Wi-Fi–Enabled Value-Added Services: Gain Insights from Cisco Mobile Customer Research

White Paper

Authors
Stuart Taylor
Tine Christensen

Unlocking the Business Value of the Wi-Fi Platform

Competing with the virtual, e-commerce world is becoming increasingly challenging for real-world businesses. Retailers are constantly looking for ways to compete with online shopping, get more people into their stores, and get them to spend more. Traditional retailers have long envied the massive amounts of valuable data that online retailers have available to help them better understand customer behavior and implement winning marketing tactics. Online retailers know valuable information such as how frequently customers return, how long they spend on their sites, what the customers looked at but didn't buy, and where they went before and after coming to the site. With this information, online retailers can rapidly adjust prices, promote certain items, and reconfigure the layout of a site in almost real time to increase the probability and value of a sale. Businesses as diverse as hotels, banks, stadiums, airports, and large public venues are all looking for ways to get detailed data on customer activities in their facilities, so they can improve the customer experience and their bottom lines. The data and insights have not been available to bricks-and-mortar facilities, until now.

That situation is changing through the growing availability of Wi-Fi in business locations. Many retailers, hotels, and other businesses are increasingly offering Wi-Fi as a service that allows their customers to connect mobile devices to the Internet. Hidden in this valuable service is a vast amount of information and insight, which retailers and others can use to deliver tangible value to their bottom lines. Hypersensitive location information, device details, identification of returning customers, and sophisticated path analysis are just some of the customer data captured by Wi-Fi networks. Businesses are now realizing that the data and capabilities offer new ways to improve the customer experience and support a range of market-leading monetization models.

Aggregating the information available from Wi-Fi access points provides unique insights into where people go, their common paths, and their most-visited places. Hypersensitive location information allows venues to provide real-time mapping and directions - a Google Maps for the great indoors. In addition, location details can be used to create highly targeted advertising to customers. Retailers, hotels, banks, and other businesses are combining location and user information from Wi-Fi access points with customer relationship management (CRM) and customer loyalty data, then using the information to provide personalized experiences and offers at points of purchase or points of customer interaction in the venue.

For many businesses, these new location-based experiences and monetization models offer new ways to compete with e-commerce. However, very little is currently known about mobile users' appetite for these new services, their willingness to use them, or their privacy and security concerns surrounding these data-based services.

To learn more, Cisco conducted a survey of 620 U.S. mobile users to understand their needs and behaviors, current and future use of public hotspots, and unmet demands. The research findings are important because they allow businesses and service providers to understand the size of the opportunity, develop winning strategies, and optimize their Wi-Fi offerings and network deployments to derive greater business value. This paper is part of a series presenting the findings of the 2013 Cisco mobile consumer research. Additional papers address changing mobile usage, consumer behavior, and what mobile consumers want from public Wi-Fi.

Innovative Business Models

The Wi-Fi infrastructure supports exciting new opportunities for creating localized experiences and new monetization models. But these innovative ideas will only work if they are embraced by mobile consumers. To better understand consumers' interest and concerns related to the new services, Cisco created several different marketing concepts. Specifically, we tested the following three business models with mobile consumers, with the following results:

Model 1: Enhanced Retail Experience

Imagine a service that would enhance your in-store retail shopping experience on your own Wi-Fi-enabled mobile device at a large retailer, such as Walmart, Costco, Macy's, Best Buy, or Home Depot. The service could include such things as product information, an in-store location finder, integrated shopping lists, coupons for special offers, and automated checkout. These services would be delivered to your smartphone, tablet, or other mobile device through a free Wi-Fi service.

The average level of interest for this service was 3.1 out of 5, with 49 percent of mobile users being "somewhat" or "very" interested in the enhanced retail experience. The mobile services of most interest, in order of priority were scan and purchase items on mobile device, personalized offers, real-time directions in the store, and relevant product information.

Model 2: Enhanced Airport Experience

Imagine a service that would enhance your experience when you are in an airport. The service could include such things as airport information, mobile check-in, maps and directions, coupons for special offers at shops and food outlets, and flight and gate alerts. These services would be delivered to your smartphone, tablet, or other mobile device through a free Wi-Fi service.

