



## Uplift Optimizer™

A new automated modeling solution driving record-breaking campaigns

Even the world's most sophisticated analytical models suffer from a serious distortion that credits each campaign when it shouldn't and completely ignores the campaign's negative impacts (such as triggering attrition).

The distortion – we call it modeling myopia – is caused by a fundamental flaw in traditional modeling approaches and analytical technologies. The problem may seem small but its repercussions are enormous: solving it typically more than doubles the profitability of campaigns.

Uplift Optimizer™ from Portrait Software™ is a new add-on to your existing analytics environment that automatically corrects for modeling myopia, resulting in models that predict campaign uplift much more accurately.

### The Four Response Segments

Every campaign – whether it's cross-selling credit cards or trying to prevent attrition for home insurance – creates four distinct response segments:

- The Persuadables – people who buy (or renew) who would not have done so if the campaign had not been run.
- The Sure Things – people who would have bought whether or not you ran the campaign.
- The Lost Causes – people who would never have bought, with or without the campaign.
- The Do Not Disturb – people for whom the campaign triggers a negative response (because of annoyance, being reminded of alternatives or simply being given a chance to overcome inertia).

The problem is this: traditional modeling does not even try to identify the Persuadables, who are the only profitable campaign segment. It simply looks at 'purchasers' and 'non-purchasers' – which generates an entirely different slice of your customer base.

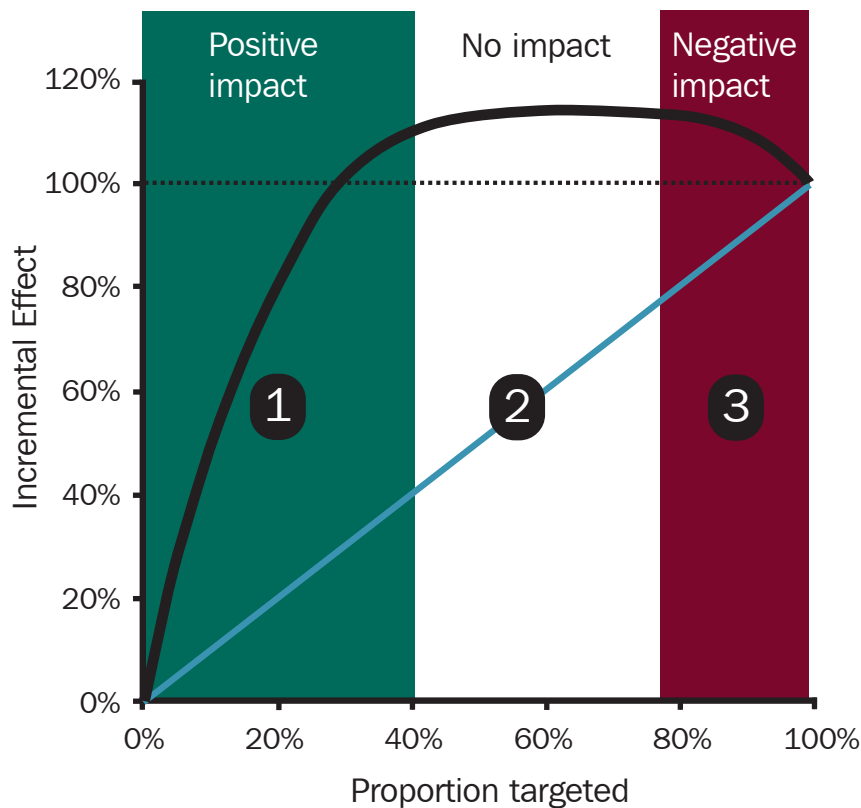
### How Campaigns Waste Money

Modeling myopia damages campaign profitability in three distinct ways:

- The False Positive Effect – wasting money targeting people who would buy anyway.
- The Barren Ground Effect – wasting money on people who are highly unlikely to buy.
- The Backfire Effect – spending money to actually drive away business.

These effects are measurable and virtually every campaign suffers from at least the first two, many from all three. But traditional analytics does not take them into account, in addition to being resource intensive and very manual.

As a result, every campaign costs more than it needs to, achieves less than it could and annoys some customers unnecessarily.



- 1 Persuadables:**  
The marketing works. These people buy only when treated.
- 2A Sure Things:**  
The marketing has no impact: They buy whether or not they are treated.
- 2B Lost Causes:**  
Again, the marketing has no effect, but these people **do not** buy either way.
- 3 Do Not Disturbs:**  
The marketing backfires. These customers **don't** buy when treated but **do** when left undisturbed.

**Figure 1** Uplift Optimizer enables you to focus on targeting the Persuadables or those who, on being treated, will respond positively and result in incremental sales – while ignoring the negative outcomes of targeting everyone else.

**Uplift Optimizer: Correcting the Distortion**

Now there’s a powerful new way to target the Persuadables while avoiding the Sure Things, Lost Causes and Do Not Disturbs for every campaign you run.

Uplift Optimizer turns traditional response modeling on its head, while driving record-breaking campaigns for some of the world’s most sophisticated financial services companies.

Uplift Optimizer, helps marketers spend less on each campaign, chase away fewer customers and make significantly more money.

**How it works**

Uplift Optimizer combines a new idea, a powerful algorithm and an automated Uplift Engine into a complete solution ready to deploy as an integrated extension of your existing SAS environment or as a standalone capability.

**The New Idea**

Uplift Optimizer looks beyond ‘probability of purchase’ to a more important dimension: ‘expected change in probability of purchase’.

