

The Power of Event-Based Marketing

Understand and master event triggers to supercharge your customer relationships and grow your business

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Executive Overview

Imagine being able to offer new products or services to each individual customer in a personalized way on any channel at any time – at the moment it is most relevant to him or her. How would you begin? You would first devise a signaling process – so that significant changes in customer interaction behavior would signal or ‘trigger’ a relevant, personalized communication with that customer. You would also want to identify and act on similar opportunities – so you would automate and replicate the process. Now, imagine companies doing exactly this with millions of customers every day.

More than ever before, innovative companies are investing in a highly compelling dimension of Customer Relationship Management (CRM) technology that has in many cases paid for itself several times over – event-based marketing (EBM).

The term “event-based marketing” has been tossed around many times – exploited to refer to a wide variety of marketing activities, software products, and demand creation services. *For our purposes, EBM is a strategic process designed to enhance the dialogue and relationship a company has with each of its customers.*

To work as promised and deliver positive results, EBM requires advanced technology and carefully crafted marketing plans. The extreme complexity of marketing to millions of individuals across multiple channels demands a customer communication framework to ensure effective, automated dialogue that is relevant, timely, and produces value.

Organizations are looking at EBM to individuals for many good reasons, including the capabilities that EBM provides to meet each individual customer at the point of need, turn customer monologues into value-producing dialogues, and rapidly improve return on customer relationships. Consider recent business results achieved using EBM.

With EBM to individuals, a leading international bank:

- Generated 570,000 sales leads representing \$4.4 billion in new business in one year.
- Achieved greater velocity – initiating 100 distinct campaigns in the first six months of the year.
- Achieved highest share of wallet, customer satisfaction, and retention rates for high net worth clients in its country of chief residence.
- Achieved retention rates of 98.4% – and 88% of customers would recommend the bank to acquaintances.
- Reported 28.7% increase in net profit for the six month period.

With individual EBM, a leading American bank:

- Generated \$1 million in new business in one district in one week.
- Achieved customer satisfaction at “9 or 10 – on a 10-point scale.”
- Is using individual event-based triggers to reach out to customers via large deposits, withdrawals, insufficient funds, and other significant events.

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- Followed up on 6,000 identified leads in the first five weeks – and 40 percent generated a sale or service opportunity.
- Is experiencing substantial increases in profitable revenue growth that are “far greater than the initial costs of the software plus the large enterprise data warehouse” deployed to make it happen.

In addition to the impressive ROI it generates, EBM is growing in popularity because it offers marketers the powerful tools they need to manage customer relationships in the right direction. For instance, EBM can give marketers the power to:

- Shape how the customer interaction takes place, while the customer determines what, when, and where.
- Engage each customer based on his or her actual individual behavior and interests rather than on a product push marketing campaign or sales promotion based on a targeted segment.
- Fulfill the promise of CRM by triggering helpful interaction with each customer at the time that customer has implicitly signaled a clear and specific need or interest.

A key challenge in this practice is that companies often begin executing EBM without fully anticipating its impact on the customer-facing process. What happens next? Marketing departments get psyched-up over the EBM capability and they start over-executing. Launched with the best of intentions by gung-ho marketers, even relevant messages to customers can get lost in the high volume and diversity of commercial communications.

More About Customer Events

EBM starts with a countless variety of events in a customer’s life; the company’s relationship with the customer, the customer’s transactions and interactions, or the market in general – whatever represents an opportunity for relevant interaction with an individual. Meaningful events need to be identified, associated with the appropriate interaction channels, and linked to the information content necessary to provide an optimal response and ongoing dialogue with each individual customer. Events can be external to the individual customer but will trigger a specific action by the marketer.

