

A Forrester Total Economic Impact™ Study Prepared For Oracle

# Total Economic Impact of Oracle Real-Time Decisions

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**FORRESTER**

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## Executive Summary

In April 2011, Oracle commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) enterprises may realize by deploying Oracle Real-Time Decisions (RTD). The RTD platform combines both rules and predictive analytics to power solutions for real-time enterprise decision management, enabling real-time intelligence to be instilled into any type of business process or customer interaction. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of RTD on their organizations.

### RTD Significantly Increases Revenue By Improving Closure Rates And Transaction Values

Our interview with one existing RTD customer in the financial services industry and subsequent financial analysis found that the company experienced the risk-adjusted ROI, costs, and benefits shown in Table 1. The company has operations in all 50 states and more than 20,000 employees. It has completed several initiatives using RTD, including:

1. Shopping cart abandonment rate reduction — online and call center channels.
2. Post abandonment follow-up email campaign.
3. Optional program enrollment, i.e., electronic funds transfer (EFT), paperless statements, etc.
4. Retention event identification and resolution strategies.

The benefits and costs associated with the first two projects are included in the ROI analysis. The company was unable to share metrics related to the latter two projects because they are considered trade secrets. Therefore, benefits associated with these two projects are not included in the ROI analysis, but they are described in qualitative terms.

**Table 1**

Three-Year Risk-Adjusted ROI<sup>1</sup>

ROI	Payback period	Total benefits (PV)	Total costs (PV)	Net present value
986%	3 Months	\$109,819,439	(\$10,107,894)	\$99,711,545

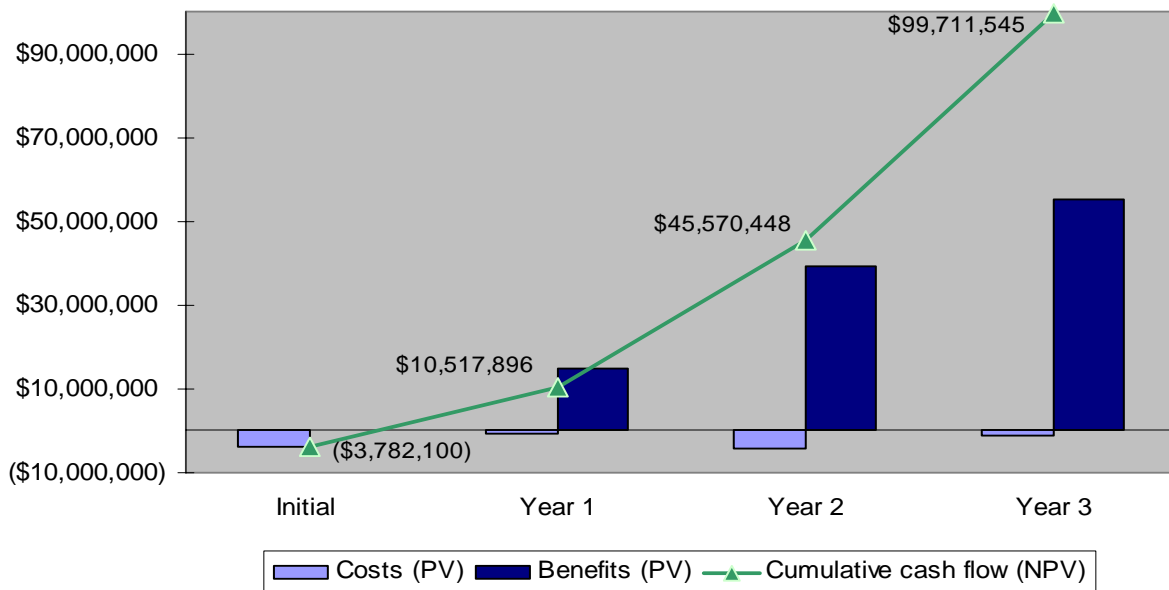
Source: Forrester Research, Inc.

- **Benefits.** The organization we interviewed is meticulous in defining test procedures to accurately identify and quantify the benefits derived from RTD, as well as all other initiatives. These procedures include using control groups and blind testing of hypotheses. Following these procedures, the company identified the following benefits:

- **Increased closure rate revenue.** The initial project's objective, to reduce shopping cart abandonment, resulted in approximately a one percentage point lift in the closure rate during the original sales cycle. This equates to roughly \$54.4 million in additional revenue over three years.
- **Incremental deal size revenue.** The initial project also looked at ways to increase the average financial services product price by suggesting additional options to the basic offering. This increase applies to all new sales, not just those attributable to the use of RTD, and is additive to the increased closure rate benefit. This results in more than \$41.1 million over the life of the study.
- **Post cart abandonment follow-up campaign revenue.** The second project created personalized follow-up emails to potential customers who asked for a quote but did not buy (abandoned their cart). This resulted in approximately a one percentage point lift in the conversion rate compared with a control group consisting of a single, static message. This totals \$56.4 million over three years.
- **Greater customer retention and lifetime value (non-quantified).** Through a variety of RTD initiatives, customer retention rates were improved. This increases the total lifetime value for these customers and reduces the cost of finding new customers to replace the losses. Due to confidentiality issues, this information could not be provided by the interviewed customer.
- **Better business intelligence (non-quantified).** RTD helped the organization learn more about its own value proposition and what motivates customers' purchasing behaviors than could otherwise be learned. This contributes to the process of continual improvement and identifying new profit maximizing opportunities.
- **Improved customer experiences (non-quantified).** RTD shows what customers really want through observed behavior, which is more accurate than relying on what customers say. The result is greater customer satisfaction and the ability to better differentiate in the highly regulated financial services industry.
- **Costs.** Some of the costs described in this study have been updated from what the interviewed organization actually paid to better reflect what a new customer can expect. The objective is to provide readers with the latest information in order to best understand the potential financial impact to their organizations. The company we interviewed experienced the following costs:
  - **Internal implementation labor.** The customer followed a process similar to Oracle's Quick Start methodology for RTD implementations. Each project lasted approximately six months — from inception through refinement in pilot. The total labor costs for the two projects included in the ROI analysis are \$260,000.
  - **Professional services.** The customer utilized a professional services company for assistance in implementing both RTD projects, each lasting six months. These costs should decrease with subsequent projects once the RTD infrastructure is established and in-house skills are developed. Professional service fees for individual projects can range from \$200,000 to more than \$400,000. The study includes \$600,000 in professional service fees split between the two projects
  - **Hardware.** Servers are required for development, testing, and production. For the projects included in the cost benefit analysis, 16 blade servers were used. This totals \$320,000 in purchase costs and maintenance.

- **RTD licenses and support.** RTD licenses can either be on a per-CPU basis or part of a Universal License Agreement (ULA). The licenses costs depicted in this study are based on the interviewed customer’s number of CPUs but applying current licensing costs. License acquisition and support costs total more than \$9 million over three years.
- **Ongoing campaign management labor.** Each RTD project is run by a campaign manager permanently assigned for the ongoing operation, analysis, and refinement of an RTD campaign. This totaled \$650,000 over three years.

**Figure 1**  
Summary Financial Results, Risk-Adjusted



Source: Forrester Research, Inc.

### Factors Affecting Benefits And Costs

Table 1 illustrates the risk-adjusted financial results that were achieved by the organization. The risk-adjusted values take into account any potential uncertainty or variance that exists in estimating the costs and benefits, which produces more conservative estimates. The following factors may affect the financial results that an organization may experience:

- **Existing revenues/size of the organization.** In absolute terms, organizations with greater existing total sales should see larger benefits from RTD. This is because an equal percentage improvement from a large base is, by definition, greater than from a smaller base. However, smaller organizations should still expect to see ROIs broadly in alignment with the one shown in this study.

- **Complexity of decisions/problems RTD is addressing.** RTD is especially valuable in high involvement decision-making such as selecting financial service products. While simpler tasks can also benefit from RTD, the corresponding financial benefits may not be as high.
- **Number of projects utilizing RTD.** The interviewed customer is using RTD in many scenarios and is always looking for new areas to use RTD for improving financial results. Each new project brings a whole set of benefits that improves the overall ROI. Readers are encouraged to think about all of the ways that a tool like RTD can be deployed in their organization.

## Disclosures

The reader should be aware of the following:

- The study is commissioned by Oracle and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Oracle Real-Time Decisions.
- Oracle reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The customer name for the interview was provided by Oracle.

## TEI Framework And Methodology

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### Introduction

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ framework for those organizations considering implementing Oracle Real-Time Decisions. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

### Approach And Methodology

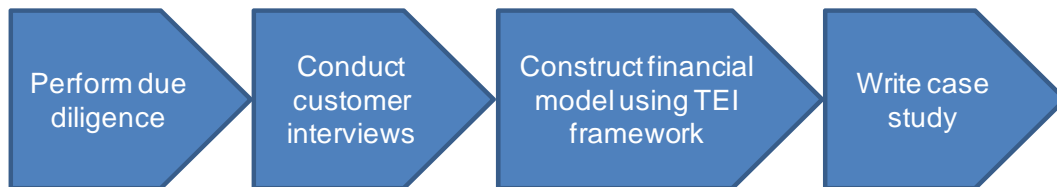
Forrester took a multistep approach to evaluate the impact that Oracle Real-Time Decisions can have on an organization (see Figure 2). Specifically, we:

- Interviewed Oracle marketing and sales personnel and Forrester analysts to gather data relative to RTD and the marketplace for real-time recommendation engines.
- Interviewed one organization currently using RTD to obtain data with respect to costs, benefits, and risks.
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.

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**Figure 2**

TEI Approach



Source: Forrester Research, Inc.

