DataSYNCH

Whitepaper

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Overview

The smart phone has been one of the most successful products in history. According to Statista, the installed base of smartphones in the US topped 286 million in 2018.

Equally astounding is the amount of time consumers spend on their mobile devices. eMarketer forecasts the average consumer spends 223 minutes per day on their mobile devices in 2019. That total will exceed television viewing for the first time (see Fig. 2).
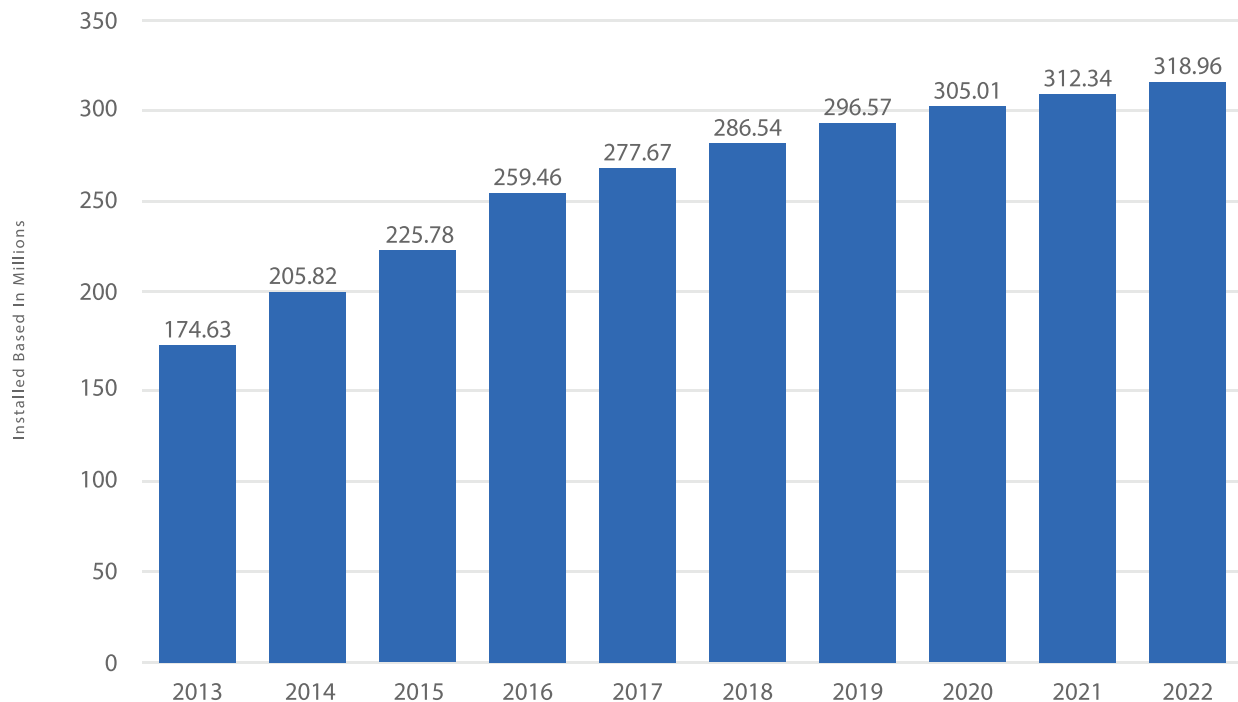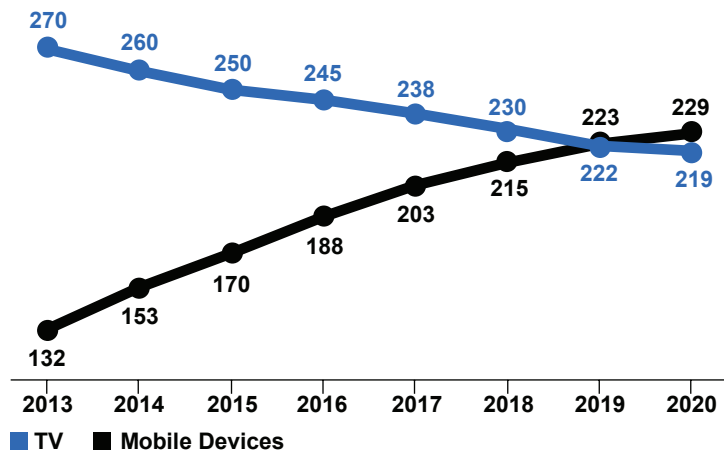

