

Retail Made Personal

Make the shopping experience personal, relevant, and profitable



Executive Summary

For retailers, the goal is attracting, keeping, and upselling loyal customers. Today, mobile devices and apps are changing the way that customers shop—and giving in-store retailers more ways to personalize and monetize customer relationships. Aerohive's "Retail Made Personal" strategy defines a cloud-based approach to personalizing the retail experience for every customer. There are steps you can take today to personalize customer experiences and nurture brand relevance. You can gain advanced capabilities to help build loyalty and monetize loyal customer relationships while employing the flexibility of a cloud-based big data platform to take advantage of smart fixtures, displays, environmental tags, and other smart infrastructure in the future. At the same time, you leverage a secure mobile infrastructure that addresses Payment Card Industry (PCI) compliance requirements. Aerohive's proven Wi-Fi solutions enable retailers of all sizes to use mobility to increase productivity, engage customers, and grow their businesses.

What's New With Shopping?

Thanks to smart mobile devices and apps, retailers have more ways than ever to engage with their customers. There are now many ways for customers to find, evaluate, compare, and purchase products and services. But retailers want to do more than just sell. They want to better understand their customers. They want to be able to better anticipate what customers want and deliver it when they want it. And they want to build loyalty, so that customers think of them first among a universe of competitors.

Coupons and Loyalty Programs Are Going Mobile

It's not news that mobility is transforming retail. And many of the same tactics for building customer engagement in physical stores—such as coupons and loyalty programs—are being adapted for the mobile environment. According to Business Insider¹, the number of U.S. smartphone users using mobile coupons increased from 7.4 million in 2010 to 29.5 million in 2012 and is expected to hit 47.1 million in 2014. And mobile coupons are being used across all kinds of retail stores, from grocery to department to clothing stores.

Loyalty programs continue to successfully engage customers and are rapidly being converted to mobile apps. Online loyalty programs and coupons deliver valuable customer data to retailers and now mobile apps and coupons can begin to do the same.

Physical Stores Will Be Able To Gain Insights in New Ways

Traditionally, online retailers have had access to customers' shopping data and histories—a luxury that physical stores didn't have. That will soon change. When coupons and loyalty programs are combined with opt-in information shared with the system, like location-based

¹ Business Insider, January 24, 2014

data and intelligent devices such as those enabled with Apple's iBeacon technology, retailers can potentially use the data gathered for an extraordinary "opt-in" experience. That data analysis can be used to understand their customers' visits and continuously evolve the experience for their customers.

Stores Will Integrate More Technology Onsite

Which leads to another trend. According to Vend, in 2014, technology will start to become even more integrated in brick-and-mortar store. "2014 will be the year when stores say goodbye to boring, antiquated layouts. It has started to dawn on retailers that if they want to keep people in their stores, they need to make their locations interactive and engaging."² What will that look like? Well, Wi-Fi networks will be core technology for physical stores. Wi-Fi gives retailers the network they need to connect mobile devices, sensors, video, wearable computers, and any device with location-based technology implemented.

A common way of extending connectivity to shoppers outside of the main physical store is by deploying temporary or pop-up stores. Retailers need to quickly extend network connectivity for employees and enabling guest Wi-Fi access for customers at remote locations.

Cloud-based Management

Aerohive's approach places WLAN management in the cloud to dramatically simplify IT management and reduce operating costs. From a web-based interface, you can plan the network, define access policies, provision new sites, obtain ongoing monitoring, and generate reporting (see Figure 3). IT administrators can run the network from anywhere, which is particularly important when deploying or troubleshooting remote sites.

Aerohive makes it easy to choose the best solution. The management solution is available as a public cloud service on a subscription basis, or as a private cloud solution deployed on your premises. Approximately 80% of our new customers choose our public cloud solution. However, you can easily move between the two. For example, you can begin with our public cloud and move to a private cloud as deployment needs to evolve.

Customers' Expectations Have Been Raised

Interestingly, having personal mobile devices has raised people's expectations of interacting with everything in a similarly personalized way. According to Vend,³ "one-size marketing just won't cut it anymore." Customers want personalized experiences—which mobile app and loyalty programs can deliver. Increased personalization builds relevance, which leads to increased retail revenue. In fact, the probability of upselling a loyal customer

² Vend, Retail Trends and Predictions 2014 <http://www.vendhq.com/retail-trends-and-predictions>

³ Vend, Retail Trends and Predictions 2014 <http://www.vendhq.com/retail-trends-and-predictions>

is greater than 60%⁴, whereas the likelihood of a new customer spending more than the coupon amount is only 36%⁵.

