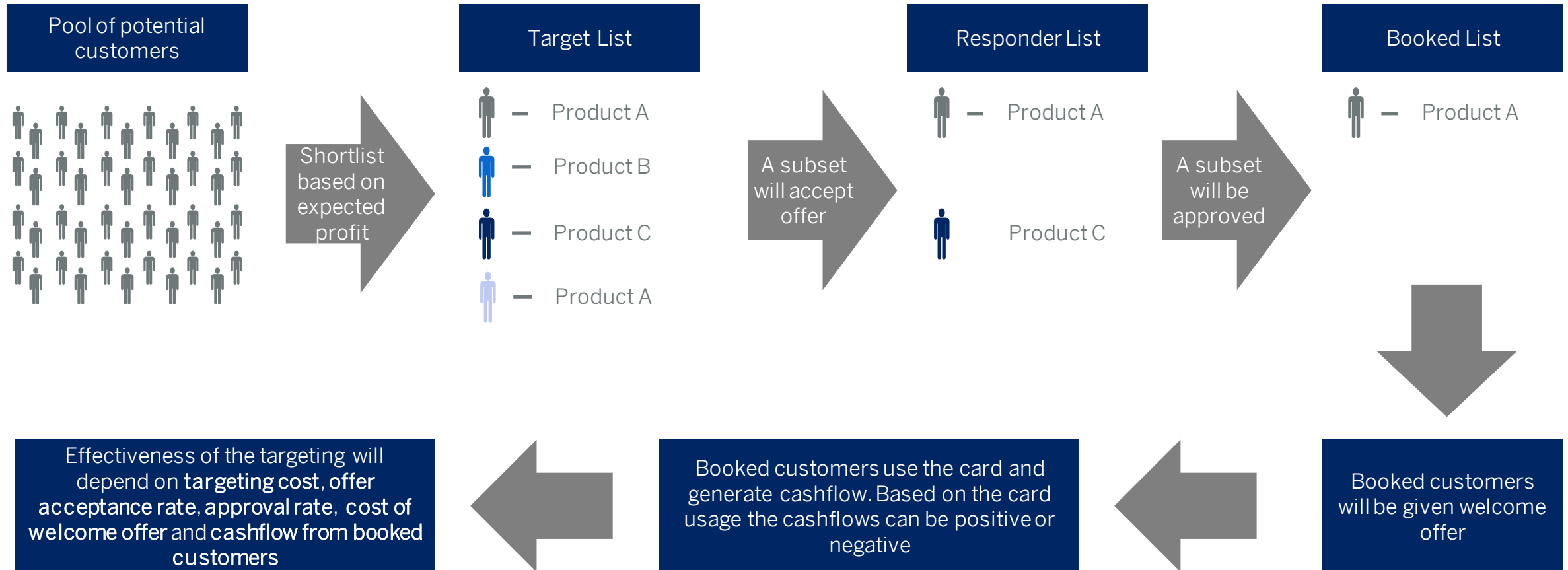


Amex Campus Challenge 2021

Business Analytics

Targeted Customer Acquisition 101

Illustration



Problem Statement

Design a targeting campaign for credit card acquisition to target right set of prospects with right set of products with a budget of **\$50,000**

You'll need to consider customer preferences and cost and benefits associated with acquiring a customer to create a winning strategy.

You need to decide



Should the prospect be targeted?



If yes, which product should it be targeted for?

Total profit generated from targeting campaign will be the leading success metric for evaluation

Data

Past Campaign Data

List of prospects targeted in past campaign with their profiles. These prospects were randomly given products. Prospects who liked their offer responded to the offer. However, after underwriting, only a certain percentage were booked.

Customer Profile – Creditworthiness Score, Credit Card Utilization Score, etc.

+

Product customer was offered

+

Flag to identify customer's response 1- Accepted offer, 0- Did not accept

+

Flag to identify if customer was approved 1- Approved, 0 – Not approved

Performance of Customer Booked from Past Campaigns

List of customers acquired from past campaign with their profile at the time of acquisition, product they chose and their customer lifetime value

Customer Profile - Creditworthiness Score, Credit Card Utilization Score, etc.

+

Product customer was booked on

+

Customer's lifetime value

Potential Customer Data

List of prospects available for current campaign along with their profiles. This will be used as validation data to assess your solution.

Customer Profile - Creditworthiness Score, Credit Card Utilization Score, etc.