Fig. 1: US Smartphone Installed Base (2013-2022)

Mobile devices have done more than cannibalize TV viewing. In October 2016, mobile Internet usage (including a small contribution from tablets) surpassed desktop/laptop computer Internet usage for the first time (see Fig. 3).

Rise Of Mobile Advertising

minutes

Note: ages 18+; time spent with each medium includes all time spent with that medium, regardless of multitasking; for example, 1 hour of multitasking on a mobile device while watching tv is counted as 1 hour for TV and 1 hour for mobile device.
ource:eMarketer, April 2018

Fig. 2: Average Time Spent per Day with TV and Mobile Devices

Given the size of the installed base and the amount of time consumers spend on their phones, mobile advertising has exploded. But mobile advertising is much more than a simple replacement of desktop- or laptop-based advertising.

First, mobile phones offer marketers a means of targeting and measurement not previously available. Key to both is identity management. Identity in a desktop/laptop environment is largely enabled with web cookies. Cookies suffer from a number of problems, both generally and in the mobile realm. First, web cookies often are short-lived. In one study, as much as 74% of web cookies were deleted within 28 days.

To add to the confusion, cookies in mobile apps are handled differently than in mobile browsers. Apps use a technology called a 'webview' which allows users to briefly access online content like websites without leaving the app. These cookies are stored in an app-specific space called a 'sandbox' environment. The 'sandbox' limits the application's ability to access data from other apps. As a result, advertisers cannot follow a user from app-to-app using cookies in the same way they can track behavior in a browser with third party cookie support.

Users on mobile devices spend only 8% of their time on a browser (see Fig. 4). Fully 92% of their time is spent using mobile apps like Facebook, Twitter, games and music. And since cookies don't work on mobile apps, they're not very useful when trying to reach those users.

Fortunately, mobile advertising can also make use of software-based advertising ID (IDFA for Apple devices and AAID for Google's Android) that exhibits far longer life than a web cookie. The lifetime of mobile identifiers are often the lifetime of the device, since most users won't reset their advertiser ID while using their device—on average, a year. This provides the longitudinal stability marketers need to implement campaigns.