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Forrester employed four fundamental elements of TEI in modeling RTD:

1. Costs.
2. Benefits to the entire organization.
3. Flexibility.
4. Risk.

Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves the purpose of providing a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

## Analysis

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### Interview Highlights

The customer interviewed for this study is a financial services provider. The company has operations across the United States and more than 20,000 employees. A significant portion of revenues come via online channels.

The individual interviewed for the study is a member of the companywide technology leadership team and describes himself as “a steward of the technology innovation process.” He said his job responsibility is to “cultivate a strategic vision of how technology can help the business and how disruptive technologies can help achieve quantum leaps in competitiveness. RTD has been one of the gems in my total body of work here.”

The interview uncovered the following salient points:

- RTD fundamentally altered how the organization understands its value proposition to customers. RTD has built-in/automated learning capabilities using behavioral observations.
  - “RTD taught us in two months that we were sub-optimizing our sales. Customers didn’t want the lowest cost overall; they wanted the best fit solution at the lowest cost for that fit. No rules engine would ever detect that or fix our cultural bias.”
  - “Decades of accumulated culture, processes, and training were based on the premise that we needed to be a low cost provider. We were ecstatic, and surprised, when RTD discovered that was not entirely the case.”
- Having a decision support engine that operates in real-time is critical to achieving the financial benefits.
  - “Any time there is a customer interaction, nothing beats real-time analysis and heuristics.”
  - “If we tried to do everything with a traditional business rules based solution, it would be very cumbersome and difficult to maintain.”
- RTD is very useful in formulating and testing hypotheses to improve sales and competitive differentiation.
  - “We are a metrics driven organization. We can assign a value to every eCommerce widget. We are also a testing organization; we operate under the presumption that in order to exploit hidden value we have to constantly experiment with customer experiences. RTD make this process much more effective.”
  - “Historically, we could only test one hypothesis at a time, which was very time consuming. By the time we thought we figured it all out, the opportunity may have already passed. RTD has sped this process up considerably, resulting in new revenue opportunities.”
  - “We hypothesized some unusual use cases. That is when we brought Oracle in to explore if RTD would be of value, and it was.”
- Properly modeling business hypotheses is critical to success, and finding the right integration partner makes this possible.

- “There were two or three really difficult nuts to crack. It helps to have someone around who has done this before. That is why it was important to get the right consulting company involved.”
- “We were very careful in how we modeled the hypotheses for testing. We ran half of the quoting process in RTD and half business as usual. Getting the number of transactions between the various control groups to equal was a challenge. It was important to get this right since the benefits were so dramatic we had to show that the study was well designed.”
- The company created stringent criteria for evaluating the various decision support solution options.
  - “We were looking for a generalized platform for customer experience and business process optimization.”
  - “RTD was the first product we encountered that had what we were looking for. We then looked at other platforms that alleged to have similar capabilities. There were some fundamental differences that made RTD the preferred choice.”
    - Rules versus data mining — “A rules only solution would not solve our business challenges. Classic business intelligence solutions would not scale.”
    - Website versus all channel optimization — “We looked at several campaign management solutions that were only relevant for e-commerce. We need something that addressed online channels and call centers.”
    - CRM versus decision analytics solution — “We did not want to buy a whole CRM system just to get the real-time decisions solution we needed. Most of the solutions we looked at that might meet our needs were intelligence layers on top of a full blown CRM solution.”
- The customer has undertaken a series of projects, each designed to address a unique business challenge and generate additional revenue.
  - “The initial pilot looked at ways to reduce shopping cart abandonment and to improve the sales funnel. The initial objective was to increase sales by changing how we position our offerings to potential customers.” This was expanded from the online channel to call centers, and went live in December 2007. It also looked for opportunities to up-sell additional services.
  - “Our second project was to follow up with potential customers who register as part of the new quote generation process but do not complete the purchase. We use information we gathered online to customize a follow-up email inviting them to come back and continue the process. We can customize the tone, theme and content of the email.”
  - “The third project was focused on getting existing customers to enroll in services that increase loyalty and reduce churn. These services include electronic funds transfer (EFT), paperless statements, automatic credit card processing etc.” RTD helped identify which theme to use to improve adoption, i.e. green, cost savings, etc.

- “The project currently under way is designed to predict retention events and take proactive steps to reduce customer churn.”

### Framework Assumptions

Table 2 provides the model assumptions that Forrester used in this analysis.

**Table 2**

#### Model Assumptions

Ref.	Metric	Value
A1	Annual fully burdened compensation <sup>†</sup> per internal resource	\$130,000
†Includes salary, variable compensation, and all direct benefits (e.g., disability insurance)		

Source: Forrester Research, Inc.

The discount rate used in the PV and NPV calculations is 10%, and time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company’s finance department to determine the most appropriate discount rate to use within their own organizations.

Some values in the study are rounded to the nearest dollar. Therefore, some calculation results shown in the tables may be off by up to a few dollars.

### Costs

This section describes the direct costs of implementing Oracle RTD projects and the ongoing management costs. Some of the costs in this section reflect Forrester’s best estimates of what a new customer should expect to pay, and may not be what the interviewed customer actually spent.

