consumer's information on the device, it's secure. It operates with a tap, instead of requiring users to wait for an app to open. Proponents say NFC's geolocation features are more accurate—and therefore more useful.

What's the downside? Despite its potential for cool, NFC isn't being used as widely as one might expect. In its report, "NFC Mobile Payments Market update—Business Models and Forecasts 2012-2017," Juniper Research estimates that there are 50 million NFC-enabled handsets in use in the U.S. and Canada in 2013. By 2014, that number will rise to 86 million—and will rocket to 239 million by 2017. With the notable exception of Apple, most phone manufacturers are now including NFC in their new smartphones.

However, usage isn't heating up yet. Of the native NFC handsets in use in North America, Juniper estimates that only 3 percent are being used for payments this year. Next year, that number is expected to rise to 12.9 percent. And by 2017, we could

Which of the following reasons prevent you from using a mobile wallet?

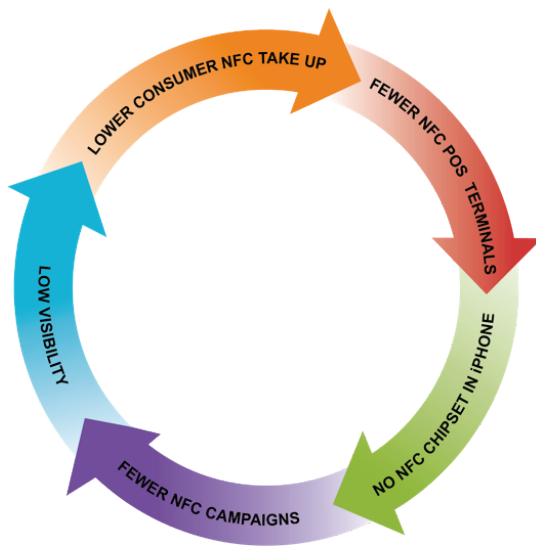


Source: CMB Consumer Pulse, Spring 2013: The Mobile Moment: Barriers and Opportunities for Mobile Wallet

see just over 50 percent using their NFC-enabled phones to make payments.

But that will require retailers to adopt NFC-enabled POS terminals. Some insiders expect retailers' NFC capability to increase as merchants update terminals to accommodate EMV (chip-and-PIN card technology), the assumption being that merchants will install terminals that work with both technologies. But changes in the payments area are historically slow. Additionally, Apple's decision not to include an NFC chipset in its iPhones has had a quelling effect.

So begins a vicious cycle: Low retailer participation and the exclusion of iPhones results in fewer NFC-based products and campaigns, which means lower visibility and less consumer adoption. NFC still shows potential, but its growth is far from meteoric.



Source: Juniper Research: NFC Mobile Payments Market update—Business Models & Forecasts 2012-2017

On the cloud-based side, the challenges are slightly different. Yet the results are similar. To get a clear picture of how cloud-based wallets work, we took PayPal's mobile app out for a spin. PayPal's promotional video promises a soft-focus world where parents pay their kids allowances via phone, shoppers scan in their own purchases and initiate payment, and everything works in harmony.

But in reality, the nearest recognizable merchant we could find that would accept our PayPal wallet was a horseback riding stable 12 miles away. This wallet doesn't require NFC, but it does require that both the sender and recipient use PayPal—and even with PayPal's considerable reach, that can still add up to a spotty experience. PayPal is backing its mobile wallet product with a complementary free business app and card reader called PayPal Here®. It's an attractive product for small-business owners, but it's still getting established.

Bottom line: PayPal's wallet app and the handful of other wallet products we tried aren't bad products. If you can find a place to use them, they're actually functional and fun. But the overall experience still falls short of expectation. If it's possible to conduct a credit or debit card transaction virtually anywhere in less than five seconds, the nascent usability of mobile wallets simply can't compete.

Jockeying For Relevance

There are other barriers to excellence in this space, and one has to do with who will profit from mobile wallet transactions. So far, payment cards that are used in mobile wallet transactions still earn interchange income for card issuers. But if you look at the lineup of brands behind some of the leading mobile wallet products, you'll see that there's a potential for disintermediation. MCX—a mobile wallet backed by Walmart, Target and a complement of retailers—may be a play for an increased share of interchange fees. And Isis™—a joint venture between wireless phone providers Verizon, AT&T, and T-Mobile—may ultimately leave card issuers out of the payment loop altogether.

