NFC Technology: How Changing Consumer Preferences Create New Opportunities for Retailers

February 2015
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Based on Observational and Survey Research Performed by Strategy Analytics in Autumn 2014
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Executive Summary</td>
<td>3</td>
</tr>
<tr>
<td>II. Consumer Preference for NFC Technology</td>
<td>6</td>
</tr>
<tr>
<td>III. Background: What Is NFC Technology?</td>
<td>10</td>
</tr>
<tr>
<td>NFC: Not Just for Mobile Payments</td>
<td>11</td>
</tr>
<tr>
<td>Millions of Devices Currently Support NFC</td>
<td>11</td>
</tr>
<tr>
<td>NFC Advances Over the Last Decade</td>
<td>13</td>
</tr>
<tr>
<td>IV. Six Specific Opportunities for Retailers &amp; Brands to Use NFC Technology to Improve Shopping Experience</td>
<td>15</td>
</tr>
<tr>
<td>Accessing Store Deals, Wi-Fi, and Rewards Accounts</td>
<td>15</td>
</tr>
<tr>
<td>Accessing More Product Information &amp; Store Inventory</td>
<td>17</td>
</tr>
<tr>
<td>Accessing Related Product Information</td>
<td>18</td>
</tr>
<tr>
<td>Accessing a Digital Shopping Cart</td>
<td>18</td>
</tr>
<tr>
<td>Accessing Large Item Product Information</td>
<td>19</td>
</tr>
<tr>
<td>Ordering Correct Consumables</td>
<td>20</td>
</tr>
<tr>
<td>V. Conclusion</td>
<td>23</td>
</tr>
<tr>
<td>Summary of Research Methodology</td>
<td>24</td>
</tr>
</tbody>
</table>
I. EXECUTIVE SUMMARY

You may have noticed that NFC (Near Field Communication) technology has become ubiquitous over the past year. Perhaps you heard about it in the news, or when you purchased a new smartphone, or saw the “N-Mark” on various electronics. To put it in straightforward terms, NFC is a simple, intuitive technology that lets consumers interact securely with the world around them with a simple touch (or tap).

“NFC was so much quicker and you don’t have to exit anything, just tap.”
- Research participant

With no need to launch an app, NFC is fast, seamless, and easy to use. In 2015, NFC is on track to be available in more than one billion smartphones, tablets, and other consumer electronics, including headphones, speakers, and wearable devices like smartwatches.

What does this mean for today’s connected consumers? Easy connections, faster transactions, and simple data sharing.

What does it mean for retailers and brand owners? Opportunity! Specifically, opportunities for the most innovative, customer-centric brands and retailers to positively differentiate themselves from competitors by connecting their online and in-store experiences like never before.

As shoppers become more savvy and knowledgeable about pricing and product value, they’re turning to technology to help them decode the abundance of product information, consumer reviews, and discounts available to them.
Retailers are bombarded with a wide range of technology-based solutions – barcodes, Bluetooth Beacons, geofencing, and more – that claim to improve consumer engagement and retention, but little reliable data exists to explain consumer preferences in retail technology.

NFC is the right technology now for retailers and brand owners to communicate to eager, yet busy, customers via targeted messaging, personalized marketing, and contextual information – all while respecting each consumer’s preferences. In addition, as the cost of acquiring new customers increases, NFC offers retailers and brands opportunities to build or enhance comprehensive loyalty and retention programs.

To help retailers and brands gain a solid understanding of what consumers prefer when it comes to in-store engagement and post-purchase technology experiences, the NFC Forum commissioned leading global consumer research firm Strategy Analytics to conduct an in-depth consumer preference study in Autumn 2014. The study included both observational research of retail scenarios (36 participants) and a web survey (1,038 participants).

