

# Optimization through Cross Selling

## Increasing Revenue and Profitability through More Relevant Cross Sell



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# Table of Contents

<b>Executive Summary</b>	<b>1</b>
<b>Optimization through Cross Sell</b>	<b>2</b>
<b>What to Look for in a Solution</b>	<b>3</b>
<b>Efficiency through Automation</b>	<b>3</b>
<b>Act as a Virtual Skilled Salesperson</b>	<b>4</b>
<b>Balance Automation with Transparency and Control</b>	<b>5</b>
<b>Deliver Offers in the Customer’s Preferred Client</b>	<b>5</b>
<b>Integrate with Web Analytics to Close the Loop</b>	<b>6</b>
<b>Coremetrics Intelligent Offer Meets the Criteria</b>	<b>7</b>
<b>Rich Data Foundation</b>	<b>7</b>
<b>Advanced Recommendation Technology</b>	<b>7</b>
<b>Easy Previewing and Tuning</b>	<b>8</b>
<b>Closed-loop Testing</b>	<b>8</b>
<b>Recommendations in Multiple Contexts</b>	<b>9</b>
<b>Coremetrics Intelligent Offer in Action</b>	<b>9</b>
<b>BeallsFlorida.com</b>	<b>9</b>
<b>Office Depot</b>	<b>9</b>
<b>FootSmart</b>	<b>9</b>
<b>Conclusions</b>	<b>10</b>
<b>About Coremetrics</b>	<b>11</b>

## Executive Summary

Today's consumer has a staggering number of options. This can be both empowering and overwhelming to the consumer. To the online merchandiser, these choices can make the task of matching potential buyers to products and services all the more challenging. Online merchandisers have examined and addressed this challenge by building intuitive and streamlined site catalog hierarchies, refining onsite, natural, and paid search and attempting to optimize the online experience in a variety of forms.

Although these techniques assist in the discovery of particular products, they fail to link this single search to the broader catalog of options for accessories, complementary products and services, promotional offers, or other items of interest.

Product assortments are continuing to grow, and the sites and channels delivering them are continuing to proliferate. Site navigation and search tools can no longer ensure optimal product exposure to site visitors. Cross selling methods, on the other hand, can expose site visitors to more products that may be of interest. Unlike navigation and search technologies that help people find products, cross sell methods help products find people.

For online businesses the opportunity is to optimize the product offering presented to customers in a way that achieves significantly increased revenues and profit while delivering consumers a stronger, more personal, more appealing online experience with an ecommerce provider. First-hand customer experience reveals that even the most sophisticated cross sell initiative can be improved through the combination of technology and best practices. This represents a clear opportunity for online businesses to work more closely and more successfully with customers that have already discovered and shown interest in your business.

Traditional product recommendation methods, many of which are manual, have many shortcomings:

Manual methods are limited because merchandisers have to spend hours poring over reports on cross sold items to make recommendations—a tedious and time-consuming process. As a result, manual methods do not scale well to large numbers of products, so merchandisers cannot include all products in their catalog. What's more, the reports are often based on limited data and don't provide full insight into cross sell activities, so merchandisers have to rely more on intuition than on actual data.

Automatic product recommendation technologies help somewhat, but they also have shortcomings:

- Recommendations are based on limited customer data, so they may not accurately match customer interests
- Recommendations do not automatically handle seasonality or adapt to the latest purchasing trends
- Traditional technologies do not automatically replace cross sells that “fall off”, such as cross sells of discontinued products, so merchandisers miss the opportunity to fully exploit web page real estate
- Perhaps most important, traditional technologies provide little or no flexibility in adjusting recommendation parameters, so merchandisers can't tailor them to meet their unique needs

Coremetrics Intelligent Offer™, an innovative, next-generation recommendation solution, eliminates the shortcomings of manual approaches and traditional technologies. It is unique in its ability to deliver offers based on rich customer context data, and to permit the merchandiser to preview and tailor the recommendations before committing them to the site.

This paper describes the need for increasing emphasis on cross sell and examines the criteria for an effective cross sell automation solution. It introduces Coremetrics Intelligent Offer, a solution that meets the requirements, and presents real-world examples of companies that are achieving compelling results with this advanced solution.

## Optimization through Cross Sell

Merchandisers have gained experience over the years and have made great strides in enhancing their ecommerce sites. Much of this effort has focused on better understanding the individual visitors and then tailoring the relationship with the visitor to maximize return on investment (ROI).

