5 Disruptions Reshaping Marketing as We Know It

A MarTech Conference eBook

Based on a webinar and article series by Scott Brinker

chiefmartec.com

Introduction

Most marketers still look at digital as a marketing channel. But digital is no longer just a website or mobile app. Nearly everything in the world is becoming connected and acquiring digital properties.

The marketing world is in the middle of five major disruptions that are reshaping the industry. Microservices, artificial intelligence (AI), and vertical competition are just a few of the trends that are transforming the digital landscape, changing how brands function internally and how they relate to their customers. Successful marketers will leverage them to their advantage, to avoid being left behind.

Note: This eBook is based on a webinar and articles series by Scott Brinker, editor, chiefmartec.com and program chair, MarTech conference. To view the on-demand version of this webcast, please visit http://chiefmartec.com/2017/02/video-5-disruptions-reshaping-marketing-know/
Thanks to Emily Fraser for preparing this eBook.

5 Disruptions Shaping Marketing as We Know It

With more than 4,000 marketing technology vendors, today's martech landscape has opened an entirely new set of possibilities for marketing as a profession. Disruption is the new status quo, with something new happening in the marketing space every week. Taking the 10,000-foot view, there are five major trends that are currently reshaping the way we think about and practice marketing.

Disruption #1: Digital Transformation

Digital transformation is much bigger than marketing — it includes sales, service, products, internal operations, and so on. In many cases, it brings entirely new digital business models.

So why is this a disruption to marketing?

For many businesses, digital has simply been the domain of marketing: web marketing, email marketing, search engine marketing, social media marketing, etc. It was lightly wrapped around existing products and services. As such, marketing could operate independently from the rest of the business with a few straightforward inputs (products) and outputs (customer demand). This wrapper-like independence enabled big chunks of marketing to be outsourced to external agencies — a model that is now in flux.

Digital is now also the concern of sales, customer service, billing, and — most importantly — the development and operations of core products and services. It requires deep, real-time collaboration between these departments.

In a digital business environment, the levers that have the greatest effect on so-called marketing outcomes — growth of revenue and the brand — are not necessarily owned by the marketing department. They can be driven more by products and services teams.

In short: digital is no longer a marketing wrapper. It is infused into the core of any and all businesses.

The level of sophistication of brands' digital marketing capabilities varies widely (Fig. 1). Some firms have implemented digital marketing technologies and are using them effectively — some are even starting to leverage that technology to change the entire relationship a business has with its prospects and customers — while others are only beginning to explore the benefits of digital marketing. Most companies fall somewhere in the middle of the curve.

Digital Marketing Sophistication Is Heavily Skewed

Source: Scott Brinker, chiefmartec.com
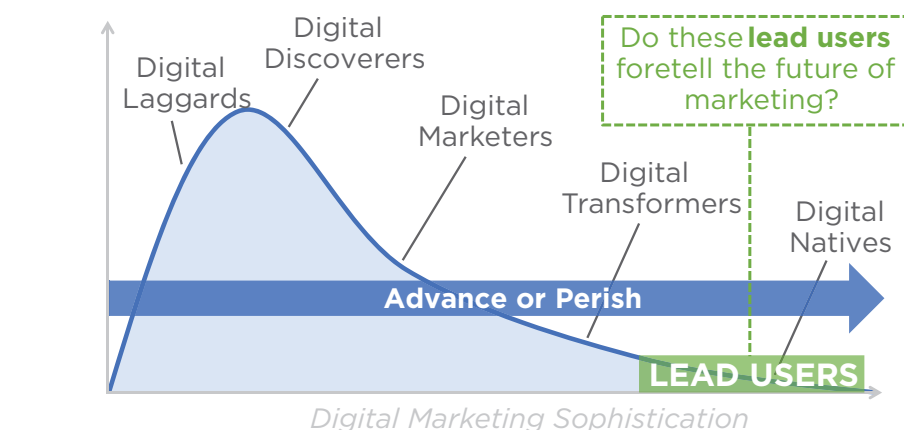
Fig. 1: Digital Marketing Sophistication is heavily skewed

At the leading end of the scale are the digital natives — firms such as AirBnB, Amazon, Netflix and Uber — where the customer's digital experience drives everything. These firms incorporate digital marketing into the very fabric of their products and services. Other companies can learn a lot from how these firms operate in a digital environment.

The core message for marketers since 2015 has been that in a world of search, social media and public reviews, brands must focus on customer experience. As a result, marketers have increasingly turned to things like content marketing, paid social, and programmatic advertising to deliver a personalized customer experience.

While digital natives recognize this need, for them it is the product team, not the marketing department, that is in control of the customer experience. Digital natives rely instead on "growth hacking," where their "marketing" is driven by the experience of the digital product or service itself. LinkedIn, for example, uses changes to the experience inside the platform to drive growth and adoption of their services.

This represents an interesting dichotomy. As the scope of marketing continues to expand beyond traditional borders, brands need to decide if the marketing department will continue to own a larger percentage of the customer experience mission, as we see with many firms currently going through digital transformation. At many firms where product and marketing are merged organizationally, the chief digital officer (CDO), who serves as champion of this transformation, reports directly to the chief marketing officer (CMO).

A second scenario, more common among digital natives, has marketing focus on traditional communications, while the product team takes over responsibility for the growth hacking dimension of the product, to deliver an improved customer experience.

There is no right or wrong approach and there are many possibilities along this curve. The key point is that the digital transformation mission is far bigger than the scope of classic marketing. Marketing leaders need to be prepared to navigate this growing integration between departments and expansion of customer experience responsibilities (Fig. 2).

The Rise (and Fall?) of Marketing's Scope Explosion

Source: Scott Brinker, chiefmartec.com
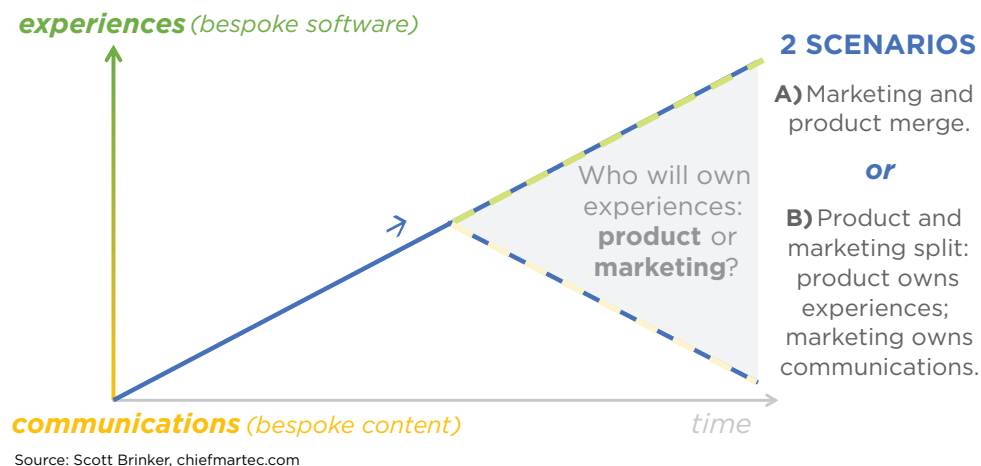
Fig. 2: The Rise (and Fall?) of Marketing's Scope Explosion

The Democratization of Marketing

This new focus on customer experience goes beyond core marketing to include sales, customer service, product, and even billing experiences. These all contribute to a brand's larger marketing impact. Every function inside a business must be aware of how its activities, engagements and touch points with customers impact the brand of the organization.

