Business Analytics Capstone Framework for Strategy

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Problem Statement

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Problem Statement–

Describe the Problem Adblockers present to GYF

- *Implications of adblockers on GYF's ad-buying customers*
  - *Loss of data caused by adblockers means significantly less ad-buying customers as GYF may not be able to reach end-users thru its online channels as the ads are blocked by adblockers. Therefore, ad-buying customers would stop advertising thru GYF's online channels*
  - *GYF's ad-buying customers would go to other companies that can deliver their ads to end-users using other ways/methods*

- *Implications for GYF's end users*
  - *Loss of data caused by adblockers means market research will be less accurate in predicting consumer behavior as the way for ads to reach end-users thru online channels are blocked by adblockers*
  - *Without accurate prediction on consumer behavior, existing marketing strategy/decisions may become obsolete, and eventually may not be effective anymore as it loses the visibility of current and future consumer behavior trends*
  - *End-users may not get better deals thru coupon codes or additional sale items thru ads delivered by GYF*

- *Implications for GYF's operations*
  - *Loss of data caused by adblockers means significant disruptive to GYF's operations and may cause much lower revenues for publishers as adblockers blocking ads from reaching end-users, so when end-users not clicking on the ads (no click-thru rate) means no revenues for publishers*
  - *No revenues means no income to pay their vendors and operations, eventually may force GYF close its operations*

- *Implications for GYF's internal organization*
  - *Loss of data caused by adblockers means significantly less/no revenues*
  - *This would lead negatively to GYF's financial bottom line*
  - *No revenues means no income to pay its employees, so this would lead to massive lay offs for GYF's employees*
  - *No income eventually may force GYF file bankruptcy*

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Problem Statement–

Application Exercise 1 – Research Methods and Tools (Optional)

- *Use this space for to answer the questions set out in Application Exercise 1: 1. Given your definition of the problem faced by GYF, what type(s) of research will you employ to learn more about the strategy the DATA Team should pursue? 2. What research tools could you use to conduct that research?*

1. The types of research that I will employ to learn more about the strategy the DATA Team should pursue are descriptive and causal.
    - Descriptive research is needed because I am aware of the problem and I need to know:
        - What kind of value-added ads that end-users want to see and click?
        - What kind of ads format that ads-buying customers should produce/deliver to meet end-users' demands?
    - Causal research is needed because the problem is clearly defined that adblockers may block GYF's ads before it is able to give concerns to end-users if they would like to see the ads or not. I also need to know how we can work with adblockers to let the end-users decide whether they want to see our ads or not.

2. The research tools GYF could use to conduct above researches are:
    - Focus groups
    - Internet Communities (MROCs)
    - Surveys (mobile)
    - Customer self-reporting
    - Media planning firms
    - Social media analytics
    - Mobile data analytics

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Strategy

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Strategy
Describe your proposed strategy

The strategy is communicating clearly and working closely with all stakeholders to overcome any potential barriers by building stronger and life-time/long-term relationships with ad-buying customers, end-users, and adblockers as well as building more effective and efficient ads along with better technology and ads platform for better end-user values and experience, and help increase revenues/values of ad-buying customers.

1. **Build stronger and life-time/long-term relationship with ad-buying customers and end-users by:**
   - Collaborating with advertisers closely to craft ads that people want to see and share. An ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story
   - Advertising should be orchestrated through every point of interaction between a person and a brand. Moreover, it should be optimized for the specific audience, context, and delivery platform
   - Aiming to earn the attention of increasingly savvy and selective individuals — listen to what they are telling us, and give them something of value. It must have meaning and values. It should be entertaining, informative, and thought-provoking
   - Envisioning the advertising of the future to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences
   - Creating customer life-time loyalty program with incentives and rewards for long-term/life-time relationships

2. **Build better and more efficient technology and processes for better long term relationship and customer loyalty**
   - Improving page load time, reducing ads file sizes, removing intrusive ads, and working toward more impactful and relevant light context/content
   - Creating GYF own ecosystem app offered thru Apple and Android phone app store for long term growth as part of multi channels to reach end-users (potentially without adblockers and build up higher customer loyalty) like google chrome.
   - Adding light cookies with end-user's approvals/consents for better user experience by improving page loads, auto-login, relevant context/contents, better accurate prediction of end-user behavior and trend, better value, etc.
   - Monitoring and adapting company's strategy to changing economic and competitive conditions, any changing industry structure and forces, any potential barriers/road blocks, etc.
   - Experimenting with different strategies and learn what works

3. **Work closely with adblockers to let the end-users decide whether they want to see our ads or not (get on adblockers white list)**

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Viability of the Strategy

Potential barriers to the strategy and proposed ways to overcome the barriers are as follow:

1. **Ad-buying customers are not cooperating and going to competitors**
   - Educating advertisers that advertising should be orchestrated through every point of interaction between a person and a brand. Moreover, it should be optimized for the specific audience, context, and delivery platform
   - Collaborating with advertisers closely to craft ads that people want to see and share. An ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story
   - Sharing and being transparent with ad-buying customers to show-case what kind of ads/models work, show better trends of increased revenues/values of effective and efficient ad-buying customers, provide solid reasons/facts why GYF is a better digital advertising company to work with over our competitors
   - Creating ad-buying customer loyalty program with incentives and rewards for long-term/life-time relationships
   - Envisioning the advertising of the future to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences

2. **End-users are not cooperating and going to competitors**
   - Aiming to earn the attention of increasingly savvy and selective individuals — listen to what they are telling us, and give them something of value. It must have meaning and values. It should be entertaining, informative, and thought-provoking
   - Improving page load time, reducing ads file sizes, removing intrusive ads, and working toward more impactful and relevant light context/content
   - Adding light cookies with end-user's approvals/consents for better user experience by improving page loads, auto-login, relevant context/contents, better accurate prediction of end-user behavior and trend, offering better values, etc.
   - Creating end-users loyalty program with incentives and rewards for long-term/life-time relationships
   - Experimenting with different strategies and learn what works

3. **Adblockers are not willing to cooperate and are blocking our ads on GYF**
   - Monitoring and adapting company's strategy to changing economic and competitive conditions, a changing industry structure and forces, any potential barriers/road blocks, and offering incentives/rewards for cooperation.
   - Creating GYF own ecosystem app offered thru Apple and Android phone app store for long term growth as part of multi channels to reach end-users (potentially without adblockers and build up higher customer loyalty) like google chrome.