Big players are investing in this space. But what's interesting is that even big, innovative companies aren't necessarily making headway. Six months ago, Google Wallet was the product to watch. Lately, the trade press has been all but proclaiming its death.

Mobile technology icon Apple remains a wild card in this field. The company has conspicuously left NFC out of its iPhone 5, leaving industry speculators to wonder what the game plan is. They've filed for a patent on a digital wallet product, the details of which are still vague. With millions of iPhone users already in play, the potential for an embedded app, and the trust of its constituency, Apple could conceivably take over the mobile wallet market in one fell swoop.

Even without a fully-featured wallet product, Apple is making inroads. Passbook, Apple's current wallet offering, comes preloaded onto every iPhone. While it doesn't allow users to carry and deploy credit and debit cards for payment, Passbook does enable storage and usage of proprietary gift cards from participating merchants. CashStar, the company that makes the digital gift cards used in Passbook, reported in USA Today that "millions of dollars" in gift cards have been added to Passbook since it debuted in fall 2012.

Security-wary consumers who aren't ready to load their credit and debit card information into a mobile wallet apparently are comfortable loading limited-value gift cards into Passbook. As users become accustomed to using Passbook for non-threatening transactions like these, they may be warming up for a full-blown iPhone wallet when it's available.

Though Apple is nearly always a player to watch, big brands aren't the only factor to consider. For all the infighting and fragmentation that's going on in mobile wallets right now, an upstart with the right technology could certainly appear out of

nowhere and win the day. There's no dominant player—and no dominant experience—yet.

The Trajectory of Growth

Still, this is a growing market. Although the U.S. lags behind the Far East, China, Africa and the Middle East, mobile wallet usage is up—and it's on the rise. In its report, "Mobile Money Transfer & Remittances—Business Models & Monetisation Opportunities 2011–2016," Juniper Research expects the average number of active mobile wallet users making domestic transfers in the U.S. and Canada to more than double between 2011 and 2013—going from 2.3 million to 5.4 million. By 2016, that number is projected to nearly double again to 9.4 million. That's growth but it's tentative.

When will mobile wallets become mainstream? It's anyone's guess. As we saw in our discussion of the "vicious circle" of NFC rejection, several factors have to line up for real adoption to take place:

- **Use of smartphones**—which is already widespread and growing. The majority of cellphone users now have smartphones
- **Merchant availability**—currently spotty at best
- **Technological congruity**—too many disparate systems don't add up to a common experience
- **Real brands**—allowing consumers to know what's out there and what to expect

For mobile wallets to reach their true potential, everything depends on critical mass. For right now, we're still firmly in startup mode.

Where Do Credit Unions Fit In?

Given that expectations are high, confusion is common and consumer experience is likely to be fragmented, how do credit unions fit into the picture?

The first step might be to take a deep breath and exhale. While there is a lot of interest and activity surrounding mobile wallets, this opportunity hasn't passed credit unions by. The gap between expectation and usage is still wide, which makes this the perfect time to get involved.

But how? CO-OP has several recommendations, each with an eye toward early action and manageable involvement:

- **Encourage adoption.** Most of your members probably aren't using mobile wallets now. If you encourage them to do so—especially in tandem with using your payment cards—you increase the chances that they'll put your cards into their wallets. Getting in on the ground floor is an important first step.
- **Keep your options open.** CO-OP is taking a nonexclusive approach to wallets; we think that's a good approach for credit unions as well. Rather than trying to commit to one product, why not encourage members to choose their own (or try many)—all with your cards in hand?
- **Focus on mobile payments.** People aren't adopting wallets as quickly as they are mobile payments. Aligning yourself with the mobile payment experience is an excellent way to get members to associate you with mobile wallets in the future.
- **Stay alert.** This market is evolving; it's important that you evolve with it.



Digital Wallets

Average number of **active mobile users making domestic transfers** in the U.S. and Canada is expected to **more than double** between 2011 and 2013. By 2016, that number is projected to **nearly double again**.

