GP_ABullhound Global Insights

AI AND THE SERVICES REVOLUTION

THE IMPACT OF AI AND DATA ON DIGITAL MARKETING

GP.Bullhound

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The View FROM GP BULLHOUND





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"ARTIFICIAL INTELLIGENCE... IS ALREADY SHAPING OUR EVERYDAY LIVES AND TRANSFORMING THE WORLD OF MARKETING."

Gurman Hundal, Co-Founder & CEO of MiQ

Data is a defining feature of the global digital economy, and as with many industries, data is reshaping the marketing sector. The amount of data available about consumers from purchases, social media, location, searches, shows watched, music listened to and usage of connected devices, among others - is growing exponentially and creating a goldmine for marketers to analyze in order to understand consumers. At the same time, through incredible advances in computing power, Artificial Intelligence (AI) is becoming a viable and affordable technology that allows marketers to collect, sort, analyze and learn from this vast volume of data, and importantly, use it to predict and influence future consumer actions.

GROWING INVESTMENTS

While it is still early days for the application of AI in marketing, it is a concept that is of increasing interest to marketers, as it promises to help solve the key question of how to best spend the next marketing dollar. Investments in marketing-related AI have been growing steadily, in particular since 2018, when \$2.5bn of investments were made in emerging companies in this sector, and continuing into 2019, with \$1.0bn invested in Q2 alone.

SOLUTION TO MARKETING CHALLENGES

There are certainly barriers to AI usage for marketing services, ranging from outdated enterprise systems to organizational structures that do not facilitate the continuous feedback loops that make AI so useful. However, we believe that the huge potential benefits of AI for marketing - to finally solve the century-old problem stated by John Wanamaker, "Half the money I spend on advertising is wasted; the trouble is I don't know which half" - will overcome these obstacles, as organizations adapt to the needs, risks and opportunities of the digital economy.

As marketers start to access these vast amounts of data and the AI-based technologies to process them, they will also need help in understanding what this all means in terms of who their best customers are; when, where and how to reach them; what to tell them; and how to most efficiently allocate marketing budgets. In addition, there is already a bewildering labyrinth of companies offering Al marketing technologies, between which marketing teams will have difficulty differentiating, choosing and implementing.

ROLE OF DIGITAL AGENCIES AND SERVICES PROVIDERS

This is where digital marketing services providers including agencies and consultancies - can play a critical role in the efficient use of AI. They can act as a trusted advisor who interprets the data and applies it to their clients' marketing strategies. According to Pete Kim, CEO of S4 Capital's MightyHive, "...future 2.0 marketing services firms will be subject-matter experts in advertising and data analysis, Machine Learning and Al." However, all of this will require fundamental organizational and cultural shifts - both services providers and their clients will need to reorient their structures around a seamless flow of data between analysts, strategists and creatives with the ability to make tactical shifts in real time.

In fact, one model that is emerging is AlaaS (Al as a Service). In this case, AlaaS not only refers to the ability to pay for an otherwise costly AI technology platform with recurring licensing fees, but also implies that a services provider will still add the necessary human element. Adam Hildreth, CEO and Founder of Crisp put it this way: "AI can do 99% of the heavy lifting to identify the needles in a haystack. But you still need a human to verify that it is indeed the needle you are looking for and the action that's required."

CATEGORIES OF AI IN MARKETING

We have explored three themes on the topic of marketing AI:

1. Hyperpersonalization: the ability to target individual consumers with highly tailored content at the optimal time, in the optimal place and using the optimal medium - but with dynamic, constantly changing variables. This is only

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possible at scale with AI. AI is supercharging established targeted marketing practices such as programmatic media buying, email, and search while adding new possibilities such as voice and visual search - all with the promise of truly optimized omnichannel marketing.

2. Branding: in addition to one-to-one marketing, AI will help marketers build stronger brands that stand out in a cluttered media landscape. With AI-enabled segmentation, marketers can better understand their audience and create new insights into their consumers using digital signals of demographic, psychographic and behavioral variables. In addition, new AI-enabled technologies such as Natural Language Processing help identify the best social media influencers, often with small but devoted followings, and enable brands to reach new consumers.

3. B2B (business-to-business): AI promises to augment and reshape B2B marketing, which is typically more sales force-driven with a more complex customer journey. Al is revolutionizing the B2B sales process, which can often take several months and involve numerous steps and parties, by uncovering patterns in customer behavior and predicting best next steps, as well as discovering high value overlooked customers. During and after the sales process, Al-driven bots are able to respond efficiently to customer inquiries, freeing up human customer service personnel for more critical or nuanced tasks. Bots are likewise used by many consumer marketers.

We believe that we are at the beginning of a new marketing era - driven by the need to connect vast amounts of disparate data, which can only be accomplished with AI. Gurman Hundal, Co-founder and CEO of MiQ, views the development of AI for marketing in two stages: first, the automation of processes and data analysis, and second, rationalization by using AI to predict behaviors and recommend actions, which is where AI gets really interesting. Brands will benefit by more efficiently interacting with existing customers and uncovering new customers as AI opens up new marketing channels such as voice and visual search and enables seamless omnichannel communications. Digital services providers - including agencies and consultancies - will benefit by providing critical advice in interpreting this data and executing these AI-driven strategies. No longer is half of the advertising budget being wasted.



Setting The Stage **KEY DEFINITIONS**

ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence is a sector of computer science which works towards a hypothetical (as of today) state where machines can perfectly replicate intelligent behavior typical for humans. Full AI has not been achieved yet. Machine Learning and Deep Learning are subsectors and enablers of Al.

NEURAL NETWORKS

In nature, neural networks are systems of neurons in a brain connected to perform a certain function based on specific information they receive. An artificial neural network, consisting of algorithms, loosely serves the same purpose - recognizing patterns in the data provided.

NATURAL LANGUAGE PROCESSING (NLP) AND GENERATION (NLG)

In the most basic sense, NLP and NLG refer to machines understanding and speaking a language the same way a human would. Both NLP and NLG have only become possible with advancements in Deep Learning as neither conventional programming nor pioneering Machine Learning models could capture the complexity of human languages (context, emotional connotations, errors etc.).

MACHINE LEARNING (ML)

Machine Learning is a sector within Artificial Intelligence. It describes an ability of a computer or software to adjust its own algorithms based on learnings from the data that has been processed with little to no human intervention. Machine Learning algorithms learn by example rather than by exclusively following pre-defined rules.

DEEP LEARNING

Deep Learning describes Machine Learning using deep neural networks, or neural networks with more than one layer (feature, aspect) of data. Deep Learning models are by nature more sophisticated than a one-dimensional machinelearning model, but it also means they require more computational power and longer times to train them.

COMPUTER VISION

Computer vision is quite like NLP and NLG the premise is to enable computers to see and interpret static and dynamic images similarly to how a human eye would do it. The problem of deciphering images rather than words might be even more complicated for machines to master, considering the innumerable variations in the natural world around us.





Artificial Intelligence Today

ON THE VERGE OF A REVOLUTION

113% GROWTH IN THE NUMBER OF ACTIVE AI STARTUPS IN THE US BETWEEN 2015 AND 2018

350%

GROWTH IN THE VC FUNDING FOR AI STARTUPS IN THE US BETWEEN 2013 AND 2017

Sources: "The Al Index 2018 Annual Report", Al Index Steering Committee, Human-Centered Al Initiative, Stanford University, Dec-2018



ANNUAL GROWTH IN NUMBER OF ACADEMIC PAPERS ON AI PUBLISHED IN THE US IN 2017 COMPARED TO 1996

34x

GROWTH IN THE NUMBER OF JOB OPENINGS REQUIRING SKILLS IN DEEP LEARNING BETWEEN 2015 AND 2017 IN THE US



AI: A Retrospective FROM SCIENCE FICTION TO EVERYDAY REALITY

Once a dream of the brave, Artificial Intelligence has come a long way since the beginning of the 20th century. Through an unprecedented advancement of computer science, smart machines have become a staple in our everyday life - feeding off the data we generate.

Moore's Law MULTIPLIED BY THE DATA

Artificial Intelligence thrives where there is enough data to process and enough power to process it. With computational power doubling approximately every two years and amounts of data generated by humanity growing exponentially, Artificial Intelligence might be entering its best years yet.