The majority of the effort and costs were incurred in the initial period and in Year 2, when the two projects were undertaken. The incremental costs shown in Year 2 are because of an increase in scope — the second project — and not an increase in complexity.

#### Internal Implementation Labor

The interviewed customer followed a process similar to Oracle’s Rapid Start methodology. For each new project, a similar timeline was followed — three months of development followed by three months of pilot. The development activities include formulating hypotheses, defining the interaction optimization model and rules, and defining the test protocols, installing additional hardware and the RTD system as needed, configuring and testing RTD settings and scripts, and integrating into other required backend systems, e.g., databases, CRM, marketing campaign systems, etc.

Once the development effort was completed, three months was spent monitoring, analyzing, and fine-tuning the campaign.

The interviewee said that he “always felt a well defined pilot with clearly defined targets and end criteria is essential for success. Close collaboration between ourselves, Oracle, and our integration partner was necessary to make this happen.”

For the initial project, three FTEs spent three months working on development. This effort was split between project management, business analysts, and system developers. During the pilot, one business analyst spent three months analyzing and fine-tuning the campaign criteria and testing protocols within RTD. Three months of development x three FTEs and three months in pilot x 1 FTE, all at \$10,833 per month is equal to a total internal labor cost of \$130,000 for the initial project. A similar delivery process was followed for the second project in Year 2.

**Table 3**

Internal Implementation Labor

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	Total
B1	Number of months - development		3		3		
B2	Number of FTEs - development		3		3		
B3	Number of months - pilot		3		3		
B4	Number of FTEs - pilot		1		1		
B5	Monthly fully burdened cost	A1/12	\$10,833		\$10,833		
Bt	Internal implementation labor	$((B1*B2)+(B3*B4))*B5$	\$130,000		\$130,000		\$260,000

Source: Forrester Research, Inc.

*Professional Services*

The interviewed customer repeatedly said that having the right integration partner is critical to successfully implementing RTD and creating valuable campaigns. The integration partner was used for each new project to define the campaigns and set up the RTD system. Projects were designed so that ongoing management was fully in the hands of internal resources, lowering ongoing operating costs.

Forrester estimates that professional service costs will be higher for the first project because of the added time for setting up the systems and knowledge transfer.

**Table 4**  
Professional Services

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	Total
C1	Development phase		\$300,000		\$150,000		
C2	Pilot phase		\$100,000		\$50,000		
Ct	Professional services	C1+C2	\$400,000		\$200,000		\$600,000

Source: Forrester Research, Inc.

### Hardware

The interviewed customer set up the RTD solution in development, testing, and production environments. This can vary from customer to customer depending on how intensively they are using RTD and the nature of their RTD license model — per processor versus ULA. Additional hardware was added for each new project because of the need for greater computing power and because some of the projects were for different parts of the organization and being run completely independent.

Readers are encouraged to work with Oracle or an integration partner to properly scope out their hardware requirements.

**Table 5**  
Hardware

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	Total
D1	Number of blade servers added		8	0	8	0	
D2	Cost per blade		\$16,000	\$16,000	\$16,000	\$16,000	
D3	Total purchase costs	D1*D2	\$128,000	\$0	\$128,000	\$0	
D4	Maintenance	D3[through current year]*10%	\$0	\$12,800	\$25,600	\$25,600	
Dt	Hardware	D3+D4	\$128,000	\$12,800	\$153,600	\$25,600	\$320,000

Source: Forrester Research, Inc.

### *RTD Licenses And Support*

RTD license costs can be based on a per dual-core CPU basis or as part of an Oracle ULA. Often, a customer will begin with a per-CPU license model and then transition to a ULA when the economics make sense. That is the model the interviewed customer followed.

The per-CPU license cost varies based on the number of years contracted as well as volume discounts. Standard RTD license costs are published on the Oracle website. Annual support is charged at 22% of the acquisition price. The licenses costs presented are Forrester's estimate of what a new customer should expect to pay in licenses for an installation similar in size and scope to that of the interviewed customer.

Additional licenses were added in Year 2 to accommodate the new project.

**Table 6**  
RTD Licenses And Support

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	Total
E1	Number of dual-core CPUs added	$E1 * 4 \text{ CPUs per blade}$	32	0	32	0	
E2	Licenses cost per CPU (perpetual usage)		\$92,000	\$92,000	\$92,000	\$92,000	
E3	Total license costs	$E1 * E2$	\$2,944,000	\$0	\$2,944,000	\$0	
E4	Software update and support	$E3[\text{through current year}] * 22\%$		\$647,680	\$1,295,360	\$1,295,360	
Et	RTD licenses and support	$E3 + E5$	\$2,944,000	\$647,680	\$4,239,360	\$1,295,360	\$9,126,400

Source: Forrester Research, Inc.

