

Who Sold It? A Discussion on Marketing Attribution



Brian Pasch
Founder
PCG Companies
Eatontown, NJ
732-672-2356
brian@pcgcompanies.com

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Learning Objectives

Upon completion of this workshop, you will be able to:

- 1) Understand how Google Analytics can help you identify wasteful and efficient marketing investments
 - a. How Google Analytics (GA) can document marketing performance.
 - b. List the conversion channels (goals) are important to track in GA.
 - c. Understand how consumers engage and convert on a dealer's website
 - d. Explain why dealers should record consumer engagement and web interactions.

- 2) Develop more accurate reports that show which marketing investments are working
 - a. Identify metrics that measure quantity and quality.
 - b. Understanding why Last-Click-Attribution (LCA) is bad for inspecting marketing investments
 - c. Explore Assisted Conversion reports to show marketing influence
 - d. Inspect user interactions with Google Analytics (i.e. User Flow)

- 3) Refine advertising strategies based on offsite and onsite shopper data
 - a. Use DMS data to create custom audiences.
 - b. Use DMS data to create lookalike audiences.
 - c. Leveraging mobile phone and beacons to capture lot traffic.
 - d. Leverage device graphics to enable people based marketing.
 - e. Leverage the power of online ecosystems.

Key trends in marketing are: more choices in advertising channels, greater data complexity, larger volumes of data, and significant innovation in measuring marketing performance. These growing opportunities give the business owner and marketers more choice than ever, but at a cost.

While writing *Unfair Advantage* in 2012, I felt that we were reaching a tipping point in marketing but it was still unclear to me what direction the industry was heading with the proliferation of new advertising technologies. I did realize, however, that there was a sea of change happening and that there was also an increasing gap between those that could take advantage of the new paradigm, and those that could not.

Marketing analytics and measurement of advertising performance has fundamentally changed. Many business executives have revolted and demanded that advertisers demonstrate how their solutions contribute to sales and service transactions.

Who Sold it? is dedicated to helping the business owner run a more profitable, resilient business by sharpening their return on advertising spend (ROAS) which translates to improving the bottom line.

Part One of the book will help the business owner understand the new landscape of return on ad spend. Part Two of the book is dedicated to the marketing practitioner. Regardless of need, my aim is to answer fundamental questions about your advertising spend and give you the new tool kit to future-proof your marketing investments.

As business owners review their marketing budgets, they will, at some point, question which combination of specific marketing investments influence their companies' target audience to increase sales. Sales attribution projects have the potential to create media efficiencies and conversion gains. Progressive business leaders want to know their Return on Ad Spend (ROAS): the amount of revenue a company receives for every dollar spent on an advertising channel.

In larger companies, the Chief Marketing Officer (CMO) or Marketing Manager will normally field these questions and will be required to present attribution reports which show the influence of each marketing channel on sales. In smaller companies, the business owner will often wear multiple hats including Marketing Manager, Creative Director, Video Producer, or Website Administrator, and have no training on how to determine sales influence or attribution.

Large and small companies are equally challenged in their ability to measure the ROAS of their marketing investments to increase sales. Readers will likely be able to list cases where marketing investments failed and others that the business "thought" worked, but business leaders are not sure.

I have some great news. In this book, I will review strategies, technologies, and metrics that will help business owners of all sizes to better identify the marketing investments which are helping their company reach their business goals.

There are many reasons why this book will be beneficial for business owners and marketing managers, regardless of the nature of their business. Every organization has sales objectives and marketing goals, which could include:

- You want to sell X products this month and can't continue to invest Y advertising dollars per unit sold.
- You want to know which channel, media, and message is most efficient at helping you sell your products.
- You need better reporting KPIs to spot changes in consumer response rates.
- You want to increase customer loyalty and lifetime revenue through more targeted customer outreach.
- You need a trusted third-party to validate the data from your marketing agency reports.

To reach these objectives, business managers will need to embrace change. There are new metrics and methods to determine which marketing channels are supporting the goals of the business. Here is a sneak peek of one of the changes managers will need to embrace:

Metrics such as Cost per Click (CPC), Impression Share, Bounce Rate, and Time on Site (TOS) should not be included in the list of Key Performance Indicators (KPIs).