This white paper highlights the results of that study and demonstrates six specific opportunities in which retailers and brands can use NFC technology during the customer journey to improve in-store experiences, generate more sales, and enhance customer loyalty and trust. Consumers had an opportunity to evaluate NFC, QR code, and Bluetooth Beacon (sometimes referred to as iBeacon) solutions to various in-store experiences.

“This is so much faster and it stores the receipts. The receipt and the speed. Wow! It’s crazy the amount of time we wait at stores.”
- Research participant
retail scenarios, and consumers in the study indicated a high level of interest in using NFC in these six retail scenarios:

- Accessing Store Deals, Wi-Fi, and Rewards Accounts
- Accessing More Product Information and Store Inventory
- Accessing Related Product Information
- Accessing a Digital Shopping Cart
- Accessing Large Item Product Information
- Ordering Related Consumables

In five of these use cases, more than twice as many consumers preferred NFC to the leading alternative. Now is the right time for retailers and brand owners to consider this rapidly emerging and customer-preferred technology for innovative physical-to-digital campaigns.

**Consumer Preference for NFC in Various Scenarios**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Using NFC</th>
<th>Using QR Code</th>
<th>Using BT Beacon</th>
<th>Web Browser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reorder consumables</td>
<td>61%</td>
<td>20%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Product info - large items</td>
<td>56%</td>
<td>23%</td>
<td>7%</td>
<td>14%</td>
</tr>
<tr>
<td>Related product info</td>
<td>50%</td>
<td>23%</td>
<td>10%</td>
<td>17%</td>
</tr>
<tr>
<td>Product info, check stock levels</td>
<td>49%</td>
<td>24%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>Connecting to Wi-Fi, view deals, etc.</td>
<td>43%</td>
<td>25%</td>
<td>14%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*total sample size: 1,038*
Overall, participants in both the observational research and web survey indicated a strong interest in using NFC both in retail and post-retail scenarios, and a stronger preference for NFC technology over competing technologies. For example, prior to participation in brand and retail technology simulations, participants played a game where they interacted with direct URL entry (via touchscreen keyboard), QR codes, and NFC while being timed.

When asked which method they preferred after completing the game, 76% of participants responded that they were very satisfied with NFC. In comparison, only half of

Participants Were Asked “How Satisfied Have You Been with Your Experience(s) Using NFC / QR Codes?”

- **QR Codes**: 53% Very satisfied, 36% Somewhat satisfied, 9% Indifferent, 9% Somewhat dissatisfied, 9% Not at all satisfied
- **NFC**: 76% Very satisfied, 19% Somewhat satisfied, 5% Indifferent

*For those that have used NFC (n=100) / QR Codes (n=561)*
respondents said they were satisfied with the QR code experience. As expected, direct URL entry was not preferred.

Across the retail and brand opportunities assessed in the study, **three significant benefits of NFC technology** emerged, pushing it ahead of competing technologies in consumer preference.

1. **Speed:** During the path to purchase, busy mobile shoppers demand ease of use and speed when it comes to in-store technology engagement. Study participants indicated that NFC provides the optimal shopping experience because it offers quick access to contextual information when they want it. To be able to get information by simply tapping, rather than having to launch an app or wait for a camera lens to focus, was perceived as a significant benefit to the consumer experience.

   “I prefer NFC because I have my child with me, and with the QR code I have to take time to find the app and then scan the barcode.”
   
   - Research participant

2. **Convenience:** 70% of study participants said that “NFC technology addresses real-world problems and inconveniences” that they have. They liked that they could use NFC regardless of what other function they were performing on their phones at that moment.

   One participant stated that simply tapping with NFC is easier to do when she has her child with her, because “with a QR code I have to take time to find the app and then scan the barcode.”
3. Control: Participants preferred NFC’s user-initiated “pull” approach to retrieving information compared to the “push” approach from Bluetooth Beacons. They felt the pull allowed greater control over what information they received and greater accuracy of that information. Consumers value credible information, especially when researching purchases on the go.