Merchandisers, retailers and other ecommerce providers have worked diligently to match the right product or service to the right person at the right time. Achieving this goal requires access to detailed customer data from multiple sources and the ability to match the corresponding solution to the right prospect or customer. The best option is simple, straightforward, affordable tools that can be tailor to meet the particular needs of their business goals. More than ever, ecommerce providers are looking to product recommendation technologies to provide a focused path for identifying and matching customers and offers of products and services.

Some early adopters of product recommendation technologies are wary because they have invested in high-cost, complex solutions that require in-depth knowledge to understand how the algorithms work. As a result, these merchandisers haven't realized an adequate ROI with these technologies.

Most merchandisers today include some form of cross sell on their sites. For the most part, however, the results still have not been encouraging. One of the main problems with recommendation solutions based on current technology is that the merchandiser has little or no control over how the solutions generate product recommendations. These solutions appear as a "black box." The merchandiser is instructed to deploy the solution, allow it to collect data for a period of time, and then let the system place recommendations on the site.

Without control over the algorithms used in these solutions, merchandisers cannot tune the solutions for their specific product mixes, merchandising methodologies, site shopping patterns, use cases, or user contexts. These solutions also lack the ability to tailor recommendations to specific business objectives such as recommending higher profit items, seasonal items or those items that have higher inventory levels. Yet merchandisers often require different recommendation approaches for their specific situations. For example, a merchandiser may want to place two recommendations on the same product page: one that is constrained to similar products and another that provides deeper, highly relevant cross-catalog item discovery.

Another problem with traditional technologies is that they do not give merchandisers the ability to preview the product recommendations being made. So even if they could fine tune the algorithm, they wouldn't be able to see the effects of their tuning on recommendations prior to going live with those recommendations.

Yet another problem is that traditional solutions make recommendations based on limited site visitor data. As a result, offers are not always effective because they may not be relevant. What's more, offers are limited to only a small subset of the total product catalog.

Clearly there is room for improvement in online cross sell. Analysts and market experts emphasize online cross sell as a key area of site optimization and recommend that ecommerce sites apply more resources and focus to it. Forrester Research says that virtually all sites can benefit from better cross sells. "Automating the process with help from numerous new vendors ... can reduce the inefficiencies that surround the current worst practice—handpicking cross sells."<sup>1</sup>

## What to Look for in a Solution

Even with these challenges, it's clear that leveraging the correct product recommendation strategy and solutions to optimize your online business can significantly enhance conversion rates, average order value (AOV), revenues, and customer loyalty. eCommerce merchandisers need to exercise care in selecting a product recommendation solution. They must choose a solution that permits them to take maximum advantage of the power of cross sell to meet business goals. This section presents key criteria that a cross sell solution should meet.

## Efficiency through Automation

Even in today's economic climate, today's consumer has a bewildering number of product choices. While this provides significantly more choice for customers, this can make the process of matching products to consumers all the more challenging. Taking the example of the music industry, consumers can, on a single site, search through thousands of selections in all musical genres from the most popular music of today to independent works by garage bands, classical masterpieces, jazz standards, country, and more. The list is nearly endless in size and variety.

The downside of this vast array of options is analysis paralysis. Consumers are so overwhelmed they can't make a decision. So in many cases, they withdraw and don't buy.

Without automation, a merchandiser can't possibly scale product recommendations to encompass the entire product catalog while also matching this massive catalog to all of the personal dimensions of their customer base. Manual processes just don't scale to handle the vast number of products and the variations in the types of offers today's merchandisers must offer. eCommerce sites typically have a limited number of people to make cross sell decisions. With resources often at a premium, the task of managing the large and rapidly increasing number of products in a catalog quickly becomes too great. Automation, leveraging today's innovative recommendation technologies, provides a more efficient and effective solution to this growing problem. It also provides a greater deal of sophistication to instantly match a nearly infinite set of combinations of products and individuals.

<sup>1</sup> *Five Immediate Opportunities for eCommerce Improvement*, Sucharita Mulpuru, Forrester Research, Inc., May 11, 2007. (Available at <http://www.forrester.com/Research/Document/0,7211,42341,00.html>)

## Act as a Virtual Skilled Salesperson

Many challenges found online simply do not exist in a brick and mortar store. Here the company can employ skilled salespersons that can quickly assess a customer's personal needs or likes and match these with their detailed knowledge of the inventory on hand. This quickly simplifies the task of, say, recommending a shirt to match a pair of pants the customer is considering, or an accessory that complements a smart-looking suit that the customer has selected.