Customer events will vary across industries. Some examples are:

- Product or service-centric customer activity; interactions or inquiries at a business touch point, such as visiting a web page, mouse-clicking on a specific item, doing a keyword search, or responding to a prompt on an ATM display.
- Purchases of a product or service that may trigger complementary items, services, upgrades, or up-sell offers. May also include achievement of “gold” status as good customer, or be based on a transaction at a point of sale that can trigger cross-sell offers.
- Name changes, changes of address, birthdays, anniversaries, births, children reaching college age, home purchases, and other personal events that signal life-stage or lifestyle changes or significant moments – as well as any date-driven triggers.
- Sudden changes in a customer’s routine banking or interaction behavior, large pay downs, new zero balance, overdrafts, new credit card applications, large deposits, large transactions – or any combination, pattern, or sequence of behavioral events.
- Calls or communication of any kind from a customer with regard to products, services, complaints, or need for information.
- For travel businesses, sudden changes to flight schedules that affect customers, patterns in travel booking that signal opportunities to improve or upgrade arrangements.
- For telecommunications, patterns of service disruptions (dropped calls), changes in phone activity or billing amounts, such as excessive roaming charges, that may signal a need to upgrade or modify service agreements, or availability of DSL or other new services.
- Economic changes.
- Rate drops or hikes – or tax law changes.
- External events such as legislation-changes, weather events, disasters.
- Competitor events, such as new product offering, equipment change in the travel industry, new cell sites in a competitive area, new entry into a specific market, new packaging, or new distribution contracts.

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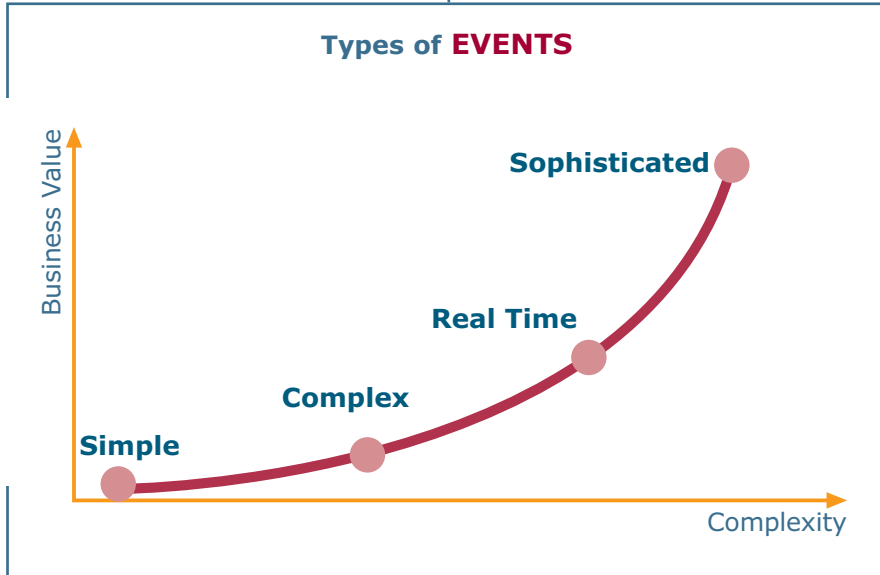


Figure 1. Complexity and Business Value increase as event sophistication increases.

In general, any changes in a specified condition (an event) could be managed as a potential opportunity to contact a customer. Marketers set the rules. Of course, marketers should choose event opportunities that best fit the company's business strategy and objectives.

EBM is designed to focus on individual behaviors. You could say that these customers initiate a communication based on something that they do, rather than being targets identified or segmented by marketers for a particular product or service. This is much more of a market pull than a marketing push.

Four Main Types of Events

We see events happening at four levels ranging from Simple to Complex to Real-Time, and then Sophisticated events. At each level, there is an increase in complexity – yet also an increase in business value (see Figure 1).

These levels can be further classified as one of two types: Tactical or Strategic. Simple and Complex events are Tactical. They can be executed ad-hoc by a marketing user, and are usually improvised and sporadic. However, Real-Time and Sophisticated events are Strategic in nature – they focus on finding relevant opportunities to communicate with customers. These become the foundation for fundamental organization change; that is, these events shape the way companies do business.

