

The BEA E-Marketing Fieldbook

# **Preface**

# By Peppers and Rogers Group

As you begin reading the E-Marketing Fieldbook, you are probably looking for specific answers. Answers to questions as basic as "What is E-Marketing?" or as complex as "How do I maximize the return on my E-Marketing dollars?" The good news is that this Fieldbook provides valuable information that will help you answer these questions and more. However, in order to get the most out of this Fieldbook it's important that you consider the following:

- First and foremost, recognize that E-Marketing is an iterative process. Just like traditional Marketing, successful E-Marketing involves a process of continuous learning. With E-Marketing you can generate a wealth of information about your customers, your promotions and your site. It is essential that you continually use this learning to your advantage. The more you embrace experimentation and adapt to results, the greater the potential to reap E-Marketing rewards.
- 2. Start small, get it right, then expand. There is tremendous pressure on Marketing to produce results and to demonstrate immediate return on investment in marketing programs. This pressure leads many to rash decisions, implementing unproven programs on a grand scale without an understanding of the true drivers of success. We strongly recommend initial testing of concepts and plans as a method for optimization of marketing performance and, therefore, long-term return on investment. This provides two benefits: the ability to test effectiveness and fine-tune efforts without major time and financial investment, and a basis for quantifying your successes by demonstrating incremental improvement.
- 3. Remember that *E-Marketing is part of an overall Marketing and Customer Relationship Management (CRM) plan and process.* The E-Marketing plan should be an extension of the overall plan based on meeting key strategic objectives. Think of all marketing communications from the customer's viewpoint and it's easy to understand the importance of continuity: the customer views your organization as a single entity, regardless of whether they interact with you on the Web, over the phone, through e-mail, or in person. In order to optimize the customer's experience, their experience should be consistent across all interaction points.

Don't expect this E-Marketing Fieldbook to provide an encyclopedic guide to E-Marketing. Instead, it provides a broad overview of subjects to consider before you jump in and start defining solutions. And, as you begin implementation, use it as a reference guide to identify E-Marketing best practices, practical examples for applying the techniques, and

for actionable recommendations that will maximize the effectiveness of your E-Marketing programs.

# Introduction: A Blueprint for E-Marketing Success

"The only man who behaved sensibly was my tailor; he took my measurement anew every time he saw me, while all the rest went on with their old measurements and expected them to fit me."

George Bernard Shaw

Decades ago at the corner store frequented by our ancestors, the bond between buyer and seller extended far beyond goods and services. Serving as trusted sources of information, neighborhood establishments were founded on personalized service and customized to the unique needs of individuals. Like Shaw's tailor, shopkeepers saw each visit as a fresh opportunity to learn more about their customers. They continually gathered information and maintained profiles on customers in the original database, their mind. They used this

profile information as the foundation for service, naturally engaging their most profitable customers in genuine relationships that kept them coming back. Product selection, while limited, had evolved over time – honed to meet the specific needs of these best customers.

Today we find more consumer choice than at any time in history. Mass production and mass marketing have together made transactions between buyers and sellers increasingly anonymous, with price the primary driver of purchasing decisions. Merchandise is specialized, affordable and accessible through a multitude of channels without geographic boundaries. All this seems good for both consumers and businesses. And in many ways it is.

But this sophisticated marketplace also has a downside. Businesses need repeat customers to sustain their growth, yet too often their bond with customers is founded on price, leaving customers and profits vulnerable to any competitor with a lower price. Many consumers, overwhelmed by the complexity of product choice, seek businesses capable of providing services to guide and support their product selection.

Many businesses today are finding success by merging the best of the new and old worlds. They are growing by realizing the economies of scale that come with mass production and serving a global marketplace. Simultaneously, they are distinguishing themselves from their competition by using E-Marketing technology to employ many of the same relationship building strategies that made the corner store successful

generations ago. Helping you understand, implement and profit from these strategies is the focus of this document.

#### What is a Fieldbook?

The goal of this *BEA E-Marketing Fieldbook* is to introduce strategic considerations integral to architecting E-Marketing programs that help you build long-term, profitable, customer relationships. While this Fieldbook takes a decidedly business-to-consumer focus, the general principles translate to business-to-business and business-to-employee implementations as well.

We've developed four sections covering key E-Marketing topics:

**Section I:** Architecting a Strategic Plan – Customer Differentiation and Lifecycle Management

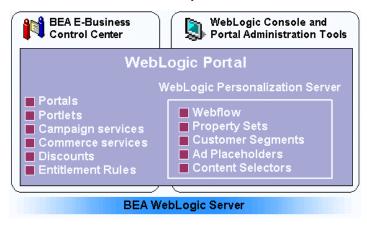
**Section II:** Laying the Foundation – Data Collection and Management

Section III: Constructing a Framework for Action – Data Analysis

**Section IV:** Building Customer Relationships – Tools for Personalized Communication

Sections I, II, and III cover mostly conceptual strategies for developing your E-Marketing program. Section IV focuses primarily on implementation and tools for building customer relationships. These four topics, together with an insightful Preface and Summary from one-to-one Marketing thought leaders, the Peppers and Rogers Group, will prepare you for the journey of building an E-Marketing program.

As we explore each of these topics we'll weave together a range of fundamental E-Marketing best practices with practical recommendations for how to implement technologies both native and non-native to the BEA platform. The following diagram illustrates some of the core functionality we'll cover in detail later in this document.



While written for marketers and business managers, this Fieldbook covers an array of technical issues, focusing on utilization of technology to drive business objectives. To arm you with the detail required to help translate your business objectives into technical requirements, we'll occasionally drill down beyond business terms to explore technical topics. These "Tech Talk" sections are marked by this symbol  $\clubsuit$ .

You'll also find a wealth of helpful hints for implementing the BEA customer management platform. Look for the (i) symbol throughout the document to quickly find these tips.

Additionally, throughout the document, we'll detail a case study based upon a fictional hotel chain, TravelPro Suites. The case study will illustrate a progression of E-Marketing tactics that together create TravelPro's E-Marketing strategy. The first phase of this progression, the basic business case for TravelPro Suites, is outlined below. The red triangle in the case study header identifies the specific area of focus for each case study section.

#### CASE STUDY

Business Case Data Collection Strategy

Drip Irrigation

Data Campaign Analysis Segmentation Planning

Campaign Campaign Planning Execution

Campaign Analysis



#### TravelPro Suites Business Case Summary

#### Situation:

- Increased competition for corporate business travelers from global hotel chains
- Price competition causing reduced margins, profitability and increased attrition

#### Plan:

- Develop Loyalty Program called "TravelPro Rewards"
- Target most valuable travelers and extend personalized services by learning their preferences and needs
- o Empower organization to act on defined preferences and needs

#### Metrics:

- Increase the value of its existing top customers
- Reduce the attrition rate of most valuable customers by 5%

# Section I: Architecting a Strategic Plan – Customer Differentiation and Lifecycle Management

In the world of E-Marketing, success is defined by your ability to build long-term customer relationships that bring value to your customer and sustained profitability to your organization.

Technology alone cannot provide a magic solution that will immediately resolve all your marketing challenges. Worldwide, companies are finding E-Marketing success by investing in a combination of innovative implementations of technology, business process enhancements, and organizational changes that are part of an overall E-Marketing strategy.

#### **Customer Differentiation**

The first step toward building successful customer relationships begins by adopting a corporate culture that recognizes that every customer is different. Your customers have different interests, different levels of disposable income, different perceptions of value and perhaps most important, different historical experiences with your company.

The world of one-size-fits-all mass marketing fails to recognize these differences and use them for competitive advantage. The more you can evangelize a customer-centric corporate culture, revising technology, business processes and organizational structure around recognition of customer differences, the more effective your relationship building strategies will be.

This does not mean that you need to develop a separate plan for each individual customer; rather it challenges you to identify the relative value of customers and create a strategy that effectively targets collective customer needs—starting with your most profitable customers.

Using customer differentiation for E-Marketing purposes requires that you not only identify who your customers are, but more importantly that you recognize who are or are likely to become your best customers. You need to develop profiles based on the characteristics of your best customers and use them as the basis for understanding the profile of customers that you want to acquire. Additionally, it is important to recognize differences in profiles based on where the customer is within the customer lifecycle. This will provide you with insight into customer behavior and allow you to address customer needs most effectively.

The metrics you use to define customer value will vary considerably based on the types of customers you have and your goals. A few key value indicators you may want to consider include:

- Transaction history
- Profitability
- Length of the customer relationship
- Cost to service

To ensure that your value indicators continue to provide valid measurement over time, you'll need to regularly reassess the components that define customer value.

# Customer Lifecycle Management

Customer lifecycle is another key E-Marketing factor you must address to successfully build customer relationships. While Marketers have traditionally used a variety of terms to define the stages of the customer lifecycle, for the purposes of this document we'll use acquire, engage, extend, and retain.

As we focus on strategies for building relationships across phases of the customer lifecycle, our emphasis will be on the business benefits of these strategies. Fundamental to the assumption of business benefit is that the strategy also delivers value to the customer. Like personal relationships, business relationships are best when built on mutual respect, trust, and value to all parties involved.

#### Acquire

Recent studies show a decrease in the cost to acquire new online customers. However, this doesn't mean your acquisition efforts don't need a well thought out plan and approach. Some of the basic elements that make your site appealing to new customers are detailed below.

Registration Incentives: Contests, promotions, white papers product samples, and demos are all examples of incentives you can provide to get new customers to register or purchase products or services. Customers need to have a clear value proposition in order to be willing to disclose information and begin a relationship with you. Develop a plan to entice customers to come to your site, and track the effectiveness of the promotions and other incentives. Prominently display incentives on your site—so much the better if these incentives are tightly bound to relevant services.

Referral Incentives: Giving incentive to current customers to refer new customers can be a cost-effective way to generate new business. Existing customers are happy to refer others, provided they are happy with the products or services they are receiving and see value in the incentive provided.

Easy Navigation and Robust Search Capability: To get customers to your site, make sure your basic design is planned with your customers in mind. Some of the basic requirements to consider include:

- A visually appealing user interface with a clear message
- Straightforward navigation on the site; users should never get stranded or lost on your site.
- Robust, easy-to-use search capabilities.

Brand Establishment and Messaging: New brands need development of messages and advertisements to convey their identity to customers. Make sure that the online experience for existing brands with well-known messages is consistent and leverages the same message as their offline advertising and messaging.

# Engage

Use content or services to ensure a positive initial experience with your company. Engage visitors in an interactive dialog that goes beyond the initial interest or sale. Demonstrate your knowledge of the product offering as a way to distinguish yourself from your competitors. Welcome visitors to the community. Make it easy for them to do business with you. Provide engaging features that will keep them coming back, as follows:

Content: The most fundamentally engaging feature is simply a Web resource that always has something new to offer when the visitor returns. Ever-changing content, like window-dressing in a storefront, provides a compelling reason for customers to return to your site. This may seem basic, but too few enterprises accurately forecast the staffing and organization needed to sustain lively content over time.