A similar dynamic has already happened within IT. Traditionally, IT was sequestered entirely within the IT department, but since 2007 there has been a democratization of technology — ironically catalyzed by the explosion of marketing technology. Now, every group within a company has a shared responsibility of the tools it uses to execute its mission. Rather than be the sole owner of all technology, IT has become more of a hub, empowering different teams to leverage their own tools under the guidance and governance of the IT division.

As the digital transformation mission moves forward, marketing will no longer be able to control every single touch point a company has with the customer — these run through the organization and number in the thousands. Instead of growing to control the entire business, other parts of the organization will likely absorb marketing elements into their domain. Marketing can help coordinate and govern those touch points through the mission of delivering remarkable, compelling customer experiences at every stage of the customer's life cycle.

Digital transformation is much bigger than marketing, but marketers have an opportunity to help architect and direct how the transformation will take hold inside each department and line of business. Whether or not they choose to follow the model used by the digital natives, brands need to recognize that digital transformation is about delivering customer experience through digital touch points that get integrated into the company's product or service.

Over the next year, firms will start to decide who will lead that customer experience mission — whether it is the CMO, someone from the product team, or a new chief experience officer.

Disruption #2: Open source and APIs

The software architecture that enables digital transformation has tremendous implications for how we think about marketing technology capabilities. With thousands of marketing technology products available, marketers have created powerful marketing stacks of their own over the last several years, using a combination of the platforms that best serve their needs.

Application programming interfaces (APIs) enable firms to weave together a fabric of individual platforms to operate their unique set of marketing capabilities, creating a whole that is greater than the sum of its parts.

The annual MarTech Stackies Awards competition showcases the unique marketing engines B2B and B2C firms have created using different sets of martech products to fulfill their individual marketing strategies (Fig. 3).

2016 MarTech Stackies

Source: Scott Brinker, chiefmartec.com

Fig. 3: Marketing engines entered into the 2016 Martech Stackies Awards

Much work has gone into enabling this product integration. Many of the major marketing technology vendors have made significant moves to open their platforms to play well in an API-managed environment:

- Salesforce has long been the platform leader in the space, with thousands of ISV integrations and a large and mature ecosystem for custom-built apps. Check out developer.salesforce.com and take particular note of Heroku.
- Adobe has launched the **Adobe I/O** hub for API documentation and services across their portfolio and the Adobe Marketing Cloud Exchange to promote their growing technology partner ecosystem.
- SAP's new **Hybris-as-a-Platform** (YaaS) offering is explicitly presented as a cloud-based microservice ecosystem for digital commerce with an emphasis on providing extensive API flexibility to developers.
- In the SMB segment, HubSpot's new **Growth Stack** features an expanded set of APIs deep into their platform and a growing ecosystem of ISV developers.
- Marketo was one of the earliest champions of an open platform strategy, with their large LaunchPoint ISV ecosystem and an updated hub for developers. Note that their new CEO, Steve Lucas, has a background in leading platform offerings at SAP and Salesforce.

The number of APIs available has exploded over the last decade, growing from 186 in 2005 to almost 16,000 in 2016, according to ProgrammableWeb (Fig. 4). Cloud integration services enable the sharing of data and logic between these different components — so firms can take data from one app and have it trigger an event in another.

Growth in Public APIs Listed on ProgrammableWeb.com

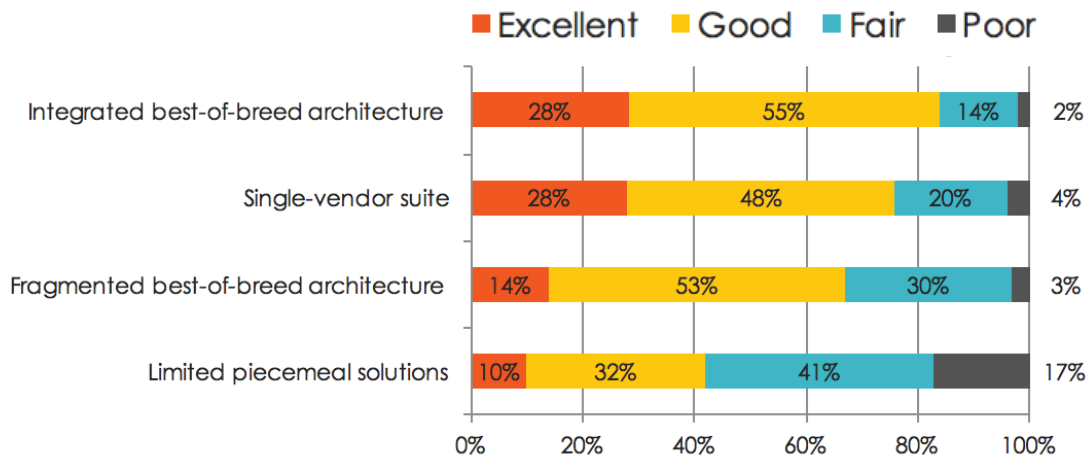Source: ProgrammableWeb.com, Ruben Vergogh
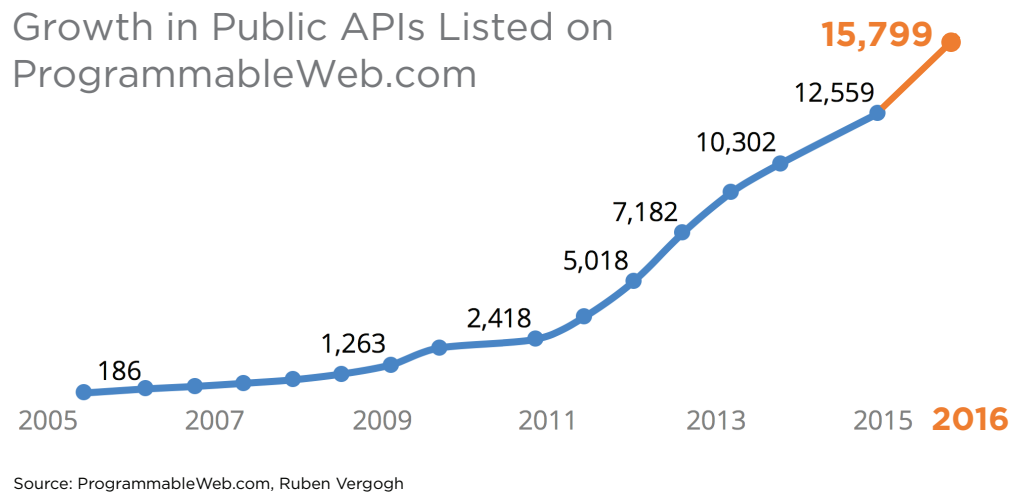
Fig. 4: Growth in Public APIs Listed on ProgrammableWeb.com