Except from “Who Sold It?” – by Brian Pasch

One of my most admired industry friends, James Grace who leads analytic products at Cox Automotive, offers this simple advice to clients:

"If you are just starting to optimize your digital marketing, first focus on getting quality traffic over quantity traffic. Many of us are so focused on visitor counts, however, this metric is not important at all; instead, focus on how many quality visitors are interacting with the site. If the marketing manager is already there, then focus on understanding and optimizing what assists with generating quality traffic. Advancing further, establish attribution values for each of those assists so that each channel / solution can be weighted and scored."

I'd add to that sentiment by also saying that before embarking on this journey, that making sure content, merchandising, data quality are all in order. I will cover these topics later in the book. It all begins though with Strategy.

To create a more effective advertising strategy you must:

- Document all advertising investments, agency partners, and the methods by which campaign data and results are presented.
- Confirm that you are collecting and have access to your marketing data for proper analysis with analytic tools and sales attribution consultants.
- Measure the right things: you may be looking at report KPIs that are not actionable.
- Differentiate KPIs based on the type of marketing campaign. For example, differentiate performance metrics on brand awareness vs ready-to-buy campaigns.
- Continually test and optimize marketing campaigns based on actionable KPIs.
- Pick the right set of tools to facilitate the analysis and insights generated from your marketing data.
- Make sure your messaging, customer experience, and merchandising are not getting in the way of your success.

This book will show you how to build a strong foundation for marketing campaign measurement and sales attribution models. This information will build the required confidence to create a practical set of metrics to determine your ROAS.

What's in It for Me (WIIFM)

In thinking through this topic, my colleague Evan LaPointe described several key reasons people care about attribution. These reasons fall into two main categories: business-oriented motivators and self-oriented motivators.

In a perfect world, these are aligned. It's necessary to acknowledge that, at times, people take actions that are self-motivated, perhaps overriding the motivation their employer would rather see.

Business-Oriented Motivators:

- Elimination of waste
- Efficient investment in marketing channels
- Accountability
- Accurate depiction of ROI for discrete channels and efforts

Self-Oriented Motivators: Justification - There are people, agencies, and marketing channels with a vested interest in being able to take more credit or demonstrate greater ROI than they do today.

With the right processes and technology in place, followed by proper analysis, business leaders can generate significant insights and benefits to their business which include identifying:

- Active marketing channels that are providing little value to achieving the sales objectives of the business. This will allow the business to direct funds to more effective channels.
- Active marketing channels that were thought to be of little value which play a large role in generating conversions or sales. There will likely be marketing channels which provide more “assisted conversions” than the business had previously known.
- BOT traffic that could be stealing as much as 20% of online advertising dollars⁴⁸.
- Waste in advertising campaigns generated by poor campaign structures, slow website technology, improper targeting, and incomplete conversion tracking.
- The online “pain points” in a current sales process that create friction with consumers, reduce conversions, and negatively impact ROAS.
- The proper media mix and the levers that can be pulled to achieve the sales objectives for the business. Proper modeling can help business owners identify their Next Best Investment (NBI).

This book will also cover effective (measurable) strategies to connect more often with prospects and customers, and describe how to include advertising engagement data in an attribution model. This will include:

- Moving beyond measuring visitors to people-based marketing. Understanding how to create a persistent ID for your customers to create a personalized shopping experience.
- Engaging consumers across all the devices that they own, not just the one device that connected with an advertisement. Better targeting, allowing business owners to present a relevant message, at the right time, on any device a consumer owns.
- Reaching consumers who are near a local business or in a geo-area that the business wants to target, also known as Local Based Advertising (LBA).

In this book, I will share stories and case studies from many industries, but there are a higher percentage from the auto industry. I have deep experience with automotive marketing, but that is not the reason why there are an abundance of automotive stories. Franchise auto dealers are excellent businesses to model and understand.

Auto dealers advertise consistently each month to reach a local audience of consumers. Franchise dealers are using multiple advertising channels to reach those consumers and they are also active members of the community. This description fits many small to medium-sized businesses who can learn from the auto industry.

