GROUP PROJECT 2

Driving Growth

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Introduction

For this part of the course group project, you are expected to evaluate customer management strategies for the same single brand, firm, or business that you did for Part 1, constructing an improvement plan that could potentially lend them a competitive advantage.

How might your approach to acquisition, retention, and development have changed, given all that you've done since Part 1? Again, the challenge for you here will be to stay away from descriptive platitudes and derive real insight as to what might result in the success or failure for that company, given your management plan.

Use this document to record all your project work and responses to any questions. You will need to submit a digital copy of this document as well as a slide deck summarizing key findings and recommendations for project completion, which will be manually reviewed by your professor/TA, with feedback provided to help you work through your findings.

Note: Though your work will only be seen by those grading the course and will not be used or shared outside the course, you should take care to obscure any information you feel might be of a sensitive or confidential nature.

Instructions

Evaluate the same brand, firm, or business that you chose collectively for Part 1 of the group project to answer the following five questions as a team. Once you are confident in your solutions, save your file with the naming convention [BANA6340_Team#_GroupProjectP2] and choose one group member to submit this completed template and your summary slide deck (outlined in task 6) on the **Group Project Part 2: Driving Growth** page in Canvas for manual review.

Group Project Tasks

1. How might you revise and/or build on your recommendation for the improvement of CLV through Customer Acquisition in Part 1 given your experience at this point in the course?

Current Arlo's Approach
Arlo's current customer acquisition strategies include product bundling with discounts, a referral program, and strategic partnerships, as well as trial periods for subscription services like Arlo Secure and Arlo Safe. These initiatives have been effective in attracting new customers to Arlo's ecosystem.

Revised Recommendation
To further enhance acquisition and subsequently CLV, Arlo could implement **Predictive Model-Based Acquisition Targeting and Use Digital Advertising** to selectively target new customers. This approach focuses on identifying and engaging potential customers who are most likely to find value in Arlo's offerings based on predictive analytics, rather than a broad approach.

Rationale for Revision
To enhance the effectiveness of Arlo's customer acquisition strategies and further improve customer lifetime value (CLV), revising the recommendation to focus on predictive model-based Acquisition Targeting and digital ads is driven by the insights gained through the course. This approach leverages advanced analytics and targeted digital marketing, allowing for a more precise and effective engagement with potential

customers who are most likely to convert and contribute significantly to Arlo's CLV over time.

Execution Plan

The revised customer acquisition strategy could include:

- **Predictive Modeling and Profiling**: Utilize predictive modeling (e.g., machine learning classification/clustering models) and profiling methods to score the fit of prospective customers and better understand what determines customer value. This involves analyzing large datasets, mainly purchased through data vendors like Nielsen or based on demographic data of Arlo's existing customer base to effectively segment the market and predict which types of customers are most likely to convert and have a high potential lifetime value.
- **Digital Advertising**: Employ targeted digital ads that reach high-value prospects identified through predictive modeling. Use platforms where data indicates these customers spend their time, such as specific social media sites, search engines, or digital news outlets.
- **Customized Offers**: Develop offers tailored to the needs and preferences identified through data analysis. For example, if predictive models indicate a segment is likely to value security features over price, highlight these in the advertising.
- **Integration with CRM**: Ensure that insights gained from predictive modeling are integrated with customer relationship management (CRM) systems to enhance personalization and customer service post-acquisition.

Potential Impact

- **Increase Conversion Rates**: Higher targeting precision reduces waste in marketing spending and improves conversion rates, as messages and offers are more relevant to the audience.
- **Enhance Customer Experience**: Tailored marketing enhances the customer experience from the first touchpoint, setting the stage for increased satisfaction and loyalty.

- **Optimize Marketing Spend**: More effective targeting ensures that marketing budgets are spent on reaching the most promising prospects, potentially lowering customer acquisition costs (CAC).

Long-term Benefit

- **Improving Retention Rates**: Customers acquired through targeted strategies are more likely to remain with the brand due to a better initial fit and satisfaction with the product offering.
- **Increasing Upsell Opportunities**: With a better understanding of customer needs and behaviors, Arlo can more effectively offer upgrades and additional services that align with customer preferences.
- **Gathering Valuable Insights**: Continuous learning from the targeting and subsequent customer behaviors feeds back into the predictive models, enhancing their accuracy and the effectiveness of future campaigns.

2. How might you revise and/or build on your recommendation for the improvement of CLV through Customer Retention in Part 1 given your experience at this point in the course?

Current Arlo's Approach

Arlo currently employs strategies for customer retention such as offering subscription services, providing regular firmware and software updates, and engaging with customers through support and community forums.

