

Introduction

Analytics is one of the hottest topics of interest among organizations worldwide not only to information technology (IT) but also sales and marketing professionals. Applying analytics to customer experience provides the highest business value to an organization and is often the most sought-after IT application.

IBM has declared analytics to be one of the four most important areas of growth toward its 2015 plan. IBM has made significant investments in both research and development (R&D) as well as in external acquisition to infuse both organic and inorganic growth in this area. In the latest research with chief marketing officers (CMOs), 67 percent of 1,000 survey recipients reported an intention to increase their investment in customer analytics. This is the highest among all areas of investment reported in the study.¹

The market for customer experience is morphing. In the 1990s, a number of companies initiated packaging and selling of Customer Relationship Management (CRM) solutions that covered marketing, sales, and customer service aspects. In the late 1990s and early 2000s, Master Data Management (MDM) and related topics became popular. *Customer Experience Analytics* (CEA) is a continuation of this journey as it comprehensively covers sales, product usage, and billing experience and correlates them for a more thorough understanding from the customer view. Furthermore, CEA uses this initial analysis to impact policies, procedures, and customer communication.

What Is Good Customer Experience?

Let us start the discussion with an understanding of good customer experience. In our daily lives, we come across hundreds of companies. With all the automation and multi-touch points, we often encounter good or bad interactive voice responses (IVRs), web sites, and call centers as we deal with our services providers, whether they are banks, airlines, telecommunications companies, investment brokers, or health care providers. We spend hours pouring out our experiences into social networking sites for others to know whether we liked a restaurant, a holiday resort, or a store. It does not take a long time for us to observe, judge, and differentiate good or bad customer experience. We often return to the organizations that provide good customer experience, and we declare it publicly by selecting the “like” option on Facebook.

How do we characterize good customer experience, and how can it be sensed by the serving organization? What makes us like or dislike an organization so much that we explore public ways of expressing it?

First Impressions

Fred Wiersema has posed six important questions:²

1. Can your customers find you?
2. Is your first impression memorable?
3. Do you get in the way when people are buying?
4. Are you sending unintended messages?
5. Are your products intuitive?
6. Do you show your customers a united front?

As we move from brick-and-mortars to e-commerce, these first impressions are still important in consumer purchase criteria. A lot depends on how we judge a product or service through our first impressions. This point is true not only for impulsive purchases but also for well-thought-out, well-researched, big-ticket items. We look for simplicity and respect in our first interactions. We look for memorable experiences. We sometimes eliminate products based on simple and trivial criteria.

The questions listed above are easy starters to understand and differentiate a good customer experience from a bad one. So how do we analyze and differentiate between a “memorable” experience and a “bad” experience? Fortunately, customer touch points provide us with a lot of associated data: How many customers abandon purchases after reaching shopping carts? How many times do we ask customers to type the same information? How much do we trust our customers? Do customers stop shopping when we start asking for a credit-card number during a free trial? In our highly instrumented customer experiences, some of this associated data can be collected, collated, and analyzed. It provides us with insights about how the customer is perceiving the product and the customer contact.

Service on Customer Terms

In today’s automated world, customers like to receive service on their terms. If I value *self-service*, I would be delighted to find my bank account fully accessible to me after dinner for any transaction. However, if the only way I deal with a bank is to visit the friendly bank branch in my neighborhood, the late-night web site access provides me with no extra value. If I have a complex customer relationship with my broker with many accounts for many members of my household, integrating all the accounts under a single login would be great. However, if I have a single account, I do not need account consolidation.

Over the years, many hotels tried copying the Ritz Carlton Hotels’ legendary capability to remember past customer experience with the hotel chain, including little details across visits, so that service would be personalized and enriched for customers making frequent visits. Does every customer like that level of personalization? For my short business trips, I am interested only in a speedy check-in, and I often ignore the poor clerk peering through his screen and saying “It is nice to see you back” or remembering a preference I expressed once in a blue moon and have no reason to replicate.

If I reach the hospital in an emergency, my expectation for a warm welcome is a fast check-in process and rapid delivery of medical expertise. Folks at a call center organization in India once told me they send birthday greetings to all their customers. They were confused when many of their customers gave

them the feedback that they would rather receive fast service than a birthday greeting card.

How do we discover these customer expectations and preferences? How do we measure and improve customer experience by aligning our products and services to what customers expect?

