

DEVELOP INSIGHT DRIVEN CUSTOMER EXPERIENCES USING BIG DATA AND ADAVANCED ANALYTICS

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This whitepaper is the second in a 3-part series on Customer Experience. The first paper dealt with Customer Experience strategy and design, and how an effortless, data-enabled, insight-driven experience is a critical enabler for competitive differentiation. This second whitepaper focuses on how customer information and analytics (especially in the age of big and unstructured data and predictive, pre-emptive, and social media analytics) can provide deep customer insights to enable differentiation and personalization, in turn, helping firms better compete. The concluding whitepaper will center on how new technologies, organizational design, and alignment of incentives are the final key ingredients to develop an integrated, digital, and multi-channel customer experience.



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INTRODUCTION

Today, firms have an abundance of customer data available from a growing number of sources. Many firms have challenges transforming this data into actionable customer insights. Nevertheless, research has shown that a positive and effortless customer experience based upon analytic insights can result in increased customer satisfaction, loyalty, advocacy and greater customer lifetime value.

To assist firms in their quest for a more insight-driven customer experience, West Monroe Partners has developed a Customer Experience Maturity Model – composed of the following dimensions:

- Customer Experience Strategy
- Customer Data Management
- Customer Insights
- Customer Experience Delivery

Like the foundation of a home, the core dimensions through which insight-driven experiences are delivered are Customer Data Management and Customer Insights.

Figure 1: Customer Experience Maturity Model - Customer Data Management and Customer Insights Dimensions

Dimension/ Level	Developing	Foundational	Advanced	Optimized
Customer Data Management	<ul style="list-style-type: none"> ▪ No big and/or unstructured data strategies have been developed ▪ Each application maintains its own customer master data. Analytical data and reports are taken from operational systems ▪ No formal customer data governance roles and 	<ul style="list-style-type: none"> ▪ Big and/or unstructured data strategies exist - developed by IT ▪ Definition of customer master data system of record. Multiple copies exist for each functional area ▪ IT roles and responsibilities exist for customer analytics and data ownership / stewardship for some data 	<ul style="list-style-type: none"> ▪ Big and unstructured data strategies developed at the BU level - with some level of business commitment ▪ Purpose-built hub used as repository of customer master data. Sharing of master data occurs across BUs ▪ Business and IT roles exist for some customer analytics and data 	<ul style="list-style-type: none"> ▪ Formal big and unstructured data strategy in place at the org level with full commitment from Business and IT ▪ Customer hub used by all major applications. Master data shared by data warehouse and other systems (e.g. CRM) ▪ Business and IT roles exist for all customer analytics and data
Customer Analytic Insights	<ul style="list-style-type: none"> ▪ Demographic based customer segmentation ▪ Revenue-based customer valuation or none ▪ No predictive model usage ▪ Multiple groups developing analytic insights with multiple versions of the truth 	<ul style="list-style-type: none"> ▪ Behavioral and demographic-based customer segmentation ▪ Profit/proxy-based customer valuation (including cost to serve) ▪ Some proxy/financial-based predictive models ▪ Multiple groups developing 	<ul style="list-style-type: none"> ▪ Needs or persona-based customer segmentation ▪ Customer lifetime value/customer share of wallet analysis ▪ Statistically-based predictive models ▪ Centralized marketing sciences organization 	<ul style="list-style-type: none"> ▪ Micro-segmentation, multi-level needs segmentation ▪ Unrealized customer value analysis ▪ Complex modeling techniques (e.g. non-parametric models, artificial intelligence) ▪ Centralized marketing sciences organization and/or processes to ensure single version of truth



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CUSTOMER DATA MANAGEMENT—INTEGRATING CUSTOMER DATA—INCLUDING BIG AND UNSTRUCTURED DATA—AND PLATFORMS TO DEVELOP A SINGLE CUSTOMER VIEW

Firms need the ability to manage and utilize both big and unstructured data, especially from customer interactions on social media channels. “An explosion of information is now available, explicitly and implicitly, for collecting customer demographics, psychographics, customer behavior, their clicks, their aspirations, their sentiment, their networks, their location, their reputation, online and offline transactions, stage of a buying process, life cycle stage, etc. All this information will be mandatory to meet lofty goals, such as a 360-degree view of the customer. Big data will not be an exercise in merely collecting massive amounts of this data; rather, it will be about making the right information accessible and action oriented for both the company and the customer for core CRM,” says Adam Sarner of Gartner.

