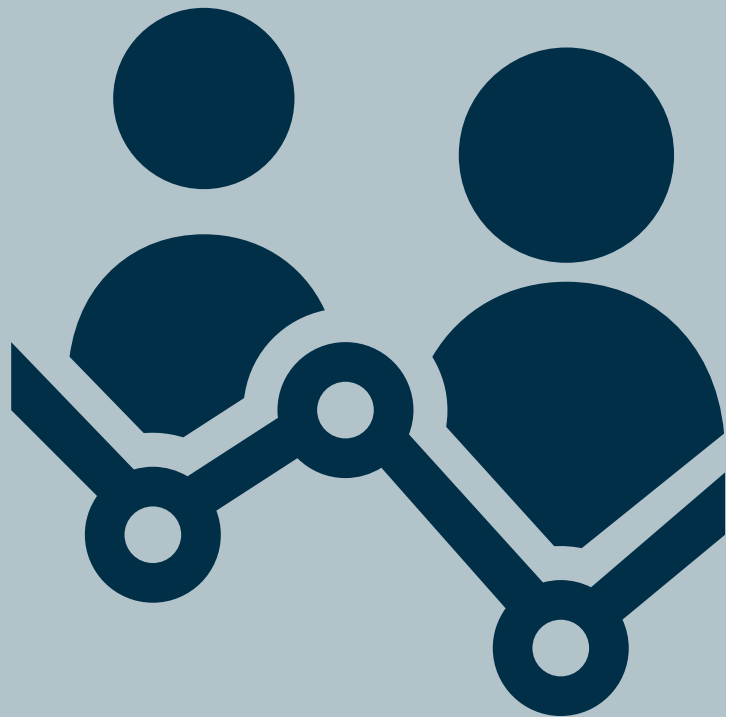


Using Big Data Analytics  
to **Understand Customer  
Journeys** and **Drive Revenue**



## Technology is radically transforming the customer journey.

Today's customers are more empowered and connected than ever before. Using channels like mobile, social media and e-commerce, customers can access just about any kind of information in seconds to inform what they should buy, from where, and at what price. (For millennials, information includes the opinions of strangers, which they value more than product information provided by companies.) Based on the information available to them, customers are making buying decisions and purchases whenever and wherever it's convenient for them.

At the same time, customers expect more. For example, they expect companies to provide consistent information and seamless experiences across channels that reflect their history, preferences and interests. More than ever, the quality of the customer experience drives sales and customer retention.

Given these trends, marketers need to continuously adapt how they understand and connect with customers. As explored in this e-book, this requires having data-driven insights that can help you understand each customer's journey across channels – not just within each channel.

## The good news is, customers generate tons of digital data, which you can analyze to gain big insight about them.

Every time customers click on a digital ad, write a review, “like” a product, browse your website, contact your call center, place items in a cart, and make or walk away from a purchase, they are generating interaction data. And along the way, companies like yours are collecting an unprecedented amount of customer data – both structured and unstructured. Think Web logs and mobile interaction data. Digital advertising, social media and marketing automation data. Product usage and contact center interactions. CRM and transaction data. All of it can be enriched with all types of publicly available data, such as cookies and demographic data, and then analyzed.

These types of customer data make up a vast percentage of big data that’s contributing to the 2.5 quintillion bytes of data being created by consumers and enterprises every day.<sup>1</sup> Armed with the right analytics, you can analyze your customer data to generate valuable insights into each customer’s journey, such as patterns that help you take informed steps to accelerate customer acquisition, prevent churn and more.

Customers always have some kind of an experience with your brand. The question is, how can you understand how good (or bad) is it from their perspective?

## The challenge is analyzing all of your customer data over time and across channels.

Despite access to so much customer data – and the relatively widespread use of various customer analytics tools – less than 1 in 10 companies feel they have an excellent understanding of the overall customer experience. And just 44 percent have a good or excellent understanding of the overall customer experience.<sup>1</sup> This is pretty scary, as they probably know less than they think they do. In a 2012 survey of 362 firms by Bain & Company, 80% of companies believe they deliver a superior customer experience, but only 8% of their customers agree.<sup>3</sup>

### What's the root of the problem? Data and analytics issues.

First, most marketers are using multiple channels for marketing – from digital ads, social media, mobile apps, and marketing automation to web analytics and CRM.

