USING MOBILE LOCATION DATA TO IMPROVE BANK MARKETING RESULTS

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EXECUTIVE SUMMARY

It's been repeated many times since, but back in 2006, Clive Humby, a U.K.-based mathematician and architect of Tesco's Clubcard, said:
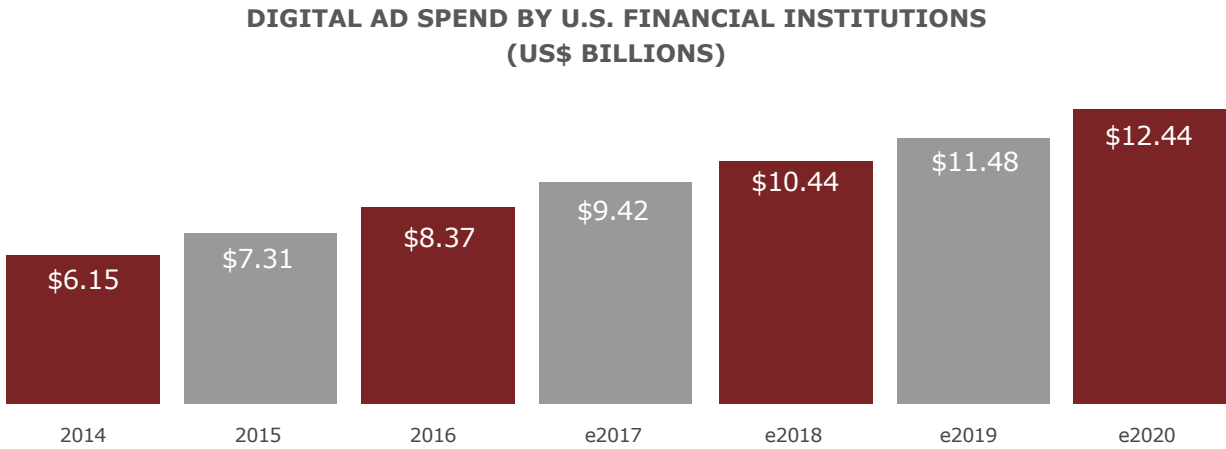
> "*Data is the new oil. It's valuable, but if unrefined it cannot really be used. It has to be changed into gas, plastic, chemicals, etc., to create a valuable entity that drives profitable activity; so must data be broken down, analyzed for it to have value.*"

Today, new forms and sources of data have emerged—in particular, data captured from mobile devices. Financial institutions are just learning what data is available and how to use it. That's where this report comes in. It will persuade bank execs that: 1) Mobile location data is more than just knowing where someone is, and utilizing this data to create behavioral trajectories can enhance marketing effectiveness, and 2) There are numerous use cases for deploying mobile location data that will improve the efficiency and effectiveness of banks' marketing efforts.

MOBILE MARKETING IN BANKING

There's little doubt that bank marketers view the mobile channel as critical to their marketing success. Financial institutions' digital advertising spend exceeded $8 billion in 2016, and will increase 50% (a compounded annual growth rate of 11.2%) to more than $12 billion in 2020 (Figure 1). In 2016, 62% of the digital spend was allocated to the mobile channel.

FIGURE 1: **Financial Institutions' Digital Ad Spend**

DIGITAL AD SPEND BY U.S. FINANCIAL INSTITUTIONS
(US$ BILLIONS)

| Year	Spend
2014	$6.15
2015	$7.31
2016	$8.37
e2017	$9.42
e2018	$10.44
e2019	$11.48
e2020	$12.44

Source: eMarketer

WHAT ABOUT CUSTOMER DATA?

Despite the importance of the mobile channel, many marketers aren't investing in, or using, mobile-related consumer data. Spending on customer and prospect data—which accounts for just 2% of a bank's marketing budget—increased by 5% between 2014 and 2015, a rate far below the 19% increase in digital advertising over that same period (Figure 2). And when asked what types of data they incorporate into their marketing approaches, only about three in 10 marketers use mobile-related data (Figure 3).