Qualitative feedback during this study suggests that participants perceive that the user-initiated NFC is more trustworthy than an unprompted message from a Beacon.

For busy shoppers, speed, convenience, and control are essential ingredients for securing their engagement. Since NFC is the only technology with all three benefits, retailers and brand owners should look to implement NFC technology over competing technologies within their stores and/or products to generate sales and enable optimal customer experience.

The recent news that Apple Pay added more than one million credit cards to their system within 72 hours of launch serves to validate consumer desire for NFC solutions – even beyond this research.

But as the data shows in this study, NFC is useful to consumers in non-payment applications. Even retailers who choose not to implement NFC for payments may implement in-store non-payment NFC applications to increase user engagement.
CONSUMER PREFERENCE FOR NFC OVER OTHER TECHNOLOGIES IN A RETAIL SETTING

NFC is the preferred technology across all retail opportunities assessed, for multiple reasons.

1. SPEED

It took consumers less time to complete tasks using NFC technology than other technologies.

- NFC: 47 sec
- QR Codes: 61.6 sec

“I like not having to launch an app or wait for an app to focus.”

2. CONVENIENCE

70% of respondents agreed with the statement: “NFC technology addresses real-world problems & inconveniences I have.”

- Agree completely: 36%
- Somewhat agree: 34%
- Neither agree nor disagree: 18%
- Somewhat disagree: 0%
- Agree completely: 0%

3. CONTROL

“I like to control what I want to access manually, rather than having information ‘pushed’ to me, as with other technologies.”

OVERALL SATISFACTION WITH NFC

76% of respondents reported being very satisfied with their experiences using NFC, of those who said they had tried it on their phone.

- Very satisfied: 76%
- Somewhat satisfied: 19%
- Neither satisfied nor dissatisfied: 5%
- Somewhat dissatisfied: 0%
- Very dissatisfied: 0%

NFC: Preferred by consumers

The right technology NOW for retailers & brands

Based on Web Survey & Observational Research performed by Strategy Analytics, Autumn 2014

View full-size infographic here.
III. BACKGROUND: WHAT IS NFC TECHNOLOGY?

At its core, Near Field Communication (NFC) is a short-range, low-power, wireless technology that enables mobile devices to connect, exchange information (data), and make transactions with just a touch.

As a standards-based connectivity technology, NFC harmonizes today’s diverse contactless technologies, enabling current and future solutions in areas such as access controls, consumer electronics, health care, information collection and exchange, loyalty and coupons, payments, wearables, and transport.

“NFC is really convenient and there’s no downside.”
- Research participant

NFC technology is supported by the world’s leading, communication device manufacturers, semiconductor producers, network operators, IT and services companies, and financial services organizations, and is compatible with hundreds of millions of contactless cards and readers already deployed worldwide.

NFC technology operates in three modes: 1) Peer-to-peer mode enables two NFC devices to communicate with each other to exchange information and share files; 2) Reader/writer mode allows NFC devices to read information stored on NFC tags embedded in smart posters and displays; 3) Card emulation mode enables NFC devices to act like smart cards, allowing users to make retail purchases, board transit systems, and gain secure access to electronically keyed buildings.
NFC: NOT JUST FOR MOBILE PAYMENTS
You may have seen NFC used in non-payment scenarios like these:

• Consumers using their NFC-enabled smartphones to obtain information that makes their daily routines more convenient and efficient, such as store discounts, map directions, ticket information, movie trailers, transit schedules and ticketing, and more.

• Consumers and businesses using NFC technology to authenticate access quickly and seamlessly, such as digitally signing documents, securely accessing the Cloud, and opening secure car, home, or office doors.

As this study shows, NFC tags on store shelves and even integrated into individual products and packaging will allow consumers to access personalized product information and coupons, as well as add products to their “basket” when tapping on NFC tags. For retailers and brand owners, non-payment applications of NFC, which can be deployed independently of payment systems, can lead to significant increases in shopper engagement and streamlined, intuitive connections between retailers’ in-store assets and their extended digital presence.

