

Big Data for Marketers

Practical perspectives on leveraging big data to grow sales, cut costs, up-sell more effectively and make better decisions.



It's easy to understand

why a term like "big data" is such a popular topic in modern business; it is estimated that more data was created in the last two years than in the entire history of the human race. Marketers are responsible for a considerable volume of this data, which is captured by a wide variety of marketing and sales technologies – all designed to help acquire new customers, retain existing customers, cut costs and make better decisions.

Marketers overwhelmingly agree they have access to more than enough data – the problem is finding actionable ways to use the data. In a 2016 survey from Demand ROI and Redpoint Global (n=232)¹, 72% of CMOs at mid-to-large firms (>\$500M in revenue) believed they were effectively using customer data to optimize marketing communications. But when we explored the type of data that was being used in multi-channel campaigns, only 45% of respondents were using behavioral data, 37% used third-party purchased data and 15% used contextual data (weather, season, time of day, device, etc.) regularly in marketing campaigns. The survey results suggest many marketers rely on very basic forms of data from CRM, form capture fields and online advertising to optimize ongoing communications. Even today, marketers struggle to utilize data that is collected and stored on customers; big data remains difficult to action for marketers.

We also asked CIOs about their role supporting marketing. They estimated that on average marketers used about 5.8% of available customer data for personalization and analytics, citing challenges with disparate data, lack of technology integration and business stakeholders (marketing and sales) who are not making sophisticated requests about available data. Marketers don't have to solve the entire "big data" challenge for their organizations. But they do need to separate the hype around big data from its practical applications. There are profound implications for the union of big data and marketing.

Marketers can solve for one or two high-priority benefits for the organization – and they can utilize elements of big data to do that today. This white paper explores the relevance of big data for marketers: what they need to know and the steps they should take today to position their organizations for success tomorrow.

¹2016 Big Data & Marketing, Demand ROI and Redpoint

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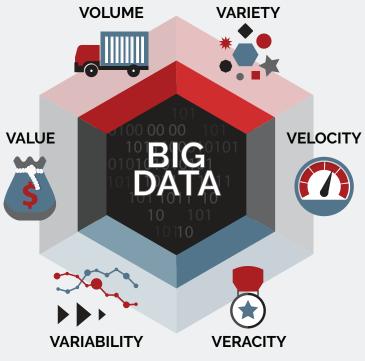


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What is big data and why should marketers care?

Big data emerged as a term for data sets that are so large or complex, traditional data processing applications are inadequate. Consider data from browsing behavior – or social media activity – which grows at exponential rates as customers interact with web URLs, post and comment on social media and engage across a litany of different channels.

Data experts commonly use the V-to-the-nthdegree definitions with words that start with the letter "v" to describe attributes of big data including:



Volume: the quantity of stored or generated data.

- **Variety:** the type and nature of the data structured, semi-structured or unstructured.
 - **Velocity:** the speed at which data can be processed for useful purposes.
 - Veracity: the quality of the data.
 - Yariability: data that can be linked consistently and analyzed.
 - Value: the benefits of analyzing and acting on the data relative to the cost of the effort.

These definitions describe "what" big data is, but why is it important to marketers? What actions can they take today to benefit from big data? There's a great deal of potential and promise with respect to analyzing large volumes of data. But that potential must be translated into initiatives that drive key metrics such as profitability, revenue growth and market share to capitalize on its value.

Harnessing big data for marketing success.

Most organizations utilize 7-10 technologies for customer engagement across the lead to revenue lifecycle – all of which collect data on customer behavior across devices, paid/owned/earned media, customer purchase history and brand mentions. All of these systems collect data that is critical to understanding customers – through their behavior, purchase patterns, comments and demographic attributes. Big data has the potential to help marketers make better decisions. It is paramount for marketers to help drive investments in big data because the unique business benefits often exceed the cost of these investments.