In 1965, one of the founders of Intel, Gordon E. Moore, predicted that the number of transistors per microchip would double about every year. While he then revised this to every two years in 1975, he has been approximately right - computing power has increased exponentially, and we are now all walking around with supercomputers in our phones. Today, the latest chips from Intel can run over 10 trillion calculations per second. This sheer power, coupled with other improvements in microchip functionality and the possibility to reprogram chips on the fly, has opened previously unimaginable opportunities for computers to learn and recognize patterns in data that are fed through them.

COMPUTER RANKING PER CALCULATIONS PER SECOND PER CONSTANT DOLLAR



AT THE SAME TIME, EVERY MINUTE OF THE DAY ...



Sources: Ray Kurzweil; Domo, "Data never sleeps 6.0", 2018.

I. The concept of programmable computers – as in "machines to compute" - existed for over a century with various machines successfully solving an array of simple tasks for humans, before the term "Artificial Intelligence" was popularized during the Golden Age of Science Fiction between 1938-1946.



II. Until 1949, one major problem of all computers was that not only were they extremely expensive - but also they could not store commands, only execute them. In the 50s-70s, however, computers became exponentially faster and smarter. So much so, in fact, that at one point Al scientists predicted machine intelligence on a level of a human being by the end of the 70s.

The 80s were marked by an overall disillusionment. Contemporary computers could not break out of a computational dilemma: they either could not store enough data or could not process it fast enough.

III. Turns out, the secret was to wait. With both computational power and memory capacity of computers doubling every two years, the problems from the 80s gradually disappeared.

In the 21st century, humanity officially entered an era of smart machines.

Sources: based on "The History of Artificial Intelligence", Harvard University, Blog of the Graduate School of Arts and Sciences on Artificial Intelligence, 2017

Make Hay While The Sun Shines MARKETERS ARE RUSHING TO CAPITALIZE ON AI OPPORTUNITY

Today, everyone understands that data is a valuable business asset. One field that both generates significant amounts of data and can benefit greatly from data insights is digital marketing.

Once only available to larger corporations, today AI and ML based advanced data analytics and predictive analytics solutions are accessible almost off the shelf for businesses of all sizes. They serve almost every aspect of a brand-customer relationship and can be used individually or as part of an integrated AI implementation strategy.

PERCENTAGE OF MARKETERS USING OR PLANNING TO USE ARTIFICIAL INTELLIGENCE (AI) IN THE FOLLOWING WAYS

	CURRENTLY USE	PLAN TO USE WITHIN	TWO YEARS	PROJECTED TWO- YEAR GROWTH
PERSONALIZE THE OVERALL CUSTOMER JOURNEY	24%	59%		+244%
DRIVE NEXT BEST OFFERS IN REAL TIME	24%	56%		+234%
AUTOMATE CUSTOMER INTERACTIONS OVER SOCIAL CHANNELS OR MESSAGING APPS	23%	57%		+252%
PERSONALIZE CHANNEL EXPERIENCES	22%	60%		+266%
LEVERAGE ONLINE DATA TO FACILITATE OFFLINE EXPERIENCES	22%	57%		+257%
GENERATE DYNAMIC LANDING PAGES AND WEBSITES	22%	57%		+257%
PROGRAMMATIC ADVERTISING AND MEDIA BUYING	22%	58%		+269%
DELIVER PREDICTIVE JOURNEYS	21%	53%		+248%
IMPROVE CUSTOMER SEGMENTATION/ LOOKALIKE AUDIENCE MODELING	21%	59%		+277%
LEVERAGE OFFLINE DATA TO FACILITATE ONLINE EXPERIENCES	21%	55%		+265%

Source: Salesforce, "State of Marketing", 2018

Creating A Virtuous Data Cycle

GURMAN HUNDAL CO-FOUNDER & CEO OF MiQ

Artificial Intelligence can no longer be considered a technology of the future - it is already shaping our everyday lives and transforming the world of marketing. According to Gartner, 30% of companies worldwide will use AI in at least one of their sales processes by 2020. And AI is increasingly powering customer experiences from real-time personalization to conversational voice interactions.

But what do we mean when we talk about AI in marketing? At MiQ, we view AI as two concepts: automation and rationalization. Automation replaces specific human jobs and is the solution to the challenge of Big Data, which produces an immense amount of information. The automation of processes and interpretation of this data is right now the most effective use of AI in marketing.

But then there is rationalization, which is where AI starts to get interesting. Rationalization is the use of AI to predict behaviors and recommend actions - and it is where AI really excels. But before putting AI in the driver's seat in the decision-making process, brands need to fully understand the technology they are using. After all, algorithms are only as good as the code that governs them, and the data used to teach them. As such, the rationalization phase is currently somewhat overplayed.

If a brand wants to trial AI, they should first employ an expert. It's not like picking up a product off the shelf. They need to invest in people to customize it to the needs of their business. That's why many of the firms using AI effectively are, at heart, technology companies with experts on hand. Agencies and other businesses looking to follow in their footsteps will need to bring in technology experts before they put AI to work for their marketing teams. In other words, before they integrate AI and data analysis, they need to integrate AI and data analysts. This could mean a change of leadership or acquiring a specialist company - but those are the kind of significant changes brands need to make to prepare for the digital era.

One brand that has taken the leap is McDonald's. Earlier this year, McDonald's acquired AI start-up Apprente to implement AI voice-based technology in its US drivethroughs. It follows on from an earlier decision to invest



in technology that can automatically alter individual drive-through menu panels depending on factors such as the weather.

For programmatic advertising, AI is now used for activation and insights. In fact, we should redefine programmatic what used to be about buying audience more effectively has now expanded to leveraging any online or offline data set in an automated and real time manner.

- Another area of marketing that AI is redefining is customer segmentation. Understanding your consumers can be a slow, painstaking process involving focus groups and other types of market research, but by collecting all the digital signals that people leave online, Artificial Intelligence can generate huge amounts of innovative insights in near real time.
- Google, Facebook and Amazon are dominant because they have great formats, good customer retention and amazing consumer data. However, there is a point when brands will max out their returns from these platforms. And that's where they need to get clever about finding alternative strategies.
- The good news is there are many alternatives to choose, from online display advertising to retargeting strategies like creating custom audiences on Facebook. Display advertising strategies such as these are a great investment for brands, who can now get better insights from display advertising than ever before. The growth of omnichannels creates a virtuous data cycle - these multiple channels create more data, more signals and more data sources - and we need AI to connect all that data.
- Looking ahead to the future, we see a world where humans and AI work more closely together. While humans intuitively absorb knowledge about how the world works, machines have to be specifically taught these rules, but once this happens, they can also produce unique insights. At MiQ, our aim is to get to a place where we can connect every data strand - whether from CRM, TV, website visits, direct mail, you name it - for a brand and create a repository for massive amounts of data to surface insights in real time. Al is going to be at the heart of this vision and that's exactly what we are investing in.



Artificial Intelligence

IN THE UNIVERSE OF DIGITAL MARKETING

HYPERPERSONALIZ

	BRANDING & ID YOUR AUDI
	ENHANCED CU SEGMENTA
ERPERSONALIZATION	SOCIAL MEDIA M
PROGRAMMATIC ADVERTISING	INFLUENCER MA
EMAIL	FOCUS ON
SEARCH	
OMNICHANNEL	
CUSTOMER DATA PLATFORMS	
CUS ON CUSTOMER	2
1	
	MARKET





Al As A Game Changer

PETE	KIM			
CEO	OF			
MIGHTYHIVE				

SIR MARTIN SORRELL FOUNDER OF S4 CAPITAL

How do you view the evolution of AI in marketing over the next few years?

Sir Martin Sorrell (MS): We see AI (including voice, AR and VR) as one of the most significant developments to focus on in the coming years. In fact, our colleagues at media firms are already using AI quite significantly.

Pete Kim (PK): We will see a gradual evolution as AI and Machine Learning help the teams in media and creative industries make better daily decisions, slowly but surely unlocking the power of advertising data.

Al and Machine Learning are being used in all aspects of advertising already. It is being applied in optimization: which of the two million permutations of an ad do you show to a particular person at this particular time? How much should we bid to target a certain audience group? Any sort of activity that has an optimization and analytical aspect to it can be automated and accelerated through the use of data and pattern matching, which is the foundation of all Machine Learning.

The real unleashing of AI is going to be Machine Learning tech with great implementation and powerful data. Today, most of the first party data around transactions isn't being piped back into this technology infrastructure. If you've got a really awesome set of software with a really imperfect set of data, then garbage in still equals garbage out, even in a world of impressive tech.

Who are the leading players in the marketing industry in the use of AI?