Simple Events

Simple events are created and executed by marketers. Simple examples would include events, such as life-stage and lifestyle changes, product purchases, and professional life changes (e.g., job change, promotion, relocation). Simple events are driven by scheduled segmentation schemas. They are periodically executed queries that interrogate or search a data warehouse, selecting customers that meet a certain condition. For example, a query or task might be: "Show me everyone that purchased a new bike last month, and then send them a thank you letter." This type of event is usually run on a monthly basis, and would return all of the people during the last month that purchased new bikes. Simple events are not time-critical for execution. Other examples include:

- Show me everyone whose year-to-date purchases have reached \$1,000.
- Show me all the people who purchased a specific product last month.
- Show me all of the people who just had a baby.
- Show me all of those people who just bought a new house.
- Show me all of those people who have children who will graduate from high school.

While not rocket science, Simple events, when coupled with individual treatment, can deliver double-digit returns on marketing activity. Simple events can be automated to occur at regular intervals,

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so it is not up to the marketer to remember to execute them. Simple events benefit the company by improving customer perceptions of your knowledge of them; customers feel remembered. This is true especially when you focus on life-stage events and think in terms of building relationships through service, rather than always trying to sell them something.

However, limitations exist at this level. Simple events are usually not time-sensitive and typically are not performed with an eye to the context of the overall relationship. They are focused on a single point in time. Simple events, while developed and executed by marketing, are not very flexible, since they are required to be pre-determined and pre-developed. Marketing can only adjust dates, products, and a few other details.

Simple Events

User:	Marketing
Builder:	Marketing
Output:	Customer ID
# of Events:	Hundreds
Flexibility:	Pre-Mapped Variables
Schedule:	Yes
SQL:	Single Pass
Timing:	Daily, Weekly, Monthly
Example:	Purchased Product Yesterday
Data Source:	Data Warehouse
Expected Return:	10 – 20%

Complex Events

Complex events are based on marketing responses to changes in customer behavior over time. They are thus a bit more complicated to detect, and are often developed in conjunction with IT. This activity consists of leveraging the data in the data warehouse to understand customer behavior trends. For instance, you may want to know whether certain customers' spending or other activity is increasing or decreasing over time.

Complex events begin with analytical technology, and are undertaken by building formulas – such as purchase patterns/ activity between Date A and Date B – and evaluating the linear slope – to detect overall positive or negative motion. Formula-based Complex events like these bring customer behavior and interaction history directly into the marketer's view – and can generate higher returns over the relationship.

Marketing can build and leverage formulas like this through an SQL builder that can be scheduled to either select all customers that meet a condition or provide a value – positive or negative – and score those customers with the result. This result can then be used to determine how and when to communicate with the customer.

Examples of Complex events include:

- Increase or decrease in spending direction over time
- Recognize and reward a spending increase
- Recognize and respond to spending decrease
- Award points/entries for the sweepstakes drawing
- Determine attribution to campaigns or sales to a certain channel
- Decline in spending – overall or in key category for top deciles
- Propensity to Buy: simple regression-like formulas with weights assigned to certain attributes to use on weekly or monthly recurring campaigns

The benefits of Complex events can give marketers a better picture of changes in behavior over time. Complex events are scheduled and executed based on a frequency determined by the marketer. This type of event can be leveraged with other insight/information/intelligence to determine how to treat the customer. One Complex event could feed multiple customer campaigns or communications.

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While more flexible than Simple events, Complex events are still based on what has been pre-determined. Complex events also require a level of knowledge of the data in the data warehouse, so even though developed by marketing, the execution might require a marketer who is conversant and capable in IT – more of what is called a power user.