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Strategy
Application Exercise 2 – Hiring a Team Leader (Optional)

- *Based on the information provided in Application Exercise 2, describe here why you would hire Carrie Candidate or Peggy Prospect to be the second-in-command of the DATA Team.*
- Both two final candidates, Carrie Candidate and Peggy Prospect are equally qualified. Each individual is unique with their own strengths. This is a difficult decision to make.
- Hiring decisions are mostly based on what the company needs at the moment and for future growth, along with the following metrics (from video lectures of process vs outcome and hiring 1 & 2 of people analytics) that could be used to predict future performance:

- GYF needs a new Senior Associate Director for Digital Advertising Strategy that help me develop and implement my strategy for addressing the problem of adblocking. Peggy has a better experience and as part of her current role, she specifically focused on the issue posed by adblocker and other technologies that disrupt the traditional delivery of online advertising
- Based on the work samples and cognitive ability tests, Carrie performed better with her work product is polished and shows a knack for creative problem solving and scored 90% on the cognitive ability tests that GYF gives to all management-level applicants
- Based on structured interview and job knowledge test, Peggy performed better with her demonstrated deep knowledge of the digital advertising landscape and exhibition of a personality that will fit well with the other team members of the DATA team, and excellent job knowledge test result that is showing a strong familiarity with the kind of tasks she would be assigned in her new position

- Given the needs to help me develop and implement the strategy for addressing the problem of adblocking as soon as possible, I will hire Peggy Prospect because of her experience, familiarity with the issue posed by adblocker, her demonstrated deep knowledge of the digital advertising landscape and exhibition of a personality that will fit well with the other team members of the DATA team for smooth team work, and excellent job knowledge that is showing a strong familiarity with the kind of tasks she would be assigned in her new position

- Reference: https://www.coursera.org/learn/wharton-capstone-analytics/supplement/02zHS/application-exercise-2-using-people-analytics-methods-to-hire-a-leader-to

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Effects and Measurement

Overall Effects

Describe the anticipated effects of your strategy

- The effects on customers (ad-buying customers and end-users):
  - Ad-buying customers will be happier. It will lead to higher loyalty to GYF and more long-term/life-term relationships because we help them reach more targeted end-users with better context and delivery platform that have been optimized through every point of interaction between a person and a brand
  - Betters ads and services that end-users/people want to see and share. The ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story. The ad is to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences
  - Earning better attention and higher retention of increasingly savvy and selective individuals/end-users — by listening to what they are telling us, and giving them something of value. The ads must have meaning and values. The ads should be entertaining, informative, and thought-provoking
  - Better user experience and higher customer satisfaction with faster page load time, auto-login, no intrusive ads, offering better values, and more impactful and relevant light context/content. This will lead to higher end-user loyalty to GYF and generate more long-term/life-term relationships
- The effect on revenue is increased revenue thru better trends of increased revenues/values of our effective and efficient ad-buying customers. This will lead to increasing higher customer loyalty with long-term/life-time relationships. Eventually it will generate more revenues for GYF as we become the prefer company to advertise their brands. This will lead to triple win solutions for our end-users, our ad-buying customers and GYF

- The effects on the internal organization:
  - Higher revenues will lead positively to GYF's financial bottom line. This leads to better incentives and rewards to employees
  - When GYF thrives, the employees will also thrive, be happier and more likely to stay with GYF. This leads to higher retention that eventually leads to increased productivity and better performance of GYF employees and GYF corporation
  - GYF will be able to offer better values and more effective trainings to employees to increase productivity and efficiency
  - Better growth, working environment, incentives and rewards will lead to higher employee retention and satisfaction

Effects

Describe the anticipated effects of your strategy

- *Please describe the anticipated effects of your strategy. Make sure you address the effects on customers, revenue, and the internal organization.*
- **Strategy 1: Build stronger and life-time/long-term relationship with ad-buying customers and end-users**

- The effects on customers (ad-buying customers and end-users) are:
  - Better ads and services that end-users/people want to see and share. The ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story. The ad is to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences
  - Earning better attention and higher retention of increasingly savvy and selective individuals/end-users — by listening to what they are telling us, and giving them something of value. The ads must have meaning and values. The ads should be entertaining, informative, and thought-provoking. These can be done thru focus groups, surveys, internet communities, etc.

- The effects on revenue are:
  - Most likely higher revenues as we better align and position GYF with our ad-buying customers and end-users
  - Increased revenue thru better trends of increased revenues/values of our effective and efficient ad-buying customers. This will lead to increasing higher customer loyalty with long-term/life-time relationships.
  - Eventually it will generate more revenues for GYF as we become the prefer company to advertise their brands. So potentially we will also get more new customers and more new end-users, which means more businesses lead to more revenues. This will lead to triple win solutions for our end-users, our ad-buying customers and GYF

- The effects on the internal organization:
  - Our DATA team will collaborate closely with IT, Finance, Marketing, Sales, Operations and all involved departments along with all stakeholders to ensure everyone has the same understanding and on the same page for smooth execution/implementation
  - When GYF thrives, the employees will also thrive, be happier and more likely to stay with GYF. This leads to higher retention that eventually leads to increased productivity and better performance of GYF employees and GYF corporation
  - GYF will offer better values and more effective training programs to employees to increase productivity and efficiency

Effects

Describe the anticipated effects of your strategy

- *Please describe the anticipated effects of your strategy. Make sure you address the effects on customers, revenue, and the internal organization.*
- ***Strategy 2: Build better and more efficient technology and processes for better long term relationship and customer loyalty***

- The effects on customers (ad-buying customers and end-users) are:
  - Better user experience and higher customer satisfaction with faster page load time, auto-login, no intrusive ads, offering better values, and more impactful and relevant light context/content. This will lead to higher end-user loyalty to GYF and generate more long-term/life-term relationships
  - Better user experience and higher customer satisfaction with GYF own ecosystem app offered thru Apple and Android phone app store for long term growth as part of multi channels to reach end-users (potentially without adblockers and build up higher customer loyalty) like google chrome. These can be done thru focus groups, surveys, internet communities, etc.

- The effects on revenue are:
  - Most likely higher revenues as we better align and position GYF with our end-users
  - Increased revenue thru better trends of our customers. This will lead to increasing higher customer loyalty with long-term/life-time relationships.
  - Eventually it will generate more revenues for GYF as we become the prefer company for end-users to use/surf information/products. With more end-users, means more businesses from ad-buying customers that will lead to more revenues. This will lead to triple win solutions for our end-users, our ad-buying customers and GYF

- The effects on the internal organization:
  - Our DATA team will collaborate closely with IT, Finance, Marketing, Sales, and Operations Departments along with all stakeholders to ensure everyone has the same understanding and on the same page for smooth execution/implementation
  - In the short term, we will increase more works and costs to make the necessary changes in order to survive from adblocking and increase our revenues in the long term thru better user experience, higher customer satisfaction, better platform and more channels to reach our end-users
  - GYF will offer better values and more effective trainings to employees to increase productivity and efficiency

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Effects

Describe the anticipated effects of your strategy

- *Please describe the anticipated effects of your strategy. Make sure you address the effects on customers, revenue, and the internal organization.*
- ***Strategy 3: Work closely with adblockers to let the end-users decide whether they want to see our ads or not (get on adblockers white list)***
- This should be our short term strategy as we build our own platform/app that has no adblockers and better understand what our customers want so we can give something of values to our customers and retain our customer loyalty

