

Marketing Optimization for rapid ROI

**THE
POWER
TO KNOW®**

A Complex World - Challenges

Customers



- Many Customers
- Many Offers
- Many Channels
- Contact Strategy

Organisation



- Limited Budget
- Limited Channel Capacities
- Competing Goals
- Understand the implications of change

A Complex World - Outcomes

Customers



- Subjective Decisions
- “Cherry-Picking”
- Over Solicitation
- Dissatisfaction

Organisation



- Fights for Customers
- Channel Bottlenecks
- Sub-Optimal Business
- Lower ROI

SAS Marketing Optimization

Increases return from contacts by objectively deciding:

Which Optimal Contact

Should be sent to

Which Customer

In order to

Maximise ROI (or another objective)










While simultaneously satisfying

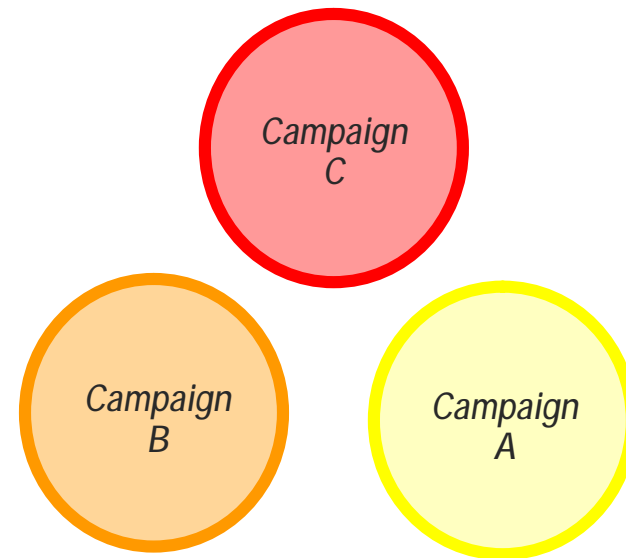
Business Constraints (e.g. budget, channel capacity, contact policy restrictions)

Why optimization outperforms other decisioning techniques

Simple Example – Prioritizing Campaigns

- Model scores define response probability for each campaign
- Probability * Expected Revenue = Expected Value
- Expected Value drives campaign allocation
- Constraints: 1 customer 1 campaign & 1 campaign 3 customers

<i>Client</i>	<i>Camp A</i>	<i>Camp B</i>	<i>Camp C</i>
1 	100	120	90
2 	50	70	75
3 	60	75	65
4 	55	80	75
5 	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75



Campaign Prioritization

- Campaigns assigned priority
- Customers selected by value for each campaign

Campaign Prioritization

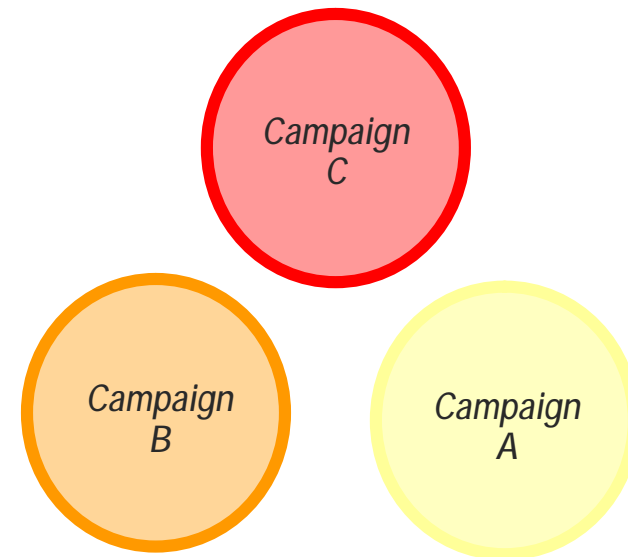
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: **280**

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8	65	60	60
9	80	110	75



Campaign Prioritization

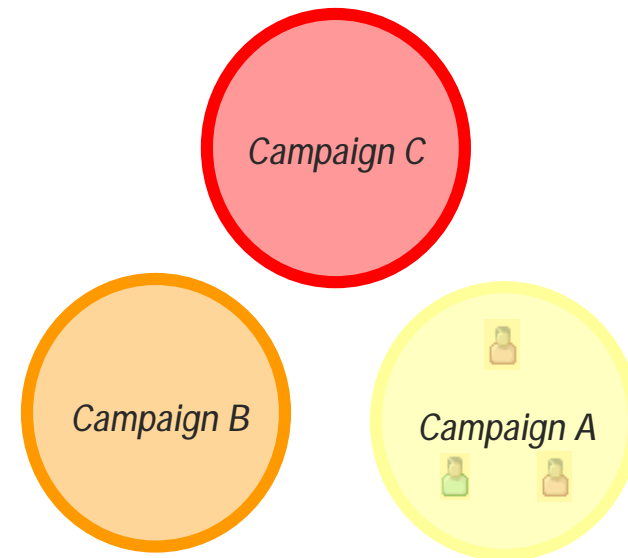
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: ~~485~~