Brands are increasingly drawn to integrated best-of-breed marketing technology architectures, selecting the specific technologies they want and assembling them in their own unique way, according to a recent report by Walker Sands Communications, State of Marketing Technology 2017. Deployed by 27% of companies and more popular than single-vendor suites, best-of-breed stacks dominate the market today.

Integrated best-of-breed architectures also deliver the highest performance — their impact is shown to be better even than a single vendor suite, which in theory could have everything built in. Those who can leverage and integrate best-of-breed architecture are able to get more out of their technology stacks, according to Walker Sands (Fig. 5).

Architecture vs. Leverage — Best-of-Breed Winds

■ Excellent ■ Good ■ Fair ■ Poor

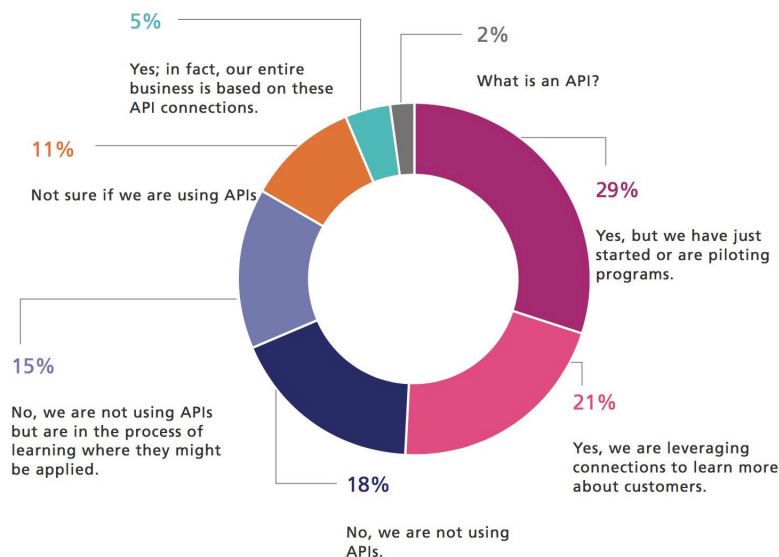|	Excellent	Good	Fair	Poor
Integrated best-of-breed architecture	28%	55%	14%	2%
Single-vendor suite	28%	48%	20%	4%
Fragmented best-of-breed architecture	14%	53%	30%	3%
Limited piecemeal solutions	10%	32%	41%	17%

Source: Walker Sands State of Marketing Technology 2017

Fig. 5: Architecture vs. Leverage – Best-of-Breed Wins

While APIs are a relatively new concept for marketers, more than half of marketers are already well-versed in the potential of APIs and have connected different components together in their marketing capabilities. Some marketers are even using APIs to create their own services. Connected Interaction to Power Brand Attraction, from the CMO Council and IBM.)   Further down the sophistication curve, there was less awareness, with some firms in the process of understanding how APIs could impact their business, and others either unaware what an API was, or saying they had no plans to leverage APIs (Fig. 6).

Are you currently leveraging APIs (application program interface) to connect to or collect customer data or intelligence? (Select one)

5%
Yes; in fact, our entire business is based on these API connections.

2%
What is an API?

11%
Not sure if we are using APIs

29%
Yes, but we have just started or are piloting programs.

15%
No, we are not using APIs but are in the process of learning where they might be applied.

21%
Yes, we are leveraging connections to learn more about customers.

18%
No, we are not using APIs.

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Fig. 6: Current levels of API adoption

Microservices Architecture

Enterprise technology architecture has evolved significantly since the 1960s, when most processes and software ran on the mainframe. In the 1980s, there was a move to a client server architecture, with software on the client machines and then in the server itself. In the 2000's the classic three-tier Web architecture emerged, including the presentation layer (Web browser), the application layer and the data layer. This was the de facto architecture for many applications.

During the past decade, we have seen the emergence of the microservices architecture, where different services are available in the cloud and accessible through APIs. Companies can configure all these different pieces on-demand to create unique capabilities. Instead of thinking about one monolithic marketing app, we are now starting to think of marketing as being served by a collection of small services that can evolve independently, as fast as needed, can be coupled to each other just enough to create business value, and are optimized for change.

A microservices architecture makes companies more adaptable, unhampered by the evolutionary speed of a single application. It has gained enormous traction in the broader digital transformation movement, and provides huge opportunities for leverage within marketing. A large and robust ecosystem of vendors has evolved to help facilitate microservices architectures (Fig. 7).
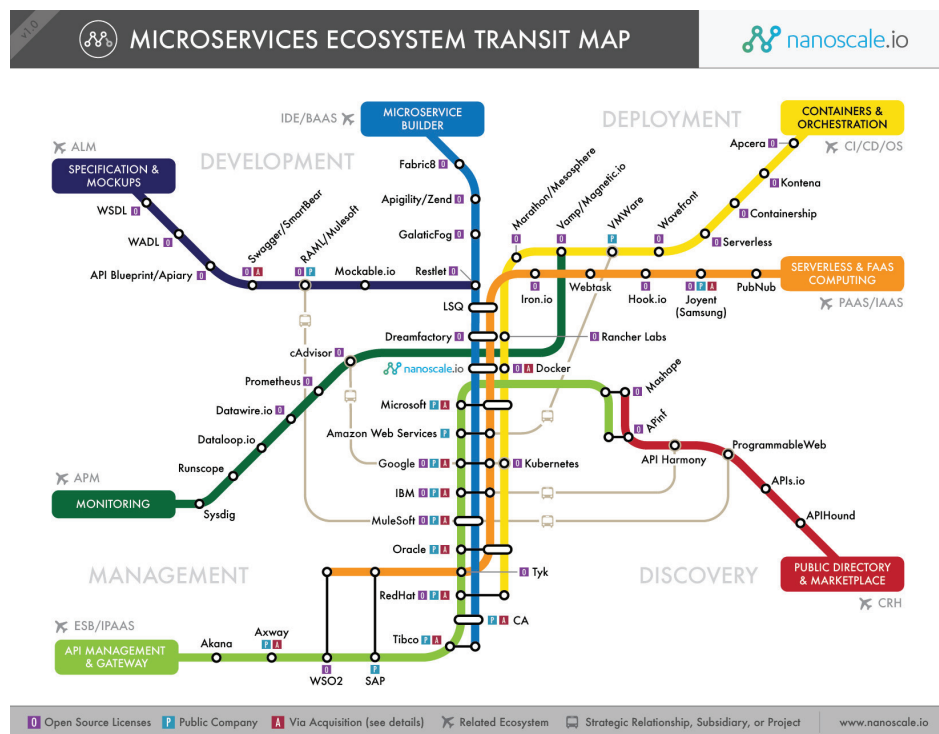
Source: nanoscale.io