The problem is that they are analyzing the impact of their campaigns within these silos using separate tools for web analytics, mobile analytics, social media sentiment analysis, CRM analytics and more. So data is fragmented, and analytic results provide only siloed views of the customer experience (i.e., the website experience, the call center experience, or the mobile experience).

As stated earlier, today's customers interact with brands across multiple channels – even for a single sale. So to understand each customer's journey, marketing needs to analyze all of their customer data across all channels at the same time (see Figure 1). This requires big data analytics – and it's what provides totally new visibility into behavior patterns, which marketers need to zero in on how to turn leads into customers. For example, marketers can identify which combination of campaigns convert most leads to customers. Armed with this information, they can design campaigns that turn more leads into customers. Similarly, they can determine which kinds of customer behaviors are associated with a high propensity to churn – and then proactively engage with customers before it's too late.

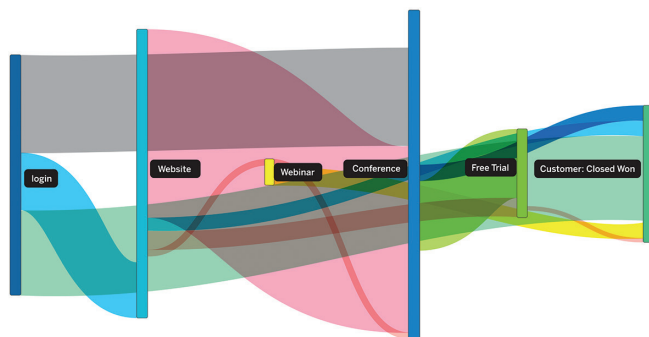


FIGURE 1:  
Campaigns that influenced the leads that converted to customers

Figure 1 shows the time journey of leads that have converted into customers and what campaigns influenced those leads.

And second, most companies rely on traditional enterprise data warehouses (EDWs) and business intelligence (BI) software for customer analytics. But traditional EDWs can't handle unstructured data, which is the bulk of most customer interaction data being generated today. And any attempt to structure it (for example, in database tables) takes a great deal of time and resources – and limits its potential value as a source of insight. In addition, a typical EDW can't run sophisticated analytics such as clustering, click path analysis, and advanced data mining. And in most cases, few people have the skills and expertise to use these cumbersome analytical tools.

All of this limits your ability to analyze data in fundamentally important ways. For example, because you need IT to prepare data for analysis, you have to wait too long for insights. In addition, the accuracy of your results is dependent upon choosing the right data to analyze before you really know what questions you need to answer. And you can only generate reports based on predefined questions. So if a new question comes up – or someone wants to do ad hoc analyses – you have to wait for several weeks to get another set of data from IT.

