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Optimizing Your Return on Customer Attention with Oracle Real-Time Decisions

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“Oracle RTD helped us overnight to capitalize on the unrealized potential of our e-commerce traffic. RTD has transformed our traditional business rules approach to optimization of the user experience....”

Chief Internet Architect of a major North American financial services company

Optimizing Your Customers' Experience is Critical

Oracle Real-Time Decisions (RTD) adds significant new capabilities to all your customer-contact applications, allowing you to decisively increase your Return on Customer Attention (ROCA). RTD uses a combination of your explicitly defined business rules and automatically identified statistical information to deliver the best possible content to your customers for every single interaction. Consider these figures, attributed to several different RTD initiatives:

Improvements in transaction volumes

- Up to 150% increase in click-through rates for Ecommerce Self-Service Web Site
- Up to 20% increase in sales conversion rates for Ecommerce Commerce Web Site
- Up to 50% increase in click and purchases rates for Email Marketing acquisition
- Up to 76% increase in close rate for inbound contact center service interactions

Improvements in transaction value

- 6% increase in average transaction value for online customer acquisition (for annually renewable contract worth hundreds of \$)

Improvements in retention rates

- 40% increase in retention rates from proactive churn management during inbound service interactions

Improvements in marketing velocity

- 500% increase in A/B testing velocity for Ecommerce Self-Service interaction optimization
- 90% reduction in number of managed targeting rules

Improvements in customer satisfaction

- Confidence that RTD helped agents do their job increased from 25% to 85%
- Confidence that RTD recommendations are ‘very accurate’ in matching customer's needs of 66%

Both you and your customers need and want to maximize the effectiveness of your interactions. Customers want to interact with customer-contact applications that make the best possible use of their information and tailor the experience to their needs. RTD lets you maximize your return on customer attention by finding the optimal content for each individual customer in the context of each interaction.

Two Examples

Oracle RTD is a technology platform engineered to optimize customer interactions at *any customer touch point*, whether on the Web, in a call center, or using any other interaction channel. Consider these examples:

- Ernest, an active online banking user, signs on to check if his bonus has been credited to his checking account. After determining that it has arrived, he decides to investigate whether the bank offers certificates of deposit with attractive interest rates. He also wants to see if he can find a loan to finance a new sports car. Can your Web site detect his intent and, in real-time, recommend items that are relevant to his specific profile and intent?
- Claudia signs on to the same bank. She is very environmentally conscious, recycles paper consistently, and pays all her bills online. Although she does not even open the bank's mailers that provide incentives to sign-up for electronic statements, she gladly signs up without incentives if reminded at the end of her bill-payment sessions. Can your Web site detect her personal preferences and recommend items that are relevant to her specific profile and intent at the right time?

In the last few years, the role of marketing has evolved. It now goes well beyond mapping customer segments with products and offers. Now, you not only need to compete to get potential customers to interact with your organization, but you also need to *optimize the value of your message content and delivery in the context of customer-initiated interactions*, what we call maximizing *Return on Customer Attention (ROCA)*. When ROCA is maximized, you see improvements in customer acquisition, the value of transactions, marketing velocity, customer retention rates, and customer satisfaction. Marketers and customer experience specialists need to work with their IT counterparts to implement a decision-management strategy that can help them confidently answer positively the following questions:

- Can your decision-management infrastructure personalize and optimize the user experience for every customer interaction?

What if Ernest and Claudia had interactions with their bank Web site and it was optimized for their customer profile?

What if your customers saw a Web site that was optimized for each one of them, that helped them buy the products they most wanted, and that best fit your corporate goals?

- Does your decision-management infrastructure allow you to cost-effectively try 10 times more offers and business development ideas than you do now? Does it give you immediate detailed analytic data on how well these ideas work?

What if Ernest's bank had tried 20 different loan packages and knew which loan features were most important to fiscally conservative users who were also interested in a loan for a sports car? And what if the bank then offered those loan features to Ernest?

"Companies that can make better decisions than the competition and get them into production faster are more likely to win in the marketplace. Superior decisioning is thus a competitive weapon and Decision Management is designed to enable superior decisioning"

James Taylor, CEO of Decision Management Solutions

What if you could easily try new product combinations and know which worked well with which market segments? And what if you could offer those combinations only to the customers most interested in them?

- Can your decision-management infrastructure do continuous A/B testing?