Fig. 7: Vendors enabling microservices architectures

This is not just about IT. Netflix's microservices architecture powers all aspects of the company, from the product and service itself through to marketing and advertising. Netflix's director of ad technology, Tony Ralph, has spoken at many conferences and on the company blog, about how Netflix uses its microservices architecture to connect on-demand its own proprietary systems with commercial off-the-shelf marketing technology, to deliver a unique, highly customized marketing experience.

For digital native firms like Amazon, the benefit of a microservices architecture extends beyond helping the different business components fit together and adapt to each other easily, but also lies in being able to make those services available to the outside world. CEO Jeff Bezos was so convinced of their value that he mandated the use of service interfaces – and that they be externalizable — well over a decade ago.

In 2002, Amazon CEO Jeff Bezos laid out his vision for the firm's adoption of microservices:
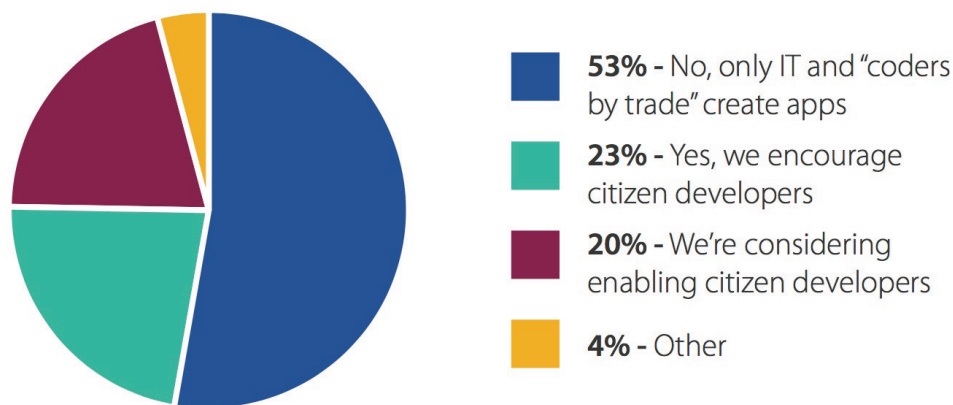
1. All teams must expose their data and functionality through service interfaces.
2. Teams must communicate with each other through these service interfaces.
3. No other communication is allowed other than service interfaces over the network.
4. It doesn't matter what technology they use.
5. All service interfaces must be designed to be externalizable.
6. Anyone who doesn't do this will be fired.

Citizen Developers and the Rise of Open Source

The role of marketing technologists is expanding rapidly, where people have enough technical background to leverage these tools, connect them together, understand how the different data pieces, or pipes, fit together, and use that to create a unique set of marketing capabilities for their business.

This can be seen in different functions throughout an organization. Analyst firms Gartner and Forrester refer to these people as "citizen developers" — people who are not programmers, but can put together a unique piece of logic to take data from one application, move it to another, and trigger various events via an API. The rise of citizen developers gives firms a lot more flexibility throughout the entire organization (Fig. 8).

Does your company enable employees who are not developers by trade (citizen developers) to create apps?

53% - No, only IT and "coders by trade" create apps

23% - Yes, we encourage citizen developers

20% - We're considering enabling citizen developers

4% - Other

Source: Outsystems, The State of Application Development, February 2017

Fig. 8: Companies increasingly permit citizen developers to create apps.

Inevitably, the more software developers that work in the field, the more open source software we will see entering the marketing stack. The use of open source software has grown exponentially over the last decade, driven by various factors such as the search for quality solutions, cost, and a desire to avoid vendor lock-in. Digital products are becoming so intertwined with the marketing mission that developers are now much more focused on customer experience.

Take Web content management, for example. WordPress, which is used by 38% of the top 10,000 Websites today, is open source. Acquia, one of the top three leaders in the space ahead of IBM and Oracle, according to Gartner, is based on open source solution Drupal. Forrester found that 51% of Web developers use open source software for Web and mobile experiences, either in their Web content management platform, or using Java Script for the interface in their client side libraries, for example.

Firms choose open source because it gives them increased flexibility and because the community aspect leads to increased innovation. Interestingly, the fact open source software is cheaper is a less important factor then the two reasons above, according to Forrester's 2016 report *Digital Experience Technology and Delivery Priorities*.

Where else is open source software for marketing?

Revive ad server	**pimcore** DAM	**PIWIK** web analytics	**suite CRM** CRM	**mautic** marketing automation
KALTURA video management	**SOCIOBOARD** social media marketing	**MediaWiki** wiki	**spagobi** business intelligence	**Oxwall** online community
Grafana dashboards	**Magento** ecommerce	**talend** data integration	**LimeSurvey** customer surveys	**Wekan** agile management

Source: Scott Brinker, chiefmartec.com

Fig. 9: Marketing solutions based on open source software

There are various open source-based solutions across the marketing technology landscape, including video management platform Kaltura, marketing automation provider Mautic, and ad server Revive (Fig. 9). While these categories of software don't yet have the momentum currently seen with web content management, these could be growth areas on the near future. Open source, microservices and APIs are disrupting the way we think about the architecture of marketing technology stacks, what they make possible, and how they better support the digital transformation mission.

Disruption # 3: Vertical Competition

The Internet enables real-time communication with consumers. Marketers often think of digital as providing a direct relationship between the marketer and consumer, but the connection is not direct. It passes through several different stages depending on the digital touch point. Perhaps a service provider manages that connection. Maybe you are using some Martech or Adtech software. That in turn might be interfacing with services like Google, Facebook, LinkedIn or Twitter. The end user is using a client interface like a Web browser.