Complex Events

User:	Marketing
Builder:	Marketing/IT
Output:	Customer ID or Score
# of Events:	Hundreds
Flexibility:	Pre-Mapped or Calculated
Schedule:	Yes
SQL:	Single Pass
Timing:	Daily, Weekly, Monthly
Example:	Usage Increase or Decrease Over Time
Data Source:	Data Warehouse
Expected Return:	15 – 20%

Real-Time Events

Real-Time events occur in two forms or types: Real-Time Scoring, and Real-Time Delivery. First, Real-Time Scoring events are normally associated with web-based interactions. For instance, a customer purchases a PC printer, and then, while still

in session at the web site, the customer is delivered an additional offer for paper and ribbons as an up-sell or cross-sell message. The purchase event is driven from a pre-defined product profile or bundle that might reflect “items that other customers have purchased who also purchased this product.” Real-Time Scoring events are normally focused on a small set of data in a single channel.

Real-Time Delivery events enable the marketer to leverage the customer event by combining it with additional information from the data warehouse, and responding with an enhanced offer for that specific customer. This response could occur on the same channel, in a different session – or on a different channel. Real-Time Delivery enables a true value-add interaction. Real-Time Delivery events enable a pre-defined offer to be delivered in real time when the customer touches the channel. A customer calls inbound to a call center. A screen appears on the call center agent’s desk top/computer telling him/her what to discuss or offer to the specific customer.

Here are some Real-Time event examples focused specifically on multi-touchpoint interaction:

- A customer purchases a product on your web site, and within minutes you deliver to them an e-mail confirmation and up-sell opportunity.

- A complaint e-mail received from a customer could be quickly transmitted to the outbound call center, allowing immediate remedial action.
- A customer visits a bank web site to check mortgage rates for refinancing, then later while interacting at the ATM, receives a message from the bank offering a special mortgage rate package or offer due to her customer status (multiple channel).
- A visit to the web where relevant changes are reflected each successive time the web site is visited. For instance on first visit, customer browsed CTAK 2000 phones. On second visit, the customer’s opening web page is ‘CTAK 2000 phones’ with a special offer (single channel).

Real-Time events also look at happenings beyond the customer touchpoint that can impact a communication you might want to initiate with the customer. To determine if you communicate directly with a customer based on a Real-Time event, you must first look at the time dimension to the data. If it is less than 24 hours to a purchase, the potential value or importance needs to be balanced against the refresh rate on the data warehouse where the context of the situation and relationship is stored. Second, consider the type, amount, and purpose of the data and whether or not it could be used for other purposes in the data warehouse.

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Real-Time events can apply to operational systems, as well as customer touchpoints. Following are some examples of Real-Time events against operational systems:

- Airline flight change
- Change in stock price
- Dropped calls
- When DSL connection gets freed up
- Retail inventory replenishment
- Medication uses
- Gate change (air travel)

Benefits include the ability to act instantly based on an activity that happens in a channel or in an operation source. This can provide for immediate action, as well as provide additional information that can be leveraged with other types of events.

Challenges or limitations include dependence on the IT staff to determine when and where the Real-Time event will execute. Once defined, however, it will happen automatically. The other limitation is that real-time events must pass the litmus test of time or inherent value. In other words, with a Real-Time event, the marketer does not see the context of the individual customer relationship so they must be careful to take immediate action for only those Real-Time events that initiate communication regardless of the relationship.

Real-Time events must be carefully balanced with other types of events. There is a danger of making bad decisions faster. It is important to leverage detailed historical

data/information along with the Real-Time event to drive genuine personal relevance. The problem with Real-Time Scoring is that it does not take into context the intrinsic value of the customer. Real-Time Scoring is focused on a small set of data at a point in time. Real-Time Scoring is fine for new prospects but where you have additional knowledge about the customer, it is imperative that you factor in the richer data and then deliver in real time – to boost relevance.