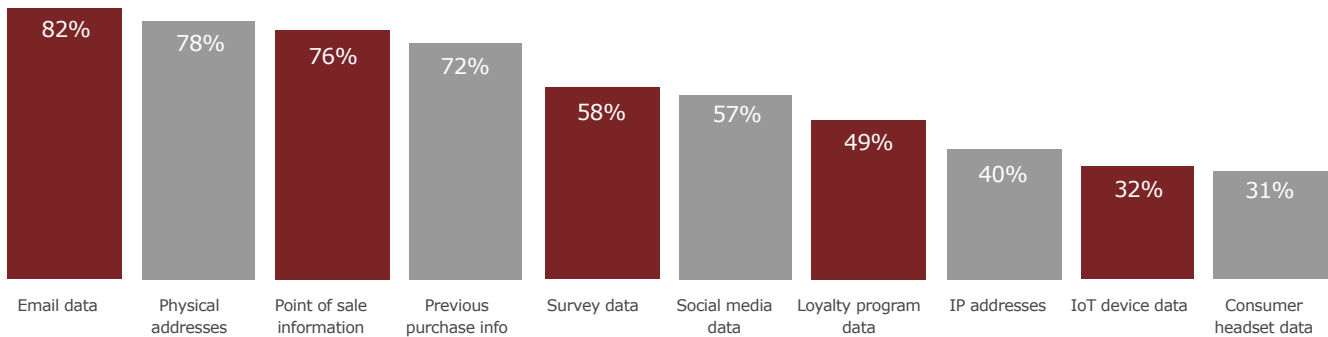FIGURE 2: **Financial Institutions' Customer/Prospect Data Spend**

CUSTOMER/PROSPECT DATA SPEND BY U.S. FINANCIAL INSTITUTIONS (US$ BILLIONS)

$352.60   **5.4%** $371.80

2014   2015
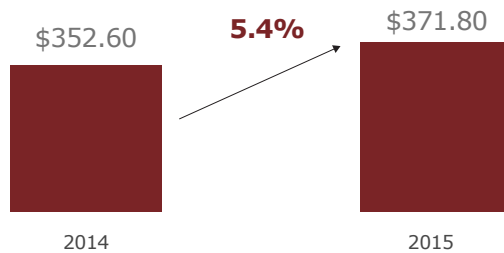
Source: Aite Group

FIGURE 3: **Marketing Data Types Used**

Q: WHICH OF THE FOLLOWING DATA TYPES DO YOU INCORPORATE INTO YOUR MARKETING APPROACH?

Email data	Physical addresses	Point of sale information	Previous purchase info	Survey data	Social media data	Loyalty program data	IP addresses	IoT device data	Consumer headset data
82%	78%	76%	72%	58%	57%	49%	40%	32%	31%

Source: Blue Venn

Bank marketers admit that they don't make good use of the data they have. No more than one in four bankers said they excelled in using data in any of the eight areas asked about (Table A). Two problem areas, in particular:

- **Delivering targeted and personalized communications.** While 14% of banks say they excel at using data to deliver targeted and personalized communications, nearly a third are struggling to do it, and almost four in 10 are experimenting with it (and presumably not achieving great success).

  Why is this so hard to do? For all the data that marketers say they incorporate in their marketing efforts, they don't have the right data to deliver targeted and personalized communications.

- **Journey mapping/analysis.** Just 6% of banks believe they excel at mapping and analyzing customer journeys. One in four are struggling with it, and roughly three in 10 are beginning to experiment in this area.

Why is this so hard to do? Despite the explosive increase in shopping behavior that occurs in digital channels, much of it occurs offline, as well, and that data isn't available to marketers attempting to map and analyze customer journeys.

TABLE A: **Financial Institutions' Ability to Leverage Data**

**Q: HOW WELL DOES YOUR ORGANIZATION LEVERAGE
CUSTOMER DATA TO DO THE FOLLOWING?**

	We excel at it	We struggle with it	We're experimenting with it
Segment audience	25%	28%	29%
Understand customer needs/behaviors	24%	30%	32%
Optimize and allocate marketing budget	22%	35%	27%
Deliver targeted/personalized communications	14%	32%	39%
Marketing automation	9%	26%	28%
Map and analyze customer journey	6%	25%	31%
Performance lookalike modeling	6%	20%	21%
Predict future needs and behaviors	5%	29%	23%

Source: Digital Banking Report

BARRIERS TO LEVERAGING MOBILE DATA

Why do so few bank marketers effectively leverage data captured from mobile devices? Two reasons:

1) They don't know what data is available to them; and

2) They don't have the people or expertise to properly leverage the data even if they have it.

