

ORACLE

Real Time Decisions (RTD)

Some RTD customers say: "RTD is the only software they know, which is close to print money!"

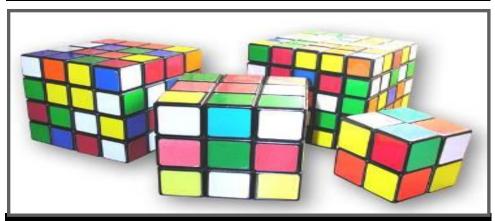
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Consumers: Hard(er) to Reach, Satisfy and Retain

Great experience is imperative, Market Trends call for focus on Customer Experience



Changing behavior, Mobile – choice of channel



Growing complexity more products, more channels





Business have a siloes view of channels

Buying Journey Has Become More Complex Siloed Channels Create Inconsistency Shop Pickup Service Research Buy Follow-On Buy Search Web Mobile **Tablet** Social **Store Call Center** Online Purchase Web Receive Check Delivery **Email** Pricing Pricing Pricina Pricing Pricing Pricing Mobile Offer Status Write Browse **Promotions** Promotions **Promotions Promotions** Promotions **Promotions** Chat Review Reviews **Tablet** Order Check Like Order Order Order Order Order With Capture Capture Capture Capture Capture Capture Tweet Friends Social Inspect In-Store Logic Logic Logic Logic Logic Product **Pickup** Store Product-Call for Related Accessory Data Data Call Data Data Data Call Center Information

It is harder and harder for firms to control interaction flows with their customers, because the world has shifted from corporate defined outbound communications to fluid ad-hoc inbound driven dialogs.



And the proliferation of point marketing have created silos among marketing teams, processes and execution

The Result of Silo'd Marketing is A Broken Customer Experience





The Result of Silo'd Marketing is A Broken Customer Experience





Pass Fragmentation
Onto Customer

78% of customers don't receive consistent experience across channels.

Accenture



Bombarded, Customers Don't Convert or They Leave

94% of customers have discontinued communication with a company because of irrelevant messages.

- Blue Research



Strategy requires on a shift in thinking

Businesses need to move from static traditional marketing to a more dynamic approach, focus on innovation and faster time to market

- · .Increased complexity is driving need for automation
- Massive shift in spending from mass marketing to online and interactive channels
- Improving online and cross-channel experience #1 investment priority by marketers

Traditional Targeting

"I have an offer ..."

offer



"Let me find a group of people /segment to tell about it."





Interactive Optimization

"I have a Customer ..."

"Let me find the <u>optimal</u> choice for this customer right now!"







What's Oracle RTD?

- platform that supports real-time decisions making
- from a universe of possible choices, it picks up 1 or more that fits in that paricular context
- takes into account real-time information and learns to continuously optimize the decision process



Story about 1:1 Marketing, Computers and Automation

- 50 years ago we didn't had Computers and companies were doing business differently
 - Customers were welcomed personally by the manager of a branch e.g. a bank or a retailer, knowing the family, the situation and preferences of the customers
 - The manager naturally generalized behavioural learnings from the answers of his customers T
- Then computer changed the business dramatically
 - Instead of one branch the companies operated 100s or 1'000s of branches, instead of 200 customers they served millions of customers
 - Computers helped to automate all customer processes and repeat the same thing again and again (that's something computers are really good at)
 - But this is also the problem all customers are treated the same way



What's wrong or right about Automation?

- Replacing people with machines makes it possible to tremendously increase the capacity of a process, which has obvious economic advantages. Automation has been successful in replacing people's work and improving many aspects of the process in addition to the capacity.
- So what is wrong with Automation? Nothing really, but the fact that there are a few things that people do better than machines.
- With automation we are able to run the same process, again and again, sometimes repeating the same mistake, again and again. With automation we tend to treat every unit the same way.
- My two favorite human characteristics that tend to be lost with automation are:
 - The capability of the process to learn
 - The capability of people to discern between different cases



What's wrong or right about Automation?

- RTD was designed to infuse these missing elements into business processes.
 - Learning and differentiating (sometimes called "personalization"), thus taking us a step further into better automation of business process,
 - not yet matching all the capabilities of humans, but at least bringing some
 "common sense" into it.

Intelligent Personalisation

The Next Generation in eCommerce



77% of customers say that they find recommendations useful.

76% of consumers are interested in receiving personalised content during on-line interactions.

33% of customers who receive personalised recommendations report purchasing a product based on those recommendations.



Why do we switch?

The three key reasons why people change supplier are consistent across Europe and the US:

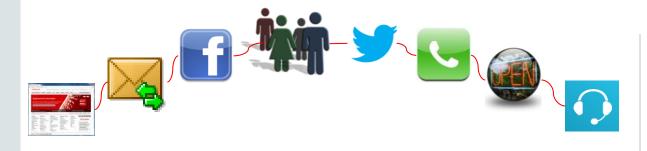
Not being recognised as a valuable customer

Unhelpful staff

Ineffective call centres



What is Oracle Real-Time Decisions (RTD)?