Product Details

Product	Annual Subscription Fee	Description
A	500	Travel and Entertainment Credit Card for Super Premium Customers
B	200	Travel and Entertainment Credit Card for Premium Customers
C	100 but only starting Second Year	Travel and Entertainment Credit Card for Entry Level Customers
D	100 but only starting Second Year	Airline Card for Entry Level/ Premium Customers
E	No Annual Fees	Everyday Spend Card for Entry Level/ Premium Customers

Acquisition Cost

Product	Targeting Cost per Contact – Incurred irrespective of response	Welcome Offer Cost per Booked Customer- Incurred only if customer is acquired
A	2	1500
B	0.7	400
C	0.5	250
D	0.2	200
E	0.4	140

Key Decision Points

Customer Eligibility

Is the customer credit worthy? Is the customer loyal?

Targeting ineligible customers will result in losses!

Response Likelihood

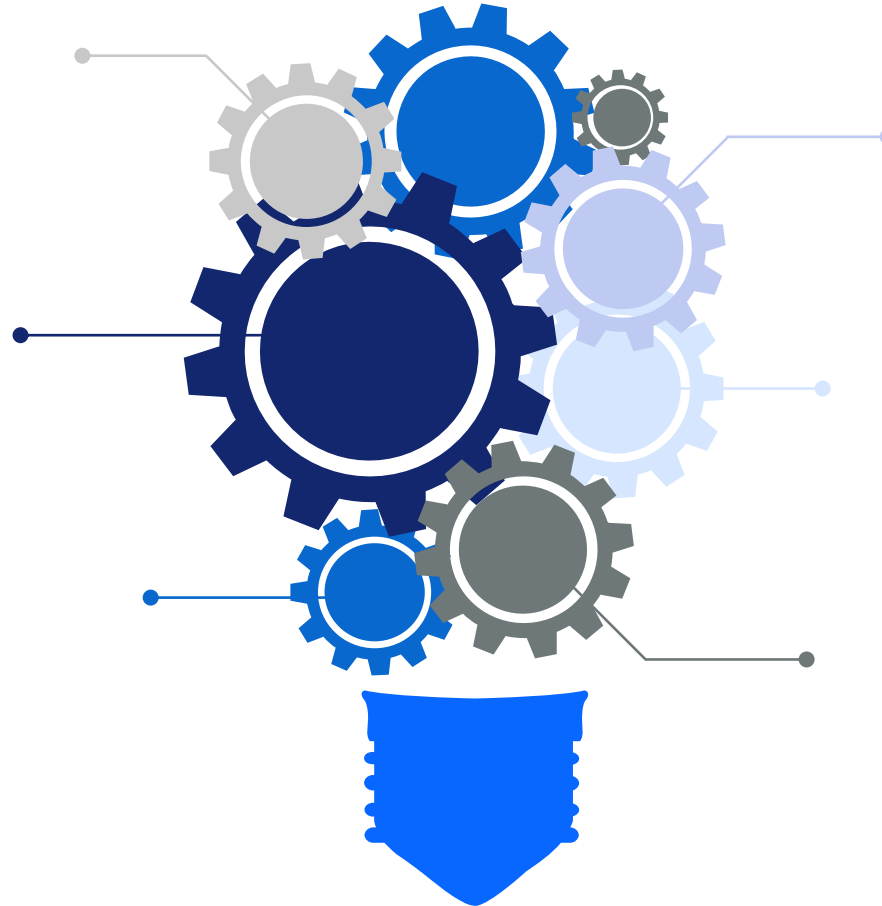
Is the customer likely to respond to any offer? If yes, which one?

Targeting indiscriminately will increase targeting cost

Customer Approval Likelihood

If the customer respond to offer is s/he likely to be approved for the card?

Targeting customers who are unlikely to be approved will increase targeting cost



Customer Lifetime Value

Total cashflow expected from customer

Customer Acquisition Cost

Includes cost of targeting which is incurred irrespective of conversion and welcome offer cost which is incurred only for booked customers