THE BENEFITS OF BIG DATA FOR MARKETERS

Marketers need to understand the value of big data relative to the business potential it can have on top line growth and cost savings in marketing. **The marketing function stands to benefit significantly from big data initiatives because marketing owns most of the systems that collect and store data about customers.** It is therefore incumbent on marketing to be the champion for deriving value from all this data.

The benefits of big data for marketers can be distilled down to three major objectives:

Use big data to meet or exceed customer expectations.

1

Deliver Customer Value: By combining data about customer demographics, purchase history, product usage and other data sources, marketers can uncover new segments, deliver more relevant messages – and maybe even discover unconventional ways to use a product or service. But it's not just about delivering a more relevant message; there are additional factors to consider such as immediacy (is the message delivered at the right time), the accuracy of the message and frequency. The larger and more disparate data becomes in an organization, the more difficult it is to act on this data in meaningful ways. Ideally, customer engagement optimization leads to concrete benefits in the form of marketing efficiency and performance.

Use big data to increase revenue, market share and profitability.

2

Accelerate Marketing Performance: Applying data-driven insights to marketing campaigns can inform everything from messaging, creative layout and channel preference, to product development and personalization. By combining customer engagement data with sales performance data, marketers can derive closed-loop insights about acquiring new customers and up-selling/cross-selling to existing customers. Large volumes of customer data can also be analyzed to minimize churn.

Use big data to cut costs and streamline operations.

3

Increase Marketing Efficiency: Big data can help identify redundant or ineffective marketing investments, reduce the time it takes to report on complex data and put ad-hoc analysis in the hands of marketers – a task that would normally require technical expertise from IT.

Marketers are in a unique position to invest in big data because marketing initiatives are closely associated with cost savings and revenue growth – priorities for virtually every business. Marketers should focus on their business objectives and then team up with their counterparts in IT, who have the technical wherewithal to capture and store exponentially growing volumes of data. Together, marketing and IT can conduct sophisticated analysis and action the data appropriately – or bring in vendors or service partners who can support their efforts.

10 KEY BUSINESS DRIVERS

Big data holds the key to unlocking value from existing data – and collecting new data – to make better decisions and optimize customer engagement. Below are ten key business drivers that benefit directly from marketing-led big data initiatives.

•

- Customer Acquisition: Explore existing customer data to profile profitable customers and use the insights to target and attract similar audiences through paid/earned/and owned media.
- **Customer Retention:** Analyze all available data, including historical data, to identify which customers are at risk of churn. Implement tactics that will help retain customers though messaging, offers, channel preferences, competitive forces, new products and other tactics.
- Up-Selling & Cross-Selling: Analyze customer data to identify highly-profitable customers and those with a propensity to purchase new or different products and services. Determine optimal channels and offers and engage them with relevant messages.
- Customer Experience: Analyze customer behavior data, purchase patterns and customer feedback to identify opportunities to exceed customer expectations across the customer lifecycle, from onboarding, product use, service, support and other critical stages of the customer journey. Analyze customer engagement touchpoints to determine customer preferences on the frequency of communications and preferred channels (email, web, mobile, etc.)
- **Real-Time Personalization:** Use data to trigger real-time interactions with prospects or customers based on embedded analytics and automated rules for next-best actions and offers. Automatically deliver personalized, relevant messages at the right time through the right channel.
- **Product Innovation:** Share customer feedback data with R&D to provide ideas for new product innovation. Collect product usage information with sensors and other tracking techniques. Mine large volumes of product usage data to identify product defects faster, inform new product development, optimize warranty commitments and mitigate risk.