Platform to:

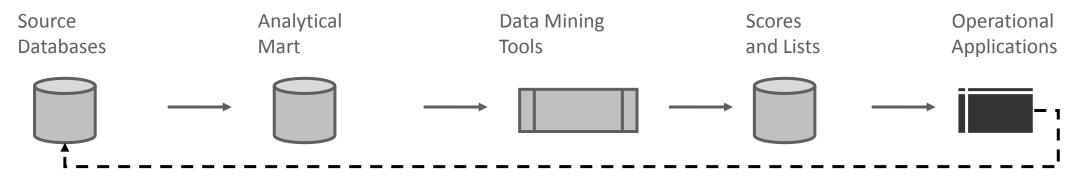
- optimise business events by making accurate decisions in real-time using the most up to date information consistently and in large volumes
- learn from all available data and events to automatically improve all future decisions
- platform that supports real-time decisions making
- from a universe of possible choices, it picks up 1 or more that fits in that paricular context
- takes into account real-time information and learns to continuously optimize the decision process



Oracle RTD Self Learning

RTD Complements Traditional Data Mining

Traditional Learning Process: models lag by weeks or months

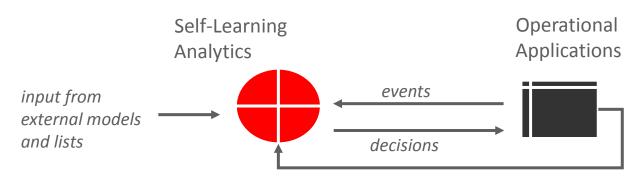


feedback: days or weeks

Continuous Self-Learning Process: models are updated in real-time

Advantages:

- Automatic model creation
- Quick to react when behavior changes
- Both learning and scoring in Real-Time
- Allows broader scope of analysis
- Simple to implement and run



feedback: immediate



Potential Usage of Offline and Real-Time Analytics

Offline Analytics

Examples:

- Life time value
- Clustering analysis
- Customer segmentation by Value other
- Recency / Frequency / Monetary
- Credit/Risk scoring
- Forecasting
- Sophisticated Retention

Reasons:

- Only Historical data
- No real-time contextual data required
- Complex task requiring Human intervention

Real-Time Analytics

Examples:

- Propensity of Next Best Offer/Action
- A/B and Multivariate Testing
- Granular personalization
- Real-Time Insight

Reasons:

- Both learning and scoring in Real-Time
- Model the campaign themselves
- Contextual +Historical Data to capture customer changing behavior
- Automated Process: Reduced TCO
- Faster time to market



One Platform for Multiple Decision Use Cases

At The "Moment of Impact

Marketing Process

- * Customer Experience Optimization
- * Next Best Offer
- * A/B and Multivariate Testing
- * Content Personalization
- * Interactive Marketing Personalization

Service Treatments Optimization *

- **Customer Retention / churn Programs ***
 - **Call Center Optimization ***
 - **Next Best Action ***
 - Fraud *

Service Process

Single Platform for Multiple Use-Cases

Operational Process

- * Maintenance Recommendations
- * Operational Process Optimization

Customer Acquisition Targeting *

- Cross Sell/Up Sell *
- eMail Targeting and Personalization *

Sales Process



Oracle RTD Main Components

Decision Management



- Collaborative environment to define decision management strategies
- .User controls over decision optimization logic
- **Discovery** with insight into decision

Decision Logic





Learning Engine

- Can be deployed independently from decision engine
- Automatically learns from each interaction and discovers important correlations
- Learning can be analyzed by way of user friendly reports

Learning Records



Decision Engine

- Support for simple rules based as well as automated predictive models to define contextual, optimal decision logic
- Self-adjusting Decision logic based on company defined performance goals
- .Highly **scalable** Decision Services
- Test & Control Framework



RTD APPLICATION



RTD is not a black box: Business users have control over business rules and performance goals

Choices

Possible process outcomes: Offers, Messages, Svc Questions, Appropriate Agent, Content, Treatments, etc

Entities

Attributes (logical objects) used as inputs into decisions: customer, account and interaction data

Models & Rules

- Rules that support decisions and scoring (Rules are declarative business logic defined by business users that support decisions.)
- Predictive models that support decisions (Statistical models predict customer behavior or session outcome.)