Customer Differentiation

We have customers, and then we have premium and VIP customers. We often break rules for our most important customers or, better still, have different rules for different levels of customers, thereby rewarding those who provide us with the heaviest revenue. A leading telecommunications organization found that 8 percent of its customers contributed 45 percent to its revenue. Any churn among these 8 percent customers represented a major revenue impact. At the same time, cultivating and harnessing such premium customers gives us the best way to protect our revenue base.

Premium customers are not always that easy to identify. Members of a household may make purchases using their individual accounts; however, money and decision-making might be centralized or collaborative. Changes in marital status or kids off to college may continue to follow old accounts despite new hierarchies. As employees of corporations make personal purchases using discounts offered through corporations, and then leave one job to join another, customer accounts go with the employee—with or without the discounting—depending on how we track the corporate accounts. One of my publishing customers told me that a large number of the company's corporate customers use public emails for customer communications. It was not clear to them which customers were using proper corporate subscriptions. As we move to medium and large enterprises as customers, finding premium customers is even more challenging amid departmental or corporate contracts, mergers and acquisitions, and other corporate events. How do we stitch the customer experience and payment information together to identify and manage our premium customers?

In addition to the customers, the supplier customer records may be equally broken down. How do we find these customers, if the revenue is counted in

different ways in different business units or if the customer definition changes from one business unit to the next? Let us say that we have identified the premium customers. Do we now have a way to provide differentiated services to them? How do we design policies that differentiate these customers? How do we apply these policies consistently across the touch points, so that the premium customers feel the difference? How do we measure whether the differences lead to an impact in customer loyalty level?

Management of Opinions and Sentiments

A century ago, all calls were routed by operators. Each operator knew the people who called by name and knew their personal details. Bank employees knew their customers by name and face. I remember walking to an airline gate just two decades ago, and the airline staff bent their rules to let me board an airplane in the middle of Christmas rush because I was their most frequent traveler that year. As organizations have consolidated and automated their customer-facing functions, this personal touch has disappeared. However, the positive and negative sentiments are still present in the buyer–seller interactions.

Would a self-service system provide me with a personal touch? How do we express empathy via a web site? How do we identify an angry customer or a destructive buzz in the marketplace? How do we analyze and sense customer sentiment and use the information to drive better customer service? While a service provider may offer a faceless web site, the customers can gripe about it on Facebook or Yelp.

I got hooked to an Indian TV show and found it had a fan club on Facebook. In this case, the fan club members were in their teens and early 20s, and they were drawn to the show because it depicted the story of office romance and humor. Facebook provided a perfect channel for them to discuss the show and offer opinions back to the performers. However, someone not very familiar with the power of Facebook decided to convert the show into a family drama. It was fascinating to watch the sentiment transform overnight with negative comments, petitions to boycott the show, and appeals to the writers to change the show. As we can easily expect, the show was soon canceled because it

could not manage the negative sentiment and demands to change the story and the focus of the show.

More recently, we have seen Facebook and other social networking sites, such as YouTube and Twitter, provide important media outlets for political change in the Middle East. We should recognize customer sentiment in social networks during product launches and use it to fix product problems.

Analytics to Drive Customer Experience

The business capabilities offered through analytics are changing rapidly. Customers are increasingly connected with their suppliers using a variety of electronic touch points—web browsers, interactive voice response, wireless devices, and kiosks are a few examples. Customer experience can be altered through these electronic touch points in real-time. Also, customers have access to a variety of methods to publicly express their satisfaction or disappointment, in real-time worldwide. The associated data is accumulated by the supplier organizations in petabytes. This data must be sorted, correlated, analyzed, and acted upon rapidly and intelligently to make a positive, long-lasting impact on the customer. Last but not least, it is no longer sufficient to report customer problems to an analyst who routes to business owners on a monthly basis. The actions must be inserted in appropriate customer-facing service, sales, billing, or operational functions to alter customer experience—often in near real-time. While the Internet has provided enormous power to consumers, the business markets have also gained an enormous amount of sophistication in multi-supplier management, electronic gateways, and customer and product data across the supply food chain.

Corporations are struggling with legacy systems that do not meet this fast-paced, action-oriented requirement from their business and consumer markets. We need a program with a solid basis in business values that appeals to the senior management, a road map that charts the way, and a solution architecture that utilizes the fast, intelligent, and action-packed CEA capabilities.