SO WHAT

Bank marketers that acquire, and effectively utilize, consumer mobile data—and, in particular, mobile location data—can improve marketing results and gain a competitive advantage.
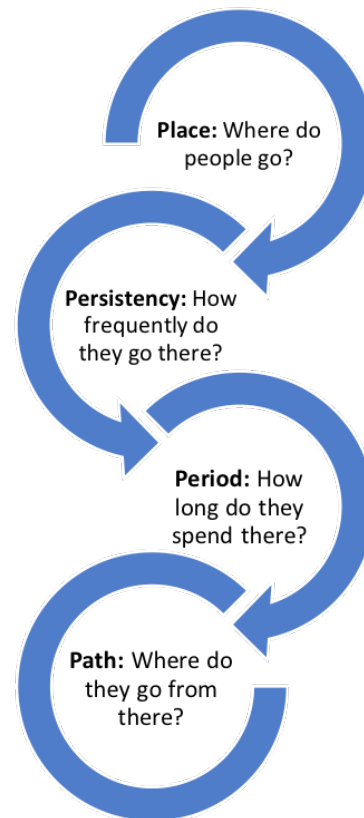
MOBILE LOCATION DATA

When you hear "mobile location data," you might think it's data that enables you to know where people are at this exact moment, so you can reach them with a message or offer based on their location.

For example, if you know your customer is at a car dealer right now, you might want to send her a car loan offer. That sounds nice, but what if she's there for an oil change? Your offer does little to help your bank fight the perception of irrelevant advertising, and, furthermore, it's downright creepy.

Mobile location data refers to more than a single data point, and can provide a **behavioral trajectory** (Figure 4)**:**

1) Place: Where do people go?

2) Persistency: How frequently do they go where they go?

3) Period: How long do they stay there? and

4) Path: Where do they go from there?

Place: Where do people go?

Persistency: How frequently do they go there?

Period: How long do they spend there?

Path: Where do they go from there?

Source: Cornerstone Advisors

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Mobile location data can enhance marketing results in a number of ways, including: 1) Customer profile enhancement; 2) Customer segmentation; 3) Marketing campaign management; 4) Competitive intelligence; and 5) Branch performance.

CUSTOMER PROFILE ENHANCEMENT

In a discussion of how mid-size financial institutions could better compete with large banks, the CEO of a $3 billion bank told us, "We have superior service. We know our customers better than any mega-bank could ever know them." No doubt that the bank knows personal details about many of its customers. But many banks and credit unions don't know:

- **How their customers make money.** They might know how much their customers make because they can see direct deposits coming in every month. But they don't know what their customers do or where they work.

- **Where their customers spend money.** Few FIs issue all (or even any) of the credit cards their customers have, so they really don't know where their customers' money is going.

- **How much money their customers have.** They only know how much their customers have with them, and it's a good bet that that's not a large percentage of the total pie. In addition, few FIs capture their customers' investment preferences or risk tolerance, or who else they bank with.

Mobile location data can help FIs know their customers better, and enhance their customer profiles by providing answers to questions like:

- **Where else do they bank?** Location data won't be able to tell what kind of accounts they have at other banks, but place and period data provides clues to which banks and brokerages customers have accounts with, or who they're considering doing business with.

- **How do they spend their time and money?** Understanding offline behavior from location signals to understand shopping patterns—including retail, food, and travel—provides insights on products and increases future share of wallet opportunities.

- **Where do they work?** Combining place and period data provides good estimates of where someone works. Aggregating work location data across customers can tell a bank if a particular business employs a disproportionately high percentage of a bank's customers, and help it reassign primary relationship status to a branch closer to their work location, instead of to a branch closer to home.

- **How far do they commute?** Combining home address data (which banks likely already have) with work location can help banks determine customers' work commute. One banker we spoke with thinks this data point could be useful in cross-sell propensity models. Likewise, place and period data, combined with direct deposit information, may indicate that a customer works from home, providing a bank with more information to send more personalized and targeted communications.

CUSTOMER SEGMENTATION

Nearly six in 10 banks struggle with, or are experimenting with, customer segmentation. Using mobile location data, banks can create customer segments around behaviors concerning:

- **Shopping.** With limited ability to analyze card spending data—and with low share of customers' payment accounts to begin with—banks are hard pressed to create behavioral segments around spending. Mobile location data reveals patterns in consumers' shopping behaviors, and can identify those who regularly visit upscale retailers or who frequent discount or bargain stores.

