Analytics Rising: How Companies Are Responding to the Demand for More Meaningful Customer Insights

The 2006 Customer Intelligence Survey takes an in-depth look at customer analytics. As part of this survey, a series of one-on-one interviews were conducted with leading companies to determine the value they place on customer analytics, the key insights they derive and the methods used to derive them. Based on our interviews and client experiences, we have identified three critical capabilities that will shape the future of customer analytics:

1. Centralizing the analytics function
2. Outsourcing analytic modeling to lower cost, offshore providers
3. Using value segments in concert with needs and demographic segments to achieve greater profitability from marketing and retention efforts

Introduction

Customer analytics have been gaining a significant amount of recognition lately as a point of differentiation in an increasingly complex and competitive business environment. Defined broadly, customer analytics is the analysis and modeling of information to categorize customer types and predict customer behaviors. Lately, the media and analyst communities have been focusing a lot of attention on the importance of analytics in general, including business intelligence and performance management. While most of the more general analytics efforts are concerned with efficiency and optimization, customer analytics is at the core of growing revenue and profitability. With accurate analysis and modeling, customer analytics promises to deliver true knowledge of customer value, needs and preferences. This knowledge allows for better deployment of resources and optimum allocation of attention, and it drives higher acceptance rates of offers. All of these factors are contributing to an unprecedented interest in deriving customer insights.

While "getting the right offer to the right customer at the right time" is the decade-old promise of Customer Relationship Management (CRM), the ability of companies to actually accomplish this is becoming enticingly real. Advances in data management, analytical tools and systems integration have converged to make the use of customer analytics a differentiating capability. Combine these advancements with an astronomical increase in the customer and prospect information that is available, and it is easy to appreciate the increased attention this area is enjoying.

In this paper, we highlight these and other findings from the survey and our related work to identify the capabilities shared by leaders and to address the challenges and opportunities that face all companies that want to elevate their customer analytics.

Analytics in the Framework of Customer Intelligence

Our previous Customer Intelligence Diagnostic Survey consisted of 60 questions. The survey was administered broadly, enabling us to quantify the results by capability and by industry. Based on our analysis of the

survey results and our observations in the marketplace, we created the Customer Intelligence Maturity Model which is shown in Figure 1. We found that Customer Intelligence capabilities could be categorized in each of three dimensions:

- Customer Information Integration
- Customer Insights
- Customer Insights Operationalization

And we found that company capabilities generally fell into one of four progressively higher rankings within each dimension:

- Basic
- Foundational
- Advanced
- Distinctive

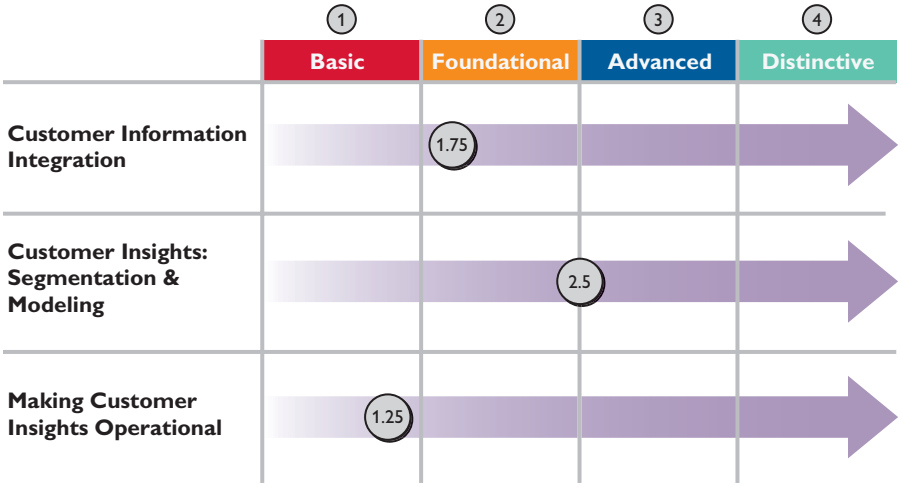
Subsequently, we have used the Maturity Model to classify capabilities and assess performance at many clients in various industries. For each industry that we address, we customize the capabilities in the Maturity Model to reflect the business models and market dynamics specific to the industry.

Figure 1. Customer Intelligence Maturity Model

	Basic	Foundational	Advanced	Distinctive
Customer Information Integration	• Manual data clean-up	• Periodic batch processes to clean up data	• Online search, lookup, validation rules applied at appropriate tiers	• Data quality maintenance using external vendors
	• No 360° view of customer	• Common IDs established for 360° view	• Automated integration of IDs for 360° view	• Central system for ID management
	• Customer changes posted end-of-month	• Changes posted weekly	• Changes posted daily	• Changes posted immediately
	• No cross departmental data stewardship	• Data steward FTE	• Data stewardship change control board	• Business subject area owners enforce data policies
Customer Insights: Segmentation & Modeling	• Market/demographic segmentation only	• Behavioral segmentation	• Needs-based segmentation	• Micro and multi-level needs segmentation
	• Revenue-driven customer valuation	• Profit and/or proxy-based customer valuation	• Share of wallet analysis	• Unrealized value analysis
	• No use of predictive models	• Some proxy-based predictive model usage	• Segment or statistically- based predictive models	• Complex predictive models for propensity scoring
	• Key metrics/indicators defined but not complete	• Key metrics available from multiple reports	• Key metrics assembled in an enterprise scorecard	• Key metrics support drill down analyses
Customer Insights: Operationalization	• Same service levels for all customers	• Differentiated service for valuable customers	• Differentiated service by customer segment	• Personalized service
	• No integration to front-office applications	• No production process to update insights	• Insights updated through periodic batch processes	• Real-time, rules-driven customer interactions
	• Manual processes for problem resolution	• Case management for problem resolution	• Automated case hand-off and tracking	• Enriched knowledge base for self-service fulfillment
	• No lead management system	• Leads manually distributed to channels	• Leads automatically generated and distributed	• Automated lead generation and tracking system