- **Budget Allocation:** Analyze large volumes of multi-channel data about consumer touchpoints to attribute which marketing investments have the greatest impact on conversion, sales and customer retention. Identify exactly how to allocate finite budget resources across marketing channels, media partners and keywords based on the historical success or failure of these investments.
- **Planning & Forecasting:** Apply predictive modeling to historical marketing spend and revenue to predict (with greater accuracy) future performance and inform decisions about budgets and targets.
- **Campaign Strategy:** Explore customer preferences and the ideal communication strategy for sales conversion. Identify which combination of channels are ideal, how frequently to communicate and what to communicate. Analyze unstructured customer data such as social media or customer communities to identify market trends, brand sentiment, customer concerns and competitive forces.
- **Messaging:** Apply a/b regression and multivariant regression to run tests on customer behavior. Identify which messaging, layout and creative design maximizes performance.

Each of these drivers involves some level of analysis on large volumes of customer data. Fortunately, most IT departments are familiar with how to invest in infrastructure, software development and using skilled talent to unlock the power of big data. By aligning with IT, marketing organizations can make exponential leaps and bounds in their ability to analyze complex data sets in cost effective ways.



THREE TYPES OF BIG DATA INITIATIVES IN MARKETING

There are fundamentally three categories of investments marketers should consider with respect to big data. These manifest themselves in three questions:

- Do we capture and store the right data?
- Are we taking action with available data? Are there current opportunities to utilize existing data to improve engagement?
- · Are we deriving insight from available data?

There are numerous frameworks that call for insight to come before action. But the real-world application of big data decision making means optimizing with *the right data*. Research suggests that three quarters of mid-to-large organizations do not use available data effectively in campaigns. For example, If they apply big data analytics to optimize against data from generic batch-and-blast campaigns or generic landing pages, the results will provide skewed values: "garbage in, garbage out." When it comes to big data initiatives, marketers need to execute targeted campaigns first, using available data in more granular ways to improve contextual relevance and then analyze the results. (See Figure 1.)



Big data isn't just about analyzing large volumes of data – it's also about taking action with the data.

Next-generation customer engagement platforms can help by connecting data from disparate marketing technologies and applying bi-directional rules that can trigger the right message at just the right time in just the right channel. This enables organizations to reap the benefits of big data without having to rip and replace existing legacy marketing tools.

Figure 1: FINDING BUSINESS CONTEXT FOR BIG DATA INITIATIVES

	OPTIMIZE CUSTOMER ENGAGEMENT		
BUSINESS CONTEXT	Deliver Customer Value Relevance Immediacy Personalization Channel Preference Messages Accuracy	Accelerate Marketing Performance Acquisition Retention Up-Selling Cross-Selling Offer Optimization Market Share	Increase Marketing Efficiency Spend Allocation Channel Strategy Campaign Cycle Time Analysis Cycle Time Service & Support Visibility
COMMON BARRIERS	 Fragmented Data Multiple systems create data silos. Poor Master Data Management Lack of governance or unique record identifier to align data. Available Technology Doesn't Integrate Disparate tools can't or don't integrate to automate next-best-action. Skills Gap Marketers aren't sure what to measure or why – and the gap in data scientist skills exacerbates the problem of getting at the data and building models to drive understanding. 		
TECHNICAL		Customer Engagement Technology MKTG AUTOMATION EMAIL MOBILE SOCIAL ETC	
	DATA INFRASTRUCTURE CENTRALIZE FEDERATE STAGING		
3 MAIN BIG DATA INITIATIVES	CAPTURE THE DATA Link Data New Database Single View of Customer Initiative Online+Offline New Technology	TAKE ACTION WITH THE DATA Automated Next-Best Action Triggered Channel PrWeference Personalization	DERIVE INSIGHT ROM THE DATA Descriptive Insights Diagnostic Insights Prescriptive Insights Predictive Insights

CAPTURE THE RIGHT DATA.

Most organizations don't have a shortage of customer data, but 9 out of 10 CMOs say they don't have a single view of the customer across all touchpoints. Data quality and accessibility is still a major problem. When it comes to data capture, the key recommendations are provided below.