Regardless of what industry you currently work in, keep an open mind. The principles, insights, and new processes outlined in this book apply to most business models that invest in online marketing. The good news is that I have broken the content into two distinct sections.

Two Parts to My Story: Managers and Practitioners

This book is divided into two parts. The first part (162 pages) is designed for all business and marketing professionals who seek to learn about improving marketing outcomes. I will build the case for why marketing metrics, tracking, and reporting need to evolve and accommodate cross-device, multi-touch attribution models.

WHICH OF MY ADVERTISING BEST REACHED IN-MARKET SHOPPERS?	WHICH OF MY ADVERTISING DROVE FOOT TRAFFIC TO MY STORE?	WHICH COMBINATION OF ADVERTISING ASSISTED AND ATTRIBUTED TO SALES ?
Who Sold It? : Part One		Who Sold It? : Part Two
Toolkit: Analytics Multi-Channel Attribution	Toolkit: Location Based Targeting Multi-Channel Attribution Device Graphs	Toolkit: Attribution Vendor or Consultant Engagement / Quality Scores

The second part is for Practitioners that want to get into the nitty-gritty of marketing analytics and attribution. In the second half of the book, I will provide specific examples of how free tools, like Google Analytics, can be used to create multi-touch attribution models. These models are much better than popular Last-Click-Attribution (LCA) reporting, enabled by CRM lead sourcing reports.

Business owners and managers are invited to enjoy all the content contained in this book, but be forewarned there are some technical details in Part Two that might best be skimmed if you are not part of an implementation team.

Vocabulary & Concepts

Readers who are just starting their education in online marketing analytics and attribution models are invited to review additional materials that are included in the appendix of this book. For now, I would like to cover vocabulary and marketing concepts that will make reading this book easier. As you know, there are often many definitions for marketing terms like conversions, engagement, and attribution.

Google AdWords - is a marketing platform that allows business owners to create, target, and deploy advertisements in Google Search, YouTube, Gmail, mobile apps, and on over two million websites that reach over 90% of people on the internet³. Google AdWords can be tethered to Google Analytics to connect advertising campaigns with website activity, engagement, and conversions.

Google Analytics (GA) - is a free software platform for websites that collect data on consumer interactions, engagement, and conversions. Business owners can review website activity on their own website, but not ones that they don't own. GA will record the path that a consumer takes to get to a website and place that traffic in a channel²: referral, organic search, direct, social, paid search, email, and other. GA will not know which other websites the consumer may have visited during their shopping journey. Adobe Analytics is a popular alternative to GA and is commonly used in larger, enterprise organizations.

Google Analytics Events - are user interactions with content that are tracked on a website or mobile app and sent into GA. Not all interactions that a consumer takes on a website may qualify for an event to be triggered. The events that are tracked are given a unique *eventLabel*, for example: *download_services_brochure*, *value_my_trade*, and *compare_shipping*. These named events are normally associated with how consumers research and shop online. Advanced marketing managers are encouraged to read more about [Google event tracking](#) and how it can help measure the quality of website traffic to your website.

For an online clothing retailer, for example, events could include viewing product photos, clicking on size charts, clicking on color swatches, placing items in a shopping cart, comparing prices for shipping methods, and placing a promotional code in a form field. By storing events in GA, online retailers can see which marketing channels brought consumers to the website who were interested in specific products or who were highly engaged shoppers.

Tags - are snippets of code which provide a method of collecting data from a website. Common tags would include conversion (pixels) tracking, analytics tracking, and retargeting. Tag scripts can be written to track consumer activities and to send events into analytics software programs. These scripts are installed into a [container](#) on a website.

Container - is a set of macros, rules and tags that is placed on a website. A [container](#) stores the code snippets on each website page and should, at a minimum, include tags for GA and AdWords.

Google Tag Manager (GTM) - is a free [software tool](#) that allows marketing managers to add or edit tags in their containers. Some third-party software programs (such as tracking and marketing optimization JavaScript tags) only need a single line of code to install, and many times it can be quickly done through Tag Manager. Adobe is also a leading provider of Tag Management solutions with a product called DTM.