Community Features: Community features such as discussion boards, feedback mechanisms, Webcasts, and live chats are proven methods for bringing visitors back to your site. These features actually involve visitors in creating much of your ever-changing content!

*Pre-populate Data:* To simplify the ordering process, eliminate redundant data collection by pre-populating information. Pre-populating data based on past visits or information

entered during the session can expedite the ordering process and make it easier for your customers to use your site. Customers appreciate ease of use and will be more inclined to return to order again.

Notifications, Recommendations, and Alerts Based on Preferences: Provide the ability to customize communications to your customers. Provide notice of promotions and news alerts based on user-indicated preferences.

Online Product Configuration: Provide your customers with the ability to configure your products and services online. Give your customers the information they need to be able to configure products based on their specific requirements.

#### Extend

When you have truly engaged your customers and established the foundation of a relationship, it is time to look at ways to extend that relationship. Uncovering opportunities to provide additional value-added products and services when built on a solid relationship will not only benefit the customer, but will also enhance the lifetime value of the customer.

Auto Replenishment: Develop a plan to auto-replenish products ordered by your top customers.

Personalized Recommendations: Use data mining and analysis of purchase and transaction history to identify personalized recommendations including potential cross-sell and up-sell opportunities. Intelligently suggesting related products or product upgrades is not only a valuable service to customers, but also a successful method of extending your *customer share* both vertically and horizontally. Develop targeted Campaigns to promote cross-sell and up-sell products and services.

Lifetime Event Selling: Based on the information you have from customers, anticipate lifetime events and develop promotions to make customers aware of products and services you provide based on the event. Examples include promoting PC's when customer's children reach school age, or promoting travel packages for active retirees.

Partner to Complement Your Offering: Develop partnerships and affiliations with other organizations that allow you to provide a complete and compelling package for your customers.

#### Retain

Retaining customers requires an ongoing commitment to provide increasing levels of value to the customer. Enhancing retention requires customers to continue to provide information about themselves, through their responses and their behavior, so that you are

better able to target products and services. Additionally, if your established services make it significantly easier for customers to do business with your organization compared to your competition, these services provide barriers to attrition.

Customer-defined Experience: Provide the ability for your customers to customize the content they receive and when and how they receive it when visiting your site. Letting the customer define the experience as much as possible lets the customer know you are in business to serve them. By defining their experience with the information they want, the customer is providing you with valuable information about their needs. Additionally, they are indicating a willingness to do business with you and provide more information about themselves and their interests.

Differentiate Service Programs: Provide higher levels of service for customers that you have designated as your best customers.

Loyalty and Reward Programs: Develop specific programs that reward your customers for making purchases and that encourage them to continue to purchase from your site. Loyalty programs can vary from simple to complex depending upon the products and services you offer.

Clearly many different strategies exist for building relationships with customers. In the sections that follow, we'll provide insight into the key underlying methods for enabling successful implementation of these relationship-building strategies.

# Section II: Laying the Foundation — Data Collection and Management

For the E-Marketer, data forms the foundation for building intelligent, ongoing customer dialogs that cultivate lasting relationships. Like the tailor's measurements, data captured and used effectively has the potential to provide deep insight into your customers' preferences and behaviors.

This Fieldbook section reviews data collection and management strategies essential to developing an E-Marketing program. We'll discuss the importance of establishing trust and delivering customer value as a starting point for all data collection efforts. We'll present considerations for developing a data collection and management plan for your organization. Next, we'll explore the concept of knowledge management, focusing specifically on content management as a key technology for enabling E-Marketing efficiency. Finally, we'll outline some fundamental issues surrounding creation of a data store and data management strategies.

# **Collecting Customer Information**

#### Establish Trust and Demonstrate Value

As more and more companies realize the tremendous value of customer information and in turn expand their data collection efforts, customers are simultaneously becoming increasingly guarded about releasing personal information. This reality makes it essential for companies to implement efficient strategies for customer profile development, and in turn, deliver services that provide customer value in exchange for their information.

Successful data collection requires that you give your customers both the incentive and the trust to share personal information. Incentive can come in the form of a customer reward or gift, which can be a positive gesture in exchange for their time and data. However, the best incentive is to clearly communicate the product or service benefit the customer will receive in exchange for their time and information. Providing context to your data collection can help overcome customer suspicion and ultimately result in the most accurate information. Most importantly, you risk losing customers by asking them to give more information than they are comfortable providing. Faced with providing large volumes of information, customers generally elect to enter inaccurate information or not complete the information at all and abandon the site.

BEA WebLogic Portal 4.0

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## Permission Marketing

To further establish customer trust, you must explicitly state your data collection and sharing practices in a privacy policy. The information you're collecting belongs to the customer. Ensure that you have their consent for any planned use of the information and disclose your intent for sharing information with others. Trust is an essential part of building customer relationships. An easy-to-read, easy-to-find and detailed privacy policy will serve as a strong beginning for establishing trust. For guidelines on creating a privacy policy, visit <a href="http://www.cdt.org/privacy/guide/introduction/">http://www.cdt.org/privacy/guide/introduction/</a> or <a href="http://www.understandingprivacy.org">http://www.understandingprivacy.org</a>.

You should give customers the ability to opt-in or explicitly consent to every form of communication (informational, promotional, transactional, and so on), and every medium of communication (e-mail, telephone, mobile messaging, and so on). Also provide an easily accessible method for opted-in customers to remove themselves from future communication. This approach not only forms a foundation of trust, it can also enhance your response rates by enabling you to communicate through a medium to which you know your customer is receptive.

It is imperative that you recognize customer permission as a vital corporate asset that must be respected and nurtured. You should closely monitor opt-in and opt-out rates as key indicators of how effectively you are delivering value to customers through your communications.

### Customer Data Types

The table below summarizes types of customer data that are important to consider in developing a customer data strategy:

**Table 1: Example Customer Data Types** 

Customer Data Types	Examples
Form-based Data	Customer identification
	Customer ID number
	Name, address, e-mail address, phone number
	Customer preferences
	Service requirements
	Channel preference
	Opt in to receive publications, promotions

Customer Data Types	Examples		
Transaction and Interaction	Previous or open orders		
History	Alliance partner products purchased		
	Customer service requests		
(Order and Discount Data)	Trouble reports		
Debasios Tradina/Imabiad	Content (avadust actagons)		
Behavior Tracking/Implied	Content (product, category)		
Profiling	Campaign response		
	Promotion response		
Aggregates and Derived	Customer lifetime value		
Values	Cost to serve		
	Credit risk		
	Recency, Frequency, Monetary (RFM)		
Data Overlays / Third Party	Financial and Industry Data		
Data Overlays / Third Farty	Credit rating		
Data	<u> </u>		
	Business: Industry SIC, sales revenue, number of		
	employees, and so on.		
	Consumer data		
	Consumer: size of household, income, occupation.		

#### CASE STUDY

Business Collection Drip Data Campaign Campaign Campaign Case Strategy Irrigation Analysis Segmentation Planning Execution Analysis

TravelPro Suites used a variety of data collection strategies to build both the depth and the breadth of their customer profiles. The specific data elements and collection methods are detailed in the following table. TravelPro wisely aligned their data collection efforts with their overall marketing strategy, the rewards program. They focused their data collection on building profiles that would enable them to more effectively identify and serve their best customers and they awarded points to customers in exchange for information. Customer preferences corresponded directly to service offerings and were solicited at relevant points of customer interaction to ensure that customers understood the value they would receive for providing information.

## CASE STUDY (CONT'D)

TravelPro User Profile	Data Collection Method/Source
Customer Identification	Hotel Registration – online and
<ul><li>Customer ID #</li></ul>	phone
<ul> <li>Name, address, e-mail address,</li> </ul>	
phone number, etc.	
<ul> <li>Primary Travel Type: Business or</li> </ul>	
Leisure	
Customer Room Preferences	Customer survey – online and in
<ul> <li>High speed network connection</li> </ul>	hotel room
Type of pillow	
Type of blanket	
Type of bed	
Music	
Newspaper preference	
Smoking preference	
Room temperature	
Type of loyalty rewards	
Hobbies and sports	
Interests and attractions	
Opt in to receive publications,	
promotions  Total number of provious stove	Transaction and interaction —
Total number of previous stays	history records from internal
Stays year to date Stay locations	systems
Registered complaints	systems
Loyalty points	
Loyalty points year to date	
Alliance partner products purchased	
Average spending per stay	
Additional destination interests	Online Behavior Tracking
Campaign response	Time Deliction Tracking
Promotion response	

TravelPro User Profile	Data Collection Method/Source
Customer lifetime value	Data mining and analysis
Cost to serve	
Willingness to collaborate	
Share of customer	
Consumer data	Data Overlays / 3rd party data
<ul> <li>Size of household, income,</li> </ul>	
occupation, etc.	
	Customer lifetime value Cost to serve Willingness to collaborate Share of customer Consumer data  • Size of household, income,

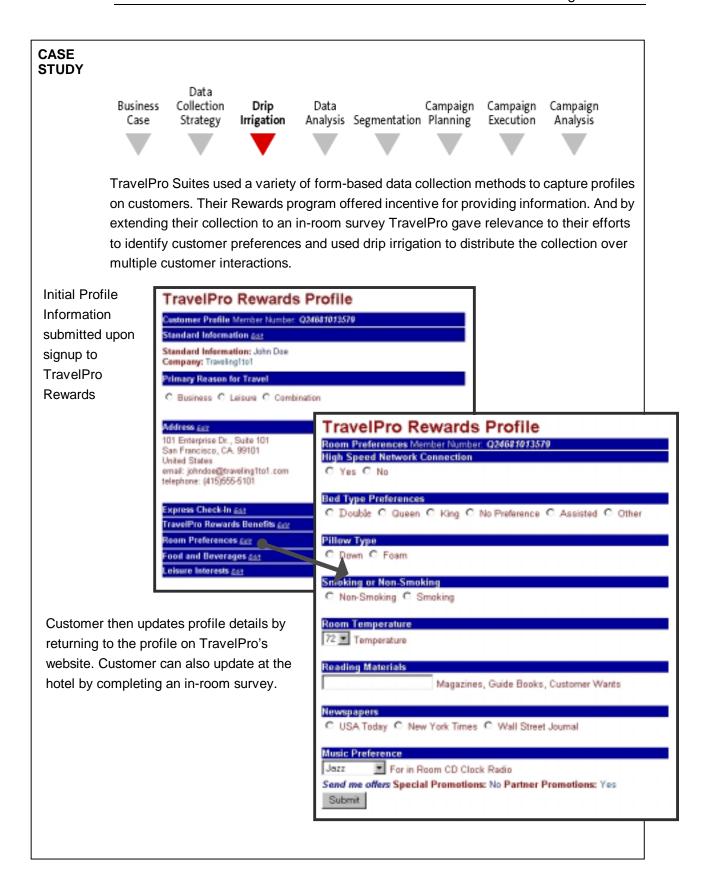
#### Form-Based Data Collection

Form-based data collection is the most basic approach to customer data capture, usually implemented through a survey or as a part of a registration or order form.