Based on the overall findings of the previous Customer Diagnostic Survey, without regard to industry, capabilities were mapped as shown in Figure 2.

Figure 2. Capability Ranking of previous Customer Intelligence Survey Respondents



Our experience confirms that it is absolutely essential to address capabilities in all three dimensions in order to use customer intelligence as a competitive differentiator. So no matter how advanced an organization is in customer analytics, if the underlying data is untrustworthy, then the analytical insights will be inefficient. Similarly, companies that develop great insights on valid data will not be successful in driving more profitable relationships if they can't act on those insights at the time of customer engagement.

From a strategic standpoint, companies must consider the degree to which they need to develop Customer Intelligence capabilities. It is not always necessary to be "Distinctive" to be a leader in an industry segment. Industries are at various stages in their use of Customer Intelligence and in their ability to affect customer behavior. The model is most effective when used as a comparative guideline within specific industries.

Customer analytics is encompassed in the second dimension of Customer Intelligence and that is the focus of this whitepaper. We will revisit the need for a holistic approach to customer intelligence in our concluding section, which summarizes the benefits of attaining advanced capabilities in analytics.

Building Blocks of Insights

Our individual interviews yielded insights into the derivation and use of customer analytics across a broad spectrum of industries. There are three overarching areas that apply to all companies that want to increase their customer analytics capabilities:

- Organization
- Segmentation
- Business and IT Integration

Beyond these three areas, our analysis and experience shows that analytics becomes inextricably tied to the industry in which a company operates and its business model for interacting with customers (direct-to-consumer (B:C), business-to-business (B:B), business-to-business-to-end consumer (B:B:C), business-to-distributor, use of brokers and agents, etc.). Therefore we will explore our findings from these three areas and then examine three specific industry segments to demonstrate examples of analytic capabilities.

Organizing for Success:

A key survey finding that has been validated from our experience is that centralizing analytics functions leads to greater capabilities. Typically, we found that customer analysis is performed by four different groups in the corporation: Corporate Strategy, Marketing, Finance and IT. Each of these stakeholders has a distinctly different degree of understanding and appreciation of business analysis, analytical tools and data as depicted in Figure 3.

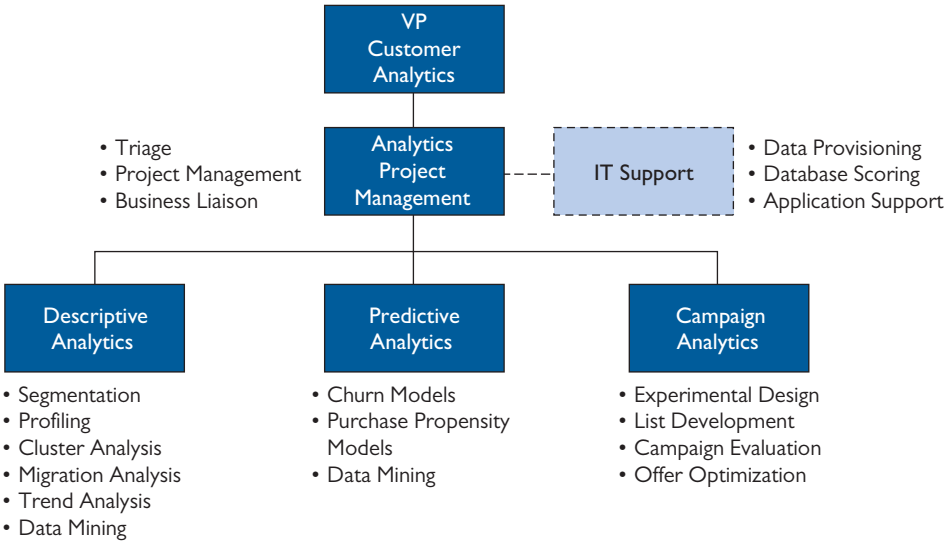
Figure 3. Customer Analytics User and Provider Characteristics

Department	Sponsor	Primary Customer Analytics Needs/Functions	Degree of Analytical Tools Knowledge	Degree of Data Knowledge
Corporate Strategy	Chief Executive Officer	Strategic Questions	Minimal	Minimal
Marketing	Chief Marketing Officer	Database Marketing, Data Mining, Modeling	Strong	Medium
Finance	Chief Financial Officer	Customer Profitability	Strong for Finance-specific Tools	Minimal
IT	Chief Information Officer	Data Provisioning, Report Production	Medium	Strong

Invariably, when these three groups operate as silos, multiple versions of the truth are created to answer extremely important business questions. That is usually because there has been no attempt to standardize definitions, reports or data sets. Users with the most clout get to the front of the request queue with little or no regard for the needs of the business as a whole.

