

Insights In-The-Moment

Enhancing Data Collection with Location-Based Mobile Surveys

Steve von Bevern
VP of Operations and Client Services
Research Now Mobile

research now Mobile™

research now Mobile™

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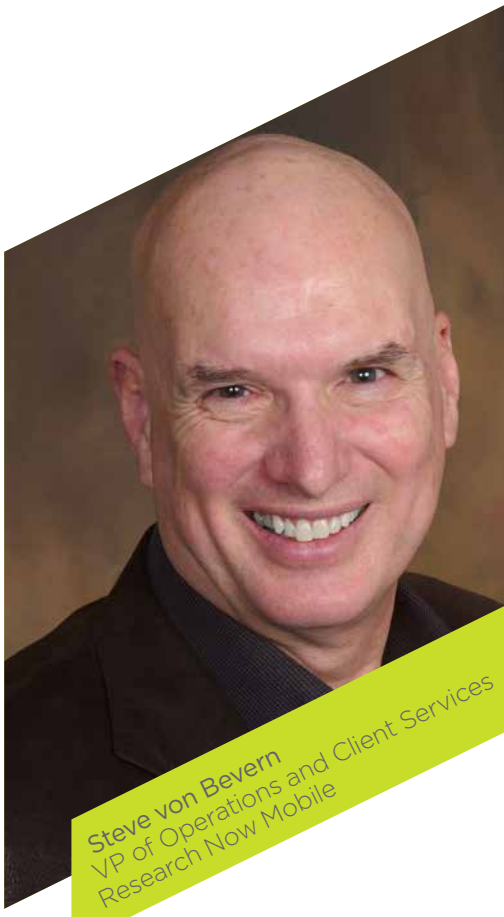
Imagine this scenario: a customer walks into a grocery store and receives an invitation on their mobile device inviting them to participate in a survey about wines. They triggered the survey via the geo-location capabilities in their phone and were recruited In-The-Moment for a study in a category known for impulse purchase decisions.

Or: a customer shopping for snack products at a grocery store is asked to act as a secret shopper, capturing photos or videos of impulse purchases like chocolate bars or fizzy drinks — purchases almost impossible to capture in syndicated purchase studies.

Or how about: a moviegoer receives an invitation to participate in a movie survey when their phone's GPS shows that they are near a cinema, capturing their feedback directly before or after they see a film.

All of these scenarios are possibilities of the newest trend of In-The-Moment data collection via mobile market research. The explosion in ownership of mobile devices, and the ability to send marketing messages directly to individuals at a moment's notice, has vitalised the field of mobile marketing and mobile market research. This new mode of data collection is opti-mistically expected to become one of the most powerful instruments for listening to the voice of consumers. It is particularly appealing because of its ability to capture In-The-Moment data via geo-location and geo-fencing.

Typically, owners of mobile devices carry one or more of their devices everywhere they go. These devices are not used remotely, but are carried on or close to the body, similar to a watch, a wallet or a pair of glasses. Close proximity to and intense, intimate reliance upon mobile devices has created a level of marketing access never before experienced in brand communications.



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Smartphones Are Becoming the Norm

The prevalence of handheld devices is the main reason why mobile market research has the potential to harvest such detailed data. According to IDC, 145 million smartphones were sold globally in the first quarter of 2012 with nearly 690 million smartphones expected to be sold by the end of the year, up from 491.4 million in 2011. By 2015, sales are expected to be close to one billion.

It is estimated that more than half (52 percent) of UK mobile phone owners have a smartphone. The numbers are just as high or higher in Canada and Continental Europe. Smartphone sales overtook PC sales last year, two years earlier than expected.

What This Means to Market Research

Mobile market research enables researchers to leverage mobile technology, so that they can reach consumers wherever they are. Because many mobile devices, including smartphones and tablets, contain GPS (global positioning systems) capabilities, location-based mobile surveys and permission-based passive mobile data collection are now additional vehicles to deliver more in-depth market research analysis and insights.

Geo-location surveys allow marketers to gather feedback and data from consumers as they travel through specific geographic locations and interact with areas of commerce.

So, what does this technology and innovation mean for market researchers?

1. **Mobile marketing yields more accurate data.** Recent research completed by Research Now Mobile regarding consumer use of mobile devices for search, social media and texting shows that consumers may actually be under-represented in online studies today if the study did not offer a mobile solution — especially among young adults and teens.
2. **Offering geo-location studies enhances mobile studies.** As researchers, it's time to adapt our data collection methods to a mobile world as consumers, healthcare and business professionals migrate their data-based activities to mobile platforms. At Research Now Mobile, more than half of our proposed 2012 requests were from clients who requested that we include geo-location surveys — both qualitative and quantitative studies. This includes ethnography, shopper programs, catching respondents 'in the act' as they shop, when they engage with entertainment venues like movie theatres or when they are using products within their homes.
3. **While smartphone penetration is at an all-time high, roughly half of mobile device owners still own feature phones.** To ensure representative samples, researchers should ensure that they have a mobile survey platform that allows surveys on both types of phones.