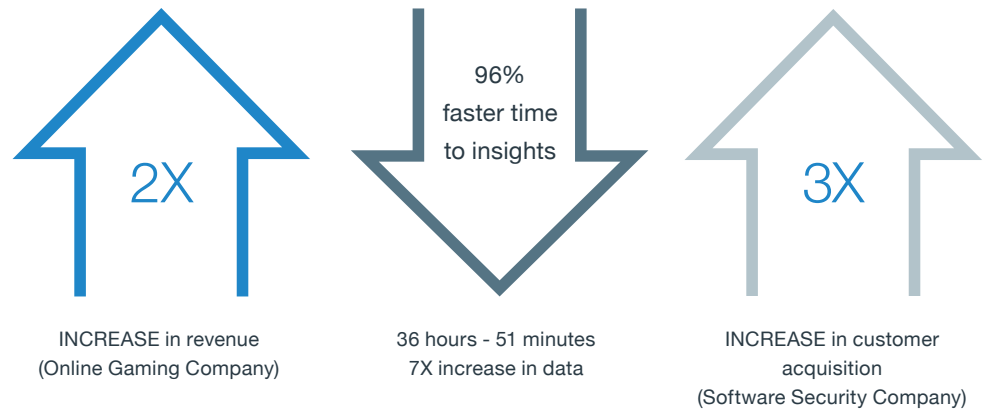


FIGURE 2:  
Examples of returns achieved  
by Datameer customers

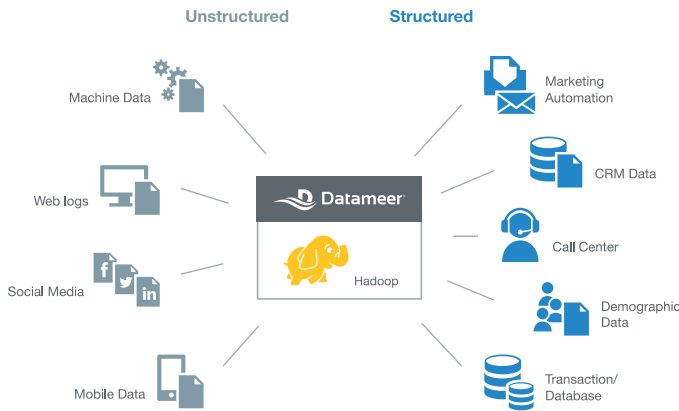
## The solution is big data analytics.

To precisely understand your customers and their customer journey, you need a way to integrate data from every channel – structured and unstructured – and analyze it all at once for an integrated customer view and holistic insights. Most importantly, big data enables you to do iterative data discovery that leads to insights you never had before, questions you never knew to ask.

Big data analytics can help you achieve this. With these technologies, you can bring together all of your structured and unstructured data into Hadoop and analyze all of it as a single data set, regardless of data type. The analytical results can reveal totally new patterns and insights you never knew existed – and aren't even conceivable with traditional analytics. The possibilities are endless.

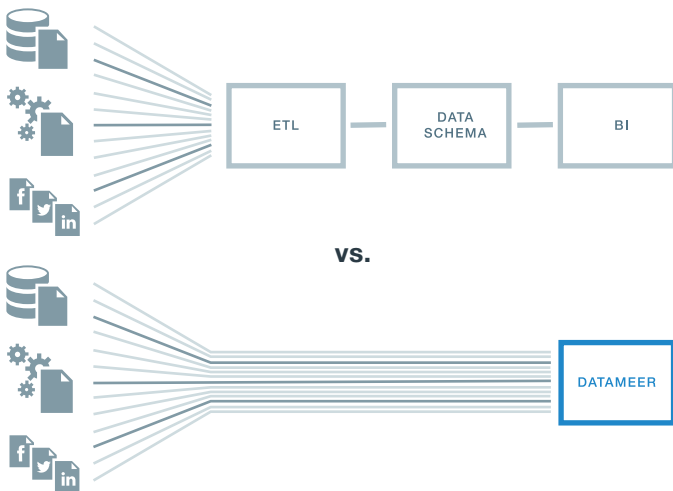
# Datameer Delivers Faster Insights from Big Data

Datameer’s insights platform quickly transforms businesses into agile, data-driven organizations. It provides an intuitive platform for fluid data discovery that reveals insights in hours instead of months.



Our solution overcomes the challenges of traditional EDWs and analytics by 1) delivering big data analytics that are powerful and yet so simple that anyone can use them to turn big data into valuable, timely insights and 2) by developing a solution that enables you to quickly aggregate and integrate all types of data in one place (see Figure 3).

FIGURE 3: Aggregate, integrate and analyze all types of data in one place



With our solution, there’s no need for a data scientist to model, integrate, cleanse, prepare, analyze and visualize your data because no schemas are required (see Figure 4).

FIGURE 4: Datameer requires no schema to bring data sources together

## Integrate, analyze, and visualize all your data for the fastest insights from big data.

We support every step in the analytics process, empowering you to generate insights faster than any other solution on the market. Datameer provides:

- 60+ out-of-the-box connectors and a file parser to integrate any data
- 270+ pre-packaged data algorithms in a simple-to-use spreadsheet interface
- Join, transform and enrichment functions
- Tools for visual data wrangling
- Self-service schema-on-read capabilities (which eliminates the need for ETL and static schema)
- 30+ visual widgets plus free-form infographics for stunning visualizations
- Automated clustering, decision tree and recommendation functions to segment customers
- Behavior and time series analytics

In addition, our solution is fully extensible using an open architecture, APIs for custom connectors, and more.