Sources of Study Material

Over the past 30 years, I have been in the business of developing customer experience. My major work is in explaining technical ideas to nontechnical audiences to gain their commitment and support for large, mission-critical CEA implementations. I also bring personal experience in designing and building CEA solutions across the globe in a number of industries. Using a series of case studies from a variety of industries, this book will demonstrate transformation to a world-class customer experience.

Under Bob Keseley's leadership, IBM created an Information Agenda® program that offers business and technical advice to customers regarding use of IT for analytics. In the two years that the Information Agenda team has been in business, they have seen CEA grow as the most important area of analytics. They have also seen a strong demand for CEA ideas and best practices. The Information Agenda team has conducted over 500 workshops and has accumulated an enormous understanding of the market for CEA. There is a global interest in these solutions, as each quarter, they share workshop reports created in German, Japanese, Mandarin, Spanish, French, and other languages. There is also a growing interest and action in the growth markets. The case studies and the methodologies reported in this book heavily draw upon the Information Agenda intellectual assets, products, references, and case studies.

While there is an enormous demand for CEA, most organizations are constrained in their ability to develop systems that span many divisions and geographies. Many legal and political challenges exist, with customer data privacy being one of the most important areas of concern. These organizations also require collaboration across entities known to work as silos before. We are also seeing coalitions across companies to create new information markets, where each company delivers a small portion of the overall information pie to be integrated and consumed by the end users. The case studies and best practices provided here have identified business capabilities enabled by CEA, if we can break the barriers and start to assemble an integrated understanding of the customer. These business capabilities have enabled organizations to build significant competitiveness and in many cases bring disruptive changes in the marketplace.

CEA is a continuum. What may be the target state for one organization is a starting point for another. At times, we do not have business justification for going beyond a certain level of sophistication. I have introduced maturity levels to acknowledge this continuum.

Book Organization and Intended Audience

The book includes three major segments. The first segment introduces the concept of Customer Experience Analytics using a series of customer experience scenarios. It discusses three enablers for CEA: automation in customer-facing processes and products, customer use of CEA data for decision-making, and emerging markets for customer data that are fueling a monetization of customer experience information. It also addresses regulatory concerns and changes coming rapidly to govern the movement of customer data. The second segment covers the CEA solution—including Master Data Management, Data Movement, Stream Computing, Analytics Engines, Predictive Modeling, and Privacy Management. This section also includes key technical contributions each area is making to the overall CEA solution. The third section provides a mechanism to establish the program, identify value, and measure progress.

This book is intended for a semi-technical audience. It uses a series of scenarios, case studies, and allegories to illustrate the CEA business opportunity, solution, and program. The technical terms are defined for easy reference. I have chosen consumer scenarios and pulled everyday examples from my own experiences. I have provided selected “deep dives” into technical details to help readers understand the technologies in the context of the solution. While business-to-business markets provide rich scenarios, I hope to cover them in a separate book or white paper.

This book is intended for two distinct audiences, each of which may read the book for different reasons. The technical community understands its products and how they are used. The business community has interesting problems and is in search of technologies. Very often, the technical community has good understanding of point products but not the end-to-end architecture for a solution. Similarly, the business community has a good understanding of immediate business requirements but not a full awareness of how technology

can be used to bring disruptive changes in the marketplace. Occasionally, we see entrepreneurial organizations coming up with an innovative use of the technology bridging to a major business need, leading to a complete overhaul of the marketplace. CEA is at the cusp of such an upheaval, and this book addresses both audiences in providing them each other's views.

The first target audience for this book is senior to mid management level in sales operations, marketing, strategy, or IT. These organizations typically participate in the Customer Experience Analytics solutions. In particular, financial services, public services, health care, telecom, energy and utilities, and electronics companies will find the most use from this book, as these groups have strong market pulls and strategic gains from implementing CEA. They will find tangible ideas to implement within their organization and gain insights about how to sell the CEA program in their organization. Using case studies and trends in the first half, the book illustrates business problems faced by this group and, in relatively simple terms, shows essential solution components for defining their solutions.

The second target audience is the IT service and software provider community. This group includes IT consultants who are engaged in developing CEA solutions, software organizations developing products, and cloud vendors building hosted solutions for CEA. The second half of the book shows this community how their technologies are combined to form an end-to-end solution. This group will also find the first half of the book useful in exploring the business scenarios addressed by these solutions. They will get an understanding of the end-to-end business opportunity, solution architecture, and where their component fits into the end-to-end solution.