Security Continues to be Primary

Recent breaches at high-profile retailers have put credit card and customer data security back in the spotlight. As data gathered from mobile coupons, apps, and devices increases, securing this data becomes even more challenging. Many retailers are implementing mobile strategies that allow customers to do everything from check item availability and compare products to make mobile purchases with their smartphones. Payment Card Industry Data Security Standard (PCI DSS) compliance is really only the beginning. Many customers also want to protect their shopping privacy and will trade off personally relevant offers for greater privacy assurance. These new capabilities place even greater security and compliance demands on wireless networks.

Getting Retail Ready

What do these trends mean? To date, wireless applications for retail have largely focused on improving operational and supply chain efficiency. However, as mobility revolutionizes customers' lifestyles, retailers must change the way that they see the customer experience. It has to be more personal. More relevant. and more connected. The way to achieve those goals is to gather and understand more data. With Wi-Fi, you now have a way to do both.

Personalize the Experience

How do you welcome a customer? How can you know if this is their first time in the store or if they are a repeat visitor? How do you directly deliver incentives, such as discounts? How do you notify them about items on sale or promotions that they will find interesting? And how do you extend these capabilities everywhere that your brand appears—whether in an anchor store location or a pop-up kiosk?

Today, the Wi-Fi network lets you use beacon technology, mobile apps, and motion sensors to answer these questions and create a personalized experience. For example, with beacon technology, retailers can prompt customers when they arrive at the store or in a specific department and ask if they want an associate to meet them. A "help" button in a mobile app can summon an associate. Wireless monitoring helps improve and personalize services by providing data that lets retailers reduce lines and wait times, make sales associates available, and direct customers to information or specific products.

Monetize Customer Advocates

Consumers' mobile devices and mobile apps offer the perfect vehicle for delivering product information, discounts, promotions, and social engagement opportunities that are

⁴ FiveStars Customer Loyalty Data Study, 2013

⁵ Forrester, U.S. Interactive Marketing Forecast 2011 to 2016

relevant to each customer. With data gathered from loyalty apps and coupons, over time retailers can incent repeat visits and more closely tailor offers to individual customers. Location-based data can be used to prompt customers about a favorite brand on sale as they enter a department and tie specific offers to specific products.

Analytics data lets retailers track visit and walk-by frequency, repeat visits, and recent visits to identify premier customers and develop programs for increasing loyalty.

Gain Business Intelligence

In order to increase engagement, retailers need additional ways to gain insight into relevant information to provide content and services personalized to the consumer based on their preferences. Combining social media with services provided in store can help retailers increase sales, engage more, and turn their loyal customers into brand advocates.

Personalization, monetization, and increasing engagement—worthy goals, but where do retailers begin on the road to achieving them?

Aerohive Retail Made Personal

Aerohive Retail Made Personal is a roadmap that defines the path to making retail personal. There are steps you can take today to personalize customer experiences and nurture brand relevance. You can gain advanced capabilities to help build loyalty and personal relationships while being ready to connect to smart fixtures, displays, environmental tags, and other smart infrastructure in the future. Retail Made Personal includes:

- Aerohive Personalized Engagement Platform
- Advanced features
- Partnership with leading wireless provider partners

Aerohive Personalized Engagement Platform

The Aerohive Personalized Engagement Platform is a cloud-based approach to personalization that allows retail customers to deploy the network they need today and easily add personalization applications and technology without investing millions of dollars in equipment they can't prove works. Justify the infrastructure with what you can deploy today (Mobile POS, employee knowledge services, custom content, etc.) and rapidly iterate personalization technologies on the cloud platform to find the perfect experience for your customers.

The personalized engagement platform is built on a foundation of Aerohive intelligent access platforms, the enterprise-class Aerohive HiveOS operating system, and Aerohive's industry changing Cloud Services Platform.