What if Claudia's bank had tried both a green minimalist Web-page design and an ornate blue-background Web-page design and knew which design was most likely to induce her to sign up for additional services? And what if the bank could automatically present the Web page to her using that design?

What if you could test every Web-page design against a small subset of your customer base and determine which was the most profitable and effective design for each customer?

- Does your decision-management infrastructure share interaction data about each of your customers between your e-commerce site and your call center, or other customer touch points, so that you can offer each customer the best recommendations, all the time and across interaction channels?

What if, when Ernest called the bank call center, the person answering knew that Ernest had been looking at car loans, the loan rates that he had clicked through, and the loan features he was most likely to want?

What if, when your customers called your call center, you knew which products they had looked at on the Web site, which product they were most likely to want to buy, and which options they were most likely to be willing to add on?

- Can your enterprise quickly adjust the decision logic component of your personalization effort to account for changes in the marketplace?

What if the financial environment had dramatically changed and people were seeking strategies to reduce their exposure by using more conservative investment vehicles? And what if your Web site quickly displayed these new vehicles, but your competitors took weeks or months to adapt?

Most companies struggle just to deliver targeted messages at the segment level and typically cannot cope with delivering messages that are tailored to individual customers. These companies are limited to presenting the most popular products, no matter what the individual customer needs or wants. Oracle RTD considers customer data, recent customer actions, the business's objectives and what has worked with recent customers to determine the optimal messages for every single customer interaction and render it in the context of the interaction flow. Instead of the most popular product being presented to everyone, each customer is presented with the products they are most likely to buy. In essence, Oracle RTD automates your targeting processes across all interaction channels on a one-to-one basis and maximizes your ROCA by learning from every interaction.

What is Oracle RTD?

RTD KEY FEATURES

- Self-learning predictive analytics
- Time-aware learning
- Balanced rule-driven and model-driven decision making
- Business goal arbitration
- Multichannel support
- Massively scalable

Oracle RTD, at its core, is a closed-loop recommendation engine. It starts with a list of possible next actions, then adds information about the customer, session history, customer history, your business goals, and what has worked or not worked in the past. RTD uses that information to come up with a recommendation for the best action to take next. Each decision is made using a *statistical model* that predicts the outcome of the interaction based on what is known about the customer and how similar customers have responded in the past.

The recommendations that Oracle RTD makes are based upon both company-defined business rules and behavioral patterns that RTD finds in the empirical data. This enables the business to guide the interaction with business rules, but also enables the system to learn from experience.

Consider two individuals, Jim and Brandon. They both own the same high-end duplex color laser printer with multiple paper sources. Jim buys supplies online and responds to special price offers for printer supplies. He also clicks through ads more often if they are humorous or bordered in red. Brandon always buys his supplies at retail stores, but when he registered his printer, he gave his e-mail address to the printer manufacturer. His registration card indicated he tends to buy printer supplies every two weeks. The data on the two men is otherwise very similar. Most Web sites would treat them the same as far as customer segmentation and would show them identical offers if they were to visit the printer Web site.

The printer company has several objectives: to lock in customers who buy supplies online, to get people to make purchases with their company-branded credit card, and to convert people buying through retail stores to purchase through the Web site.

Oracle RTD can use all this information to determine what to present to the customer. During the shopping process, Oracle RTD notes what has worked with thrifty high-end printer customers in the past and recommends presenting Jim with special offer ads for attachments for his printer and with ads for some new, inexpensive paper that will increase the quality of his output. It also recommends presenting Jim with a special offer of 10% off his purchase (in red) if he signs up with a reward-based company credit card.

Though Brandon has never used the Web site, the marketing team would like to encourage all potential candidates to use this low-cost channel to make their purchases. The marketing team uses RTD reports, summaries of previous Web-site visits, to see what factors have worked with thrifty high-end laser printer owners. The team creates a one-time e-mail marketing program tailored to this profile. The e-mail talks about safe Web-site transactions and offers a one-time discount to first time Web-site buyers.