The golden rule, essential to effective data collection and too often ignored by many organizations, is as follows: If you can't identify specific actionable use for the information you are collecting, don't collect it. At the same time, as we described above, don't ask customers to provide information unless you can provide value in return.

A common pitfall faced by many organizations today is over-collection of information. It is easy to fall into the *rainy day* trap: collecting excessive data just in case you might need it someday. There are key problems with this approach. Over-collection makes it difficult to sift through the enormous volumes of data to find valuable nuggets of information that actually benefit your customer relationships. Over-collection also results in an unnecessary burden on customers and data storage systems.

*Drip irrigation* is a proven strategy for extending the depth and breadth of profiling without over-burdening customers. Rather than overwhelming customers with the never-ending ask-all form we've all experienced, this common-sense approach distributes data collection over the course of multiple online or offline interactions. As mentioned above, aligning collection with an activity that is directly relevant to the information being collected improves accuracy by helping customers understand the benefit they'll receive for participation.



## Behavior Tracking and Implied Profiling

To this point, the data collection strategies we've discussed have related primarily to customer profile information explicitly divulged by customers through a transaction such as a site registration, service call, or purchase.

One of the distinguishing aspects of E-Marketing relative to offline marketing is the ability to track and identify online customer behavior. This data can provide valuable profiling information. If a customer is viewing information about a specific product on your site, they are implicitly telling you they have some level of interest in that product.

Traditionally, e-businesses have crunched Web logs to analyze customer behavior on their Web sites. Logs effectively store Web site data and excel at capturing data pertinent to the visit: who's visiting, where did they come from, what browsers are they using, and so on. Log files, originally designed for technical use, have been co-opted over time by business analysts to answer essential e-business questions. However, log files do not lend themselves to easily untangling the puzzle of what customers do within a visit, especially on sites making use of dynamically served pages. Log files lack flexibility, which compromises their usefulness in understanding the nuances of your ever-changing site. Deviations from the standard log format can create difficulties: the parsing processes necessary to extract log files into usable data are notoriously finicky, regularly choking on errors or unusually large logs.

To address this problem, BEA's Customer management platform uses Behavior Tracking, which captures and stores data integral to understanding your Web site and customers by generating *event* records triggered by key activities on your site. BEA Behavior Tracking supports 16 event types out of the box, and is also an extensible service that permits you to expand or add events. The standard events fall into eight categories: Session, Product, Content, Campaign, Cart, Registration, Rule, and Buy. Unique Session and Customer Identifiers bind all event types together, allowing analysts

TECH TALK: BEA Behavior Tracking data is stored as XML in a Character Large Object database table [CLOB]. This provides great flexibility and enables you to extend the types of events persisted without making changes to the database schema. For analytics and reporting purposes you may want to use an XML parser to extract data from the CLOB.

to accurately recreate the sequence of customer interaction with the site. Each event is time-stamped, enabling time-series analysis. Because Behavior Tracking captures data optimized for each type of event, it is innately more flexible and detailed than log files. And because of the way it's stored , the data can be easily and reliably extracted into relational database tables for analysis.

The eight event categories are detailed below. While most marketers won't need to intimately understand all aspects of these events, taking the time to gain a fundamental understanding of each event type will enable you to more effectively develop data collection and data analysis strategies that yield insight into your customers' site activities. Some of the events introduced here, including Campaign and Rule, relate to BEA specific topics that will be expanded upon later in this Fieldbook.

## Event Types

**Table 2: Behavior Tracking Event Types** 

Event		
Category	Event Name	Event Description
Session Event	SessionBeginEvent	Occurs when a customer begins interacting with a Web site.
	SessionEndEvent	Marks the end of any user's WebLogic Server session, regardless of whether that user has logged in.
	SessionLoginEvent	Occurs when a customer logs on a Web site.
Registration Event	UserRegistrationEvent	Occurs when customer registers on a Web site.
Product Event	ClickProductEvent	Occurs when a customer clicks a product link.
	DisplayProductEvent	Occurs when a product is displayed to the customer.
Content Event	ClickContent Event	Occurs when a customer clicks some Web site content, such as a link or banner.
	DisplayContentEvent	Occurs when content is presented to a customer, commonly any content from a content management system.

Event Category	Event Name	Event Description
Cart Event	AddToCartEvent	Occurs when an item is added to a customer's shopping cart.
	RemoveFromCartEvent	Occurs when an item is removed from a customer's shopping cart.
	PurchaseCartEvent	Occurs once for an entire order, unlike the BuyEvent, which occurs for each line item. This event is useful for Campaigns. You can use it when writing scenario actions to know when your customer makes a purchase with specific characteristics, such as an order greater than \$100 or the purchase of a particular product.
Buy Event	BuyEvent	Occurs when a customer completes the purchase. A BuyEvent occurs for each line item. A purchase may consist of one or more line items. A line item may consist of one or more items of a specific type (ie SKU). For example, although a particular line item may have quantity of four items, only one BuyEvent occurs.
Rule Event	RuleEvent	Indicates the rules that were fired as a customer navigates a Web site.
Campaign Event	CampaignUserActivityEvent	Occurs when a customer participates in a Campaign. Specifically, this event is fired whenever one or more scenario actions are true and the Campaign service is activated. You can limit this event to a single occurrence per user for a particular scenario. This event is intended for use by analytic software.

Event		
Category	Event Name	Event Description
	DisplayCampaignEvent	Occurs when Campaign content, such as an ad, is presented to the customer.  Specifically, this event is fired whenever a Campaign placeholder displays an ad placed in the Placeholder by a Campaign. You can use this event to trigger another Campaign action. Analytic software uses this event to determine if a customer saw an ad as a result of a Campaign.
	ClickCampaignEvent	Occurs when a customer clicks on a Campaign item, such as an ad. Specifically, this event is fired whenever a customer clicks a Campaign ad that was placed in the ad bucket by a Campaign. You can use this event to trigger another Campaign action. Analytic software uses this event to determine if a customer clicked on an ad as a result of a Campaign.

For each event fired, Behavior Tracking captures and stores the following information.

EVENT\_ID

**EVENT\_DATE** 

**EVENT\_TYPE** 

WLS\_SESSION\_ID

USER\_ID

XML\_DEFINITION

This event information is key to enabling reporting, which will be covered in detail in Section III.

Your site is not limited to events delivered out of the box. The XML schema provides the flexibility to tailor the information you gather to your needs. For instance, you may wish to add a PageView event. With the assistance of your development team, you can dictate which data to capture for particular pages on your site.

Some event types are automatically stored within the system. All Campaign, Cart, and Session events are captured by default. Product and Content event types require your development team to implement the proper page tags to capture the necessary data. By their nature, Campaign and Cart events occur less often than Product and Content event types and therefore generate less data.

You may choose to be judicious in tagging Product and Content entities, only tagging items when you have specific analysis in mind. Or you may choose to be less selective and tag all Product and Content entities. In the case of products, this can be accomplished by tagging the Product Detail template page. Ultimately, it is up to you to decide the balance between data volume and analytic needs.

Note: Behavior Tracking captures and stores data. You will need an analytics or reporting tool to process the information. We'll explore analytics and reporting in detail in Section III.

Behavior Tracking does not capture all information out of the box. You may choose to add events or expand the information tracked in existing events to capture additional information. Or you may choose to crunch log files to capture information. For instance, log files contain important contextual information about each visit:

- Referring URL
- Domain
- Browser and Operating System
- IP Address
- Errors
- Bytes Transferred
- DNS Name

#### Order and Discount Data

If you're running a commerce site, the ORDER and ORDER\_LINE tables will be of utmost importance in building a solid data profile. The Buy event in Behavior Tracking contains an Order Line ID to serve as a join with these tables. The data in these tables overlaps with the Buy event data, but contains additional information such as MSRP, tax, shipping information, and order status. For more information, refer to: <a href="http://edocs.bea.com/wlp/docs40/order/schemord.htm">http://edocs.bea.com/wlp/docs40/order/schemord.htm</a>.

Discount data also exists in the ORDER table and includes information on discounts applied to orders, and the price adjustment for each target item.

# Aggregates and Derived Values

(i) **HINT**: Developing offline processes to regularly aggregate or calculate key customer profile elements and integrating that data into your standard customer profile (see Derived Values p. 32) will dramatically improve your targeting capabilities.

Data aggregation and calculated or derived value ratings can provide insightful profiling information. For example, capturing information on individual customer orders is valuable. Knowing the total value of all orders an individual customer has placed over a specified period of time is more

valuable. Calculating a qualifying value to identify not only the total monetary value of orders, but other *best customer* characteristics such as the recency and frequency of purchases provides powerful profile data that is especially useful for personalizing and prioritizing delivery of services.

## Third-Party Data and Data Overlays

For some organizations, it may be difficult to demonstrate to customers the direct benefit of collecting sensitive information such as income or marital status. However, for these same organizations this data may provide insightful profiling information. In these cases, acquiring customer profile data from a third-party provider or from other internal enterprise data sources, and overlaying that information on your customer file may provide the most accurate and successful method for acquiring this information. There are many vendors, such as Acxiom Corporation in Conway, Arkansas, who specialize in aggregating customer profiles and appending them to company databases.

# Knowledge Management

While often not perceived as data, many corporate resources such as product images, product descriptions, service tips, and company directories, all represent information that can add value to a customer's site visit. However, traditionally these resources were not easily extended to customers.

As database technologies have matured, definitions of the types of information companies can capture, store, and manage as data have broadened. Increasingly, organizations are applying standard database practices to a breadth of corporate resources, which structures and organizes information for easier integration with data-driven technologies. As a result, organizations are realizing efficiency and improved customer service by automating the process of extending these resources directly to customers. The key to leveraging knowledge at the right time for the right customer is the ability to develop structure and standards for applying knowledge management. Content management systems offer one example of this trend, which is particularly relevant to E-Marketing.

Most content management systems provide a centralized repository for all content types, enabling organizations to create content that can be easily re-used, re-purposed, indexed or searched. This centralized repository also enables content creators to easily collaborate on the development of E-Marketing materials. Document management functionality simplifies the content creation process through features such as version control and workflow. Through version control, multiple content developers or contributors can share access to files. This enables a team to work on the most up-to-date files at the same time and consolidate updates to the files.

There are two primary types of workflow functionality included in most content management systems: production workflow and business workflow.

Content production workflow facilitates development of documents from initial creation, to draft, to publication. An example of this type of workflow begins when a content contributor creates a draft document. The creator makes the document available for review. If reviewers deem it ready to publish, they can push the content to the production server to be published automatically.