### *Ongoing Campaign Management Labor*

Each RTD project/campaign should be closely managed on an ongoing basis to analyze results and refine business logic. RTD campaigns are all about continual improvement through observation, experimentation, and analysis. A company may want to organize a centralized group with RTD skills or may choose to disperse these resources across the various, relevant parts of the organization. This will depend more on how the reader's organization generally structures itself.

For the interviewee, the RTD business analysts were initially spread across the marketing organizations. Based on the now widespread use of RTD, there is a reorganization effort under way to create a centralized RTD decision management team.

**Table 7**  
Ongoing Campaign Management Labor

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	Total
F1	Number of FTEs	1 FTE per campaign/project		1	2	2	
F2	Annual fully burdened cost	A1		\$130,000	\$130,000	\$130,000	
Ft	Ongoing campaign management labor	F1*F2		\$130,000	\$260,000	\$260,000	\$650,000

Source: Forrester Research, Inc.

### Total Costs

Table 8 summarizes the costs for the implementation and ongoing campaign management for two RTD projects. The increased costs in Year 2 are attributable to the completion of a second RTD project.

**Table 8**  
Total Costs

Ref.	Costs	Initial	Year 1	Year 2	Year 3	Total
Bt	Internal implementation labor	(\$130,000)		(\$130,000)		<b>(\$260,000)</b>
Ct	Professional services	(\$400,000)		(\$200,000)		<b>(\$600,000)</b>
Dt	Hardware	(\$128,000)	(\$12,800)	(\$153,600)	(\$25,600)	<b>(\$320,000)</b>
Et	RTD licenses and support	(\$2,944,000)	(\$647,680)	(\$4,239,360)	(\$1,295,360)	<b>(\$9,126,400)</b>
Ft	Ongoing campaign management labor		(\$130,000)	(\$260,000)	(\$260,000)	<b>(\$650,000)</b>
	<b>Total</b>	<b>(\$3,602,000)</b>	<b>(\$790,480)</b>	<b>(\$4,982,960)</b>	<b>(\$1,580,960)</b>	<b>(\$10,956,400)</b>

Source: Forrester Research, Inc.

### Benefits

The first half of this section details the quantitative benefits included in the ROI. The second half describes qualitative benefits that the interviewed customer described but could not be quantified for this study. They are not part of the ROI

analysis. Readers should take the qualitative benefits into consideration when analyzing the total benefits their organization may realize by utilizing the RTD solution.

### *Increased Closure Rate Revenue*

The first benefit that the interviewed company was seeking to achieve with RTD was to improve the conversion rates from quote requests to actually buying. Stated another way, the company wanted to reduce shopping cart abandonment. Even a small improvement in this area could have huge impacts in terms of additional revenue. The interviewee said, “We have a rather mature, highly tuned online platform. All of the low hanging fruit has long been picked. So, anything approaching a 1% point lift in closure rate is considered quite spectacular. The various RTD-driven optimizations in place have no doubt contributed to this outcome.”

The number of new sales because of RTD is directly related to the number of quote requests received — both through the online and call center channels. Over the life of the study, the number of overall quote requests decreased year-on-year for a variety of reasons not related to RTD. The result is fewer new sales each year even though the closure rate continued to improve because of RTD.

In the first year of the study, approximately 0.8% point more quote requests were converted into sales. This increased to 1.0% beginning in Year 2. This improvement is attributable to the self-learning capabilities of RTD as well as the ongoing hypothesis testing and campaign refinement work completed by the decision management team. The interviewee was not able to share the baseline closure rates because it is considered highly confidential. By example, if the original close rate was 40.0% of all quote requests in Year 0, it would be 40.8% in Year 1, and 41.0% in years 2 and 3. Once a new sale is made, that revenue continues year after year unless the customer leaves — customer churn. Forrester assumed a 25% annual churn rate based on industry averages.

Readers are encouraged to think about opportunities to reduce cart abandonment or otherwise improve the sales funnel using a tool like RTD and calculate what the potential upside can be.

**Table 9**

## Increase Closure Rate Revenue

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
G1	Percentage point closure rate lift		0.8%	1.0%	1.0%	
G2	Incremental # of new sales from RTD		14,400	13,600	12,500	
G3	Estimated churn rate	Forrester assumption	25%	25%	25%	
G4	Cumulative # of incremental sales from RTD	$(G4[\text{previous year}] * (1 - G5)) + G2[\text{current year}]$	14,400	24,400	32,020	
G5	Average annual sale price		\$740	\$740	\$740	
Gt	Improved closure rate revenue	$G4 * G5$	\$10,656,000	\$18,056,000	\$23,694,800	\$52,406,800

Source: Forrester Research, Inc.

*Incremental Deal Size Revenue*

Table 9 shows an average sale price of \$740. As part of the initial project, the company also looked at way to increase the average price. This was done by targeting additional services based on real-time observed behaviors and assumptions based on past experiences. “If the RTD predictive models discovered that informing specific prospects about additional options could jeopardize the sale, it wouldn’t be offered. For those customers that the closure rate would not be affected, we would educate them on those options.”