All of this software impacts the relationship between marketer and consumer. This was clearly demonstrated by the introduction of ad blockers. When the user installs a piece of ad-blocking software at the client interface stage of this channel, it changes the competitive dynamic of everything else up and down the channel, and impacts whether the marketer can even reach the consumer.

Vertical competition is the jostling between providers at the various stages in the channel. Facebook, an Internet service, has more power over how marketers connect to a consumer than an adtech solution that is being used to manage placements of advertising within Facebook.

When we think about competition, we usually think about horizontal competition, between providers of similar solutions — Adobe versus Oracle, or Google versus Facebook. However, the power struggle between these horizontal competitors is actually less disruptive than the power struggle between players such as Adobe and Facebook. Which will have the most value to marketers over the way they engage with their audience?
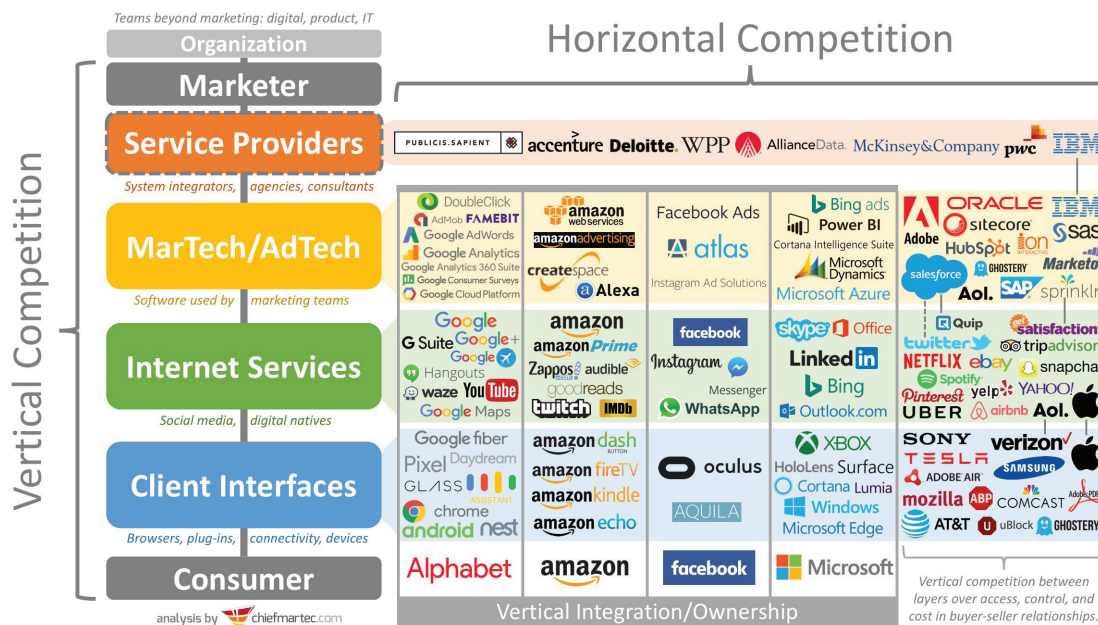
Source: Scott Brinker, chiefmartec.com

Fig. 10: Vertical vs horizontal competition

Alphabet, Amazon, Facebook and Microsoft have each amassed stakes and offerings in all vertical stages. For example, in addition to Internet services Google and YouTube, Alphabet has marketing technology offerings with DoubleClick and Google Analytics 360 Suite, client interfaces with Chrome, and new interfaces with Google Home. Amazon has unique assets with amazon.com and new client interfaces such as Amazon Alexa or the Amazon Dash button, and recently announced a new video conferencing solution Chime.

These four companies, along with Apple, are among the top six largest companies by market capitalization in the world today. This jostling between vertical competitors is an important aspect for marketers to think about when starting to plan how to achieve an optimized relationship with their audiences (Fig. 10).

How will vertical competition affect marketers?

- The increased jostling of more vertical competitors will require marketers to react to more and bigger changes in their digital environment — both as direct effects and side effects.

- Vertical competition will motivate a wave of new client interfaces that will dramatically multiply and fragment the number of digital touch points marketers will need to address.

- Marketers will need to factor more vertical thinking into their own strategies, to avoid being vertically squeezed themselves, by direct competitors, near-adjacent competitors, or "partners."

As rule of thumb, the more stages from the vertical chain that marketers can bypass in their relationships with customers, for as many digital touch points as possible, the better.

A worst-case scenario for marketers is a horizontal competitor grabbing a stake further down the vertical chain and intercepting customer relationships. For example, every retailer should be watching what Amazon is doing with Alexa — customers now have an interface in their living rooms where Amazon controls the answers it gives and services it offers.

Disruption #4: Digital Everything

Some 98% of marketing technologies are focused on Web, mobile Web, and mobile app interfaces. But digital transformation also includes new digital touch points and interfaces, such as wearables and natural language voice interfaces like Amazon's Alexa or Google Home. Brands need to consider how to digitize their products and services to create a better relationship with their customers on these channels, too.