Cookies - are digital breadcrumbs that are dropped in a consumer's web browser which allow website owners and marketing companies to track activity on websites and to improve the consumer's experience when they return. Cookies can be used to splice together activities on the internet and assign them to a consumer's online identity. Tracking cookies across multiple consumer devices has become a challenge for marketing professionals, so other methods such as Single-Sign-On (SSO) are helping to tie together consumer activity across devices to create a persistent online ID.

Impressions - Marketing managers can measure display ad impressions which are today's digital billboard. An impression count is the number of times an ad was shown on a page that was viewed by a consumer. If a consumer clicks on the ad, the advertiser can be charged on a Cost-per-Click (CPC) billing model. In the Cost-per-Thousand (CPM) billing model, business owners are charged per thousand impressions regardless if any clicks were made.

Session - is a group of user interactions with a website that take place within a given time frame by a visitor. For example, a single session can contain multiple page views, the watching of a video, the triggering of GA events, and an ecommerce transaction. If there is no activity on the website but the visitor remains on a website page, the session will be disconnected.

Touchpoint - is the varying ways that a brand interacts and displays information to customers. Touchpoints allow customers to have experiences every time they 'touch' any part of the product, service, brand or organization, across multiple channels and various points in time. The collection of touchpoints makes up the Consumer Journey.

Single-Sign-On (SSO) - is an account that allows access to multiple websites and apps without requiring an individual sign-in. Facebook has a very powerful SSO platform that allows their users to access other websites

using their Facebook account. With over 2 billion active users on Facebook, their ability to see what consumers are doing on Facebook, third-party apps, and websites is without peer.

Engagement - I use this term to describe the individual actions (events) that a consumer may take during a session or across sessions. These events are recorded in an analytics software platform, like GA. A high level of engagement means that the consumer acted in a way which was valuable to creating a lead or sale. Think of an engaged visitor as a qualified virtual sales lead.

The specific actions that are tracked will depend on the industry and the capabilities of the website/app technology. Event values can be weighted to create scoring systems for website traffic quality. VistaDash created a weighted event scoring system for the automotive retail industry to help auto dealers inspect the quality of their advertising traffic.

In the auto industry, consumer engagement tracking would include viewing vehicle photos, playing a video, viewing a window sticker, using a lease payment calculator, and getting a trade-in price for their current vehicle. In the travel industry, a consumer who looks at hotel property photos, reads and scrolls through multiple customer reviews, views the hotel location on the mapping tools, and requests information on car rental would be an engaged visitor.

A non-engaged visitor is more common than most business owners would predict. For example, a consumer who clicks on a banner advertisement for the Aria hotel in Las Vegas and is taken to the hotel website, takes no action, and leaves three seconds later is *not* an engaged shopper. By no action, I'm saying the consumer never scrolled down the page, never clicked on the *view room choices* button, never viewed the hotel's restaurant offerings, and didn't look at room photos or special offers.

In some cases, a visitor may not engage with page content but will call or text the business, without a click action, and convert to a lead or sale. In the engagement models discussed in this book, points are accumulated for conversions, so this visitor would get a *boost* in engagement points for their decision to call or text the business.

Leads and Conversions - It is important to distinguish the difference between events, leads, goals, and conversions because in each industry these terms can mean different things. I will define "leads" as consumers who have expressed an interest, shared some contact information, but have not yet purchased. When a home buyer calls a realtor about their listing and provides their contact information over the phone, that sales opportunity will be considered a lead. When the consumer purchases, enrolls, or subscribes the lead would also be a conversion.

It is very common for consumers to complete lead forms on automotive, finance, insurance, and technology websites. Marketing managers will often calculate the *lead closing ratio* for each marketing channel to measure relative lead quality. For example, they might compare the lead closing ratio between Google AdWords and Facebook leads. The formula is the number of sales / number of leads. Sufficient time should be granted to allow a normal sales cycle to be completed.

An ecommerce lead could also be an abandoned shopping cart. For example, if you ever want to purchase a larger ticket item on Amazon, place it in your shopping cart and do not purchase it. You will likely receive an email 2-3 days later offering a discount to purchase the product immediately.