Site categorization and onsite search tools are supposed to provide this same kind of assistance online. Unfortunately, traditional tools have done a poor job of helping consumers find the right combination of products. Consumers' "search costs" are too high and they aren't getting the help they need in their searches. They are not being presented with other products that may be of interest, such as new or unfamiliar products, and they are not being reminded of old favorites.

An effective product recommendation solution helps consumers overcome analysis paralysis by automating cross selling and playing the role of a virtual salesperson with knowledge and experience. The big opportunity lies in the depth of the catalog, so the solution must be able to present relevant offers for all products in the catalog, regardless of their number. By addressing the full catalog, the solution can increase revenues to the full potential of the merchant's product offering.

An effective solution enables merchandisers to address:

- Different types of offers, such as competing products, different brands of same product, and different models of same product
- Business goals and drivers, such as recommending higher margin items, seasonal items or those items with adequate inventory to satisfy demand
- Complementary products, such as a DVD player to accompany an HDTV and create a complete home theater system
- Product families, such as a belt that matches the color and style of a pair of shoes from a given manufacturer
- Accessories, such as a pump for inflating the rubber raft the consumer is buying
- Discovery products, that is, related products that may not be intuitively obvious to the merchant yet when shoppers see them, they like them and buy them. Example: cool style pants that go with a cool shirt that is not in the same product family
- Different user contexts, such as browsing a web site page, shopping with a shopping cart, and purchasing items at checkout

***“We knew Intelligent Offer would lift revenues. We just didn’t think it would provide this much lift. After the initial set up it runs by itself, constantly updating recommendations on our site based on new product introductions and changing customer interests. It’s substantially more hands off.”***

**Senior Manager, eCommerce  
Merchandising & Analytics,  
The Orvis Company, Inc.**

## Balance Automation with Transparency and Control

Automation without control can be dangerous. Traditional “black box” recommendation technologies operate under the assumption that one size fits all. Yet, each site differs in its mix of products and categories, business objectives, and customers.

Because fixed recommendation algorithms take a one-size-fits-all approach, they cannot be optimized to the requirements of any site in terms of that site’s product mix, the shopping use patterns exhibited by the site’s customers, and recommendation location such as product page or cart page. As a result, fixed algorithms do not provide the most relevant recommendations, so they deliver limited ROI. Often, fixed algorithms hit a performance ceiling early on, and, therefore, do not take maximum advantage of the company’s full product or service catalog.

An effective solution should permit the merchandiser to add human art to the science of optimizing the online presence through the product recommendation algorithm. To do so requires the ability to tune algorithms to the merchandiser’s particular environment. A preview feature is also essential because merchandisers can’t tune for the better without seeing what they’re tuning. A preview feature enables the merchandiser to view recommendations before they are placed on the site. With preview, the merchandiser can ensure that recommendations align with the practices and objectives of the site, or with the merchandiser’s goals; and dictate where recommendations are presented in terms of user context in the site experience.

## Deliver Offers in the Customer’s Preferred Context

Many customers prefer to shop in contexts other than online. These other contexts may include email, call centers, in-store kiosks, gift registries, and point of sale devices. Cross selling is just as important in these other contexts. Ideally, the same solution can be used across all sales channels. A highly effective product recommendation solution presents the same or at least similar offers to customers regardless of the channel they are using.

For many eCommerce sites, the email channel delivers a substantial portion of revenues. An effective recommendation solution enables sites to target relevant and timely email product offers to consumers based on their observed behavior while on the site. For example, the merchandiser may send out an email message presenting a promotional offer to visitors who recently abandoned a product in the cart. The offer might be for the abandoned product or a related product in the same category. This type of cross sell provides the opportunity to recapture a portion of sales lost through cart abandonment.

Call centers that support catalog sales can also benefit from cross selling. Call center solutions can present product recommendation screens to the call center agent during customer contact. These screens enable the representatives to simplify shopping for the customer and to increase AOV by permitting the representative to quickly make relevant recommendations. Cross sell items may include generic specials or close-out items that are not included in the catalog and, therefore, unknown to the customer.

Call center recommendations are complicated by the fact that call center customers are typically buying from a specific catalog. Consequently, unless they are generic specials or close-out items, cross sell items presented by call center agents must be in the catalog from which the customer is ordering. This allows the call center agent to direct the customer to specific pages in the catalog that describe the recommended products.