"More than half (52%) of UK mobile phone owners have a smartphone."

The Geo-Location App

To take full advantage of the location capture capabilities of mobile devices, researchers should use the 'native app' approach. Consumers are accustomed to apps—they already know how to download and use them. The numbers tell the story: Consumers have downloaded an estimated 40 billion apps globally to date—30 billion by Apple users and another 10 billion by Android users. Nielsen estimates an average of 41 apps per device in 2012, up from 32 in 2011.

Like online surveys, respondents should have to opt-in to be on mobile panels, such as Research Now Mobile. In order to use the geo-location app, location capabilities (GPS and A-GPS) should be enabled on the devices. Most devices have it already enabled as a default setting, but respondents may need to be reminded to enable it.

Mobile survey apps, such as Research Now Mobile, must be downloaded onto the respondent's phone to be used, but once the respondent logs into the app at least once, they do not have to keep the app open.

Location information from mobile devices can be mapped to track where the user has been during a specified time. Combined with the timestamp, this technology can create a path of movement for the user. In 2011, Research Now Mobile was capable of accessing more than 7 million locations. We are able to vary the capture interval at device level, controlled from the web portal. Location capabilities are evolving, and there could be more to come as we go forward.



Considerations

There are various options to specify locations, such as:

- Latitude/longitude
- Update from existing location databases
- Specifying ad hoc locations
- Resolving addresses
- Using third-party store/venue databases

Ways to inform a respondent that a survey has been assigned to them include:

- Push notifications
- Email
- SMS
- Badges

All of these modalities can be used in combination.

When choosing from these notifications, consider:

- SMS can cost the user
- Mobile numbers are needed for SMS notification
- Push and badges are handled by the app
- Email IDs are normally obtained from all registered panel members

Challenges

There are several challenges inherent in geo-location marketing. All mobile devices are not the same, and differences exist in the way that Android and iOS devices measure latitude/longitude. This, in turn, creates challenges such as how GPS affects battery life. When poor carrier coverage exists, it is important to have a native app or web app survey software that will work offline or can control a respondent's place in a web app survey when the signal drops. Research Now Mobile avoids this pitfall by automatically picking up where a respondent was interrupted when taking a survey in web app mode. Another challenge is that smaller stores or venues may require smaller geo-fences than, say, a theatre or super store location.

Survey Validation

Validating surveys can be done in several ways with location information. Certain surveys need respondents to be in specific locations, regions or countries to participate. With location capture, respondents can be qualified with their 'current' or 'history' location. For shopper studies, in-home ethnography studies or outdoor surveys, location can be used as a validation data point. Latitude/longitude metrics can be used as screening or sampling criteria, which allows researchers to determine ahead of time which respondents should receive surveys and which shouldn't.

Advantages of Mobile Market Research

There are many advantages to mobile as a market research vehicle. Mobile market research allows researchers to use mobile devices as a data collection platform—eliminating double keying of P&P results into a desktop portal or by phone. Touch screens allow speedy data entry in the moment as consumers enter feedback and data on their mobile device in the store, or as face-to-face interviews take place. Additionally, researchers can not only capture closed-end and open-end results, they can get immediate access to enhanced raw data such as photos, audio feedback or videos.

There are also opportunities to build on traditional research. For example:

"Consumers have downloaded an estimated 40 billion apps globally to date."



Expand product use tests to include products consumed on-the-go by using consumers' smartphone devices to record reactions wherever they are. Replace clipboards and pencils in home use tests or desktop entry with consumers using their mobile device while cooking, changing nappies or any other product test you might want to administer.



Other advantages to consider:

- Time-consuming, costly mystery shops or in-store ethnographies can be replaced with results immediately after the experience, not hours or days after the actual shop. In a recent home-based study, 97 percent of respondents were willing to scan barcodes of products in their home, 99 percent uploaded snack images and 82 percent provided audio feedback about what they liked about various snacks. Almost one-half shared videos of their pets, and 53 percent provided open-end responses explaining what they like about their pets.
- Geo-location surveys are great for impulse purchase categories, where In-The-Moment insights capture is critical.
- Mobile studies result in better qualified data—photos, videos and audio feedback or scanned UPC codes on products respondents are considering purchasing or have purchased, not just open-end text responses.
- Research Now Mobile offers a variety of different tools within a survey to capture better data: UPC bar code scans, ability to take videos/photos or record audio, and more advanced features that can enhance data, such as giving respondents the ability to take a photo and then use a heat-map tool to indicate likes/dislikes with what they see.