Revised Recommendation

To further enhance customer retention and CLV, Arlo could implement a **Predictive Model-Based Early Churn Detection System** to identify potential customer defections and selectively target those at risk with tailored promotions and interventions. This approach shifts from a general loyalty program to a more data-driven, targeted strategy that can provide immediate and specific solutions to the risk of customer churn.

Rationale for Revision

Based on the insights gained throughout the course, particularly regarding the limitations of loyalty programs and the importance of targeted, data-driven approaches, revising the recommendation to include a predictive model-based early detection system reflects a more strategic and effective method of enhancing customer retention. This approach leverages advanced analytics to proactively address potential churn, allowing for more personalized and impactful customer interventions, which are essential for increasing CLV and strengthening the brand's relationship with its customers.

Feature of the Early Detection System

- **Predictive Analytics**: Utilize predictive modeling (e.g., RFM analysis, Logistic regression) to identify customers who show signs of reduced engagement or satisfaction before they reach the point of defection. This could be based on changes in their interaction patterns, purchase frequency, service usage, or responses to past marketing campaigns.
- **Targeted Interventions**: Develop customized retention campaigns that address the unique needs and concerns of each at-risk customer segment. This could include special offers, personalized communications, or invitations to participate in exclusive events.
- **Adaptive Learning**: Continuously update the predictive model with new customer data to improve its accuracy over time, adapting to changes in customer behavior and market dynamics.

Execution Plan

The revised customer retention strategy could include:

- **Integration with Existing Systems**: Incorporate the early detection system into Arlo's existing CRM platform, ensuring seamless data flow and analytics.
- **Communication Strategy**: Design personalized outreach campaigns that resonate with the targeted customers, utilizing the insights gained from the predictive model to craft messages that are likely to elicit a positive response.
- **Monitoring and Adjustment**: Regularly review the performance of the detection system and the retention strategies, making adjustments based on feedback and evolving customer needs.

Potential Impact

- **Enhanced Precision in Retention Efforts**: By targeting individuals who are at a higher risk of churn, Arlo can more efficiently allocate resources, potentially increasing the effectiveness of its retention programs.
- **Increased Customer Satisfaction**: Personalized interventions can make customers feel valued and understood, thereby enhancing their overall satisfaction and loyalty to the brand.
- **Improved CLV**: Proactively preventing defection and enhancing customer satisfaction can lead to increased CLV as customers remain with the brand for longer periods.

Long-term Benefit

Implementing a predictive model-based early detection system can enable Arlo to take a proactive stance on customer retention, allowing the company to anticipate and mitigate risks before they lead to churn. This strategic approach not only enhances customer loyalty and trust but also supports sustainable growth and maintains a competitive edge in the smart home security market.

3. How might you revise and/or build on your recommendation for the improvement of CLV through Customer Development in Part 1 given your experience at this point in the course?

Current Arlo's Approach

Arlo is driving customer development through high consumer engagement, innovative product introductions, and a broad accessory range. These strategies have cultivated a strong community, propelled a virtuous cycle of product usage and data generation, and fostered a deep integration within customers' IoT ecosystems.

Revised Recommendation

Considering the need to balance customer revenue with cost control for enhanced profitability, we now propose implementing a **Trade-In Program similar to Apple's model**. This program would allow customers to

trade in their old devices for discounts on new purchases, encouraging the upgrade cycle and fostering brand loyalty.

Rationale for Revision

Given the insights gained throughout the course, especially the importance of balancing revenue growth with cost management, revising our recommendation to include a trade-in program addresses both profitability and customer engagement more effectively. This shift from purely revenue-focused personalized packages to a cost-effective trade-in model (as the recycled and refurbished old devices can further decrease the cost of raw materials and production) not only enhances customer lifetime value by increasing purchase frequency but also aligns with Arlo's sustainability goals, demonstrating a strategic move towards comprehensive customer development that considers environmental, social, and governance (ESG) factors.

Execution Plan

The revised customer development strategy could include:

- **Launch the Trade-In Program**: Introduce a system where customers can return their old Arlo devices in exchange for discounts on newer models.
- **Marketing and Communication**: Promote the trade-in program through targeted marketing campaigns, emphasizing the dual benefits of cost savings on new purchases and environmental responsibility.
- **Recycling and Refurbishing**: Partner with recycling firms to refurbish usable parts from old devices, reducing waste and manufacturing costs.

Potential Impact

- **Increased Purchase Frequency**: By making it financially attractive to upgrade to newer models, we expect an increase in purchase frequency, directly boosting revenue.
- **Cost Efficiency**: Recycling and reusing parts from old devices can significantly reduce production costs and minimize environmental impact, aligning with corporate sustainability goals.