CUSTOMER ANALYTIC INSIGHTS—LEVERAGING INFORMATION-BASED CUSTOMER INTELLIGENCE, ANALYTICS, MODELING, SEGMENTATION, AND RESEARCH

Insights derived from customer data and analytics expand customer understanding at every phase of the customer lifecycle—from acquisition to onboarding to growth to retention to win-back. Leading practices in customer insights require advanced, predictive, as well as pre-emptive analytics.

Optimized customer analytic insight practices include usage of non-parametric, non-statistical artificial intelligence capabilities, innovative tools that provide more complete customer insights than traditional statistical models.

The customer data and analytics marketplace is rapidly changing. However, the objectives remain the same—given the end goal of maximizing customer lifetime value, firms need to leverage customer data, including Big Data, to create insights via advanced and predictive analytics, including social media analytics.

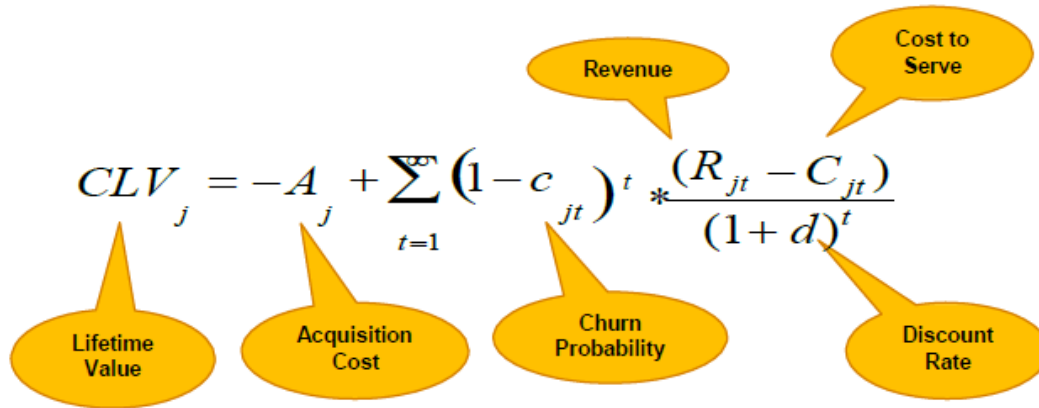
CUSTOMER LIFETIME VALUE

As mentioned earlier, one of the primary goals of customer experience is to optimize customer lifetime value. Leveraging an analytics-based customer lifetime value approach is an excellent way to differentiate customers based upon value, allocate resources accordingly, and grow share of customer based upon insights. A simple mathematical calculation of customer lifetime value can be derived from the following equation:



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Figure 2: Customer Lifetime Value Equation



The goal of optimizing customer lifetime value (CLV_j) can be achieved by:

- Minimizing acquisition costs (-A) by more efficient and effectiveness insight-based targeting
- Maximizing the relationship duration (1 - c_{jt})^t by decreasing churn propensity through incentivizing customer recency and enabling early defection detection
- Maximizing revenue (R) and profitability (R-C) by increasing cross and upsell, frequency of purchase, and average order spend, and decreasing cost to serve – including migration to lower cost to serve channels.

Customer lifetime value has appeal as a strategic and marketing concept, because theoretically it represents exactly how much each customer is worth financially, and therefore exactly how much a firm should be willing to spend to acquire, retain, and win back each customer. Thus, the goal of any customer experience program should be to maximize both individual and aggregate customer lifetime value.

BIG DATA

Probably the most hyped new term in the data and analytics industry and customer data disciplines is Big Data. But just what is 'Big Data' and why is it important? Big data is a collection of digital information whose size is beyond the ability of most tools to capture, manage, process and analyze it. The origin of Big Data is the proliferation of data that has occurred because of the web and instrumentation.