Centralizing the customer analytics function (Figure 4) can provide significant benefits. First, there is the ability to create a centralized triage function so that business needs drive analysis and reporting priorities. Second, the need to create common definitions that can be represented as meta data in the company's data stores and systems will become apparent and a collaborative team can approach a solution as a common goal. Third, centralization facilitates the use of common models, algorithms and tools, which enhance reporting and analysis when combined with the use of common data definitions. Finally, the greatest benefit we see is the ability to identify data gaps in the organization's data warehouses and databases that can be addressed in a more timely and efficient fashion. In a decentralized organization model, data requests can be redundant with little evidence of importance, other than the user's urgent request. Data requests from a centralized analytics organization bear the stamp of credibility for the data professionals in the organization (usually in the data warehouse department of IT) and are able to be prioritized without redundancy. One other advantage of a centralized organization is the ability to consolidate the management of third-party data providers. Almost every company requires some sort of third-party data which can include credit information or demographic information that is appended to information already in the company's databases. The cost of third-party data can be substantial, and a centralized management function avoids conflicting or overlapping data and the resulting costs.

Figure 4. Centralized Customer Analytics Organization Model



Segmentation Redux

Customer segmentation has been a cornerstone of marketing strategies for decades, emerging as far back as the 1960s when the consumer-driven economy was just beginning to become a force. Lately, segmentation is undergoing a revival due to the increased availability of data, the advancement of analytic tools and techniques and the proliferation of customer channels that require more focused attention to sub-segments.

The most common forms of segmentation are still based on either demographics or revenue. This holds for both business-to-business sales models and business-to-consumer models. In the Customer Intelligence Maturity Model, both of these

segmentation schemas are considered basic. More sophisticated companies get beyond revenue to develop value-based schemas to distinguish higher cost and therefore less profitable customers from lower cost, more profitable customers. Another progression from the basic segmentation schemas is to identify clusters of segments by needs and then to overlay needs segments with value segments. The ability to understand customer needs and provide products that meet those needs or fulfill unmet needs is common in business-to-business models but less common in business-to-consumer. And the practice of overlaying the needs segments with value segments is even less common.

While many firms are using multiple segmentation schemas for different purposes, such as customer acquisition, customer retention and new product development, very few firms have coordinated segmentation across the enterprise to help facilitate analysis of customer migration. Multiple segmentation schemas for varying purposes are perfectly logical and often warranted, but the lack of coordination can be a problem. There are two reasons for the lack of coordination:

1. Decentralized analytics, which can lead to multiple segmentation schemas and uses throughout the company
2. Lack of data management principles, which results in the inability to track segment changes throughout the customer lifecycle

Segment migration analysis is critical to understanding customer motivations, behaviors and needs. It is a gap in the analysis of most companies that we interviewed and with whom we have worked.

Business and IT Integration

The lack of coordination and integration between business and IT was a major focus area for CIOs several years ago. Although improvements in collaboration are apparent, we continue to observe opportunities for tighter alignment, especially as it relates to closing customer data gaps and the use of analytic tools. IT departments continue to struggle with getting requirements from the business for the data that needs to reside in reporting and analysis warehouses and repositories. IT departments follow rigorous processes to define data requirements for transactional systems that are generally very successful. But when it comes to defining reporting and analysis needs, the rigor is not as easily applied and gaps emerge. Since reporting and analysis systems are not essential for the day-to-day business operations, they suffer from a lack of resource attention as well as an absence of a joint business and IT approach that defines requirements and stewardship processes. The same approach that works for defining the requirements for transactional systems does not work for reporting and analysis data repositories. Only a few leaders in analytics have determined that new and more collaborative efforts are essential to increase the effectiveness of the analyses that can and should be performed on behalf of the business.

The findings in these three areas — organization, segmentation and business and IT collaboration — apply to every organization that wants to use analytics more effectively. At a certain level of detail though, analytics become very specific to the market in which a company operates and the business model that it deploys. In order to better understand the more complex use of analytics, we need to turn our attention to some specific industry examples and their unique challenges and responses to developing better customer analytics.

Our industry analysis focuses on three segments:

1. Investment Management
2. Cable and Satellite Television and Wireless Telephony
3. Manufacturing

For each of these three segments, we will identify how analytics are deployed and highlight customer information analysis gaps that must be addressed. Based upon our survey interviews and industry experience, we will conclude each segment section by ranking the industry segment on the Customer Intelligence Maturity Model.