Client	Camp A	Camp B	Camp C
1	100	120 ?	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8	65	60	60
9	80	110 ?	75



Campaign Prioritization

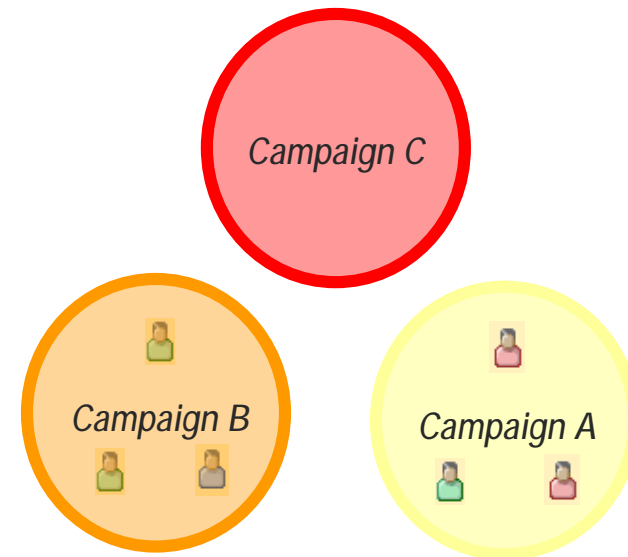
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: **485**

Client	Camp A	Camp B	Camp C
1	100	120 ?	90
2	50	70	75 ?
3	60	75	65
4	55	80	75
5	75	60	50 ?
6	75	65	60 ?
7	80	70	75
8	65	60	60 ?
9	80	110 ?	75



Customer Rules Approach

- Campaigns allocated to customers by expected value










Customer Rules Approach

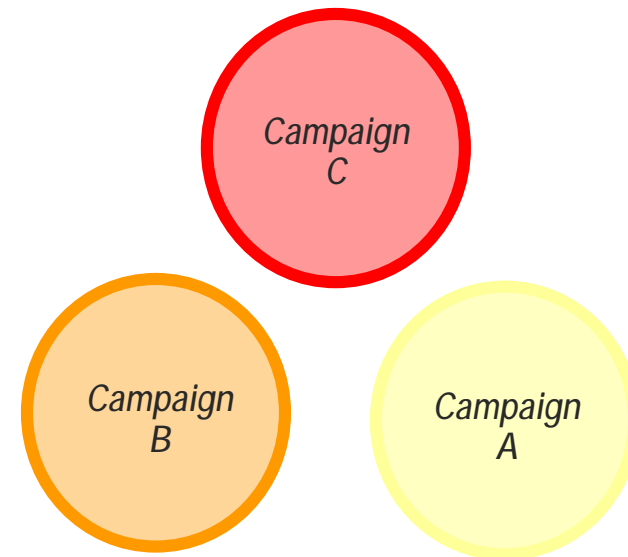
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 120

Client	Camp A	Camp B	Camp C
1 	100	120	90
2 	50	70	75
3 	60	75	65
4 	55	80	75
5 	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75











Customer Rules Approach

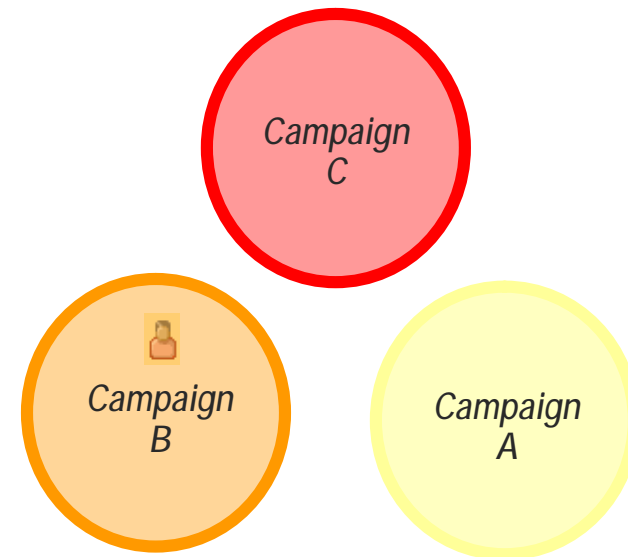
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 195