Business workflow, or process flow, goes beyond linear workflow by adding dynamic or branched processes. For example, processing a bank loan requires several people to add information to a document—from the customer to various bank employees. The document needs to be routed based on information entered. Therefore, the workflow must support business rules, not just a linear accept or reject path.

The content management functionality most relevant to developing enhanced customer relationships is the ability to separate content from presentation. This enables

(i) HINT: Organizations embarking on next generation personalized application design often uncover the need to do a complete audit of their metadata resources, and either enhance their data (for example, product catalog), normalize data across disparate legacy sources, or contract with new content providers that include richer metadata or adhere to standards.

presentation of content to be assembled based on customer interaction. For example, this separation is key to enabling a customer using a Wireless Application Protocol (WAP) phone to receive content presented in a format specific to their device.

Metadata, descriptive information about other data elements, is an important database concept employed by content management systems and many other data-driven

systems. By using metadata, content management systems facilitate integration of content into personalization systems by providing a mechanism to correlate content attributes with specific customer interests.

# **Data Management**

Many businesses distribute data collection, storage, and access across company hierarchies. For instance, sales, marketing, and service departments each may have a unique silo of important customer information, inaccessible to other parts of the organization. Have you ever called for service on a recent product purchase, only to find the service representative has no record of you in their database? Did this enhance your relationship with that company?

Building an infrastructure that supports personalization and enhanced relationships with your customers requires moving toward a customer-centric data model, that integrates data from all customer touch-points to create a comprehensive view of customer history at the individual level. A customer-centric data model enables each part of the organization to see a different but consistent view of the holistic customer relationship.

Shifting to a new data model can definitely be a major undertaking, especially for established companies with significant investments in legacy systems. The key is not only to achieve data integration, but also to enable access to the data for customer-facing systems and personnel. To extend the understanding of your customer outside the domain of your site, you will need access to other enterprise data. ERP, legacy, sales force automation, and customer service data all contain extremely valuable customer information. If this sounds like a data mart or centralized data warehouse you may be right. Your particular installation needs to fit in with your organization's overall business-intelligence strategy. The complex details of creating the proper data store for your organization are outside the scope of this document. However, it is important that your organization address data storage and integration and have a basic understanding of the related principles and functionality delivered by BEA tools.

The data store, in its most fundamental terms, is conceptualized in Figure 1. The redtabbed data sources on the left side of the drawing comprise the data internal to the BEA system. Gray data sources illustrate other sources of salient customer data. The Extract, Transform, and Load (ETL) box refers to the processes necessary to move data from their operational source to your data store.

In addition to distinguishing native BEA data sources from other enterprise data sources and outlining the general data-aggregation process, this figure also illustrates the importance of data aggregation and centralization. We'll cover this in detail later in the document. Specifically we'll discuss the ability to analyze a comprehensive profile, produce actionable results, and return those results to the user profile in the form of a derived value.

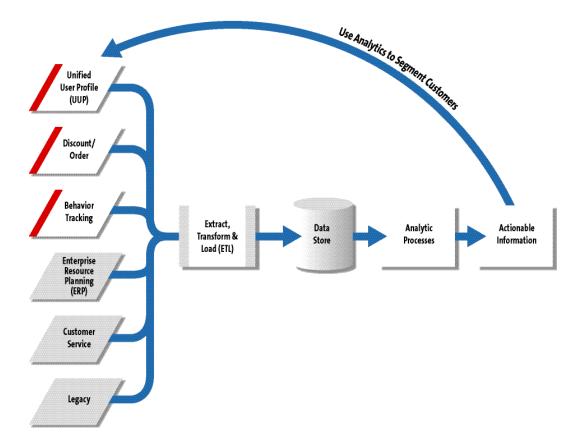


Figure 1: Customer Intelligence Data Store

The Extract, Transform, and Load Process can be very complex. This process transforms data from a wide range of data sources, all potentially with very different ways of capturing and storing similar information about the same customer, into a single model. In developing your data management strategy, understanding the differences in the data captured and stored in each source will minimize the difficulty of accurately integrating the information. Here are some things to consider before you define your data store:

- Wherever possible, capture data in a consistent manner. For example, if you
  already capture customer name in three separate offline fields, and you're
  building a new online form, capture the name online in the same format as your
  other sources. It's much easier to match names when the data is in the same
  format.
- Develop standard business rules for updating and merging data. If you plan to
  collect the same data elements from multiple sources, you must define rules that
  determine how the data will be merged. Rules should include when data is
  updated and when it is overwritten by data from another source. You'll also need
  to develop rules for identifying and handling duplicate records.

Standardize a process for uniquely identifying customers across systems. Depending on how you categorize your customers, you may need a hierarchy of identifiers to group multiple unique individuals under a single household.

(i) HINT: Your Web site will generate tremendous volumes of data. Don't wait until

you reach a storage crisis to formulate your

strategy for data purging and archiving.

Together with your development team, you should create a maintenance strategy for all your data. In developing your maintenance strategy, you need to balance business requirements with IT requirements. For example, how long you need the data needs to be balanced with data storage capabilities. As part of a comprehensive customer data

strategy, maintenance plans need to address the following issues:

- Develop a strategy to purge and archive data.
- Develop a strategy to aggregate data that is no longer being used as individual data elements, but may have value in aggregate form.
- Evaluate cost-effective, offline data-archiving options for infrequently used data.
- Evaluate converting free-form fields to fixed values where standards have developed.

#### Unified User Profile

While not a data mart, the BEA Customer management platform includes a powerful tool, the Unified User Profile (UUP) that is designed to facilitate data integration specifically for

TECH TALK: LDAP (Lightweight Directory Access Protocol) is a standard for accessing and searching collections (directories) of information, such as names, phone numbers, and billing addresses that reside in a database or on a server.

e-business use. The UUP transparently collects user properties gathered from WebLogic Personalization Server database tables and other enterprise data sources including LDAP servers.

Once developed, this centralized collection of customer information can be accessed by virtually any system that may benefit from the customer information it stores. For example, the BEA Customer management platform can pull and display contact information from the UUP, such as first and last name, to welcome a customer personally when they visit your site.

Out of the box, the UUP contains fields of particular interest to E-Marketers including contact information and demographics. This may serve as a good foundation of data, or you may want to replace or add more fields with characteristics specific to your business. The UUP's out of the box demographic elements are detailed below:

**Table 3: Unified User Profile (UUP)** 

Gender	Income	DOB	Marital Status	Occupation	Education	Employment Status
Male	Under \$35,000	mm/dd/yy	Widowed	Professional	High School	Self- employed
Female	\$35,000- \$49,999		Married	Executive Mgmt.	Some College	Employed
	\$50,000- \$74,999		Divorced	Clerical	College Graduate	Not Employed, Not Looking for work
	\$75,000- \$99,999		Single	Management	Graduate Degree	Not Employed, Looking for work
	\$100,000- \$124,999			Engineering	Prof. Degree	

The UUP's flexibility is its greatest strength. To meet the specific marketing needs of your organization, your development team can add new data fields to the UUP. Any distinguishing customer characteristics, from profile elements to key aggregated or calculated values, can be added to the UUP. However, while the UUP offers significant flexibility and extensibility, each data element you add to the UUP can affect performance of the BEA Customer management platform by expanding the data each system call must query. As a result, we encourage customers to be conservative in adding data to the UUP, appending only the information they know they'll use.

Additionally, overall performance is affected by where and how the data is stored. You'll need to work with your development team to balance how and where you store data for access by the UUP. More structured systems may provide optimum performance, but this performance can come at the expense of flexibility.

With a foundation of solid data collection and management practices in place, it is time to look at how to turn this data into action.

# Section III: Constructing a Framework for Action – Data Analysis

"I know half the money I spend on advertising is wasted, but I can never find out which half"

Viscount Leverhulme (William Hesketh Lever)

Your site and your customers generate enormous volumes of data every minute of every day. Each data point a pixel on a seemingly infinite, ever-changing canvas. The resulting mass of unprocessed data resembles a Pointillist painting viewed too closely: a jumble of dots with no recognizable form. Of course, just as the same pixels viewed from a greater distance form a coherent picture, your Web site data contains

patterns and trends invaluable to optimizing your E-business.

The data collection and management strategies outlined in Sections I and II lay the groundwork to harness the hidden power within the mountain of information. The data, essential metrics and tools exist to enable you to deliver on one of E-Marketing's greatest promises: Accountability. Now you can distinguish which half of your budget you're wasting and subsequently refine your programs to maximize Campaign performance. On a more abstract level, putting your data to work will also allow you to deliver on another of E-Marketing's great promises: Building better, longer-lasting, and more profitable relationships with customers by developing an enhanced understanding of their needs and delivering products and services specific to those needs.

The knowledge that yields accountability and profitable customer relationships does not come without effort. Valuable customer intelligence practices require proper data storage, tools, processes, benchmarking, and planning to succeed. In this section, our goal is to provide a jumpstart to transforming your site and customer data into actionable information. Next, we will define systems and processes essential to deriving business intelligence as the foundation for building personalized E-Marketing programs.

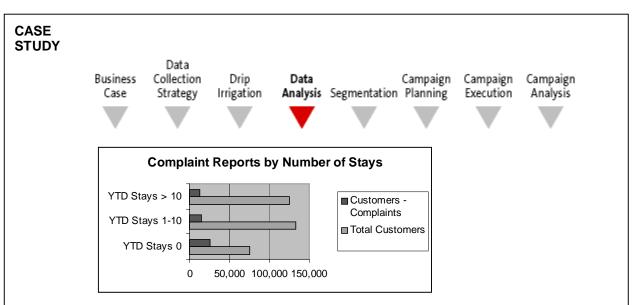
# Methods and Tools for Analysis

Countless methods and tools exist to assist E-Marketers in their quest to create action from data. From basic reporting to advanced data mining, site analysis to customer profiling—analyzing customer data can take a wide variety of forms and employ an equally diverse set of tools.

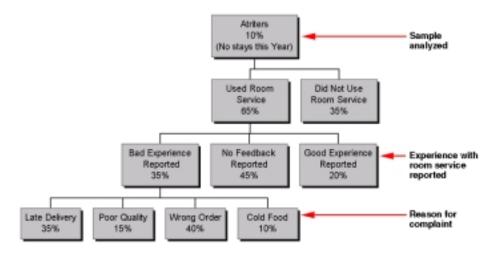
By its nature, analysis is an ongoing and never-ending process. Answer one question and you'll often uncover others. Some metrics, meaningless in isolation, reveal valuable insight when measured and monitored over time. As you increase the sophistication and

granularity of your analysis you'll discover new opportunities to derive insight that can help you refine your E-Marketing strategies.

As we outline this ongoing process, we'll start with some basic reporting principles. From there, we'll extend into more sophisticated analytic techniques and explore the enabling technology required for success. Throughout, we'll illustrate opportunities for applying your customer intelligence to the development of E-Marketing programs.



TravelPro is focused on reducing customer attrition. Their reporting shows a significantly high percentage of complaints from customers that have attrited. In this report, attrition is defined as 0 stays in the current year.