Jim	Brandon
Owns the same high-end duplex color laser printer	Owns the same high-end duplex color laser printer
Buys online	Has never logged on to the Web site
Responds to specials	Buys at retail stores
Does not have company-branded credit card	Buys supplies every two weeks
Responds to ads with red color theme	
RTD shows:	
Red-themed ads	Sends e-mail about the safety of online transactions
Offers for inexpensive add-ons to his printer	Sends e-mail offering 20% off first online purchase
An offer of 10% off with an application for a company-branded, reward-based credit card	
Offers for new, inexpensive paper to improve the quality of printer output	When he finally appears online, repeats the offers of 20% off and guaranteed delivery time

Can you manage the same kind of real-time interaction in your current decision-management infrastructure? Possibly, if you have a sophisticated business intelligence environment in place to uncover the relevant insights and if your customer interaction channel applications are enabled with some business rules under control of the marketing community. With those items in place, you can write rules to present the same content to Jim and Brandon. The issues are:

- How many rules do you want to write to cover the multitude of situations that might present themselves?
- How much analysis time can you afford to spend figuring out what customization rules to write?
- How much trouble will it be to update your system to use the new rules?

Oracle RTD updates its model and its data *after every interaction*; as a result, it constantly improves its ability to predict the outcome without the addition of rules by the analyst. It closes the analysis loop with every customer click. These self-learning predictive analytics enable an application integrated with Oracle RTD to improve its recommendations and, therefore, improve the interaction with the user. Oracle RTD is quick to react when the behavior or situation changes. The RTD decision platform doesn't have to wait for an analyst to work through a report and determine out how to change the interaction with the user. As a result, it ultimately allows a broader scope of analysis than the traditional business analysis process.

Oracle RTD's analytic process takes into account historic information, but it is also smart enough to give information from the most recent interactions more weight in the decision-making process. Its learning process is aware of the passage of time.

Oracle RTD is channel-agnostic. It supports the decision-making process on every channel: on the Web, through your call center, through e-mail, through a phone call or PDA interaction, even through an on-site interaction. More importantly, RTD provides multichannel support; that is, it can support all the interactions with a customer and share data between those interactions.

How effective is Oracle RTD in improving interactions? Here is a typical case :

A Fortune 50 company that uses the Web as their primary sales channel wanted to increase both acceptance rates and the dollar value of each sale. A significant number of customers dropped the interaction while applying, so the company wanted to improve the Web site user experience. In addition, the company wanted the Web site to be more effective in identifying customers who would be interested in their premium products.

Despite business analysis and Web design efforts, the numbers were not improving as much as they had hoped. In addition, the analysis and redesign cycle took too long.

The company engaged the Oracle RTD team to evaluate the situation. The team designed an initial three-month implementation effort to

- Improve the customer experience in ways that would increase acceptance rates
- Increase the average sales value
- Effectively identify opportunities to sell their premium products

The RTD application was integrated with and ran alongside of the previous Web application. Immediately, RTD's predictive models used the real-time customer-interaction data to optimize the product selection process. Significant improvement over the initial system became obvious within days. Through personalizing interactions, the RTD-based system demonstrated business value over the previous system and provided significant ROI within a month:

- An RTD click-through rate of 11.5% vs. a control group click-through rate of 8.2%
- An increase in average monetary value per transaction of 6.5%

The business intelligence insights gleaned from the interaction reports enabled the company to streamline the application process significantly and measurably improve customer satisfaction.

NEEDS FOR OPTIMIZING CUSTOMER INTERACTIONS

- Continuous data capture
- Real-time predictive analytics
- Real-time Interaction customization

RTD Benefits for You

Different parts of your business will see different benefits from RTD.

If you are in charge of the products, promotions, and offers or if you are in charge of the business conducted through your Web site, call centers, or kiosks, RTD will

- Optimize the delivery of your offers in each channel
- Begin gathering information on customer interactions immediately after it is implemented
- Allow you to look at data on your products and offers, as it comes in
- Let you launch new products, offers, and promotions quickly
- Suggest new models and rules that will work best for your products
- Automatically uncover patterns in your customers' behavior and use those patterns for decision making

If you are in charge of the customer experience, Web personalization, operational business intelligence, or cross-channel business capability, RTD will

- Give you the tools to increase click-through rates, customer satisfaction, and profits, as your corporate goals require
- Give you immediate feedback on the success of initiatives, promotions, and changes to the channel
- Be able to implement business models and rules with large numbers of conditions, rules that are profitable but which would be difficult for a human being to maintain
- Make channel personalization an accomplished fact at your company, rather than a hoped-for goal

If you are your company's Web architect, chief e-commerce architect, or front office operations manager, RTD will

"As soon as our customers encountered the RTD-enabled e-commerce experience, they began to convert at a higher rate, and select higher-priced product packages than we traditionally suggested. RTD essentially discovered and exploited the unrealized potential of our e-commerce applications; we learned that the lowest-cost biased culture of the company, reflected in our traditional business rules, had sub-optimized both our top and bottom line."