MS: It's likely that the big 3 [Google, Amazon and Facebook] will have a dominant position.

PK: Each of them has the identity graph. They know who you are, on every single device that you own because the whole world obligingly logs in with a unique identifier. There are only a handful of companies that have such a comprehensive identity graph and it is critical. The graph allows you to take all the other bits of data floating around and combine them into sole records that give you a complete picture – it's the crown jewel of each of these companies.

In adtech there will be a massive, and long overdue, consolidation. We don't need 10,000 logos, we need 10. These will be surrounded by consultancies and agencies that know how to operate the platforms and create integrations with other elements of the marketer's stack.

Can AI have an impact on the role and the work of creative agencies?

MS: Both the media and creative areas will be impacted. Data improves output, but it doesn't replace output. Access to vast amounts of data will make our job more, not less effective. The traditional argument, that data destroys creativity, is nonsense - AI will aid creativity. With better data input, you get better output.

PK: To Sir Martin's point, data is the most important asset. Future 2.0 marketing services firms will be subject-matter experts in advertising and data analysis, Machine Learning and Al. It will be insufficient to have two separate persons with each of the backgrounds collaborating on a team - you need to understand both subject matters equally in order to truly be effective. In the short-term, we will serve as the guide, the explainer, the implementer, and the creator of these new processes, with and software that unlocks the power of data. I agree with Sir Martin that Al won't replace us, but it does change the game.

Are we at a stage where AI can drive truly channel agnostic marketing?

MS: With AI you have more of a shot of doing it than without!

PK: We are very close. If we can get transaction and real moment-to-moment data, then we're nearly there. But it's going to be an exercise in data and discipline, as opposed to some fundamental advance.

Are there ethical issues around the use of this data, particularly with the impact of GDPR?

MS: As long as we educate the consumer, there won't be a problem. There are examples of apps in the US that are paying people to use their data – these users are conscious about what they are opting into and understand the value of their data.

Ultimately, people will decide what data to share, and what to withhold.

PK: I think this is much ado about something few people care about. I hesitate to say what's right or wrong, although that is a debate that needs to happen. But if everybody cared about this, then why do people generally dismiss the disclaimers that come up every time they log into a US server.

There is an expectation that data will be used in a way that targets people with what they are interested in. Advertising, like media as a whole, is no longer about "you'll get what you get and you'll like it." There is an unlimited pool of things to buy, watch, listen to, or search. We can all cater our experiences to what we like, so why should advertising not be the same?

No consumer wants to browse Amazon and be targeted with products they have no interest in. They will say "what are these awful ads?" and log off. What keeps them on the site is that they are targeted correctly. No amount of legislation will change that, and AI will make the targeting better.





Hyperpersonalization IS ONLY POSSIBLE AT SCALE WITH AI...

...according to Ravi Shah, Head of Strategy at Acoustic (formerly IBM's Watson)

The concept of direct marketing, targeting defined audiences with measurable results, has been around for decades - indeed, the venerable ad man David Ogilvy swore by it ("Direct response is my first love, and later it became my secret weapon."). While he was referring to long copy direct response print ads and direct mail, direct response later expanded to television, and notably, in the last decade of the 20th century, to email. The ability of email to send more personalized messages to vetted customer lists and measure response rates made it an important promotional channel for marketers. However, the level of personalization was often limited to a person's name, and the lists used were often generic, obtained from publishers and other thirdparty sources.

Fast forward to today. The combination of AI tools and vast amounts of data collected on individual consumers across all touchpoints makes true personalization - hyperpersonalization - a unique opportunity. Hyperpersonalization allows marketers to reach individual consumers with highly tailored content at the optimal time and using the optimal medium - the combination of which, however, can change constantly - which is where AI comes in. The analysis of and learning from vast amounts of data including search and transaction history, social media usage, and location data is ideally suited for the capabilities of AI.



COMPETITION, " 1992

Hyperpersonalization TAKING CENTER STAGE

"A person's name is, to that person, the sweetest and most important sound in any language." - Dale Carnegie

Hyperpersonalization is effectively an evolution of direct marketing and CRM - updated for the digital age. Importantly, a key development is not just the ability to analyze vast amounts of data - regression analysis has been a useful marketing tool for decades - but it is the ability to predict at massive scale behaviors by studying patterns between large quantities of variables. Indeed, in its 2019 Marketing Trends Report, IBM Watson Marketing noted "...look for 2019 to be the year when testing from after-the-fact A/B and multivariate transforms to more predictive-based and combined models with rules that optimize content and offers in real time."

LOOKING AHEAD, WHICH OF THESE DO YOU REGARD AS THE MOST EXCITING PROSPECT IN THREE YEARS' TIME? (% OF RESPONDENTS IN CATEGORY "ADVERTISING", TOP 4 RESPONSES INCLUDED)



Programmatic Advertising

Programmatic media buying has existed now for over a decade, and at first was not generally associated with the term AI. However, the exponential growth of data over the last few years has created a growing demand for the use of Al in programmatic. Andrew Shebbeare, Co-founder and Chief Product Officer of global digital media agency Essence noted, "Al has changed a lot in the few last years from an interesting academic proposition to becoming more democratized and efficient, easy to implement."

While programmatic at scale has become the domain of the world's largest media agencies, such as Essence (a unit of WPP), the application of AI is giving rise to a new breed of programmatic and data-driven agencies backed by venture capital and private equity firms, who recognize the massive opportunities for personalized marketing created by AI. For example, marketing intelligence firm MiQ (backed by ECI Partners) has developed a technology that leverages second-by-second TV data with online and offline data to match and track customers across multiple touchpoints, helping to understand who the audience is, where to find them, their likes and dislikes, and the best time to market to them.



Sources: "2019 Digital Trends: Advertising in Focus", Adobe, Econsultancy, 2019

KEY INVESTORS

Jolt Capital, Vækstfonden, Conor Venture Partners, Heartcore Capital, Cipio Partners

ABOUT BLACKWOOD SEVEN

- Operates a cloud-based platform for media analytics and planning
- Helps marketers track efficiency of media spend through scalable, Al-driven algorithms

ABOUT JELLYFISH

- Global digital partner for clients providing full range of digital services capabilities, technology, analytics and consultancy to create perfect digital journeys for customers
- Founded in 2005 with headquarters in The Shard, London, has expanded globally to span 23 offices in 12 countries

KEY INVESTORS

ECI Partners

ABOUT MiQ

- Marketing intelligence company that provides customers with data, insights, and Al-driven programmatic campaigns
- Operates across three service areas; media, analytics and tech, including a programmatic-first insight and planning tool, AiQx



Fmail

Email gained widespread usage in the 90s, both as a personal and as a business communications medium. However, due to the clogging of inboxes with irrelevant messages, its usage has started to plateau. Indeed, in GP Bullhound's 2018 Technology Predictions, we predicted the decline of email in the US, exacerbated by the explosion of messaging tools such as Slack. While we expect this trend to continue for internal corporate purposes, email as a commerce tool may experience a renaissance due to the application of AI with its superior targeting and personalization (i.e. more relevant communications).

Al enables marketers to focus resources on the optimal targets based on customer and external criteria, from calculating buying and replenishment probabilities and long term value (LTV) to tailoring products and content, to identifying the optimal time to reach a consumer both pre- and post-purchase, as well as the optimal frequency to find the right balance between getting an individual's attention and causing them to unsubscribe.

In addition, the use of natural-language generation (NLG) enables the creation and robust testing of more impactful subject line and relevant content for each customer. Al enables highly tailored subject lines to be created through much more rigorous A/B testing, while constantly adapting to new open, click through, conversion data and shopping cart data. For example, JPMorgan Chase recently signed a five-year deal with Al software firm Persado, after a successful pilot. Kristin Lemkau, CMO of JPMorgan Chase, said "Persado's technology... rewrote copy and headlines that a marketer, using subjective judgment and their experience, likely wouldn't have. And they worked."

CHANNELS WITH STAYING POWER (PERCENTAGE OF CONSUMERS WHO THINK THE FOLLOWING CHANNELS WILL STILL EXIST IN 10 YEARS)



Source: "Email marketing in 2020", Litmus Software, 2019. This survey was commissioned by Litmus and conducted online within the U.S. by Fluent, Inc.