Real-Time Events

User:	Marketing
Builder:	IT
Output:	Customer ID & Observation
# of Events:	Hundreds
Flexibility:	Unlimited
Schedule:	Channel Initiated
SQL:	N/A
Timing:	Real Time
Example:	Product Purchased on Web
Data Source:	Data Warehouse, systems, touchpoints
Expected Return:	20 – 30%

Sophisticated Events

Sophisticated events can increase our insight into a customer's needs and preferences and help us make better, more informed decisions concerning that customer for improved marketing, communications, sales, and personal service. In the case of sophisticated events, we determine significance by understanding data that represents an exception or deviation from the baseline norm for a customer over time. Teradata expertise and thought leadership around EBM for sophisticated events is due to the pioneering research and thought leadership of Ray O'Brien, our Teradata Solution Architect in the Asia Pacific region, and he deserves credit for his major contribution to our insight here.

Sophisticated events focus on one specified consequential moment in a customer's life. These moments may represent or lead to a measurable change in a customer's normal behavior, state of mind, personal circumstance, or interaction pattern. A prime objective is to proactively identify these events as they occur – or anticipate them beforehand. This is achieved by detecting the clues that result from an individual customer's change in state of mind, personal circumstance, or interaction behavior. By understanding, identifying, and detecting these clues, it can be deduced that a significant event in a customer's life is occurring or has occurred. It increases the knowledge we have about a customer –

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and the capture of this information alone can add useful value to the customer data already present in a data warehouse.

Any occurrence or series of behaviors can comprise the basic ingredients of a Sophisticated event, whether they be one or many, external or internal to the business. A fundamental step for Sophisticated event detection is establishing a 'baseline' period of individual customer interaction behavior over an initial specified time period. Individual base data from this period becomes the norm to help us later identify deviational or significant behaviors we seek to detect. Once we have this data baseline for comparison, we can deduce event significance. These deduced clues will help lead to the right conclusion concerning significance. The baseline time period may range from three months to years. The longer the baseline period, the more that the exceptions, deviations, or significant behavior become apparent. A note of caution: for longer periods of time, be sure to factor in the effects of seasonality or cyclical patterns.

Significant event rules ensure continuous scanning of the data warehouse for specific changes in customer behavior as part of an EBM program. Again, significance is a measurable exception to normal baseline behavior over time. For best results, marketers must be careful and thorough in defining and testing what is truly exceptional versus normal in individual customer interaction behavior over time. Marketers

must also understand subtle differences between what is a change of fact versus a change of mind. For example, a geographic change in a customers' use of an ATM network may indicate a residential relocation, a job change, or possibly be travel-related. Think through the possibilities, then test and validate them. In addition, try to determine whether the event represents or could lead to a customer change of mind – thus a potentially related change in the relationship with your business.

Finally, when defining significance, be certain to describe why knowledge of such an event will add business value, how it adds value, how this knowledge is useful or actionable – and by whom. Plus, take into consideration the importance of 'reaction timeframe' associated with the event. Reaction timeframe refers to the time window in which your business can act or communicate for relevance to the customer and value to your business. Many events lose customer relevance and business value if they are not acted upon promptly.

Definition and validation of significant events can be subtle, yet always critical to outcomes. Consider creating a large deposit event for a financial institution. It cannot be determined that any deposit greater than \$10,000 always indicates a significant event. Why? Because many customers may regularly make deposits of such amounts and these are simply consistent with normal behavior patterns. So, consider whether this simple rule is in any way relevant. Such an event rule could be modified to filter out

normal deposit patterns and spot big deviations in deposit amounts. Thus conditions must be added, like the percent difference above an average deposit, or perhaps quantify the relationship to the previous largest deposit or frequency of deposits over a short period.

Sophisticated events may involve a number of daily customer activities, such as deposits and home loan repayment inquiries in the financial industry, which are recorded in source transaction systems. Sophisticated events are possible to detect when a continuous historical transaction pattern/profile for each customer is kept in a data warehouse. Then queries trawl the database every night to search for significant changes to an individual's profile. Significant changes discovered in a customer's profile can then drive relevant communications (e.g., a very large deposit today relative to the average over the previous six months).

