

Optimising real-time marketing

An Experian white paper



Executive Summary

In an age where direct marketing effectiveness is declining, organisations are increasingly using marketing when customers decide to interact with the business (through telephone, face to face, web or ATM).

This is a time when an organisation has the attention and permission of the customer to communicate, providing an ideal opportunity to strengthen the relationship. Sophisticated organisations are using experienced front-line staff and new systems to help manage the decision-making and delivery process of customer offers and marketing messages.

However, most inbound marketing systems still have inherent weaknesses that limit an organisation's ability to derive the optimum value from these opportunities.

At any one time, there can be hundreds of possible actions to consider for each customer and just taking the first that triggers or the one with the highest expected value may not always be the best, given the goals and constraints of the organisation.

The solution to this issue is for marketers to optimise customer actions within the wider objectives of the organisation.

Optimisation maximises the overall portfolio, product and channel objectives, taking into consideration real-time customer status and requirements, whilst simultaneously satisfying business constraints such as product targets, channel limitations, budgets and customer contact policies.

Optimisation enhances and exploits all of the inbound marketing systems, processes, analytics and data that you have in place today, enabling you to fine-tune all of your customer contact activities to achieve maximum ROI.

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1. The case for inbound marketing

The advent of the 24-hour society has changed the market for products and services, enabling customers to interact with organisations when it suits them and on their terms. Service has become the prime differentiator, so being more 'customer oriented' enables an organisation to improve its understanding of customer's needs and how to satisfy them. The ultimate goal is to engage with customers in a real-time interaction about their needs and wants, building trust and creating satisfied customers.

Forrester Research predicted that by mid-2006 more than 85% of consumer oriented businesses will be using one or more inbound channels to direct targeted marketing messages to individual customers¹. However, most organisations will do this using a basic rules approach to guide the offer that the customer receives.

Other organisations have focused their marketing efforts onto interactive channels, automating the use of the latest customer intelligence to identify and recommend more pertinent service and sales messages at the point of customer contact.

Agents no longer have to guess what action to take with a customer; instead they are prompted with the best decision so that they can concentrate on presenting it. For example:

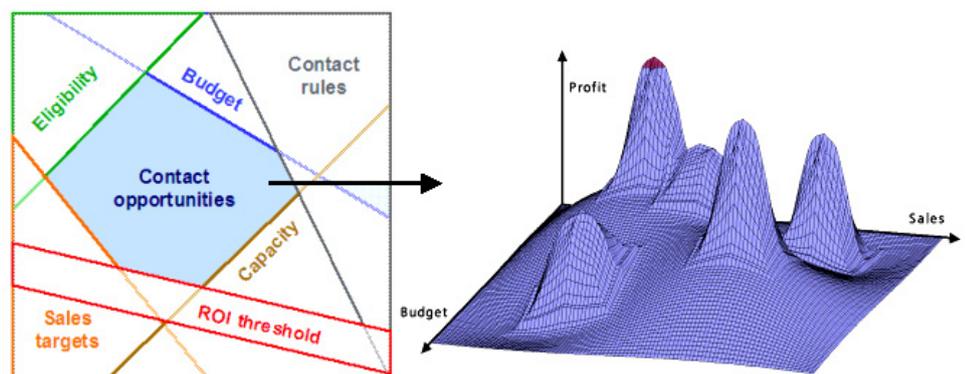
- A customer contacts an organisation to cancel their current agreement. The organisation wishes to prolong the relationship so the representative discusses a retention offer appropriate to the reason for cancellation.
- A customer close to the end of their current agreement contacts an organisation, and the organisation wishes to continue the relationship so the representative discusses a proactive retention offer appropriate to the customer's current and potential usage.
- A customer contacts an organisation with a change of address or transaction; if time permits the representative discusses an up-sell offer appropriate to the customer's usage.

Using inbound calls for marketing results in an offer response rate that can be as much as ten times higher than the equivalent message through outbound marketing. As sales rates improve from this process, there will be less reliance on outbound marketing, producing a corresponding reduction in costs.