Rise Of Mobile Advertising

Internet Usage Worldwide
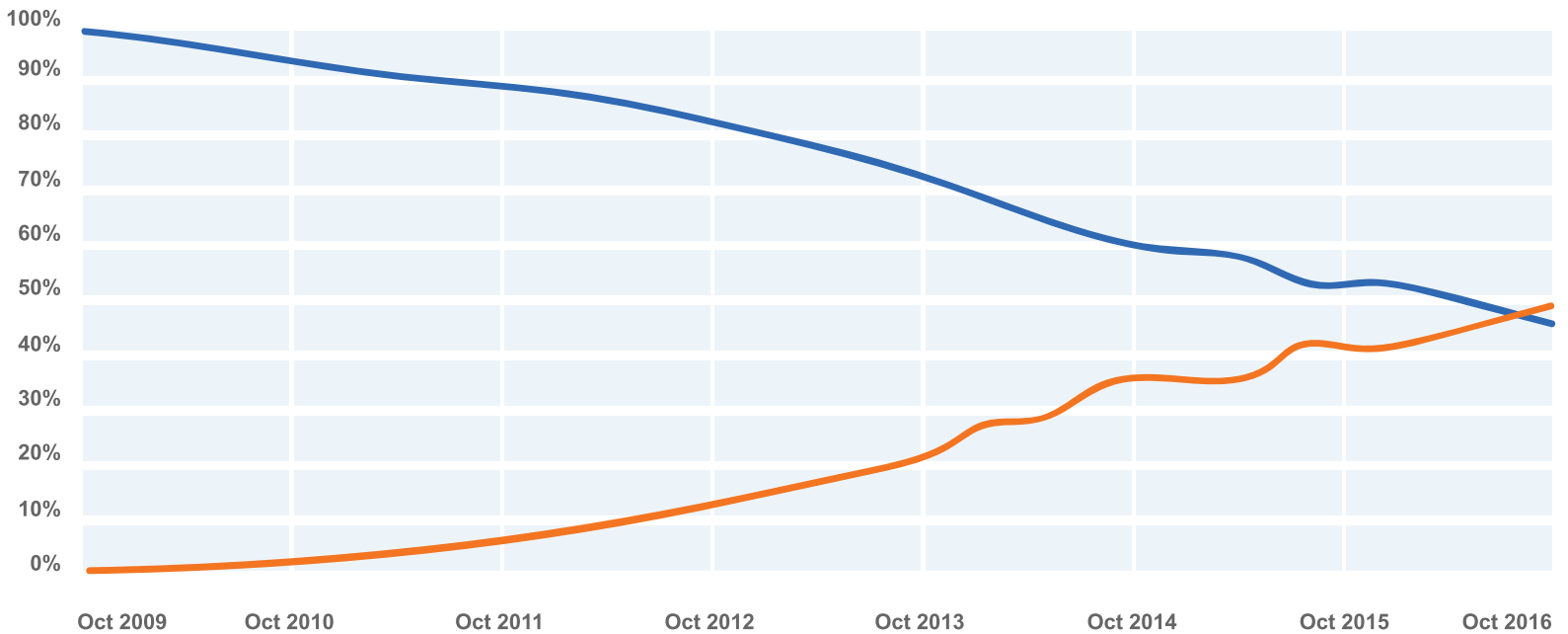*October 2009 - October 2016*
■ Desktop ■ Mobile Tablet

Fig. 3: Worldwide Internet Usage – Desktop/Laptop vs. Mobile Devices

US Time Spent ByApp Category

8% BROWSER | 92% APP

Browser 8%
Other 8%
Sports 2%
News & Weather 3%
Productivity 9%
Lifestyle & Shopping 5%
Utilities 9%
Gaming 11%
Music, Media & Entertainment 15%
YouTube 3%
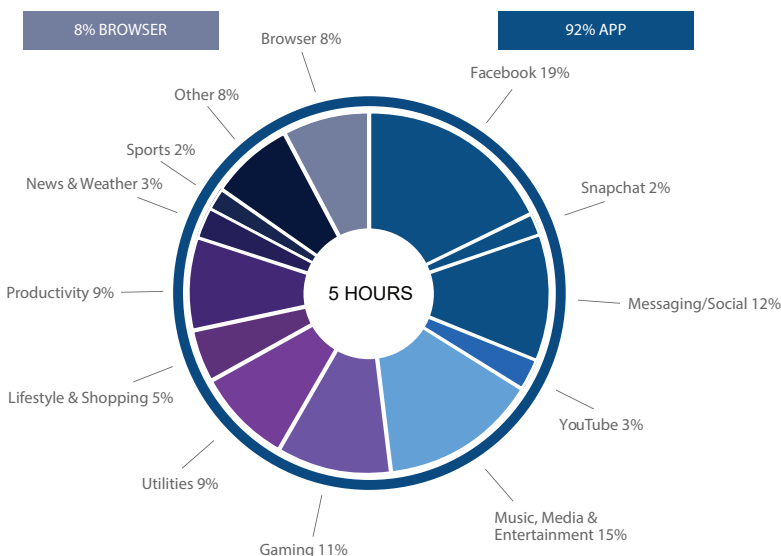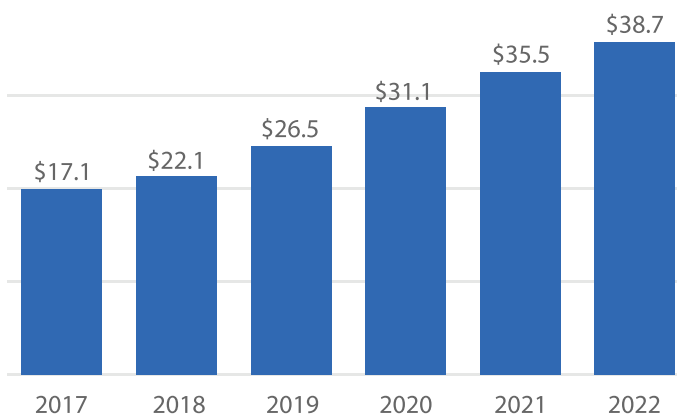Messaging/Social 12%
Snapchat 2%
Facebook 19%