- The effects on customers (ad-buying customers and end-users) are:
    - End-users that do not use adblockers will continue to enjoy our search for relevant information and ads
    - End-users that use adblockers will have the option to continue using our search and/or see the ads
    - GYF may lose some customers who opt out to see our ads, which will lead to less end-users and less ad-buying customers

- The effects on revenue:
    - Most likely less revenues over time as we lose some of our end-users and ad-buying customers as well as due to less click thru rate

- The effects on the internal organization:
    - Higher costs as we need to pay some fees to adblockers to get on their white list
    - This will lead negatively to GYF's financial bottom line
    - Eventually this will lead to some employee reduction/lay off due to increased costs and less revenues
    - We need to continuously monitor our operations, number of customers that use adblockers on our search platform that have opted out on our ads so we better understand the future trend and directions

Effects

Application Exercise 3 – Designing a Deterministic Optimization Model

- *Optimization model for the scenario in Application Exercise 3*

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Application Exercise 3

Net Productivity Increase (in $ per $ spent on training)

Training	Hard Skills	Soft Skills	Total Net Productivity Increase (in $)	
Internal	0.2	0.6	42,823.50	Objective
External	0.7	0.4		

Spending Amounts (in $)

Training (Decision Variables)	Hard Skills	Soft Skills
Internal	0	26,765
External	38,235	0

Constraints

	Required		Constraint
Total Spending Budget (in $)	65,000.00	<=	65,000
Productivity Increase in Hard	26,764.50	>=	20,000
Productivity Increase in Soft	16,059.00	>=	12,000
Productivity Increase Internal v. External	0.60	>=	0.6

Note:
HI = Internal Hard Skills Program
HE = External Hard Skills Program
SI = Internal Soft Skills Program
SE = External Soft Skills Program

Algebraic Model

Goal to maximize Total Productivity Return within Budget
Maximize 0.2*HI + 0.7*HE + 0.6*SI + 0.4* SE
Subject to
0.2*HI + 0.7*HE >= 20,000 (The Hard Skills training program must achieve at least $20,000 in the total net productivity increase)
0.6*SI + 0.4*SE >= 12,000 (The Soft Skills training program must achieve at least $12,000 in the total net productivity increase)
0.2*HI + 0.6*SI >= 0.6* (0.7*HE + 0.4*SE) The Internal program should achieve at least 60% of the net productivity increase realized for the External program
HI, HE, SI, SE = integer
HI, HE, SI, SE >= 0

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Effects

Application Exercise 3 – Designing a Deterministic Optimization Model

- *Provide an explanation of the calculations you performed to build an optimization model using decision variables, constraints, and an objective; this model could use the scenario in Application Exercise 3, or one of you own devising.*
- We create an algebraic model as follow:
  - Our goal/objective is to maximize Total Productivity Return thru Employee Training Program within Budget
  - GYF's management has calculated that the productivity return (i.e., the expected extra productivity in the next period, in the equivalent of U.S. dollars, that is achieved for each U.S. dollar spent on training, net of training cost) is proportional to the amount of money spent on training and can be expressed as follow:

	Hard Skills	Soft Skills
Internal	0.2	0.6
External	0.7	0.4

- So our goal/objective is to maximize the Total Productivity Return value of
  0.2*Internal Hard Skills (HI) + 0.7*External Hard Skills (HE) + 0.6*Internal Soft Skills (SI) + 0.4*External Soft Skills (SE)
- We use Excel Solver to find the optimal values for our decision variables which are the training spending amount for each combination of Hard/Soft Skills with Internal/External Program with the following constraints:
  1. 0.2*HI + 0.7*HE >= 20,000 (The Hard Skills training program must achieve at least $20,000 in the total net productivity increase)
  2. 0.6*SI + 0.4*SE >= 12,000 (The Soft Skills training program must achieve at least $12,000 in the total net productivity increase)
  3. 0.2*HI + 0.6*SI >= 0.6* (0.7*HE + 0.4*SE) The Internal program should achieve at least 60% of the net productivity increase realized for the External program
  4. HI, HE, SI, SE = integer (no decimal points)
  5. HI, HE, SI, SE >= 0 (no negative values)
- Using the excel solver, we enter our objective, decision variables, and constraints above.
- The objective comes at $42.823.50 with training spending amount of $38,235 for External Hard Skills Program and $26,765 for Internal Soft Skills Program

