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**ZEN Motors & AAC**

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**Marketing Research Proposal**

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**Researchers**

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*Chapter1: pg.21*

AAC and Zen motors are presented with a very difficult decision. AAC is faced with a situation in whether to enhance market share by creating and coming up with new engineering and vehicle design, but without discrediting what they are already known for, SUV’s or larger vehicles. Faced with the rising cost of fuel, this is the most important concern for ZEN motors. Nick Thomas the CEO wants to conduct a market research study to see if it would be profitable to create a new division of ZEN motors that would specialize in fuel-efficient cars.

List of marketing research studies:

*Identifying Market Opportunities and Problems*

• Competitive Analysis

• Environmental analysis studies

• SWOT analysis

• Market Segment identification

• Market Demand Determination

• Product/service-use studies

Improving Marketing as a Process

• How to understand if people are really in demand for fuel efficient vehicles

*Generating, Refining and Evaluating Potential marketing Actions*

• Concept tests of proposed new products or services

• New-Product prototype testing

• Distribution effectiveness studies

• Reformulating existing product testing

• Proposed marketing-mix evaluation testing

*Monitoring Marketing Performance*

• Customer- Satisfaction studies

• Image analysis

• Website evaluations

*Chapter 2 pg. 39 question 2*

2. In response to Nick Thomas suggestion for the following for would be:

1. Which type of research design should Nick use?
	1. We suggest that Nick should use descriptive research design. The reason we suggest descriptive research because it answers: the who, what, when, where, and how questions. This type of research is also good for finding consumer attitudes, intentions, and behaviors or the number of competitor and their strategies.
	2. Nick should collect primary data/information. The reason we suggest this is because primary information is information collected specifically for the problem at hand. Specifically Nick wants to find consumer attitudes toward future oil price levels and global warming.
	3. Some specific question we suggest Nick to ask is consumers attitudes toward:
		* Fuel price
		* Alternative fuel
		* Fuel-efficient cars
		* Global Warming
		* Where do you see oil prices going in the future
	4. In terms of a sample plan Nick should sample American Household as units that already drive or will be driving in the near future. He also should sample automobile owners.

**Unit 2 Establishing Secondary Information Relevant for AAC’s Marketing Situation:**

Chapter 6: p.175

1. Nick should seek out qualitative data to find out which fuel-efficient cars are selling well and which alternative fuels are the closest to being developed.

-Internal secondary data sources like sales and marketing reports and accounting/financial records will help generate the information needed for Nick. Nick also should consider using external source, such as annual reports, library sources and the federal government to find out which fuels are being close to being developed.

**Literature Review:**

Automobiles play an important role in the day to day lives of people throughout the world. As the daily operations of people’s lives include cars, the cost of fuel has a major impact on the type of vehicle and the amount of driving consumers do each day. Automobile makers are constantly researching and generating ideas on how to find the solution to the cost of fuel with car purchasing and the consumer’s attitudes on how much it has to do with global warming. Aside from that, automobile makers are trying to find information on competitive information on automobile companies offering fuel-efficient cars to remain competitive within the market and strive for success in the future.

ACC and Zen motors is in the process of making positive changes for the growth of the company and is stuck with the decision of trying to decide on whether they should enter the market of fuel friendly and smaller vehicles. The price of oil has a major impact on this decision and as Nick sees the price of fuel constantly rising, the demand for fuel-efficient vehicles is certainly a growing market. Robert Schoenberger, quotes analyst Ivan Drury in his article on rising gas prices and fuel efficient cars, for clevelend.com, stating how four years ago, [fuel economy] wasn't a focus and how we were still on a trend where people wanted SUVs and large vehicles. Drury continues to say “when gasoline prices crossed the $4 line in early June of 2008, the auto industry and consumers were caught off guard. Only two months earlier, the average pump price was about $3.25, and consumers were still opting for larger cars. There were only a handful of fuel-efficient cars on the market, and they were in short supply on dealer lots.” (Schoenberger, 2012)