- Make sure the right data is captured, available and accessible. If the current environment doesn't support this, it might be time to invest in new marketing technologies or new data management techniques.
- Link disparate data sources through a unique customer ID or email address. A single view of the customer initiative can help consolidate disparate data. Keep in mind, data centralization isn't the only option – a federated approach can be used to link data from different systems where the data resides.
- Maintain high-quality customer data. Invest the necessary time, resources and tools to augment and scrub customer records and remove duplicates to ensure the highest level of data quality possible. Utilize reputable third-party data vendors to enrich customer profiles and fill in any knowledge gaps.
- Combine offline and online customer data. Look for solutions that can integrate customer behavior across in-store purchase activity and digital channels.

Rather than starting with the intention to invest in "big data," **start with a high-priority business problem** and then explore the application of big data solutions to solve it. The context surrounding a business problem helps define exactly what data, systems, capabilities and proficiencies will be required to solve it.

TAKE ACTION WITH THE DATA.

Once the data has been collected, it can be used to improve customer engagement, personalization and profitability. Big data is exciting because technological advances in computing power and software algorithms allow marketers to benefit from automation. Yet marketers still struggle with disparate systems that don't integrate, excessive dependence on legacy channels, and a general lack of understanding about emerging best practices in marketing. The key recommendations for taking action with data are provided below.

 Deploy marketing technologies capable of automated trigger communications. Use tools that can ingest behavior data from any

channel (direct mail, web, mobile phone, landing pages, etc.) to trigger a communication. This may require migrating to a more comprehensive multichannel platform (like marketing automation or campaign management) with built-in capabilities for executing cross-channel campaigns from one system.

Modernize legacy systems. Today there are purpose-built, out-of-the box ways to solve for technological inadequacy in legacy marketing tools. The challenge with these deeply embedded or highly customized legacy systems is that they are incapable of collecting cross-channel customer behavior that can be used in automated business rules. There are really only two viable options: 1) a centralized multi-channel system or 2) multiple, tightly-integrated best-of-breed marketing tools.

 Use personalization to increase conversion rates. Personalization usually has a positive effect on conversion rates. More sophisticated personalization techniques – based on real-time visit behavior, retargeting and dynamic content – require significant computing power using large volumes of data. While there are hundreds of marketing technologies on the market today, only a fraction are capable of providing advanced realtime personalization.

DERIVE INSIGHT FROM THE DATA.

The concept of big data is frequently associated with insights, intelligence and reporting: taking exponentially growing volumes of data and making it actionable through analytics, visualizations and dashboards. There is no shortage of big data analytics these days – virtually every system includes a reporting feature. **The challenge is distilling all this data down to the right level to allow a marketer to ingest it and make better decisions**.

There are four fundamental ways marketers can derive insight from available data, each with incrementally more value – but also incrementally more effort with respect to sophistication.

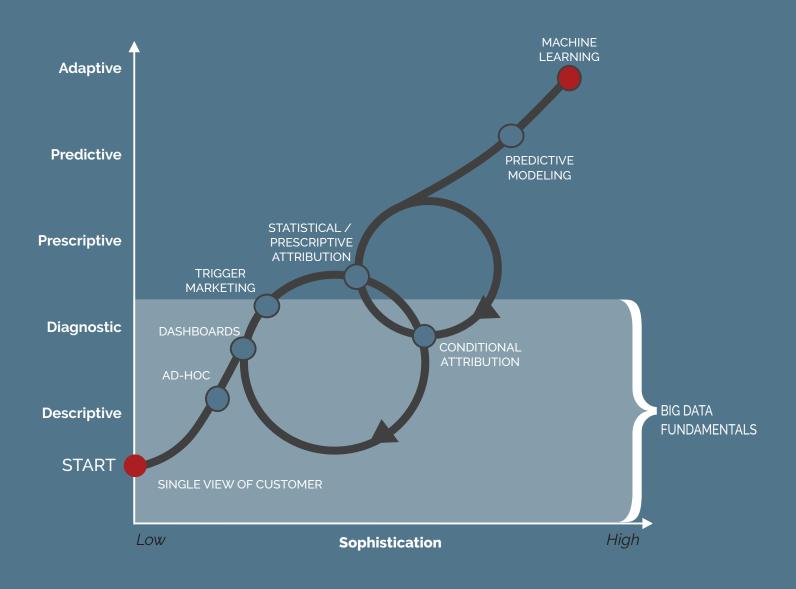
- 1. Descriptive Insights: What happened?
- 2. Diagnostic: Why did it happen?
- 3. Prescriptive: What should we do?
- 4. Predictive: What might happen?