Client	Camp A	Camp B	Camp C
1	100	120	90
2 	50	70	75
3 	60	75	65
4 	55	80	75
5 	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75



Customer Rules Approach

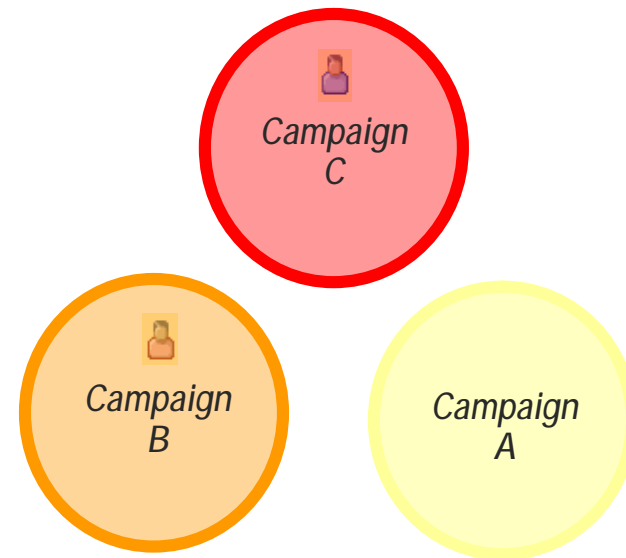
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 270

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8	65	60	60
9	80	110	75









Customer Rules Approach

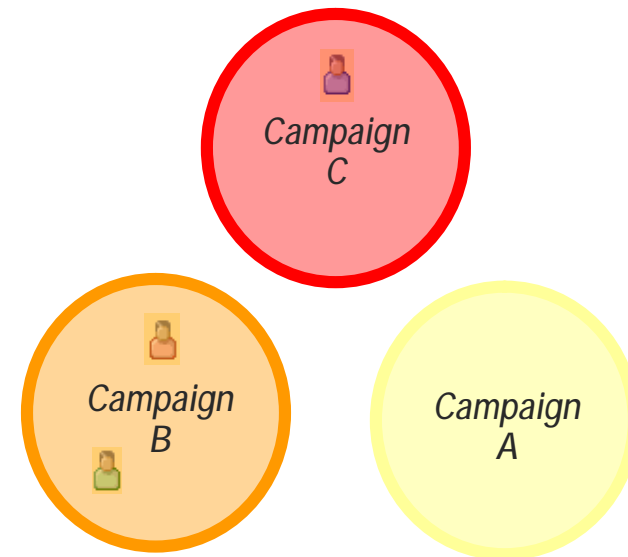
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 350

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4 	55	80	75
5 	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75








Customer Rules Approach

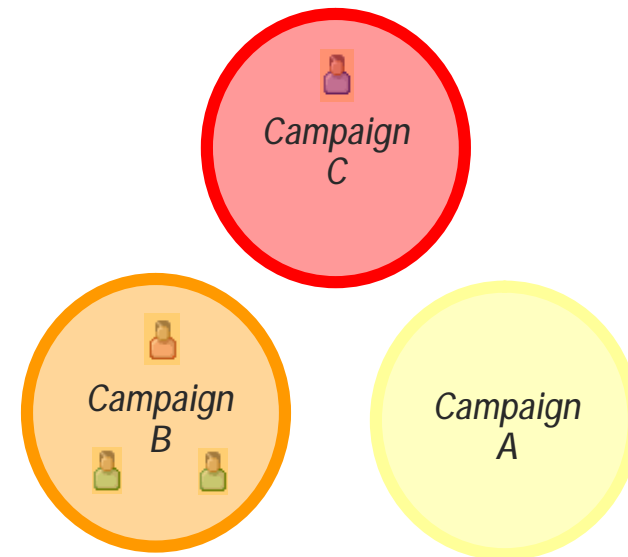
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 425

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5 	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75