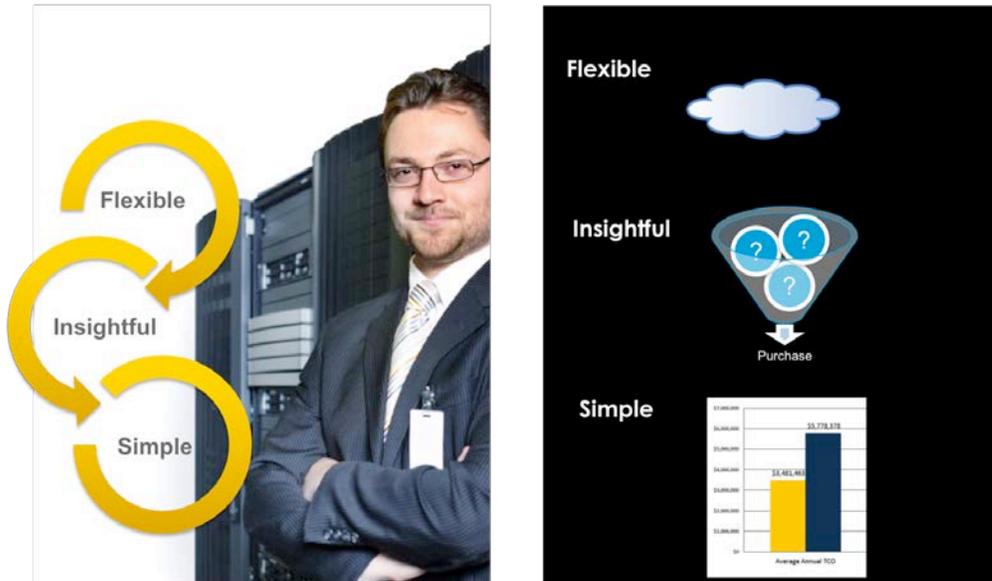


Figure 1. Aerohive Personalized Engagement Platform

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Flexible

Because making retail personal is not an exact science, the flexibility of Aerohive's Cloud Services Platform allows you to add or remove services with the click of a button. Since it's built on a network that is continually monitored for PCI DSS 3.0 compliance and vulnerabilities, you can always maintain PCI compliance. Quickly deploy wireless connectivity wherever it's needed, even in remote or temporary locations. Even store associates can plug in an Aerohive branch router or access point and the Aerohive platform automatically connects, acquires its configuration, and establishes a secure connection.

Insightful

As a cloud-based approach, Aerohive Retail Made Personal strategy delivers a rich network and client analytics platform for gaining insight into network and application usage. In addition, the data can help you reduce customer wait time, deliver help when customers need it, optimize marketing plans, and integrate with your social media plans.

Simple and Secure

We make it simple to plan, deploy, manage—and afford. Cloud-based management lets you easily manage thousands of Aerohive devices. And we can provide an analysis of operational efficiencies and cost of ownership savings when compared to traditional wireless implementations—often up to 50% savings.

Compliant

The Aerohive Personalized Engagement Platform is built on a flexible, high-performance Wi-Fi network with advanced security features that address PCI 3.0 requirements. Gain a highly secure way to personalize the shopping experience for in-store customers while complementing your PCI compliance goals.

Aerohive Infrastructure

Aerohive intelligent Wi-Fi and access platforms include the enterprise-class Aerohive HiveOS operating system. HiveOS enables Aerohive devices to organize into groups, which allows functionality like fast roaming, user-based access control, and fully stateful firewall policies without needing a centralized or dedicated controller. HiveOS provides:

- Leading Wi-Fi features, including Service Level Agreement (SLA) compliance, airtime management, and built-in spectrum analysis
- Routing features to deliver functionality to remote locations with zero-touch deployment
- Switching features combined with identity-based routing, security, and contextual policy enforcement
- Security measures including Wireless Intrusion Protection System (WIPS), strong authentication and encryption, intrusion detection, an integrated firewall, strong password enforcement, and logging of all wireless association and authentication requests

PCI 3.0 with Aerohive Wi-Fi Solution

Aerohive HiveManager is an out-of-band enterprise-class network management system that handles configuration, OS updates, and monitoring for thousands of Aerohive devices. HiveManager checks the network for PCI 3.0 compliance and reports on non-compliant Wi-Fi configurations and vulnerabilities as shown in Figure below. HiveManager reports include:

- Rogue Device Compliance provides details on rogue devices and stations
- Device Configuration Compliance identifies devices with weak access security, WEP, or open authentication.
- Intrusion Detection Compliance for MAC address and IP DoS
- Log Servers provide a list of external and internal log servers

PCI DSS 3.0 Wireless LAN Compliance Report

System Name: ah-demo
Reporting Time Period: 2013/08/01 00:00:00 to 2013/09/10 00:00:00
Version: HiveManager 6.1r6

6.5.10	<p>Pass</p> <p>Reason: Devices support secure authentication access using https and ssh.</p>	<p>Broken authentication and session management.</p> <p>Secure authentication and session management prevents unauthorized individuals from compromising legitimate account credentials, keys, or session tokens that would otherwise enable the intruder to assume the identity of an authorized user.</p> <p><i>Note: Requirement 6.5.10 is a best practice until June 30, 2015, after which it becomes a requirement.</i></p>
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Figure 2. Hive Figure 2. HiveManager PCI 3.0 Wireless LAN

Aerohive Social Login

Aerohive Social Login gives you business intelligence about your customers to better understand Wi-Fi usage, types of devices, demographics of users, and user access patterns. Consumers can use their existing social media credentials—including Facebook, Twitter, Google+, and LinkedIn—to access your Wi-Fi network, allowing you to receive detailed reports that visually present data about customers and their patterns, as shown in Figure 2. Aerohive Social Login allows retailers to simultaneously provide enterprise-class Wi-Fi to their consumers while gaining visibility into valuable demographics that help the retailer provide more personalized engagement opportunities and increase sales.