Measurement

Describe the anticipated effects of your strategy and how you will measure them

- Measuring the anticipated effects of our strategy:
1. Customers (ad-buying customers and end-users) :
    - We need to measure all of our three strategy implementations (This is to ensure our continued operations without any disruption from adblockers) to see which one(s) give best values in terms of customer acquisition and retention along with it being cost effective
    - This can be measured by collecting data and analyzing whether we are having higher/lower traffic and more/less click thru rate on our different strategies. If there is not much increase in traffic and click thru rate in our ads and cost of operations are too high in comparison to our revenues, we need to find a new strategy and may need to work with media planning firms
    - Collecting data from focus groups, online/mobile surveys, internet communities, social media analytics, mobile data analytics, customer self-reporting, media planning firms can help us better understand our end-user interests and if they prefer good relevant ads context/contents or not having enthusiasm at all in our ads context/contents on GYF platforms and channels
    - By tracking the end-users activities, we can learn what they like and dislike so it will help us improve their experience and satisfaction on our GYF platforms and channels
2. Revenue:
    - We can measure revenues and click thru rate by each strategy and compare it to most recent years prior to implementing the new strategies
    - With frequent display online advertising thru multi-channels to connect to customers, GYF will be able to increase conversion rate (revenues) and improve Return on Investments (ROI), which ultimately will increase customer life-time value
    - To improve long term growth, we are taking actions from reactive to proactive by using accurate predictive analytics
3. Internal Organization :
    - Collaborate closely with IT, Finance, Marketing, Sales, Operations, all departments and stakeholders that involve with our new strategies to measure each area they contributed
    - Conduct employee surveys on how they feel about the new strategies and open a forum/portal where employees can submit ideas/strategies that we should consider
    - Measure the amount of time and money spent on these strategies from beginning to implementation
    - Measure the amount of head counts and resources used on collaboration from beginning to implementation
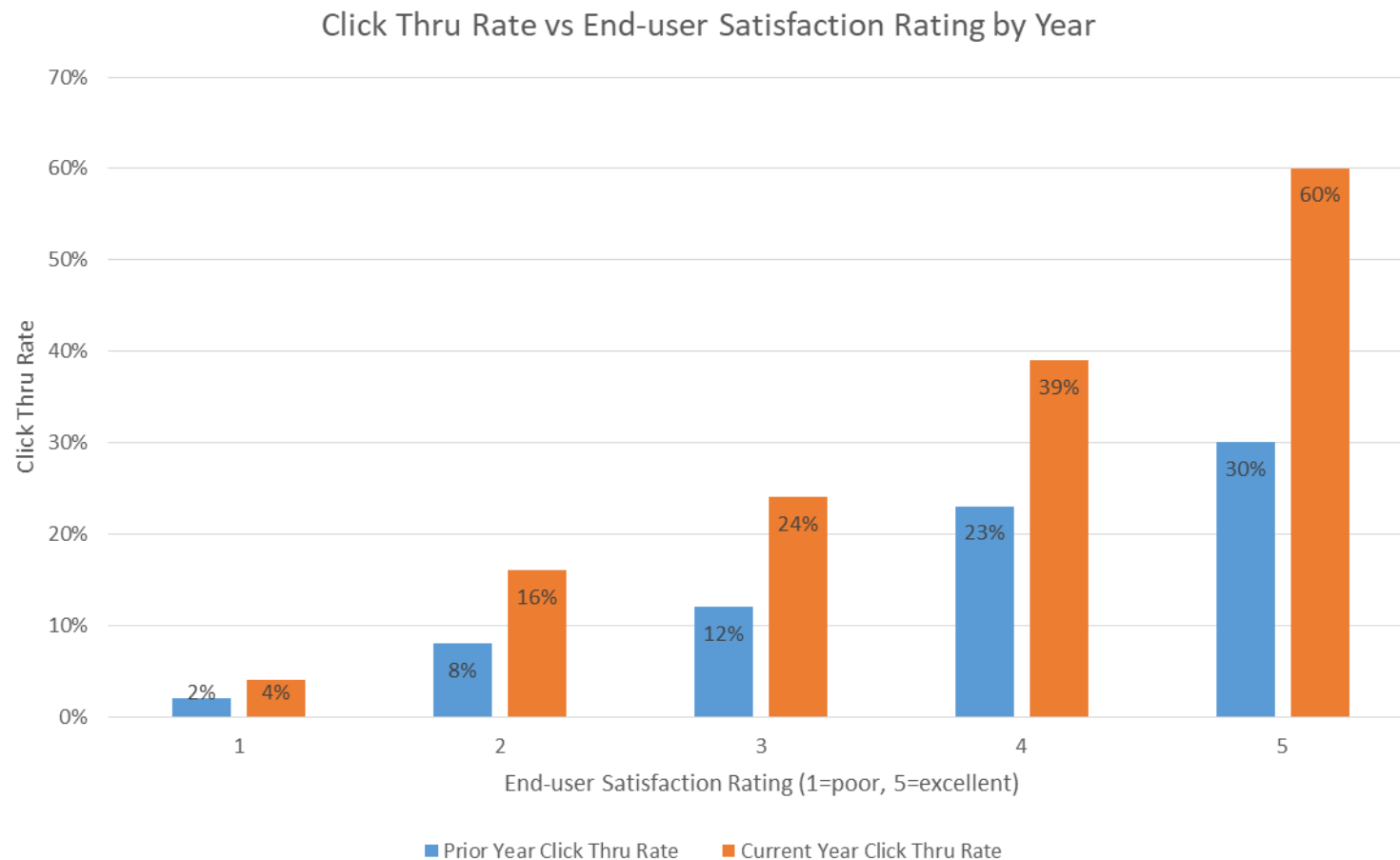
Overall Key Measurement

Describe the anticipated effects of your strategy and how you will measure them

- *Please outline your plan for measuring these effects using data. Make sure you use techniques you learned about in the courses*
- Measurement Plan for effects on customer for our strategy can be measured by annual/monthly year over year growth of:
  - Quality of our services thru customer and end-user surveys/ratings
  - Overall customer and end-user satisfaction thru surveys/ratings
  - Overall customer and end-user experience thru surveys/ratings
  - Overall customer willingness to be a reference
  - Overall numbers of customers and end-users (can be categorized/segmented by existing vs new customers and end users)
  - Customer ad renewals (or likelihood of customer renewals)
  - Values assigned to services
  - Ad value ratings by end-users
  - Customer and end-user recommendation and sharing of our ads
  - Click thru rate by ad-buying customer
- Measurement Plan for effects on revenue for our strategy can be measured by annual/monthly year over year growth of:
  - End-users loyalty and retention
  - Ad-buying customers to measure growth in loyalty and retention
  - Revenue that can be broken down into customer ads category to benchmark to same industry category growth/trend
  - GYF financial bottom line
- Measurement Plan for effects on internal organization for our strategy can be measured by annual/monthly year over year growth of:
  - GYF employee satisfaction and retention
  - GYF employee productivity and efficiency
  - GYF employee increased performance thru comprehensive training programs

- Some comprehensive measurement of key performance indicator examples that we will highlight are:
  - Analysis of Click Thru Rate vs End-User/Customer Satisfaction Rating by Prior Year vs Current Year
  - Analysis of Customer Revenue Growth vs Customer Satisfaction Rating
  - Analysis of Future Revenue Growth
  - Analysis of High Future Revenue Growth

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Measurement

Describe the anticipated effects of your strategy and how you will measure them

- Measurement for effects on Click Thru Rate vs End-user Satisfaction Rating by Prior Year vs Current Year as comparison
- It shows that new advertising plan performs much better than the old advertising plan by roughly double the Click Thru Rate
- The higher the End-user/Customer Satisfaction Rating the higher the Click Thru Rate
- End-user/Customer Satisfaction Rating 5 (Excellent) has the highest Click Thru Rate, ultimately bring in potentially highest revenue

Click Thru Rate vs End-user Satisfaction Rating by Year

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Measurement

Describe the anticipated effects of your strategy and how you will measure them

- Analysis of Customer Revenue Growth by Customer Satisfaction in Year 1 vs. Year 2 Revenue/Year 1 Revenue
- The chart shows more satisfied customers purchase more in the future (additional sales of same service; upgrade existing services; cross-sell other services)
- The largest increase in Customer Revenue Growth that we need to focus on is Customer Satisfaction value around 55 that we need to increase it by 5 points to push it up toward 60

Analysis of Customer Revenue Growth

Source: Ittner and Larcker, *Journal of Accounting* Research (1998) -- Data from 2,156 individual customers