One more word of caution: events should not be too complex. Marketers may feel compelled to over-engineer an 'event detective' – creating complex multiple queries to comprise or define a Sophisticated event. The negative result is that multiple complex queries bundled and launched together increase the demand on the system, which can delay responses. Thus, it's important how you define 'significance.'

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The most effective significant events are prioritized by a specific change in customer behavior or circumstance that indicates a change in a customer's personal requirements. It helps to apply a few tips from companies that regularly conduct EBM. For example, to determine significance, a marketer might:

- Compare current behavior to past behavior for each individual.
- Combine all relevant factors to refine the definition of an event
- Combine multiple events to determine specific requirement changes

The possibilities are virtually limitless. However, here are a few just to provide some idea of the tremendous potential value of EBM:

- All transactions that are greater than 100 percent of any other transaction for the last 24 months for each individual
- Significant 'out of condition'
- Insufficient funds usage for each individual
- First usage of E-Channel
- Changes in contract usage
- Decrease in usage of cellular phone
- Changes in payment history
- Significant balance change

Again, the benefits include a positive, customer-centric approach to fundamentally changing the way your company does business – while creating competitive brand differentiation through customer experience. Moreover, Sophisticated events consistently deliver 40 to 60 percent

returns. This is the powerful result of driving a relevant communication to an individual at a point in time to solve a specific need that they actually have at the moment.

Challenges include close teamwork to strategically define what and how to execute. This is not a guessing game but rather a serious discovery process. Build channel components that enable you to deliver the solution when a customer contacts you. Ensure that you educate your channel resources about the differences in event types. Train teams to act quickly to service the customer once a significant event has occurred. You should also create a system that automatically ranks the different types of events, and prioritizes those that are significant to each channel for appropriate action.

Sophisticated Events

User:	Marketing
Builder:	IT
Output:	Selection Variables
# of Events:	10 - 100
Flexibility:	Unlimited
Schedule:	Warehouse Scheduler or PR
SQL:	Multi-Pass
Timing:	Daily, Weekly, Monthly
Example:	Significant Change Balance
Data Source:	Data Warehouse
Expected Return:	40 – 60%

Once events are identified, then what?

The marketer must become something of a customer relationship architect because EBM is about more than just detecting events. It is about understanding how to act on those events for greatest business advantage. Detecting events is only the beginning of EBM. In fact and experience, we have found that most organizations spend too much time thinking about what events to execute, and not enough time defining and planning the right action to take once the event is detected.

A rules-based engine is the critical component in determining the events that need response, as well as the response that is appropriate. Think of rules as “if this, do that” coded instructions or algorithms that launch a task or next step of marketing action. For instance, “If event A occurs (a first-time purchase, for example), then use X channel to send M message with appropriate instruction.”

Again, pre-defined event triggers initiate a marketing response. This response is sometimes a series of steps which, taken together, constitute a virtual dialogue between a company and its individual customers. The importance of leveraging multiple events, as well as multiple types is that marketers can better manage the potential conflict that can arise when executing these automatically in parallel.

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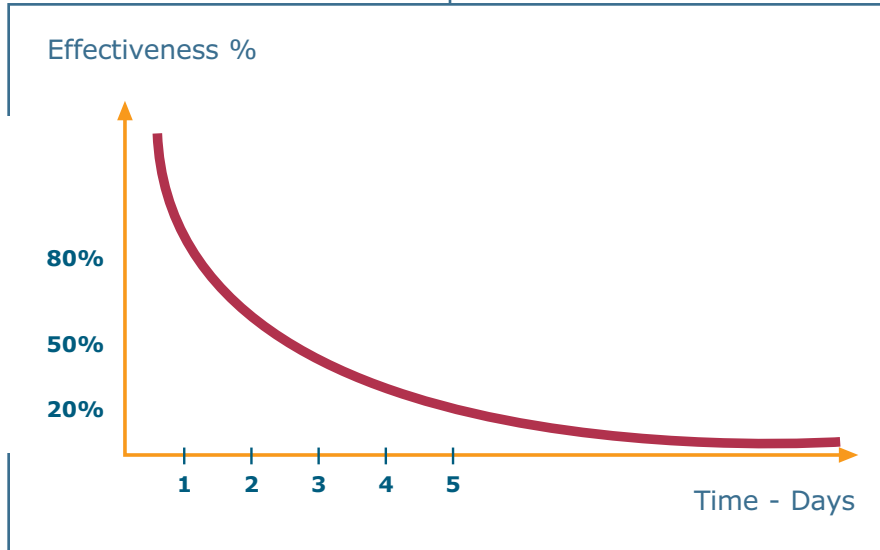