- Be easy to plug in to your existing environment
- Operate with a defined Service Level Agreement (SLA), so RTD will not slow down your system under heavy loads
- Automate and mediate content addition from your company's product specialists
- Operate with commercial performance standards in your Oracle environment
- Protect your system from the performance hits of poorly programmed business rules
- Give your system excellent performance, scalability, and reliability (PSR) in a commercial context

How RTD Works

There are five components that Oracle RTD uses to make recommendations: choices, data, rules, models, and performance goals. Each plays an important role.

Lead RTD architect for a major North American financial services company.

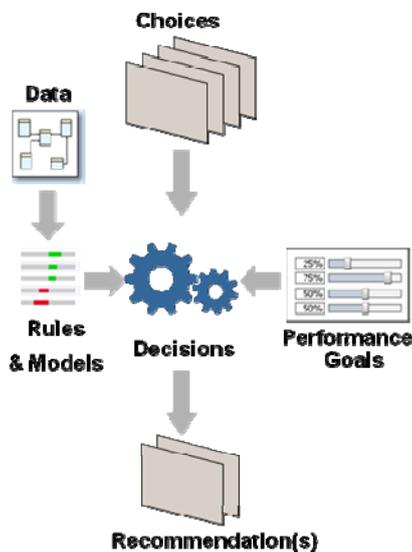


Figure 1. Components of the Oracle RTD Decision-making process. Rules and models use the data that is collected to conclude which next action is the best choice. RTD chooses the action that is most likely to achieve the business performance goals.

Choices: The business specifies the possible actions that Oracle RTD can select at any given point. Some examples of these actions are messages to display, offers to make, agents to use, and colors to display. Each choice is tagged with the context for which it is appropriate or eligible. For example, an offer might be marked as unavailable to customers under a certain age or marked as unavailable in some states. A credit card offer might be marked as inappropriate for people who already have that credit card or who rejected an offer for the same product in another channel within the last few weeks.

Data: RTD is given access to customer data such as age and location. RTD also collects information on customer choices in their interactions with the customer-contact software. RTD uses a wide spectrum of data, including customer profile data, interaction context data (which page the customer was looking at, which agent the customer was talking to, the date and time), and choice metadata (which kind of message it is). This data enables exceptional personalization because the RTD recommendation engine can use hundreds of data points instead of being limited to a small handful.

Rules: Rules contain two kinds of information. First, they contain the explicit decision logic for which customers are eligible for which offers and how the offers can be presented. For example, a California card offer might only be available to residents of California. Secondly, rules contain information about the different customer segments and how they should be handled. For example, a customer might be in the “old customer” segment if their first purchase was more than 180 days ago. As time goes on, RTD will uncover new insights based on the customer data and the customer actions. Your business can use these insights to optimize the decision logic.

Models: Models decide which choices are presented to which customer segments. At first, these choices are selected solely on the basis of the explicitly defined business logic. As RTD learns from empirical data, this explicitly defined business logic is augmented by predictive models. RTD’s predictive models are data patterns that RTD associates with your “best” decisions and those that

RTD predicts will lead to the customer action most likely to optimize your objectives. The RTD predictive models can be based on both historical data (demographic profile, billing information, account transactions, and so on) and on real-time contextual data (purpose of the interaction, time of day, agent skill level, what has already occurred during the interaction). The ability to automatically manage the life cycle of up to thousands of predictive models is what makes RTD decisions more accurate and broader than traditional approaches to targeting. The RTD predictive models become increasingly effective as more data is collected and considered.

Performance Goals: These goals define the business objectives for RTD, such as to increase revenue, maximize profit, minimize handling times, or decrease customer service costs. RTD can manage competing goals. You determine how important each goal is in a particular context. For example, a business might want to simultaneously decrease service costs and increase revenue. RTD can optimize its decisions to consider both goals. RTD balances between them according to the criteria that *you* specify.

It is important to note that *both dynamic rules and dynamic models are required to create a dynamic solution*. Neither can provide a solution that adjusts to new customer information alone. Both dynamic rules and dynamic models are needed to provide the dramatic increases in ROCA that RTD provides.