5 HOURS

Fig. 4 Mobile User Activity

In addition, software-based advertising IDs can also be used to target users in both their browser and app-based activity. Finally, identity management on mobile devices solves some common problems encountered with personal-computer cookie-based advertising. A family PC might be used by the adults and children in the house, but smart phones are truly personal and rarely shared. A user's activity across multiple browsers can be readily tracked. What's more, most users have a single mobile device for use at work and at home. This simplifies the integration of a user's daily activity to provide a 360o view.

Location Intelligence

Mobile devices also provide new data, capabilities and insights not previously available. The new medium offers the ability to track the movements of consumers. This location intelligence is extremely powerful and can be used to:

US Mobile Location-Targeted Ad Spending 2017-2022
billions

Note: included mobile ads sold by traditional media plaers (e.g., newspaper/magazine publishers and TV/radio broadcasters)
Source: BIA/Kelsey, "U.S. Local Advertising Forecast 2018: Mobile and Social" as cited in press release, Frb 1, 2018

Spending on mobile location-based targeting is surging, growing from an estimated $26.5 billion in 2019 to $38.7 billion in 2022

- Identify audience segments (from offline behavior)
- Understand consumer purchase intent and preferences
- Target "in-market" consumers
- Target competitors' customers and prospects, even while in their stores
- Target ads to real-world activity and transactions
- Enhance the accuracy of offline attribution for digital campaigns
- Understand customer activity from an operational perspective (what is our busiest time?) to improve the customer experience
- Gain competitive insights (where else does our customer go and how often?)
- Benchmark store/location performance (internally or competitively)
- Enable more contextually relevant or personalized customer experiences
- Predict earnings, financial performance and potential M&A activity
- Enhance security and fraud protection

According to LSA's Market Landscape Report on Location Intelligence, over the past several years the discussion surrounding location and location data changed from a focus on "geofencing" and real-time purchase incentives (e.g. targeting consumers based on their immediate physical proximity to a location) to more compelling and brand-friendly talk about audiences and attribution. And by building and leveraging historical archives of location data to asynchronously target prospects, the market for location data has broadened dramatically.

Location Intelligence

Challenges with Location Intelligence-Based Advertising

Despite the rapid growth, location intelligence-based advertising is not without challenges. In a survey conducted by Forrester, marketers reported a number of problems with utilizing location data (see Fig. 6). The accuracy of location data was questioned by 34% of the participants and speaks to the need for an improved enabling substrate. But other common problems speak to the difficulty of using the data itself, such as understanding how to use location to deliver relevant messaging (33%), the difficulty of combining location with other customer data (28%), and the difficulty defining the targeting to apply (28%).

The difficulty of combining mobile location with other customer data is perhaps the most important and underappreciated challenge. The implications are twofold. First, when mobile IDs cannot be linked to name and postal address, e-mail address, social media handles or cookies, an omnichannel marketing campaign is impossible.

Why should a marketer care? Coordinating communication across channels delivers demonstrably superior results. Indeed, simply combining two channels in a campaign can deliver significant improvements. According to performance marketing agency Merkle, marketing campaigns that used direct mail and one or more digital media experienced a 118% lift in response rate compared to using direct mail only. In a recent engagement with a financial services client, DataSYNCH's campaign augmenting e-mail with display advertising drove a 52.9% increase in e-mail clickthrough rates versus an e-mail only control group.