Customer Rules Approach

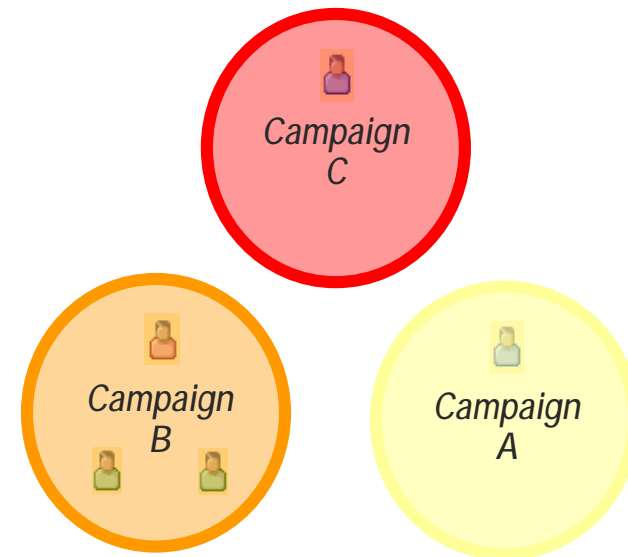
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 500

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6 	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75






Customer Rules Approach

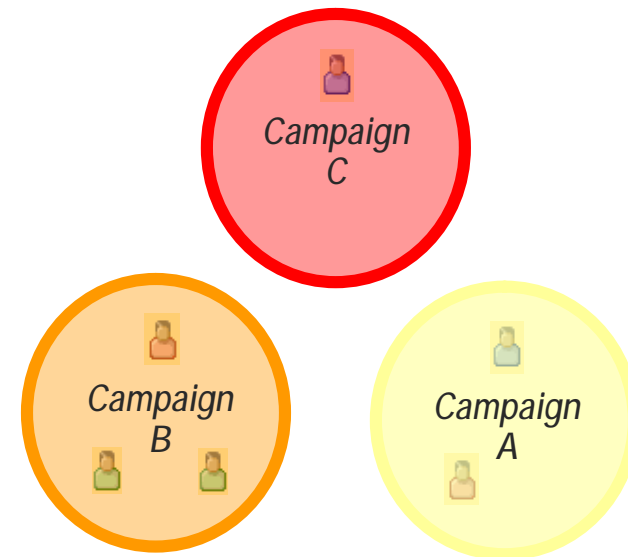
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 580

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7 	80	70	75
8 	65	60	60
9 	80	110	75





Customer Rules Approach

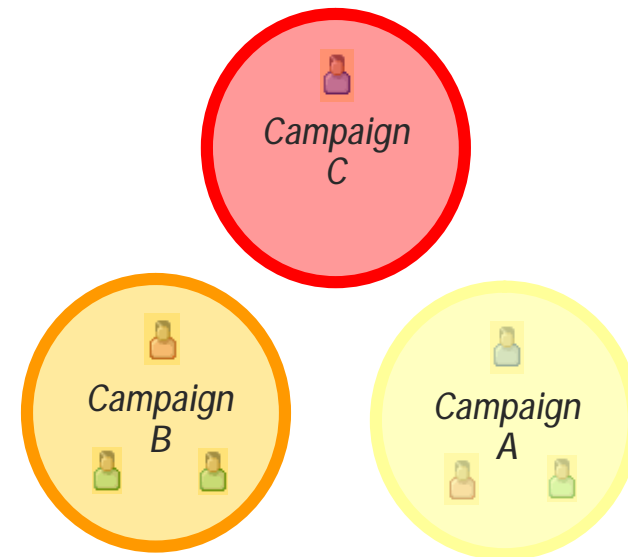
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 640

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8 	65 ?	60	60
9 	80	110	75



Customer Rules Approach

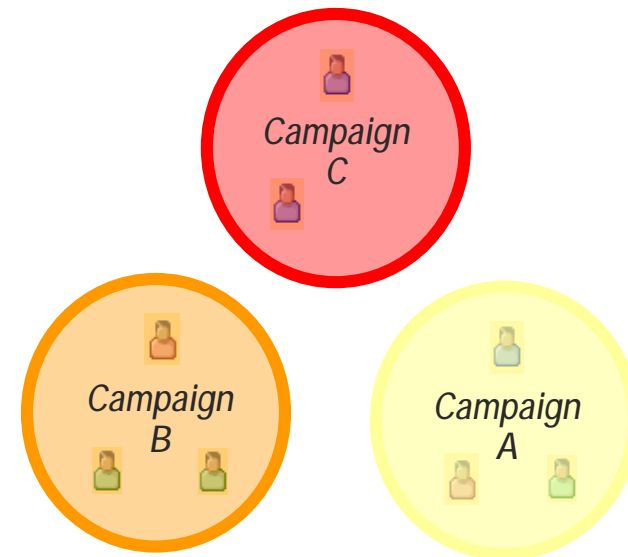
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