MILLIONS OF DEVICES CURRENTLY SUPPORT NFC
A few years ago, a handful of phones and devices supported NFC. Today, all of the top manufacturers sell NFC phones and devices, including Apple, Samsung, Nokia, Sony, HTC, LG, and more. The number of NFC-enabled phones has grown to 275+ models worldwide.
WHAT IS NFC AND WHAT DOES IT MEAN TO RETAILERS & BRANDS?
Near Field Communication (NFC) is a short-range, low-power, wireless technology that enables mobile devices to connect, exchange information (data), and make transactions with just a touch.

NFC OPERATES IN THREE MODES
- **Tag Reader/Writer**: Connect the world of apps with the physical world
- **Peer to Peer**: Connect devices through physical proximity
- **Card Emulation**: Connect to a common infrastructure (for secure transactions)

NFC FUN FACTS
- **Models of NFC phones available globally**: 275+
- **Percent of US purchasers buying physical goods using smartphones**: 2009: 14% 2014: 51%
- **NFC phones in market in 2015** 1 billion +

PROFILE OF RETAILERS & BRANDS USING NFC TECHNOLOGY
- Customer-centric: Understands mobile customer
- Technology-savvy: Omnichannel, Agile
- Focuses on differentiation

HOW RETAILERS & BRANDS CONNECT WITH BEST CUSTOMERS
- In-store services, Authentication, Social proof, Packaging, Contextual messaging, Trust-building
- NFC: NOT JUST FOR PAYMENTS
- Loyalty programs, Social sharing, Shopping cart, Couponing, Personalized marketing, Product information

NFC: Preferred by consumers
The right technology NOW for retailers & brands

Based on Web Survey & Observational Research performed by Strategy Analytics, Autumn 2014

View full-size infographic here.
In 2015, one billion NFC-enabled handsets will be shipped worldwide, according to IHS Technology. The NFC World website maintains an up-to-date list of all devices that currently support NFC. This projected growth points to a tremendous opportunity for developers, system integrators, and businesses in general.

NFC ADVANCES OVER THE LAST DECADE

Today’s NFC technology evolved from radio-frequency identification (RFID) technology that can transfer small amounts of data between two devices held a very short distance from each other. In 2004, Sony, NXP (formerly Philips Semiconductors), and Nokia collaborated to form the NFC Forum.

The NFC Forum was created to:
• Develop standards-based specifications that ensure interoperability among devices and services
• Encourage the development of products using NFC Forum specifications
• Educate the market globally about NFC technology
• Ensure that products claiming NFC capabilities comply with NFC Forum specifications
• Promote the NFC Forum N-Mark

The specifications developed by the NFC Forum bridge gaps between existing technologies and devices to enable new applications/devices.

The first NFC-compatible mobile phone, the Nokia 6131, was also launched during this time. Soon after, more NFC-enabled devices emerged and the technology expanded from
payment methods to sharing videos, links, and game invites among smartphones and other NFC devices.

In 2010, Google produced its first Android NFC phone, the Samsung Nexus S. Google Wallet, an app that used NFC to make mobile payments, first appeared in September 2011 on the Nexus S smartphone.

Since that time, NFC technology has been deployed in a wide range of non-payment applications, from advertising to consumer electronics. NFC has also appeared in consumer electronics from Sony, HP, Canon, Brother, and others to extend the functionality of those products.

Apple’s entry into the NFC marketplace was among the biggest tech news of 2014. Apple debuted NFC in its iPhone 6 and 6 Plus and is using the technology initially for mobile payments.

Apple also included an NFC chip in the new iPad Air 2 and Retina iPad Mini 3 to provide a secure element of Apple Pay information for in-app purchases. It’s widely assumed that Apple has bigger plans for NFC beyond mobile payments.

