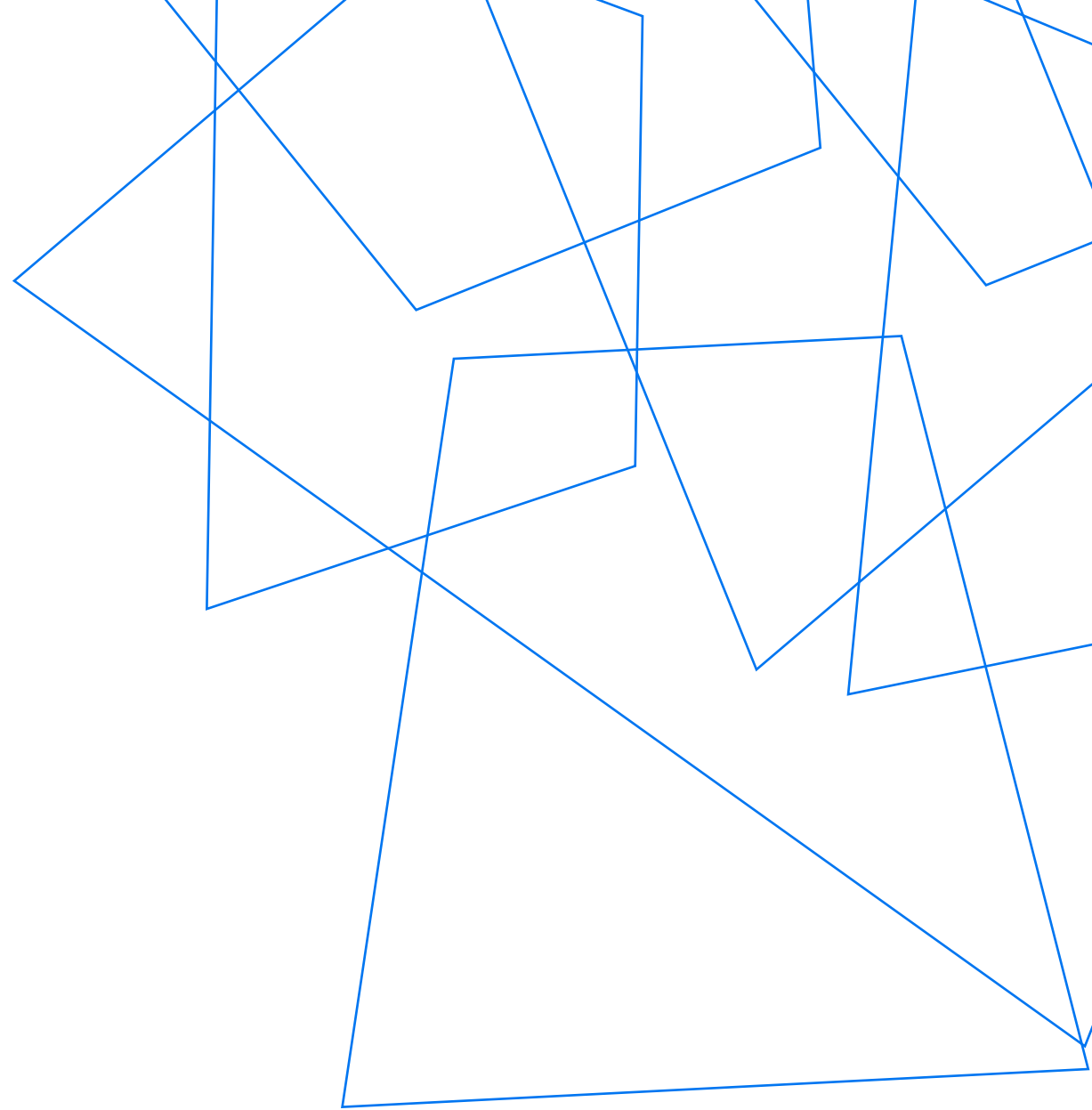# COST OPTIMIZATION
&
WEBSITE PERFORMANCE

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COST OPTIMIZATION

REQUIREMENT

- For the next quarter, your marketing department has a budget of $60,000 to spend on online campaigns.
- How would you allocate it between SMS and Email?