Search Marketing

As ad networks such as Google AdWords grow increasingly complex with constant changes, the ability of AI to learn and improve is becoming critical to SEM. Indeed, Google uses AI to optimize ad campaigns run on its platform, for example, by determining similar products tailored to the individual consumer. Importantly, AI also now enables marketers to predict consumer search trends, and NLP results in better analysis of related words and topics. Al learns from the massive amounts of data available around search rankings and click through rates with much greater predictive abilities.

One new channel of search marketing that could not exist without AI is voice search. Forbes predicts that by 2020, "half of all online searches will be made through voice search." Websites can now be tailored to voice search terms on assistants like Alexa, Google Home and Siri; indeed, the integration of voice across all touchpoints is an increasing request from marketers. Voice in fact represents a fundamental shift in a brand's relationship with the consumer. Chris Sykes, CEO of Volume.ai put it this way, "...as people get more confident talking to inanimate objects, marketing will go from push to pull, and become more experiential." Similarly, visual search is another nascent, yet promising technology enabled by AI. Ben Silbermann, CEO of Pinterest, said in 2017, "A lot of the future of search is going to be about pictures instead of keywords."



Sources: "Why Voice Search Will Dominate SEO In 2019 -- And How You Can Capitalize On It", Forbes.com, Gabriel Shaoolian, 27-Dec-2018

ABOUT RAIN

- Voice search and conversational AI agency
- Define voice strategies, design conversational experiences, and build voice technology software

KEY INVESTORS

Iris Capital, Verdane Capital, Holtzbrinck Digital

ABOUT SEARCHMETRICS

- Global enterprise platform for search engine optimization (SEO) and content marketing
- Delivers data and analytics to over 100,000 users worldwide in order to help companies improve their positioning in search engine results

KEY INVESTORS

- Shamrock Capital
- ABOUT WPROMOTE
- Digital marketing agency offering paid media, SEO, content marketing, and digital intelligence services to brands
- Helps clients optimize marketing campaigns and create ٠ marketing strategies through paid media, earned and owned media, and digital intelligence services



Omnichannel

WHERE ARE YOU ON THE CROSS-CHANNEL

OPTIMIZATION SPECTRUM?

COMPLEXITY

ЦO

LEVEL

OMNICHANNEL MARKETING

CROSS-CHANNEL MARKETING

MULTICHANNEL MARKETING

SINGLE CHANNEL MARKETING

Of course, the ultimate goal of any marketer and their agency is to optimize communications across all channels - whether paid media, email, search, owned media or e-commerce. The promise of "black box" optimization has been around for many years, but now advances in

Al-driven analytics and the ability of Al to process massive amounts of computations are beginning to enable true omnichannel optimization of how to best spend the next dollar. Large media firms that offer AI tools are often viewed as (understandably) biased, so agencies and AI vendors can champion true channel agnosticism.

Examples of firms that offer omnichannel capabilities across a customer journey include integrated digital holding companies such as S4 Capital and You & Mr Jones, and consulting firms such as Accenture Interactive.



Source: (1) As of 30-Sep-2019

Customer Data Platforms IT'S ALL ABOUT THE DATA

It is the proliferation of data that is driving the need for AI, and conversely, without good data, there is little use for AI. While AI allows for the analysis of unstructured data, this data still needs to be properly managed both from a storage and even organizational standpoint. Recognizing that current marketing clouds are not properly integrated, and in order to give marketers a holistic view of customers using customer databases, website and search, retail, email and other contextual data, Customer Data Platforms (CDP) are emerging as a tool to import, centralize and disseminate customer related data and create a unified customer view. In contrast to current demand management platforms or customer databases, CDP's Machine Learning abilities allow constant updating and new pattern recognition, versus time-consuming human programmed algorithms.

In addition to the efficient collection and aggregation of data, AI enables a CDP to predict customer behavior. Al-driven marketing platform company Emarsys states, "We enhance the customer profile with Al-generated smart attributes such as purchase probability, engagement probability, future value, and product affinity, and automatically assign customer lifecycle stages according to your business needs so you can quickly make accurate decisions."



Sources: "Why a Customer Data Platform (CDP) Will Be the Next Evolution of Your Marketing Automation", emailvendorselection.com, 2018

INSIDE A CUSTOMER DATA PLATFORM

Offering Brands An Omnichannel Experience

RAJ BALASUNDARAM SVP ARTIFICIAL INTELLIGENCE AT EMARSYS

When Emarsys was founded in 2000, we started out offering email technology, but over two decades we have moved into marketing automation powered by AI. Emarsys offers a truly omnichannel experience for brands, enabling them to maintain seamless personalized communication across all channels - providing consumers with brandconsistent messaging throughout.

Five years ago, lots of people were talking about being omnichannel but actually they were just multichannel, in other words, they were using lots of different platforms to reach consumers, but the communications were conflicting and inconsistent with overall brand positioning. Emarsys decided to take personalization to the next level and make experiences agnostic. We made a lot of architectural changes to be able to create what we call unified personalization.

This is where AI comes in. Let's say a marketing database has a million contacts - that means you need to come up with many millions of permutations and combinations across all channels - it's not possible for humans to visualize and work with this. So, you end up breaking the communications into segments which become one-to-many - not one-toone. To solve this problem of one-to-one personalization we started using AI.

We found that for marketing AI to work successfully, several raw ingredients need to come together. Number one is a good customer data platform (CDP), because you need to collect the data, aggregate it, and make it available. Importantly, this CDP needs to be specific to an industry the needs and types of processing differ from one industry to another.

Second, you need to connect the customer data platform to what we call a prediction platform (this is the AI platform). The raw data collected provides a data set to the AI platform, which starts generating predictions and results. Then the AI platform needs to connect to a personalization service that can deploy across multiple channels. These three different platforms need to operate hand in hand to make an omnichannel experience work, and that's what we provide - industry specific CDP connected to an AI platform connected to a personalized marketing automation platform.



How do large players like Google and Amazon fit into this? They are really good at A⊢ because they have the data sets. You need to have a substantial amount of customer data over a long period of time to discern patterns and make good predictions. You can't fake AI.

The industry has evolved rapidly in the past five years. Amazon and Google give you so much computing power now, it's incredible. You can essentially sign up to Google data prediction algorithms for free. However, if you speak to any marketer who has used these prediction analytics, the problem is activation. After the prediction analytics is done, it's not as simple as a business user looking at the dataset and knowing what to do. It doesn't work like that - you need a data analyst or strategist to manipulate the data, look at it, analyze it, create a segment and then give it to the marketer. The data analyst may not understand the implications of what the marketer is trying to do, and vice versa. That's where there's a sizeable gap.

As a result, the majority of marketers drop out of big predictive analytics projects - they will not see uplifts, but instead they see negative trends and think it's not working. We've seen it time and time again when marketers are left to their own devices. To solve this, Emarsys takes the prediction analysis and automatically converts it into a marketer's language. We create a personalized marketer's experience where we provide tactics, a strategic dashboard and an automated roadmap for them to adopt AI.

We still see a role for agencies here. The campaigns that marketers need to create have changed.

Where once you would send an email after someone made a purchase, now, thanks to predictive technology, we know someone will very likely make a purchase in the near future - so what does that communication look like? This knowledge changes strategy, tactics and tone, and marketers need more help from strategists and creatives with this nuanced messaging. The whole topic of AI producing marketing content by itself is 5-10 years out.