The result was a \$10 increase in the average price for *all* sales in Year 1, not just for those closed because of RTD. This increased to \$12 in years 2 and 3. This improvement is attributable to the self-learning and predictive modeling capabilities of RTD, along with the ongoing efforts of the decision management team to identify new areas for improvement.

**Table 10**

## Incremental Deal Size Revenue

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
H1	Incremental # of new sales from RTD	G2	14,400	13,600	12,500	
H2	# of new "business as usual" sales		720,000	680,000	624,000	
H3	Total annual # of new sales	H1+H2	734,400	693,600	636,500	
H4	Cumulative # of new sales	(H4[previous year]*(1-G3))+H3[current year]	734,400	1,244,400	1,569,800	
H5	Average increase in sale price		\$10	\$12	\$12	
Ht	Incremental deal size revenue	H4*H5	\$7,344,000	\$14,932,800	\$18,837,600	\$41,114,400

Source: Forrester Research, Inc.

*Post Cart Abandonment Follow-Up Campaign Revenue*

A subsequent project was looking at the potential customers who initiated the quote process online but still did not purchase. Using information captured during the registration and quoting process, the company used RTD to identify highly personalized content to include in follow-up emails as part of a campaign to win this business. These emails could be highly targeted in terms of tone, theme (green vs. dollar savings), color scheme, subject line, etc.

This outbound campaign was highly successful. The company estimates that they "realized approximately a 1% point lift from that campaign. We were able to close more business than without RTD, and that results in tens of thousands of new sales every year." Once again, the interviewee was not able to share the existing closure rates in order to show the full calculation. This benefit is calculated using the improved sale price described earlier.

**Table 11**

## Post Cart Abandonment Follow-Up Campaign Revenue

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
I1	Number of additional sales		0	25,000	50,000	
I2	Cumulative # of additional sales	(I2[previous year]*(1-G3))+I1[current year]	0	25,000	68,750	
I3	Average annual price	G5+H5	\$750	\$752	\$752	
It	Post cart abandonment follow-up campaign revenue	I1*I2	\$0	\$18,800,000	\$37,600,000	\$56,400,000

Source: Forrester Research, Inc.

*Total Benefits*

Table 12 summarizes the total quantified benefits the interviewed company realized through RTD projects.

**Table 12**

## Total Quantified Benefits

Ref.	Benefits	Year 1	Year 2	Year 3	Total
Gt	Improved closure rate revenue	\$10,656,000	\$18,056,000	\$23,694,800	<b>\$52,406,800</b>
Ht	Incremental sale price revenue	\$7,344,000	\$14,932,800	\$18,837,600	<b>\$41,114,400</b>
It	Post cart abandonment follow-up campaign revenue		\$18,800,000	\$37,600,000	<b>\$56,400,000</b>
	<b>Total</b>	<b>\$18,000,000</b>	<b>\$51,788,800</b>	<b>\$80,132,400</b>	<b>\$149,921,200</b>

Source: Forrester Research, Inc.

*Qualitative Benefits***Greater Customer Retention And Lifetime Value**

The benefits quantified earlier show the financial contribution for the first three years. In reality, these benefits will continue as long as the individual remains a customer. A third project was undertaken to increase customer loyalty. RTD is being used to target messages to improve enrollment customers in paperless billing, ETF, and other programs

that have been shown to increase customer loyalty. Enrollment has improved because of RTD. “I can say with some certainty that our retention rate has improved over the last two consecutive years. Each one-tenth of one percent improvement in retention is worth a lot to the bottom line. If we can keep a customer for three years, we can keep them for life.” This benefit was not included in the ROI analysis because the information is kept highly confidential by the interviewed company.

Another benefit of improved retention is cost avoidance for having to acquire new customers. It costs the interviewed company five times more to acquire a new customer compared with retaining an existing customer. Reducing customer churn reduces overall customer acquisition costs.

### ***Better Business Intelligence***

As discussed earlier, the organization interviewed places a heavy value on business analysis and continual improvement. RTD has helped in understanding the business fundamentals and customers’ wants.

*“We have changed how we approach customers in terms of what we say, when we contact them, etc. Some emails go out at different times of day based on when there is an increased likelihood of it being read. People will usually say what they think is the correct answer, but if you observe their behavior they can’t lie. We learn a lot more about who our customers really are and what they really want.”*

RTD also allows the company to better structure customer analytics and research projects. It can easily change weighting and factors to determine what works best. RTD also allows for multiple experiments to be run at the same time with the ability to control for each experiment individually. These experiments can also be completed more quickly, and the outcomes put into general use. This results in additional revenues because previous analysis methods would often discover the opportunities too late to be monetized.

### ***Improved Customer Experiences***

The financial services industry is highly regulated, which limits the extent to which providers can compete on price. Therefore, improving customer service is extremely important in attracting and retaining customers. Enhanced personalization and predictive modeling makes for an overall more valuable customer experience.