Expected Return: 715 +60

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8	65 ?	60	60
9	80	110 ?	75



Optimisation Approach

- Optimisation decides holistically

Optimisation Approach

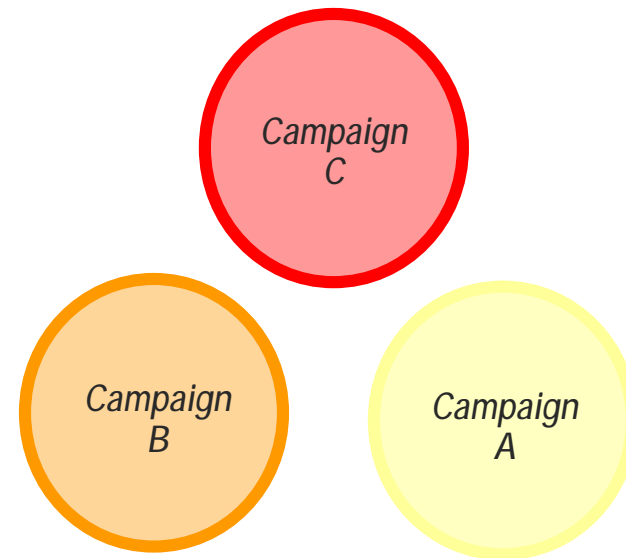
Constraints:

1 customer - 1 campaign

1 campaign - 3 customers

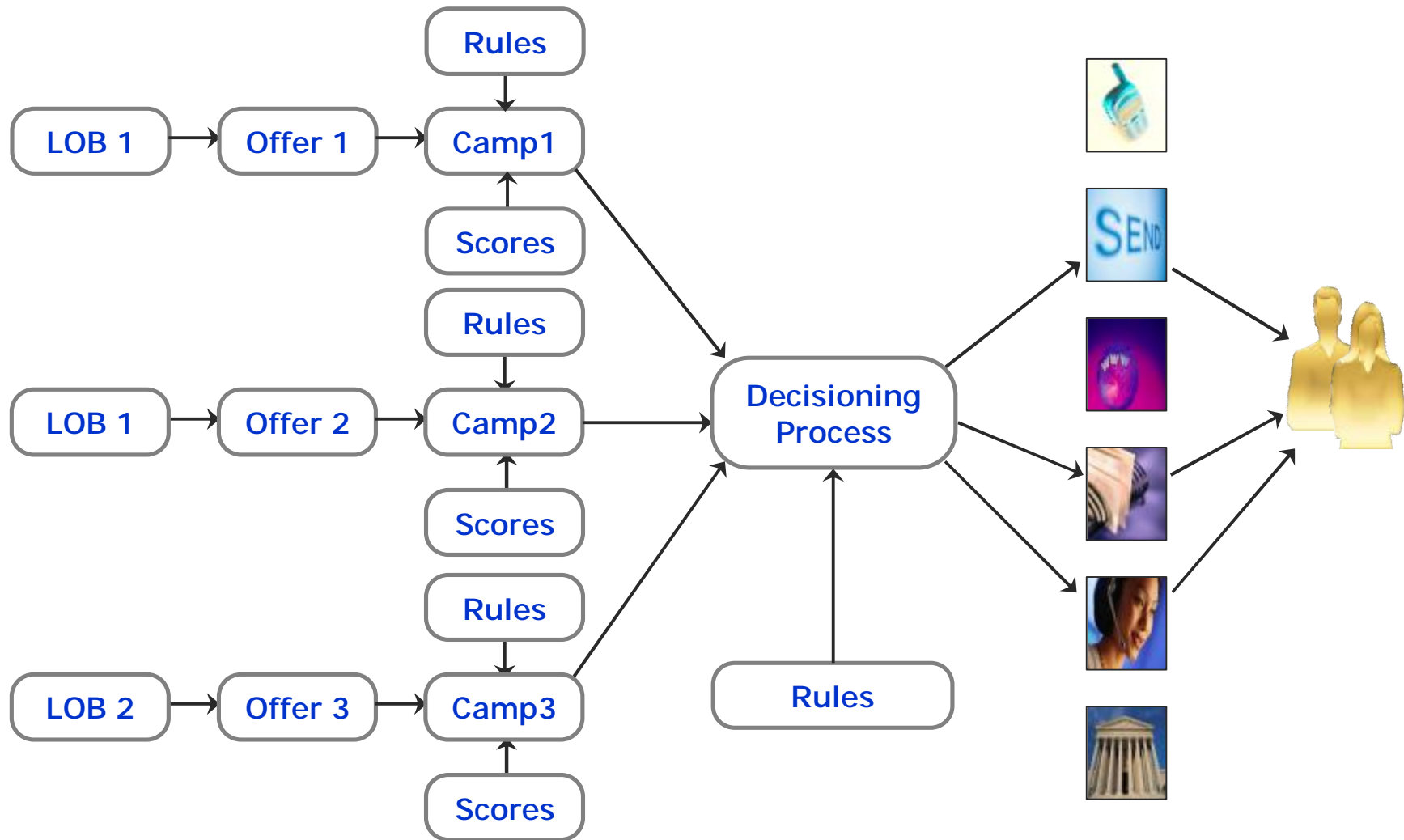
Expected Return: 745 + 30

Client	Camp A	Camp B	Camp C
1	100	120	90
2	50	70	75
3	60	75	65
4	55	80	75
5	75	60	50
6	75	65	60
7	80	70	75
8	65	60	60
9	80	110	75