- **Banking.** Frequency and duration of visits (branch or ATM) can help identify customers who want or prefer face-to-face interactions. In addition, identifying customers who frequently visit other financial institutions can help banks identify segments of their customer base that do business with certain other banks.

- **Commuting.** Mobile location data can help identify consumers who have long commutes, commute by train or car, or those that don't commute at all but work from home.

- **Financial shopping.** Spikes in frequency of visits to bank branches may be a sign of consumers in the market for financial products. Mobile location data can help identify prospects who are shopping your bank, or identify your customers who are shopping elsewhere.

For any segment created, a unique aspect of mobile location data is the ability to use time-of-day as a factor distinguishing subsets of customer segments. For example: Are there segments of consumers who visit bank branches predominantly in the morning or afternoon, or those that typically go on a particular day of the week?

MARKETING CAMPAIGN MANAGEMENT

Scenario 1: **You want to launch a new marketing campaign. How can you rapidly test the offer?**

Digital channels are great for sending marketing offers out. But with the majority of account applications still coming in through the branches, evaluating the success of offers is still dependent on the branch reporting cycle.

Targeting offers to prospects and customers in specific geographic regions (down to the zip+4 code level), and then watching branch activity in those areas can help banks test the success of various offers in specific geographies before launching a full campaign.

Scenario 2: **You want to launch a new marketing campaign with a partner or promote a co-branded card offer.**

Determining who to engage for co-branding promotions is made easier when you know exactly where your customers (or prospects, for that matter) shop. Bringing mobile location data to the table to create a targeted segment for the offer (frequent shoppers of retailer X) or leveraging this segment with potential retail partners for card utilization offers can provide the evidence a retailer needs to be convinced you're the right bank partner for a given promotion.

Scenario 3: **You just launched a new marketing campaign. How's it doing?**

It'll probably take weeks before you'll get an answer to that question. Your branches know the answer, but the rest of the bank has no insight into branch activity thanks to the technology silos that exist in your organization.

With mobile location data, you can get success signals nearly immediately. Looking at impression to branch visits—in terms of both frequency and dwell time compared to a control group—could be signs of campaign success. In addition, the data can provide indications of which markets, zip codes, or branches are experiencing more success than others.

The location data can also help banks respond, and take corrective action if necessary. For example, if after a campaign is launched, 90% of branches experience a lift in branch traffic. Armed with that data, marketing can look into what's potentially causing issues in the other 10%.

COMPETITIVE INTELLIGENCE

Mobile location data provides a range of benefits that improve banks' competitive intelligence:

- **Which banks do my bank's customers do business with?** The original promise of account aggregation services (e.g., Yodlee) was that it would give banks the ability to know their share of a customer's wallet, and determine what other institutions their customers do business with. That promise, more than 10 years after aggregation first came out, is yet to be realized, thanks to a low rate of adoption on the part of consumers. Mobile location data can't answer the question of which accounts customers have at other institutions, but it can provide strong clues as to which ones they do business with.

For example, mobile location data provider Cuebiq discovered that 55% of Bank of America customers visited JP Morgan Chase branches in March 2017, with fewer customers visiting in April and August. On the other hand, the percentage of BofA customers visiting PNC branches increased throughout the year (Table B).[†]