Additional Leading Companies Offering Hyperpersonalization/ **Omnichannel Services/Platforms**



Sources: Company websites, Pitchbook, CapitalIQ

KEY INVESTORS

Centerbridge Partners

ABOUT ACOUSTIC

- Formerly IBM's Watson marketing group, acquired by Centerbridge Partners in Apr-2019, rebranded to Acoustic in Jul-2019
- Services include marketing automation tools, marketing analytics, an Al-powered content management system. and customer experience analytics

KEY INVESTORS

Tenaya Capital, Sequoia Capital, NextWorld Capital, Mayfield Fund, Four Rivers Group

ABOUT AGTIONE

- Cloud-based predictive marketing analytics and optimization platform
- Offers technology that uses self-learning and predictive algorithms to send hyper personalized messages and offers to consumers at optimal times

KEY INVESTORS

Greycroft, Ignition Partners, Wildcat Venture Partners, Seven Peak Ventures, Trilogy Equity Partners

ABOUT AMPLERO

- Artificial Intelligence marketing (AIM) company
- Offers an automated message optimization platform for KPI driven messaging that enables B2C marketers to optimize customer lifetime value

KEY INVESTORS

Norwest Venture Partners, Georgian Partners, FirstMark Capital, Felicis Ventures

ABOUT BLUECORE

- Retail marketing technology and e-commerce company
- Offers a platform that generates personalized interactions by utilizing customer and catalog data
- The technology matches customer data with real-time product updates to provide real-time targeted email campaigns

Additional Leading Companies Offering Hyperpersonalization/ **Omnichannel Services/Platforms**

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Source: Company websites, Pitchbook, CapitallQ

Sources: Company websites, Pitchbook, CapitallQ

KEY INVESTORS

Blenheim Chalcot

ABOUT FOSPHA MARKETING

- Provider of marketing attribution and optimization software
- The software provides real time insights into customer behavior that allows organizations to optimize their marketing budgets and improve audience engagement

KEY INVESTORS

Wamba Capital, Sequoia Capital India, 500 Startups, ٠ Dogan Yayin Holding

ABOUT INSIDER

- Growth management platform using AI and machine learning capabilities to leverage real-time predictive segmentation
- Helps marketers deliver personalized experiences to customers across web, mobile web, mobile apps and ad channels

ABOUT PMG

- Digital marketing agency providing omnichannel strategy, media, insights, and creative content production services to brands
- Launched its intelligent marketing platform "Alli" in Jun-2019, designed to provide marketers with tools to create more personalized experiences for users



Branding

While AI is perhaps most often associated with use cases around hyperpersonalization, it also has applications for broader branding and and segmentation, although certainly the ability to more accurately target and predict remains a common thread. Reach still matters.

In this age of hyperpersonalized marketing (with the technology to do this and consumers who expect this), there is a risk of a brand trying to mean too many things for too many people, and hence there is a pressing need to build strong brand positioning with consistent messaging. In fact, given today's cluttered media landscape, proliferation of upstart brands leveraging digital media for marketing and distribution, and overall retail challenges, a strong and relevant brand is critical in order to stand out. While AI helps a marketer predict what a consumer will want based on historical data, brands still have the ability to shape a consumer's preferences.

As Steve Jobs once said, "A lot of times, people don't know what they want until you show it to them."

Improved customer segmentation and brand influencers, especially on a micro level, are two branding related applications that are being fine-tuned with AI. And while AI can help create a more relevant and desirable brand, it can also help marketers react quickly to problems around a brand or product, which is an increasing risk given social media and a complex ad tech ecosystem that can associate a brand unwittingly with undesirable content.

Just as branding has historically leveraged market research, data and analysis to support what are ultimately creatively or strategically driven decisions, do not expect AI to displace human intuition. For example, Adam Hildreth, CEO and Founder of social media safety firm Crisp noted that a human will always need to be in the loop to judge what is truly harmful: "you can't call a Fortune 500 CEO at 3am to deliver an alert that is actually a false positive." He stressed the need to combine AI with Human Intelligence to create Extended Intelligence:

AI + HI = XI

Another related AI application that will be an increasing discussion for marketers and media is content discovery. Today, we are constantly influenced in deciding what content we will consume next. This takes many shapes and forms, such as Facebook deciding what your newsfeed looks like, Netflix deciding which TV shows or movies to suggest, and when YouTube chooses a video which automatically plays next. This is all driven by AI. For example, Spotify uses a combination of collaborative filtering (looking at which tracks a user streams frequently and comparing that to other users with similar tastes), Natural Language Processing (automatically analyzing written content such as blog posts about music to understand if two pieces of music are similar), and raw audio models (applying neural networks to understand characteristics like estimated time signature, key, mode, tempo, and loudness of tracks).

As technology-based media firms such as Spotify and Netflix have successfully used AI to dominate their fields, other media firms/publishers are likewise seeking to leverage AI to help consumers discover relevant and interesting content, which in turn becomes more valuable advertising inventory. Traditional publishers have lost significant ground in the battle for consumers and are looking for ways to better control the customer journey integrated with their own (often still premium) content.

Customer Segmentation

Customer segmentation has traditionally centered around large demographic groupings such as age. While the flaws with these over-simplified analyses have long been known, it is only now with AI technologies that marketers can create much more meaningful and dynamic customer segments, separating customers into different personas to understand what motivates them. Importantly, AI not only enables the creation of these highly refined "microsegments" but also recognizes patterns of how consumers change segments or personas over time and the customer journey - using both historical and predictive analytics.

For example, Albert, the Al-driven marketing platform of Adgorithms, helped Harley Davidson drive an increase in sales leads in New York City by over 2,000%. Albert analysed data from the CRM system to identify the defining characteristics and behaviours of previous high-value customers, and then identified lookalikes who resembled those customers. By creating micro segments, small sample groups, Albert ran test campaigns before extending the efforts more broadly. The data from those tests were then used to predict campaign variables most likely to convert different audience segments through different digital channels (social media, search, display, and email or SMS).

TARGET AUDIENCE SEGMENTATION: SEGMENTATION VERTICALS



Social Media Monitoring/Brand Safety

Social media has become a key strategic channel for brands. It is often through social media that consumers choose to promote a brand when they are satisfied, but also turn to for customer support, and to voice complaints.

Sadly, social media is being weaponized by bad actors. The scope is vast. Adam Hildreth, CEO and Founder of social media safety firm Crisp, gave a poignant example: one CPG company lost \$20m in sales and a multiple of that in market capitalization within hours after a fake video - created to sell ads - about a product was released on YouTube.

NLP now allows brands to monitor virtually all online mentions and related conversations, including negative sentiments, from valid consumer complaints to scams and hate speech, in addition to IP infringements and competitors' promotions. Similarly, through such Al-based monitoring, brands can see how consumers react to particular marketing campaigns and adjust accordingly, as well as protect against ads appearing together with offensive material, and from appearing in news articles or other content that does not align with the brand. In addition, the growing problem of fake followers and fake engagement driven by social bots is being tackled with AI, which can analyze followers' behaviors to discern between actual human users and engagement driven by bots.



Source: "Guide | Segmentation made simple", theaudienceagency.org

KEY INVESTORS

Mårten Mickos, Inbox Capital, Moor Capital

ABOUT BRANDBASTION

- Uses AI to help brands succeed on social media and works with some of the biggest brands in e-commerce, luxury, entertainment and technology
- Offering includes social media brand moderation. insights, customer management, ad optimization and IP protection solutions

KEY INVESTORS

Baird Capital

ABOUT CRISP

- Leading provider of Social Media Safety for global brands, protecting their enterprise and brand value from harmful social content by guaranteeing they are always first to know and first to act
- By combining artificial and human intelligence, Crisp's extended intelligence delivers brand-specific, continually-tuned, 24/7 Social Media Safety with no false alarms to assure C-level peace of mind
- KEY INVESTORS
- Vista Equity Partners

ABOUT MELTWATER

- Media intelligence platform
- Uses AI and Machine Learning to help companies make analytical, informed decisions on business strategies and brand communication



Brand Integration/Influencer Marketing

As consumers increasingly digest content from social media, the role of brand influencers has evolved from A-list celebrities to YouTube, Instagram and other digital media personalities, who may sometimes have small but highly engaged audiences. AI has opened up new possibilities for marketers to identify and work with these micro-influencers.

Using NLP, marketers can analyze unstructured data including contextual relevance, psychographic data and audience demographics from social media and other relevant data sources to identify key influencers around topics most relevant to a brand and who match a brand's positioning, and then determine which content and marketing materials would resonate the most with that influencer's followers. There are clear risks in aligning with unknown influencers, but AI enables marketers to thoroughly vet them for off-brand or inappropriate content.





Sources: Loosely based on "6 Types Of Influencers And How To Identify A 'True' Influencer", Forbes, 2019

The Fvolution From Demographics To Data

NII AHENE

CHIEF STRATEGY OFFICER, TINUITI (FORMERLY CO-FOUNDER & COO OF CPC STRATEGY ACQUIRED BY TINUITI FALL 2018)

At Tinuiti, we have seen data transform marketing over the past 15 years. The emergence and democratization of Big Data means we now know more about our customers than ever before, connecting with them on a one-to-one basis. Increasingly sophisticated AI tools allow advertisers to better understand and predict consumer behavior. The amount of data that we collect has grown so fast that AI is needed to separate the noise from the signal to make sense of it all.

Previously a brand would go to a market research agency for consumer insights, a creative agency for production, and a media agency for buying, stitching together a cohesive marketing campaign - but data has fundamentally changed the game. With first-party and third-party data easily available, it's no longer prudent to work on each aspect of marketing in isolation.