Performance goals

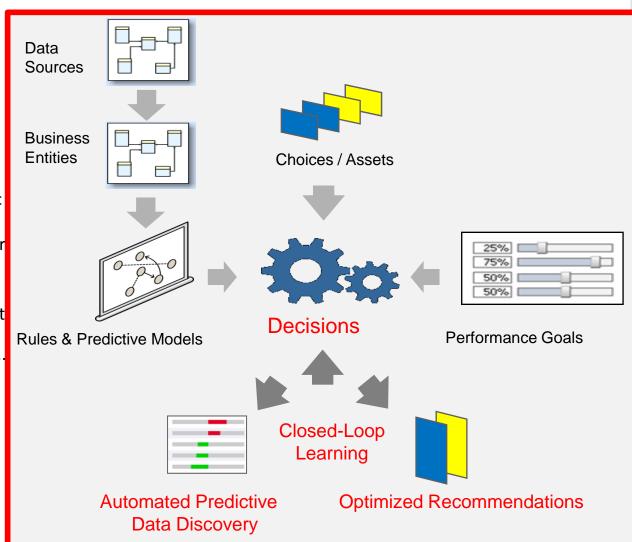
Business objectives (KPI's) by which value of decision is measured, ie. KPIs that the inline service is designed to optimize: Revenue, Costs, No of products per customer, Customer satisfaction, .Cust. retention, Maximize Response Rates, ..

Decisions

Executes models and rules, then applies performance goals to recommend 'best' Choices. (Decisions result from the evaluation of rules and models and the application of performance goals to select choices to provide as recommendations.)

Real Time Analytical Reporting

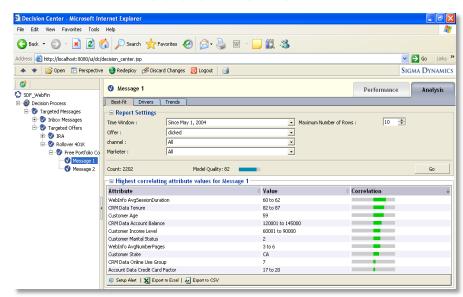
Analytical reports such as data correlation, predictiveness, trends, etc.





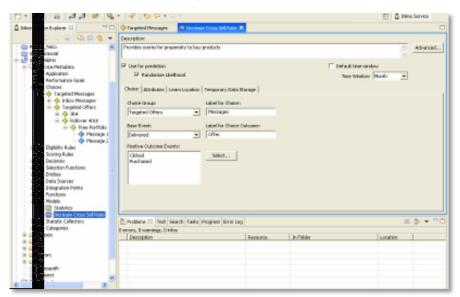
User Interfaces for Designing "Decision Logic"

Decision Center



- Used daily by business analysts to monitor / define business logic
- Web Based App
- Analyze Data via reports
- Configure Actions / Choices and Attributes

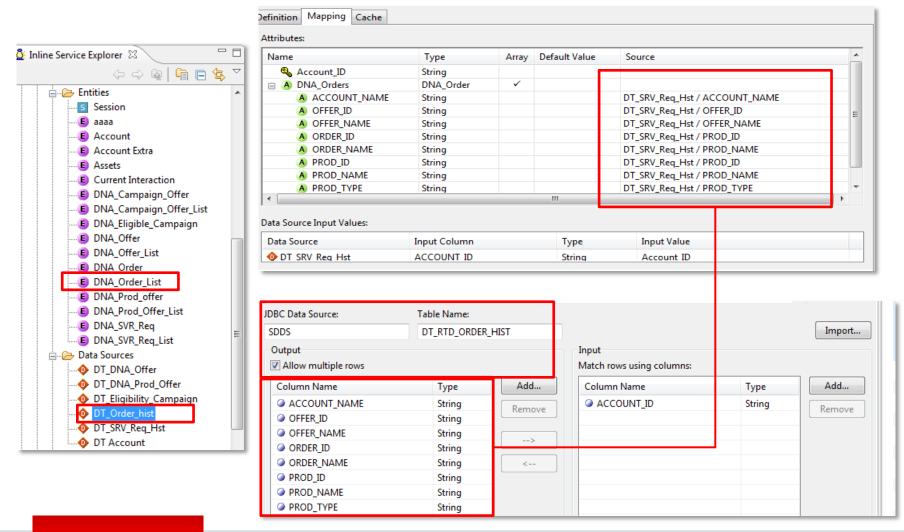
Studio



- Used (one off) by IT to setup environment
- Client Based App
- Define Data Sources, Models, Attributes, Objects
- Built as an Eclipse Plug-in