From 2014 to 2015, one billion NFC-enabled handsets will be shipped worldwide, according to Strategy Analytics. This growth indicates a remarkable opportunity for retailers and brands to offer consumers versatile technology that enables them to make simple, fast purchase decisions, creating a foundation of consumer engagement and trust.
IV. SIX SPECIFIC OPPORTUNITIES FOR RETAILERS & BRANDS TO USE NFC TECHNOLOGY TO IMPROVE SHOPPING EXPERIENCE

This research has shown that NFC is preferred by consumers over competing technologies to access information quickly and efficiently in retail and post-retail scenarios. The following six specific retailer and brand opportunities emerged from the study.

>> Accessing Store Deals, Wi-Fi, and Rewards Accounts
Participants were asked to evaluate the usefulness, ease, and speed of touching their NFC-enabled smartphones to an icon or poster at the store’s entrance in order to:
• connect automatically to a store’s Wi-Fi network
• be logged in automatically to account/rewards accounts and loyalty programs
• download a brand or store’s mobile app
• view deals, coupons, and special offers
• access other services the store has to offer

Results: 74% of respondents indicated some level of interest in using NFC for this type of experience in a retail store. 67% of respondents found this type of retail experience valuable to them, and 28% of respondents indicated this experience made their shopping experience much more valuable.
When asked which aspects of this opportunity were the most compelling to them, 85% of respondents said they are most interested in store deals and coupons (many mentioned NFC devices as useful for store-specific grocery shopping), and 78% said they are most interested in using NFC to connect to the store’s Wi-Fi network automatically.

Notably, the study found that in exchange for specific offers and personalized deals, consumers are more willing to give retailers basic information relating to themselves and less likely to disclose information relating to their family. The chart below shows that respondents are most willing to provide their gender, zip code, details of previously used coupons/discounts, and their age. However, they are less likely to give retailers information on the ages of other family members, their occupation, and the number of family members.

Participants were asked “what information would you be willing to share with your preferred retailers in exchange for specific & personalized rewards & deals?”

![Chart showing willingness to share information](chart.png)

Total sample size: 1,038
Accessing More Product Information & Store Inventory

Participants were asked to assess the efficiency and effectiveness of using their NFC-enabled smartphones to tap a product – in this example, a pair of shoes – to learn more about the product, and to:

- see other colors available
- check store inventory to see what colors and sizes were available to try on and/or purchase today
- have the shoes shipped to their home
- see social media photos and videos from celebrities or athletes using the shoes

Results: 77% of respondents indicated some level of interest in using NFC for this type of experience shopping for products such as shoes, and 45% would be very interested in having this experience at their favorite retail shops. 32% of respondents indicated this experience would make their shopping experience much more valuable, with a further 37% saying it makes it somewhat more valuable.

Most notably for retailers and brands, study participants showed the greatest interest in getting more product information (e.g. shoe colors available, 82%), and checking stock levels (81%) using NFC in this scenario. Out-of-stock issues are a leading cause of lost sales revenue. NFC technology has an advantage in driving consumers quickly and easily to information that can connect them with the intelligence they need to make a purchase either in-store or via a store website.
Accessing Related Product Information
Participants were asked to assess how effective and easy it would be to use their NFC-enabled smartphones to see related product and brand information by touching their phones to a shelf display enabled with NFC. In this case, the display was a “recipe of the week” from a well-known chef, utilizing a specific brand of pasta, pasta sauce, and cooking oils.

Results: 64% of survey respondents indicated some level of interest in using NFC to learn related product and brand information (e.g. recipes), while 34% were very interested in having this experience at their favorite retail shops. 59% of survey respondents found that using NFC to gather related product information was valuable to them, and 29% of respondents indicated this experience makes their shopping experience much more valuable.