2.3

million users

2011

5.4

million users

2013

9.4

million users

2016

Source: "Mobile Money Transfer & Remittances—Business Models & Monetisation Opportunities 2011-2016" – Juniper Research

Begin now by getting your credit union's cards into mobile wallets. This strategy is not only easy, but it's also smart. You don't have to choose the winning technology. You don't have to create or mobilize your own new technology. Even if things change in the future, there's no real downside to being in today's wallets. And, for the record, interchange works the same in wallets as it does anywhere else.

Taking an active role in getting members to try this technology offers several advantages to credit unions. It positions credit unions at the front of this trend, opening conversations about security, card benefits and convenience features, and driving home the message that credit unions are on point with new technology. At the same time, consider mobile wallet transactions as a valued portion of your overall growth. If increased card usage is a worthy goal overall, why not build usage through mobile wallets?

Here are a few ideas to consider for encouraging mobile wallet usage when wallets mature:

- **Create rewards** tied to wallet transactions.
- **Run contests** to incentivize adoption.
- **Use content marketing** to promote adoption. Showing credit union staff or members road-testing wallets and reporting their results might inspire members to dive in—with your credit union's cards at the ready.

Additionally, remember that keeping your card top-of-wallet in the mobile sphere is largely the same as it is anywhere else. Sharpening your card programs is a smart tactic now:

- **Evaluate your programs.** Are they meeting your members' needs?
- **Promote yourself.** Consumers are using credit again, so this is an excellent time to remind them what makes your cards competitive.
- **Use analytics.** If you aren't already using analytics to track interest and usage, get going. Knowing what your members are up to is one of the most important advantages you can give yourself.
- **Mobilize.** As consumers move toward mobile wallets, credit unions should position themselves as mobile leaders. If your credit union isn't already using mobile banking, don't wait.

CO-OP Connect users have an easy—and free—way to add mobile wallet functionality. Sprig™ by CO-OP evolved out of CO-OP's shared branching interface, and it operates both online and via mobile device. Sprig offers digital account management, transactions between credit unions, Me2You transactions within participating credit unions, remote deposit capture and—soon—Me2Anyone payments. Best of all, Sprig operates on a real-time good funds model. Rather than waiting days for payments to ride the ACH, Sprig users see their transactions post immediately: a key feature for mobile-minded consumers.

ENGAGEMENT: How and When Will Wallets Take Off?

Credit unions can and should pursue mobile participation now. But that still leaves us with a very important question: How and when will mobile wallets truly take off? How will they go from being an emerging technology to an everyday tool?

Historically, changes in the payments area happen slowly. EMV card technology has been in existence since 1994, but it's only beginning to gain acceptance in the U.S.—and even then, with lukewarm enthusiasm. The payments system has so many moving pieces that large-scale change takes time.

Then again, there's plenty of anecdotal evidence that mobile wallets could catch on quickly once the stars are aligned. Many of the elements that make a mobile wallet work are already in place—and in use:

- **Mobile banking**, including mobile P2P, is available at many credit unions already.
- **Proprietary payment cards and apps**, such as those being used by Starbucks and Dunkin' Donuts®, are popular.
- **Digital loyalty cards, apps, coupons and e-receipts** demonstrate an obvious advantage over their conventional counterparts.
- **Electronic ticketing** for air travel, public transit and event tickets are fast becoming the standard.
- **Geolocation** native to smartphones has all but replaced the standalone GPS.

With so many pieces already in place, rapid widespread adoption isn't hard to imagine—and if it does happen, expect the transition to be seamless. Think of how consumers made the switch to smartphone photo galleries. Back in the day, if someone asked to see a picture of your kids (or pets or latest vacation), you would pull out printed photos from your wallet. Sometimes these photos would be outdated and tattered. Often, they didn't depict whatever it was you were trying to show. But now, nearly every smartphone user has a gallery of photos, new and old. The transition didn't happen deliberately, or with effort. It happened automatically, because smartphone photo galleries are simpler, easier, more accessible, convenient, available and fun.

If the same adjectives applied to mobile wallets, would consumers make a similar switch? It's hard to imagine why they wouldn't.