BUSINESS UNDERSTANDING

A company produces a new generation of electric men razor. Last month the company registered an e-commerce site to sell its product online instead of the traditional supermarket channel. During the last month, it piloted advertising on 2 channels: SMS and Email
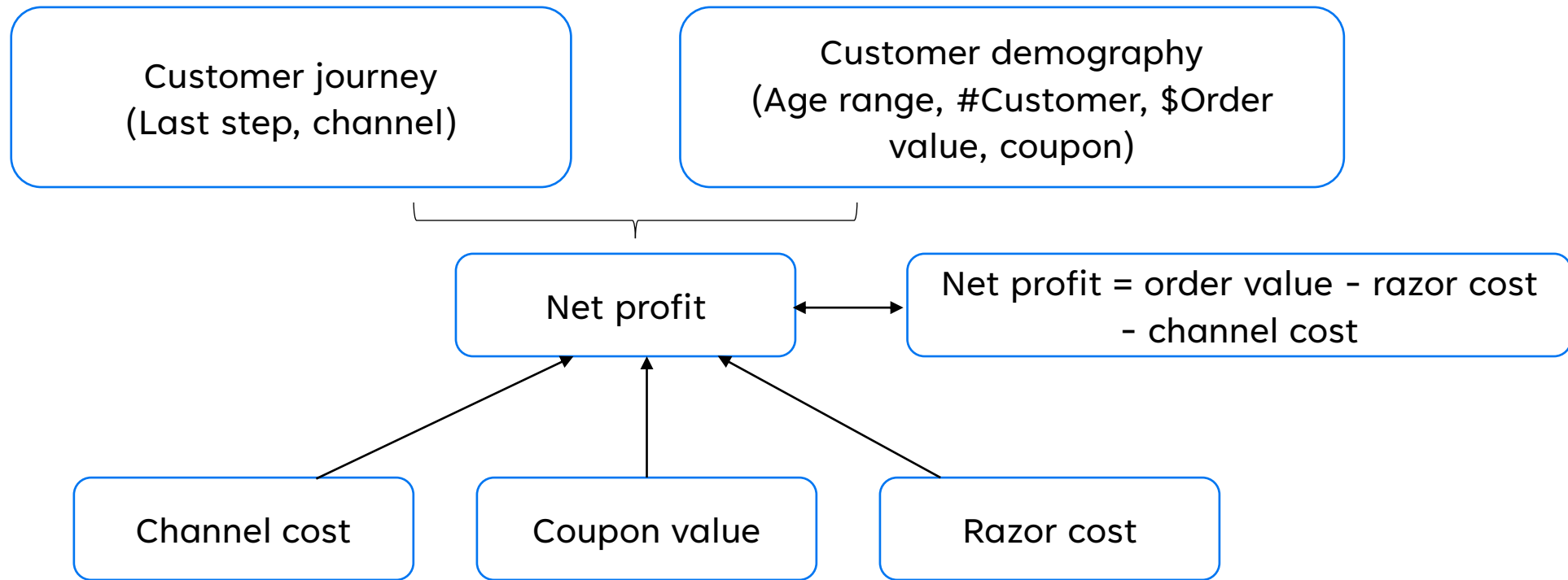
PLANNING

In the next campaign, the company has budget $60000.
A potential customer pool by age group and channel cost to send message listed below:

Age group	Pool size
18 – 30	300,000
31 - 45	350,000
46 – 60	500,000
60+	200,000

Channel	Cost
Email	0.075
SMS	0.05

1. The number of message sending
- To increase awareness, I plan to send messages to all customers of last campaign.
- To acquire more customer and optimize cost, I plan to send additional messages to potential pool based on profit rate of last campaign to each age group