Investment Management

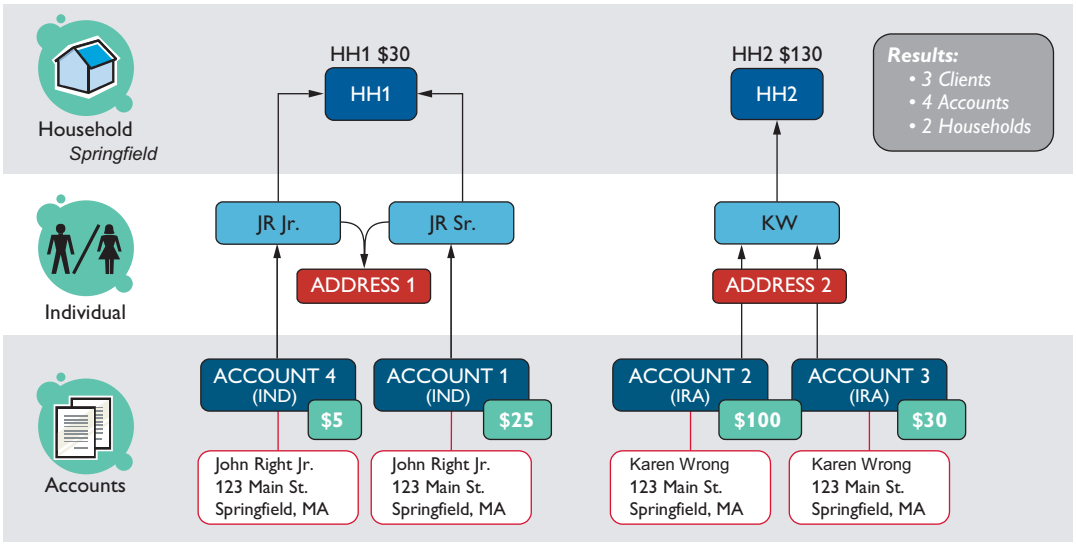
It seems as if every financial services organization has turned its focus to the high net worth customer, and with good reason. The graying of the baby boomer generation in the United States has led to greater concerns about retirement saving and planning for the most widely affluent generation in the country's history, while increased life expectancy and increased standards of living drive similar attention to the wealthy in Europe and Asia.

In the United States, three types of financial services institutions involved in wealth management are most advanced in their use of customer intelligence. Examples in the three areas include:

1. Brokerage houses: Merrill Lynch, Morgan Stanley and Charles Schwab
2. Private Banking Divisions of Money Center or Super Regional Banks: Citigroup, Bank of America and Wachovia
3. Mutual Fund Firms: Fidelity, Vanguard and American Funds

All of these companies deal with high net worth individuals and address customer analytics in similar ways. These companies do not perform segmentation solely to analyze customer propensities; they organize around their customer segments according to the degree of wealth, usually measured by assets under management. They have developed complex models that tie life events to needs and target their marketing programs to meet the varying needs of each subset of customers and prospects. They are relentless in their cross-selling efforts, still proving that the "rule of three" applies. This standard rule in banking states that a relationship that includes three separate products will bind a customer to the institution.

Figure 5. Household Model Showing One Residence that Contains Two Households



Another prominent source of insight for these companies is information about the customer household. The household is considered a key buying/influencing agent in financial decisions. A definition of a household can be quite complex. For financial institutions that rely on household intelligence to drive business, a simple address is not adequate. A household includes those sharing the same residence that may or may not be considered part of the household for decision making purposes. The task of defining a household has been

made much tougher by the erosion of the typical nuclear family. Often a residence contains individuals with different surnames which makes it a challenge for financial services firms to determine who should be linked in that household. Our work in this area has led to a modeling technique we use to represent household composition, as shown in Figure 5.

John Right is married to Karen Wrong and they live at the same address, 123 Main Street in Springfield, Massachusetts. There are two households in this example because this bank's definition of household requires the members of a single residence to either share the same last name or have a shared financial relationship. Even though this example includes a husband and wife living in the same house, they represent two financial households.

Defining who is a member of a household can lead to endless debates in a company. It is more important to use whatever definition is adopted consistently, on an enterprise-wide basis. By thoroughly grasping the behaviors of a household over time and its migration through various segments, organizations can understand the real applicability of products and services. We believe that there is an opportunity for other industries to understand and apply the value of household information to their businesses since it is such a major factor on buying influences.

Gaps in Analytics for Investment Management

Even with a comprehensive view of households and accounts, these wealth management companies share similar gaps in certain areas. The three leading areas of unfulfilled analytics needs are:

1. Share of Wallet
2. Channel Optimization for Marketing Offers
3. Event Triggers

Share of wallet at the household or individual level is a key metric in financial services that is hard to ascertain. However, a combination of internal and external information can be modeled to approximate share of wallet. For example, the applications that customers and prospects fill out for different products or offers can often supply this information, although there is no easy way to obtain it. This information is so valuable that often these companies offer free financial planning services just to be able to get a comprehensive view of a customer's financial relationships. Then they use that information to model services at the individual level, and to extrapolate it for use at the segment level.

Determining channel optimization for marketing offers involves the most complex deployment of customer analytics in financial institutions. Huge amounts of marketing budgets are at stake in deciding which channels to use to reach customers. Even small increases in offer acceptance based on using the right channel can have a significant monetary impact. Lately, hard core analytics are being applied to this area. Techniques such as MANOVA (multivariate analysis of variance), latent class segmentation, the Markov Switching Matrix and Plackett Burman Screening Design all fall under the heading of experimental design. These techniques are used to determine the channel that is going to get the best results for each customer for a given offer. Credit card companies have been leading the way with the deployment of these tools, but they have also spread to companies that offer products through retail, catalog and Web channels. They will become more prevalent as all companies start to adopt best-in-class practices for maximizing marketing efforts.