Defining Data Sources + Business Entities



RTD Entities

- Describes Business Universe
- Feeds rules and models

Data Sources Definition

- Can access multiple data sources
- Retrieve multiple rows

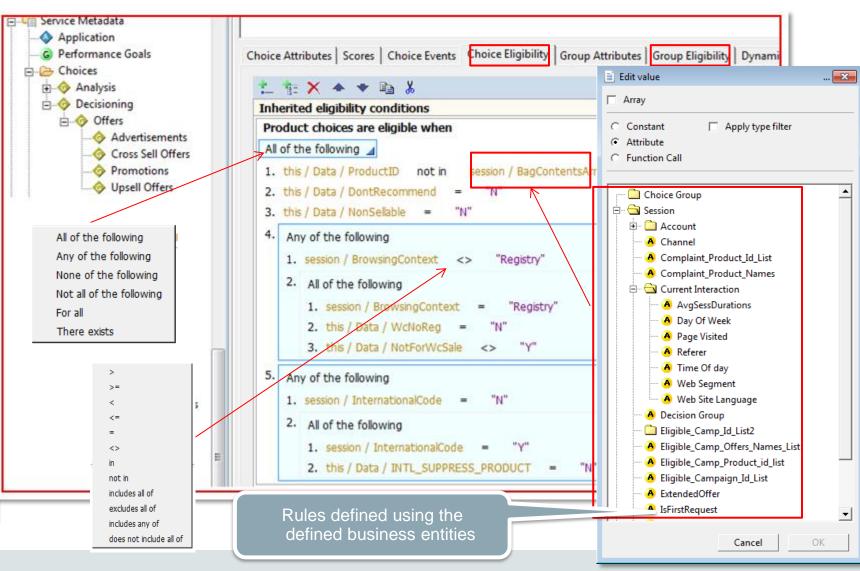


Business rules defined on business entities

Drives Adaptive Business Process

Rule Editor

- Intuitive & Easy to define business rules using Rules Editor for
 - Eligibility rules: to define restrictions on which offer to present and in which context:
 - Cross-sell and retention conditions
 - Channel preference conditions
 - Contact frequency conditions
 - Scoring rules : can be applied to prioritize offers
 - Segmentation rules: to define various sub-decisions
- Business Rules can be:
 - Sophisticated
 - Hierarchical
 - Re-used





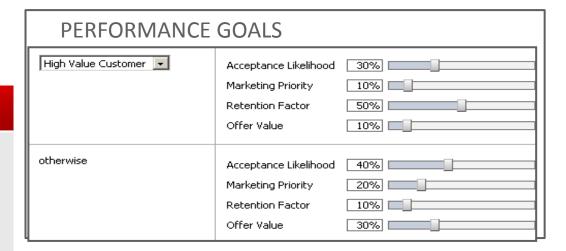
Performance Goals

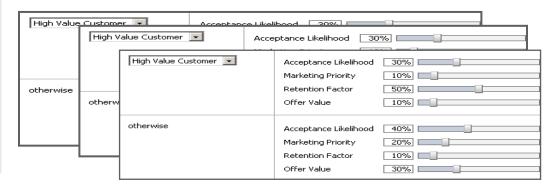
Drives Adaptive Business Process

RTD continually adjusts it's recommendations

Performance goals driven decisions

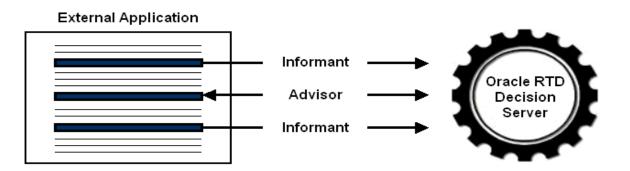
- Recommendations evaluated based on impact of multiple outcomes
- Business users control weight to apply to each performance goal per segment according to business priorities of the moment
- Can define multiple decisioning: per Campaign group, per channels ...
- When selecting the best offer to present to a customer during a given interaction Performance Goals represent the business objectives that the decisions are designed to track and optimize







Oracle RTD communication: Informants and Advisors



- I & A are integration points for handling information events and requests for decisions
 - <u>Informants:</u> pass contextual information to Oracle RTD; integration point where data flow is into RTD from an external system (eg. application). Examples: start user session, user information, choice acceptance/rejection
 - <u>Advisors</u>: request optimized offers from Oracle RTD; integration point where data flow is bidirectional between an external system and RTD. Example: An application requests a decision and Decision Server provides it.
- I & A use standard SOA protocols to communicate

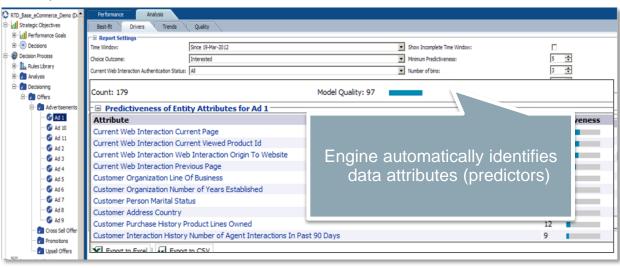


Oracle RTD Insight into its Decisions for Business Users

Oracle RTD Decision Manager is a rich web based user application for business users to collaborate on Decisions and Decision logic:

- for managing, analyzing and refining Decisions over their entire lifecycle,
- providing role based access controls for users to visualize, author, refine, version, audit