TABLE B: **Cross-Bank Branch Visitation**

PERCENTAGE OF BANK OF AMERICA CUSTOMERS THAT VISITED OTHER BANKS' BRANCHES

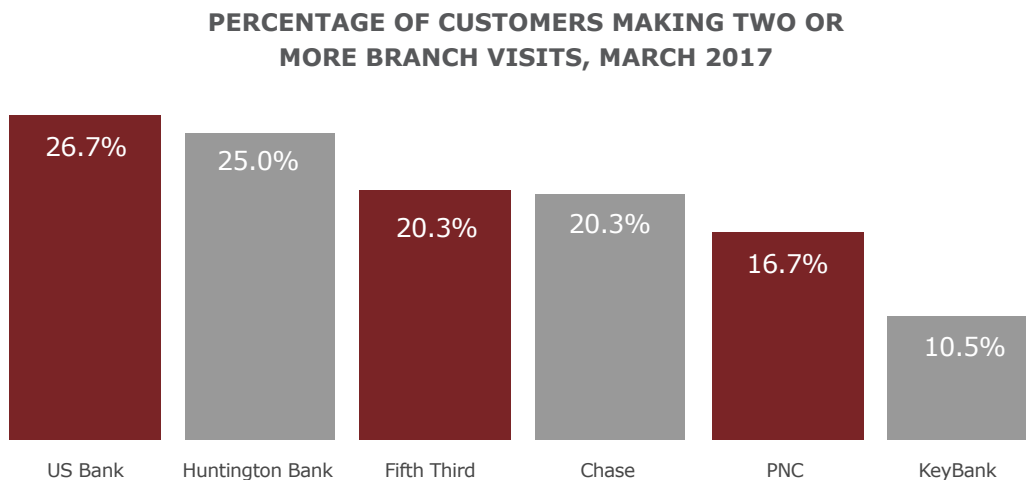|	March 2017	April 2017	August 2017
Chase	55%	50%	45%
PNC	16%	18%	20%
US Bank	15%	17%	13%
Fifth Third	4%	4%	3%
KeyBank	3%	1%	1%

Source: Cuebiq

Why the decline? Possible interpretations include:

1) Chase ran an offer in March, drawing BofA customers;

2) Fewer BofA consumers evaluated Chase, or responded to Chase offers over the course of the year; and

3) BofA customers are responding to PNC offers or considering switching.

† *For this analysis, Cuebiq analyzed footfall visitation patterns of a subset of its U.S. nationwide opt-in user base in the months of March, April and August 2017.*

● **How does my bank's branch activity compare with other banks?** You may know how often your customers visit your bank's branches, but how does that compare to other banks? Are other banks more successful at driving branch visits than you are based on their community orientation or technology leadership across certain segments? In March 2017, among a number of large U.S. banks, nearly three in 10 Huntington Bank customers made two or more branch visits. Only 18% of KeyBank customers, however, made two or more branch visits that month (Figure 5).

FIGURE 5: **Visits per Customer**

PERCENTAGE OF CUSTOMERS MAKING TWO OR MORE BRANCH VISITS, MARCH 2017

US Bank	Huntington Bank	Fifth Third	Chase	PNC	KeyBank
26.7%	25.0%	20.3%	20.3%	16.7%	10.5%

Source: Cuebiq

In terms of branch visits per customer, Fifth Third held a slight lead over banks in each of three months throughout 2017 (Figure 6). Have branch visits per customer been declining in your institution since the beginning of the year? Don't worry—that number has gone down at Fifth Third, US Bank, Huntington, PNC, Chase and Bank of America, as well.

BRANCH VISITS PER CUSTOMER

Legend: March 2017, April 2017, August 2017
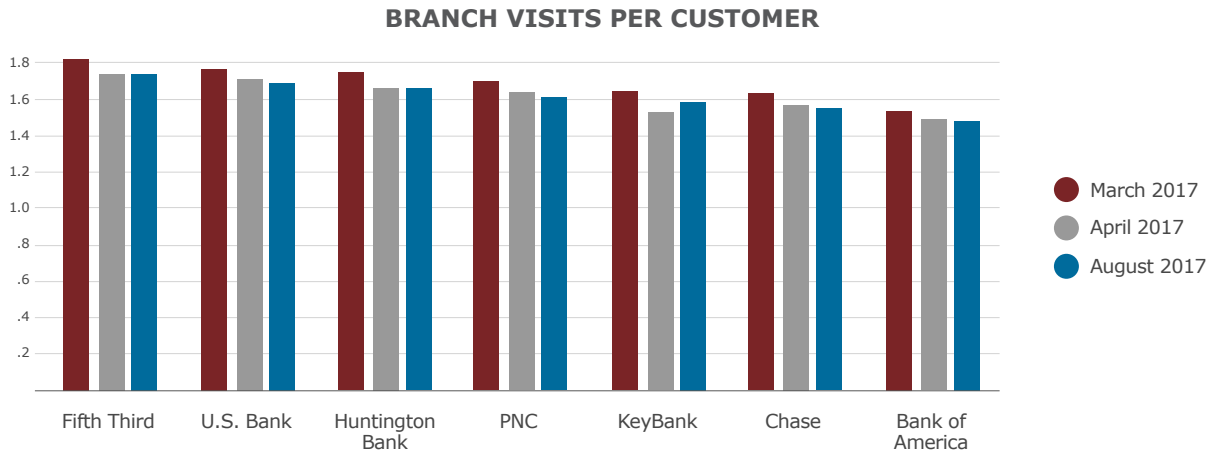
Huntington Bank, however, achieved the largest number of visits per branch, consistently averaging nearly double the branch traffic of PNC, Bank of America, and JP Morgan Chase (Table C). Huntington's management would have no insight into the fact that other banks' visits per branch also declined between March and April, without access to mobile location data.