As big data expands, so does the ability to extract insights from this data. The most promising advances in data analytics are coming from *machine learning*, a type of artificial intelligence that enables computers to learn without being programmed. Machine learning is being used to help with both prescriptive and predictive insights by allowing models and insights to constantly change, adapt and learn in response to changes in customer behavior and data sets. It's an exciting development because in the past modeling techniques were typically one-off initiatives that could only be deployed manually on a periodic basis. In terms of advanced modeling techniques, here's the bottom line: the model is only as valuable as the action a marketer takes based on the insights – and insights aren't always black and white recommendations. Most marketers believe they need to be doing more sophisticated analytics to inform marketing decisions, but getting a better handle on basic descriptive and diagnostic insights could have a much higher return on investment.

Today some of the most popular business intelligence tools like Tableau, Microsoft PowerBI and Olik are being used by marketers for rudimentary ad-hoc big data intelligence. But keep in mind, these tools typically do not trigger communications – a void that is being filled by more sophisticated marketing technologies.

Figure 2: DERIVING VALUE FROM BIG DATA ANALYTICS

The figure below shows how typical big data related marketing investments deliver incremental value for an organization – and at the same time, require greater degrees of sophistication. The "Big Data Fundamentals Zone" highlights the areas marketers need to prioritize before deploying more sophisticated techniques. Prescriptive and predictive modeling based on data from legacy marketing techniques (batch-and-blast, broad segments, etc.) will lead to poor quality insights. As long as marketers are unable to utilize available data effectively (behavioral data, third-party data, contextual data, etc.), sophisticated modeling and analytics will have diminishing returns – or may actually be misleading.



BIG DATA GLOSSARY

Big data is often associated with insights, intelligence and reporting; yet there are a variety of terms and concepts that are also synonymous with big data. Here is a practical perspective on some of the most popular.

- Cloud Computing: A network of remote servers hosted on the Internet to store, manage and process data, rather than a local server or a personal computer. Cloud computing allows massive volumes of data to be analyzed with results in days/hours/minutes/seconds – calculations that may have taken 8-10x longer to complete just five years ago. This architecture provides faster answers to complex analysis and removes the burden of maintaining physical hardware. It also makes it easier for IT to support big data requests.
- Customer Data Platform: A Customer Data Platform (CDP) captures a single view of the customer, provides insights into customer behaviors and preferences and enables organizations to deliver contextually relevant brand experiences across all interaction points. CDPs tap into any and all data sources

 structured or unstructured, 1st or 3rd party –
 while resolving anonymous to known customer identities. Robust platforms leverage this data in combination with advanced in-line analytics to orchestrate real-time interactions across marketing, sales and service touchpoints.
- Data Augmentation: Additional data on existing customers can be purchased from data vendors to augment customer records and learn more about their demographic, psychographic and firmographic attributes. For example, attributes such as family income, marital status and hobby information to can be added to the

customer database to explore new customer segments or personalize communications more effectively.