Leads are typically managed through a Customer Relationship Management (CRM) software platform which will record all interactions between the consumer and the company.

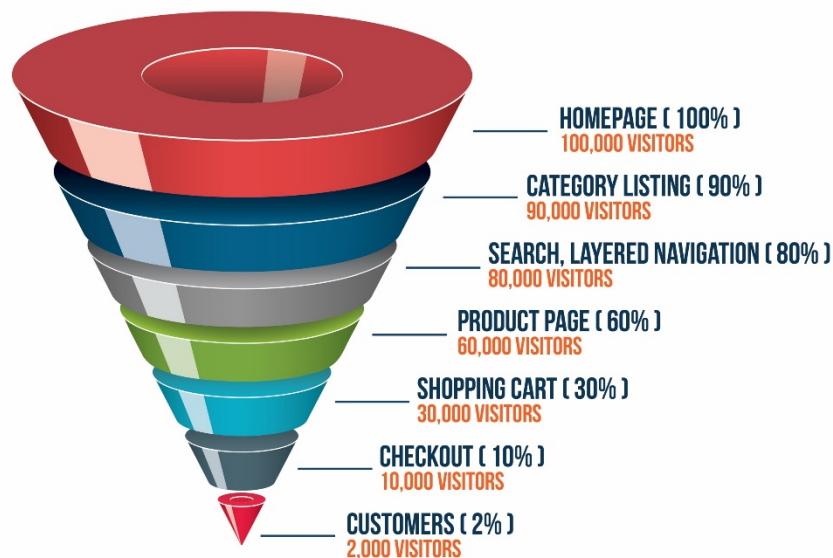
Last-Click Conversion - In Google Analytics, it is a marketing channel associated with the visitor session on the website that created a conversion. Session-based conversion modeling is dangerous because it ignores

conversions that were influenced by an initial advertising engagement (trackable) which came back to the website through an untracked channel, like direct.

Assisted Conversions - In Google Analytics, a marketing channel that engaged or influenced the consumer to visit the website but did not create a conversion until later when the consumer came back through another channel. Assisted conversions are displayed in the *Conversion* section of GA under *Multi-Channel Funnels*.

Google Analytics Goals - are specific actions that a business owner would like to track in GA. Each goal is given a name, for example, *lead_form_submission*. It is very common to have less than 20 goals created in GA but 3x the number of events defined. Named goals are normally assigned to conversions: Lead form submissions, click-to-call, chat sessions initiated, completion of a skill level in a mobile app, or a purchase. Goals can also be created for non-conversion actions, like the number of pages viewed by a consumer or their visit duration.

Ad Serving - The technology and services that place advertisements on websites or mobile apps. Ad serving technology companies provide software to publishers and advertisers to serve ads, count them, choose the ads that will make the publisher or advertiser the most money, and monitor progress of different advertising campaigns. Ad serving technology can help advertising identify the best placement for their ads to generate higher click-through-rates (CTR).



Conversion Funnels - are a visualization of the actions that consumers take on a website/app on their way to completing a goal. Once goals are defined, GA provides tools to show how consumers engaged with the online content.

For online retailers, their conversion funnels are the steps to a sale. For example, online retailers can view the checkout process to see which steps toward completing a goal were creating friction with consumers.

They might find that the shipping address form was buggy, causing a higher than normal shopping cart abandon rate of 80%, as shown in the above illustration. Once fixed, the retailer should see an increase in sales and a decrease in shopping cart abandonment rates.

Return on Advertising Spend (ROAS) - is the total revenue generated by an ad campaign divided by the cost of the ad. ROAS is expressed as a percentage. For example, if \$50,000 in revenue was generated by a \$10,000 ad investment, the ROAS would be 500%.

Over a year ago, I was scrolling through my Facebook feed when I came across an advertisement for a new product called Pixie, a first-generation Bluetooth tracking device for keys, wallets, and personal items. I had never heard of the company or the product before. The technology attracted my click and minutes later I purchased the product. In that case, Facebook was exclusively responsible for influencing my purchase.