Determining What Type of Geo-Location Survey You Need

It is essential to consider which type of geo-location survey is right for a specific study.

Examples of different types of geo-location surveys are:

- A survey offered based on entry to a store or venue
- A survey offered upon being in a specific location or within a particular radius of a location
- Tracking consumer's path through their day and merging with survey data (combining behavioural and attitudinal data)
- Follow-up survey opportunities based on points of interest or purchases

For any type of geo-location based study, it's important to also determine the

right geo-invite to use—is it geo-fencing, geo-targeting or venue resolution?

Whatever mobile research solution is used it should always include a software platform that will work online and offline. Whether it's a medical convention or shoppers in covered malls, it's important that respondents can take the full survey while offline. This is made possible by software that automatically uploads the raw data when they are back in wireless coverage.

Consider whether to use native app or web app surveys for location-based research. Remember that web app geo-location means something different: it can only be used as a validation tool. Latitude/longitude can be confirmed while respondents are taking the survey, but their locations will not be available before or after the survey is completed and submitted.

Geo-triggering with a web app survey allows the survey to be sent to a consumer. The survey is sent when in the vicinity of the trigger, such as point of sale, or other venues such as posters with QR code triggers, shortcode SMS or short URL invites.

Further Considerations

After selecting what type of geo-location marketing best fits the needs of a particular study, there are several questions to consider to further refine a mobile marketing methodology:

- How many respondents need to be recruited to get panellists to download the native app, as well as take the survey? A good rule of thumb is to recruit double what you need, but that figure can range widely by category and segment.
- What is the best way to obtain accurate GPS readings? Latitude/longitude from a Wi-Fi signal can produce much different results than from the satellite GPS. Make sure to ask that panellists enable satellite GPS tracking when they agree to participate in a study.
- What is the best way to engage respondents? Should they receive push notifications to their mobile devices with SMS text reminders or email invites? How should you time the sending of that invite? It's often good to push a survey invite AFTER respondents enter the fenced area, to allow them to first shop before seeing an invite that may get lost among the many distractions that can occur in a shopping visit. In certain types of studies, we recommend using both pre-reminders (say 30 minutes before you want panellists to take a survey), during the event and up to 60 minutes afterwards.
- How many invites are acceptable to panellists, and how many are too

What's the Difference?

- **Geo-fencing** studies place a 'fence' at a customisable radius around a panellist's mobile device. When the device enters that radius, the consumer receives a push notification.
- **Geo-targeting** studies examine where consumers have shopped in the past two weeks and use that data as a filter to invite them to certain surveys.
- **Venue resolution** studies select target locations (for example, Starbucks), and triggers a survey when the panellist is within the designated radius of Starbucks.

many and may cause respondent frustration?

- Despite the rapid growth of smartphones, many consumers still use just a few limited functions. To get the most from respondents, some segments may require extra coaching in how to complete various functions like photo capture, audio feedback or taking videos.
- Make invitations simple: once panellists download the native app, taking a survey is much easier, but getting them through that two-step process of downloading, then taking the survey requires extra effort by project managers. Specifically, doing things like tracking non-responders to initial invites and sending them follow-up reminders can help your response rate.
- Determine which scenario fits the research design best. For example, we often see scenarios that trigger surveys in a certain class of stores (e.g. all grocery, supermarket etc).
- Consider the power of In-The-Moment surveys to help you better measure impulse category purchases. For example, snack purchases at fast food restaurants, or drinks and chewing gum purchased at convenience stores.
- Consider combining with UPC bar code scans that validate what consumers say they purchased. In a recent study, Research Now Mobile let consumers tell us what they considered to be snack purchases by having them scan the UPC code on all items in their shopping basket that they considered snacks. Don't just rely on attitudinal data capture; let consumers share behaviour data too.



Privacy Issues

Most passive data collection occurs in the background; respondents are rarely aware it's occurring. But it is important, of course, to double opt-in panellists to this activity. PII information must be protected at all times. For example, a researcher might gather information on incoming or outgoing calls or text messaging patterns, but not the content of those messages. Research Now Mobile uses opt-in agreements in user-friendly language that are fully compliant with CASRO, ESOMAR and MRA standards.