## Integrate with Web Analytics to Close the Loop

When product recommendation technology integrates seamlessly with a comprehensive web analytics platform, merchants benefit in two ways. First, they benefit from the ability to capture and maintain detailed visitor data that provides a basis for highly relevant recommendations. Recommendations aren't effective unless they are based on accurate, complete, and contextual data. Second, merchants benefit from granular, closed-loop measurement of cross sell performance, which means they can track the results of cross sell initiatives to test and optimize recommendations.

First and foremost, the web analytics solution must capture and maintain the right data. The right data is more than just summary data and more than just customer behavior data. The right data describes not only customer behavior but also the full context of every customer action, including:

- What the customer was doing when the action was taken—for example, browsing, shopping, or purchasing
- Where the customer was on the web site when the action was taken—for example, a product page or cart page

Historical data is also vital. The data must provide a complete history of customers' past actions. Historical data should include such information as products viewed in the same session; products viewed, shopped, and/or purchased in previous sessions; and purchase history.

Second, the web analytics solution must provide comprehensive analytics to leverage the data. One essential requirement is that the analysis permit segmentation of cross sell actions from non-cross sell actions—for example, separate customers who bought a product from a particular recommendation from those who bought the product directly, without recommendation. Segmenting cross sell results from non-cross sell results and comparing the results provides insight into cross sell impact on AOV.

Analytics should permit merchandisers to further segment and measure the results of recommendations in different contexts. For example, the merchandiser could analyze cart recommendations separately from product page recommendations; compare previous buyers seeing cross sell offers to new buyers seeing cross sell offers; and separately analyze people arriving from different channels and viewing cross sell offers.

Merchants can leverage analysis to optimize offer placement through insight into:

- Which pages deliver the best results—product or cart pages
- Which types of offers work best on which pages—does a competing product plus accessory offer or a discovery product offer work best on a product page?
- Which page layout works best, including such factors as the number of offers per page
- Where to place the offer—above or below the fold
- What format works best—horizontal or vertical

Analysis permits closed-loop testing and measurement of offer results—for example, setting up A/B tests to test offer placement and page layouts. Testing enables merchants to continually improve the site based on test results.



## Coremetrics Intelligent Offer Meets the Criteria

Intelligent Offer provides an advanced and tunable product recommendation technology that operates in concert with Coremetrics Analytics™. This industry-leading web analytics platform provides comprehensive contextual data capture and sophisticated analytics to leverage that data. With this powerful combination, merchandisers can automate and optimize recommendation relevancy and ROI.



*Demonstrated lift from installation of Coremetrics Intelligent Offer in Coremetrics Analytics Merchandising Report*

## Rich Data Foundation

Coremetrics Analytics observes and remembers every detail of every customer’s individual behavior—every mouse click on every page for every visit. It maintains this wealth of data in a Lifetime Individual Visitor Experience (LIVE) Profile.

The data provides not only customer behavior information but also the context of that behavior, including:

- Whether the customer was browsing, shopping, or purchasing at the time of each behavior
- The page on which each action occurred
- Which behaviors involved cross sell, permitting segmentation of cross sell activities
- What channels brought the visitor to the site

What’s more, Coremetrics Analytics tracks visitor behavior over time, remembering all actions in detail, right from the very first visit. The result is a complete history on each and every customer that permits the analysis of customers’ actions over time and in context.

## Advanced Recommendation Technology

Coremetrics Intelligent Offer applies sophisticated statistical analysis to LIVE Profile data, aggregating demonstrated customer preferences to derive four types of product affinities. Based on these affinities and their relative weights, Intelligent Offer creates a file of product recommendations that can be exported to the merchandiser’s eCommerce platform.

## Easy Previewing and Tuning

Like all Coremetrics solutions, Intelligent Offer makes it easy for users, even beginners, to get started quickly. Default settings for the recommendation algorithm are based on best practices for two user contexts, the product page and the cart page. As shown in Figure 1, the merchandiser can easily preview the recommendations on a graphical display. What's more, the merchandiser can tune the algorithm using the same window, changing the affinity weighting factors by simply moving graphical sliders and immediately seeing the effect on recommendations. No statistical expertise is required.