VISITS PER BRANCH (INDEXED TO HUNTINGTON BANK, MARCH 2017)

	March 2017	April 2017	August 2017
Huntington Bank	100%	88%	94%
US Bank	77%	68%	68%
PNC	56%	49%	51%
Bank of America	55%	46%	48%
JP Morgan Chase	54%	46%	47%

- **Is my competition running promotions?** Why is Huntington's visits per store performance so far ahead of the other banks? It may be driven by the demographic composition of the bank's customer base. It's possible, however, that Huntington's March performance is above average even for Huntington, and that the higher traffic is due to a promotion the bank ran that month. Seeing this data in real-time and creating benchmarks around this can give you clues into the promotional activity of your competitors.
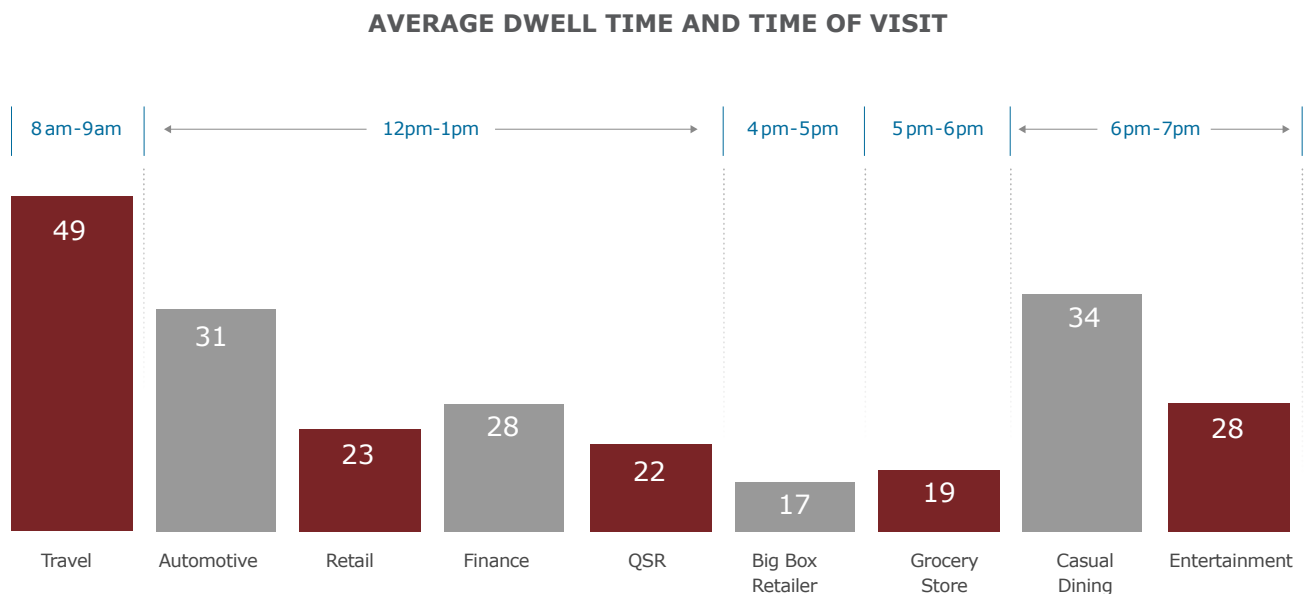
BRANCH PERFORMANCE

Bankers have plenty of data on branch transaction and interaction volume. What you don't know—and what mobile location data could help tell you—is:

1) How long do customers stay at my branches? and

2) Where did customers come from before visiting branches, and where do they go afterwards?

Long dwell time (period data) at individual branches can be a sign of a good interactions-to-transactions ratio, or a sign of long wait times and service issues. Cuebiq discovered that, nationally, the average visit to a financial services location was 28 minutes long, and that the 12pm to 1pm (i.e., lunch hour) slot was the most popular hour for those visits (Figure 7).