The agencies of tomorrow will partner with brands to help them ingest what they know about consumers. They will model audiences against third party (e.g. Acxiom Infobase, Amazon's Insight and data clean room tools) and proprietary data models to inform segmentation, messaging, and media buying. This is Tinuiti's approach, and our peers aren't far behind in adopting a data first approach to awareness, activation, and retention marketing.

A key challenge many brands are burdened with is shifting from a legacy framework in consumer advertising. Demographics dominated brand advertising in the 20th century - it was the best way to identify consumers likely to be motivated by an advertising campaign. This means that senior marketing teams in large enterprises now need to go beyond demographics and into the data using partners, platforms, and approaches that previously didn't exist. Forward looking CMOs are able to champion this new mindset, but operational inertia is never easy to overcome.

There are fantastic marketing opportunities available for companies willing to seize them. Before only Google or Amazon could find the useful data in the haystack.



- Now new platforms have emerged in the personalization, customer data, and messaging orchestration space, powered by ML and AI, enabling smaller companies to target users with the same precision as the big tech giants.
- Today, you can ingest first party data, leverage these tools to identify an audience and then target them across addressable channels. With AI, correlations jump out of the data in a way they never would using human brainpower.
- But the size advantage still exists and bigger brands capitalize on it. Google, Facebook and Amazon essentially have a monopoly on consumer data. Google has all our search data, Facebook has our browser histories and Amazon has our purchase information. Any brand that has a direct relationship with the consumer is going to have an advantage in predicting consumer trends.
- But a heightened awareness over privacy issues means consumers no longer give away their data as easily.
- Legislation like GDPR and CCPA means that brands need to be clear about where they get their data, and do so with explicit consent. Consumers can always opt out and pull their information if they're not comfortable with how it's being used.

Legislation also means that marketing models that leverage third-party data will be hard to scale. But the marketing industry has always been adaptable, and brands will find a new course. Big tech firms get their data with explicit

- permission from users who want to use their services. Other brands will need to highlight the value they provide to incentivize consumers to offer their data.
- I expect AI to soon start powering email and search marketing, telling us what audiences to go after. A marketer will tell their AI assistant. "Oliver likes to buy this type of shoe," and it will suggest sending him two emails, followed by a Facebook ad and a YouTube campaign. We're not there yet - but we're getting there. For now though, we'll have to rely on analysts to make those decisions.

BRANDING

Additional Leading Companies Offering **Branding/Customer Engagement**

Additional Leading Companies Offering **Branding/Customer Engagement**



Sources: Company websites, Pitchbook, CapitallQ

Sources: Company websites, Pitchbook, CapitalIQ





Plug and Play, Eastward Capital Partners, Omega Venture Partners, The Goldman Sachs Group, American Express Ventures, Citi Ventures, Bain Capital Ventures and others

ABOUT PERSADO

- Marketing technology agency providing AI-powered personalization to marketing language in emails and social ads
- Announced five-year deal with JPMorgan Chase in Jul-2019 to integrate AI marketing across all platforms



- Influencer management platform that allows advertisers to track, manage and monitor influencer campaigns
- The platform's dashboard provides real-time insights, including branded content views, ad spend, clicks, conversions, and post-conversion events

KEY INVESTORS

AXA Venture Partners, Sir Elton John, Starwood Capital All Mobile Fund

ABOUT QLOO

- Al-powered cultural data science platform
- Leverages Deep Learning intelligence to predict consumer preferences while maintaining privacy

ABOUT SYNTASA

- Al and Machine Learning-driven marketing analytics platform
- Product offerings include automated data preparation and processing and model diagnostics and analysis



Additional Leading Companies Offering **Branding/Customer Engagement**



Voice AI - The **Next Frontier**

NITHYA THADANI CEO OF RAIN

At RAIN, we're seeing conversational AI transform everything from brand campaigns to the way companies do business. Conversational AI is technology that responds to us in natural, contextually aware and anticipatory ways. When humans have a conversation it flows naturally as we can make inferences based on context. Conversational Al aims to mimic human conversation and gain that same familiarity.

The leading big tech platforms have made great strides in accelerating the technology and its ability to build on past experience to anticipate future interactions. If you were to ask: "What time are the Lakers playing tonight?" Alexa or Google Assistant will use contextual data (such as location) to provide the correct response. If you were to ask five minutes later, "And when is their next game," the assistants would understand this is an ongoing conversation.

Voice technology is guickly becoming ubiguitous, with 30 percent of mobile searches now coming from voice. That's experience was the primary business driver, this initiative over a guarter of a trillion voices searches around the world also alleviated pressure on the front desk by diverting lower level requests like "what's the Wi-Fi password" or every year. Research suggests that future generations will increasingly interact with these assistants in more personal "more towels" to Al assistants. and empathetic ways. When Alexa first launched, half a Brands winning at voice are those with thoughtful million people told her 'I love you'. Through conversational approaches to how voice AI can integrate into their brand Al, brands have an opportunity to build an authentic and ecosystems. We are seeing brands building voice into their emotional relationship with consumers, and we're seeing existing digital infrastructure - with the ambition of being greater investment as brands recognize new use cases. voice-first in the future, particularly in retail, financial services and healthcare. A common use case is creating brand affinity and

engagement through voice. These experiences tend to Take Bank of America's Erica. Erica isn't just a chatbot; she manifest as content or entertainment-based conversations, is integrated into the bank's technology. Erica is gathering meant to build a consumer relationship. A detergent brand data from every transaction and getting smarter, building like Tide, for example, can establish its category authority the credentials to play the role of a true financial advisor by having voice-ready answers for questions like "how do who can anticipate needs and make decisions on the I get a mustard stain out of a silk shirt?". This is a great customer's behalf. "in the moment" use case where Tide can demonstrate its authority by delivering real utility to consumers. Organizations must navigate this moment in time wisely.

Another emerging use case is facilitating transactions. The voice shopping industry is estimated to be worth \$40bn in the US and UK alone. Voice is effective for 'last mile' conversion on the path to purchase. A customer may

Sources: Company websites, Pitchbook, CapitalIQ



discover and research a product through another channel, but voice is a frictionless touchpoint to that can facilitate that transaction.

We worked with Nike and Google Assistant to create the first "voice activated sneaker drop" for the launch of Nike's Adapt BB sneaker. We built a 'second screen' voice experience during a live basketball game, where viewers could ask questions about the sneakers throughout the game and then purchase them using only their voice. This moment was tremendously successful in demonstrating the potential of voice commerce; we sold out Nike's batch of inventory for that sneaker release in under five minutes.

Finally, voice technology is enabling business operational efficiency. It's gaining traction in traditional enterprise automation industries as well as in the consumer sector. In hospitality, RAIN worked with Marriott to pilot smart speakers in hotel rooms. While improving the guest

Conversational AI offers endless opportunities to build a fundamentally different relationship with customers, and those brands that do will rise above the rest and make their voices heard.



B2B / Sales And Support

Much of the discussion so far around hyperpersonalization and branding has been focused on Business-to-Consumer (B2C) marketing, which is often an earlier adopter of new technologies. However, Al also promises to augment and reshape B2B marketing, which is typically more sales force driven and often highly technical in nature. Al is moving B2B sales away from pre-programmed, rules-based marketing, to more personalized, contextual and predictive activities.

Because of the length and complexity of a B2B sales process involving numerous parties including sales reps, local managers, technicians and finance, it is important to align organizational culture and structure to support the proper use of data and AI, as siloed departments and lack of coordination can remain impediments to successful B2B marketing. For example, B2B marketing and consulting firm GELLIFY helps clients not just organize, capture and store data, but also reshape entire business processes, by:

- a. activating functionalities and services that are based on data within their supply of products, by predicting clients' behaviors or by optimizing decisions within business processes;
- b. simplifying both operational and strategic decisions, by transforming company data into usable insights, thanks to data visualization and interactive simulation; and
- c. creating and fostering a data-driven company culture, where the organization follows the definition, collection and assessment of information and estimates with trust in all processes, these steps being necessary to make effective decisions that become more accurate over time

THE MOST EFFECTIVE AND THE MOST DIFFICULT TYPES OF B2B MARKETING TECHNOLOGY



Sources: "B2B Perspective on Marketing Technology Utilization", Marketo, 2019

Sales Optimization And Chatbots

B2B sales processes often span several months and involve numerous steps, interactions and people. The sequencing of these steps is critical, and this is where AI can revolutionize the process by coordinating the proper sequence of outreach via email, calls and social media with tailored content to reach prospects on their terms.