The ROAS would be calculated as follows: Facebook Sales Revenue / Facebook advertising costs. If the campaign generated \$40,000 in sales and the ads cost \$4,000, the ROAS would be 10:1 or 1,000%.

Cost per Click (CPC) - is used to compare the cost of engagement across SEM advertising campaigns. For example, if a Google AdWords campaign cost \$3,000 and generated 1,500 clicks, the CPC would be \$2. For ecommerce companies, a more effective calculation would be the Cost per Acquisition (sale) also known as CPA.

Effective Cost per Click (eCPC) - is used for calculating the effective cost per click on display campaigns. For example, if a display campaign cost \$1,000 and generated 10,000 impressions and 100 clicks to the business website, the eCPC would be \$10. This calculation can be used to compare media channel choices and outcomes.

The reverse can also be done to convert CPC campaign metrics into eCPM metrics, effective cost per thousand impressions.

Cost per Acquisition (CPA) - The advertising/marketing cost to acquire a customer (sale) or to generate a lead/action. In the past, cost per acquisition would relate to a single marketing channel, like Google AdWords. The single silo model for CPA ignored other ad costs which influenced a customer. In the future, CPA metrics will aggregate advertising costs based on multiple consumer touchpoints to have a more accurate cost for advertising.

Marketing Attribution - There are many definitions for this term, so let's start with Wikipedia⁴: *In marketing, attribution is the identification of a set of user actions ('events' or 'touchpoints') that contribute in some manner to a desired outcome, and then the assignment of a value to each of these events. Marketing attribution provides a level of understanding of what combination of events in what particular order influence individuals to engage in a desired behavior, typically referred to as a conversion.*

In layman's terms, attribution seeks to answer the question "Who Sold It?" More specifically, which series of marketing and consumer-generated messages created a conversion or sale. For example, when a consumer sees an ad with "70% off Labor Day only!" it might have been the final stimulus required to bring in more foot traffic on Labor Day. A more dire example is when a consumer reads a TripAdvisor review that includes comments like "moldy bathroom ceiling." All the marketing in the world will not overcome that negative image.

In some industries, marketing attribution is easy and for some, it is nearly impossible. The reason why attribution is so difficult is because the largest advertising platforms and portals do not share a common method for tracking consumer events and touchpoints along the "road to the sale." Without third-party software, a hotel owner does not have the ability to know that a visitor to their website also read a review on TripAdvisor which positively or negatively influenced the booking.

Media Mix Modeling (MMM) - (or Market Mix) is a time-tested way to measure the high-level impact of a range of marketing, tactics, and advertising campaigns. It differs from Multi-Touch Attribution (MTA) because it is a top-down approach that starts with aggregate data at the level of campaigns and markets, and not at an individual level. More technically, it is a statistical analysis, such as multivariate regressions on sales and marketing time series data, to estimate the impact of various marketing tactics (marketing mix) on sales and then, at a campaign level, forecast the impact of future sets of tactics. It is often used to optimize advertising mix and promotional tactics with respect to sales revenue or profit³³.

MMM emerged as the savior to the question of “Was my ad campaign successful?” Unfortunately, results were not available until well after the campaign ended and, therefore, could only be used to shape the next campaign. It did have its advantages because it looked holistically at advertising, defining what patterns of activities performed best. However, it lacked the details about specific media properties or campaigns.

Multi-Touch Attribution - Better known as MTA, is a bottom-up approach to answering the question, “Was my ad campaign successful?” because it attacks the problem from the visitor or person level. It supports the analysis of vast amounts of data across paid search, display advertising, websites, and email. Because it analyzes information about every consumer touchpoint, it can analyze the exposure and the response (either achieving a goal or not) of every consumer within each campaign.