FIGURE 7: **Average Dwell Time and Time of Visit**

AVERAGE DWELL TIME AND TIME OF VISIT

8am-9am	12pm-1pm	4pm-5pm	5pm-6pm	6pm-7pm

Travel	Automotive	Retail	Finance	QSR	Big Box Retailer	Grocery Store	Casual Dining	Entertainment
49	31	23	28	22	17	19	34	28

Source: Cuebiq

The challenge for banks here should be clear: Four categories are competing for time during that lunch hour. The sum of the average dwell time for those categories is 110 minutes. That's nearly two hours of visit time being squeezed into an hour of actual time. If consumers experience, or think that there will be, long wait times in the branch, they may be disinclined to visit.
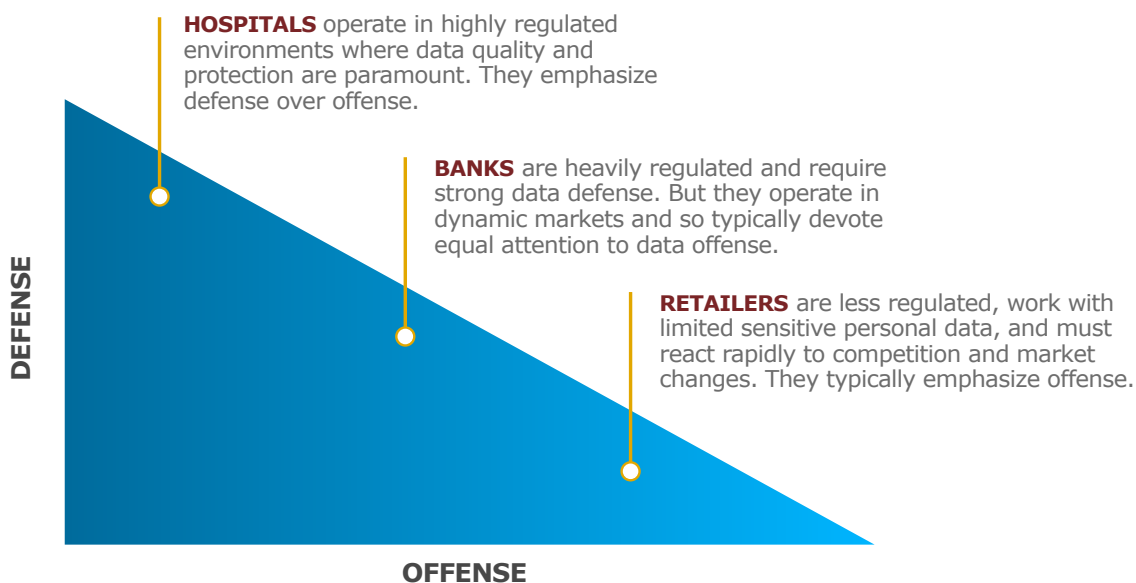
CONCLUSION:
IT'S TIME FOR BANKS TO PLAY OFFENSE WITH DATA

A recent *Harvard Business Review* article, titled "What's Your Data Strategy?" asserted that organizations make trade-offs between "defensive" and "offensive" uses of data and between control and flexibility in its use. According to the article:

> *"Data defense is about minimizing downside risk. Activities include ensuring compliance with regulations [and] using analytics to detect and limit fraud. Defensive efforts ensure the integrity of data flowing through a company's internal systems. Data offense focuses on supporting business objectives such as increasing revenue, profitability and customer satisfaction. It typically includes activities that generate customer insights or integrate disparate customer and market data to support managerial decision making."*

On a spectrum of defensive to offensive uses of data, banks play both, but tend to have stronger competencies on defensive (vs. offensive) uses of data (Figure 8).

FIGURE 8: **Data-Strategy Spectrum**

HOSPITALS operate in highly regulated environments where data quality and protection are paramount. They emphasize defense over offense.

BANKS are heavily regulated and require strong data defense. But they operate in dynamic markets and so typically devote equal attention to data offense.

RETAILERS are less regulated, work with limited sensitive personal data, and must react rapidly to competition and market changes. They typically emphasize offense.