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

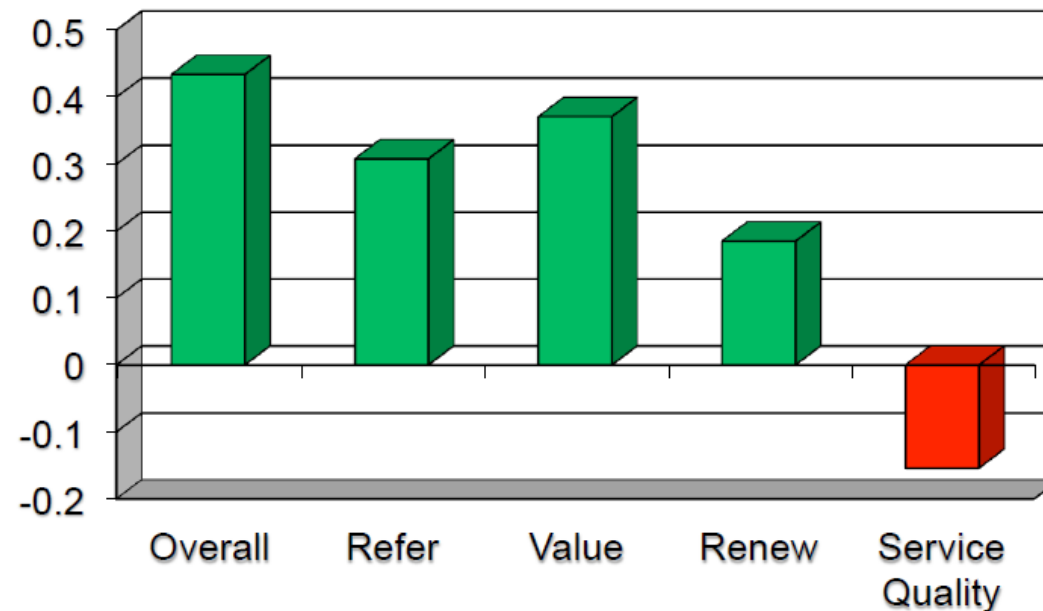presented by Suhaimi Chan   Wharton UNIVERSITY *of* PENNSYLVANIA   ONLINE

Measurement

Describe the anticipated effects of your strategy and how you will measure them

- Analysis of Future Revenue Growth using Regression coefficient linking customer score and future revenue growth
- The chart shows us that Future Revenue Growth is driven by Overall and followed closely by Value
- It also shows that Customer Score on Service Quality value does not impact highly like Overall and Value on future revenue growth
- The chart can be interpreted as one-unit (out of five score value) increase in Overall is related to a future increase in annual revenue growth of 43.4%

Analysis of Future Revenue Growth

Regression coefficient linking customer score and future revenue growth

INTERPRETATION: "One-unit" (out of five) increase in Overall is related to a future increase in annual revenue growth of .434 (or 43.4%)

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

Measurement

Describe the anticipated effects of your strategy and how you will measure them

- Analysis of High Future Revenue Growth using Regression coefficient linking customer score and <u>High</u> future revenue growth
- The chart shows us that <u>High</u> Future Revenue Growth is significantly driven by **Value**
- It also shows that Customer Score on Service Quality value does not impact highly like Value on <u>High</u> future revenue growth
- The chart can be interpreted as the regression coefficient for **Value is statistically significant** and indicating to moving the client closer to the high growth category (over 15%) in <u>High</u> future revenue growth

Analysis of <u>High</u> Future Revenue Growth

Regression coefficient linking customer score and <u>high</u> future revenue growth

	Overall	Refer	Value	Renew	Service Quality
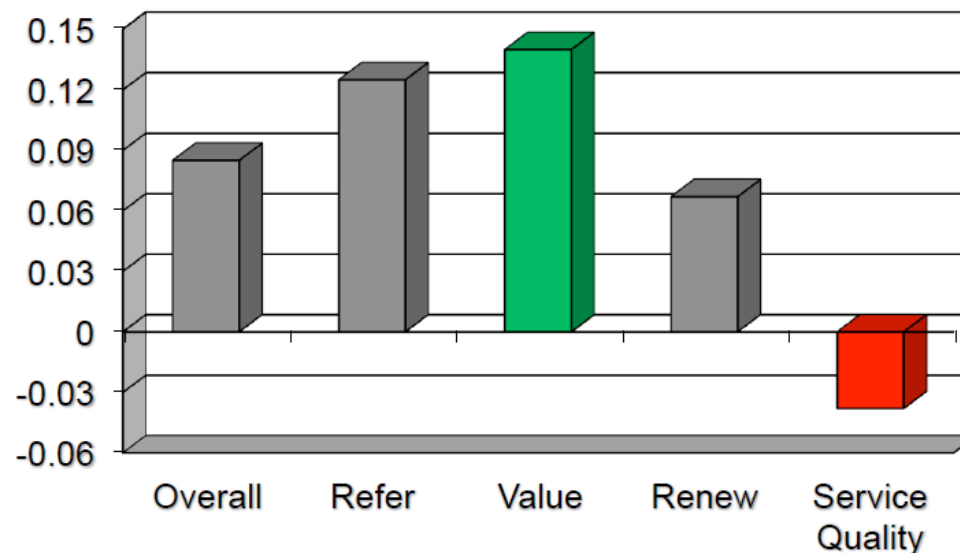
INTERPRETATION: Since the dependent variable is coded as zero/one, the coefficient should be thought of as indicating that increases are moving the client closer to the high growth (> 15%) category

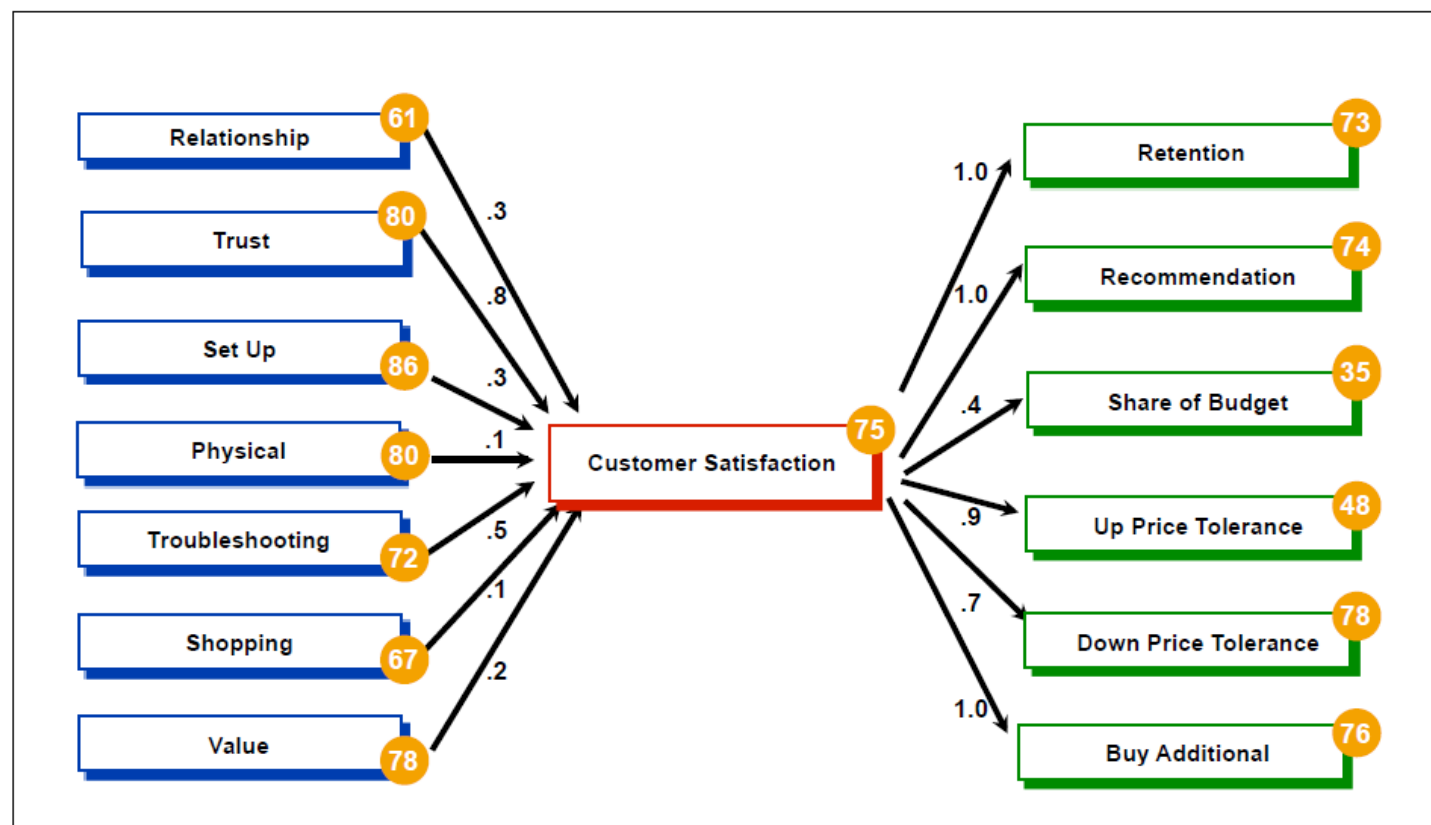Note: Only the regression coefficient for Value is statistically significant

