Treasury Management

WELLS FARGO

Mobile technologies: the Innovation Lab

Emerging innovations that could benefit your business

March 2015

Together we'll go far

Wells Fargo is a trusted and familiar global brand that continuously invests in new solutions to help our customers succeed financially. Among these solutions are online tools that deliver more convenient and smarter ways to bank and do business. In fact, Wells Fargo has consistently led the industry in launching innovative online and mobile services.

Among the most exciting concepts are those being hatched in Wholesale's Innovation Lab, helmed by Bipin Sahni, head of Wells Fargo Wholesale Innovation and R&D. In the conference room nicknamed "Spark 23," the Lab is focusing on a wide range of new concepts, which once refined and ready for market could ultimately provide a better experience for our customers. "We're a small team, focused on big ideas," says Bipin Sahni. "Our goal is to take those big ideas and potentially fuse them so they add value to our consumers, our corporate customers, and our merchants."

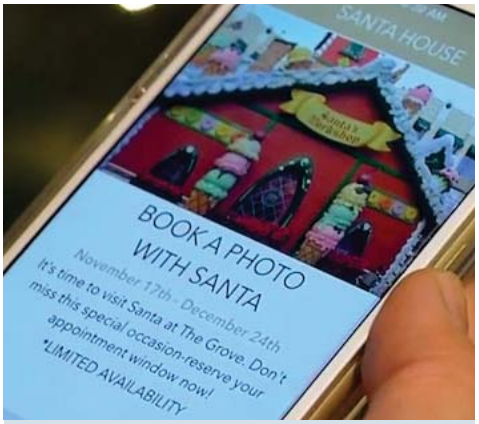
Innovation highlights

Mobile Solutions services

A collection of value-added mobile application programming interface (API) services in ongoing development aims at our commercial and large corporate banking customers such as U.S. colleges and universities, shopping malls, and government agencies. Available individually or in combination, customers can subscribe only to the ones that help meet their business needs.

Basically, an API is an app within an app. Using Wells Fargo's software development kit, or SDK, customers can embed the APIs within their existing mobile apps. These APIs provide valuable features and expanded functionality to the merchant or company's existing mobile app.

With these innovative in-app mobile-based services, businesses have the opportunity to reach out in real time to their customers, and provide them with location-based, personalized, relevant messages, as well as a wide range of options — to purchase gift cards, make payments, make reservations, receive offers, save/manage receipts, and more.



As part of our pilot, 6,500 customers used Wells Fargo's APIs to schedule and pay for their visits to Santa during the holiday season.

API pilot — Southern California. Our receipt image capture, reservation ordering system, and location-based services APIs are already in pilot at two major shopping malls in Southern California: Grove (Los Angeles) and Americana at Brand (Glendale). In fact, during the holiday season last year, 6,500 mall customers used these Wells Fargo's APIs to schedule and pay for their visits to Santa. We anticipate other APIs, such as loyalty programs, gift cards and offers, and parking, to be available later next year. (Related to location-based services; see also "Beacons," below.)

Beacons

A beacon is a super-small computer with a long battery life. It transmits location information to a mobile device, such as a smartphone or tablet, if the owner of the device has loaded the merchant's app and opted in to receive messages from the merchant.

With the help of beacons strategically placed around their stores, merchants can tailor the shopping experience for individual customers based on who they are and their approximate location. Based on this data, merchants can communicate directly in real-time to the customer's device and reward loyal shoppers with news about sales and special offers. The customers can use their Wells Fargo Wallet to make payments at the point of sale.

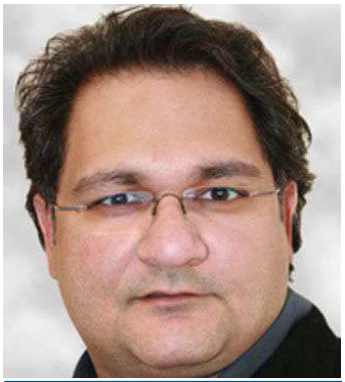
We are currently working with several different beacon manufacturers, and evaluating which products will add the most value for our customers. Some other uses for beacons are indoor mapping and guides in malls, parks, offices, and airport gates. Other functions include the ability to automatically silence cellphones in movie theaters or set up notification-free zones, make contactless payments, and share information using wearables (for example, smartwatches and health peripherals).

Biometrics

Privacy and security are always a top priority, and biometrics is a fundamental shift in the way we identify and authenticate customers. Unlike traditional identification such as driver's licenses and passwords, biometric identification relies on traits that are unique to an individual and more difficult to fake, such as fingerprints, voice analysis, iris patterns, facial recognition, and so on. Many of the newer Apple® devices have Touch ID, a sensor that reads stored fingerprints to unlock the user's iPhone or iPad, as well as to authorize purchases made on the device from the iTunes Store, App Store, and iBooks Store.

Wells Fargo is exploring various forms of biometric identification to determine their applicability and usefulness. Once we assess which types of biometric authentication would be most effective and helpful, we will make them available for business customers to leverage in their mobile apps through our SDK.

Current biometric pilots. We recently launched the Spark 23 pilot to test a new piece of equipment that uses the scan of a person's eyes as authentication to unlock doors to some doors to Wells Fargo offices instead of a badge, conventional key, or keycard. Another successful pilot in progress uses voice recognition as the means to identify and authenticate. We also plan to engage a few customers for a pilot using eye vein verification, which applies pattern-recognition techniques to video images of the unique veins in a user's eyes.



Bipin Sahni
Head of Wells Fargo Wholesale innovation R&D

"We are building the future here."

What's ahead

The Lab has already made significant progress in delivering innovative services for our customers. In 2015, we'll continue to explore emerging mobile technologies, particularly real-time data analysis. Also upcoming will be additional APIs for services such as loyalty programs, gift cards and offers, and parking.

Another area of great interest is wearables — clothing and accessories that incorporate computer and advanced electronic technologies. This is a hot, highly competitive field , and smartwatches particularly offer the potential of many extra uses for an item most people already own and commonly purchase. With Apple Watch due to launch early this year, we've already built a Wells Fargo Wallet app prototype that has the basic functions to make mobile payments to take advantage of that company's influence on consumers and the tech market.

Wells Fargo Startup Accelerator. In addition to testing and creating new technologies in the Innovation Lab, we've launched a program called the Startup Accelerator, which enables us to support a select group of promising young technology companies. We're looking for companies pursuing innovations in payments, analytics, big data, mobile, security, and infrastructure. Their creativity helps spark more innovation inside our organization and enhance future customer experiences.

During this six-month program, we work closely with the companies to develop and test their concept, and offer them $50,000 to $.5 million in funding for a small equity position in their companies.

We've already invested in three startups: Zumigo, a location-verification service, Kasisto, who is collaborating with us to build out an electronic personal banking assistant, and EyeVerify, a biometric ID method that uses eye veins, which are unique to each person.

Contact us to learn more

We'll provide more information about these developments throughout the year. Meanwhile, if you have questions or comments about the services highlighted in this report, please contact Bipin Sahni or his team.

1. Allied Business Intelligence, Inc., February 21, 2013. ABIresearch® forecasts that the wearable computing device market will grow to 485 million annual device shipments by 2018.