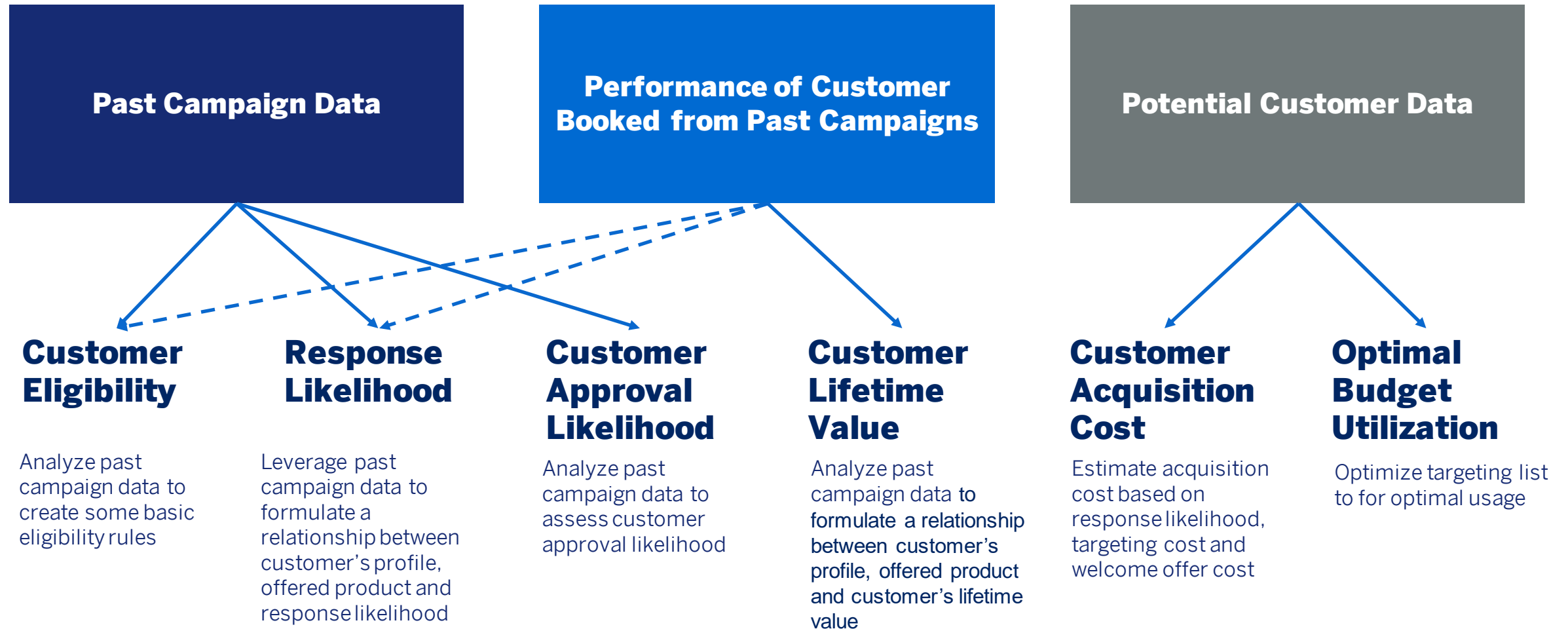
Optimal Budget Utilization

Both under utilization and over utilization are expensive

Note- All factors don't have same contribution to campaign profitability. You can choose to prioritize some of these factors based on your analysis and assessment

How to use data?

One or more than one data can be used to arrive at a decision point



→ Recommended Source

How to use sampling factor in 'Past Campaign Data'?

Illustration

ID	Targeted Product	Sampling Factor	Applied for the card	Approved for the card	Response Likelihood Total Applied for the card/ Total Targeted for the card	Likelihood of Approval Total Approved for the card/ Total Applied for the card
1	A	1	1	1	A $(1+0)/(1+100)$ $= 1/100 = 0.99\%$	A $(1)/(1)$ $= 100\%$
2	A	100	0	0		
3	B	1	1	0	B $(1+0+0)/(1+100+100)$ $= 1/201 = 0.49\%$	B $(0)/(1)$ $= 0\%$
4	B	100	0	0		
5	B	100	0	0		

Stages of Competition

Stage 1- Submit solution for Leaderboard



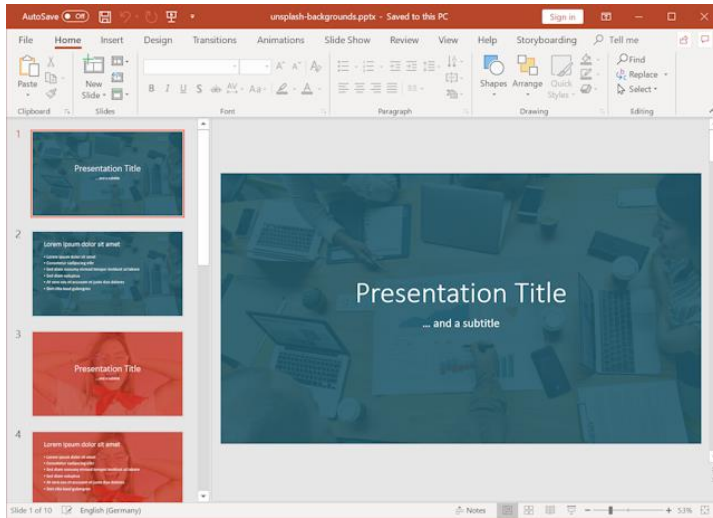
Submit your output in form of CSV with two columns

1. Id
2. Product name A/B/C/D/E/X, X implies no targeting

ID	Product
1	A
2	X
3	C
4	B
5	E
6	D

You can make multiple submissions and observe your scores. The **latest submission** on round 1 end date and your position on leaderboard based on that will be considered a final one!