For example, brands can develop Skills for Amazon Alexa, where users speak a request and the platform triggers a response. There are already more than 1,000 Skills available from brands as diverse as TV networks, banks and ride-sharing companies. Users simply say, "Alexa, can you get me a Domino's pizza," or "Alexa, ask Uber to request a ride" and the wheels are set in motion (Fig. 11).
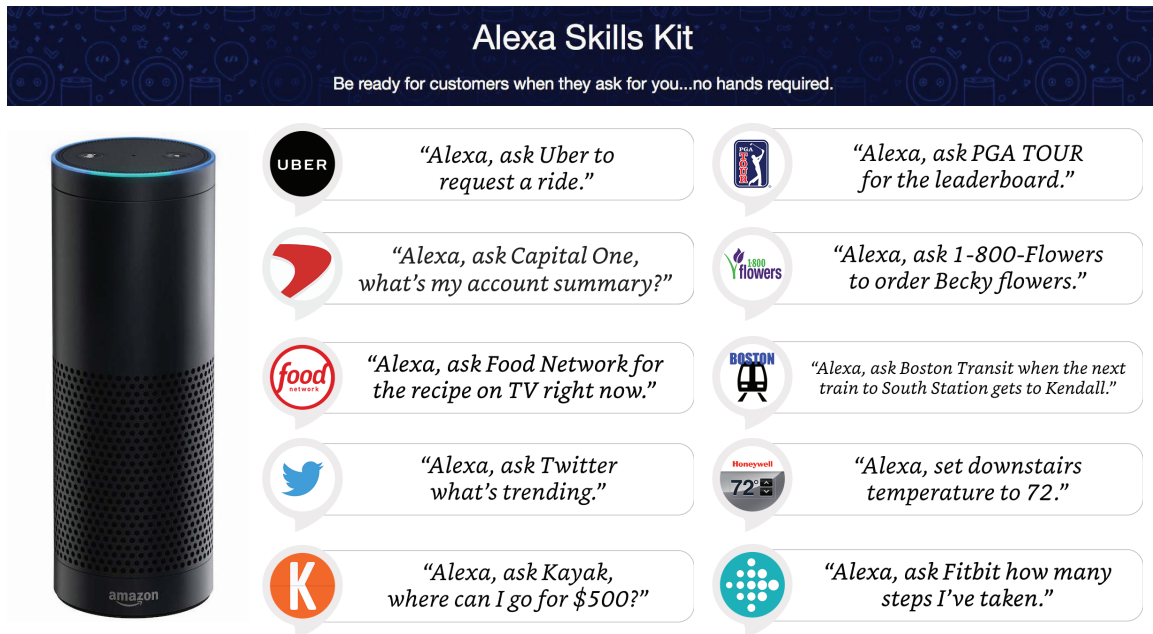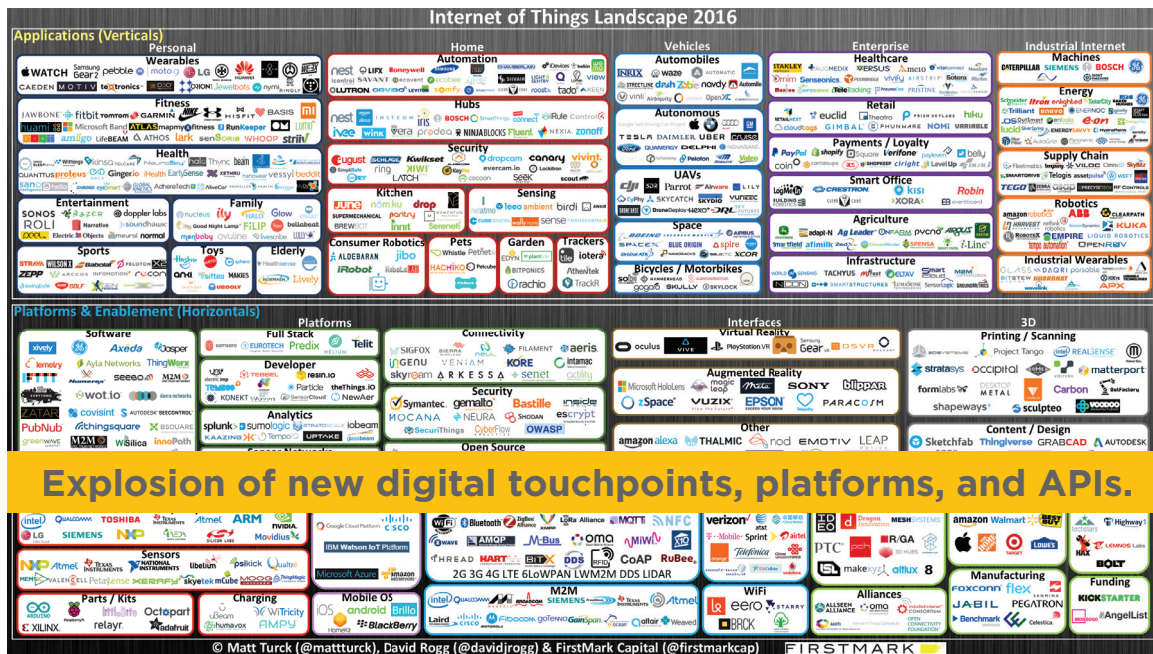
Source: Scott Brinker, chiefmartec.com

Fig. 11: Alexa Skills Kit

These conversational interfaces are starting to be of use to marketers as well as consumers. With marketing analytics platform Datorama, marketers can ask Alexa how their campaigns are doing. With an Amazon Echo or Dot speaker in your boardroom, you can ask Alexa to find your campaign statistics for the last quarter, or to compare the conversion rates of two different drip campaigns. The tool finds the data and provides the answer. This capability will be very exciting as it spreads further throughout the marketing technology vendor community.

Chat bots represent another set of touch points enabling users to pose questions using natural language queries, and have the software quickly find the right answer. There has been an explosion of chat bots available in Facebook Messenger, for example.

For B2B marketers, Slack features several bots. GrowthBot, a free chat tool created by HubSpot CTO Dharmesh Shah, interfaces with HubSpot and Google Analytics. Users can ask how much a competitor is spending on pay-per-click advertising, what ad networks a competitor is using, or what keywords their competitor ranks for, for example.

There are many other innovative touch points that are not generally represented in the marketing technology landscape, for example in the virtual and augmented reality space (Fig. 12).

Source: Scott Brinker, chiefmartec.com

Fig. 12: Explosion of new digital touch points, platforms and APIs

Here are just a few of the different customer touch points marketers can consider:

- Web - must work on desktop/laptop, tablet, smartphone, etc.
- Mobile - native apps, SMS, AR/VR experiences, etc.
- Beacon-triggered and geolocation-based mobile experiences
- Chatbots - screen-based and voice-based, across a variety of devices
- Wearables - smart watches and more purpose-specific wearables
- AR/VR glasses and headsets - from Google Cardboard to Occulus and HoloLens
- Connected TVs with an explosion of OTT content and services
- Connected cars - Android Auto and Dash are two platform examples
- Digital out-of-home signage and digital kiosks - including augmented reality features
- APIs as a digital interface for citizen developers with tools like IFTTT
- New point-of-sale experiences - Amazon Go is an example of how far this can go
- 3D printing for digitally delivering physical items to prospects/customers

With the Internet of Things, digital connections are being embedded into products of every kind, in industrial, business and consumer marketing. Uber has even had drones deliver miniature billboards to commuters in Mexico City!

With this explosion of new digital touch points, platforms and APIs, marketers need to take a step back and look at how the pieces fit together. Most digital marketing organizations were originally built around a website. A web team took care of front-end design, backend systems and content management systems. Firms later added email marketing, marketing automation and social teams as those tools became more prevalent. Mobile app developers were hired. Each of these teams was largely separate from the next, operating in its own silo within the marketing organization. Firms have tried to think about omnichannel marketing, to connect the dots between them. But now there are chat bots, voice-controlled interfaces, wearables, VR and AR, and the Internet of Things. In order to develop and deploy an effective customer experience, brands cannot afford to have a separate silo for each.