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

Measurement

Application Exercise 4 – Identifying Key Drivers

- *Apply the "causal business model" performance measurement framework to your strategy*
- Identifying the right key drivers is key in performance measurement framework to our strategy
- Improving our key drivers will lead to better/higher Customer Satisfaction, which ultimately will lead to better outcomes
- Our causal business model is determined by linking key drivers, customer satisfaction, and outcomes

Linking Drivers, Satisfaction, and Outcomes

Drivers	Weight		Outcomes
Relationship (61)	.3	1.0	Retention (73)
Trust (80)	.8	1.0	Recommendation (74)
Set Up (86)	.3	.4	Share of Budget (35)
Physical (80)	.1		Customer Satisfaction (75)
Troubleshooting (72)	.5	.9	Up Price Tolerance (48)
Shopping (67)	.1	.7	Down Price Tolerance (78)
Value (78)	.2	1.0	Buy Additional (76)

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

Measurement
Application Exercise 4 – Identifying Key Drivers

- Improving key drivers with high scores will be much more challenging and difficult than improving key drivers with lower scores
- For example, improving a few points for high score like 86, will likely be much more difficult than improving 10 points of low score like 61
- Therefore, we better focus on the following:
    - Improving key driver that is statistically significant to drive high future revenue growth such as Value (78 score) and
    - Improving lower score key drivers such as Relationship (61 score) and Shopping (67 score)
- Improving the three key drivers above will likely better improve/increase our Customer Satisfaction score, which will lead to better outcomes
- Higher Customer Satisfaction score means more satisfied customers will purchase more in the future (additional sales of same service; upgrade existing services; cross-sell other services)

- Further research revealed that:
    - Retention
        - If retention score was 90 or above (below 90), the customer bought the same brand again 56.76% (30.77%) of the time – a <u>change</u> of 25.99%
    - Recommendation
        - If the recommendation score was 90 or above (below 90), the customer recommendation resulted in 1.52 (0.87) purchases of the same brand – a <u>change</u> of 0.65

- Based on the revelation of further research above, we better focus on improving our outcomes in Customer Retention (73 score) and Recommendation (74 score) to at least 90 score to achieve the greatest advantages in our causal business model for our strategy

- Our action plans will be experimenting with different strategies and learn what works

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

Measurement

Application Exercise 4 – Identifying Key Drivers

- Based on the research revelation earlier that we need to focus on Critical Customers to improve Retention and Recommendation score to at least 90, we deep dive into the numbers of customers by Retention score and Recommendation score in our data sample
- As we can see in the chart below, we need to focus on 16.51% of our targeted customers in Retention score and 16.34% of our targeted customers in Recommendation score

Focusing on Critical Customers

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

Conclusion

- The rapid growing of adblocking software and Apple's support of adblocking software on its ecosystem poised a great threat to GYF advertising business survival
- This adblocking threat to GYF advertising business creates a great opportunity for GYF to reform and reinvent its advertising business model
- GYF DATA Team is the main driver and responsible in creating and implementing a new strategy to resolve this issue
- GYF DATA Team is using Customer Analytics research and tools to help shape its strategies to resolve adblocking threat to its advertising business model
- GYF DATA Team is using Descriptive and Causal Research. The research tools that GYF can use to conduct descriptive and causal researches are Focus Groups, Internet Communities (MROCs), Surveys (mobile), Customer self-reporting, Media planning firms, Social media analytics, and Mobile data analytics
- GYF DATA Team employs People Analytics Method to shape its strategies like Process vs Outcome and also uses People Analytics Method to hire a leader to implement my strategy
- GYF is also using Operation Analytics Method to understand and select what training programs within allocated budget that can optimally increase productivity, efficiency, and performance of its employees and operations in implementing the strategies
- GYF is building and using Operating Analytics Optimization Model with Excel Solver to optimize its training program selections for its employees
- GYF uses People Analytics Method to promote innovative and collaboration culture within its internal organization
- GYF DATA Team collaborates closely with IT, HR, Finance, Accounting, Marketing, Sales, Operations, all departments and stakeholders that involve with our new project strategies to measure each area they contributed to the project
- GYF needs to measure all three strategy implementations (This is to ensure our continued operations without any disruption from adblockers) to see which one(s) give best values in terms of customer acquisition and retention along with it being cost effective
- GYF is using Accounting Analytics Methods to identify and measure the key drivers of the proposed strategies
- To better analyze its financial outcome, GYF is also employing Accounting Analytics Methods by linking Non-Financial Metrics to Financial Performance
- And finally, to better improve its strategies and financial performance, GYF uses Accounting Analytics Methods by incorporating analysis results in its Financial Models

Conclusion (Strategy)

- The problem Adblockers present to GYF can be resolved by the following strategies:

1. ***Build stronger and life-time/long-term relationship with ad-buying customers and end-users by:***
   - Collaborating with advertisers closely to craft ads that people want to see and share. An ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story
   - Advertising should be orchestrated through every point of interaction between a person and a brand. Moreover, it should be optimized for the specific audience, context, and delivery platform
   - Aiming to earn the attention of increasingly savvy and selective individuals — listen to what they are telling us, and give them something of value. It must have meaning and values. It should be entertaining, informative, and thought-provoking
   - Envisioning the advertising of the future to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences
   - Creating customer life-time loyalty program with incentives and rewards for long-term/life-time relationships

2. ***Build better and more efficient technology and processes for better long term relationship and customer loyalty***
   - Improving page load time, reducing ads file sizes, removing intrusive ads, and working toward more impactful and relevant light context/content
   - Creating GYF own ecosystem app offered thru Apple and Android phone app store for long term growth as part of multi channels to reach end-users (potentially without adblockers and build up higher customer loyalty) like google chrome.
   - Adding light cookies with end-user's approvals/consents for better user experience by improving page loads, auto-login, relevant context/contents, better accurate prediction of end-user behavior and trend, better value, etc.
   - Monitoring and adapting company's strategy to changing economic and competitive conditions, any changing industry structure and forces, any potential barriers/road blocks, etc.
   - Experimenting with different strategies and learn what works

3. ***Work closely with adblockers to let the end-users decide whether they want to see our ads or not (get on adblockers white list for short term solution before transitioning over to our long term solution)***

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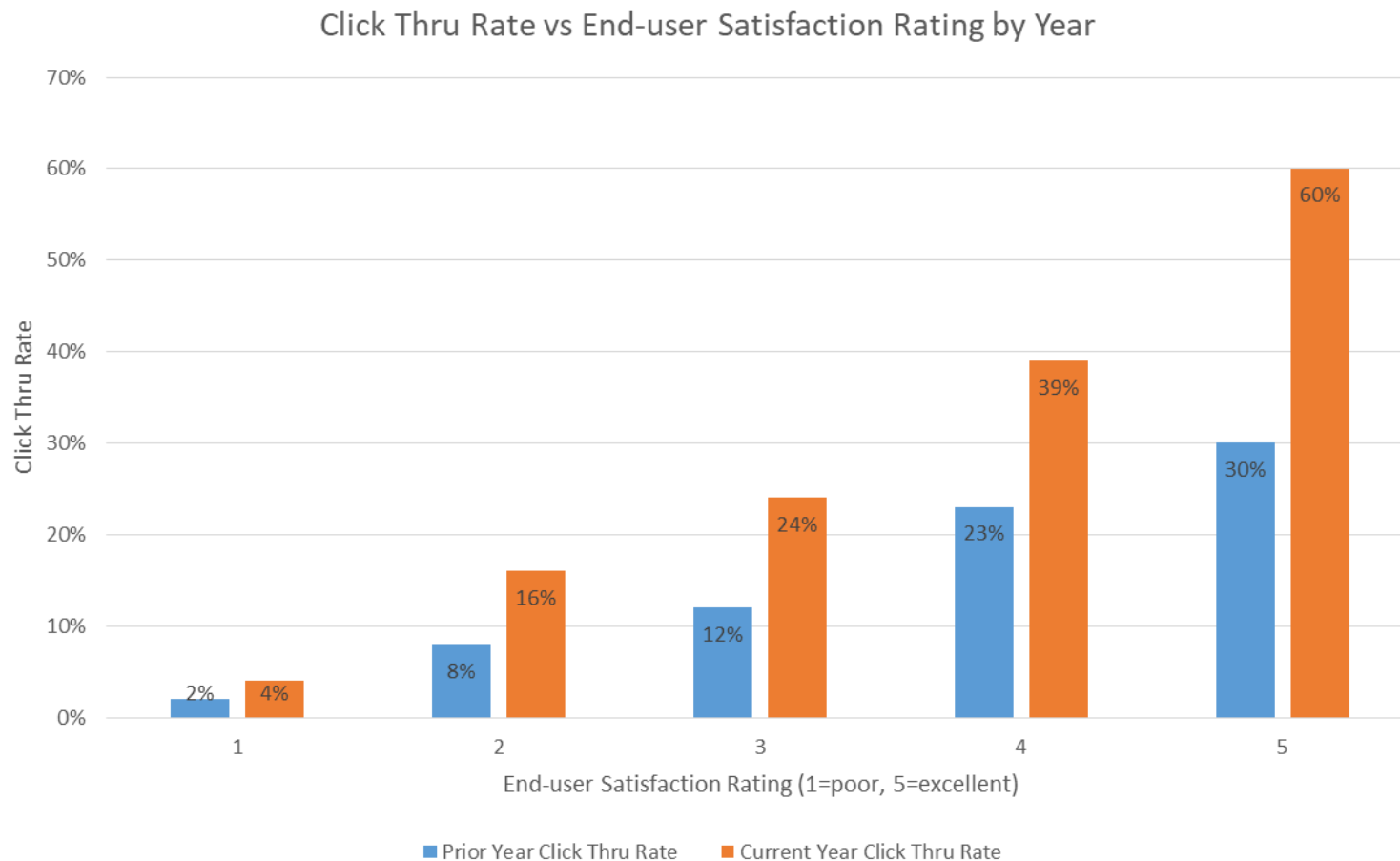
ONLINE

Conclusion (Effects)

- The effects on customers (ad-buying customers and end-users) are:
    - Better ads and services that customers want to see and share. The ad that is relevant and respectful, actionable, valuable and value-generating, purveys an exceptional experience and a shareworthy story. The ad is to be a gift, delightful and informative, useful, meaningful, relevant context/content to targeted end-users, and an invisible, inspirational, and indispensable part of product and service experiences
    - Earning better attention and higher retention of increasingly savvy and selective individuals/end-users — by listening to what they are telling us, and giving them something of value. The ads must have meaning and values. The ads should be entertaining, informative, and thought-provoking. These can be done thru focus groups, surveys, internet communities, etc.
    - Better user experience and higher customer satisfaction with faster page load time, auto-login, no intrusive ads, offering better values, and more impactful and relevant light context/content. This will lead to higher end-user loyalty to GYF and generate more long-term/life-term relationships
    - Better user experience and higher customer satisfaction with GYF own ecosystem app offered thru Apple and Android phone app store for long term growth as part of multi channels to reach end-users (potentially without adblockers and build up higher customer loyalty) like google chrome. These can be done thru focus groups, surveys, internet communities, etc.
- The effects on revenue are:
    - Most likely higher revenues as we better align and position GYF with our ad-buying customers and end-users
    - Increased revenue thru better trends of increased revenues/values of our effective and efficient ad-buying customers. This will lead to increasing higher customer loyalty with long-term/life-time relationships.
    - Eventually it will generate more revenues for GYF as we become the prefer company to advertise their brands. So potentially we will also get more new customers and more new end-users, which means more businesses lead to more revenues. This will lead to triple win solutions for our end-users, our ad-buying customers and GYF
- The effects on the internal organization:
    - Our DATA team will collaborate closely with IT, Finance, Marketing, Sales, Operations and all involved departments along with all stakeholders to ensure everyone has the same understanding and on the same page for smooth execution/implementation
    - GYF will offer better values and more effective training programs to employees to increase productivity and efficiency
    - Better growth, working environment, incentives and rewards will lead to higher employee retention and satisfaction