Stage 2- Deck Submission



Top 50 teams in leaderboard based on stage 1 results are eligible for this round.

Submit a deck to capturing your approach, considerations and any analysis used to finalize the campaign

Stage 3- Virtual Interaction



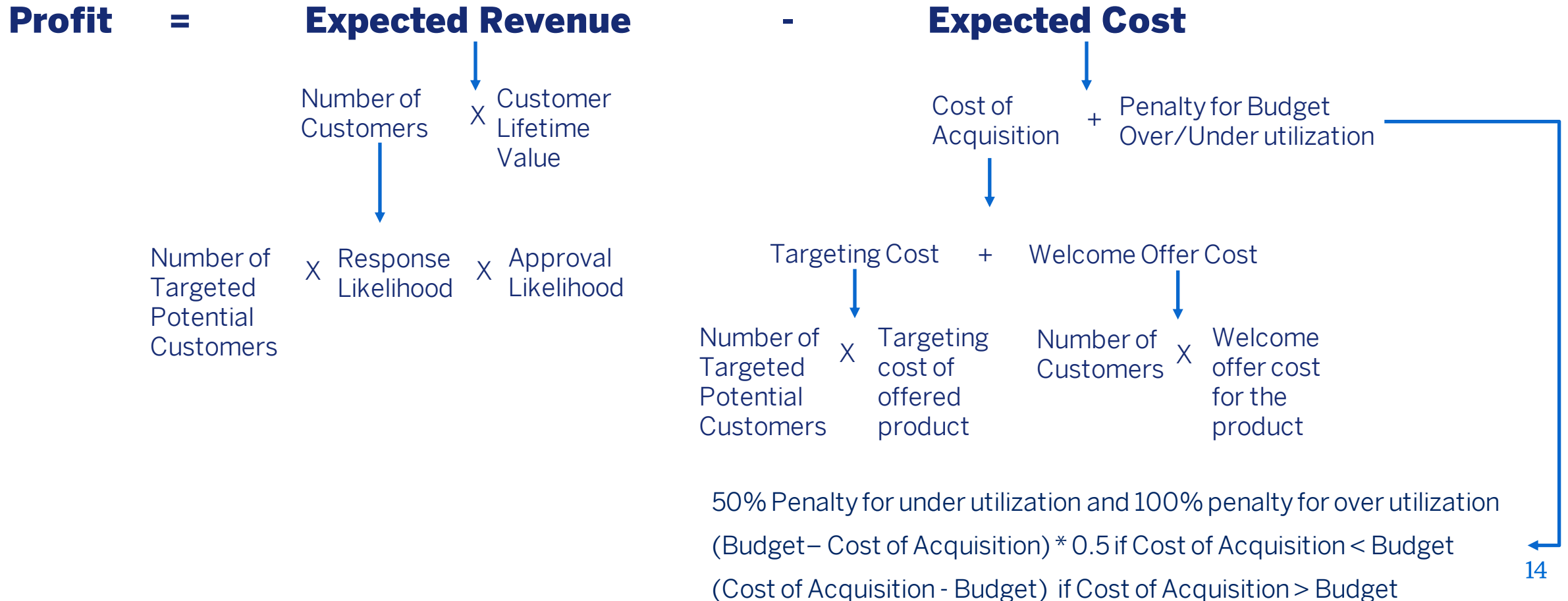
Select teams from stage 2 will qualify for stage 3 based on their score from stage 1 and deck submission from stage 2

In round 3, teams will be asked to present to a panel

Evaluation Criteria-Quantitative

You're expected to share the list of all prospects and the product you want to target them with. If a prospect is not to be targeted, then assign product as 'X'

Total profit will be calculated across all prospects based on their likelihood of response, customer lifetime value and total budget utilization.



Evaluation Criteria-Qualitative

To be evaluated based on deck submitted. Relevant for stage 2 and 3 only :

- Understanding of Problem:
 - Understanding of the overall objective
 - Data Exploration: Understanding trends, patterns & deriving insights
- Methodology & Thought process: Ideas & Approaches Tried
- Assumptions made

Rules

1. A team can be maximum of 2 members
2. An individual cannot be a member of more than one team
3. In case of a tie between two teams, the lead would go to the team which submitted the results first
4. In case of a discrepancy, the decision by the organizing team would be final

Key Terms

Prospect – Potential customers

Response- Potential customer accepting offer

Approved/ Booked- Potential customer passing all criteria to get the credit card

Approval Likelihood- Probability of a potential customer passing all criteria to get a credit card

Product Affinity- Preference for a certain product

Customer Lifetime Value- Present value of all cashflow expected from customer

Customer Acquisition Cost- Total cost incurred to acquire a customer