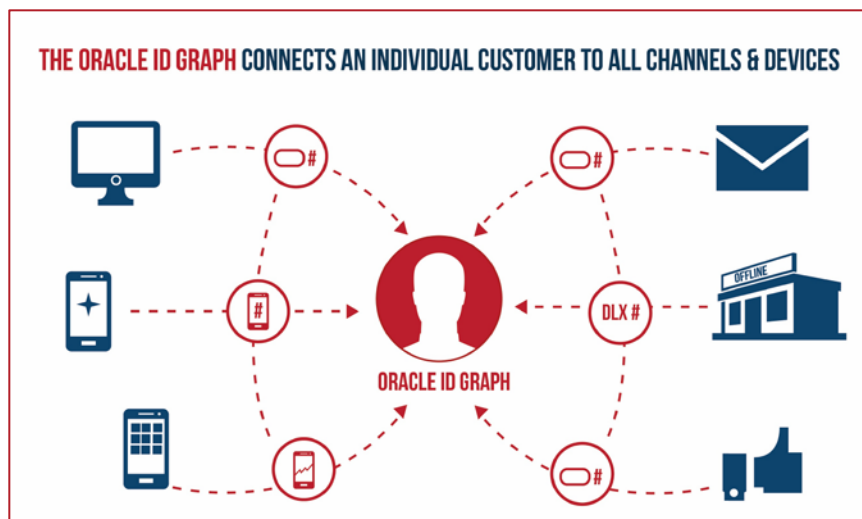
Next Best Investment (NBI) - If I can spend one more dollar, where do I put it? What is the marginal return for that dollar? If a business manager says, “I only want \$20 leads,” then the company is giving up the \$21, \$22, \$25, \$30 leads, which could still be profitable. Marketing channels have different costs and they need to be ranked based on the cost of the outcomes to the business.

Device Graphs (ID Graphs) - are used to connect online identifiers of phones with a consumer’s cookies on desktop devices and ad exchanges. Tracking protocols are different between desktop, mobile, and mobile apps as we have discussed early in the book. So, simply put, a device graph is a map that links an individual to all the devices they use, which could be a consumer’s desktop at work, laptop at home, tablet, and smartphone.

Oracle’s device graph is one of the most powerful in the marketplace, powered by data from BlueKai, Datalogix, and more recently Tapad⁴⁰. Here is an excerpt from the Oracle website⁴¹:

The Oracle ID Graph is not a product but it is a foundational capability or technology that powers the Oracle DMP. All linkages in Oracle ID Graph are continuously validated and scored, which changes dynamically based on a proprietary algorithm to the input. Only the linkages deemed accurate are accepted.

Oracle ingests massive amounts of IDs across cookies, logins, HH, emails, and mobile ad IDs on a weekly or sometimes daily basis from ID data partners. The Oracle ID Graph can reach over 90% of people online in the U.S. and in markets that matter internationally so users can deliver audiences, at scale, and across channels.



Geofencing - allows you to target users within a predefined area based on location. It's like a virtual boundary (thus the use of the word fence) that is created around a physical business location. The shape of the fence is dependent on the vendor's capability and, sometimes, the phone.

For example, the Apple iOS tracks consumers within a radius and then the vendor's specific software could track the consumer more precisely using the boundary of the lot or the outline of the store. It is important that the vendor be able to isolate consumers that are within the geofence for more than say 20 minutes (avoid drive by false positives) and less than 6 hours (employees).

Location-Based Services - A healthy funnel of precise GPS location data is streamed from consumers that have opted into "Allow Tracking" or by providers that are able to triangulate a consumer's location based on a combination of cell phone towers, Wi-Fi and Bluetooth triangulation.

Location-based services use a smartphone's GPS technology to track a person's location. After a smartphone user opts-in, the service can identify their location down to a store interior without the need for manual data entry.

Location-Based Advertising (LBA) - is a form of advertising where the audience is determined by the consumer having been in a precise location (like a venue) and potentially fits within a specific cohort like an age bracket. LBA ties it all together, geofences, services and device graphs. A consumer that has crossed a geofence is placed into an audience segment and then mapped to an advertising ID using a device graph, the segment in turn is then targeted with a geographic contextual ad.

In practice, it is a bit more complicated. For example, the consumer's ID and Latitude and Longitude are seen in real time (by a subscribing vendor), the location is determined if it is within the geofence, the ID is then associated to all other IDs based on the device graph, and then associated to multiple IDs found on ad exchanges. Finally, when a consumer uses their mobile phone, desktop or laptop where the device graph could bridge the IDs to the same person, the ad exchange serves a relevant ad. It works, but scaling the solution can be a challenge.