The main challenge of inbound marketing is identifying the best action to take when the customer interacts with the organisation. As each customer is different in profile and behaviour, they should warrant different, personalised actions. However, this poses a significant challenge when there are tens or hundreds of different actions to choose from and the fact that the most relevant action for the customer may not always be the best action for the organisation.

Specifically, the action with the highest estimated customer response rate might not be the one that will maximise their value to the business, achieve overall sales or revenue targets, or be the most effective use of available resources. Should the inbound contact opportunity be used to ask about their holiday and capture additional information about future insurance needs? Why not raise the issue of an overdue bill? Maybe a sales prompt is most appropriate, but which one if the customer qualifies for 2 or more? Or perhaps, do nothing this time?

There can be literally hundreds of possible actions to consider for each customer, taking into account the multi-dimensional trade-off between the goal the organisation is seeking to maximise and the boundaries defined by its budget, sales targets, capacity, contact rules and ROI expectations.



2. Identifying the next best action

Given the complexity of this multi-dimensional problem, the ideal method of identifying the next best action for any given customer interaction requires the business to combine timely and accurate information about the interaction with predictive customer intelligence. There are many different approaches that companies have adopted to try and make the best decision for the customer during an inbound contact.

Experience

Some organisations rely on their front-line staff to make a skilled assessment of the interaction to determine what to do beyond basic customer service. Summarised customer data is often provided by an information system to help guide their assessment. However, most agents sell what they know or what they are told to sell based on this week's "special offers".

Automation

As the volume and speed of customer interaction has increased, automated recommendation systems have been introduced to make an informed 'decision' delivered to the front-line staff during the customer interaction.

Different pieces of data can be incorporated into decision logic implemented through programming or scripting within the customer service application or operational database. For example, if the customer has done X, then recommend message Y. However, automation can be perceived as de-skilling front-line staff, which can reduce sales effectiveness, particularly if the quality of recommendations declines. It is also inherently difficult to maintain in a dynamic, competitive environment as it relies on IT or Database Administrator (DBA) resources to make changes.

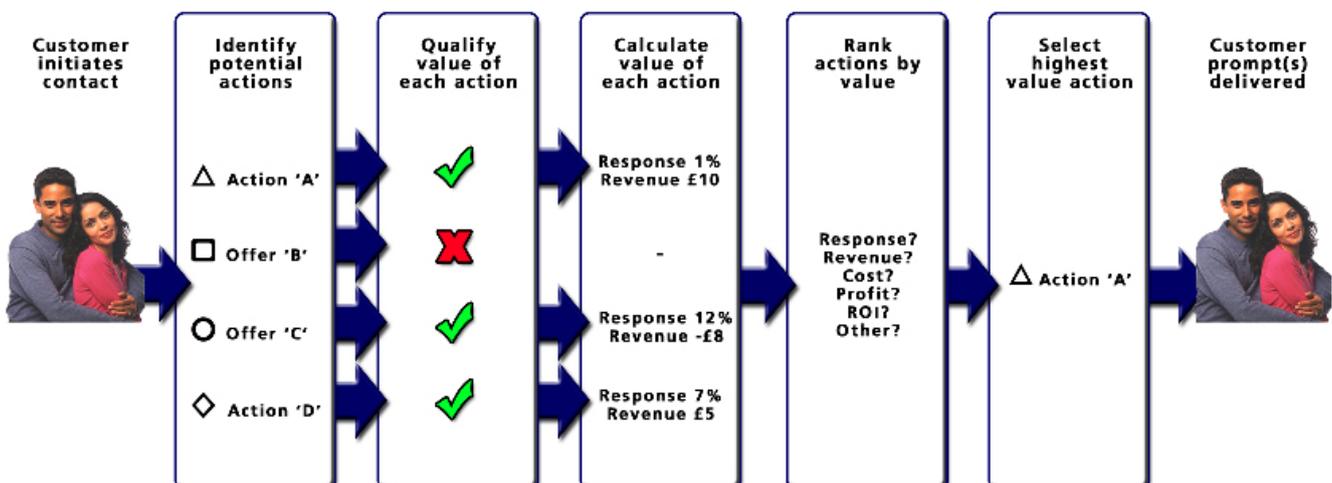
Rule management

This approach elevates the decision logic to the marketer's desktop. This typically involves using a specialist software application that enables a series of expressions, criteria and/or trees to be defined by the marketer and then compiled for execution by a decision engine that is connected directly to the customer service application for on-demand recommendations. This rule-based approach is typically visual and therefore easy and intuitive for the business user to manage. However, the order in which the rules are

applied can give radically different results. As the number of different actions increases, the number and complexity of rules must also increase to differentiate the target audience. This in turn creates the challenge of how to prioritise the rules to identify the best action for the customer and the business.