Further analysis shows a high percentage of complaints from attriters linked to a negative experience with room service. TravelPro's analysis has uncovered an opportunity to reduce attrition by proactively addressing their room service issues.

## Reporting

Basic reports aggregate, summarize, and surface data. Most basic reports offer little interactivity and may require technical knowledge of databases and query language to customize. However, for those with the technical skills basic reports can generally be produced without investing in sophisticated analytic tools. These reports excel at displaying high-level trends over time. Reports are often used to track the most fundamental company metrics and therefore frequently support executive-level decision-making.

Basic reports provide an ideal starting point for your foray into understanding your site usage and customers. By establishing fundamental metrics to measure over time, you will be able to identify high-level trends in your E-business, plus validate your programs based on progress against these metrics.

Accordingly, choose metrics that will serve as meaningful benchmarks as your project progresses. Visits, visit duration, order, revenue, registration and conversion rates serve as good starting points. An important component of establishing the baseline metrics is to ensure that your organization has standard definitions for the measures you will be tracking. Additionally, recognize that it is unrealistic to measure everything. You need to selectively track the few key measures that will give you the most insight.

*Visits:* While visits aren't the Holy Grail they once were, they still provide great insight into your E-business. Growing visit numbers aren't necessarily good or bad. For example, if site visits are going up while revenue is going down, it's time to investigate.

It's easy to glean information about visits from Behavior Tracking data. Simply perform a count of SessionBeginEvent. To count the number of Unique Visits during a given time, group by user ID, then perform a count on Session ID. Note that anonymous users are not given a unique, permanent ID until they log on. If you're interested in seeing Visits tabulated only for Registered Users join SessionBeginEvent data with SessionLoginEvent using Session ID as the foreign key.

Visit Duration: Whether you're running a commerce or content site or an information portal, Visit Duration metrics can provide insight into the how engaging and efficient your site is. If you're a content site, increasing Visit Duration will normally have positive implications. On the other hand, if you're a service site, increasing visit duration could indicate a usability problem. To discern the length of an average visit join the SessionBeginEvent data with SessionEndEvent data using Session ID as the foreign key. Subtracting the BeginSessionEventEventDate from the EndSessionEventEventDate yields Visit Duration. Date information extends into milliseconds so you will be able to report this metric in as fine a detail as you desire.

Order & Revenue: Of course, if you're a commerce site, the number of orders placed and the corresponding revenue generated during a given time span are fundamental measures of your business. You can get at this data through either the BuyEvent data or ORDER and ORDER\_LINE data tables. In addition to the number of orders, you should be concerned about the average order size in terms of units and currency. This data can be found in the same sources. A count of Order IDs in the ORDER table yields the number of orders during a given time period. A summary of the quantity in the ORDER\_LINE table divided by the order count illustrated above will deliver the average units per order.

Registration: We're operating under the assumption that the more you know about your customer the better you can serve them. Accordingly, registration events represent instances of your customers willingly sharing information about themselves, and are therefore supremely important to E-Marketing success. To quantify registrations, count Session IDs in the UserRegistrationEvent data.

Conversion Rate: Due to common usage, the term conversion rate has developed multiple meanings. Normally, when used in the context of commerce sites, it means the number of orders/number of visits. As previously discussed, these elements are readily available through Behavior Tracking. Other analysts use it in a more general sense, such as the count of any desired outcome divided by the count of total customers presented with the opportunity to participate. Conversion rate is a valuable metric. If you are driving unqualified visitors to your site, your conversion rate will take a dive. Lower prices and it will zoom upwards. This particular metric increases in value over time. You can expect conversion rates to soar in peak buying periods. Comparing the rate to the same period in previous years makes the metric much more useful.

#### Derived Values

In addition to the basic measures we've just outlined, you can use basic reporting to extend into more advanced, formula-based concepts like Recency, Frequency, Monetary rankings (RFM), and Lifetime Value and Personalization Indexing. Some reporting metrics may clearly point to success when reviewed in isolation, yet actually represent adverse long-term effects unidentifiable with basic measures. For instance, sale promotions featuring heavy discounts will almost always show high levels of short-term sales and conversion rates. However, over time, consistent discount messaging may reduce the contribution of these customers to the long-term bottom line.

Producing derived or calculated values that apply formulas to sets of data elements is a proven strategy for extending the value of your core business metrics. Recency, Frequency and Monetary (RFM) and Customer Lifetime Value are two examples of

derived values traditionally used by marketers. Personalization Index is a more recently defined metric particularly relevant to this document.

*RFM:* A common approach to calculating RFM is to split your customer file into quintiles (1/5s) for each of the core values being calculated (Recency, Frequency, Monetary). All customers falling into a given quintile are assigned the same ranking, a number between 1 and 5, with 5 indicating the most recent, frequent and highest monetary values for those quintiles and 1 the lowest. By combining the quintile rankings for each calculation into a single value, you can distinguish your best customers (555's) from your worst customers (111's). In isolation, an RFM calculation can be a valuable tool for prioritizing delivery of services to your best customers. Tracking movement of customers across RFM values based on exposure to particular Campaigns provides additional insight into the long-term effectiveness of your promotions.

Customer Lifetime Value: Lifetime value is one of the best methods for evaluating customer value over time. Lifetime Value is the profit you can expect to receive from a customer discounted over time. If you increase Lifetime Value for all of your customers you are generating additional profits for your organization. This metric requires patience to be of value. It provides a powerful philosophical tool to educate short-term decisions as you build the data to make it useful over time. If you think you're ready to begin using Customer Lifetime Value to drive your E-Marketing decisions, we recommend reading Strategic Database Marketing by Arthur M. Hughes, which provides a detailed overview of how to calculate and interpret Lifetime Value.

Personalization Index: Personalization indexing helps marketers evaluate their data collection practices relative to their actual actionable use of customer profiles. By calculating the total number of profile elements used within the context of your E-Marketing Campaigns divided by the total number of profile elements collected, you can measure the effectiveness of both your data collection and the application of your user profiles for marketing purposes. You may choose to perform this measure on a subset of all data elements collected for profiling purposes to provide more relevance to the index.

The list above is in no way exhaustive. You know the drivers of your business. It might be downloads per hour. Or your site may be oriented toward reducing expenses by using E-Marketing to provide more cost-effective customer communications that augment offline programs. Make sure to develop metrics and benchmarks appropriate to your particular business model.

#### Multi-dimensional Analysis

Increasingly, simple reports are being displaced by more sophisticated tools making use of On-Line Analytical Processing (OLAP). OLAP tools enable non-technical users to

engage in directed discovery, or the slicing and dicing of data to uncover trends and verify hypotheses.

OLAP creates multidimensional views of aggregate data that optimize data exploration to create actionable information. OLAP transforms organizational data into dimensional information that conforms to the organization's business model. For instance, sales figures are often analyzed across time, geography, product, channel, and salesperson. With this structure in place, analysts are not limited to looking at data in a particular way, they can instead explore the data in a timely, consistent, and interactive manner at the level of aggregation they desire.

While OLAP tools can certainly perform simple roll-up aggregation, they can also execute more complex calculations such as percent of total, moving averages, and percent growth. In addition, OLAP is built with the sequential nature of time in mind. For most organizations, time is one of the most crucial elements in business analysis. OLAP tools understand that March follows February. Since time is often dealt with in a manner distinct from other dimensions, OLAP tools must make time analysis such as year-to-date or quarter-to-quarter comparisons intuitive and easy to perform.

#### Data Mining

Data Mining represents perhaps the most sophisticated level of E-Marketing analysis in practice today. Data mining analyzes large data sets to discover unforeseen relationships or patterns within the data. Unlike OLAP tools, whose top-down approach requires marketers to act on a hunch or from a hypothesis, data mining tools explore the data from the bottom up to discover unexpected patterns.

Data Mining is a complex subject and its complete understanding is outside the scope of this Fieldbook. However, it is illustrative to talk about how the technology is commonly used. Analysts employ data mining to answer questions such as propensity-to-buy, cross-sell and up-sell opportunities, retention forecasts, and complex customer segmentation.

In conclusion, it's easy to get caught up in paralysis by analysis. Just as in data collection, justify each metric and report you develop.

- How much time does the report take to create?
- What is the business value?
- What are the processing and storage requirements?

Some forays into analysis may do little more than satisfy curiosity while others will certainly provide invaluable guidance. It is important to continually evaluate the benefit that each form of analysis is bringing to your organization in actionable results.

As we turn our focus now to personalized customer communication, the business intelligence yielded from your analysis emerges as the catalyst that provides actionable answers to the most fundamental E-Marketing questions—answers that enable personalization to become reality.

# Section IV: Building Customer Relationships—Tools for Personalized Communication

It is through personalization that we see the pieces of the E-Marketing puzzle outlined throughout this document come together to form a complete vision for building customer relationships.

Returning to the corner store of old, it's easy to visualize the cognitive tools the shopkeeper used to provide personalized customer service. From memory the shopkeeper immediately identified returning customers, recalling historically relevant information about their previous visits. For new customers, the shopkeeper began the process of building a profile by questioning them on their needs and observing their shopping patterns to better serve them in the future. Intuitively, the shopkeeper categorized customers based on common characteristics or shared patterns of behavior, using knowledge of similar customers to extend relevant services at just the right time. These skills enabled delivery of personalized services and established the foundation for lasting relationships.

While purely human-based solutions can't scale to meet the demands of personalization in the age of millions of site visitors a day today's technology can. Everyday organizations worldwide are gaining competitive advantage by applying personalization technology in new and innovative ways. And though there is no single road to personalization success—one thing is clear—personalization is no longer a luxury dabbled in only by the most Web-savvy organizations. It is a necessity of doing business in the online world.

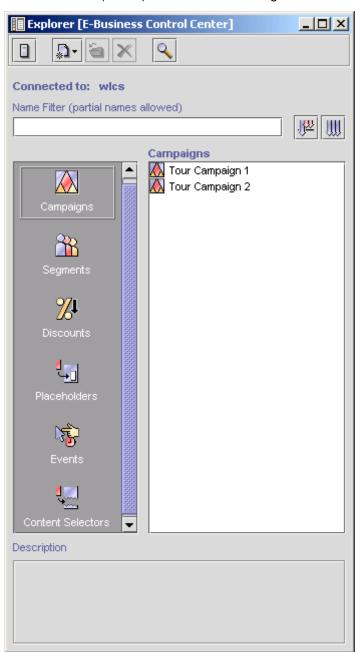
That said, it is not imperative that your initial personalization efforts immediately apply leading-edge sophistication. Even the most basic implementations can provide positive return on investment. As the Peppers and Rogers Group suggested in their preface, for any E-Marketing strategy you should start small, get it right, and then expand. Represented by the methods listed below, personalization can be implemented through a variety of methods representing various levels of complexity. We'll explore each of these methods in detail in the section that follows.