Event triggers are being used in financial services companies to monitor state changes which tend to be static. Dynamic event triggers have yet to be widely adopted because they are extremely difficult to implement. Nevertheless, companies in the wealth management sector are all active to one degree or another in this area. State changes usually involve monitoring changes in balances that trigger an alert so that the customer can be contacted

for follow-up action. This could apply equally to increases or decreases in amounts. Dynamic event triggers, on the other hand, apply rules to customer events that trigger real-time suggested actions. An example might involve a customer who has consistently funded a college account, but then misses a quarterly deposit. A rules engine triggers an automated review of the account because it is a high-value customer. If the review of the account shows that a member of the household is still of age to be in school, an alert is sent to the relationship manager to contact the customer with a reminder. Similarly, the reminder could flash to a relationship manager's desktop when engaged in a telephone conversation with the customer or the reminder could pop up in a Web session in which the customer is engaged.

Event triggers are true tests of customer intelligence capabilities. To be successful, an organization has to perform in several areas, including modeling, systems integration and employee training. No financial services company has staked out a distinctive reputation in this area yet, although some are getting close. Although Amazon is sometimes cited as a distinctive example, its analytic-based recommendations still often miss the mark, and they are single-channel oriented. This will be an area to monitor for progress in the future.

Here is our overall Customer Intelligence Maturity Model ranking based upon the characteristics and gaps that we have reviewed. Of the industries we cover in this paper and as a rule overall, Investment Management is the most advanced industry segment for its use of Customer Intelligence.

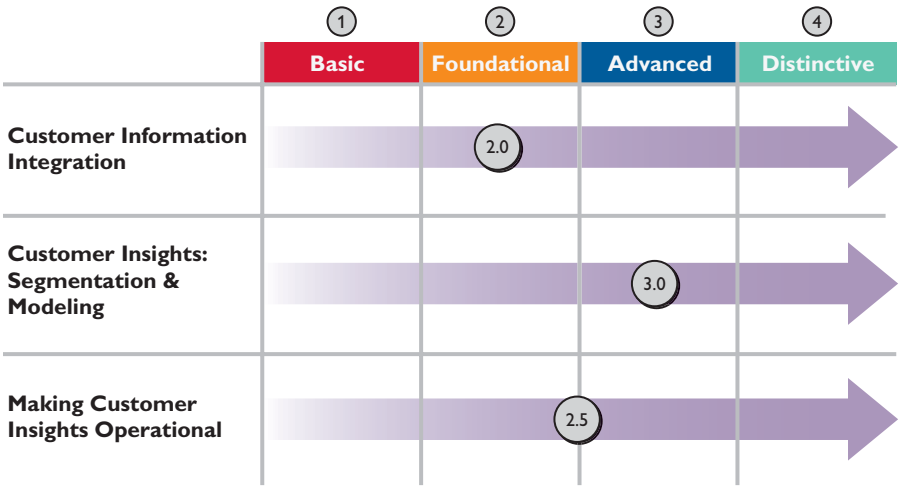


Figure 6. Investment Management Customer Intelligence Maturity Model

Cable and Satellite Television and Wireless Telco Providers

This is an interesting industry model to explore since almost everyone has personal experience as television (TV) customers and cell phone customers. Here is a snapshot of the primary companies in this sector and their number of subscribers.

Figure 7. Select Cable and Satellite Television and Wireless Telephone Subscribers

U.S. Cable and Satellite Companies	
Subscribers (Millions)	
Dish Network	12
DIRECTV	15
Comcast	25
Time Warner Cable	11

U.S. Wireless Telco Providers	
Subscribers (Millions)	
Cingular	54
Verizon	49
Sprint	48
T-Mobile	20

In Europe and Asia, SKY Television offers pay TV services to millions of subscribers and similarly, Vodaphone, Deutsche Telecom and DoCoMo offer cellular telephone services to these markets.

These companies share common business models and characteristics, including subscriber-based customers that are on monthly billing cycles, high tech equipment that often includes contractual commitments, constantly changing offers and promotions, reams of subscriber behavior information and call centers as the primary basis for customer service.

The overarching issue for the industry is digital convergence. The pace of change for equipment, services and content delivery is staggering. Many players in this arena are both partners and competitors. In this relatively new industry, the primary focus of attention has been on acquiring new subscribers. All of the players have been trying to grow as fast as possible in a hyper-charged environment. Unfortunately, this singular focus on growth has come at the expense of customer service. These firms have pretty dismal reputations for providing quick access to customer service representatives and flawless problem resolution.

Companies in this industry have a distinct advantage when it comes to sourcing subscriber information. They all rely on billing systems as their core systems of record for subscriber information which are rich in demographic and behavioral data. Most other industries have to rely on a mix of legacy systems to pull together a single view of the customer, whereas this industry is able to get upwards of 80 percent of that information from one system.

From a customer analytics standpoint, this is a metric-driven industry and the key metrics are relatively simple to calculate and understand. Every company in this industry tracks four key metrics on a daily basis. These metrics and their drivers are in Figure 8.