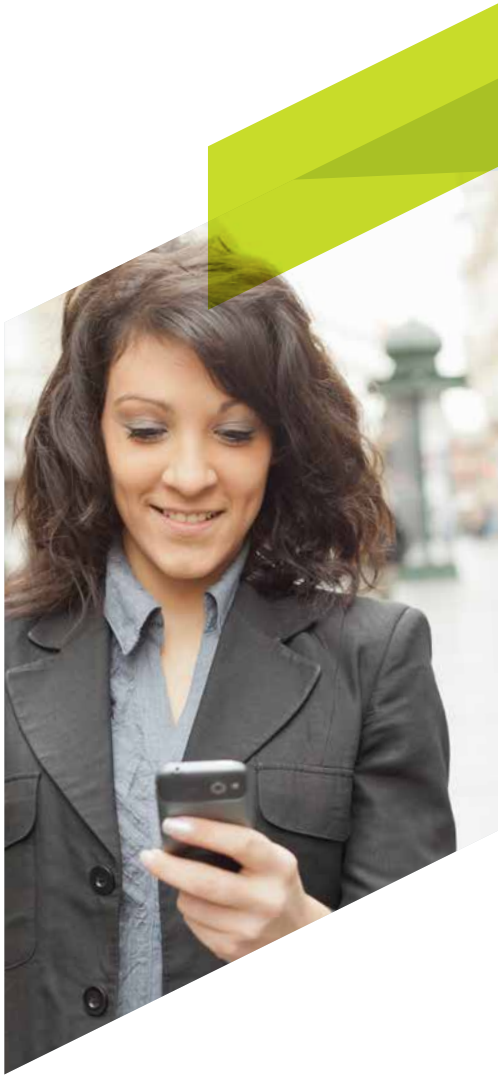
Additionally, be aware, particularly outside of the use, of data charges or SMS text charges. At Research Now Mobile, we believe that it's best, for example, to use SMS as an invite method with a URL link in the text message that takes respondents to a survey, as opposed to offering up surveys one question at a time using SMS text messages.

Other Technical Considerations

Capturing location information is draining to device batteries.

Compared to six months back, there are a lot smarter ways to collect this information:

- Older devices were not designed to have GPS radios on
- iPhone 4 onwards and recent Android have a smarter way to capture GPS info
- iPhone uses persistent data capture
  - Ideally, the radio only works when the respondent moves. When they are still, the radio is turned off
  - Satellite GPS radio is a separate radio
  - iPhone 4s does not ping continually, rather, only when the device is moved significantly—that way, GPS can be shut off
  - Network GPS can be used to know if the device moved or not, then satellite GPS can be turned on



Another technical consideration is GPS availability. If A-GPS is not available, the device may provide poor location accuracy. Users can also turn off GPS, sometimes inadvertently. Additionally, users must be logged in to the mobile app for it to work.

Finally, frequency of location capture and submission should be considered. Frequent capture and submission decreases battery life, but less frequent capture and submission may miss desired user movements. Geo-fencing typically requires more frequent capture and submission (e.g. five minutes) than geo-targeting (e.g. 15 minutes).

Research Now Mobile Up Close and Personal

Research Now Mobile is able to capture location information during specific actions such as sign-in, survey assignment, response submission, sign-off or at regular intervals, such as every 10 minutes or even hourly. It is possible to correlate the respondent device-supplied location information with popular information databases and user generated/updated location databases like Foursquare, and determine the venues around the user. We can indeed use that information to set up opt-in surveys for venues around them. With geographical information, we can set up geo-fence triggers and geo-target triggers to launch relevant surveys In-The-Moment or as a follow-up survey based on a visit. We also combine location data with survey data for further analysis. In a recent study, Research Now Mobile was able to poll moviegoers as they left the theatre on weekends to gain reactions to new releases. More than 150 people responded in just one weekend, and more than 3,000 panellists agreed to participate in ongoing studies.

In Conclusion

Mobile surveys have the power to combine behavioural data with answers to 'why' questions. It's a powerful way to enhance your mobile marketing insights.

Is the technology ready? The answer is ***"Yes!"*** Research Now Mobile has conducted thousands of interviews in both web app and native app with solid results for clients. It does work. For example, we recently asked younger males to answer questions about a Saturday night TV show right after they viewed it. Ad recall and reactions to segments within the show both benefited from the immediate responses, which could only have been obtained by mobile surveys.

Does all this geo-stuff work? The answer to this, too, is ***"Yes!" Geo-fencing, geo-triggering and venue resolution work***—their viability has been demonstrated on a global scale. If wireless coverage is weak, geo-location triggers are not the solution to use, but it can otherwise be widely adopted.

"Mobile surveys have the power to combine behavioral data with answers to 'why' questions."

www.researchnowmobile.com

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