*“We want to easily give customers what they want when they want it. We can be predictive based on IP address, search words, average demographics, past histories, etc. This can be used to tailor the landing page and all aspects of the online and call center experience. The goal is to deliver relevance to each visitor. We also learn more using RTD than we otherwise could. Without RTD I don’t know how we would do any of this as effectively. Since sales price and fundamental product structure is largely regulated, we focus on the long tail of customer experience as our differentiator.”*

## **Flexibility**

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the “right” or the ability to engage in future initiatives but not the obligation to do so. There are multiple scenarios in which a customer might choose to implement RTD and later realize additional uses and business opportunities. Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

The RTD platform is very flexible in terms of quickly initiating and running multiple campaigns targeted at different areas of the value chain. It can also enable an organization to do more with fewer people resources. The interviewee said that with RTD they can be “more efficient, faster, and more agile.” New projects can be completed faster at a lower incremental cost.

To a large extent, the uses of RTD are only limited by the imagination for the interviewed customer. They “see a lot of opportunity to be more strategic in the use of the platform for customer touch projects.” A project recently launched is looking at real-time customer analysis during a phone call to identify potential upcoming retention events and make suggestions to the agent to improve retention.

For each new project, there may be an incremental investment in licenses (depending on if a ULA is in place), hardware, internal labor, and professional services. For the projects already completed by this RTD customer, the ROI for each project has been significant. No future flexibility benefits have been included in the ROI analysis.

## **Risk**

Forrester defines two types of risk associated with this analysis: implementation risk and impact risk. “Implementation risk” is the risk that a proposed investment in RTD may deviate from the original or expected requirements, resulting in higher costs than anticipated. “Impact risk” refers to the risk that the business or technology needs of the organization may not be met by the investment in RTD, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

Quantitatively capturing investment and impact risk by directly adjusting the financial estimates results in more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations since they represent the expected values considering risk.

The following implementation risks that affect costs are identified as part of this analysis:

- The implementation project could go longer than expected or fail due to technical complexities of integrating RTD with other backend systems, i.e., CRM DBMS, etc. This risk can be largely mitigated by engaging with a system integrator that has previous, relevant experiences implementing RTD.
- Understanding the Oracle licensing model is also important for avoiding cost overruns. Readers should consider their likely usage in order to identify the best initial model and constantly be looking to determine if it makes sense to move between a ULA and per CPU license.

The following impact risks that affect benefits are identified as part of the analysis:

- RTD involves experimentation with actual customers. In all likelihood, not all experiments will deliver the desired results. This could result in lost revenue for a segment of customers. The interviewee described this as the “cost of experimentation.” This risk, along with the risk of other unintended consequences being introduced into production, can be mitigated by architecting the solution so that turning off RTD will revert the underlying systems to their original state. That way, if the RTD goes down or needs to be taken off line, the other systems and business logic all remain intact. This was described as a best practice by the interviewee.

- There is also the risk of suboptimal results because of the lack of expertise to build, score, and iterate RTD campaigns. This can be mitigated by engaging with an experienced integration partner and providing the necessary training to internal resources.
- RTD requires a certain level of trust from employees, i.e., call center staff, if they are to follow the system recommendations. This requires adequate training to ensure that all parties are comfortable with the system and understand how it changes people's daily responsibilities.

Table 13 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

**Table 13**  
Cost And Benefit Risk Adjustments

<b>Costs</b>	<b>Low</b>	<b>Most likely</b>	<b>High</b>	<b>Mean</b>
Internal implementation labor (medium risk)	100%	100%	115%	105%
Professional services (medium risk)	100%	100%	115%	105%
Hardware (medium risk)	100%	100%	115%	105%
RTD licenses and support (medium risk)	100%	100%	115%	105%
Ongoing campaign management labor (medium risk)	100%	100%	115%	105%
<b>Benefits</b>	<b>Low</b>	<b>Most likely</b>	<b>High</b>	<b>Mean</b>
Improved closure rate revenue (medium risk)	80%	100%	95%	92%
Incremental deal size revenue (medium risk)	80%	100%	95%	92%
Post cart abandonment follow-up campaign revenue (medium risk)	80%	100%	95%	92%

Source: Forrester Research, Inc.

## Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the return on investment, net present value, and payback period for the organization's investment in Oracle Real-Time Decisions. The financial results are based on rigorous testing methodologies followed by the customer. These include using control groups and blind testing of hypotheses. These are shown in Table 14 below.

**Table 14**

Cash Flow — Non-Risk-Adjusted

Cash flow — Original estimates						
	Initial	Year 1	Year 2	Year 3	Total	Present value
Costs	(\$3,602,000)	(\$790,480)	(\$4,982,960)	(\$1,580,960)	<b>(\$10,956,400)</b>	(\$9,626,566)
Benefits		\$18,000,000	\$51,788,800	\$80,132,400	<b>\$149,921,200</b>	\$119,368,956
Net benefits	(\$3,602,000)	\$17,209,520	\$46,805,840	\$78,551,440	<b>\$138,964,800</b>	\$109,742,390
ROI	1,140%					
Payback period	2 Months					

Source: Forrester Research, Inc.