RTD Customers

Telecommunications / Media













Financial Services and Insurance



High Tech



Retail















dialog





Personal



MIN















MOTOROLA









T·-Mobile



CABLEVISION



BANCO ESPIRITO SANTO





Financial Group®

















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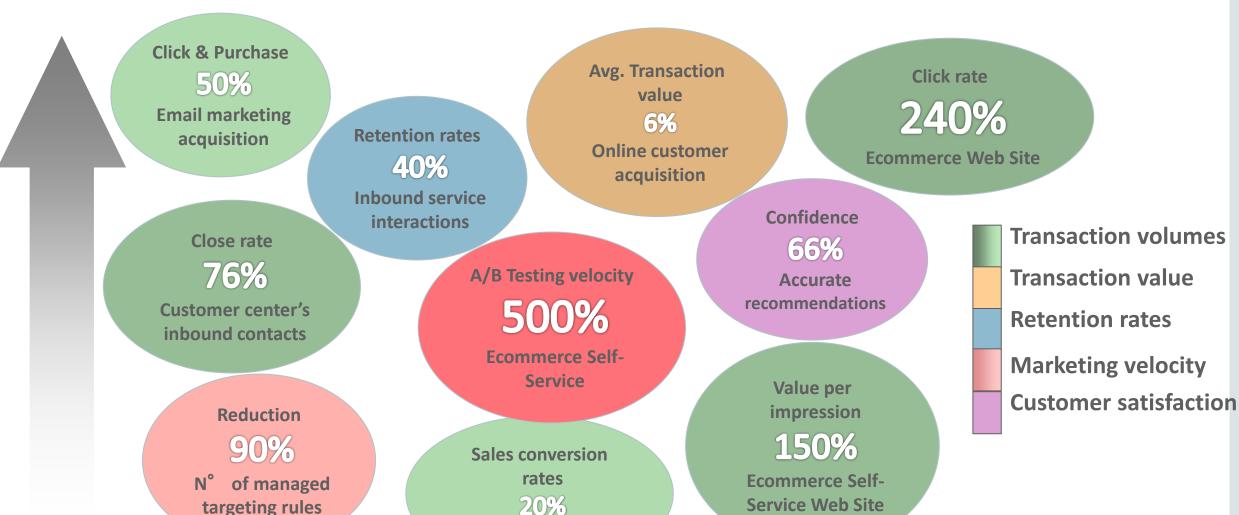








Reality: RTD provides the infrastructure to measure and enhance ROI



Commerce Web Site



Betfair boosts revenue with Oracle analytics RTD



- "We went through a rigorous selection process and found 23 potential suppliers. We cut this to a shortlist of six, who performed technology presentations for us, after which we cut to three suppliers."
- "We wanted a self-learning system. The system has to know how to categorise people..."
- "On average we are making 2,500 decisions per customer in around 50 miliseconds. Decisions like which sport we should drive the customer to. That means we can use this on the web, and serve it to mobile devices."
- "We've seen a 400 per cent uplift in click rate in the target group which is driven by RTD,"
- http://www.computing.co.uk/ctg/news/2144534/betfair-boosts-revenue-oracleanalytics



Privredna Banka Zagreb



- Expansion of reach increased contact rate / number of customers reached
- Communication relevance improved increased number of "clicks" on banners
- Interest in communication increased significantly numbers of responses captured on "product/service" information page has big growth rate
- Number of positive responses leading to contracting increased
- Number of negative responses also increased → good for customer know-how and saves time and money on other "unnecessary" outbound or more expensive contacts
- Impact on Sales and Leads very high increased sales and leads on Internet Banking
- Learning from models tremendous in both quantitative and qualitative terms previously not considered variable for targeting are coming up (can be applied to both "Traditional' high priority campaigns and for improving future activities on RTD)