- Data Lake: A storage repository that holds a vast amount of data in its native raw format. This repository can democratize access to large volumes of data for any business or technical resource to explore. An important caveat is that meaningful analysis of the data will likely require some degree of governance and transformation.
- Data Management Platform: DMPs (Data Management Platforms) almost exclusively provide access to 3rd party anonymous data such as cookies, devices and IP addresses. This allows DMPs to exchange audience data without violating personal privacy restrictions. DMPs are a valuable tool for customer acquisition since aggregated data can be used to target audiences online.
- Data Quality: The accuracy of customer data. For example, there may be two different entries in the state field of two records: "California" and "CALI". These values must be cleaned up before any meaningful big data analysis can take place. Lack of data quality can be the single biggest impediment to achieving the benefits of big data initiatives. This is particularly critical for identity resolution and entity resolution to get a precise view of customers, devices and other dimensions that provide the base for customer engagement.



Do Marketers Need Data Scientists?

Yes and no. Data scientists can help with the execution and discovery of insights, but unless they have ample knowledge of customers and products, they may not have sufficient context to inform recommendations. Identifying correlations in data or predictive insights doesn't always correspond to identifying the appropriate actions. Typically marketers have more context to determine how to test and refine different hypotheses. Data scientists are adept at scrubbing and transforming data so that machines can use it to make insights scalable. But with the right tools, more technology-savvy marketers will be able to do this themselves. To that end, more sophisticated self-service data management applications are growing in popularity and will likely streamline this process even further in the future.

- **Data Scientists:** Highly educated statisticians and programmers who take enormous amounts of structured and unstructured data and clean, transform and organize the data in meaningful ways. In addition to running sophisticated analyses on large data sets, data scientists spend a great deal of time massaging and fixing poorquality data.
- Federated Data Warehouse: A database management system that transparently maps multiple databases into a single database. This model enables organizations to obtain a consolidated view of customer data without creating a new customer data warehouse to physically house the data.
- **Hadoop:** An open-source software framework for storing data and running applications on clusters of commodity hardware. It provides the ability to handle virtually limitless tasks or jobs on massive data sets. Hadoop was created in 2005, making it a more recent innovation.
- In-Memory Computing: Keeping data in a server or desktop's physical RAM memory for faster access to solutions to complex problems. In-memory computing allows data analysts to access data faster, drill down faster and compute equations faster.

Relational Database Management Systems (RDBMS): A relational database is a digital database whose organization is based on the relational model of data. In a relational database, data is organized into one or more tables (or "relations") of rows and columns, with a unique key for each row. Relational databases will continue to play a future role in the world of big data because of their essential role in running marketing campaigns. Data is accessed in Hadoop first then moved to a database that can work with Hadoop, such as Splice or Hive.

• Single View of the Customer (SVOC):

An aggregated, holistic representation of all the data known about a customer by an organization. This requires some way to link disparate data to a unique customer – which is typically done through a customer ID, email address, or fuzzy logic matching algorithm that includes multiple fields such as name, address, email and phone number. Organizations with poor data on customers should make it a high priority to develop a single, unified view of the customer.

Structured vs Unstructured Data:

Structured data is information with a high degree of organization that can easily be stored in a relational database and is easily searchable (for example, city, state and phone number). Unstructured and semi-structured information (such as social media, web, keywords and metadata) is typically text-heavy and includes multiple forms of data including text, dates, numbers and sometimes symbols. Today an enormous amount of data is collected on customer purchase behavior, from a structured and unstructured standpoint. Some of this behavioral data resides in secure locations owned by individual merchants and some if it is sold at aggregated levels on the open market. A wealth of information is available on customers that can be used to uncover additional insights that inform segmentation and messaging.

Tag Management: Most marketing tools used for customer engagement have something called an e-marketing tag (or pixel or web beacon). When dozens of these pixels are placed individually on a web site, it can slow performance and cause issues. Tag management tools are a conduit / hub for all of these disparate tools. They allow web site managers to place all tags in one location and post a single e-marketing tag (provided by the tag management vendor) on a website. These tools become a conduit for tracking all data from the web and other digital properties and allow bi-directional data flows across disparate marketing technologies. This effectively allows data from one marketing tool to trigger communications or interactions in another. This is one of the fastest and easiest ways to integrate digital marketing systems and rapidly centralize data capture.