What should marketers do in the face of all these new touch points?

- Embrace Digital Everything: Try out as many new technologies as possible. Get out of the siloes and thing about how these new touch points can be used in your business.

- Think mechanisms more than media: Many of these new interfaces enable new services for your customer. Think of these as mechanisms for providing positive customer experiences.

- "Service First" (and "Data First") Development: Instead of talking about mobile first, marketers need to think in terms of service first, or data first. What is the unique service offering you want to give your customers? How do you orchestrate the different touch points to executive that vision? There will be specialists within each touch point, as building a VR application is different from a chatbot or website, but you need to establish a common digital foundation.
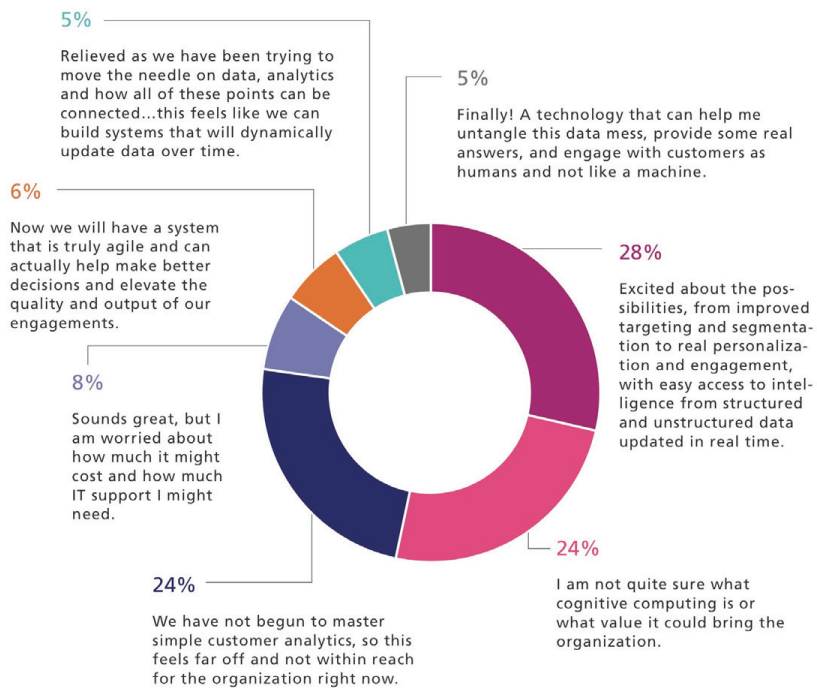
Over the next 12 to 24 months, brands need to think about everything becoming digital. Web will still be important, but firms must figure out how to develop service-first and data-first architectures to support the broader marketing mission.

Disruption #5: Artificial Intelligence

The hottest topic of the day and the fifth major marketing disrupter is artificial intelligence (AI). Web publications are full of stories about breakthrough technologies being created using AI, and the amount of innovation in this field is phenomenal. AI technologies are quickly becoming embedded into the marketing organization as they enable companies to target audiences, develop content, or optimize conversion rates in a far more deep and sophisticated way.

The level of awareness and enthusiasm for AI — also referred to as cognitive computing — among marketers is extremely scattered. Some have no idea what it can do, some are afraid it will steal their job, while others believe it can solve every problem they ever had, according to the CMO Council.

When the industry talks about "cognitive computing," what is your first reaction? (Select one)

5%
Relieved as we have been trying to move the needle on data, analytics and how all of these points can be connected...this feels like we can build systems that will dynamically update data over time.

5%
Finally! A technology that can help me untangle this data mess, provide some real answers, and engage with customers as humans and not like a machine.

6%
Now we will have a system that is truly agile and can actually help make better decisions and elevate the quality and output of our engagements.

28%
Excited about the possibilities, from improved targeting and segmentation to real personalization and engagement, with easy access to intelligence from structured and unstructured data updated in real time.

8%
Sounds great, but I am worried about how much it might cost and how much IT support I might need.

24%
We have not begun to master simple customer analytics, so this feels far off and not within reach for the organization right now.

24%
I am not quite sure what cognitive computing is or what value it could bring the organization.

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Fig. 13: Marketers' impressions of AI

There is actually very little secret sauce when it comes to machine learning. Most of the algorithms that power AI were developed in academic circles and have been widely published. All the major cloud platforms, like Microsoft's Azure or Google and Amazon's cloud machine learning platforms are built on engines that anyone can rent on demand for pennies. If you want to apply the world's most sophisticated machine learning engine towards a problem, it is available for you, on demand.

The competitive element within AI comes from the data that feeds those algorithms. AI is what makes big data truly valuable, because algorithms are able absorb and process information at scale, and distill patterns and relationships within it. To compete in an AI world, a firm's primary mission needs to be around data. What is the unique set of data you will own? Can you guarantee its accuracy? If you use data from partners and third-party providers, how do you assess the quality of their data? Over the next 12-24 months, those companies that have the highest quality data will have the best AI capabilities in marketing.

A lot of marketing work can already be automated. Per Bureau of Labor Statistics data from 2014, even marketing managers spend 13% of their time on tasks that can currently be done by machines. As the use of AI increases and begins to eliminate some of the more mundane work, it will free marketers to invest time in other settings. How they reinvest that time will be key. Building out new services and products for prospects and customers will deliver the highest business value for companies, as they embrace the digital transformation mission, and leverage microservices architectures to add new utility their audience.

The more that companies leverage AI, the more it will increase the scope of marketing. Until now, marketers have been limited by the amount of information human teams can handle, which put a ceiling on marketing engines' sophistication. Turning over more data processing tasks to AI engines removes some of these barriers. AI will enable marketing to achieve a level of sophistication that we can barely imagine (Fig. 14).