Leading Challenges of Using Location Data in Mobile Ads According to Digital Marketers in North America, March 2017
% of respondents

Inaccurate location data
34%

Understanding how to use location to deliver relevant messaging
33%

Lack of clarity on what third-party vendors or providers exist
30%

Perception within the company that existing social media marketing efforts overlap with this
29%

Difficulty combining mobile location with other customer data
28%

Difficulty defining the targeting to apply
28%

Achieving scale of reach
27%

Difficulty passing exposure data back into data management platform
27%

Lack of transparency in location data collection
27%

Lack of clarity on the sources of location data
25%

No significant challenges
6%

Location Intelligence

The Harvard Business Review also reports engaging retail customers through omnichannel marketing yields significant increases in buying activity:

- Spend 4% more every time they go shopping.
- Spend 9% more when shopping in-store.
- Spend 10% more when shopping online.
- Are more loyal, with a 23% uptick in repeat purchases.

The second limitation of linking a consumer's online and offline IDs is the inability to leverage the vast stores of demographic, psychographic, and behavioral data linked to them. These data elements can be used as additional selects for segmentation or as independent variables in predictive models.

The power of predictive modeling, sans location data, is well-known. One example is scoring a customer or prospect list based on their likelihood to respond (propensity model) or to be influenced by the marketing campaign (uplift model), and selecting only a portion of the list to include in the campaign. For example, it is not uncommon for the top scoring prospects to respond at rates double or more that of the control group. By marketing to only to the top scored portion of the list, the cost per customer response can be cut by more than 50%.

What's missing? Location Data + Insight = Location Intelligence.

Integrating the firehose of mobile device location data such as ID, latitude and longitude, and matching the former to a consumer profile and the latter to a business location is a huge challenge. While complexity and challenges abound surrounding vast and rapid data integration leading to actionable insight, they are in no way insurmountable.   Leveraging data integration, predictive analytics, and machine learning that links software-advertiser based IDs with behavioral data, location tracking and "resting" behaviors with B2B firmagraphics and the contact or company level, and/or B2C demographics at the individual or household level provides a comprehensive profile that can be used by digital marketers to connect with consumers like never before. The insight and power in prediction that comes from providing a 360O view of consumers with an accuracy in "feet" to a consumer's location, can be used for sophisticated segmentation and propensity scoring enabling highly targeted messaging to be sent to the right place at the right time—connecting with potential prospects and existing customers who have the greatest likelihood of becoming a consumer of a company's product, detect for potential churn, or predict who is most likely to be responsive to digital influencing for a particular product, experience, call to action, or creative.

The DataSYNCH Solution

DataSYNCH, a pioneer in creation of O2O (online-to-offline) marketing, has crafted a novel solution to address these data challenges and deliver the full power and promise of location data. Data. DataSYNCH's vast mobile ID database collected over the last 12 months includes more than 2 trillion connects, with an additional 1_million records per second collected. DataSYNCH has linked these IDs to a database of more than 300 million US consumer profiles, encompassing more than 100 demographic, psychographic, behavioral, and lifestyle attributes. These profiles also link name, postal address, email, and social media handles to support omni-channel campaign execution.

DataSYNCH also offers a comprehensive business database of 23 million business locations linked to senior executives and firmagraphic profiles. These company profiles include attributes such as annual revenues, number of employees, SIC/NAICS codes, years in business and much more.

Modeling and Analytics for Superior Targeting

ID linkage allows vast marketing databases of demographic, psychographic and behavioral data elements to be appended and used for audience selection. The DataSYNCH solution provides marketers with several data-driven targeting solutions:

1) Selection/Filtering: In the simplest case, appended data elements can be used to directly select or filter the desired audience (ex. select females age 25-34 or exclude males age 50+). This approach presupposes the marketer has a good understanding of their ideal customer profile and that it can be implemented with relatively simple selects.

But what if you don't know your ideal customer profile? DataSYNCH's VProfiler can automatically profile a customer list to determine the data elements which overindex vs. the general population. Figure 9 shows the penetration index for family type for a customer list. In this case, families with children were 60% of the total customer list. Since families with children only represent 27% of households overall, the market penetration index shows they are more than twice as likely to be clients.