- **Enhanced Brand Loyalty and ESG Awareness**: Demonstrating commitment to sustainability can enhance Arlo's brand image and attract environmentally conscious consumers.

Long-term Benefit
The trade-in program could substantially increase Arlo's CLV by ensuring that customers not only make initial purchases but also continue to engage with the brand as their needs evolve and technology advances. This program supports Arlo's long-term sustainability strategy by reducing waste and promoting continuous customer engagement through regular upgrades.

4. Of the revised/improved recommendations listed above, which would be the most impactful on CLV in your opinion, and why do you think that is the case?

In our opinion, the implementation of **Predictive Model-Based Early Churn Detection System** would be the most impactful on Customer Lifetime Value for Arlo. The rationale behind this choice is as follows:

- **Churn Rate Reduction**: As what we learned in this course, and similar to the previous course of Introduction to Marketing and Marketing Analytics by Professor Stijn van Osselaer, the churn rate is the most critical component of CLV. Even a small reduction in the churn rate can have a significant impact on CLV, as it extends the average customer lifespan and, consequently, the total revenue and margin generated from each customer. A Predictive Model-Based Early Churn Detection System directly addresses this by identifying at-risk customers early, allowing for targeted interventions that effectively prevent customer defection before it occurs.
- **Increased Targeting Precision**: Unlike general loyalty programs, a predictive model enables Arlo to accurately identify which customers are at risk of churn, leading to more precisely targeted interventions. This refined focus ensures that resources are not wasted on customers who do not need intervention, thereby

increasing the overall efficiency of retention efforts. This model would also help increase the overall CLV for customers that are at the most risk of churn.

- **Proactive Engagement and Personalization**: This system facilitates proactive engagement, where interventions are not just general but are tailored to the specific needs and behaviors of at-risk customers. This level of personalization enhances customer experience and satisfaction, making interventions more relevant and effective, which is crucial for increasing both retention and CLV.
- **Dynamic Adaptation to Customer Behavior**: The predictive model can continuously learn and adapt based on new customer data, which improves its accuracy over time. This dynamic adaptation ensures that the retention strategies evolve in response to changes in customer behavior and market conditions, keeping the retention efforts relevant and effective.
- **Cost Efficiency and ROI**: By focusing on those customers who are most likely to churn, Arlo can optimize its marketing spend, which improves the return on investment (ROI) of its retention programs. Targeted retention efforts are generally more cost-effective than broad-based approaches, as they reduce expenditure on low-risk customers.
- **Long-term Customer Engagement**: Effective churn management through a predictive system extends the duration of customer relationships. Longer relationships provide more opportunities for cross-selling and upselling, and they increase the likelihood of customers becoming brand advocates.
- **Enhanced Brand Loyalty and Reputation**: By addressing customer issues before they lead to defection, Arlo reinforces its reputation as a customer-centric brand. This not only aids in retention but also enhances overall brand loyalty and can lead to organic growth through positive word-of-mouth from targeted customers that may not have done so before.

5. Draft a detailed execution plan for the implementation of whichever recommendation you settled on for question 4, outlining any metrics necessary to objectively assess the success of your endeavors:

Below is our structured execution plan for the implementation of the **Predictive Model-Based Early Churn Detection System** using logistic regression model, detailing the predictive modeling process, timeline, and key performance indicators (KPIs) to assess the effectiveness of the initiative:

1. Predictive Modeling Process

The predictive modeling process, as specified in Unit 5.3 of this course, includes (a) defining the problem, (b) preparing data, (c) estimating the model, and (d) selecting customers to target. For Arlo's early churn detection system, we will employ a logistic regression model to predict the probability of customer churn. Below are potential available variables to be selected based on our team's preliminary discussion.

Variable Selection:

- **Dependent Variable:**
  Churn: Binary indicator (0 = no churn, 1 = churn within the next defined period, e.g., 6 months).
- **Independent Variables:**
  - **Demographic Information**: Gender, age, and other sociodemographic data that may influence product usage and churn.
  - **Customer Engagement Metrics**: Frequency of product use, monetary value of purchases, and purchasing behavior patterns - the RFM metrics.
  - **Product Usage**: Number of devices such as cameras and doorbells per customer.
  - **Subscription Type**: Which subscription program the customer chose - Arlo Secure, Arlo Total Security, or Arlo Safe.
  - **Customer Support Interactions**: Number of calls to product support/hotline, indicating possible dissatisfaction or issues.
  - **Billing and Payment Patterns**: Indicators of financial reliability and satisfaction, including history of past due payments.
  - **Seasonality**: Timeframe data to capture potential seasonal variations in product usage or churn.