DEFENSE

OFFENSE

Source: *Harvard Business Review*

SO WHAT

To effectively compete in the market, banks must build better data "offense" capabilities. Utilizing a new data source like mobile location data—and doing so before other banks figure out how to do so—can help banks make smarter marketing decisions, and gain a competitive advantage. Cornerstone Advisors believes that banks should invest in:

- **New data sources.** Banks need new sources like mobile location data to augment their existing third-party data investments (e.g., Claritas, Equifax IXI). Data that captures demographics and psychographics is still useful, but data that captures behaviors—what people actually do—is rapidly becoming the best data to understand and predict attitudes and future behavior.

- **Personnel.** Hiring "data scientists" is popular within the financial services industry these days. The skills gap, however, isn't just about the ability to do advanced analytics—it also concerns the lack of understanding of what data is available, and what to do with data if you have it. Banks need to up the ante on their staffs' ability to understand what data sources are available and how to use that data—as much as they need, or want—to improve analytical skills.

- **Integration.** Banks need to combine and integrate new data sources into accessible data warehouses and leverage investments in business intelligence (BI) tools or third-party analytics tools from location data providers to gain insights into their customers and take action quickly. The integration imperative doesn't just refer to technology—it encompasses the need to integrate data across lines of businesses and departments. If the digital channel group purchases mobile location data because it's "digital channel" data, and fails to make it accessible to execs running branches, a bank isn't getting the full value of its investment in data.

APPENDIX:
BRIEF PRIMER ON LOCATION DATA

The following guide will help financial services executives better understand what mobile location data is.

Bidstream data. Data collected off an ad when a mobile phone user opens an app. The mobile ad call retrieves latitude and longitude of the mobile phone user based on GPS, IP address, or other location identifier.

Panel based data. Location data based on persistent usage of a single app, which has a specific user purpose. Dependent on user-contributed data and consistent usage. Data is based on the audience that makes up that app's installed base. Panels and bidstream data only tell part of the story because the consumer must actively supply the data. Passively collected anonymous information derived from the location services output of a smartphone gives a more persistent and accurate view of the customer's location and dwell time.

Software Development Kit (SDK) for mobile apps. Application of an SDK that connects apps to location awareness on the user's phone, subject to their acceptance when the app installs. Data is normalized based on a diversity of app audiences and greater chances for data collection per person, leading to more complete customer journey insight.

Beacons. Often used in specific physical areas, Bluetooth-based beacons can contribute location data in areas with limited cell coverage.

Wi-Fi. Wi-Fi hotspots contribute to location awareness both by the location of the network device, and the active log-in by the individual user.

GPS. The most ubiquitous and accurate indication of where the phone is when communicating its location. GPS solely provides latitude and longitude coordinates.

Background versus foreground data collection. App settings on smartphones can be set to collect location data even when the app is not being used. Most location SDKs are only able to collect data while the app is being used (i.e., in the foreground). Some can collect location data in the background, provided that the user granted permission. In the latter case, it is important for apps to choose an SDK that provides a battery-saving mechanism, in order to avoid a negative impact on the user's smartphone experience.

First party data. Company-owned data about interactions with customers. When matched with third party data from location data providers, customer insight can be matched to CRM, using privacy-safe methodologies.

ABOUT
CORNERSTONE ADVISORS

Cornerstone's multidisciplinary team lives by the philosophy that you can't improve what you don't measure. With laser-focus measurement, financial institutions can develop more meaningful business strategies, make smarter technology decisions, and strategically re-engineer critical processes.

Cornerstone Advisors takes financial institutions from strategy to execution through an array of Solutions offerings, including Strategy, Contract Negotiations, Performance, Technology, Mergers & Acquisitions, Payments, Risk Management, System Selection & Implementation, and Delivery Channels.

Cornerstone publishes *GonzoBanker,* our blog, and the *Cornerstone Performance Report,* a series of annual benchmarking studies. Cornerstone hosts Executive Roundtables for bank and credit union C-level and management executives.

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ABOUT
CUEBIQ

Cuebiq is a next generation location intelligence and measurement company, leveraging the largest database of accurate and precise location data in the U.S. to help marketers map and measure the consumer journey. Its leading data intelligence platform analyzes location patterns of 61 million monthly active U.S. smartphone users on over 180 mobile apps, allowing businesses to glean actionable insights about real-world consumer behaviors and trends. Cuebiq's SaaS platform provides clients offline location analytics, real-time campaign optimization and footfall attribution, and geo-behavioral audiences for cross-platform ad targeting.

Cuebiq is headquartered in New York with offices in San Francisco, Chicago, Italy and China.

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