2) Next Generation Marketing Models. In more complex cases, predictive models are needed to identify the best targets. The traditional approach involved an analyst or statistician using the hundreds of appended demographic, psychographic and behavioral data elements as independent variables in model creation. The models can be used to define an ideal client profile and identify those most responsive to a given marketing message or offer. For example, propensity scoring can identify the expected lift (greater probability for engaging in the desired behavior) over random targeting. The propensity model would be used to score a prospect list, which is also seeded with actual customer records. A typical result might reveal that the top 20% of the scored prospects capture approximately 60% of the seeded customers. This indicates that prospects who also scored in that 20% are significantly more likely to become a customer.

App Name	Device GEO	Mail Device	Device	Device OS	Device ID
Facebook	(32.481963, -82.807648)	Samsung	Samsung	Android	######-####-######-#####
Facebook Messenger	(36.818080, -90.890050)	Apple	Apple	IOS	######-####-######-#####
YouTube	(25.095549, -80.699195)	LGE	LGE	Android	######-####-######-#####
Google Maps	(30.078601, -100.378087)	ZTE	ZTE	Android	######-####-######-#####
Google Search	(42.236652, -74.022428)	Motorola	Motorola	Android	######-####-######-#####
Google Play	(37.935533, -119.717868)	LGE	LGE	Android	######-####-######-#####
Gmail	(32.184911, -112.341050)	Samsung	Samsung	Android	######-####-######-#####
Instagram	(39.580290, -99.690333)	Apple	Apple	IOS	######-####-######-#####
Apple Music	(37.935533, -94.067792)	Samsung	Samsung	Android	######-####-######-#####
Amazon App	(42.236652, -100.744560)	Samsung	Samsung	Android	######-####-######-#####

Fig. 7: ID Linkage Connects Software-Based Advertising Identifiers to Rich Consumer Profiles

Profile Card

John Doe
john@email.com
999-999-9999
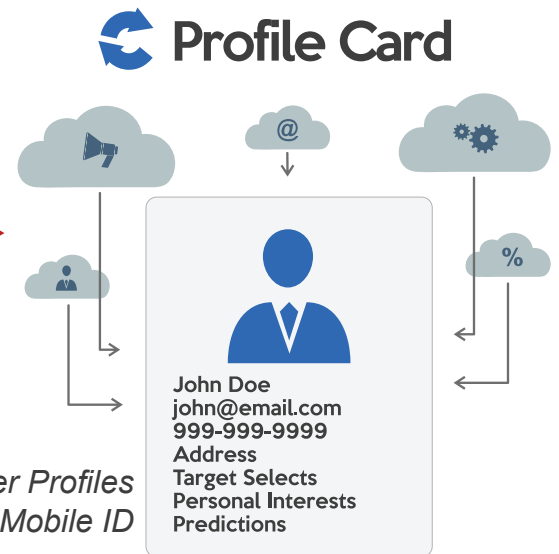Address
Target Selects
Personal Interests
Predictions

Fig. 8: Rich Consumer Profiles Linked to Mobile ID

Can we do better leveraging location intelligence? As the case studies in this white paper reveal, we can. However, leveraging the power of location intelligence at scale requires a new approach: machine learning/automated analytics. It is also well-known that 'life events' serve as triggers for purchasing behaviors of interest to marketers. Examples include graduation, marriage, birth of children and retirement. The timing is opportune for marketers to engage prospects when these events occur. This concept applies for lesser everyday events and everyday decisions as well. Given the data volumes involved, these triggers are much more complex and nuanced—making them more challenging to detect. A scalable automated approach is required. The DataSYNCH platform takes that insight to the next level by combining machine learning and automated analytics to process hundreds of thousands of data points to identify temporal and spatial real-time triggers.