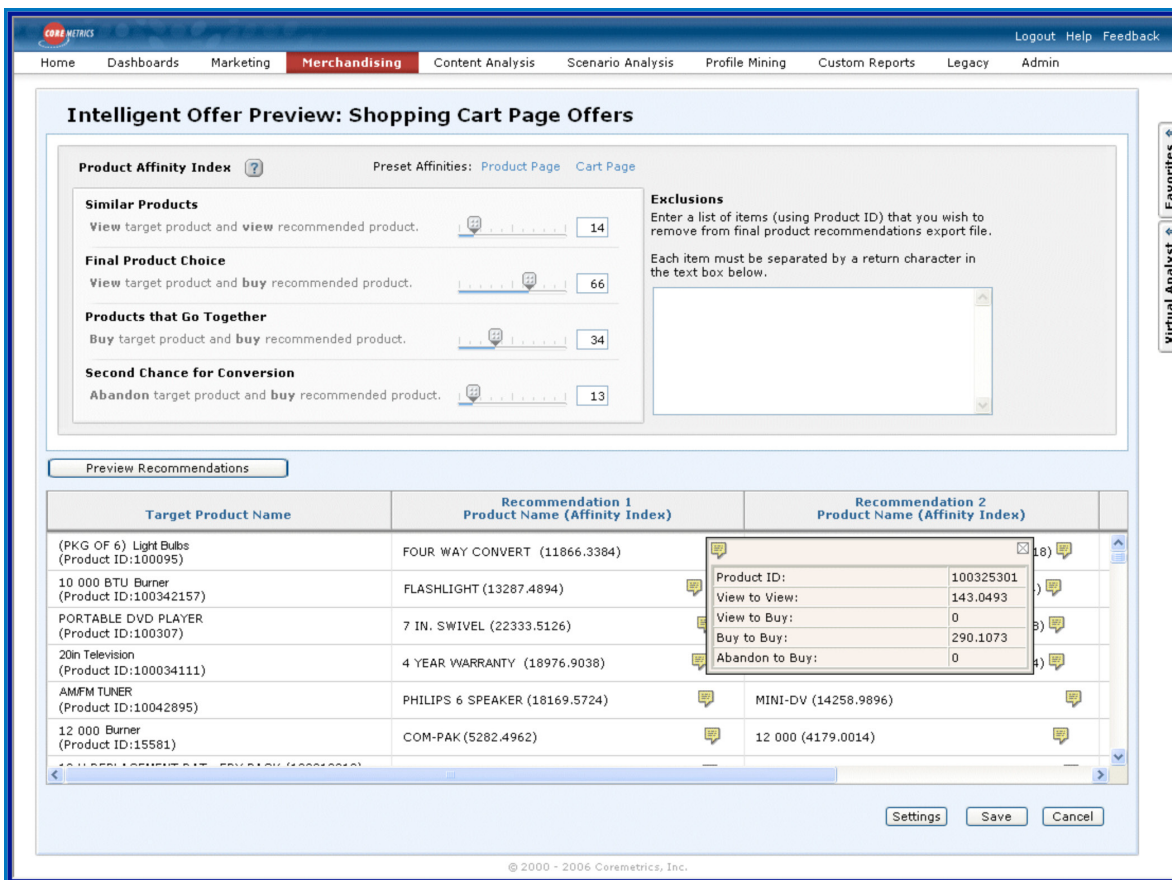


Figure 1: Previewing and tuning with the Product Affinity Index

Merchandisers can further tune the recommendations by deleting certain items, such as out-of-stock and low-margin products, from the recommendation file. They can also schedule automatic export of the file to accommodate seasonal offers.

## Closed-loop Testing

Coremetrics Analytics provides extensive and sophisticated analysis of data to help merchandisers assess cross sell results. Merchandisers can perform segmentation analysis for tracking cross sell activities, using metrics that are meaningful to them. Segmentation reports help merchandisers compare cross sell with non-cross sell activities.

Cross sell measurements can be used to gain insight into the results of cross activities, such as through closed-loop testing. For example, merchandisers can measure the increase in cross sell browsers as a percent of total, the revenue value of a cross sell customer, and the incremental revenue lift due to cross sell.

## Recommendations in Multiple Contexts

Intelligent Offer provides cross-channel capabilities to further enhance the effectiveness of merchandising efforts. Through Coremetrics LIVEmail™, which provides seamless integration with leading email providers, merchandisers can extend recommendations to targeted email. They can, for example, identify “abandoners” who added a product to their shopping cart but did not buy it, and follow up with offers for related products, or with informative, relevant email content about related product categories. They can also send up sell offers within a specific period of time after an initial purchase.