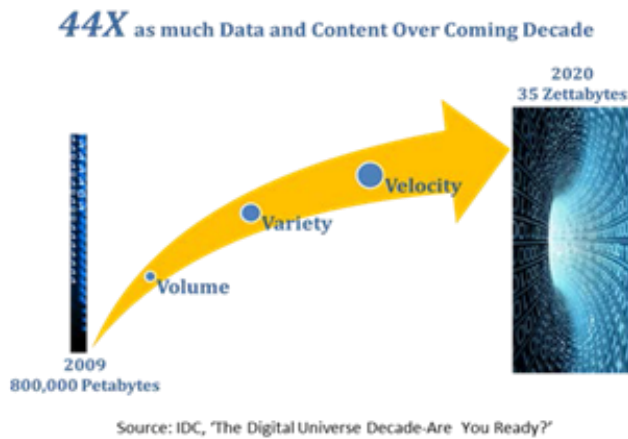


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The Big Data market (or Business Analytics Services Market) is made up of solutions for storing, analyzing, modeling, and delivering information to support organizational decision-making and reporting processes. This market is expanding rapidly. International Data Corporation (IDC) estimates that the Big Data market will hit \$16.9 billion in 2015 from \$3.2 billion in 2010.

The amount of Big Data is also expanding rapidly. IDC also predicts that the digital universe will total 35 zettabytes 1 which is 44 times bigger in 2020 than it was in 2009. Gartner predicts that 80% of this data will be unstructured, coming from text and social media.

Figure 3: The Proliferation of Data



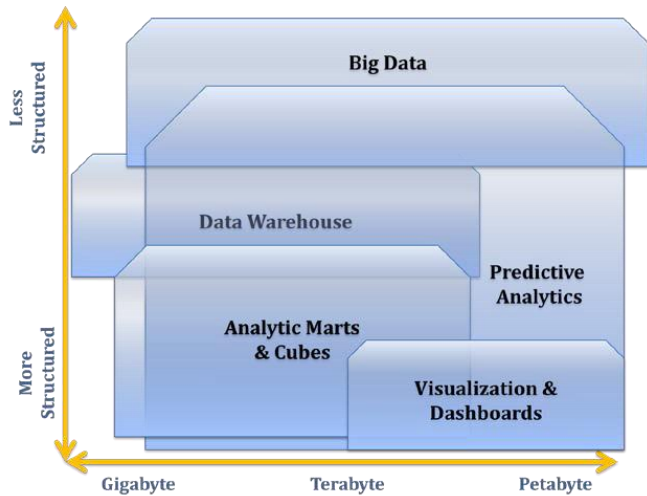
1 A zettabyte, or ZB, is massive by today’s standards. 1,000,000,000,000,000,000 bytes in decimal or 1021

With today’s wide accessibility to the web, individuals are capable of providing larger volumes of information that companies can leverage to gain insight into how their customers think. This is the consumption of Big Data—more data is kept and leveraged via analytics, including predictive analytics. These massive data sets—from gigabytes to petabytes in size—mostly include unstructured data, external data from social media, blogs, and mobile to internal data such as audio and video files. This data then continues to grow as new real-time data is captured.



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Figure 4: The Big Data Universe



What are the challenges when with dealing with Big Data:

- Volume: collecting data of all types grows extremely quickly and can easily reach the terabytes or even petabytes
- Velocity: being aware of time sensitive processes, such as identifying fraud or predictive attrition, and ensuring the data is used and analyzed properly to maximize its value
- Variety: collecting both structured and unstructured data in order to provide a well-rounded view
- Veracity: trusting data creates additional challenges as the number and variety of sources grow
- Vision: leveraging the increased and new types of data to create new analytical insights

Chief Information Officers as well as Chief Marketing Officers are moving their focus to Big Data as they are able to see the potential for big money in in it, i.e. increased customer revenue, predicting future customer activities, ability to make smarter business decisions. In April 2012, Wakefield Research¹ interviewed over 550 C-level executives and IT decision makers. They found that 73% of the companies surveyed had already leveraged big data to increase customer revenue.

The most important strategic benefit of leveraging Big Data as a component of the overall customer experience strategy is facilitating optimized decision making. The ability to reactively and proactively solve business challenges, uncover root causes, make predictions, manage risks, and prescribe what to do in (near) real time is invaluable.