Figure 2. Reaction Timeframe

It is imperative that a rules engine is established to evaluate each and every event and act automatically. Marketers will need to make a decision whether to execute a specific even-based on the nature of the communications each customer received yesterday. As well, they must consider which one has the biggest payoff for the company. Another factor to consider is which one drives that greatest long-term value to the customer. There is a great deal to consider. Remember, it is not just about sales, it is about servicing each customer wisely and expanding the value of the relationship.

Finally, experience has shown that the following questions must be addressed in any plan to conduct EBM:

- Is this event in itself significant, or does it require additional knowledge or information before it becomes significant?
- Which events take priority over other events?
- What channels should be used for which events?
- What events should be acted on now versus later?
- What discussion should we have with the customer based on the event?
- Is this a retention opportunity or a sales opportunity?
- What additional information could enhance the experience of each customer for optimal service and benefit?

Remember that event detection is not event execution. Some events indicate opportunities to communicate. Other events might be most effective in combination with other events or other data elements to determine the best possible customer communication stream.

This does not mean that EBM is largely a manual process. It just means that EBM requires human ingenuity and business acumen. Companies need to take a very methodical approach to determining the effect on the customer facing process to ensure that prior to setting up automated processes they look at the impact on the customer. Executing EBM requires structure and planning to ensure that you are not automatically bombarding the customer with annoying messages.

In customer environments, consistently 60% – 80% of all the respondents happen with the first 24-48 hours of the detection of the event. Therefore, reaction time-frame is critical. If you wait a week or even longer to contact the customer, you have probably lost the opportunity. (See Figure 2)

You might think that customer driven communications should always take precedence over company driven messages. This is not always the case. Companies must build a communication framework that has rules based on the objective of the communication. Is it to sell someone a product, is it for retention, or is it a service message?

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It is at this level where the determination should be made, and it should be based on the priorities and the timing of the last customer contact. A customer communication framework can help marketers apply intelligent business guidelines to ensure that individual product incentive programs do not undermine stated strategic objectives.

Companies must consider the reaction timeframe. Once a significant event has been determined, it is important to act quickly due to the measurable change in a customer's normal behavior, state of mind, personal circumstance, or interaction pattern with your organization.

To sum up, companies desiring to explore EBM as a strategic tool must first define a customer communication framework that defines objectives and addresses key issues and questions. It will help companies prioritize and manage the wide range of very unique communication opportunities, and determine when and how they should communicate. Once the customer communication framework is established, then companies can define the type and frequency of different event types, and drive increases in customer satisfaction – reducing churn while growing revenue and bottom line profit.

Teradata has been helping customer-focused businesses around the world take advantage of Event-Based Marketing since 1997 in industries like banking, travel, telecommunications, and gaming. Teradata Customer Management Solutions help to plan, execute, and manage all types of events – but more importantly, they provide tools that were specifically designed to automate, manage, and optimize hundreds of simultaneous event-based communications over time, enforcing enterprise business rules and enhancing the customer experience.

For more than 10 years, Teradata has developed a proven methodology for building and defining events and establishing rules around a strategic communication framework. This methodology was developed by industry experts and supports companies as they establish strategic marketing objectives. This includes analyzing, modeling, prototyping, and implementing events created to identify opportunities and build more profitable relationships with individual customers.

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