- Dynamic Content Generation
- Group Segmentation
- Targeted Segmentation
- Portals
- One-to-One, Closed-Loop Marketing

Before we delve into personalization methods, we'll first introduce the BEA technologies designed to enable personalization. With a fundamental understanding of BEA technologies in place, we can then examine specific approaches for aligning these technologies with your implementation strategies

### Tools for Personalization—The E-Business Control Center

For users of the BEA customer management platform, the E-business Control Center (EBCC) is the hub for building customer relationships. The EBCC centralizes functionality



delivered by WebLogic Portal, WebLogic Personalization Server, and the WebLogic Portal's Commerce and Campaign services into an easy-to-use graphical interface. (Note: WebLogic Portal is a product suite that includes portal, campaign, commerce, and personalization features.) The EBCC offers tools designed to give E-Marketers direct control over the development of personalized customer experiences.

Shown here, the EBCC Explorer pane includes up to six E-Marketing tools intended for use by both E-Marketers and developers. The specific tools and functionality enabled in your implementation will vary based on the BEA products you have licensed.

Here is an overview of each of the tools delivered by the E-business Control Center including information the primary user of each tool.

Campaigns: Enabled only for users of WebLogic Portal, Campaigns are designed to empower E-Marketers to create highly personalized customer experiences. Through Campaigns, E-Marketers can create Scenarios that trigger Actions including ads, e-mails, and discounts, based on specific user-behaviors on your site. Scenarios are targeted at specific

groups or customer segments. Additionally, Campaigns can associate Behavior Tracking events to enable Campaign specific reporting and analysis.

Segments: Activated in the EBCC for customers using any product in the BEA customer management platform. Segments provide a mechanism for E-Marketers to group or categorize customers based on common characteristics. Once defined, Segments can be targeted with relevant communications using other EBCC tools. The underlying technology for constructing Segments is an easy-to-use plain-English rules editor. It draws upon a combination of profile elements from the UUP as well as general conditions, such as time, to uniquely distinguish groups of customers.

Discounts: Discount functionality is available in one of two forms to EBCC users. Discounts provide E-Marketers with the ability to extend a variety of pricing offers to customers at check out. Discounts can be applied to individual items, sets of specific items, or total orders, and can take the form of a percentage, total amount off or fixed price. Stand-alone discount functionality is available to everyone using the E-business Control Center. Stand-alone discounts apply discounts globally to all visitors to your site at the product, product-set, or order level. Campaign discount functionality is included only for users with WebLogic Portal. It enables discounts to be targeted at specific customers.

Placeholders: Available to all EBCC users, Placeholders define locations on your Web site where personalized content can be displayed through the use of content queries. To create a Placeholder, developers must embed tags in Web pages to specify the exact locations for content display. Their general descriptions and the supporting content queries are defined in the EBCC using the Ad Search tool. Once tagged and defined, Placeholders provide an easy method for E-Marketers to independently control the delivery of content throughout their site. This is done by using the Ad Search tool to construct content queries to retrieve personalized messaging. Each Placeholder can include multiple content queries, which retrieve content from the content management system for display based on criteria controlled by the E-Marketer. Each content query can be weighted against other queries contained by the Placeholder to determine display frequency relative to other content. Campaign users have the additional capability to target delivery of content within each Placeholder.

Events: Available in all products and introduced in Section I, Events form the foundation for Behavior Tracking, which provides a mechanism for tracking customer activities on your site. If E-Marketers identify a need to record and monitor customer activities not covered by the events available out of the box (see pages 20-22 for a complete list), developers can create new event types and embed event triggers within your Web site. These events are then registered with the Event tool in the EBCC.

Content Selectors: Also available to users of all products, Content Selectors provide a mechanism for E-Marketers to develop queries that access the content management system under a specified set of conditions to retrieve documents to display on specific pages of your Web site. A developer must then modify the Web page to effectively render all the content retrieved. While Content Selectors deliver functionality similar to Placeholders, Content Selectors are better suited for retrieving and displaying multiple pieces of content that meet a given set of criteria. Actual content rendering requires developer support. On the other hand, Placeholders are more structured and better suited for easily presenting a single piece of content on a page without continued developer support.

So how do these tools fit together to deliver personalization? The answer varies depending on the products you have installed and the methods you are prepared to use for implementation.

### **Dynamic Content Generation**

In the most fundamental approach, personalization technology can be used to move beyond static site content, to enable dynamic page generation. As we detailed in Section I, a basic strategy for engaging customers who visit your site is to provide them with fresh, ever-changing content. Gone are the days when re-purposing your corporate brochure as static, online content represented a legitimate web presence. Today customers expect to find fresh content when they make repeat visits to your site, and they are unlikely to return if they can't regularly experience something new.

Placeholders provide E-Marketers with an easy mechanism for updating site content without ongoing developer support. You can work with your development team to use Placeholders to set-up locations for content display throughout your site. Once defined and tagged on pages by your development team E-Marketers can construct content queries to rotate content into Placeholders, without developer involvement. Because each Placeholder can support multiple content queries, you can easily use the Ad Search tool to build many queries that rotate site content to keep messaging fresh for visitors.

E-Marketers can also use Placeholders to test content variations to evaluate which versions most effectively influence customer behavior. Because Placeholders work with Behavior Tracking Events, the content display and the content the customer clicks can generate Behavior Tracking data. E-Marketers can rotate multiple versions of content equally within a Placeholder, and then evaluate the Event data with their analytics package to determine which creative produces the most desirable customer response.

Because a single Placeholder can support multiple competing queries (each defining unique content displays) you'll need to develop business processes to guide prioritization

for delivery of competing content within each Placeholder. This is especially true if you have multiple users working within the EBCC to define priorities for content delivery. Within the Placeholder tool, you can set a content priority, which will weight the display of that content relative to all other content competing for that space. It is not possible to ensure that a given priority overrides all others for a specific Placeholder in all instances. It is up to you to determine the right business process to govern prioritization.

### Segmentation

While dynamic content is a good starting point for E-Marketers, matching that content with specific segments of customers based on their characteristics or site behaviors is a far more powerful tool for building personalized customer experiences. Just as organizations use a diversity of general approaches to personalization, customer segmentation is also implemented using a wide variety of methods of differing levels of complexity.

#### Group Segmentation

For many organizations segmentation is centered on known groupings of customers who have historically had a unique business relationship or a set of specific customer needs

(i) HINT: Content management systems are essential. The more refined your segmentation, the greater the need for targeted messaging, resulting in more versions of content and therefore increased requirements for efficiently managing that content. Given the wide range of content management solutions implemented by BEA customers, and our understanding of its importance to overall E-Marketing success, we designed the BEA Customer management platform with a service provider interface that allows you to easily plug your content management solution of choice into our personalization platform.

that warrant personalized content. For example, many international organizations offer customers the opportunity to customize site content based on language or nationality. WebLogic Personalization Server includes a basic framework that enables developers to easily create multiple versions of a site based upon large groupings of customers.

For technical detail on creating localized applications with internationalization tags, go to: <a href="http://edocs.bea.com/wlp/docs40/p13ndev/i18n.htm">http://edocs.bea.com/wlp/docs40/p13ndev/i18n.htm</a>

## **Target Segments**

Throughout this Fieldbook we've introduced many concepts that are key to differentiating customers beyond known groupings. We've discussed capturing profile data and adding it to the UUP. We've defined RFM and lifetime value calculations. We've explored using advanced analytics to validate hypothesis with OLAP tools or discover unforeseen patterns uncovered by data mining tools. These methods for customer differentiation form the cornerstone upon which you'll build your personalization.

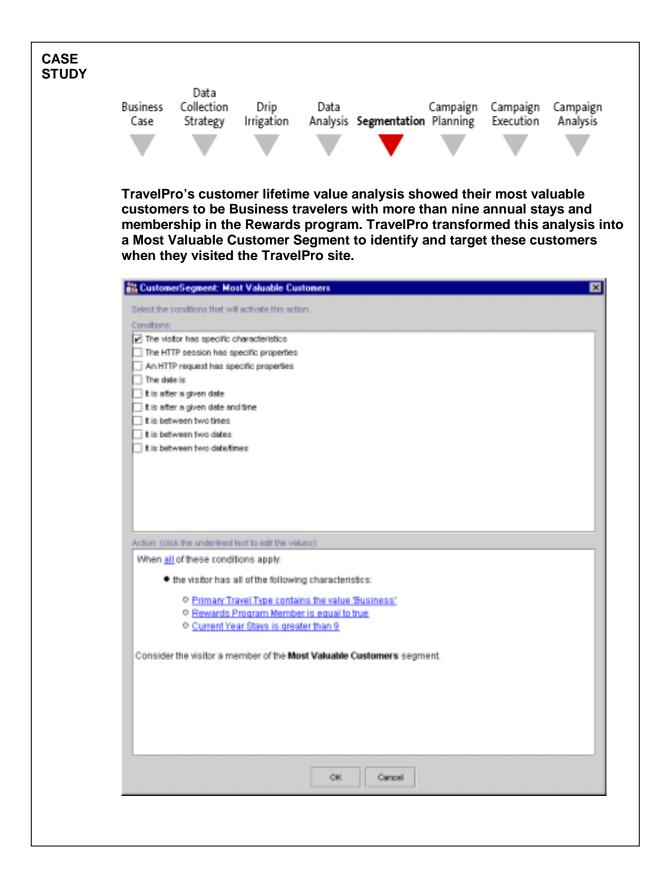
It's all right if your initial personalization efforts are basic, such as splitting visitors by gender to deliver relevant content to men and women. Obviously, even this simple split can only occur if you have accurately captured gender in your customer profile. And by continually tracking information on how men and women are behaving on your site, your profile will grow, and with it the opportunity to improve your targeting.

As you iteratively refine your analytic methods and your understanding of your customers, distinct patterns of customer behavior and distinguishing customer characteristics will emerge. You'll be in a position to implement strategies outlined earlier in this Fieldbook to calculate customer value indicators and associate customers with specific lifecycle phases. You'll uncover logical groupings of customers around which you can design your personalization strategies—Customer Segments.

The underlying business logic that emerges from your analysis to define segmentation is transformed within the personalization system into rules. Rules are used to identify and qualify site visitors based on specific conditions or distinct sets of characteristics and site behavior. Once Segments are defined, they can be used by the personalization system to trigger delivery of the right content, to the right customers, in the right place at the right time.

WebLogic Personalization Server customers can use the combination of Segments and Content Selectors to target the delivery of content to specific groups of customers. This process will require involvement of both the E-Marketer and the development team. However once implemented, you can easily use Content Selectors to feed new content into pages simply by updating your content management system with new content that meets the criteria specified by your Ad Search or content query.

This process begins with the Segment tool. This tool allows E-Marketers to define rules that classify and identify customers when they visit your site using characteristics from the UUP, HTTP session properties, or time. Ideally, the underlying rules that define your Segments are driven by information gleaned from your analysis. Segments can vary in complexity from simple groupings, to more refined categories that may incorporate multiple qualifying conditions or a derived value calculated off-line and stored in the UUP.