Figure 8. Cable, Satellite and Wireless Telephone Company Subscriber Metrics

Subscriber Metrics	Customer Intelligence Levers
• SAC: Subscriber Acquisition Cost	• Segmentation, Targeting, Marketing
• ARPU: Average Revenue Per Unit	• Behavior and Needs Segmentation
• Churn: Subscriber Defections	• 360° View, CSR Tools and Training
• Cost to Serve	• Web and Call Center Effectiveness

While simple to calculate and report, these metrics are not easy to affect. They are all interrelated to varying degrees and require extensive analysis to determine actions to take that will produce profitable results.

One of the most important analytic measurements for these companies is the lifetime value of the subscriber. This is a theoretical, calculated value based upon acquisition cost, offerings accepted and predicted to be accepted, service costs, probability of cancellation and estimated tenure. The calculation for customer lifetime value (CLV) is:

CLV for Subscriber A Equals:

Discounted expected revenue from Subscriber A (time (t) equals months 1.2.3…n)

Less

Discounted expected costs associated with Subscriber A (t equals months 1,2,3,…n)

Less

Cost of acquiring Subscriber A (t equals 0)

This calculation is subject to many variations, refinements and dependencies. For instance, the prediction of tenure is usually a complex calculation involving several factors related to the profile of an individual subscriber. Likewise, projected revenue is another complex input that relies on formulas to predict what offers a subscriber is likely to accept during his or her tenure. For the purpose of value segmentation, the refinements can be somewhat loose since this segmentation schema will be based on comparative rankings of value. However, if CLV is used for determining the profitability of subscribers, treatments or services, the calculation needs to be highly accurate, or incorrect conclusions that negatively impact profitability may be made.

The use of analytics that gets the most attention from companies in this industry is predicting churn. Churn is defined as the percentage of subscriber cancellations related to the average number of total subscribers for a specified period. It is usually expressed as a monthly percentage, so that a 2 percent churn rate would equate to 24 percent of the average number of subscribers canceling their service on an annual basis. While this percentage may sound extraordinary, it is generally accurate for companies in this industry. Hence the focus on how to predict who is going to churn and how to prevent churn.

Churn has two components:

- Voluntary churn – subscribers who are canceling for reasons that include poor service, inability to access content, better competitive offer, etc.
- Involuntary churn – subscribers who are cut off due to non payment or theft of services

Most efforts to stave off voluntary churn occur in call centers when a subscriber calls to cancel service. The goal of every company in this industry is to be able to identify potential defectors before they call to cancel and to intervene with offers or services that will retain the subscriber. Complex models are built to predict potential defectors with varying degrees of success. Neural network models that review every aspect of subscriber activity and history and then find patterns that predict the likelihood of defection have been the most successful, but timing is the key. The longest time between defection prediction and actual defection that we observed in this industry is 30 days. Contrast this with a 90-day window in the mutual funds business and one can appreciate the pressure that this creates for these companies.

Another significant use of analytics for this industry is predicting the likelihood of accepting offers. Millions of marketing dollars are at stake in the multitude of offers to subscribers of pay television and wireless telephones. Companies depend on segmentation to target specific offers; however, we find segmentation in this set of companies to be only moderately sophisticated. Similar offers go to the masses of customers instead of crafting customized versions of offers to carefully derived micro-segments of likely purchasers. Competition, naturally, drives this type of behavior but that will change soon. As the number of available new customers dwindles in this maturing industry, the battle will shift from acquisition to retention and from unrestrained growth to market share.

Gaps in Analytics for Cable and Satellite Television and Wireless Telco Providers

Current gaps in analysis will become much more important. One of these gaps is the absence of household analysis. Just as in financial decision making, household membership impacts pay television and wireless phone behavior and therefore extends to marketing. Another gap is the absence of persistent customer identifiers. The billing systems that provide robust subscriber information use account numbers to identify customers. These often do not aggregate to households or distinguish related parties, residences or whether someone was a former customer at some point.

As the competitive battleground shifts to market share and retention, companies will be forced to use better data to improve their segmentation capabilities and offer better service to their best customers, based on analytical insights. This requires more than analytics skills. It requires process, organization and systems integration skills as well. These are the capabilities associated with the third dimension of Customer Intelligence, Customer Insights Operationalization. Companies that advance their capabilities in this dimension as well as in analytics will prevail.

Here is our overall Customer Intelligence Maturity Model ranking based upon the characteristics and gaps that we have reviewed. This industry has one of the highest rankings in the Customer Information Integration dimension while also ranking the lowest in the third dimension, Operationalization.

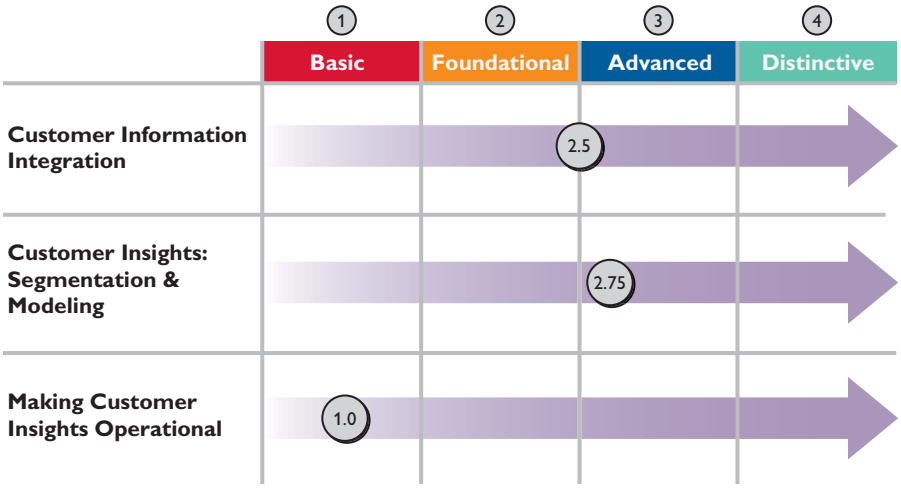


Figure 9. Cable and Satellite Television and Wireless Telephone Customer Intelligence Maturity Model