Conclusion (Measurement)

1. Customers (ad-buying customers and end-users) :
   - We need to measure all of our three strategy implementations (This is to ensure our continued operations without any disruption from adblockers) to see which one(s) give best values in terms of customer acquisition and retention along with it being cost effective
   - This can be measured by collecting data and analyzing whether we are having higher/lower traffic and more/less click thru rate on our different strategies. If there is not much increase in traffic and click thru rate in our ads and cost of operations are too high in comparison to our revenues, we need to find a new strategy and may need to work with media planning firms
   - Collecting data from focus groups, online/mobile surveys, internet communities, social media analytics, mobile data analytics, customer self-reporting, media planning firms can help us better understand our end-user interests and if they prefer good relevant ads context/contents or not having enthusiasm at all in our ads context/contents on GYF platforms and channels
   - By tracking the end-users activities, we can learn what they like and dislike so it will help us improve their experience and satisfaction on our GYF platforms and channels

2. Revenue:
   - We can measure revenues and click thru rate by each strategy and compare it to most recent years prior to implementing the new strategies
   - With frequent display online advertising thru multi-channels to connect to customers, GYF will be able to increase conversion rate (revenues) and improve Return on Investments (ROI), which ultimately will increase customer life-time value
   - To improve long term growth, we are taking actions from reactive to proactive by using accurate predictive analytics

3. Internal Organization :
   - Collaborate closely with IT, Finance, Marketing, Sales, Operations, all departments and stakeholders that involve with our new strategies to measure each area they contributed
   - Conduct employee surveys on how they feel about the new strategies and open a forum/portal where employees can submit ideas/strategies that we should consider
   - Measure the amount of time and money spent on these strategies from beginning to implementation
   - Measure the amount of head counts and resources used on collaboration from beginning to implementation
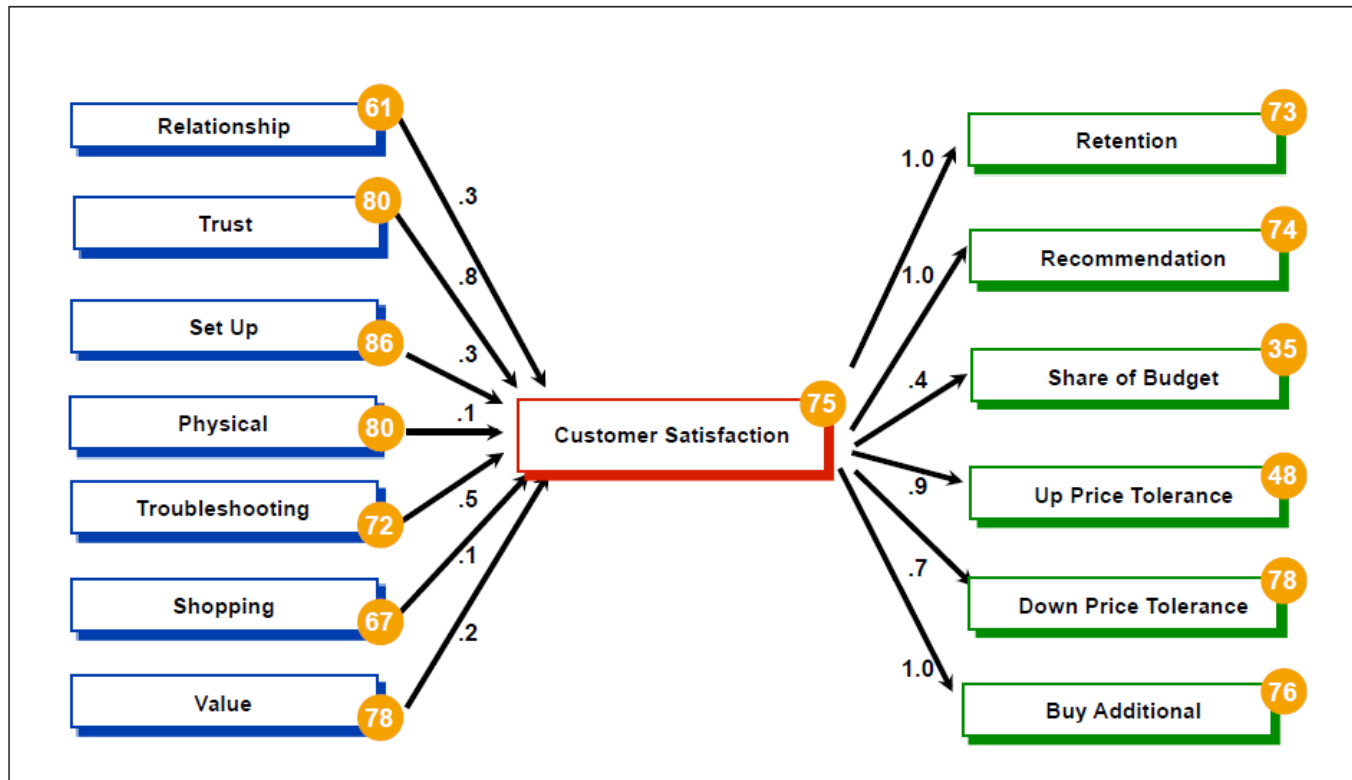
Conclusion (Measurement)

- Measurement for effects on Click Thru Rate vs Customer Satisfaction Rating by Prior Year vs Current Year as comparison
- It shows that new advertising plan performs much better than the old advertising plan by roughly double the Click Thru Rate
- The higher the End-user/Customer Satisfaction Rating the higher the Click Thru Rate
- End-user/Customer Satisfaction Rating 5 (Excellent) has the highest Click Thru Rate, ultimately bring in potentially highest revenue

Click Thru Rate vs End-user Satisfaction Rating by Year

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Conclusion (Measurement Application)

- Identifying the right key drivers is key in performance measurement framework to our strategy
- Improving our key drivers will lead to better/higher Customer Satisfaction, which ultimately will lead to better outcomes
- Our causal business model is determined by linking key drivers, customer satisfaction, and outcomes
- Higher Customer Satisfaction score means more satisfied customers will purchase more in the future (additional sales of same service; upgrade existing services; cross-sell other services)

Linking Drivers, Satisfaction, and Outcomes

- *Reference: University of Pennsylvania Wharton Online Linking Non-Financial Metric to Financial Performance Presentation Slide*

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Conclusion (Measurement Application)

- Based on the research revelation earlier that we need to focus on Critical Customers to improve Retention and Recommendation score to at least 90, we deep dive into the numbers of customers by Retention score and Recommendation score in our data sample
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