The Internet of Things (IoT) and the Internet of Everything (IoE):

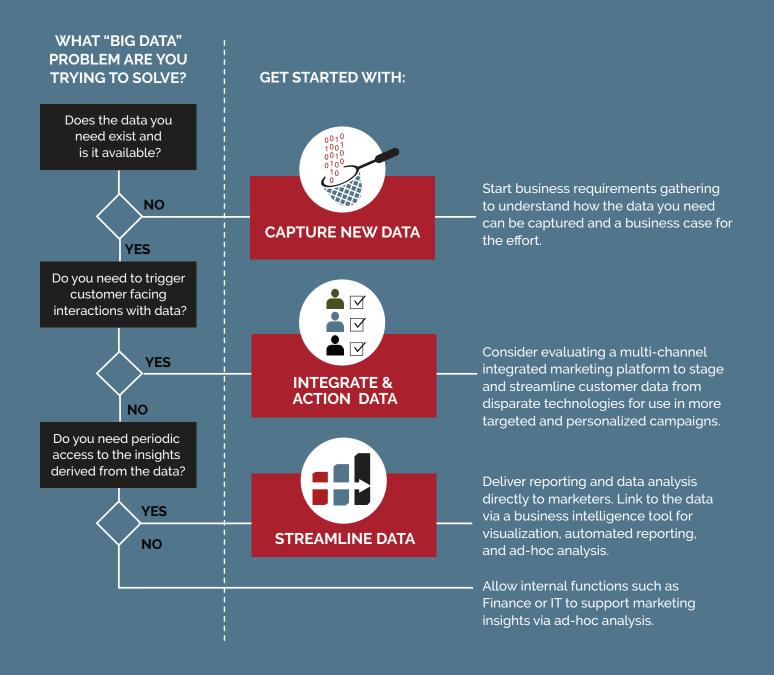
The Internet of Things is the connected network of devices, vehicles, buildings and other objects embedded with software and sensors that allow these objects to collect and share data. Today, there are refrigerators with built-in sensors that can remind you to buy milk when you get close to a local market. The IoT is ushering in new forms of data that can be used to trigger 1:1 marketing communications across email, mobile and social channels.

The emergence of sensor-based technology for processes, people and other biological objects led to the concept of "the internet of everything." The IoE will be responsible for exponentially growing volumes of data – hence IoE contributes to big data.

For marketers, the IoE has profound ramifications on how products will interact with consumers; ultimately it will change the concept of relevance in the future. For companies that collect data on product usage, big data investments can be used to inform product development and customer engagement.

FIGURE 3: OVERCOMING CHALLENGES WITH BIG DATA

Big data initiatives in marketing are complex and often have ramifications on multiple internal functions including Marketing, Sales, Finance, IT, Support and Operations. Marketers are in a unique position to help champion big data initiatives because their efforts have a direct impact on key business drivers such as customer acquisition, retention, churn and cost savings. These benefits can deliver a tangible return to justify investments made to solve some of these challenges. Figure 3 outlines a simple decision matrix for determining next steps with respect to big data challenges.



TIPS AND TRICKS FOR OVERCOMING COMMON BIG DATA CHALLENGES

Fragmented data.

Customer data resides in silos caused by multiple disconnected marketing and sales technologies:

- Invest in more robust multi-channel marketing technology. If customers are engaging across multiple channels (web, email, mobile, in-store, direct mail, reps, etc.), niche solutions won't scale to meet future personalization requirements. It may be time to invest in a customer data platform that can not only collect data across multiple channels, but also trigger relevant communications at the right time, in the right channel.
- Invest in a single view of the customer. Previously, this could be done using a variety of approaches such as a data lake, centralized database, or federated database. Marketers should consult with their IT colleagues to learn what they think about specific big data concepts and whether a customer data platform (CDP) or tag management solution can be deployed to capture and align cross-channel engagement data from customers.