Recommendation engine

An improved approach to rule management is to use a form of prioritisation to identify the best offer. For example, introducing a relative value of each action (e.g. a monetary and/or probability) and then prioritise per customer to identify the action with the highest value. This approach typically mixes explicit rules with value-based assessment that enables the business to create a list of candidate actions per customer, qualify them using eligibility rules, then pick the highest value action(s) from those remaining.



The challenge of these approaches is that they still consider only one customer at a time, relying on the user to translate overall objectives, strategies and channel constraints into individual customer decisions. For example:

- How to maximise the profitability of all activities to ensure that customer preference, product targets and channel limitations are satisfied?
- How best to allocate a limited stock of handsets or special rate funds – first come first served, best value per customer, or ROI?
- How to ensure all products achieve a fair proportion of leads?
- What is needed to do next to achieve end of year sales targets for this product?

Summary

All of these approaches require the marketer to rely on informed guesswork to determine the decision strategy for a customer that achieves the highest overall return given the resources available.

Even the most sophisticated prioritisation techniques rely on an iterative process to filter different combinations of rules and cut-offs on multiple score dimensions. This results in an inherently subjective determination of the combination that best fits business goals and resource constraints. With the majority of these approaches, physical customer data is not used to configure the decisioning process – the organisation has to wait and see what happens.

This 'art vs. science' approach means the marketer is in most cases 'flying blind' in terms of the impact their strategies have on both the customer base and the overall organisation, at least until significant resources have already been committed.

New advances in the ability to model customer behaviour in real-time have been touted as another way to take guesswork out of these decisions. However, experience is beginning to show that real-time scoring of predictive models only makes sense in cases where the attributes are highly volatile². More and more, sophisticated direct marketing organisations are finding that off-line scoring of models can be just as effective once they are made operational in an objective and timely way.

² Inbound Marketing Goes Mainstream, September 2005, Forrester Research Inc.

3. Optimisation - maximising customer value

The complexity inherent in today's real-time marketing is driving advanced techniques in analytics and decisioning. Optimisation techniques have been applied to similar problems in outbound marketing decisioning, with well-proven increases in returns.

Packaged solutions currently available to marketers use advanced mathematics to help them allocate their finite resources in a manner that will maximise their overall goals.

Why should an organisation consider optimising next best customer actions, particularly if it already has the ability to make prioritised real-time customer decisions? By introducing mathematical, constrained optimisation into their decisioning systems and processes, organisations have seen improvements in their marketing returns of between 10% and 30% or more.

Constrained optimisation enables marketers to build the 'big picture' into each and every next best action, ensuring that they are maximising their overall marketing objectives, such as profit or sales, whilst simultaneously satisfying all business constraints, such as sales targets, channel limitations, budgets and contact policies. It can take into consideration any current, historic or predictive information about the individual customer or the context of the interaction.