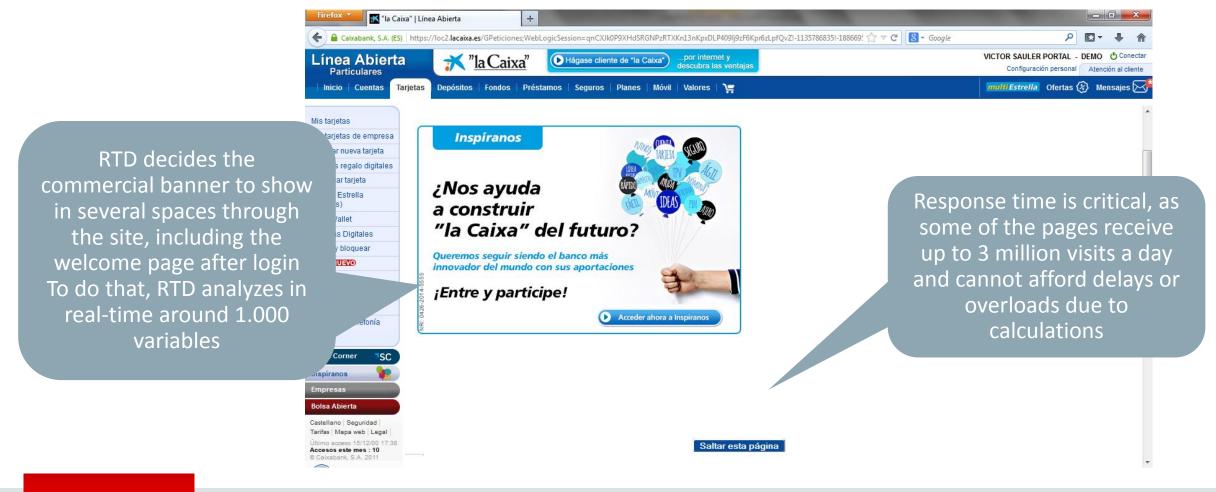


CaixaBank Línia Oberta

CaixaBank's homebanking site

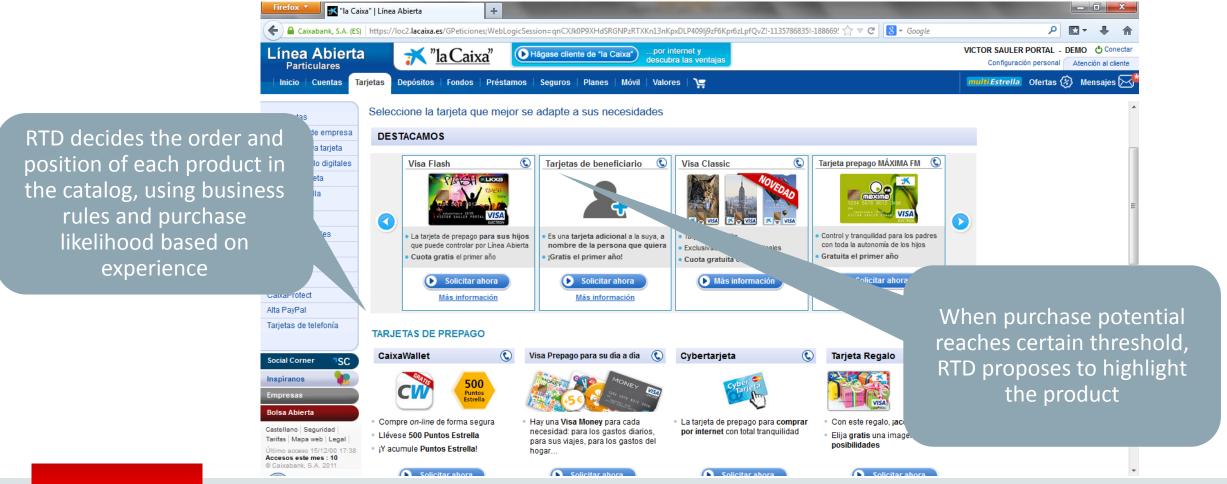
- Línia Oberta (LOE) (<u>www.lacaixa.es</u>) is CaixaBank's homebanking website: by far the most used one of all banks in Spain
- With 30 million logins per month and peaks of near 3 million logins a day: LOE is used by several million customers of CaixaBank as his main and almost only interface with the bank
- So important communication channel claims to be used as an efficient promotion and sales platform for banking products, thus increasing benefits already obtained
- With that objective, CaixaBank Electronic Channels department requested to use RTD to improve product sales in the web channel, and then expand to other electronic channels (mobile, email, ...)

CaixaBank Línia Oberta Best offers



CaixaBank Línia Oberta

Product catalog sorting

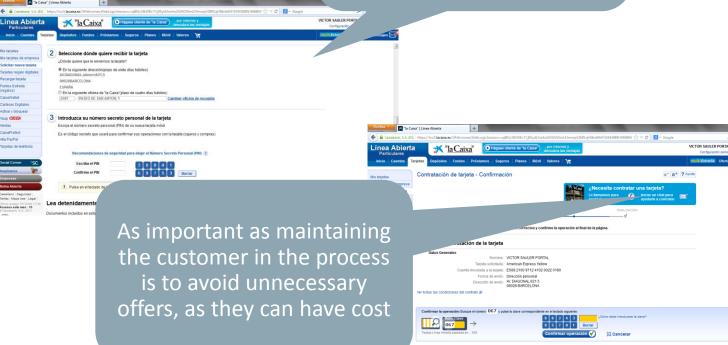


CaixaBank Línia Oberta Purchase churning prevention



RTD predicts the probability that the customer leaves the contracting process, and decides if an incentive is needed in order to keep the customer in the process

For each step into the process RTD recalculates churning likelihood, remembering decisions taken for this customer to maintain consistancy





CaixaBank Línia Oberta Facts of the project

- Some technical performance achievements
 - Over 30 million logins each month
 - Peaks of 3 million logins a day, with 150k concurrent sessions
 - Login decision in 60 ms, including RTD session start time
 - Best offers decisions in 20 ms, and combined set of 21 decisions in 70ms
 - Full HA & DR architecture, with 8 decision servers to manage 1.500 requests/second
- Some business performance achievements
 - Tests during pilot phase registered purchase uplifts from 30% up to 139% against batch assigned campaigns



RTD @ Credit Mutuel Arkea Bank, France



Company Background

- Crédit Mutuel Arkea is a mutual banking and insurance group in France
- Composed of three branch networks and several specialized subsidiaries, including one dedicated to online banking, Fortuneo
- Turnover of USD2.3 billion and over 9,000 employees and 600 branches