The average level of interest for this service was 3.1 out of 5, with 46 percent of mobile users being "somewhat" or "very" interested in the enhanced airport experience. The mobile services of most interest, in order of priority were real-time flight updates and alerts, flight check-in using the device, advice on best check-in and security queues based on wait times, and real-time directions in the airport.
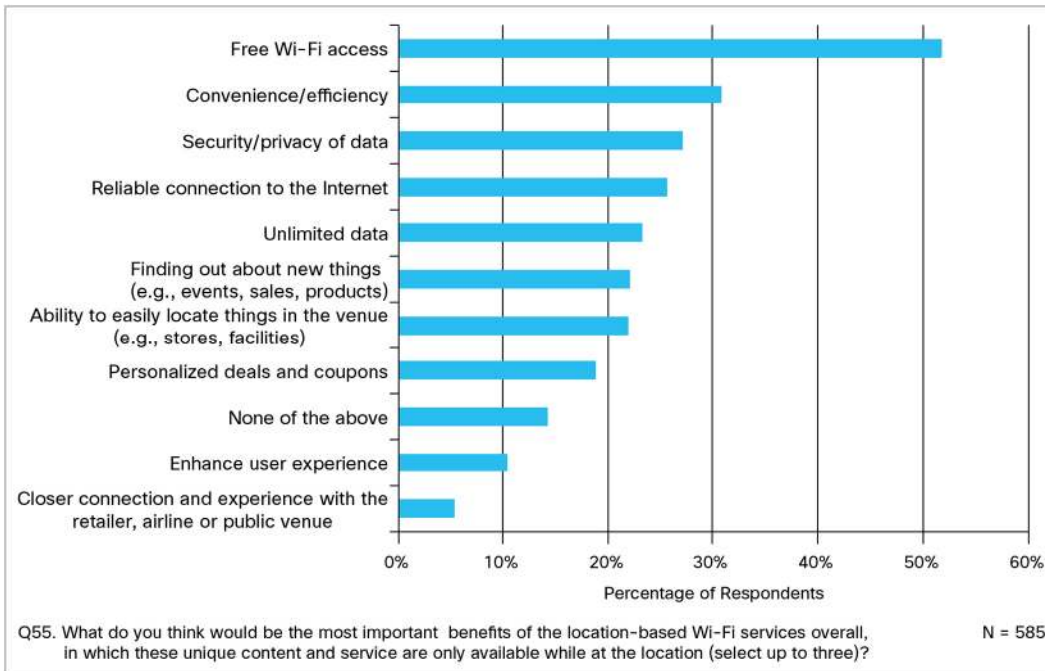
Model 3: Enhanced Public Venue Experience

Imagine a service that would enhance your experience on your own Wi-Fi-enabled mobile device while you were in a large public venue, such as a shopping mall, amusement park, sports stadium, arena, or resort. The service could include such things as venue information, maps and directions, coupons for special offers at shops and food outlets, and information on upcoming events. These services would be delivered to your smartphone, tablet, or other mobile device through a free Wi-Fi service.

The average level of interest for this service was 3.2 out of 5, with 47 percent of mobile users being "somewhat" or "very" interested in the enhanced public venue experience. The mobile services of most interest, in order of priority were personalized offers for food and shops; real-time directions to stores, vendors, and elsewhere; notification of events of personalized interest; and venue maps.
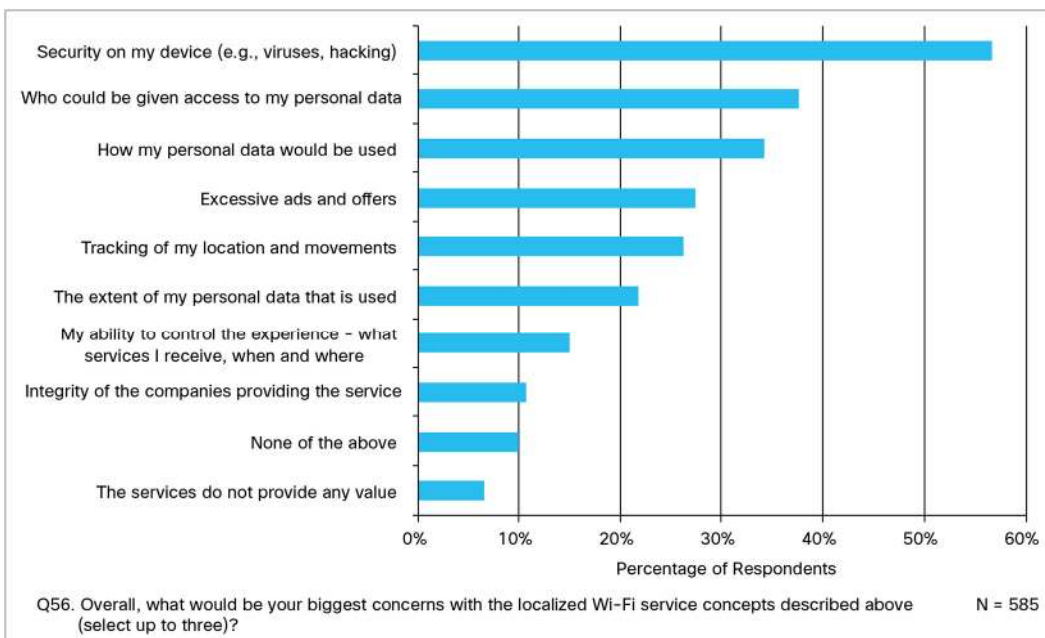
Everything is Local

Mobile consumers seem to be truly interested in new localized services and solutions as exemplified in the tested business models. In addition to access to free Wi-Fi, consumers valued the convenience and efficiency of the services, such as finding out about new things (for example, products, sales, or demonstrations), the ability to locate themselves in the venue, and being offered personalized deals or coupons (Figure 1).