## Coremetrics Intelligent Offer in Action

Here are three real-world examples of how Coremetrics Intelligent Offer has helped organizations increase the effectiveness of their cross sell efforts.

### BeallsFlorida.com

BeallsFlorida.com partnered with Coremetrics to take advantage of the automated, highly configurable, cross selling capabilities of Intelligent Offer. The solution develops relevant offers, scaling the offer-generation process while measuring and improving performance. BeallsFlorida.com implemented Intelligent Offer right out of the box, added a few rules, then just let it run. The solution delivered an almost immediate increase in sales and positive ROI. An Intelligent Offer session results in conversions at a rate that is 51 percent higher than the site average. Intangible results include time savings as a result of eliminating manual generation cross sell offers and additional product exposure.

*“We turned on Intelligent Offer and started making money!”*

**Manager of eCommerce for  
Merchandising and Analytics,  
Bealls Department Store**

### Office Depot

Coremetrics Intelligent Offer has helped Office Depot overcome the enormous task of creating recommendations for the 20,000 products they sell online. Intelligent Offer automates the recommendation process, without removing the merchandiser entirely from the process. Intelligent Offer automates the identification of related items so Office Depot merchandisers no longer spend hours poring over data to identify the best up sell candidates. In addition, Intelligent Offer continually optimizes recommendations based on changing customer behaviors and new product introductions. At the same time, merchandisers maintain full control. They can preview recommendations on a graphical display. They can also create and modify business rules that help them achieve a variety of business goals, including avoiding down selling, ensuring high visibility for high-margin products, and eliminating products with low customer review scores.

### FootSmart

At FootSmart, the largest direct-to-consumer retailer of foot and lower body healthcare products, cross sell has surpassed several other categories, including search, as the most effective vehicle for driving sales. Since implementing Intelligent Offer, the company has already realized a 147 percent increase in cross sells as a percentage of total online sales, a 31 percent increase in cross sell conversion rate, and a 19 percent increase in AOV when a cross sell product was purchased. Additionally, shoppers are completing their purchases after fewer product views, a direct result of having more relevant cross sell products. FootSmart is now looking to expand its online cross sell success to multi-channel areas such as targeted email and call center.

## Conclusions

Optimizing an eCommerce environment is challenging. Online product catalogs can contain thousands upon thousands of items. The task of aligning this catalog to the specific needs and interests of a customer base is an ongoing, often complex effort. To leverage that product catalog to its fullest, customers must quickly find the products in the catalog that are of the most interest to them. Likewise, merchandisers must have a deep understanding of the visitor and the ability to quickly and easily match an offer to the exact needs of the customer. More than ever, the answer to this challenge is a product recommendation solution.

Product recommendation technologies have been available for some time now, yet they have not met customers' expectations. Many traditional approaches, including manually matching customers to products or leveraging overly complex and expensive legacy technology models, have failed to meet the goals of eCommerce providers. Today's technologies, however, offer clear ROI for increasing revenues and achieving aggressive business goals. The best solutions combine detailed data, flexibility for customization and clear visibility to enable merchandisers to hone their solutions for maximum impact.

Coremetrics Intelligent Offer provides a solution that eliminates the shortcomings of traditional product recommendation technologies. Intelligent Offer works in concert with Coremetrics Analytics to provide an advanced and innovative product recommendation solution. With Intelligent Offer, merchandisers can leverage the full potential of their product catalogs by meeting customer expectations for relevant, targeted offers. That translates into more satisfied customers and greater differentiation in a fiercely competitive market, a clear step towards lasting optimization of your online business.

## About Coremetrics

Coremetrics is the leader in marketing optimization. Its products help businesses relentlessly optimize their marketing programs to make the best offer, every time, anywhere, automatically. More than 2,100 online brands globally use Coremetrics' Software as a Service (SaaS) to optimize their online marketing. Coremetrics' integrated marketing optimization solutions include real-time personalized recommendations, email targeting, display ad targeting across leading ad networks, and search engine bid management. The company's solutions are delivered on the only online analytics platform designed to anticipate the needs of every customer, automate marketing decisions in real time, and syndicate information across all customer channels. The company is privately held with funding from Accel Partners, FTV Capital, Highland Capital Partners, and W Capital Partners, and is headquartered in San Mateo, California.

To learn more about Coremetrics, visit <http://www.coremetrics.com> or call 866-493-2673.

Coremetrics has strongly supported online privacy since its inception. To learn more, visit <http://www.coremetrics.com/privacy>.

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