Next, you can use a Content Selector to associate this Segment with a category of content including text, links, and images returned by a content query. After constructing the Segments and Content Selectors, you'll need to work with your development team to define exactly where the content is displayed and how it should be rendered on the page.

With the Content Selector defined and implemented into the page, visitors who meet the criteria defined by the Segment will experience personalized content. Updating the content on that page becomes as easy as updating your content management system with new materials meeting the criteria defined by the Content Selector's content query.

#### Portals

WebLogic Portal enables personalization of site content through portals.

Internet portals are a key part of many E-business applications. Portals provide an entry point to the Internet as well as value-added services such as searching and application integration. WebLogic Portal allows you to quickly assemble both business-to-consumer and business-to-business portals.

Intelligent portals can act as tour guides to points of interest and can be tailored for individual user preferences. Some portals concentrate on collecting and delivering specialized areas of information such as stock trading and finances, emerging technologies, or corporate information.

Internet portals are an efficient way to exchange large volumes of information with large groups of people. From the user's perspective, most portals are organized as a hierarchical Web site where the main page provides links to a set of pages that provide a more detailed view of the information.

Static portals, like many corporate home pages, provide a standard set of information to everyone who visits the site. In contrast, dynamic personalized portals, where the information presented may differ based on who is viewing the portal, represent a far more efficient and targeted way to do business. Well-known examples of dynamic portals include www.amazon.com, www.ebay.com, www.excite.com, and my.yahoo.com.

The tools for foundational portal development are not a part of the EBCC, and the overall portal development process is outside the scope of this document. If a portal framework makes sense for your organization, see

<u>http://edocs.bea.com/wlp/docs40/portal/index.htm</u> and work with your development staff to construct a strategy.

Once the portal foundation is established, you can use the EBCC tools to deliver personalized content within the portal framework.

### One-to-One, Closed Loop Marketing

The ultimate vision for personalization is to enable organizations to conduct ongoing one-to-one dialogs with their customers. Dialogs that are founded in an understanding of unique customer characteristics, built on insight gained from previous interactions, and relevant to the context of current time and customer events. It is through one-to-one dialogs that organizations can truly develop lasting and profitable customer relationships. The campaign services in WebLogic Portal form the foundation for building and optimizing customer dialogs.

While the core WebLogic Personalization Server tools clearly provide a powerful set of functionality for delivering personalized content to your customers, the campaign functionality included in WebLogic Portal adds to the EBCC in two beneficial ways.

First and foremost, WebLogic Portal gives E-Marketers the ability to go beyond delivery of personalized content to develop personalized customer experiences. With WebLogic Portal, you can construct Scenarios, which trigger Actions based on user initiated behaviors. Scenarios enable you to develop an ongoing dialog with customers. Unique to WebLogic Portal, Scenarios incorporate multiple forms of Actions, enabling communication with customers through ads, e-mail, and targeted discounts. They also provide a mechanism for responding directly to customer activities as they occur on your site through the use of real-time events.

The second way WebLogic Portal extends WebLogic Personalization Server functionality is by reducing E-Marketers dependence on the development team. WebLogic Portal provides E-Marketers with tools that streamline the personalization process and enable direct control over how, when, and to who personalized content is displayed on their Web site.

As we drill down into the details of WebLogic Portal, we'll simultaneously explore the broader strategic E-Marketing objectives that drive the implementation of this tool. For decades, marketers have practiced the iterative process of **planning**, **executing**, **analyzing**, and **refining** marketing programs. The continuous cycle known as closed-loop marketing is a proven strategy for optimizing performance. While the science of closed-loop marketing evolved primarily in the offline world, it is the online world that offers closed-loop marketing Nirvana. E-Marketing replaces expensive and slow print processes with affordable and near real-time publishing capabilities. Immediate response and enhanced tracking enable closed-loop measurements that are unachievable in the offline world. Implemented correctly and strategically, all this means better, more targeted customer communications that yield strong customer relationships. It is through the context of the closed-loop marketing process that we'll explore the process for using WebLogic Portal to build customer relationships.

### Campaign Planning

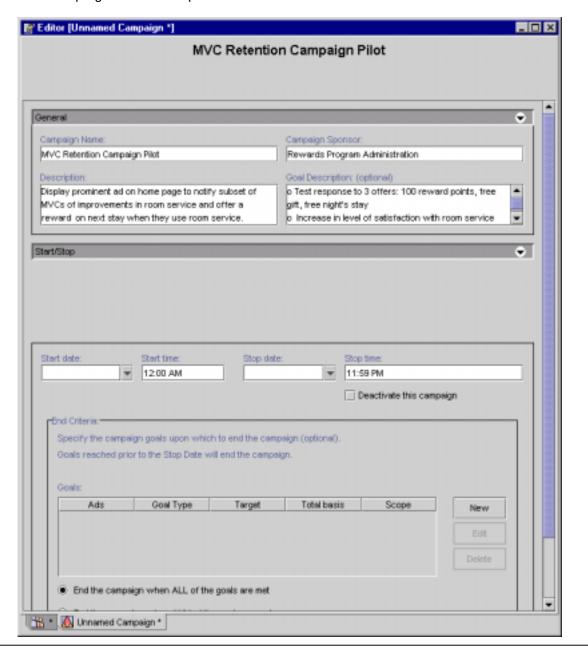
Most E-Marketers will plan their Campaigns within the context of a specific marketing strategy. Outlining the strategic objectives of the Campaign and defining the specific metrics used to evaluate success is the first developmental step. Are you trying to acquire new customers? Engage repeat visitors? Or retain your best customers by delivering enhanced services?

The campaign services in WebLogic Portal provides a framework for documenting your strategic Campaign details including definition of sponsor, general description, objectives, and Campaign start and stop criteria, which can be date-based or goal-based or both.

### CASE STUDY



Given the impact poor room service was having on customer attrition, TravelPro modified their room service program to enable staff to identify and prioritize room service requests coming from most valuable customers. With their room service problems resolved, TravelPro initiated an online campaign to promote room service to most valuable customers when they visited the TravelPro Web site. This retention program was one specific tactic used to reduce customer attrition.



As the strategic pieces of your plan fall into place, you'll need to plan the more tactical marketing elements of your Campaign by answering questions like:

(i) HINT: Using standardized naming conventions when entering Campaign planning data can have significant benefits for your backend reporting by providing supporting metadata for integration with your reports. For example, if you always begin your promotion names with Campaign type (up-sell, cross-sell, retention, and so on) you'll be able to roll-up or sort by this standard to easily group and analyze promotions of a given type.

- Whom should I target with this Campaign?
- What offers will they respond to?
- What messages most effectively convey this offer?
- Where should I communicate this message?
- What communication methods do the target customers prefer?

The answers to these questions relate directly to functionality available in the E-business Control Center and will therefore drive your Campaign execution.

#### Campaign Execution

To execute Campaigns, you'll utilize many of the same tools we outlined in our previous discussion of personalization methods.

- Segments define your target audience.
- Discounts are one form of offer.
- Your Content Management System will store your key messages.
- Placeholders or Content Selectors form the locations for message delivery.

Relative to WebLogic Personalization Server alone, WebLogic Portal simplifies and refines the use of these tools through Scenarios. Scenarios pull all these pieces together, enabling you to deliver the right offer and message, to the right customer, in the right place at the right time.

A Campaign consists of one or many Scenarios. For each Scenario, you'll utilize Segments to target specific Actions at groups of individuals based on their interaction with the site. Actions are delivered in the form of an ad, an e-mail, or a targeted discount. The Scenario builder tool integrates with EBCC tools like Placeholders and Discounts to

dramatically simplify the process of delivering personalization. For example, when specifying an Ad Action, the system prompts you to specify a specific content item, Placeholder, and ad priority during set-up. This integration not only simplifies the process for an E-Marketer but it actually enhances the Placeholder functionality by enabling an E-Marketer to target delivery of content within a Placeholder.

You can specify your target audience by assigning Segments to a Scenario, to specific Actions within a Scenario, or to both a Scenario and Actions within that Scenario. By enabling Segment definition at each level you can chain together Segments across Scenarios and individual Actions. This means you can progressively narrow your targeting without having to script new or more complex Segments.

If your Scenario is targeting a single Segment, you would typically associate that Segment at the Scenario level rather than the Action level. This gives you the ability to add multiple Actions without having to define the Segment multiple times.

Scenarios also give you the ability to refine the delivery of your Actions beyond your Segment criteria by applying additional qualifying conditions as triggers. At the Action level, these qualifying conditions include real-time site events, which are incredibly

(i) HINT: When you set-up a new Action, you'll be prompted to define the conditions used to trigger that Action. You should always use an event-based qualifying condition, not only to refine your targeting, but because the system performance is optimized by having a specific event trigger the Action rather than having the Action triggered solely by the Segment criteria.

powerful from a marketing perspective. Just as the corner storekeeper watched customers shop the store and took action to serve customers at appropriate times, within Scenarios you can trigger Actions based on real-time events to enable an ongoing dialog. Evoking Actions with real-time triggers provides an automated mechanism to respond directly to customer activities on your site. If a visitor clicks a specific ad, you can respond by sending an

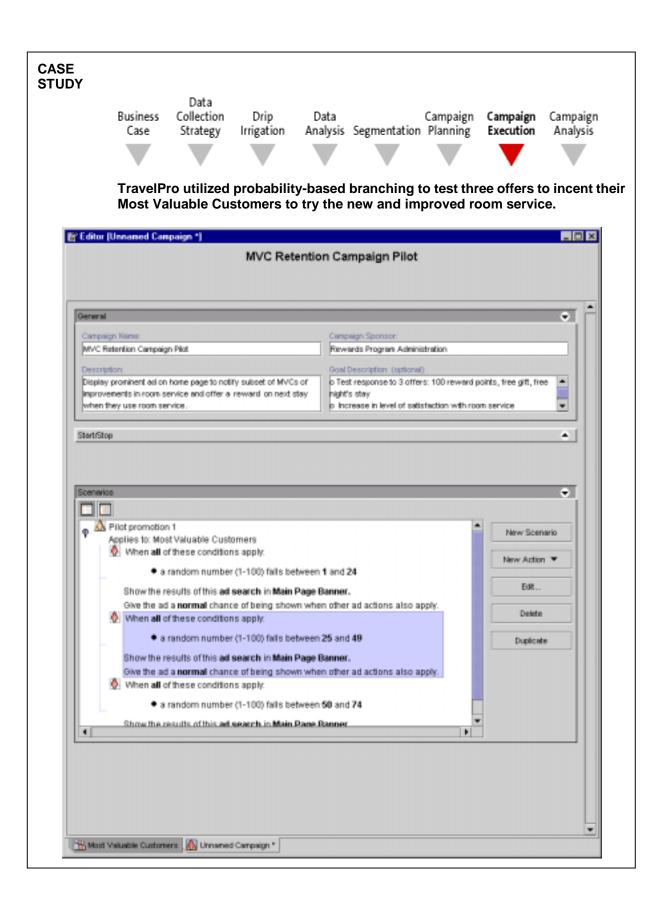
e-mail or by presenting another ad that builds on the original message. If they don't click, you can respond with a totally different Action.