Figure 1. Most Valued Benefits of Localized Wi-Fi Offers

Free Wi-Fi access
Convenience/efficiency
Security/privacy of data
Reliable connection to the Internet
Unlimited data
Finding out about new things (e.g., events, sales, products)
Ability to easily locate things in the venue (e.g., stores, facilities)
Personalized deals and coupons
None of the above
Enhance user experience
Closer connection and experience with the retailer, airline or public venue

Percentage of Respondents

Q55. What do you think would be the most important benefits of the location-based Wi-Fi services overall, in which these unique content and service are only available while at the location (select up to three)? N = 585

While mobile consumers would like to use these localized services, they have concerns about security and the use of their personal data. For example, they are concerned about the security of their device and its susceptibility to viruses or hacking as a result of using these localized services (Figure 2). They are also concerned about the types of personal data that would be collected, how it would be used, and who would have access to it.

Figure 2. Concerns with Localized Wi-Fi Offers

Security on my device (e.g., viruses, hacking)
Who could be given access to my personal data
How my personal data would be used
Excessive ads and offers
Tracking of my location and movements
The extent of my personal data that is used
My ability to control the experience - what services I receive, when and where
Integrity of the companies providing the service
None of the above
The services do not provide any value

Percentage of Respondents

Q56. Overall, what would be your biggest concerns with the localized Wi-Fi service concepts described above (select up to three)? N = 585

Getting Personal

These new localized mobile services typically require some personal data, whether that is location or a customer's profile, to fully deliver the promised customer experience and value. While consumers recognize that they will have to relinquish some of their personal information, they are still concerned about who will have access to that data and how it will be used.

In general, consumers are willing to sacrifice some of their privacy to derive the value of personalized services, but they want to have control over how it is used. As shown in Figure 3, mobile users are willing to use their customer loyalty information to sign in for Wi-Fi access and personalized services, but they feel strongly about having control over the experience. They want to control what data can be used, when and where, and they want to control the types and quantity of advertisements they receive. Consumers would also prefer the ability opt in to use the new services, rather than having to actively opt out of a service. Mobile consumers also want to have control over how ads and personal offers are delivered to them. They would much rather choose which ads and offers are delivered than have ads and offers appear automatically on their mobile devices.

Figure 3.   Perspectives on Personal Privacy and Control

	Disagree	Neutral	Agree	Mean
I am willing to use my customer loyalty information to sign-in for Wi-Fi access and personalized services	20%	25%	55%	3.4
I am willing to log in to Wi-Fi access using my social media log in for a more targeted experience	45%	23%	32%	2.7
I want to control the experience (e.g., specific types of ads I receive)	3%	15%	82%	4.3
I prefer that any ads and offers selected for me and delivered automatically, rather than ask for me to choose	42%	26%	32%	2.8
I would prefer to opt-in to services if I don't want them, rather than actively opt out	8%	17%	74%	4.1
I am willing to share personal information to obtain much more tailored and relevant offers and services	46%	21%	33%	2.7
I would like to have control over the experience - what data can be used, when, where, types of ads and offers, etc.	4%	2%	95%	4.6

Q57. To what extent do you agree or disagree with the following statements regarding the location-based Wi-Fi services concepts overall, in which these unique content and services are available only while at the location? Select one for each option on a scale of 1 to 5 where 1 equals "Strongly disagree" and 5 equals "Strongly agree"   N=585

While consumers like the idea of receiving personalized offers and recommendations on their mobile devices, they are only willing to share a limited amount of personal data in return. We asked people a series of trade-off questions regarding the type of personal information they would be willing to provide to receive different personal benefits. As is clearly indicated in Figure 4, people reach a threshold in the type of information that they will offer. Beyond that threshold, consumers do not feel that the value of the benefit justifies the value, or intimacy, of the personal data that they are being asked to provide. Consumers are willing to volunteer their email address, location, and information on previous visits in exchange for free Wi-Fi access, recommendations, and personalized offers and coupons. But they are not willing to volunteer more intimate details, such as their personal contacts, browsing history, or Facebook activity - even if providing the information means receiving special offers and information, from their favorite brands, for themselves and their friends.