Business Challenges

- Marketing campaigns are not well targeted. These are distributed across various channels and they are not very relevant to consumer expectations
- need to increase the acceptance rate at their branches and improve customer product equipment level
- Pursue leadership in innovation in the banking and insurance sectors and achieve greater conversion rates during incoming calls

Business Goals

- Support the client's 'bank of tomorrow' strategy to target major events in their clients' life
- Enhance customer experience by providing real-time offers across channels
- Optimize operations

Business Results:

."We increase our revenue by 30% in few weeks"

Marc Chéreau – IT Innovation Director







RTD @ A Financial Global

Client

- A global Financial Service Institution with 10 years of experience executing successful real-time personalization programs on their Ecommerce Banking Web site - 30 Million sessions per day
- Selected RTD out of 25 Vendors to support it's 10 years cross-channel "Personalization Utility" roadmap - 400+ business requirements, 100 M data records for predictive modeling benchmarking
- •Top 150 US Web site according to Alexa.com traffic ranking

Business Goals

- Improve consumer's online experience and maximize revenue opportunities from each web visit
- Combine offline & real-time predictive models to optimize offer clickthru & conversion rates
- Reduce time to market by providing business users controls over the lifecycle of offers

Project 1 – Website Optimization

- Largest RTD worldwide deployment generates 100% lift in value per impression
- Support personalization for high traffic pages in the US and migrating international sites
- .RTD handles 400M Marketing Messages per Month

Project 2 – Interactive Marketing Lifecycle Management of Choices

- Enabled daily change cycles versus bi-weekly, by providing direct business user control over personalization logic & associated content
- End-to-end "campaign-to-offer-to-creative-to-placement-to presentment" in support of marketing "ideation to production workflow"

Project 3 – Recommendations For Mobile

• RTD is now being used to push personalized recommendations to Smart Phones and Tablets

.Project 4 – Facebook Page Recommendations

- Rules utilize Facebook opt-in shareable/actionable profile attributes
- Utilize models based on Corporate web page choice presentments to push recommend offers .

Project 5 – Call Center Service Optimization

- •Provide Next Best Action for Service Related Calls
- •Improve Process related to determine automated approvals



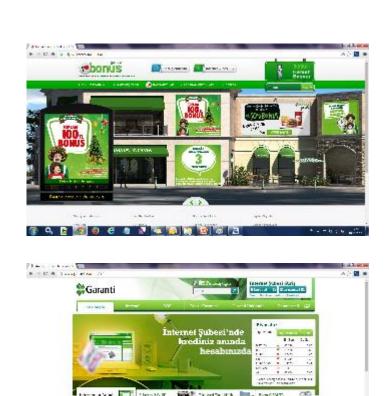
Oracle RTD @ Garanti Bank

NEXT BEST OFFER: First Project Web Channel

1. Enrich existing product propensity models with new external data sources

Enhance product offers with realtime data by utilizing machine learning and Real time decisioning

- 2. Identify best offers/products for individual customers real-time thru machine learning
- 3. Discover Commercial and SME networks, understand the roles and the relationships in the networks and between to better predict financial needs of the customers







RTD @ Nextel

Company Background

- Nextel Argentina is a subsidiary of NII Holdings Inc., a company based in Reston, Virginia, United States. NII Holdings Inc. is a leading provider of mobile communications for business customers in Latin America, with operations in Argentina, Brazil, Mexico and Peru, listed on NASDAQ (US market) under the symbol NIHD.
- Nextel began operations in Argentina, in June 1998 with his service PPT (Push to Talk) focusing on the cities of greater economic activity, beginning with Buenos Aires.

Business Objective:

- To improve the level of acceptance of offers prepaid mobile telephony, maximize interest in increasing the threshold offers recharging.
- Based on understand customer consumption behavior through processing of call records -Call Details Records - in real-time and predictive models
- using RigthNow (RN) and Real Time Decision (RTD)

Implementation

- Nextel acquired RightNow and RTD to replace the Campaign Management solution used in the marketing area, in sending offers through text messages to their pre-paid customers.
- RightNow was implemented for segmentation campaigns for their prepaid customer base, and RTD for intelligent promotions online, incorporating the concept of marketing one-toone.
- Implementaion of RTD in both Peru and Argentina

Results from RTD in Argentina

- Prior to the implementation of RTD Nextel has 9 (nine) different offers to provide its customers, now handle more than ninety (90) (new) offers.
- .Doubled acceptance rate of 1.74% to 4.22% in two months.
- RTD allowed Nextel learn more about the behaviour of their customers and the preferred offers the one they are most likely to accept
- Achieving Autonomy and facilitate the management in area segmented marketing campaigns. (Nextel stopped paying segmentation service that was outsourced to another company, which was completely manual. On the other hand, added the solution of RTD to implement the strategy of direct marketing)



Oracle RTD for Customer Acquisition & Retention





Goals

- Increase revenue from products and associated services through inbound contact center channel
- Easy integration into backend systems and contact center processes
- Minimal disruption to exiting business models and agent handle times