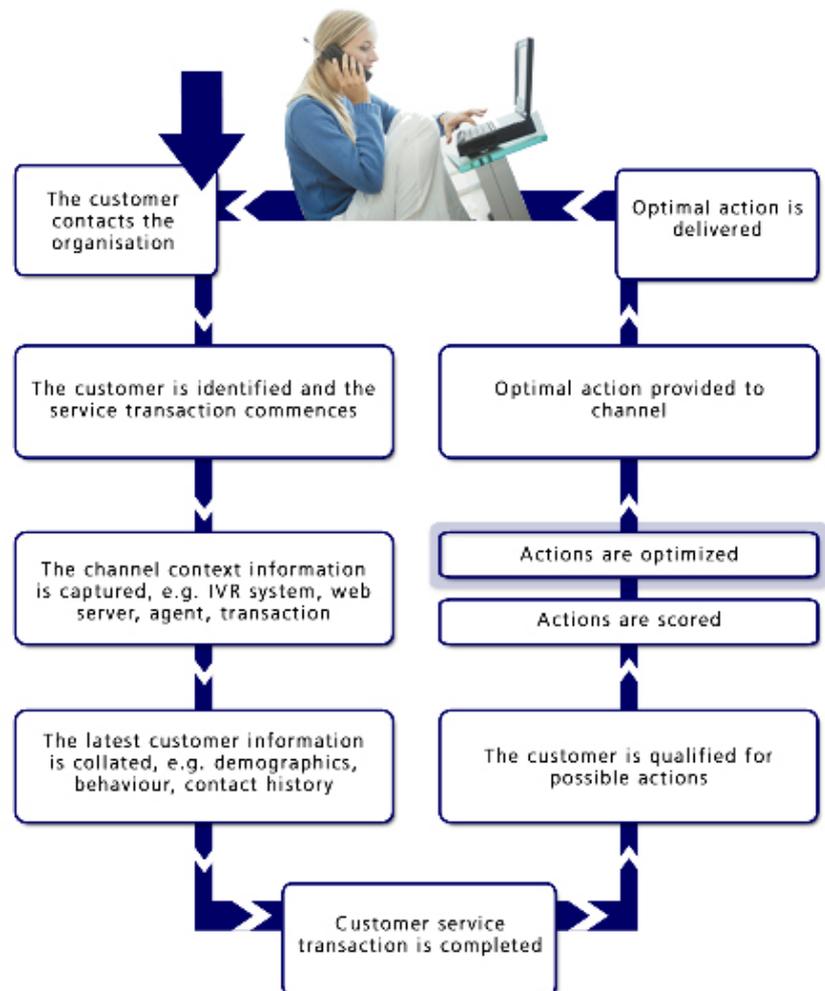
Optimisation of next best actions enables marketers to answer questions such as:

- What is the best set of individual actions to assign to customers in order to achieve our business objectives?
- How to maximise the success of a campaign in terms of its overall contribution to business profitability, taking into account other product sales targets, contact centre service targets and limited customer service resources?
- How to balance the trade-off between the customer's willingness to respond and the organisation's ability to fulfil?

3.1 Where it fits

Optimisation is an objective decisioning technique that can be used to simplify the complexity of marketing decisions and add incremental value to the entire customer interaction and decisioning process.

It adds a layer of decision intelligence to the marketing process and fully exploits the modelling, data warehousing, customer and decision management systems that are already in place. Where an automated, inbound marketing decisioning system exists already, optimisation should be used in-stream to provide optimal next best action decisions in real-time.



3.2 Value management

Whilst applying decisioning in a single channel is advantageous, the biggest value comes from making a decision about the customer as a whole. The best optimisation tools enable the marketer to consider any number of actions across all channels, including synchronising outbound channel activity with inbound decision strategies.

This means the organisation can manage their customers as a portfolio of assets and convert parallel or conflicting cross-functional activities into a single customer contact strategy. This also enables marketing, operational and resource plans to be developed from 'bottom-up' based on actual individual customer events and propensities.

Optimisation can help the marketer identify the right investment balance between marketing, promotions, customer service, data capture, product development, product pricing and yield management. This enables budgets to be optimised across portfolio growth, revenue generation and cost minimisation, making it easier for marketers to justify the answers to questions including: "how much to spend on recruitment?", "how much on retention?".

3.3 Goal seeking

One of the primary advantages of using an optimisation technique is its goal seeking capability. This means it can make recommendations based on maximising overall strategic objectives, whilst considering any operational constraints rather than just selecting the action with the highest expected value per customer. This is particularly important when, for example, you need to achieve multiple product sales targets or you have limited fulfilment capabilities available. In this instance, an organisation needs to promote offers to customers that help achieve all the targets without overburdening the fulfilment processes. Constrained optimisation ensures the next action truly is the best action.