## Anyone can use it, right from day one, for better decision making.

Datameer is simple to use and designed to empower everyone across your enterprise to make data-driven decisions. With its intuitive, Excel-based interface, it's designed for business analysts. So just about anyone can learn to use it and get answers to complex questions such as:

- What's really happening across every step in the customer journey?
- Who are your high-value customers?
- What campaigns motivate customers to buy more?
- How do they behave?
- How and when is it best to reach them?
- Which offers are driving customer retention and referrals?
- What are the top campaigns across all channels? What combinations of campaigns convert leads to customers most effectively?

Now you can ingest, cleanse, prepare, analyze and visualize all of your customer data – structured and unstructured – in hours, not months.



## Exploring Customer Successes

Datameer transforms businesses into agile, insight-driven organizations – and it's already delivering bottom-line results for leading firms in industries such as finance, telecommunications, retail, and technology, among others. Let's explore the value of Datameer as illustrated through real-world case studies.

In the marketing area alone, McKinsey estimates that data-driven companies worldwide improve their marketing ROI by 15-20%, which adds up to \$150 - \$200 billion in additional value.

# A major credit card company: Lowering customer acquisition costs

A major credit card company was spending millions of dollars on digital advertisements. Management wanted to create more relevant, targeted ads and increase digital advertisement conversion.

Reduced advertisement cost by \$3.5M per year, while at the same time improved advertisement conversion by 25%.

This would require analyzing all their ad click stream data to gain a deeper understanding of high-value customers – and using these insights to deliver more targeted campaigns that would boost wallet share.

Using Datameer, the company correlated data on customer purchase histories, customer profiles, and customer behavior collected from social media sites indicating their personal interests. This data was then correlated with transaction histories and data on things that customers “liked” on Facebook to identify hidden patterns. These patterns enabled management to see that a large percentage of their high-value customers regularly watch the Food Network and shop at Whole Foods.

Armed with this insight, the company was able to define a more personalized advertisement strategy to target people with certain profiles. This involved creating advertisements to run on the Food Network channel and special promotions for Whole Foods customers. The end result? They reduced their advertisement cost by \$3.5 million per year.



FIGURE 5:  
Improve digital advertisement conversion

## A global financial services company: Accelerating customer acquisition

A global financial services company uses big data analytics to perform clickstream analysis on their digital advertisements.

Their goal was to create more targeted ads that improve conversion and ensure the different business units were not over-targeting certain consumer segments. The company ingests four to five billion advertisement records per month across all business units to better understand ad exposure for each consumer segment.

Using Datameer, they can ingest and process large amounts of data extremely quickly, as well as empower analysts and business managers to run everything from basic to sophisticated analytics without the need for programmers. For example, using customer segmentation analysis, they found that 60% of the overall company advertisement budget was focused on only 4% of consumer segments. Based on this analysis, they reallocated their budget to other consumer segments to increase ad conversion. Now they can trace 50-60% of the people who receive their ads based on cookies, and they have increased advertisement conversion 25% by creating more targeted ads for each consumer segment.

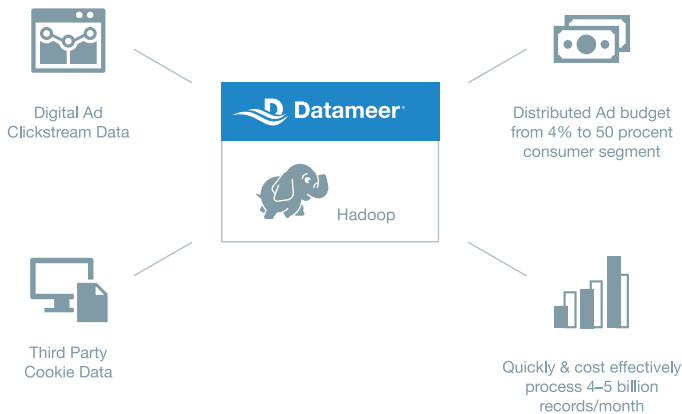


FIGURE 6:  
Identified that 60% of ad budget was focused on 4% of their customer

## A financial services company: Predicting and preventing customer churn

As part of a strategic initiative to reduce the amount of funds being transferred to competitors, a financial services company wanted to understand client behaviors that indicate potential churn – especially as people approached retirement.