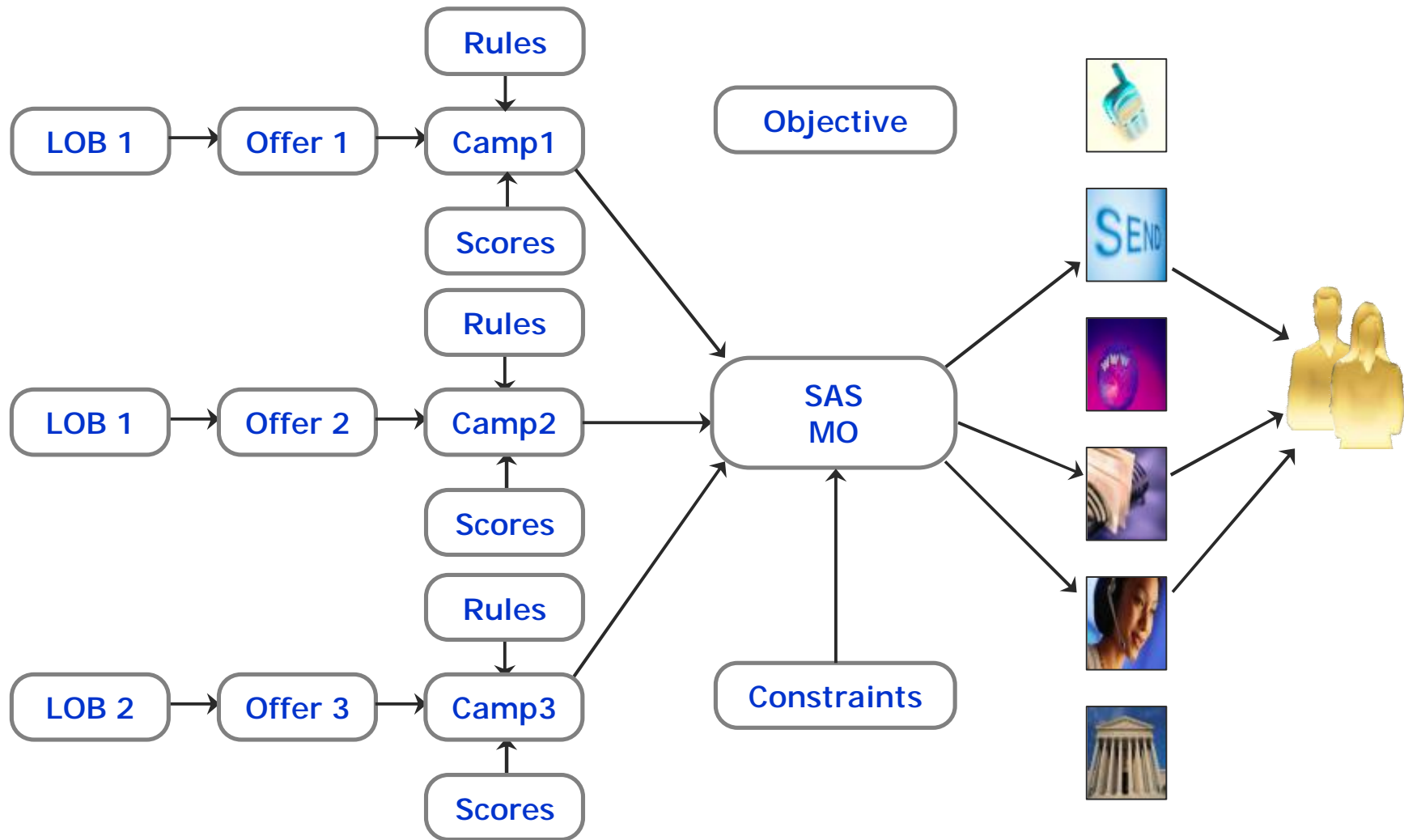


Adding optimisation to the mix

Managing the Complexity - Now



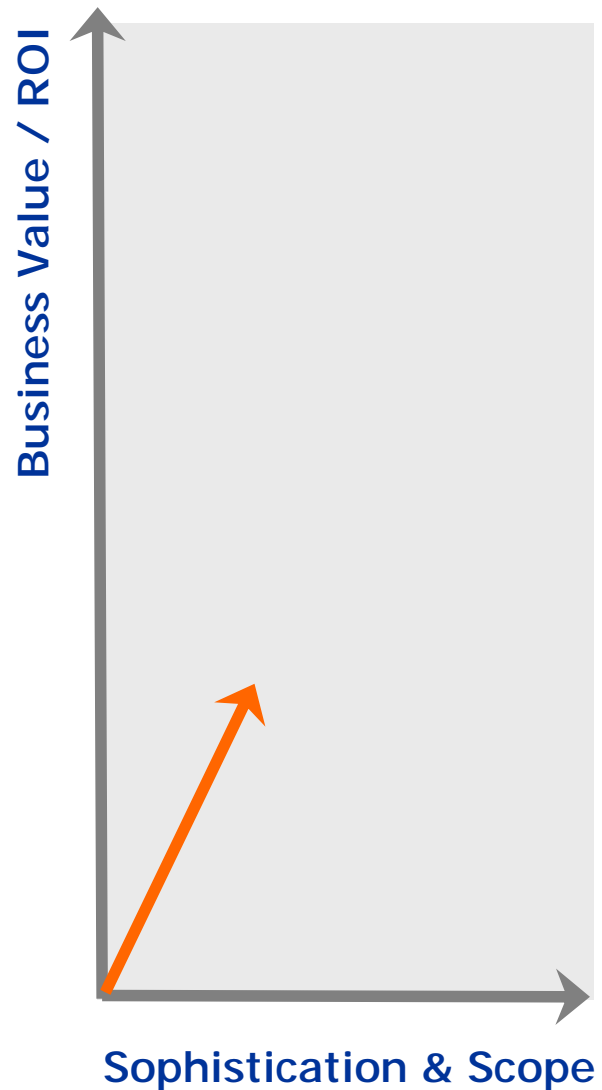
Managing the Complexity with SAS MO



Getting Started

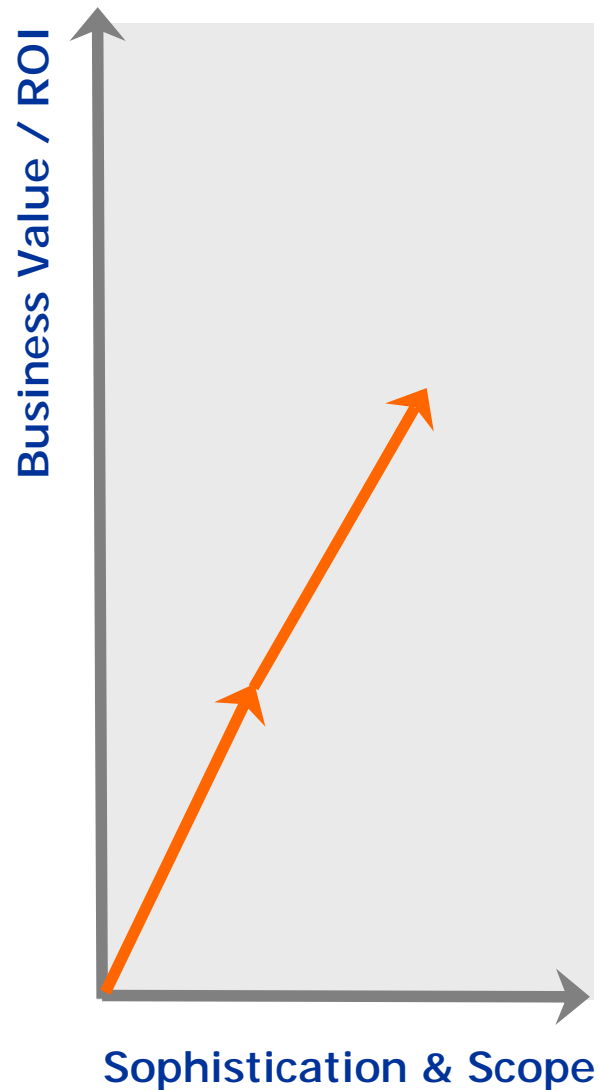
- Identified Marketing Opportunities
- Significant Overlaps
- Response Rates & Values
- Cost per Contact (by Channel)
- Delivery Mechanism