3.4 Simultaneous evaluation

Another key feature of optimisation is that it considers all of the available data simultaneously in the decisioning process, rather than one criterion at a time in a predetermined sequence. It is configured using real data, so the user can make strategy changes and view the impact of the change all in one place.

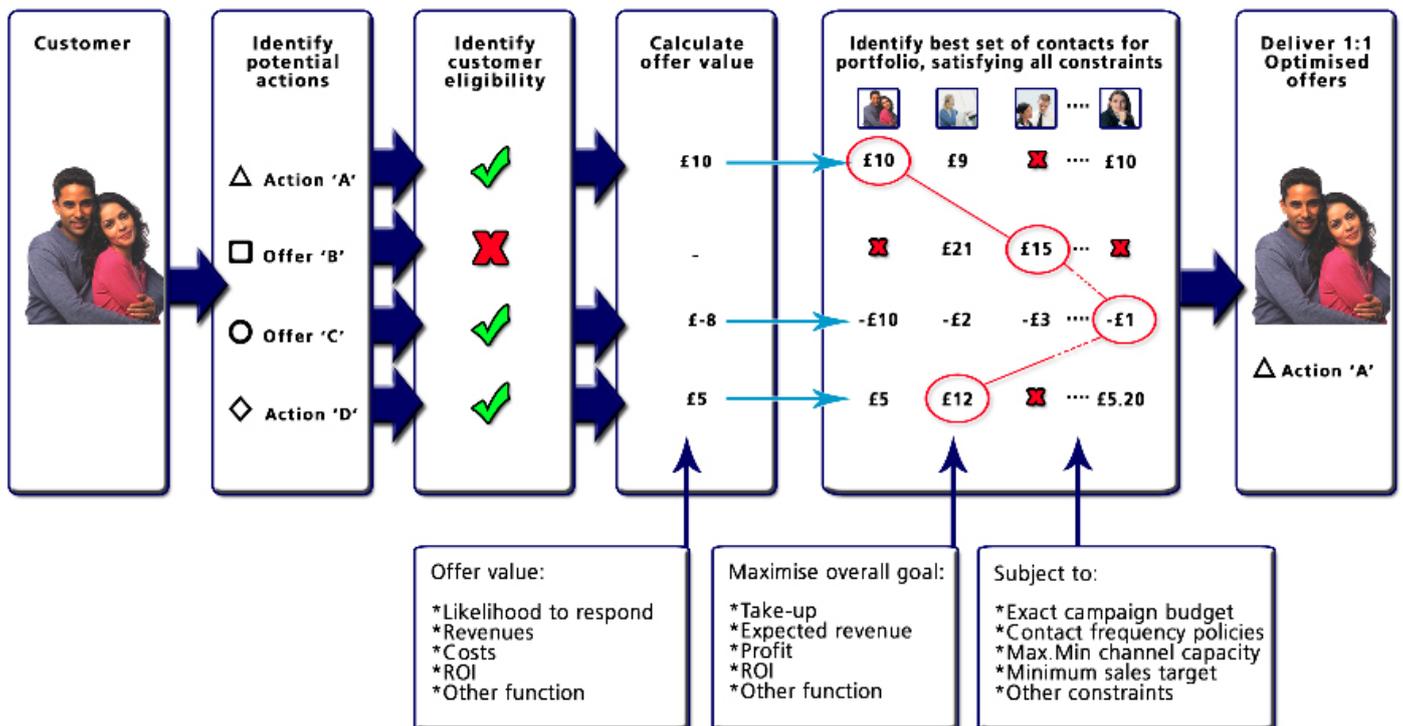
This also eases the job of managing the complexity of hundreds of different actions and multiple channels without having to work out how to simplify the problem or prioritise rules to fit the desired objectives. Enabling "segment of one" management of customers is no longer a challenge – optimisation makes it easy to manage opportunities that would otherwise be missed or have to be ignored when using other decision management approaches.

3.5 Linking planning and execution

Optimisation does not replace marketing expertise - it enhances it. The best optimisation tools allow the user to easily define and 'play' with different business objectives, inputs and constraints and see the results of each scenario in a matter of minutes.