Traditional modeling throws out the control group, analyzing only the treated group when building models (control groups are only used for measurement and comparison after the fact).

By feeding control group outcomes into the Uplift model alongside the ‘treated’ group, new techniques allow you to determine the increase in the probability that each customer will buy (or stay) when they would otherwise not have done so.

We can also see which prospects are likely to ignore the offer (Sure Things and Lost Causes) and which are likely to use it as a trigger to defect (Do Not Disturbs).

**Uplift Retention Campaign Results Summary**

Strategy	Churn rate	Annual saving
Target everyone	10.0%	\$0.00
Target no one	9.0%	\$4,000,000
Target right 30%	7.8%	\$8,800,000

**Left: Uplift Optimizer identified 30% of customers as ‘most savable’ and likely to respond to treatment.** Compared to targeting everyone, a retention campaign to this group of 30% of customers actually reduces churn from 10% to 7.8%. Using industry-standard ARPU of \$400/year, the financial impact of moving to Uplift Optimizer, for one segment alone (approx. 1 million customers), is as shown in the results summary.

### The Uplift Algorithm

Portrait's Uplift Algorithm allows us to apply Uplift Optimizer to databases with hundreds of inter-related variables and millions of records.

The key to putting theory into practice is an algorithm that can handle the new input in meaningful ways. After years of development and deployment experience with top financial institutions, Portrait's Uplift Optimizer has proved to be the most effective optimizer of true campaign profitability available.

The algorithm works. We've proved it over and over again – on historical campaign data and in real-world deployments, where the Uplift model out-performs even the very best response models; even those that try to model uplift. Often this more than doubles campaign profitability through a combination of maximizing positive response, reducing waste and minimizing customer defection.

### The Uplift Engine

The Uplift Engine automates the laborious task of identifying the most relevant uplift-driving variables and combining them to predict incremental impact. It then scores each individual according to their likelihood to change behavior (positively or negatively) if treated compared to that same likelihood if untreated.

Underlying the engine is a powerful data manipulation backbone able to handle the vast data volumes created by the Uplift methodology.

Added to this are two important technologies that turn subtle uplift dynamics into powerful campaign models:

**Noise Reduction** – identifying and isolating the small but real uplift effects from the surrounding data noise.

**Data Amplification** – the ability to magnify uplift signals even when response rates are extremely low and data samples small.

Without Noise Reduction and Data Amplification, the effects identified by the Uplift Algorithm would be difficult to isolate and put to work. With them, the effects jump out from the background data and demand to be heard.

That's Uplift Optimizer in a nutshell: A simple idea. A powerful algorithm. And a high-performance engine to automate the modeling process and extract new meaning from oceans of data.

### The difference between traditional response modeling and Uplift Optimizer:

Many modelers already believe they are using control group data in exactly the way we prescribe. But once we demonstrate Uplift Optimizer against their best models, the difference becomes clear and compelling.

Portrait Software sells Uplift Optimizer to the world's most sophisticated analyst teams in leading financial services institutions. Uplift Optimizer has proven to even complement the latest SAS toolsets used at these organizations.

Portrait Software's Uplift Optimizer generates high-quality uplift models faster, more easily and at lower cost than any other approach.

### Uplift Deep-sell Campaign Results Summary

Proportion of population targeted	50%	80%
Incremental spend per head – champion model	\$10.24	\$8.50
Incremental spend per head – uplift model	\$11.84	\$9.70
Extra spend per head gained from using uplift model	\$1.60	\$1.20
Incremental revenue increase by using uplift model	16%	14%

**Above: Summary of how Uplift Optimizer performs in deep-sell campaign where selling more to existing customers is the primary objective.** Up to about 20%, the uplift model and the organization's champion model perform similarly. Thereafter, the models diverge. For example if 50% are targeted, the uplift model manages to identify customers delivering about 16% more revenue than the champion model. And if 80% are targeted, the uplift model generates 14% in additional revenues as compared to the champion model. So by targeting 50% of the population overall marketing spend decreases – despite slight increase in spend per head, and incremental revenue is maximized.



#### The Clear Lens

Modeling myopia causes the predictive models you're using today to mislead your marketing strategists. The result is a series of campaigns that cost more than they should, perform less well than they could and actually drive some customers away.

Uplift Optimizer is the only packaged solution to these problems, allowing the development of radically different models that will significantly out-perform your very best. ROI is provable in very simple terms and payback can often be realized in a single campaign.

#### Contact Us

To learn more about how you can significantly increase profitability of even your most successful campaigns, give us a call to set up a free consultation and demonstration of the value that Uplift Optimizer can deliver for your next campaign.

After that, live deployment can be a few weeks away.

The white paper "Optimal Targeting Through Uplift Modeling" provides three examples that compare Uplift Optimizer to traditional response models for three real-world data-sets.

Download it from [www.portraitsoftware.com](http://www.portraitsoftware.com).

#### About Portrait Software

Portrait Software specializes in Customer Interaction Optimization software and solutions that help organizations manage customer interactions in the most effective way to ensure world class customer service is delivered. Portrait Software's solutions combine analytical capabilities with a process-centric customer interaction management platform, providing organizations with the ability to deliver the most highly optimized customer processes across all sales and service channels.

Our 200+ customers are organizations that lead the world's most demanding customer-intensive sectors, Financial Services, Public Services and Telecoms. These include Nationwide Building Society, The Woolwich, British Telecom, Washington Mutual, Merrill Lynch, T-Mobile, Fiserv CBS Worldwide, Bank of Tokyo, Bank of New Zealand, China Automobile Association and IAG.

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