Modeling Steps:

1. **Data Collection and Preparation**: As the problem itself is clearly defined, we will start from gathering customer data across the specified variables, ensuring completeness and accuracy. Address missing data through imputation methods and create dummy variables for categorical data.
2. **Model Estimation**: Apply logistic regression to estimate the relationship between churn and the independent variables. Use training, testing and validation datasets to refine the model and prevent overfitting.
3. **Model Testing and Refinement**: Test the model with a separate dataset to assess its predictive accuracy. Adjust parameters and refine variables as necessary based on model performance metrics such as ROC curve and AUC.

2. Timeline Plan

We propose this early churn detection system recommendation to be a year-long program with following specified plans by month:

- **Month 1-2: Project Initiation**
  - Conduct initial meetings with stakeholders to outline project goals and resources.
  - Start the initial data collection process, gathering comprehensive customer data across the specified variables.
- **Month 3-4: Data Preparation and Initial Modeling**
  - Complete the preprocessing of data, including handling missing values and creating dummy variables.
  - Develop the initial logistic regression model using the training set, focusing on identifying key predictors of churn.
- **Month 5-6: Model Validation and Refinement**
  - Use the testing and validation dataset to refine the model, optimizing parameters to balance accuracy, precision, and recall.
  - Begin internal testing with a subset of the data to evaluate preliminary performance.
- **Month 7: Model Testing and System Integration**
  - Test the full model using the separate test dataset to assess predictive accuracy and finalize the model parameters.

    - Start integration of the early churn prediction model into Arlo's existing CRM and customer support systems.
- **Month 8-9: Implementation of Targeted Interventions**
    - Develop and implement targeted intervention strategies for customers identified by the model as at-risk of churning.
    - These strategies could include personalized offers, enhanced support, or engagement initiatives designed to address individual customer needs and pain points.
- **Month 10-12: Monitoring and Adjustment Phase**
    - Monitor the effectiveness of targeted interventions through ongoing evaluation against established KPIs.
    - Adjust intervention strategies based on customer feedback and model performance, refining the approach to maximize retention and customer satisfaction.
- **Ongoing Post-Year 1: Continual Learning and Adaptation**
    - Continuously update the churn prediction model with new data to improve accuracy and adapt to changing customer behaviors and market conditions.
    - Regularly review and revise the targeted interventions, ensuring they remain effective and relevant to customer needs.
    - Conduct periodic reviews of system performance, including assessing the ROI of the predictive model and targeted interventions.

3. Metrics and Evaluation
Performance Indicators:

- **Accuracy, Precision, Recall, Specificity, and F1 Score:** These metrics will evaluate the model's ability to correctly predict churn.
    - **Accuracy** will measure the overall correctness of the churn predictions made by the model, reflecting the percentage of true results (both true positives and true negatives) among the total number of cases examined.
    - **Precision** will be particularly emphasized to minimize wasteful spending on false positives.

    - **Recall (Sensitivity)**: Measure the model's ability to correctly identify all actual churners, which is essential for ensuring that no at-risk customers are missed by the retention strategies.
    - **Specificity** will measure the model's ability to correctly identify non-churners, which is crucial for avoiding unnecessary customer interventions.
    - **The F1 Score** provides a balance between precision and recall, making it a crucial metric for evaluating the overall effectiveness of the predictive model.
- **Customer Lifetime Value Increase:** Track changes in the CLV of customers who have been targeted by interventions versus those who have not. An increase in CLV among targeted customers would indicate a successful retention strategy. If data is sufficient, a detailed testing approach can be adopted to ensure the observed increase is statistically significant.
- **Churn Rate Reduction:** Measure the overall reduction in churn rates post-implementation compared to historical data. A significant reduction in churn would directly validate the effectiveness of the predictive model and associated retention strategies.
- **Return on Investment**: Calculate the cost savings from reduced churn versus the operational costs of maintaining the detection system.
- **Customer Satisfaction and Feedback**: Gather customer feedback to assess any changes in perception due to targeted retention efforts.

Execution and Integration:

- **System Integration Progress Rate**: Measure the seamless integration of the predictive model with existing CRM systems in a timely manner.
- **Operational Uptime**: Track the operational availability and reliability of the early churn detection system.

6. Generate a 2-3 slide presentation summarizing the most important findings, any key recommendations, and the execution plan drafted as a result of your analysis for a senior management team. Once you are done, submit this completed document along with your slide deck on the **Group Project Part 2: Driving Growth** page in Canvas for manual review.

To submit this project, please refer to the instructions in the course.