2. The total cost for the next campaign (I do not include production cost in this budget)

       Total cost = Sending cost + coupon value

- Allocate coupons as last campaign to convert to at least the next step

APRIL CAMPAIGN RECAP

3,135	**115,864**	**1,862**	**4,110**	**18,412**	**74,842**	**41,022**
Product sold	Order value	No. coupon	Coupon value	Sending costs	Total costs	Total profits

Age range	Channel	No. msg	% sent msg/channel	No. purchased msg	% Purchased msg	$ Profit	% Profit/msg
18-30	Email	46,660	36.2%	273	0.59%	4,408.5	9.4%
31-45	Email	55,880	54.9%	558	1.00%	**12,497**	**22.4%**
46-60	Email	23,001	30.5%	115	0.50%	1,418.9	6.2%
60+	Email	10,948	36.9%	2	0.02%	**-751.1**	**-6.9%**
18-30	SMS	55,447	63.8%	426	0.77%	**11,991.7**	**21.6%**
31-45	SMS	67,020	45.1%	185	0.28%	3,507	5.2%
46-60	SMS	27,892	69.5%	297	1.06%	**8,417.4**	**30.2%**
60+	SMS	13,152	63.1%	6	0.05%	**-467.6**	**-3.6%**
Grand Total		300,000	100%	1,862	0.53%	41,022	10.6%

KEY INSIGHTS

1. **Channel Effectiveness:** SMS is more effective than email in terms of both the percentage of messages sent that result in purchases and the percentage of profit per message.

2. **Age Group Response:** The 46-60 age group has the highest percentage of purchased messages for both email and SMS channels, indicating that this age group may be more responsive to marketing messages.

3. **Profitability:** The 31-45 age group generates the highest profit for both email and SMS channels, with the SMS channel showing exceptionally high profitability for this age group.

4. **Negative Profit:** The 60+ age group has negative profits for email and SMS channels, indicating that marketing to this age group may be less effective or profitable.

5. **Overall Trends:** Across all age groups, the SMS channel tends to have higher percentages of purchased messages and higher profitability per message than the email channel.

⟹ These insights suggest that targeting the 31-45 age group with SMS marketing could be a profitable strategy, while marketing to the 60+ age group may require further refinement or a different approach to be successful.

BUDGETING FOR SENDING MESSAGE

Age range	Channel	No. Message	Next message	Total message	$ Total cost
18-30	Email	46,660	7,560	54,220	4,067
31-45	Email	55,880	40,425	96,305	7,223
46-60	Email	23,001	1,200	24,201	1,815
60+	Email	10,948	0	10948	821
18-30	SMS	55,447	38,400	93,847	4,692
31-45	SMS	67,020	9,450	76,470	3,823
46-60	SMS	27,892	19,600	47,492	2,375
60+	SMS	13,152	0	13152	658
Grand Total		300,000	116,635	416,635	25,473

o   As a plan, I will send messages to all customers of last campaign. To acquire more customers, I send additional messages to potential pool based on profit rate of last campaign to each age group.

o   For age group 60+, profit rate is negative, therefore, I will send no additional messages to this group.

o   Total budgeted cost for sending message next campaign is $25,473. The remaining budget is prepared for coupon value that customers purchase our product and use coupons.