The DataSYNCH Solution

An example would be identifying foot traffic at a car dealership that does not sell the vehicle brand currently owned by the consumer. The likely inference is that the consumer is in the market for a new vehicle. Omnichannel Execution. By matching the mobile IDs to DataSYNCH databases, matched records can be identified for email, direct mail and telemarketing campaigns.
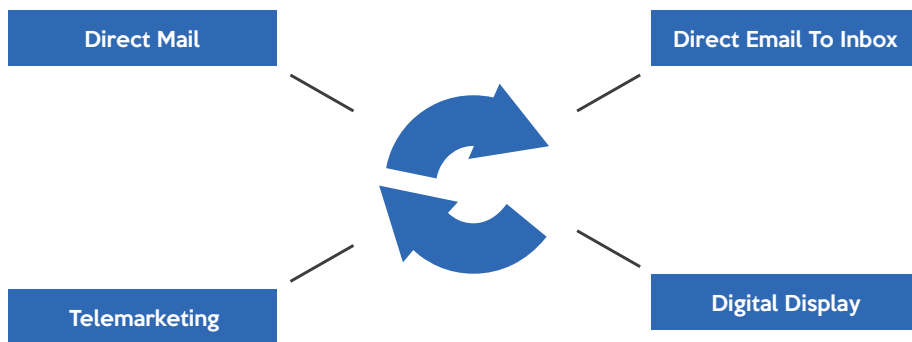
Direct Mail		Direct Email To Inbox
Telemarketing		Digital Display

Fig. 10: ID Linkage Allows Omnichannel Marketing Campaign Execution

Campaigns can be choreographed to seamlessly coordinate omnichannel activity and optimize the marketing mix. Email data can be exported to an email service provider (ESP) or campaign management platform. Direct mail data can be exported to a client marketing database or letter shop.

Display advertising is another area in which the DataSYNCH platform enables a new marketing approach. Historically, onboarding and retargeting a list was slow, expensive and exhibited a low match rate. Onboarding a customer or marketing list is now a very simple task. Upload the file and the DataSYNCH platform matches, extracts and loads the custom audience of mobile IDs to the DSP for campaign execution. What took days in the past, can now be completed same day—at a substantial cost savings.

Case Study 1: Financial Services

CHALLENGE

A Credit Union with 6 branch locations needed to bring in a consistent stream of new members under the age of 35. This client used display ad campaigns in the past with little to no success.

SOLUTION

- Build a model to identify the demographic attributes of new members under 35.
- Create a display ad program that would reach the target market
- Target the individuals who fell within a 10-mile radius of each of the 7 branch locations
- Provide an extensive new member analysis at the end of the campaign to identify age and distance to each of the 7 branches.

RESULTS

- Increased the number of impressions served (with the same digital budget) by 50%.

Case Study 2: Vocational School

CHALLENGE

A fast-growing post-secondary trade/vocational school has a primary focus on local (commuter) students. The marketing department is tasked with increasing enrollment, focusing on certain departments where the school is expanding. The staff wants to track campaign results and recognize overperforming and underperforming campaigns to maximize allocation of marketing resources.

SOLUTION

- Using a database of current students, a predictive model was built to identify people who are most likely to enroll in the three largest programs offered at the school.
- The model showed several segments of prospects who had a much higher than average likelihood of enrolling.
- The list was scored to allow the client to pull the top tier of prospects.
- Promote an Open House on campus targeting top tier prospects with display ads for 45 days leading up to the event.

RESULTS

- Click-through rate of 0.18% for the 45-day campaign—3 times the industry average CTR.
- Added over $2.5 million to the client's pipeline for Associate Degree program
- 76 new enrollees for the Summer and Fall quarters—all of whom could be tracked to the use of targeted digital ads.

Case Study 3: Financial Services

CHALLENGE

A leading provider of eyecare services has more than 570 optical retail stores in 40 states. The firm has over 10 million customers and generates in excess of $1 billion in annual revenue. The goal was to test innovative ways to boost sales at some of its underperforming retail stores.

SOLUTION

Devise an A/B split test with the following marketing treatments on location-targeted new prospects:

Group 1: Received direct mail piece only

Group 2: Received direct mail piece and digital display advertising over a 30-day period

RESULTS

- Over the subsequent 5 months, Group 2 substantially outperformed Group 1 in both units sold and total revenue.

- 600% ROI on digital display advertising investment.

DataSYNCH