Cooperation Brings Engagement

Right now, the best moves for credit unions are to get members using mobile wallets, sharpen card programs to keep cards top-of-wallet, and adopt mobile technology enthusiastically. But as this emerging marketplace evolves, the strategic demands placed on credit unions are likely to change. For individual credit unions, keeping up with what's happening in developing technology can be a real challenge. Actually deploying that

technology in a timely and productive manner can be even more challenging.

Cooperation is critical. The risks and costs of developing individual solutions in the mobile wallet space are beyond prohibitive. Add in a high difficulty factor (remember, Google is struggling with it) and the way forward becomes clear. Leveraging the cooperative model is the only viable way for most credit unions to compete. Choosing the right products—and forming strong alliances—is vital.

QUICK GUIDE TO TERMS

App—(Application) Typically a small, specialized program downloaded onto mobile devices: the best GPS apps for your iPhone.

EMV—(Europay, MasterCard, Visa) An international standard for smart credit cards that have a built-in CPU chip. Deployed with brand names such as Chip and PIN and IC Credit, the smart card provides greater safety than a magnetic stripe, because it can support sophisticated security methods and make decisions on its own.

Geofencing—Geofencing is a feature in a software program that uses the global positioning system (GPS) or radio frequency identification (RFID) to define geographical boundaries. A geofence is a virtual barrier. Geofence programs allow an administrator to set up triggers so when a (mobile) device crosses a geofence and enters (or exits) the boundaries defined by the administrator, an SMS or email alert is sent.

Geolocation—Geolocation is the process of finding, determining and providing the exact location of a computer, networking device and equipment. It enables device location based on geographical coordinates and measurements. Geolocation commonly uses global positioning system (GPS) and other related technologies to assess and specify a geographical location.

GPS—(Global Positioning System) An electronic system that uses these satellites to determine the position of a vehicle, person, mobile device, etc.: The car is equipped with GPS, so I'm sure we won't get lost.

P2P Payments—(Person-to-person payments) is an online technology that allows customers to transfer funds from their bank accounts or credit cards to another individual's account via the Internet or a mobile phone.

POS Terminal—(Point-of-sale terminal) A point-of-sale (POS) terminal is a computerized replacement for a cash register. Much more complex than the cash registers of even just a few years ago, the POS system can include the ability to record and track customer orders, process credit and debit cards, connect to other systems in a network, and manage inventory.

Mobile wallets are a natural area of interest for CO-OP, and we're committed to positioning ourselves and our credit union members at the leading edge of this emerging technology. We offer a real-time good funds model, because your members don't want to wait days for the ACH transfer to come through. We feature state-of-the-art security, because that's a top concern for prospective wallet holders. Our mobile solutions are easily integrated into existing CO-OP infrastructure. And our current products—Sprig by CO-OP, CO-OP Mobile and CO-OP Bill Pay—enable credit unions to mobilize now.

There's more to come. Before the close of 2013, CO-OP expects to roll out Me2Anyone payments via Sprig by CO-OP. We're working to develop new strategies for keeping your credit union cards top-of-wallet. And we're developing additional mobile and virtual integration options for your credit union. We're only beginning to innovate in this important space and that's precisely what this space requires.

In a field where disruptive innovation is not only possible but likely, the best defense credit unions have is to take extraordinary measures to deliver what their members need: excellent, secure, leading edge payments and access from a trusted financial partner.

At CO-OP, we are constantly working to provide credit unions with that advantage, so that you're able to offer your members not only the best and most brilliant new innovations, but to do so in the context of good business. We know how important it is to address new technology, but we're also very aware that new technology must fit into your credit union's larger systems: It should work for your credit union.

We're also leaders in helping credit unions collaborate and share access to new technology, so our whole movement is lifted.

Mobile wallets have a way to go before they achieve their full potential. But we at CO-OP believe that the potential is there and there's no reason credit unions shouldn't capitalize on it.

To learn more about how digital wallets can benefit your credit union, visit www.co-opfs.org, email sales@co-opfs.org or call 800.782.9042, option 2.

If you're interested in learning more about Sprig, please email us at sprigsalesleads@co-opfs.org