Evolution – Getting Started



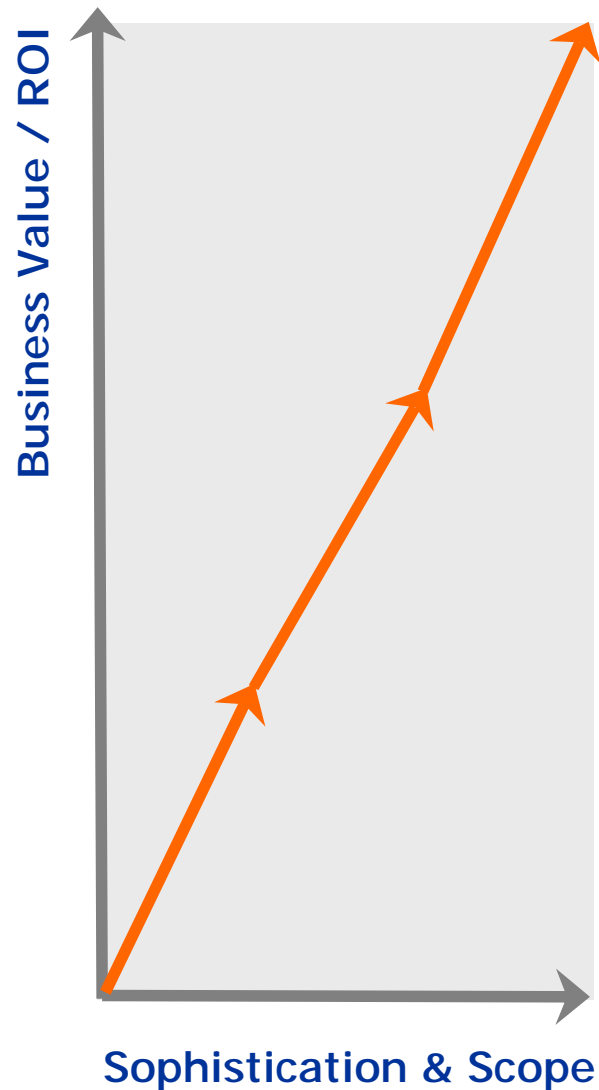
- **Narrow Focus:**
 - Initially pick one line-of-business
 - Weekly / monthly campaigns
 - Some models available - approximate to fill gaps
 - Limited constraint set
- **Benefits:**
 - Prove success - boost ROI
 - Identify and resolve any business issues with limited impact
 - Establish demand for inclusion – “me too”
 - Identify development priorities e.g. what models are needed

Evolution – Expanding Scope



- Broadening Focus:
 - Additional lines-of-business
 - Greater availability / sophistication of models – less approximation
 - Increasingly complex constraints
 - Sophisticated contact strategy management
- Benefits:
 - Further boosted ROMI
 - An expanding, objective, decisioning process across the business
 - Deepening skills and knowledge
 - Identification of new priorities

Evolution – Full Optimisation



- Expanded Focus:
 - “Leads factory”
 - Increasing granularity – daily leads identification & optimisation
 - Micro-management of channel capacity constraints
- Benefits:
 - Further boosted ROMI
 - Driving resource management right out into the channels and optimising the “human touch-point”



Challenge	Solution	Results
<p>Predict, for any given mix of campaigns, which products should be marketed to each individual customer</p>	<p>SAS Marketing Optimisation: helps Scotiabank:</p> <ul style="list-style-type: none">• make better use of its campaign response models• realize the most efficient use of channel resources and marketing dollars	<p>Analyzed >70 offers at once for > 3M customers</p> <p>Campaign ROI uplifted > 50% , compared to traditional offer selection techniques</p>

What Customers say.....

“SAS Marketing Optimization is the next step forward in the evolution of database marketing. Everyone who has a large customer base, many product lines and uses predictive modelling **is going to move to this in the future**”

Andrew Storey

Director of Decision Support

Scotiabank

Optimisation - Key Focus Areas

Flexibility of MO



- Customer problems addressed:
 - “Traditional” revenue maximization
 - Banking
 - Telco
 - Alternative approach for next best offer
 - Telco
 - Minimize the customer lifetime value change
 - Utilities
 - Voucher optimization for loyalty programs
 - Retail



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