- Include loyalty card information to gain additional insights into VIP users and grant access to promotions or coupons.
- Fully-customizable captive web portal that promotes your brand and integrates social logins as well as loyalty program and mobile phone options:
- Detailed reports that display graphs about returning guests, frequency of visits, and other useful analytics



Figure 2. Aerohive Social Login Reporting

Comprehensive demographics supplied by user social profiles can be used to correlate and sort information about consumer interests, personal information, and location, as shown in Figure 3:

Social Logins

Social Logins | VIP Logins | Phone Number Logins

Search: Total: 53,701 Items per page: 100 / 538

Icon	Login	Name	Gender	DOB	Age Range	Email	Location	Last Visit	Visit...
	LNKD	Tina Zhao	Female	1996-11-10	18 - 20	tzhao@gmail.com	China	2014-05-2...	7
	TWTR	Twitter User	Female	1994-07-09	18 - 20	-	California, USA	2014-05-2...	10
	LNKD	Jason Jackson	Male	1990-08-05	21 - 27	jack@me.com	Indianapolis, IN	2014-05-2...	10
	FB	Andrew Larson	Male	1988-02-01	21 - 27	al Larson@gmail.com	San Francisco, ..	2014-05-2...	1
	FB	Danica Michaels	Female	1995-05-03	18 - 20	dani@yahoo.com	Muncy, IN	2014-05-2...	1

Figure 3. Consumer Social Login Activity

Aerohive Instant Connectivity

Aerohive provides solutions for remote branches and temporary retail locations, such as pop-up outlets or kiosks. Retail staff simply plugs in the router and has wired and wireless connectivity in minutes. The Aerohive device automatically finds its configuration and security policies and creates a secure connection to the corporate network, as shown in Figure 4. IT staff can manage all remote locations from a single, centralized location.

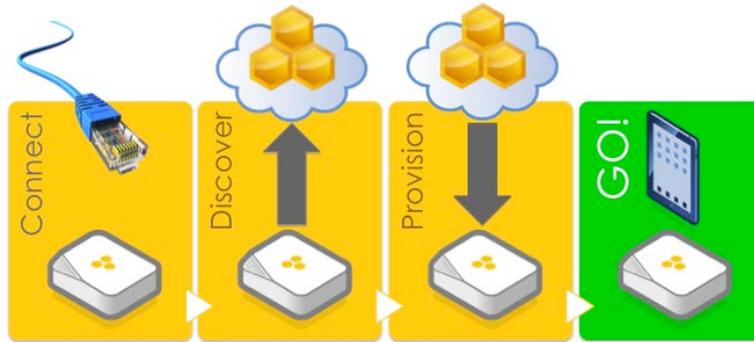


Figure 4. Zero-touch Provisioning

Why Aerohive?

Aerohive's proven technology enables organizations of all sizes to use mobility to increase productivity, engage customers, and grow their business. Aerohive's proprietary mobility platform takes advantage of the cloud and a distributed architecture to deliver unified, intelligent, simplified and cost-effective networks.

For More Information

Products:

<http://www.aerohive.com/products/overview.html>

Resource Center:

<http://www.aerohive.com/resources>

Promotions:

<http://www.aerohive.com/promotions>

About Aerohive

Aerohive (NYSE: HIVE) unleashes the power of enterprise mobility. Aerohive's technology enables organizations of all sizes to use mobility to increase productivity, engage customers, and grow their business. Deployed in over 13,000 enterprises worldwide, Aerohive's proprietary mobility platform takes advantage of the cloud and a distributed architecture to deliver unified, intelligent, simplified and cost-effective networks. Aerohive was founded in 2006 and is headquartered in Sunnyvale, Calif. For more information, please visit www.aerohive.com, call us at 408-510-6100, follow us on Twitter [@Aerohive](https://twitter.com/Aerohive), subscribe to our [blog](#), join our [community](#) or become a fan on our [Facebook page](#).



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