Understanding the trade-off between different objectives and various constraints has the added benefit of improving the dialogue between marketers and service operations. Now multi-channel activities can be optimised to maximise overall results and balance what's best for the customer with the overall profit and business goals of the company.

This scenario planning approach allows those familiar with the business to test 'what-if' questions and truly understand the interactions and trade-offs between different factors, activities and returns before committing resources to the optimal scenario. For example, an organisation is able to simulate and report on the relative impact of contact centre constraints and opportunities such as staff availability, attrition and training.



4. Execution

Optimising next best actions during each real-time interaction is not a trivial undertaking, particularly where there are hundreds of potential actions across many channels for thousands or millions of customer interactions. The key issue is data: do you have the information required to make the best decision in real-time at the point of interaction?

Typical data includes:

- Customer information – e.g. personal details, demographics
- Behavioural – e.g. account or service transaction usage, segmentation
- Interaction history – e.g. how recent a contact is and type of contacts
- Preferences – e.g. stated or scored channel or product preference
- Predictive scores – e.g. propensity to buy, to churn, expected value
- Events – e.g. real-time, recent or trend based triggers of activity
- Channel – e.g. availability of resources, costs
- Product – e.g. budgets, sales targets, revenues
- Interaction – e.g. IVR exit point, current web page
- Action – e.g. eligibility rules, success rates

The ideal situation is when the data is complete, accurate, timely, available within or across any interactive channel and refreshed dynamically.

However, even if the data is not available in real-time or at the point of interaction, strategies can be put in place to capture missing information, or data can be pulled together off-line with optimised recommendations placed on a database ready for delivery in real-time.

5. Case studies

U.S.A. Internet retailer

This leading U.S.A. Internet Retailer generates 100% of its sales via the internet. It uses dynamic product configuration to select appropriate inventory and pricing based on customer propensity and purchase history.

The optimisation challenge was to ensure best fit between products presented and anticipated customer requirement, balancing the trade-off between margin maintenance and closing the sale. Once live, they realised a \$1.8m increase in revenues generated each month.

Web portal

This leading consumer champion Web portal used complex rule-based eligibility and filtering criteria to try and balance contractual volumes and take-up commission from affinity leads for a wide range of business partners.

Each lead is decisioned in real-time using the latest customer profile information. This has led to a 19% increase in take-up and a 10% increase in revenue over the previous decisioning process, equating to €6m per annum

UK retail bank

This leading UK bank had already implemented a major 3rd party CRM and decisioning system which enabled the business to implement their marketing decision strategies in real-time. This existing capability included extensive business rule and prioritisation tools to enable the marketers to create an appropriate next best action strategy for each customer segment.

The challenge was how to select the single best action for the customer service representative to deliver during inbound customer service calls, particularly when there was in excess of 250 potential actions per customer covering welcome; events; usage incentives; reminders; education; data capture; product up- and cross-sell opportunities. Unfortunately, the prioritisation approach often led to over selling of some products and underselling of other products, resulting in an unequal lead generation for each product area.

The bank decided it needed a more objective decisioning process that could balance the conflicting product priorities in the context of their overall objective of profit. The bank also wanted to take a more holistic approach to its customer contact, considering planned outbound actions in addition to the triggered opportunities. This increased the number of potential actions per customer to over 400, making it even harder for the marketers to construct a prioritised decision strategy.

By implementing optimisation the bank can identify the best leads to meet sales and revenue expectations across all products and channels, adhering to strict customer contact frequency policies and work load constraints.

The optimisation considers, in real-time, relative action profitability and the relevance to the individual customer using the latest available data. The bank now operates an analytical decision intelligence platform into the operational CRM environment, streamlining the marketing planning process and providing the bank with the ability to forecast and price the effect of different strategies before committing scarce resources.

The bank has benefited from a 25% increase in customer 'net present value' over the existing rule-based rank/sort decisioning process.

6. About our solution

Our solution comprises two key components, expert consulting and advanced optimisation software.

Our optimisation experts provide best practice solution design, implementation and support services, including specialist analytical services to help you define and implement an optimisation framework within your business.