Accessing a Digital Shopping Cart
Participants evaluated the usefulness, ease, and speed of using a digital shopping cart experience with their NFC-enabled smartphones, an experience that included:

- accessing more information about the product by touching their smartphone to the individual product
- an option to add the product to their “digital shopping cart” until they are ready to check out later (similar to the process of online shopping)
- checking out at special NFC PayPoint registers that are faster than the standard manual checkout process
- applying all available coupons and rewards programs automatically, and storing digital receipts in the shopping app
Results: 66% of respondents indicated some level of interest in utilizing a digital shopping cart when shopping, while 36% were very interested in having this experience at their favorite retail shops. 32% of respondents indicated that this experience makes their shopping experience much more valuable.

Respondents showed the greatest interest in applying store or brand coupons and/or rewards to purchases automatically using NFC in this type of scenario (83%). Further, 68% indicated some level of interest in using a digital shopping cart/quick NFC checkout and having receipts stored digitally.

>> Accessing Large Item Product Information
Participants were asked to assess the efficiency and helpfulness of using NFC technology to gather more product information about a large, expensive, and/or high-involvement retail item that would be seen as a major purchase (such as a washing machine). NFC eliminates the need to find a sales assistant and points consumers to important product information such as:

- product videos
- warranty information
- available accessories
- product specifications
- consumer reviews
- energy guides

Results: 73% of respondents indicated some level of interest in using NFC for this type of brand experience shopping for larger products, such as a washing machine, while 39% said
they were very interested in having this experience at their favorite retail shops.

68% of respondents found using NFC to gather more product information when shopping for large items valuable to them. 33% indicated that this makes their shopping experience much more valuable. The majority of respondents agreed that being able to access on-the-spot product and brand information, such as user reviews, videos about new and innovative features, and consumer reports, is useful when making large purchases.

>> Ordering Correct Consumables (such as printer ink and toner)

In the last scenario, participants were asked to evaluate the usefulness of using NFC-enabled smartphones to find information on related consumables, post-purchase, by tapping an NFC tag on a printer, which then identified the printer model number and the exact type of print cartridges required. The NFC-enabled smartphones also offered single-click links to retailers where consumers could purchase the correct cartridges instantly either for store collection or home delivery, along with the option to order other consumables such as paper.

Results: 45% of respondents were very interested in being able to tap a product they own and order exact replacement parts/accessories for it. 39% of respondents indicated that this experience would make their shopping and brand experience much more valuable, with a further 29% saying it would make the experience somewhat more valuable.
Overall, almost all participants found the NFC-compatible device to be a very useful way to, at minimum, find out the specific ink cartridge needed for their printer. In addition, all observational research participants indicated that NFC would be their preferred technology for reordering exact parts/accessories such as printer ink, as shown in the chart below.

Participants were asked “If your favorite brand offered the ability to order parts/accessories in this way, how would you prefer to order?”

- Using NFC: 61%
- Using QR Code: 20%
- Using Browser: 19%

Total sample size: 1,038
# Opportunities for Retailers and Brands

How to Provide a More Relevant, Convenient, and Enhanced In-Store Shopping Experience with NFC Technology

Summary Based on Web Survey & Observational Research Conducted by Strategy Analytics, Autumn 2014

<table>
<thead>
<tr>
<th>Engagement Technology Experiences</th>
<th>Interested in NFC for this experience*</th>
<th>Believe NFC makes experience more valuable*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessing Store Deals, Wi-Fi, and Rewards Accounts</td>
<td>74%</td>
<td>67%</td>
</tr>
<tr>
<td>Accessing More Product Information &amp; Store Inventory</td>
<td>77%</td>
<td>69%</td>
</tr>
<tr>
<td>Accessing Related Product Information</td>
<td>64%</td>
<td>59%</td>
</tr>
<tr>
<td>Accessing a Digital Shopping Cart</td>
<td>66%</td>
<td>62%</td>
</tr>
<tr>
<td>Accessing Large Item Product Information</td>
<td>73%</td>
<td>68%</td>
</tr>
<tr>
<td>Ordering Correct Consumables</td>
<td>73%</td>
<td>68%</td>
</tr>
</tbody>
</table>

*RESEARCH TAKEAWAYS
- 2/3 to 3/4 of consumers were interested in NFC.
- 2/3 of consumers believe NFC makes these experiences more valuable.