BUDGETING FOR COUPON VALUE

Age range	Channel	Coupon	% Percent	$ Cost
18-30	Email	2	0.51	498
18-30	Email	4	0.79	1,542
18-30	Email	6	0.55	1,610
31-45	Email	2	1.07	1,855
31-45	Email	4	0.90	3,120
31-45	Email	6	0.87	4,524
46-60	Email	2	0.46	201
46-60	Email	4	0.35	305
46-60	Email	6	0.91	1,189
60+	Email	4	0.04	14
60+	Email	6	0.06	33

Age range	Channel	Coupon	% Percent	$ Cost
18-30	SMS	2	0.72	1,216
18-30	SMS	4	0.80	2,703
18-30	SMS	6	0.91	4,612
31-45	SMS	2	0.26	358
31-45	SMS	4	0.28	770
31-45	SMS	6	0.34	1,404
46-60	SMS	2	0.72	616
46-60	SMS	4	1.53	2,616
46-60	SMS	6	1.67	4,283
60+	SMS	2	0.04	9
60+	SMS	4	0.09	39

% percent: No. purchased customers/Total purchased customer

o Total coupon value = $33,517

⇒ **Total cost = sending cost + coupon value = 58,990 (under budget)**

WEBSITE PERFORMANCE

REQUIREMENT

Improve the website's performance to maximize net profit?

WEB PERFORMANCE

Customer journey   Email   SMS

Customer exploration

Received	128785	
Bounced	2807	**Bounced: 2.28%**
Saw Review	2865	**Saw review: 2.22%**

Received	153449	
Bounced	4143	**Bounced: 2.7%**
Saw Review	2387	**Saw review: 1.56%**

Payment flow

Added to cart	889	**Add to cart: 0.69%**
Payment page	195	**Payment page: 0.15%**
Purchased	948	**Purchased: 0.74%**

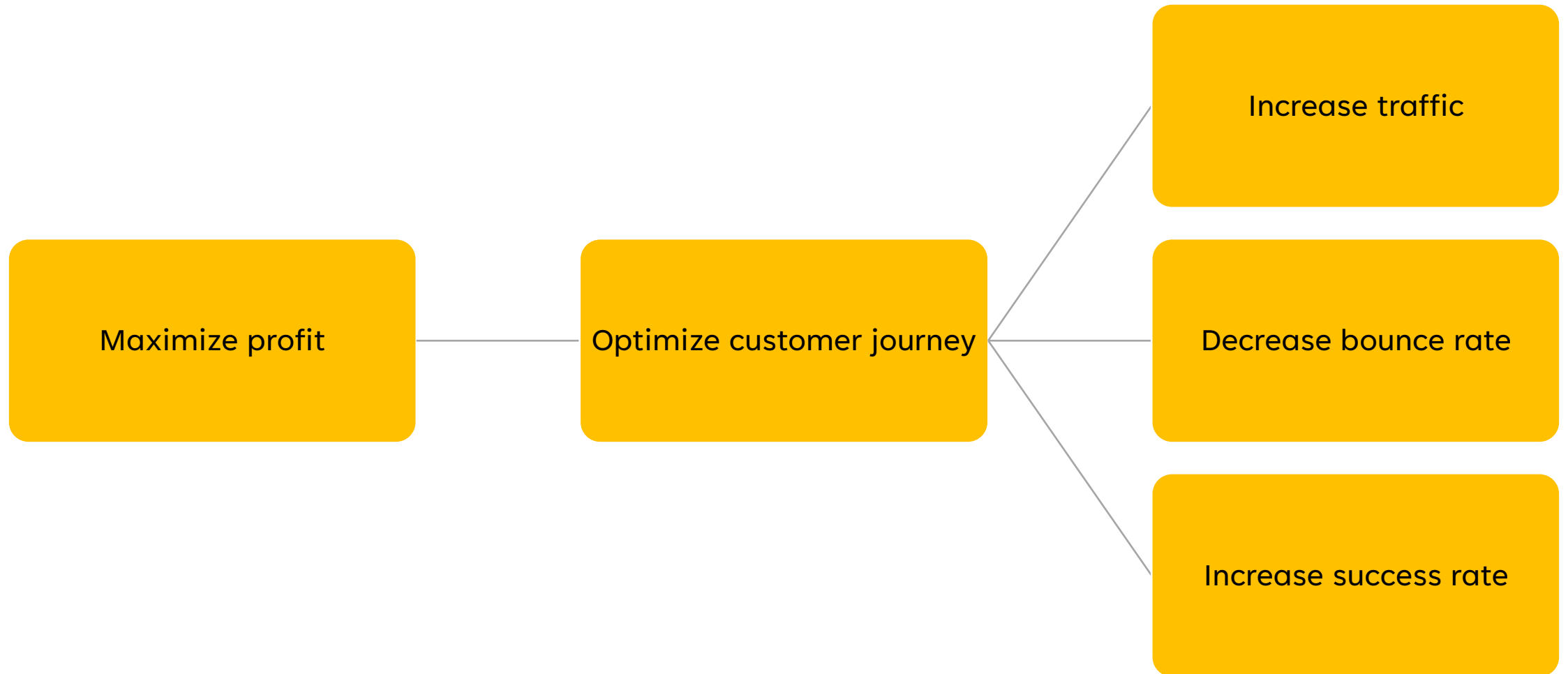|		
Added to cart	1864	**Add to cart : 1.21%**
Payment page	754	**Payment page: 0.49%**
Purchased	914	**Purchased: 0.6%**