Table 15 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 13 in the Risk section to the cost and benefits numbers in Tables 8 and 12.

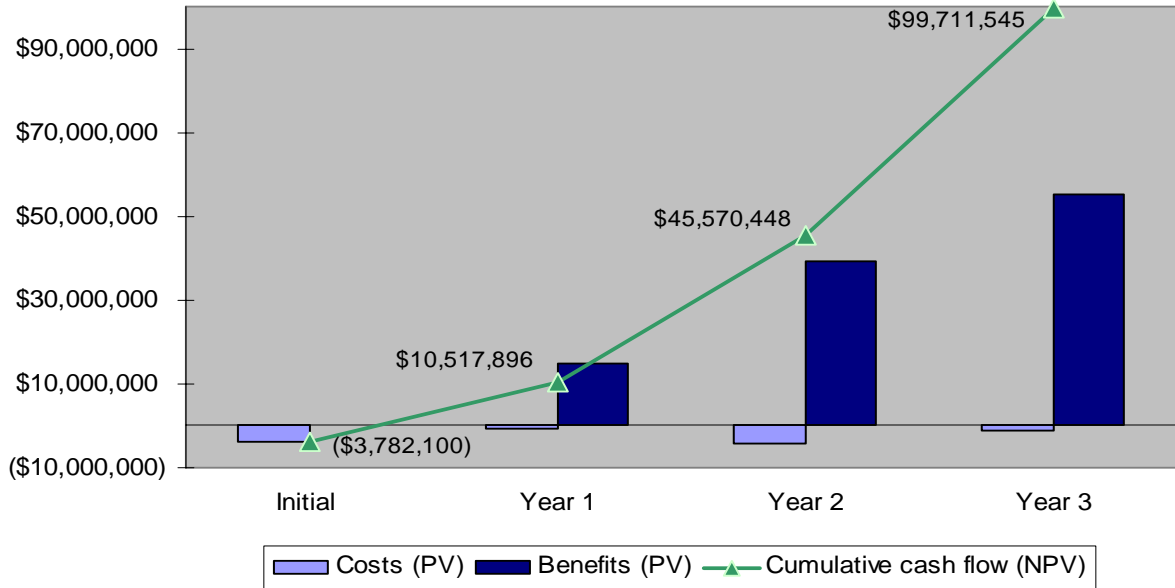
**Table 15**

Cash Flow — Risk-Adjusted

Cash flow — Risk-adjusted estimates						
	Initial	Year 1	Year 2	Year 3	Total	Present value
Costs	(\$3,782,100)	(\$830,004)	(\$5,232,108)	(\$1,660,008)	<b>(\$11,504,220)</b>	(\$10,107,894)
Benefits		\$16,560,000	\$47,645,696	\$73,721,808	<b>\$137,927,504</b>	\$109,819,439
Net benefits	(\$3,782,100)	\$15,729,996	\$42,413,588	\$72,061,800	<b>\$126,423,284</b>	\$99,711,545
ROI	986%					
Payback period	3 Months					

Source: Forrester Research, Inc.

**Figure 3**  
Summary Financial Results, Risk-Adjusted



Source: Forrester Research, Inc.

## Oracle Real-Time Decisions: Overview

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According to Oracle, Oracle's Real-Time Decisions (RTD) platform combines both rules and predictive analytics to power solutions for real-time enterprise decision management. It enables real-time intelligence to be instilled into any type of business process or customer interaction. A high-performance transactional server delivers real-time decisions and recommendations. This server automatically renders decisions within a business process and reveals insights, creating actionable intelligence from data flowing through the process in real time.

## Appendix A: Total Economic Impact™ Overview

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Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility.

### *Benefits*

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

### *Costs*

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the form of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

### *Risk*

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At minimum, three values are calculated to estimate the underlying range around each cost and benefit.

### *Flexibility*

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point in time. However, having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

## **Appendix B: Glossary**

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**Discount rate:** The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, companies often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective organization to determine the most appropriate discount rate to use in their own environment.

**Net present value (NPV):** The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

**Present value (PV):** The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total net present value of cash flows.

**Payback period:** The breakeven point for an investment. The point in time at which net benefits (benefits minus costs) equal initial investment or cost.

**Return on investment (ROI):** A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

### *A Note On Cash Flow Tables*

The following is a note on the cash flow tables used in this study (see the example table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in Years 1 through 3 are discounted using the discount rate (shown in Framework Assumptions section) at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash flows in each year.

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**Table [Example]**

Example Table

Ref.	Category	Calculation	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.

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## Appendix C: Supplemental Material

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### *Related Forrester Research*

“Defining The Online Marketing Suite,” Forrester Research, Inc., October 17, 2007

## Appendix D: Endnotes

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<sup>1</sup> Forrester risk-adjusts the summary financial metrics to take into account the potential uncertainty of the cost and benefit estimates.