Artificial Intelligence Will Increase Marketing Complexity

Source: Scott Brinker, chiefmartec.com
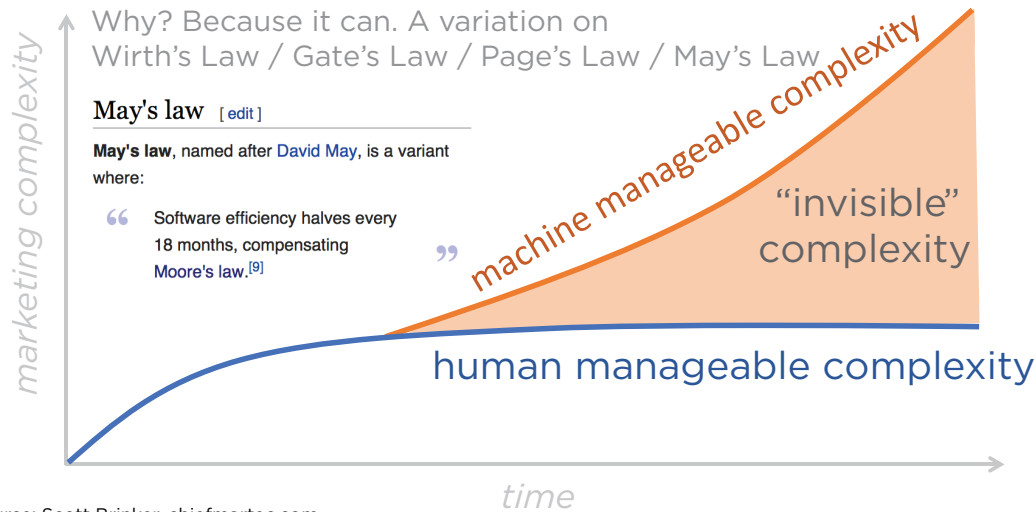
Fig 14: Artificial intelligence will increase marketing complexity
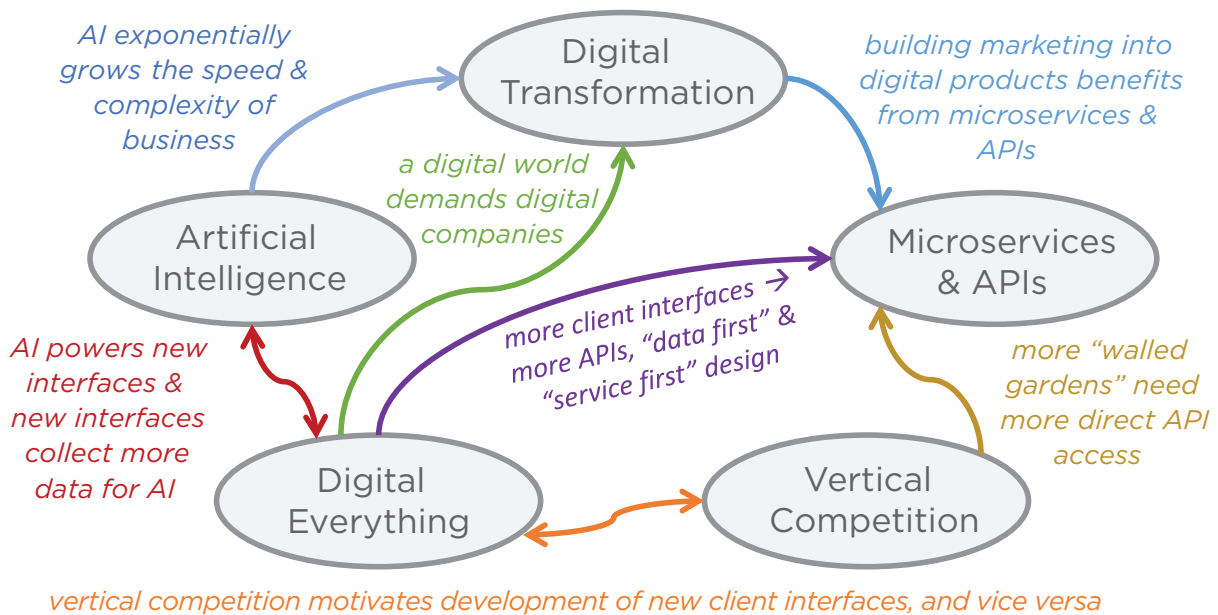
How can marketers prepare for AI-powered marketing?

- Assure that your data is accessible from all marketing systems, and consider building a centralized data lake
- Invest in data quality initiatives, especially for core customer data. An important element of this is to match customer identify across as many touch points as possible, which faces both technical and regulatory challenges
- Learn about system dynamics as an approach to understanding the complexity of this new environment

Conclusion: Connecting the Dots

These five major marketing disruptions are all interrelated, and together they will drive an explosion of digital products and services over the next 12 to 24 months. Leveraging interconnected platforms and APIs, brands can offer their customers exciting new experiences through these new digital services and touch points.

For example, AI and a generally more digital world will drive digital transformation within companies, which will need microservices to build marketing into digital products. Increased vertical competition will motivate the development of new client interfaces, and vice versa. More "walled gardens" will require more direct API access. New digital touch points and digital everything will provide new data for AI.

AI exponentially grows the speed & complexity of business

Digital Transformation

building marketing into digital products benefits from microservices & APIs

a digital world demands digital companies

Artificial Intelligence

Microservices & APIs

more client interfaces → more APIs, "data first" & "service first" design

AI powers new interfaces & new interfaces collect more data for AI

Digital Everything

Vertical Competition

more "walled gardens" need more direct API access

vertical competition motivates development of new client interfaces, and vice versa

Source: Scott Brinker, chiefmartec.com

Fig. 15: Five Disruptions mind map

All these pieces fit together to form a new vision of marketing capabilities (Fig. 15). How much of this is handled by the marketing department as opposed to a broader vision of marketing that encompasses the entire organization will depend on the firm. Either way, "marketing" is heading for a golden age as these technologies create exciting new customer experience possibilities.

About MarTech Conference:

MarTech Conference® is the premier conference for martech professionals working at the intersection of marketing & IT. The MarTech conference is programmed by conference chair Scott Brinker. Scott has been chronicling the rise of marketing technology and its impact on marketing strategy, management and culture on his blog, chiefmartec.com, since 2008.

MarTech's unique program blends graduate-level marketing, technology and management topics. Attending MarTech will help you:

- Craft remarkable customer experiences.
- Acquire and implement effective marketing technology stacks.
- Rethink strategy enabled by marketing technology innovations.
- Adapt your organization to fast-paced, collaborative marketing.
- Manage cross-functional teams with agile and lean practices.
- Nurture multi-disciplinary talent.
- Redefine marketing's role in the context of enterprise-wide digital transformation.

Conferences are held annually in San Francisco and Boston. For more information, visit http://martechconf.com/ or follow @martechconf on Twitter.

About Scott Brinker and ChiefMartec.com

Scott Brinker publishes the Chief Marketing Technologist blog, chiefmartec.com, with over 75,000 readers at the intersection of marketing and technology, and he is the program chair of the MarTech conference series. He is also the co-founder of ion interactive, a provider of interactive content marketing software to many of the world's leading brands.

Scott is an experienced keynote speaker and the author of the book "Hacking Marketing" published by Wiley. He's written articles published in Advertising Age, Adweek, Harvard Business Review, and TechCrunch. He has degrees in computer science from Columbia University and Harvard University and an MBA from MIT. Connect with him on Twitter @chiefmartec.