Manufacturing Companies

The two previous industries we profiled for their use of analytics focused on business-to-consumer models. For the most part, manufacturing companies sell to other businesses, which provides us with a view into analytics use in B:B models. Manufacturing companies run the gamut from process chemicals to durable goods to consumer packaged goods, so it is difficult to generalize across such a diverse set of companies. However, we will draw inferences from our survey interviews and project experience to represent insights that basically apply across the board to B:B manufacturers.

Customer analytics in this group of companies has traditionally taken a back seat to other priorities such as supply chain and production efficiency, new product development and pricing. In fact, most executives in manufacturing companies appreciate the need for better customer relationships but they lament the fact that for their customers, everything always seems to come down to price. However, lately even this industry is considering analytics to provide insights that will differentiate them from the competition.

Segmentation is usually basic for manufacturers and is often associated with how a customer uses a product that the manufacturer produces. It seems that every few years, manufacturers segment their customers on size or product for the sole purpose of allocating resources. They rely on account teams comprised of sales and customer service people to provide input on customer specifications and to bring new ideas on how to fill unmet needs. Since needs and behaviors of customers are usually apparent, leaders in this industry generally focus on value segmentation. Understanding the profitability of each customer and developing strategies to tap unrealized value or to migrate low-profit customers to higher margin products or services is the objective of these companies.

Gaps in Analytics for Manufactures

A gap that some manufactures are starting to address (and which has long been addressed by consumer packaged goods companies) is to identify the needs of the end user of the product and the insights that may be gleaned from that knowledge for product development and pricing. And to take it one step further, leading manufacturers are paying more attention to the needs of all of the companies and users that comprise the value chain for their products. There is a constant battle being fought by manufacturers to differentiate their offerings on something other than price. Leaders in manufacturing are turning to intermediate and end-user insights to provide a competitive edge.

Another gap in manufacturers' analytics capabilities is tied to business structure. Many manufacturing firms organize the enterprise into business units that represent specific products or families of products. The multiple business units that comprise the enterprise share little in common except maybe for some shared services as a way to cut costs. Often though, there are common customers across business units. However, even if there are not common customers, there should be common approaches to segmentation, profitability measurement and scorecarding. The corporate marketing department in manufacturing companies should be operating more like the accounting department, issuing standards and providing guidance for common measurement and analysis of customer activities. Most corporate marketing departments of large manufacturing companies perform marketing communication and brand building tasks, but very few that we observed are driving segmentation standards and common analysis platforms across the enterprise. There are a few that are trying to redefine their roles in this light and should lead the way for their counterparts.

Here is our overall Customer Intelligence Maturity Model ranking based upon the characteristics and gaps that we have reviewed. The biggest challenge for this industry is data. Customer information is usually scattered in multiple legacy systems that are product or plant specific or that survived from previous mergers and acquisitions. Even the huge investments made in Enterprise Resource Systems have failed to solve many of the data standardization issues. This is an area that manufacturers need to address more than any other since it provides the platform for all intelligence efforts.

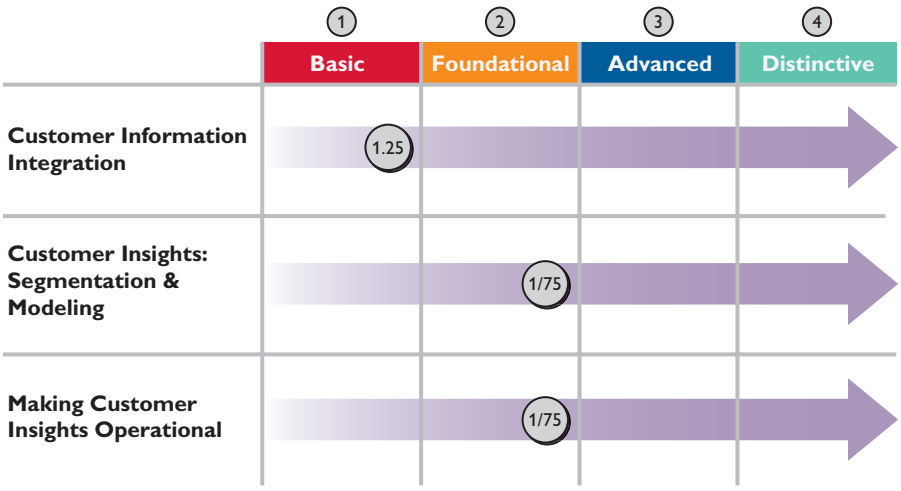


Figure 10. Manufacturing Customer Intelligence Maturity Model

What Does the Future Hold?