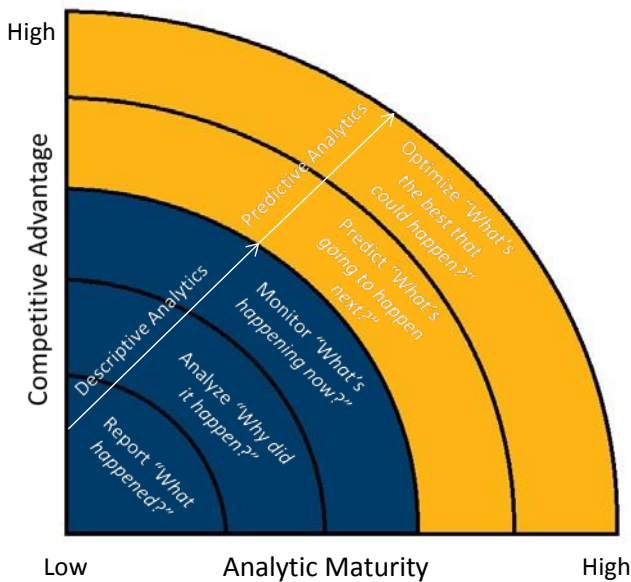


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ADVANCED ANALYTICS

One of the key factors that contribute to maturity in Customer Insights is the organizational emphasis of advanced analytics to drive business performance. Such analytics can be more foundational in nature, such as descriptive analytics for a better understanding of customer behavior, yet still leveraging business intelligence and reporting for customer and marketing—related metrics. Descriptive analytics would include such types of analysis as customer segmentation—demographic, behavioral, persona, and value.

Figure 5: Analytic Maturity and Competitive Advantage



Nevertheless, as a firm progresses in analytic maturity it advances towards predictive and pre-emptive analytics. Research indicates that the adoption of predictive analytics is a recent trend. Many firms that have become proficient in more simple analytics are now moving towards forward-looking, predictive, even pre-emptive, and real time or near real time analytics.

SOCIAL ANALYTICS

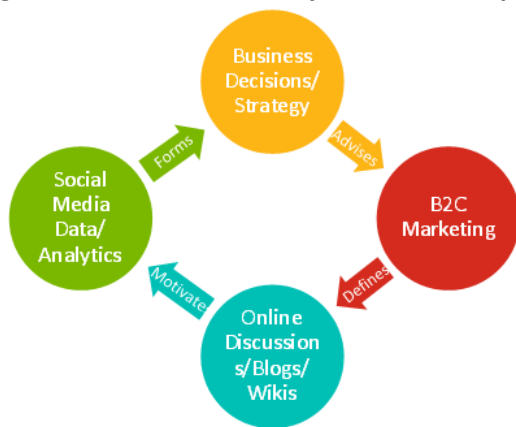
The ability for consumers to discuss companies, services and products in an open forum has grown exponentially in the last few years and continues to grow with emerging platforms for social media such as blogs, Twitter, discussion forums, review boards, social networks, etc. This expanse of social media allowing for consumer commentary and review gives companies the opportunity to collect and analyze the qualitative and quantitative customer data available to form future business strategy.



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Social media analytics is the ability for a company to apply analytic ‘listening’ platforms against social media data. Social Intelligence harnesses the information collected from various social media, compares it to current business goals (e.g. brand value proposition), develops insights for future business strategy, and shares it across all business units to be leveraged in multi-channel customer interactions.

Figure 6: Social Media Analytics Closed Loop Process



The typical business issues around social media analytics include:

- Passively monitoring and listening to social media without a business purpose
- Having a strategy to proactively handle data captured and generate actionable insights
- Having the right people for the job—having the requisite skills to create insights, develop metrics and measure business results
- Continuously modifying strategies and tactics to enhance and manage the risk to the brand via interactive channels
- Ensuring compliance with industry specific regulations and privacy rules

The customers who are active contributors in the social media space require a different type of attention and engagement. Traditional customer service models convey that if a customer has a good interaction, they will only tell a limited number of people, but if they have a negative experience they will tell many more. Pre-internet and social media this required limited brand risk management on the part of the company, as the sphere of influence of an individual customer was essentially limited to word of mouth. However, in the world of social media, the speed at which one individual customer could communicate a negative customer experience interaction and the impact of that communication, is exponentially greater. This creates significant brand risk for companies, and this risk needs to be managed.