Poor customer data quality.

Customer data quality is a common challenge – even among the largest brands with the most resources.

- Sit down with IT to review and discuss the state of the customer data. Marketers should be familiar with the customer data model and have an understanding of what data is available for producing insights, the quality of that data and the best way to improve it.
- Consider investing in a data quality or a data
 cleansing solution to augment or correct customer
 data records. Marketing lists can be cleansed and
 enhanced using third-party data solutions.

Data skills gap.

Marketers lack the skills and focus needed to realize the benefits of big data investments.

- Consider running pilots. Many marketing
 organizations run the same campaigns and make
 virtually the same investments in the marketing mix
 quarter after quarter. There's comfort and safety in
 sticking with what's tried and true and it may even
 deliver the desired results. But there's still room for
 small wins and rapid value test initiatives. Consider
 running small pilot campaigns to explore different
 conditional attribution models against data, or just
 dig into some data the team hasn't looked at before.
 These small initiatives are learning opportunities for
 the team and mitigate the risk if the initiative fails to
 deliver a massive return.
- Build a strong partnership with IT. There's a trendy cliché about CMOs and CIOs being at odds. This isn't accurate and usually isn't the case in most organizations. Yes, CMOs may invest in many different technologies that can create customer data silos. But most of the time there is a strong enough partnership between IT and Marketing to challenge any renegade practices that degrade data quality. There are also new technologies that automate data management and analytics, providing more capacity for IT to support marketing.

Available technologies don't integrate.

Multiple marketing technologies lead to disconnected channel-specific communications, communication fatigue, opt-out compliance challenges and no visibility into the holistic customer experience.

• Deploy a centralized customer engagement hub. One of the most common challenges marketers face is a lack of ability to automate next-bestactions across marketing channels. Consider replacing or augmenting existing tools with an integrated platform that can collect and act on data from cross-channel interactions and trigger automated communications via preferred channels. This may or may not require data to be centralized. What is needed is a tool that can utilize *all* customer data for communications, even if that data resides in a half-dozen marketing technologies.

CONCLUSION

It's an exciting time for marketers. Innovations in software and hardware have opened the door to the world of big data, and it's never been more accessible from a cost and time-to-value standpoint. It is very possible to action and analyze all aspects of the data collected on customers.

As little as five years ago, that may not have been the case. And while "big data" may be discounted as another trendy buzz term, the reality is a new generation of customer engagement solutions are capable of delivering cross-channel, contextually relevant interactions – made possible with exponentially growing volumes of customer data.

There are three fundamental ways marketers can benefit from big data today:

- Capture and centralize customer data to generate a single view of the customer.
- **Take action with available data** via trigger-based marketing, personalization, and next-best actions across all relevant Whannels.
- **Derive insight from the data** using four types of analytics: descriptive, diagnostic, prescriptive and predictive.

Every year we continue to make incredible strides in our ability to capture, store and action massive volumes of data. It is imperative that marketers learn about innovations in big data to help champion investments that will future-proof the brand experience. After all, these big data initiatives can deliver big value across the strategic objectives *every* organization desires — revenue growth, cost savings, visibility, profitability and customer satisfaction.

About Redpoint Global

With Redpoint's software platform, innovative companies are transforming their customer experiences across the enterprise and driving higher revenue. Redpoint's solutions provide a remarkably unified, single point of control where all customer data is connected and every customer touchpoint intelligently orchestrated. Delivering more engaging customer experiences, highly personalized moments, relevant next-best actions and tangible ROI—this is how leading marketers lead markets. To learn more, visit **redpointglobal.com**.



US Headquarters: Wellesley, MA | Tel: +1 781 725 0250 EMEA Headquarters: London, UK | Tel: +44 (0)20 3948 8170 www.redpointglobal.com