View [full-size infographic here](#).
V. CONCLUSION: THE TIME IS RIGHT FOR NFC TECHNOLOGY IN RETAIL

There are multiple factors currently in place for NFC technology to succeed now more than ever – especially in the retail and brand space.

First, the world’s two leading smartphone operating systems each have their own form of NFC payment solutions (Apple’s Apple Pay and Google Wallet for Android phones). The three main mobile operators in the US (AT&T, Verizon Wireless, and T-Mobile) have joined to create SoftCard, an NFC-enabled mobile payment solution. Mobile wallets have also enjoyed traction in Asia and Europe, with more rollouts planned for 2015. This momentum indicates that a solid foundation is in place to support NFC’s adoption and growth.

Second, non-payment NFC applications are also ready to thrive in the retail environment, whether or not NFC is enabled at the point of sale. Consumers who took part in this study indicated strong interest in using NFC to perform a broad range of retail operations.

Across all scenarios in the study, NFC was preferred by the majority of participants over competing technologies, including QR codes, Bluetooth Beacon, and mobile web browsers, because NFC technology provides a unique and desired mix of convenience, speed, and choice/control. This mix enables the more relevant, efficient, digitally enhanced in-store shopping experience that consumers prefer.
The versatility of NFC also lets retailers and brands extend their connections with consumers post purchase, to further nurture engagement-based consumer loyalty.

Therefore, progressive, customer-centric retailers and brand owners should look to implement NFC retail experiences in the near future, as it is clear that NFC is instrumental in establishing value-based personalized relationships with consumers by providing an optimal shopping experience.

Summary of Research Methodology

Strategy Analytics conducted observational research with 36 participants centered around unique NFC retail scenarios to further understand consumer perceptions around usefulness, usability, and security — and how compelling these are to consumers. Participants in the observational research were able to experience both NFC tapping using a mobile phone and QR codes across several of the use cases. In some instances, Bluetooth Beacon was also discussed as an alternative technology through storyboard configuration. All participant feedback was both audio- and video-recorded, and participants experienced each scenario individually to prevent any influence from other participants. This research was conducted in San Diego, California, USA.

Strategy Analytics also surveyed 1,038 consumers in the US via the web to further validate the findings from the observational research.

To qualify for participation in this study, consumers were asked to confirm that they owned a mobile phone that was used daily.
Quotas were imposed to ensure good sampling of participants by age (from 16 years+), by gender, and by device brand.

Acknowledgement of Contributors
Strategy Analytics would like to thank Thinaire and Cellotape. The materials and knowledge that they contributed made the simulation portion of this research more authentic for study participants.

ABOUT STRATEGY ANALYTICS
Strategy Analytics has been helping Global 500 companies chart prosperous routes through complex technology markets for more than 40 years. We help our clients develop defensible strategies for high-risk, big-reward technology projects.

Strategy Analytics is a global organization with analysts based in Europe, Asia, and the Americas. Our local presence allows us to understand regional markets, conduct primary research, and manage consulting projects with a high degree of control and, as a result, with impeccable data integrity. We are the only analyst and research provider with an in-house user experience practice and digital home observatory. See more at http://www.strategyanalytics.com.

ABOUT THE NFC FORUM
The NFC Forum was launched as a non-profit industry association in 2004 by leading mobile communications, semiconductor, and consumer electronics companies. The Forum’s mission is to advance the use of Near Field Communication technology by developing specifications, ensuring interoperability among devices and services, and educating the market about NFC technology. The Forum’s global member companies are currently developing specifications for a modular NFC device architecture, and protocols for interoperable data exchange and device-independent service delivery, device discovery, and device capability.