According to AI sales firm Infer, a corporate buyer can leave a digital trail of up to 700 signals - including news articles and press releases, social media activities, other vendor relationships, patents and trademarks and job openings. Al can uncover patterns in this data to predict new buyers, new segments, and the optimal path to success with existing leads, driving the sales team to the best next action.

In many cases, a B2B marketer already has an existing CRM system like Salesforce, which will need to be integrated with the new AI platform. Indeed, Salesforce introduced its own AI tool in 2016 called Einstein that is used to "discover insights, predict outcomes, recommend next steps, and automate workflows."

An additional use case of AI in the sales process is the development of NLP driven chatbots. Conversational bots ask qualification questions and can direct a site visitor to the appropriate content or sales resource instantly, creating new leads. Chatbots can respond much faster than human agents and offer far superior scalability. There is even evidence that people prefer speaking with chatbots, at least initially. According to conversational AI firm Drift, "consumers are 4x more likely to prefer using chat over speaking to a human." Depending on the complexity of a query and with innovations in sentiment analysis, chatbots can also direct more demanding or return leads to the best qualified human agents.

FROM SIX ACTIONS TO ONE REQUEST: HOW A CHATBOT CAN SAVE YOUR TIME AND EFFORT (AN ILLUSTRATIVE EXAMPLE BY GARTNER)

John is trying to access files that are stored in Box Sync, a productivity tool that enables users to mirror data stored on Box to their desktop. To do this, John follows a six-step process. By using a chatbot, however, he only makes a single verbal request (assuming the chatbot supports his language).



Source: "Chatbots will appeal to modern workers", Gartner, 2019

Content Customization

Corporate buyers are very used to customized content in their personal lives from companies like Netflix and Amazon - B2B marketers need to create similarly tailored content to attract and keep their attention. By going beyond site visitor demographics and uncovering intent, AI can create a curated content experience for customers and potential customers.

Al content firm Uberflip estimates "personalized recommendations increase the chances of a visitor consuming more content than generic recommendations by 60%." This tailored content can come from case studies, white papers, social media and other marketing collateral - which B2B marketers often have in droves, but the challenge that AI helps to solve is organizing this unstructured data and delivering what is of most interest to individual buyers. In addition, AI can analyze existing content to learn a marketer's strategy and branding and can then both uncover inconsistencies and guide the development of new content that is on strategy.

While machine translation is a field of its own and beyond the scope of this report, it is important to note that due to the global nature of B2B marketers, another use case of AI is the application of NLG to ensure that content is consistent across all geographies.



KEY INVESTORS

Genui Partners

ABOUT ACROLINX

- Al software platform for enterprise content creation
- Enables companies to streamline the content creation and editorial process to deliver powerful brand stories to better attract customers

KEY INVESTORS

500 Startups, ForceOverMass, Telefonica

ABOUT CODEC

- Al powered audience insights platform for content marketing
- Codec's Machine Learning analyses hundreds of millions of real-time content interactions to provide actionable insights into audience networks where brands can drive deeper engagement

KEY INVESTORS

Updata Partners

ABOUT UBERFLIP

- Cloud-based content experience platform empowering B2B marketers to create personalized content experiences
- Uses progressive profiling, trigger campaigning, page-level engagement and a metrics dashboard to target every stage of the customer journey



Additional Leading Companies Offering B2B, Sales And Support And Chatbots





2

PREVIOUS

EQUITY



ABOUT BYTE

- Marketing technology agency focused on Data, Tech, Creative and Media. Proprietary chatbot platform and AR technology
- Key clients include Spotify, ASOS, Just Eat, Pret

KEY INVESTORS

PeakSpan Capital, Oliver Wyman

ABOUT COGNISM

- Al-driven B2B marketing and prospecting platform
- Revenue AI technology uses graph-based machine learning to predict the likelihood of people being good targets for products





2010

MOUNTAIN VIEW, CA

2

PREVIOUS EQUITY

ROUNDS





FOUNDED 2015 HQ BOSTON, MA EMPLOYEES 390



KEY INVESTORS

Charles River Ventures, General Catalyst, Sequoia Capital

ABOUT DRIFT

- Developer of a conversational marketing and sales platform designed to convert website traffic into sales
- Connects businesses with website visitors in real-time ٠ using bots and Artificial Intelligence, enabling businesses to generate more qualified leads

Sources: Company websites, Pitchbook, CapitallQ

Sources: Company websites, Pitchbook, CapitallQ

Additional Leading Companies Offering B2B, Sales And Support And Chatbots

KEY INVESTORS

ESW Capital

ABOUT INFER

- Provider of data-powered business applications designed to help companies improve productivity
- Applications analyze enterprise data, external web signals and customer statistics to build statistical models identifying customers with the highest propensity to buy

KEY INVESTORS

DFJ Growth, Lone Pine Capital, M12, Mayfield Fund, ٠ Sapphire Ventures, Spark Capital, Trinity Ventures

ABOUT OUTREACH

- Developer of a sales engagement platform designed to drive deeper engagement with prospects
- Uses Machine Learning to automate and personalize processes and enable engagement throughout the customer lifecycle

A Promising Yet Still Nascent Market

OVERVIEW OF RECENT MARKETING AI FUNDING AND M&A ACTIVITY

While practical implications of AI have been in the headlines for a while now, transaction data for the last 5.5 years shows that the industry still has some way to go before it catches up with more mature tech markets. Dominated by investment rather than M&A transactions, the sector reached a total transaction volume (fundraising and M&A combined) of \$3.7bn⁽¹⁾ in 2018. Should the robust performance of H1'19 be repeated in second half-year, 2019 would become a new record year with cumulative transaction size of \$4.6bn.

It is important to note that historic data on M&A transaction volume is scarcer compared to that on investment (45% vs. 90% disclosed deal volume respectively), so the true magnitude of M&A activity on the market is substantially higher - underscored by the huge increase in M&A transactions from 11 in 2014 to 80 expected for 2019, should the positive trend from H1'19 continue.



Sources: CapitalIQ, Pitchbook, publicly available company information, GP Bullhound analysis Note: Data on transactions covers the period from 01-Jan-2014 to 30-Jun-2019. (1) M&A transactions include transactions by both strategic acquirers and financial sponsors. Outlier transaction with transaction volume above \$400m are excluded from transaction volume figure





Private Placements \$11BN OF INVESTMENTS SINCE 2014

Based on transaction data from 2014 to 30-Jun-2019, investors have poured more than \$11bn of funding into Marketing AI companies, with the pace of investments really picking up in Q2'18. With \$1.4bn raised across 68 transactions in 2019 so far, this year is on a clear trajectory to grow significantly over 2018 levels.

PP DEAL ACTIVITY OVER TIME



North America accounts for the majority of the funding into Marketing AI companies, with a yearly volume of around \$1.5bn in 2014-2018. The share of total funding going to North American companies, however, has fallen from 85% in 2015, to 66% as of 30-Jun-2019. Both European and Asian transactions represent a significantly larger share in recent years, but while European transactions have grown to represent ~30% of all transactions in H1'2019, Asian transactions have fallen from ~20% in 2018 to only 5% as of H1'2019.

Europe has seen a strong increase in activity, with the number of transactions taking off in 2018 and continuing through the first half of 2019. At current pace, North America could be looking at a record year, with 50 transactions so far compared to a total of 80 in 2018.



Source: CapitalIQ, Pitchbook, publicly available company information, GP Bullhound analysis Note: Data on transactions covers the period from 01-Jan-2014 to 30-Jun-2019

Most Active Investors A "WHO'S WHO" OF PREMIER VCs

As a clear testament to the overall interest in Marketing AI, the list of most active investors features a broad range of the largest US and European venture capital investors, with Salesforce Ventures being the most active having 31 investments in the sector since 2014.

Marketing Al companies are clearly attracting investments from Corporate Venture Capital investors, with names such as Salesforce Ventures, Intel Capital and ComCast Ventures.





Source: CapitalIQ, Pitchbook, publicly available company information, GP Bullhound analysis Note: (1) Transactions with the highest number of participants from listed investors. Data on transactions covers the period from 01-Jan-2014 to 30-Jun-2019 Transactions concluded by regional, industry- or stage-specific funds of one investor are counted as conducted by the respective investor

Subtle Trend Towards Maturity

Transaction data suggests that while the market is still relatively young, first indications of movements towards greater maturity can be seen. While later stage VC investment has remained relatively stable as a category over the last five years, producing on average 61% of total transaction volume on the market, early stage VC investment receded by roughly 10% in 2018. PE transactions are gaining ground in the meantime, generating almost a quarter of all funding in 2018. This can, among other factors, be explained by companies in the sector that have progressed through several financing stages in the last years - some of them below - and are achieving levels of scale and profitability that are sought by PE.