We work with you to identify appropriate processes, resources and skills required to operate and realise maximum value from your investment in optimisation.

The market-proven Marketswitch® Optimization software uses patented, mathematical, constrained optimisation technology that enables marketers to easily create, analyse and apply sophisticated optimisation algorithms through a graphical front-end.

The Marketswitch® Optimization software allows marketers to create and analyse multiple scenarios based on their own unique business goals, constraints and decision inputs.

Within the “what-if” environment, a variety of contact strategy scenarios can be created by the business user that tune the contact strategy until the best mix of business benefits is achieved. Analysis reports let users explore their scenarios to understand how the different constraints, costs and customer contact policies impact on their business objectives.

Once a satisfactory scenario has been identified, it can be deployed into the execution environment as a next best action cache that is used to “score” customers in real-time through the real-time optimisation engine.

The optimisation technology can operate within and across real-time (interactive) channels and outbound (batch) channels with support for a wide range of CRM platforms. Key features include:

- Optimise any mathematically user definable goal - maximise or minimise any quantifiable value, such as profit, revenue, customer retentions or sales - at the individual customer level or household level
- Robust constraint functionality - easily customise and set constraints such as budget or minimum sales volume goals at any user defined level - e.g. account, customer, household, campaign, channel and business unit
- Flexible eligibility criteria and event trigger inputs - define inputs such as marketing and offer costs, customer history, event based triggers, business compliance and customer treatment strategies. In addition, recency and frequency contact rules can be applied for time based contact planning
- Intuitive graphical user interface - to set up new optimisation scenarios in minutes, without requiring any programming, modelling or statistical skill sets
- Interactive what-if (simulation) analysis - the user can determine the best marketing scenario before executing a campaign
- Industry-leading scalability - proven to operate within the most complex marketing production environments, optimising at the true, individual customer level

For more information on Marketing Optimization please also see our white paper ‘Realising maximum value from data driven marketing’.

7. About the authors

The specialist optimisation team comprises a number of professionals who typically have an analytical academic background, often with a specific interest in Operational Research.

This is supplemented with many years of experience across a variety of industry sectors and business areas, spanning the spectrum of risk and marketing disciplines, from credit scoring to portfolio management, and from new product development through to campaign management.

This knowledge is combined with market experience with a range of leading organisations, which include retail financial services (including personal loans, credit cards, store cards, retail finance), commercial financial services, telecommunications, retail and utilities.

A common theme amongst all of these is advancement of the decision making capabilities of each organisation.

With Experian, the members of the optimisation team have worldwide experience having helped organisations across the globe obtain improvements in performance, with projects being completed from the UK through to APAC, North and South America, EMEA and Africa

The combination of academic background, client and client facing experience, worldwide and varied market experience across decision points allows a unique and insightful position regarding optimisation that can help organisation significantly improve their performance.

8. About Experian

Experian is a global leader in providing information, analytical and marketing services to organisations and consumers to help manage the risk and reward of commercial and financial decisions.

Combining its unique information tools and deep understanding of individuals, markets and economies, Experian partners with organisations around the world to establish and strengthen customer relationships and provide their businesses with competitive advantage.

For consumers, Experian delivers critical information that enables them to make financial and purchasing decisions with greater control and confidence. Clients include organisations from financial services, retail and catalogue, telecommunications, utilities, media, insurance, automotive, leisure, e-commerce, manufacturing, property and government sectors.

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For more information, visit the Group's website on www.experiangroup.com.

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About Experian's Decision Analytics division

Decision Analytics is the international division of Experian specialising in providing credit risk and fraud management consulting services and products.

Over more than 30 years, it has developed its best practice analytical, consulting and product capabilities to support organisations to manage and optimise risk; prevent, detect and reduce fraud; meet regulatory obligations; and gain operational efficiencies throughout the customer relationship.

With clients in more than 60 countries and offices in more than 30, the decision analytics division of Experian delivers experience and expertise developed from working with national and international organisations around the world across a wide range of industries and business size.

**For more information, visit
the company's website on
www.experian-da.com.**