They also wanted to identify and track specific behaviors so they could focus on the people who might consider moving their retirement funds to a different financial firm. Historically, the bank successfully retains at-risk customers 50% of the time if the customer loyalty team knows in advance they are considering moving their assets – for

example, by proactively reaching out to educate them about their wealth management services.

The company started by building a custom solution to help them pull together all of the necessary data from CRM and call center systems, third-party sources (such as demographic data), transactional systems (such as 401K deposits and beneficiary data), website reports, and corporate financial systems. But at the recommendation of senior IT management, they decided to use Datameer, as it would make it much faster and easier to ingest and prepare data – especially for users with little Hadoop experience. And they were right. Using Datameer, marketing was able to integrate and analyze all of this data in less than three hours. Results enabled marketing to identify specific customer behaviors that signal when a customer is likely to transfer their investment.

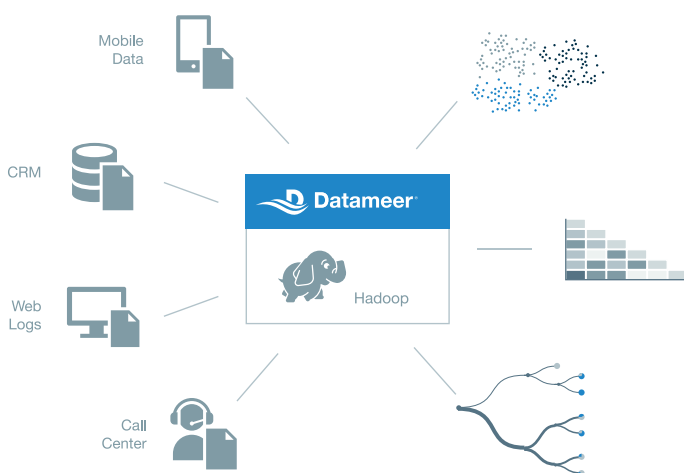


FIGURE 8:  
Reduced customer churn by 50%

For example, they found that customers are more likely to churn if they had recently called the call center for information with an outside financial consultant on the line; requested a change in address, workplace, or power of attorney; or recently browsed the company website for forms. The bank then pulled multiple data sources together to build out activity paths for each client. For example, they tracked clients' specific activities and whether these activities ultimately led to a transfer or withdrawal.

By correlating this data, they were able to determine the statistical relevance of each activity, or combination of activities, that created a risk score for customer churn, as well as identify patterns of customers at risk of churn. The company now reaches out proactively to these customers, offering their wealth management products at the right time. And as a result, customer churn has been reduced by 50%.

# An online gaming company: Driving continuous, agile product enhancement to maximize revenue per customer

The primary goal for gaming companies is to increase customer acquisition, retention and monetization.

And this means getting more users to pay to play – and do so more often and for longer periods to maximize revenue per customer. This means giving customers a steady flow of new functionality that attracts and entices them.

To gain critical insights into players and their behavior, a major gaming company uses Datameer to analyze game event log data and user profile data (see Figure 10). Using Datameer, they pull data from more than 3,000 servers, make it available to the developers and designers and run more than 2,000 daily reports. For example, Datameer helps them understand what motivates users to play longer and interact with others – behavior that enhances the gaming experience for all players; these insights help product development know where to focus future enhancements. And to increase monetization, they use Datameer to identify user behavior by segment and the characteristics of users most likely to pay. For example, they can test to see if giving away a free sword during certain parts of the game would entice power players to pay for a second sword given their determination to win.

Harnessing these insights, this gaming company continues to enhance its games and design new games that have made them one of the most popular online gaming companies. They have grown revenue from \$50M to \$600M in just 3 years.