TRANSACTION VOLUME DISTRIBUTION BY INVESTMENT STAGES



SELECTED COMPANY EXAMPLES (A DOT OF A CERTAIN COLOR REPRESENTS A TRANSACTION IN A RESPECTIVE STAGE)



Sources: Capital Q, Pitchbook, publicly available company information, GP Bullhound analysis Note: Data on transactions covers the period from 01-Jan-2014 to 31-Dec-2018. Overview based on transaction classification suggested by Pitchbook. Early Stage VC includes accelerator, angel investor as well as seed rounds

Largest Amount Of Funding Raised US COMPANIES DOMINATE THE FUNDING GAME

TOP 10 COMPANIES BY TOTAL FUNDS RAISED BY H1'19 (IN \$M)



Source: CapitallQ, Pitchbook, publicly available company information, GP Bullhound analysis Note: Data on transactions covers the period from 01-Jan-2014 to 30-Jun-2019. Excludes public, merged and acquired companies. Transactions concluded by regional, industry- or stage-specific funds of one investor are counted as conducted by the respective investor

M&A 240+ TRANSACTIONS SINCE 2014

A clear indication that we are still in the early days of Marketing AI is the fact that the number of M&A transactions in the sector since 2014 is less than half of the number of funding rounds. There are, however, signs that activity is picking up, with the number of transactions remaining in double-digits for 8 consecutive guarters up to the end of Jun-2019.



North America has dominated Marketing AI M&A in recent years, accounting for almost 60% of M&A transaction in 2014-2018. This is likely a consequence, as seen on the previous pages, of US companies attracting the majority of the funding in the sector. However, in the first half of 2019 Europe reached US levels with these two regions registering 18 and 19 transactions respectively.





Source: CapitallQ, Pitchbook, publicly available company information, GP Bullhound analysis Note: Data on transactions covers the period from 01-Jan-2014 to 30-Jun-2019. Less than half of M&A transactions listed reveal price, so actual transaction volume would be much higher. (1) M&A transactions include transactions by both strategic acquirers and financial sponsors. Outlier transaction with transaction volume above \$400mm are excluded from transaction volume figure.

Notable M&A STRATEGIC ACTIVITY AROUND AI IN THE DIGITAL SERVICES SECTOR



Source: CapitalIQ, Pitchbook, GP Bullhound analysis, press releases, company websites (1) A not everythy transaction outside of the timeframe used for corporate finance analyses in this report (01-Jan-2014 to 30-Jun-2019)

RATIONALE

Provider of a proprietary AI technology able to recognize users across multiple digital touchpoints and deliver personalized customer experiences in real-time leading to increase brand loyalty and marketing ROI. This acquisition will help Omnicom strengthen its existing AI capabilities as well as deliver seamless end-to-end customer experience solutions for its clients

Developer of a conversational intelligence platform designed to help organizations know their customers and grow their customer relationships at scale. The company's platform centralizes fragmented customer interaction data from across channels and leverages Artificial Intelligence (AI) to power action-ready insights from throughout the entire customer journey, allowing clients to drive conversion, retention, upsell and improve customer relationships

Formerly IBM's marketing platform and commerce software ("IBM Watson Marketing"), rebranded by PE firm Centerbridge as Acoustic, the company provides a suite of AI-based cloud marketing tools, including mobile and web analytics, campaign automation capabilities, real-time personalization tools, a content hub, journey analytics, lifecycle pricing, and payments

Developer of an AI-powered personalization platform intended to deliver individualized experiences at every customer touchpoint. Dynamic Yield's technology will be used to enhance customer experience with McDonald's Drive Thru menu displays, allowing them to tailor the visuals based on a number of parameters - from the time of the day to what's trending with other customers in real time

Provider of an AI-driven content analysis platform using NLP technology to turn consumer opinions from across the internet into valuable insights based on the topic and sentiment of a conversation. Aspectiva joins Walmart's Store # 8, a corporate incubator for development of ideas that can have profound influence over how people shop in the future

Notable M&A CONTINUED

AQUIRER	TARGET	DATE	RATIONALE
accenture	Adaptly	DEC-2018	Developer of a platform which provides real-time data insights and auto-optimization of marketing campaigns allowing brands to manage media planning, buying and implementation across multiple digital channels more efficiently. The acquisition will bolster the existing capabilities of Accenture Interactive Programmatic Services
Adobe [®]	URU	APR-2018	Provider of an online video advertising platform designed to pair brands with visual content in powerful, brand-safe ways. The company's video advertising platform finds surfaces in online videos where it can introduce logos and other content from sponsors, providing brands with computer vision- powered advertisements
SAP	RECAST. AI	JAN-2018	Recast.Al provides a development environment – software, technology and applications – that uses natural language, for example, chatbots. Recast.Al's technology matches the requirements of conversational chatbots and allows high performance Natural Language Processing that supports more than 20 languages. The acquisition will help SAP enhance the Natural Language Processing capabilities in SAP applications to help customers enjoy an improved user experience
ebay	$\Sigma \pi$ salespredict	JUL-2016	Provider of predictive analytics platform for sales and marketing. The company provides an inside-sales software that profiles leads and builds statistical models of sales data, correlated with social, website activity and demographics data. Its software is designed to find hidden buying patterns used to prioritize leads. SalesPredict will support eBay's Artificial Intelligence, Machine Learning and data science efforts, and their deep expertise will contribute to eBay's structured data efforts
ORACLE	∞ crosswise	JUL-2016	Leading provider of machine-learning based cross-device data which enables marketers and publishers to realize the benefits of cross-device advertising, personalization and analytics. Crosswise's technology processes over one petabyte of user and device activity data from billions of unique devices every month. By applying advanced data science and proprietary machine-learning techniques to this data, Crosswise constructs a new probabilistic Device Map [™] matching multiple devices to individual users in an accurate, scalable and high-quality manner. Crosswise further broadens the Oracle ID Graph to construct a complete view of consumers' digital interactions across multiple devices

Sources: CapitalIQ, Pitchbook, GP Bullhound analysis, press releases, company websites





Our Marquee Digital Services Credentials



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ACQUIRED BY

ACCENTURE





MEDIA IQ INVESTMENT FROM

ICF

DWA

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WPP DIGITAL

ACQUIRED BY

MERKLE

ECI PARTNERS





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OLSON ACQUIRED BY INTERNATIONAL

WONGDOODY ACQUIRED BY INFOSYS

SOLITA ACQUIRED BY APAX DIGITAL



ADLUCENT ACQUIRED BY ADVANTAGE SOLUTIONS





EBECS ACQUIRED BY DXC TECHNOLOGY



SEREN ACQUIRED BY



We took an in-depth look into the group of companies developing AI- and machine-learning-driven solutions in the field of digital marketing. From a gualitative perspective, we focused on areas of Hyperpersonalization, Branding and B2B/Sales and Support as these were the most frequently mentioned topics from our conversations with industry experts. Our goal was to highlight some of the recent developments in the industry, describe promising and technologically advanced use cases, and conduct an initial evaluation of financing activity in the sector. We hope that this report becomes a starting point to an open discussion around implementations of AI in digital services - and welcome your commentary.

OUR METHODOLOGY AND SOURCES

WE HAVE INCLUDED:

Tech and digital services companies only, with a bias towards software and services that operate in the broader digital marketing space including adtech, marketing tech, marketing communications agencies and consulting businesses.

Companies that state Artificial Intelligence, advanced Machine Learning, Deep Learning, neural networks, Natural Language Processing and/or Generation, computer vision as a major driving force behind their business model.

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MSQ

ACQUIRED BY













ΕY





Our analysis was based on data from 01-Jan-2014 to 30-Jun-2019. No geographies were excluded.

CAVEATS:

Our sources only include public data (e.g. data platforms such as Capital IQ, Pitchbook, press articles, etc.), and the accuracy of our dataset is limited to the disclosed data.





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We act as a trusted adviser to many of the leading technology companies in competitive international sale and acquisition processes. The firm has completed 420 successful M&A transactions to date, worldwide, with a

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total value of over USD 18bn.

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