Figure 4.   Personal Data Trade-Offs.

		Disagree	Neutral	Agree	Mean
Location and your information as a previous customer to receive ...	... Free public Wi-Fi	36%	27%	(37%)	2.9
Your location to receive ...	... Recommendations and coupons for nearby stores and restaurants	32%	25%	(43%)	3.0
Your e-mail address to receive ...	... Exclusive online or mobile discount codes	34%	23%	(44%)	3.0
Your contact's e-mail addresses to receive ...	... Discounts or reward points for each friend you views the company's ads	(63%)	21%	16%	2.1
Your browser history/behavior to receive ...	... Offers from brands and products you have viewed/researched online	(61%)	24%	15%	2.2
Your Facebook activity to receive ...	... Special offers for you and your Facebook friends who "like" an ad placed on your newsfeed	(65%)	22%	13%	2.0
Your purchase history to receive ...	... Reminders/alerts about warranties, recalls, and upgrades	44%	27%	29%	2.6

Q64. Many of the personalized offers and services now offered over mobile devices require one or more pieces of personal data to complete the personalization. Companies buy or request access to this data in order to provide products, services, and ads that are relevant to users. Below is a series of service-data combinations or pairs. For each pair, indicate how willing you would be to provide that information in order to receive that service or benefit. How willing would you be to provide...   N=585

This attitude to sharing personal data varies by age and other demographic factors. However, in all cases, there is a "data-sharing threshold," beyond which consumers are much less willing to share personal information to obtain more tailored and relevant offers and services. It is critical that operators and venue owners understand and carefully consider this threshold when developing localized Wi-Fi offers.

Delivering New Mobile Monetization Opportunities

Despite concerns about costs and how it might affect their current business models, many leading retailers, hotels, banks, sports facilities, and other large venues are embracing mobility and making it an integral part of their business and technical strategies. Many of these businesses are outfitting their facilities with public Wi-Fi access as a cornerstone of those strategies. Wi-Fi value-added services allow these businesses to compete on more equal terms with the data-driven world of e-commerce, and the financial returns more than justify the investment in Wi-Fi infrastructure. Best of all, as our study shows, consumers want these enhanced mobile experiences and the value that they offer. Of course, consumers have privacy concerns, but these concerns are not insurmountable and incompatible with the new localized services. A real opportunity exists for service providers to create these solutions as a means to unlock the business value of the Wi-Fi infrastructure and deliver the solutions as value-added, managed services to businesses.

Service providers must consider several important implications and potential strategies, when positioning themselves to capture the opportunities of delivering Wi-Fi localization offers:

- **Actively pursue new Wi-Fi monetization opportunities.** Develop new offers that enhance the customer experience, differentiate the service provider-managed service offering, and deliver new sources of revenue.
- **Take advantage of technical and business capabilities.** Combine the inherent capabilities of Wi-Fi with personal metadata and customer relationship (CRM) data to create compelling new localized offers.

- **Develop proactive personal data strategies and communications.** Undertake extensive customer research to formulate comprehensive data policies and strategies to allay customers' concerns.
- **Actively communicate privacy policies.** Make customers aware of privacy policies and the value delivered from the localized services.

Cisco firsthand experience and research indicate that service providers have a unique opportunity to create and deliver winning and lucrative localized services using the Wi-Fi infrastructure. Although developing these new services will require creativity and the development of a broader business ecosystem, service providers can unlock the business value hidden in the Wi-Fi platform. The time to act is now.

About the Survey

Cisco conducted an online survey of 620 U.S. mobile users in August 2013. The survey base was representative of the U.S. population in terms of age, income level, physical distribution, and employment status. Fifty-eight percent of respondents were employed: full-time (46 percent) and part-time (12 percent). The remaining 42 percent were not employed. These respondents included stay at home (9 percent), student (7 percent), unemployed (9 percent), and retired (18 percent). Fifty-two percent of respondents described the area in which they live as suburban, while other living environments consisted of urban (24 percent), rural (16 percent), and semi-rural (8 percent).

The study was also undertaken in Brazil, Italy, Japan, Russia, and the United Kingdom.

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For More Information

Additional papers related to the 2013 Cisco Mobile Consumer Research are available at:
http://www.cisco.com/en/US/netsol/ns673/networking_solutions_white_papers_list.html.

Authors
Stuart Taylor, Director
Service Provider Transformation Group
+1 978 936 0022
stuart.r.taylor@cisco.com

Tine Christensen, Director
Cisco Consulting Services - Service Provider Practice
+1 978 936 5713
tichrist@cisco.com

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