After the initial components are put into place, and the initial choices, data, goals, models, and rules are defined, RTD gathers information on customer interactions. As it does so, it notes the choices that work for each customers and those that do not. It attempts to find indicators that predict what customers are looking for and what makes customers more interested in one offer or choice over another. This data is reflected in proposals for new models, which you can use to control the choices presented to the customers.

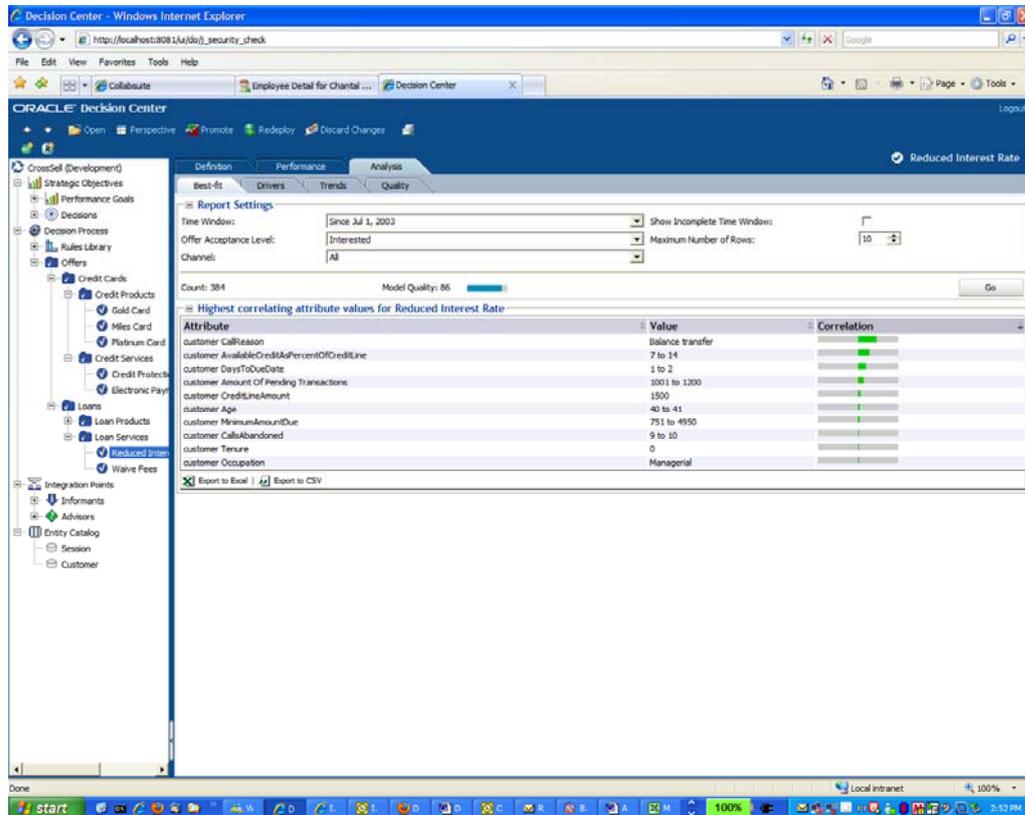


Figure 2. Example of RTD data, showing which customers are responding to a particular offer. It shows that, for these credit card customers, interest in offers of reduced interest rates is correlated with (1) calling about a balance transfer, (2) having a balance that is 7% to 15% of their credit limit, and (3) having a due date that is one or two days out.

Is Oracle RTD Right for My Business?

To get the best ROI, Oracle RTD needs to be integrated with your core business applications and data environments. This integration work *appears* to be complex, but it is the easiest part of an RTD implementation. Initial projects are usually up and running within two to four months. Most initial projects have tangible ROI results within days of deployment.

RTD easily integrates with your current IT and business process architecture.

- It uses a service-oriented architecture that works *alongside* your CRM, CMS, or campaign management applications.
- It requires *only read access* to your existing customer information.
- It does *not* require structural changes to your current business processes or current applications.
- It does *not* slow down current systems that are serving content or providing data or context.

Overall, the impact of integrating Oracle RTD into your existing IT infrastructure is minimal.