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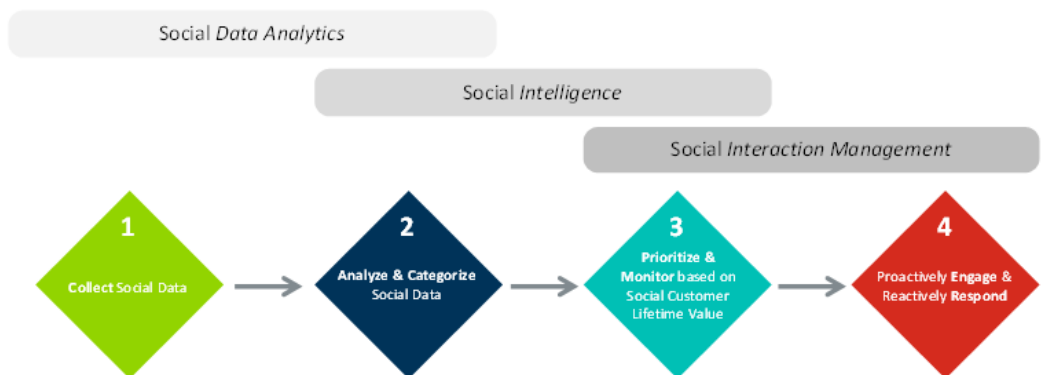
While any individual customer could communicate a negative experience via social media at any time, there are varying degrees to which a customer has influence in a particular area. Some individuals have greater topical followings in the social media world, for example via large followings/audiences on blogs and Twitter, and therefore the impact of what they communicate can create a large ripple effect very quickly. As a result, these individuals can be categorized as high "social influencers" who require a different level of interaction management. The importance of identifying and engaging with these individuals is less about proactively leveraging their influence to propagate a brand message but more about managing interactions and their influence to minimize brand risk.

As a result of the evolving importance and impact of social media, the traditional concept and customer engagement model of customer lifetime value also needs to evolve. Historically, customer lifetime value as described earlier has been calculated based upon past buying patterns, profitability, behavioral response to sales, marketing and service touch points as well as their propensity to defect as a customer. These factors collectively allowed companies to categorize customers in levels of importance determined by their 'individual value' to the company, based on however the company defines 'value', which has historically been tied to revenue generation, profitability, and probability of those future cash flows (i.e. probability of not defecting).

However, social media adds a potential risk value of what a given customer could have on other current customers based on what they communicate in the social media space. One customer could have a very quick and highly negative impact on other customers. This changes how companies should be thinking about the 'individual value' of a customer to the organization. Rather firms should consider the holistic customer lifetime value, which now includes 'Social Customer Lifetime Value', a customer advocacy or detractor 'value' that is applied in the social space.

So what should firms be thinking about related to managing these social interactions? To appropriately manage these key social influencer relationships, companies should consider that there are four key aspects: 1. Collect the social data, 2. Analyze and categorize the data—to identify and classify social influencers, 3. prioritize and monitor social influencers based on social customer lifetime value, and 4. proactively engage and reactively respond.

Each one of these four steps requires consideration as part of a holistic social media strategy. Subsequently each





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step will require its own set processes, people and tools to execute the collection, analysis, monitoring and engagement of these customers. This is an iterative and ongoing process as the ranking of social influencers as well as the assessment and management of brand risk needs to be constantly reevaluated and modified based on the latest data that is collected.

CONCLUSION

West Monroe Partners' believes that a positive and effortless customer experience can result in increased customer satisfaction, loyalty, advocacy and greater customer lifetime value, leading to competitive advantage.

Companies must holistically address the four dimensions of customer experience in order to provide an effortless, data-enabled, insight-driven customer experience and enable competitive differentiation. However, the foundation of any successful customer experience capability is data and analytic insights.

Today, firms have an overabundance of customer data available from multiple and a growing number of sources. Many firms have challenges, however, transforming this data into actionable customer insights. Integrating customer data and platforms in order to develop a single customer view is the information-based foundation of a customer-centric organization. Leveraging this information and analytic-based insights that along with new technologies can be utilized to deliver multi-channel, digital, and optimized customer experiences can then truly enable competitive differentiation with incredible results.

For more information on how to better develop and achieve your customer data and analytics goals, please contact Dave Nash, Director-Customer Experience, at dnash@westmonroepartners.com.