WEB PERFORMANCE

Profit maximization model – website performance perspective

KEY METRICS OF APRIL CAMPAIGN

Bounce rate

= Total one-page visits / Total entrance visits

Bounce rate		
Age range	Email	SMS
18-30	37.87%	35.25%
31-45	35.31%	**47.90%**
46-60	38.99%	**42.33%**
60+	31.41%	32.72%

1. **Consistent Channel Trends:** SMS generally has higher bounce rates across age groups than Email, indicating that Email may be more effective in maintaining user engagement.

2. **Targeting Consideration:** For the 31-45 and 46-60 age group, which show higher bounce rates for email, focusing on SMS marketing could improve engagement and reduce bounce rates.

3. **Age Group Engagement:** The 60+ age group exhibits the lowest bounce rates for both email and SMS, suggesting higher engagement levels with marketing content in this demographic.

Cart Abandonment rate

= Transaction completed/ Shopping cart initiated

Cart Abandonment Rate		
Age range	Email	SMS
18-30	45.27%	30.36%
31-45	**55.63%**	15.49%
46-60	30.42%	**35.32%**
60+	4.17%	6.38%

1. **Consistent Channel Performance**: SMS generally has lower cart abandonment rates compared to email.

2. **Conversion and Engagement**: Lower cart abandonment rates in SMS, especially in the 31-45 age group, could be linked to higher conversion rates and engagement levels in this demographic

3. **Age Group Behavior:** The 60+ age group shows relatively low cart abandonment rates for both email and SMS, suggesting a higher likelihood of completing purchases once items are added to the cart.

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DECREASING BOUNCE RATE SUGGESTIONS

Decrease bounce rate

Enhance User Experience (UX)

Improve Page Load Speed

Optimize images, use browser caching, and minimize redirects to speed up your website.

Mobile Responsiveness

Provide a seamless experience across all devices. Mobile optimization is crucial as more users shop on smartphones and tablets, esp ecommerce

Enhance Product Pages

Create informative and visually appealing product pages with high-quality images, detailed descriptions, and customer reviews to help users make informed purchasing decisions.

Implement Exit-Intent Pop-ups

Use exit-intent pop-ups to offer discounts or promotions to visitors who are about to leave your site. This can help retain visitors and encourage them to make a purchase.

INCREASE SUCCESS RATE SUGGESTIONS

Seamless checkout process

Offer customers checkout options, provide clear instructions, and minimize the number of steps required to complete a purchase.

Increase success rate

Personalized Recommendations

Use data analytics and machine learning algorithms to offer personalized product recommendations to customers based on their browsing and purchase history.

Excellent Customer Service

Offer multiple channels for customer support, such as live chat, email, and phone support, and ensure that customer queries are addressed promptly and effectively.

THANK YOU

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