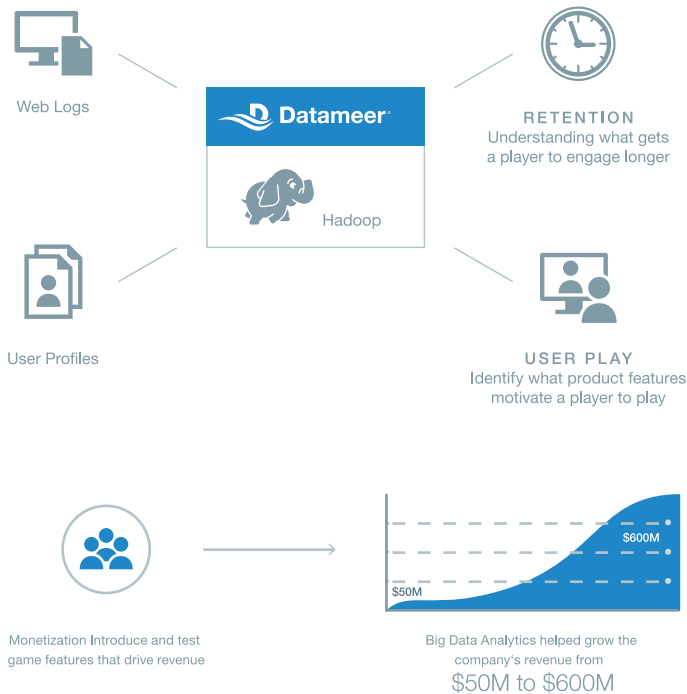


FIGURE 9: Designing more innovative products by understanding customer behavior

## A major financial services company: Increasing revenue per customer

The consumer cards division of a major financial services company needed a faster way to analyze billions of customer attributes to better understand the customer journey and systematically engage with customers in ways that boost revenue per customer.

Their prior solution – SAS analytics on Teradata – took 36 hours to process 0.7 billion data – far too long for this amount of data. At the same time, they wanted to move to an analytical tool that would empower more of their end users to generate insights without requiring IT and

analyst assistance; business users were easily overwhelmed by their existing tools and required a significant investment in training before using them.

After evaluating a wide range of competitive solutions, they chose to deploy Datameer. Now, the credit card division can analyze seven times more customer attributes (in other words, 5 billion attributes) in just 51 minutes, which is 95% faster than they could analyze a much smaller data set with their prior software. Because marketers can analyze so much more data at once, they have a much more precise understanding of the customer journey. And they are using these insights to systematically acquire more customers, prevent credit card fraud, improve cross-sell and upsell results and reduce churn. These outcomes have resulted in a higher revenue per customer.

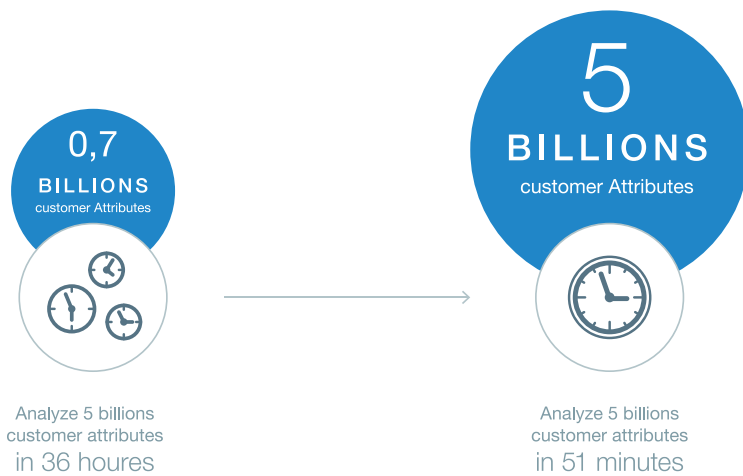


FIGURE 10:  
Analyze 7x more data points, 96% faster

## Learn More

As explored in this e-book, you can use these kinds of insights to make decisions that:

- Reduce customer churn
- Accelerate and increase customer acquisition while lowering associated costs
- Strengthen customer relationships
- Increase revenue per customer
- Improve existing products and services and design better products

As the examples provided in this eBook, Datameer enables companies to become much more customer centric and agile by providing a deep understanding of customer journeys and interactions. And using these insights, companies can optimize campaigns to drive greater customer acquisition.




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