RTD is designed from the ground up as scalable, enterprise-grade, technology with

- **Strength in functionality:** The design framework includes dynamic rules and dynamic models based on statistical inference
 - **Strength in integration:** Deep and easy data integration with existing systems, a scalable architecture, and reporting and interface structure to ease integration with human systems
- No other solution offers the speed, scalability, integration, and functionality of Oracle RTD.

Getting Started with Oracle RTD

Oracle Consulting's Rapid Start for Oracle RTD is designed to implement a measurably successful phase 1 implementation rapidly and at minimal cost.

Rapid Start is a collaborative effort between Oracle and your company, where the Oracle RTD team works as a cohesive team with your internal stakeholders, technology experts, and key. As part of the process, the RTD team analyzes, designs, and executes a rapid deployment approach that quickly generates measurable business results.

Our approach focuses on addressing one or more of the following key business challenges, such as

- Increase cross-sell, up-sell, and customer retention opportunities
- Optimize A/B testing and analytically driven personalization of customer interactions
- Provide product recommendations based on real-time data
- Provide the organization with real-time analysis of acceptance measurements and predictors of success

When RTD is implemented, our clients quickly realize value in the form of targeted recommendations on their Web site, in their call center, with e-mail, or with other customer-facing channels. These recommendations, whether they are offers, campaigns, products, or creative, are optimized in real-time based on the revenue or cost-savings goals upon which the client wishes to focus. This creates substantial revenue or cost-saving lift over business-as-usual tactics.

Implementation Details of an RTD Phase 1 Project

With the Rapid Start implementation program, two or three consultants will deliver a short, three- to four-month engagement that will

- Understand your business objectives
- Translate those objectives into the RTD product
- Integrate Oracle RTD within your environment
- Go live in a limited production environment
- Measure and optimize the results

The key stages are

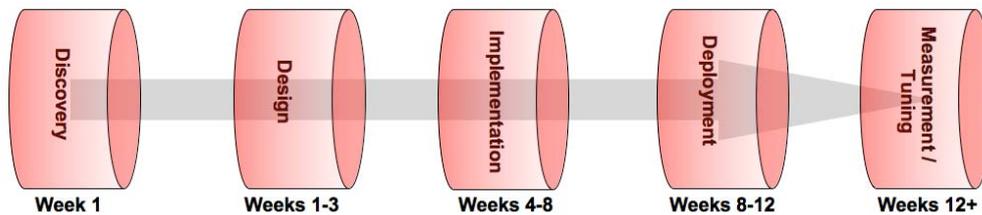


Figure 3. Key stages of an RTD implementation

For example, if you were to apply RTD to a commercial Web site, the initial implementation might go as follows.

Discovery: The discovery phase focuses on understanding your current e-commerce process, business pains, and goals. The team studies your current content management scheme, learns about your customer-interaction database, and does a thorough review of your site and processes.

Design: The Oracle RTD team continues the project by creating a detailed functional design for a tangible, results-oriented solution that delivers quantifiable results.

Implementation: In this phase, the solution and technical consultants work collaboratively with the e-commerce and marketing teams to implement the functional design within Oracle RTD and to create the necessary integration for your e-commerce platform.

Deployment: For a couple of weeks, the Oracle RTD team works collaboratively with the e-commerce and business teams to test the solution framework and technology scalability. In addition, the team trains key users and support staff.

Measurement/Tuning: A key component of any Oracle RTD implementation is the ability to measure and record the performance of the solution. The Oracle team monitors the implementation to provide performance adjustments post deployment. How do you know that RTD is working better than your previous solutions? Oracle Consulting suggests running side-by-side comparisons for a few months until you are convinced that the RTD solution significantly outperforming your previous technology.

Additional Phases for an Oracle RTD Implementation

When the initial implementation has been deployed and the ROI becomes significant, organizations often decide to expand their use of RTD. Additional projects usually integrate with a second channel in the organization. They also typically add a second strategy to the decision-making process. If Phase 1 is focused on retention, the second phase might focus on cross selling. In addition, real-time analysis and more advanced self-adapting models are often added to the analytic strategies.

The Next Step

If you think RTD might be right for your business, please call your Oracle RTD representative to discuss how RTD can benefit you and your business. We can work with you to identify the most applicable use cases for your business and build a business case that quantifies how RTD can help you optimize your Return on Customer Attention.

For more information about Oracle Real-Time Decisions, please call +1.800.ORACLE1 to speak to an Oracle representative or visit

<http://www.oracle.com/appserver/business-intelligence/real-timedecisions.html>



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