#### Testing Campaigns

Data and analysis are crucial to the execution stage of closed-loop marketing. You will often want to test and measure variations in Campaigns before rolling them out to a broader audience. By running your Campaign variations to everyone in a Segment for a limited test period or by targeting a subset of a Segment, you will be able to analyze early response and optimize Campaign performance for the remaining customers who meet the Segment criteria.

When testing, you may want to limit the number of Campaigns targeting a single Segment. The more Campaigns that target a specific Segment during a given time, the more difficult it is to measure the influence of any one Campaign.

Probability-based branching is a feature you can use to trigger an Action, which provides a useful mechanism for testing Campaigns. By using the probability-based branching feature you can test your Campaigns against a subset of any segment. Within the EBCC, you enable probability-based branching by selecting the condition: *A random number falls within a given range*. When you specify this condition, the system assigns a random number between 1 and 100 to every visitor targeted by the Campaign each time the scenario is fired. You can then assign different actions to any numeric range to target a specific percentage of customers. For instance, you may show Promotion A to customers assigned numbers in the range of 1 through 5 (5%) and Promotion B to customers assigned 6 through 10 (5%). To judge the effectiveness of each promotion you can look at how many times promotional content was displayed, clicked on and, through association with the Session IDs, see how many orders were generated in the same session. Based on these numbers, you will be able to make an informed decision as to which promotion to roll out to the entire segment.



Within the WebLogic Portal tool there can be many different ways to combine Campaigns, Scenarios, and Actions to produce a given user experience. While this flexibility is beneficial, the approach you choose will have specific implications on your ability to analyze performance on the backend.

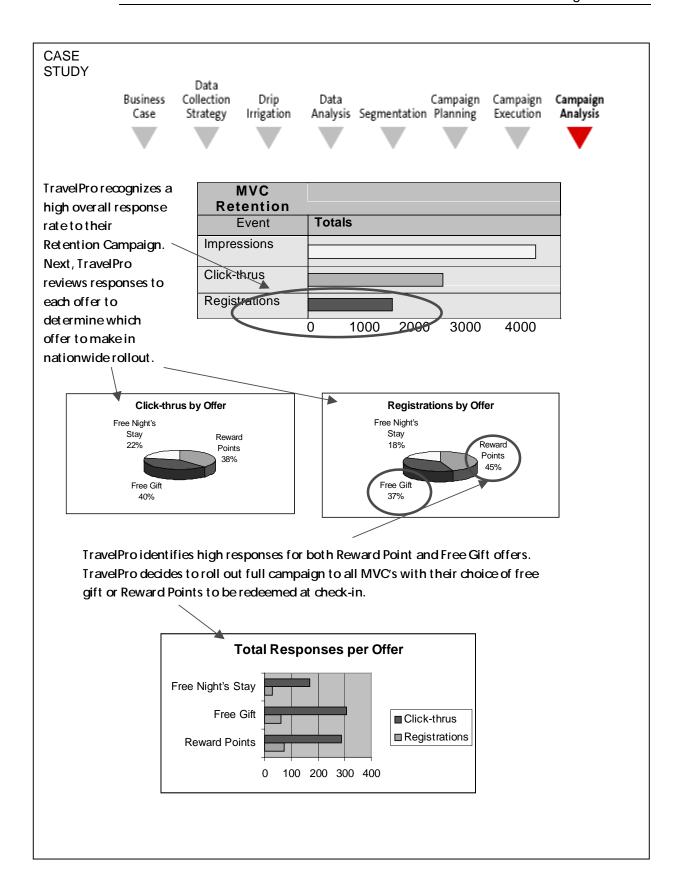
As noted earlier, Campaigns provide enhanced Behavior Tracking that specifically associates events to the Campaigns and Scenarios to which they apply. This provides the foundation for closed-loop measurement. As a general rule, when conducting a test, you should construct a Scenario for each individual action that you want to evaluate on the back-end. Because Behavior Tracking events are only associated at the Campaign and Scenario levels, it may be difficult to evaluate performance of multiple Actions if they are grouped under a single Scenario because no Scenario-specific event association exists to distinguish which Actions produced which results.

This leads us directly into the Analysis phase of the Closed-loop process.

#### Analyzing Campaigns

We have covered much of the analysis component in previous sections. Analysis permeates the entire E-Marketing process and requires both discipline and patience to fully deliver on the potential return.

There are an enormous number of factors that influence Campaign performance including: offer, message, audience, time, type of Action, and so on. To effectively analyze your Campaigns, it is important that you methodically isolate specific campaign variables as a part of your testing and analysis strategy. By keeping all other factors constant, and varying a single Campaign element for the purposes of your test, you can accurately measure the effect of that specific variable on Campaign performance.



#### Campaign Refinement

Obviously, data analysis is the primary driver of the Campaign refinement process. The process is iterative. Of course, your customer and the space in which you operate will continue to change in this dynamic environment. Data analysis will not replace the marketer. It is a tool to help you do your job better. You may let algorithms choose what to promote to customers, but you're probably not ready to let them tell you to abandon your core business.

With the campaign services provided by WebLogic Portal, you have the tools to embark on a process of optimizing site performance by providing increasingly relevant customer communications that build lasting customer relationships through one-to-one dialogs.

## In Conclusion

In conclusion, a final bit of commentary on the meaning and measurement of *success*—a word we've used liberally throughout this Fieldbook.

As we stated earlier, E-Marketing success is defined by your ability to build long-term customer relationships that bring unique value to your customer and sustained profitability to your organization.

BEA's Customer Management Platform provides one important piece of the overall framework for success. It is up to you to piece together the unique combination of technology and business process enhancements that can lead your organization to E-Marketing success. From this Fieldbook, evaluate the potential effect each recommendation holds for your organization. Prioritize resources and assess the cost/benefit each task represents. Commit to those that make sense for your organization. Together these tasks form your blueprint for success.

Before you begin building, take the time to define the current state of your E-Marketing through a set of baseline measurements. With this baseline in place, you can monitor and regularly report on incremental improvements. This will help you demonstrate the increasing value you are bringing to your E-Marketing program.

You must be aware that E-Marketing needs can easily be subsumed by more operational goals without firm commitments throughout the organization. Be prepared to consistently serve as a champion for the effort to understand your customer. If you're reading this, we assume you're already sold on the value of E-Marketing—not everyone will be. As the evangelist for this process, sooner or later you'll be asked for a project return on investment. Executed correctly, the information should be at hand to justify the time, effort, and money.

# Summary

by Peppers and Rogers Group

Initiating or redesigning your E-Marketing program is a significant effort. It should not be initiated as a standalone effort but as a strategic corporate initiative. An effective E-Marketing program is part of a larger strategy that in addition to technology incorporates people, process, and knowledge elements.

Prior to beginning an E-Marketing program, consider the readiness and alignment of your organization. Here are some key considerations that will help you determine your organization's readiness for E-Marketing:

- 1. Do you have executive sponsorship? Is your sponsor at the right level to be able to address resource, budget, and strategic issues? Does the sponsor understand the big picture? In other words, does the sponsor understand the iterative, learning aspects of E-Marketing and expect to see incremental improvements and return over time as opposed to immediate payback? The return on successful E-Marketing investments is substantial, but requires a significant upfront investment in technology, time, resources, and dollars.
- 2. Does your organization have key strategic goals that have been defined and that are addressed in your E-Marketing plan? Are other corporate initiatives in line with your E-Marketing efforts? Do your E-Marketing plans deliver a message consistent with corporate branding and messaging?
- 3. Do you have the ability to form a dedicated, cross-functional team committed to the value of business intelligence and enhanced, consistent customer communication? Remember that the customer sees one company regardless of the way they choose to interact your organization. Make sure you are presenting the customer with a consistent message.
- 4. Have you identified internal business processes that must be in place to support the implementation of E-Marketing programs?
- 5. Is the organization set up to effectively support E-Marketing efforts? Are there established rules and standards for sharing customer data throughout the organization?
- 6. Have you established baseline measurements to evaluate the success of E-Marketing programs and initiatives? Does the plan address how you'll monitor and refine these metrics over time? Baseline metrics and the ability to measure

success is one of the most important factors that define successful E-Marketing programs.

- 7. Have you completed adequate research to support the specific plans for acquiring and retaining customers? For correctly identifying and targeting customers? If not, you are jeopardizing the success of your E-Marketing efforts. It is very expensive and provides no long-term benefit to acquire thousands of new customers, unless the new customers have the potential to become regular, loyal customers.
- 8. Does your E-Marketing plan include ways to document and communicate both successes and failures to all program stakeholders?
- 9. Is your plan based on what your customers value, instead of what you want to sell?

As you get started, remember that your E-Marketing program will evolve over time. Your customer base will change and grow, customer needs will change as customers move through the customer lifecycle, and your product and service offerings will change to meet your customer needs. Many of the changes will be driven by your E-Marketing program as you begin to know more about your best customers' needs and develop

campaigns to reach these customers with personalized communications. Take the time to devise your plan carefully and start with small, positive steps. Pilot initiatives wherever possible. Each step should build on the previous step and provide you with new insights into customer value and needs. Document and communicate your learning about customers and program effectiveness to ensure the learning is leveraged



throughout your organization. And, just as in an offline marketing campaign, recognize that your E-Marketing program involves an ongoing process that includes planning, execution, analysis and refinement. As the picture above illustrates, the E-Marketing cycle requires a tight and dependent relationship among E-Marketing programs, campaigns, and analytics.

With each campaign, you gain new insights into customer behavior, value, and needs. Using reporting and analytic tools, you are able to take the insights and identify ways to increase the effectiveness of your overall approach and E-Marketing strategy. Each

personalized response and communication becomes part of a carefully crafted E-Marketing program that continually allows you to improve how you:

- Identify customers.
- Define profiles of your best customers and the customers with the potential to become your most profitable long-term customers.
- Learn about the explicit and implicit needs of your customers.
- Personalize communications and interactions with your customers based on what they value.
- Retain and grow your most profitable customers and establish a competitive advantage.

The power of E-Marketing is its ability to be able to turn mass amounts of data into individualized and personalized communications and treatments for larger numbers of customers than ever before. It provides the ability to understand and predict customer needs and be able to react to those needs before your competitor. Unfortunately, the reverse is also true. Reaching large numbers of customers can also mean that if you provide a poor customer experience through your E-Marketing efforts, you can lose customers faster than ever before. The BEA E-Marketing Fieldbook recognizes the challenge that goes along with the power of E-Marketing and provides you with a jumpstart to effectively leverage the capabilities to meet your customer goals and develop true competitive advantage.