Implementation

- Contact Center deployment on top of Siebel
- Phase 1 deployment was 2 month production pilot in 3 sites (100 advisors), 3 control teams
- Success metrics: Conversion rates, Customer experience, Call Handling Time, Agent Satisfaction

Results

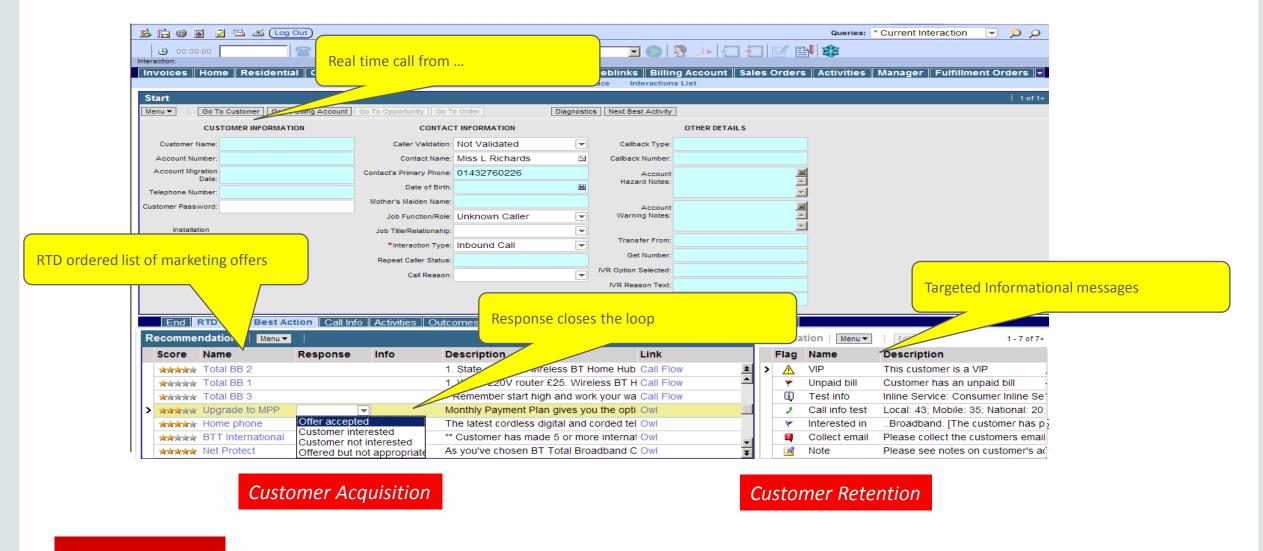
- Improved accuracy over business rules alone
- Improved Cross Sell Lift by 8%
- Based on agent survey, confidence that RTD helped doing their job increased from 26.1% to 85.7%
- Agent confidence that RTD recommendations are 'very accurate' in matching customer's needs: 66.7%







Oracle RTD for Customer Acquisition





Marketing Personalization in Dell





- "We increased our revenue by 40%"
- "The insights are amazing. You can really see customers' buying patterns and interests, how they change over time, and we can take action on that."

Mark Sucrese, Marketing IT Director, Dell

Dell is using Oracle's RTD in 15 countries and 30 languages to accomplish:

- \$132M in net new revenue FY2012
- 40% reduction in cost of dispatch
- 20% Closure Rate
- 10% Increase Revenue per Call
- 20% Increase Profit Margin per Call



Dell RTD is Live in 3 Channels, 4th is WIP





- 70,000 Service Requests/Day
- 7,000 Tech Support Agents
- RESULTS: 15% Close Rate



Project#2: Sales Contact Centre

- 40,000 Order Booked/Day
- 4,000 Sales Agents
- RESULTS: \$15M Revenue / Month



Project#3: Email content personalization

- Personalize email subjects header to increase opening rates
- Send emails at optimal time based on learned behaviors.
- Propose Upsell / Cross-Sell offers at mail opening with high probability of a sale transformation
- Learn in real-time on mail opening, click, cart, revenue generating positive events



Many Organizations Are Facing Similar Challenges

Objectives

Problems Today

Best Practice

Timeliness and Relevance

.Over-reliance on business rules

Balance between model-based and user-defined decisions

Multi-Channel Support .Long lead times between analysis and deployment

High degree of automation / Self-learning models

.Poor channel integration

Pervasive solution spanning all customer-facing applications

Ease of Integration

Siloed solution for each channel

Common set of models and metadata for all channels

Poor real-time performance and scalability

Service-oriented architecture with guaranteed response times

Source: Oracle Insight analysis



Oracle RTD: Summary

- Unique decision platform learning in real time from real time context
- Tie Operations with Analytics to offer more personalized interaction flows across channels
- Insightful business decisions Analysis
- Performance sub-second decisioning & automatic statistical models management
- Business User interface to decide on Marketing Priorities over Predictive models
- Open Architecture
- Strong References
- Very High ROIs



Hardware and Software Engineered to Work Together

ORACLE®