By highlighting our survey findings and then taking an in-depth view of analytics in these three industries, we hope you have gained an appreciation for the challenges and rewards of gaining greater capabilities in using customer analytics. So what are the trends that are emerging in the area of customer analytics? There are several that will have a major impact on investments in the future. Two trends, in particular, demand attention and must be assessed for their impact on specific industries and businesses: master data management and analytics outsourcing.

Master Data Management

Every organization struggles with data quality, consistency and access. It is a constant challenge to store, organize and route increasing amounts of data. Master Data Management (MDM) is the means for standardizing data throughout an organization. There are numerous applications that generate and use data. And, there are usually multiple data repositories that store data and make it accessible to users. All of this data creates a strain on resources to keep it current, clean, accurate, reliable and accessible.

MDM creates a system of record for all of the important data in an enterprise. It includes architecture, tools and a set of processes for setting and maintaining standards that make sure that all applications and users share a common pool of synchronized data. MDM addresses typical data hygiene matters such as data cleansing, standardization and reconciliation, but it also goes beyond these standards to establish common definitions, management procedures and stewardship.

Applying MDM to all of the data in an enterprise is a daunting task. Most companies should consider segmenting the work by subject area, such as customer, product and employee. The common term used for MDM applied to the subject area of customer is called Customer Data Integration (CDI). New tools and approaches are being touted by a number of vendors and consultants in this subject area, which usually represents about 70 percent of the data in a company. Several CDI vendors recommend establishing an operational data warehouse devoted to customer information, and we endorse this approach. A Customer Intelligence Hub that is used for standardizing, scoring and brokering customer information for use throughout the enterprise makes data integration simpler — and that is exactly what is needed to increase the effective use of customer analytics.

Outsourced Analytics

A recent trend that is going to grow into prominence is the outsourcing of analytics to offshore providers. This development can be viewed as the third wave of outsourcing. The first wave was programming. The second wave was business process outsourcing for low-to-mid tier labor intensive services, exemplified by call centers. The third wave that is just emerging will be business process outsourcing for sophisticated labor intensive functions — and analytics is a perfect match.

Most companies involved in developing customer analytic models will build libraries of perhaps 50 models but very few will require more than that. If these models can be constructed offshore at one-fifth the cost of building them onsite, albeit with some onsite presence for interpretation and direction, there is a compelling cost advantage for this option. And as model building matures, standards will develop that reduce the variation between models and commoditize their value, just like every new product or service offering. We have worked with several firms that have established operations in India, whose combination of low cost and highly sophisticated capabilities require consideration by anyone involved in this area.

Conclusion

The need to use customer analytics to create insights that shape the strategies of businesses has dramatically increased. Competition is fierce to win market share by retaining good customers and wooing new customers. Targeting unfulfilled needs, or offering a better overall customer experience is not easy. Knowledge about customer behavior, needs and preferences is at the heart of increasing the value of the customer experience. Companies that develop insights through the use of highly disciplined analytical approaches are going to outperform their competitors.

While each company must approach customer analytics from the standpoint of its market, the three areas of greatest impact for developing future capabilities are:

1. Centralizing the analytics organization
2. Developing multi-dimensional segments (demographics, value, needs, behaviors, etc.)
3. Increasing collaboration between business and IT

If these areas are addressed properly, the development of meaningful customer analytics can flourish. In the end, though, the dimensions of Customer Intelligence must be mastered. Truly excelling in customer analytics, the second dimension of Customer Intelligence, requires increasing capabilities in customer data integration and operationalization — making insights available where they matter most — at the point of customer interaction. Without a solid foundation of reliable and accessible data, the best analytics will not be meaningful. As companies review their analytics capabilities, they need to take a holistic approach to Customer Intelligence to be truly successful.

About the Authors

Alexander J. Black is a partner and the head of strategy for CSC's Customer Solutions Practice. He is responsible for CSC's sales, marketing and service offerings that comprise CRM. Mr. Black has over 25 years of broad-based experience in information systems, finance, operations, and project management. He has specialized in directing consulting engagements that develop a client's vision and strategy and transform business processes and information systems to achieve the organization's growth objectives.

Mr. Black developed CSC's CRM solution offerings and most recently has focused on Customer Intelligence as a growth generator for organizations. Customer Intelligence comprises customer information consolidation — for a single view of the relationship — and the ability to identify actionable customer insights that drive longer lasting and more profitable customer relationships.

Mr. Black has collaborated with the following clients on behalf of CSC: AT&T, Bristol-Myers Squibb, ConAgra, Dell, DirecTV, DuPont, DST, Flowserve, JP MorganChase, Hewlett-Packard, Novartis, Sun Microsystems, Sunoco and The Vanguard Group. Mr. Black holds a B.A. from Westminster College and an M.B.A. from Rutgers University.

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She is currently an associate professor at Northwestern University. Prior to joining Northwestern University, Professor Thomas was a faculty member at Stanford University's Graduate School of Business and Emory University's Goizuetta Business School specializing in the areas of database marketing, customer relationship management, measurement and modeling. Co-author of the book *Customer Equity* (Harvard Business Press), Professor Thomas holds a Ph.D in marketing and a B.A. in mathematics from Northwestern University.

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