While the change in fuel prices has gone up, it clearly has changed the buying behaviors of fuel efficient automobiles over the past few years. Consumers are now looking into purchasing cars that get higher gas mileage per gallon but contain all the amenities of a larger less fuel efficient car. As stated by Jessica Anderson in small is the new big, automakers are packing in features such as Bluetooth and USB connections as standard items, adding more airbags for extra safety, and manufacturing vehicles with high-quality fit and finish. Jessica also quotes vice president of industry trends and insights for TrueCar, Jesse Toprak saying, "Buyers are getting the most car they have ever gotten for their money," About five years ago we started to see a change in the way people were looking at cars, but it's only been in the last couple of years that they've consciously made the decision to move towards smaller vehicles," says White in article Image is everything by Hayley Barnett. Reflecting how consumer’s attitudes are continuing to change in relation to gas prices (Anderson,2012).

Automobile makers are constantly trying to develop and market the fuel efficient vehicles to stay competitive within their markets. Consumers are looking for this change and expect the automobile market to provide fuel efficient models that they will want to purchase. Since then a few key changes have taken place. Automakers retooled old plants to make fuel-efficient cars. They've brought new, better and more efficient cars to market. And consumers have gotten used to the idea that gas prices aren't always going to stay low as stated by Robert Schoenberger in the article rising gas prices and automakers healthy supply of fuel-efficient cars (Schoenberger, 2012). Jessica Andersons’ article, small is the new big, discusses how in 2011 eight of the 20 bestselling car models were compacts or compact crossovers. Based on this information and the constant cost of rising fuel Nick can use this information to gather a strong idea on where exactly the market is heading.

Global warming is an element that automobile makers have to take into consideration as they continue to innovate. The realization, that global warming is steadily increasing has sparked a trend in fuel efficient vehicles and a “greener lifestyle”. The United States government is applying pressure to automobile makers to reduce greenhouse gases and car emission and rewarding manufactures that do. As awareness of global warming increases, consumers may look towards fuel efficient vehicles to play their part in the easing of global warming.

Patty Adams, in drive away global warming, goes into detail about vehicles that can contribute to the cause. Patty states, the hybrid has an internal combustion engine like a traditional car but an electric-powered battery. That combo gives off less greenhouse gases (the harmful toxins that trap heat in the earth's atmosphere and cause global warming) than a regular car. 2. The electric car. It runs off-what else?-electricity that it stores from being plugged into a standard outlet. It releases no tailpipe emissions and is roughly 90 percent cleaner than a gas car. 3. Low-emission vehicles (LEVs). They're gas-powered cars that are modified to release less harmful gases (super-low-emission vehicles release 90 percent less) than a regular car (Adams, 2007). As these cars continue to work their kinks out and generate a greater buzz, Nick should consider these vehicles.

Americans in general will always drive gas guzzling vehicles, whether it is trucks or SUVs, however for the majority of consumers, the cost of fuel is really dictating the type of vehicle they purchase. Consumer’s attitudes and buying preferences will certainly continue to change and the market will have to change to say stay on top of demand. As of recently consumers are getting the most for the money when it comes to smaller automobiles and expect all the amenities that they used to get in the larger vehicles. Nick Thomas’ vision for the small fuel efficient car market within ZEN motors is a step in the right direction and will keep him up to date with the market. ZEN motors old larger models vehicles is not something they should shut out however in order to grow and enter a market with consumer demand, a smaller fuel-efficient car will help ZEN motors do so. The secondary research presented provides evidence that Nick is moving in the right direction and if built correctly they will certainly tap into a growing market.

**Unit 3 AAC’s Marketing Problem and Corresponding Research Objectives Evaluation of the Value of Exploratory and Casual Research:**

*Chapter 4 pg. 113*

1. Failure to meet an objective and Opportunity. The source of Nick’s problems would be described as Opportunity based. The reason is because Nick is trying to decide on what options or paths to take to get in to the fuel-efficient vehicle market. Also trying to figure what options he has to stay competitive in this market. Nick comes across multiple problems. One of his first problems is trying to decide on what fuel or type of energy he needs to focus in on. He also, runs into another problem when he needs to decide on what type of vehicle to make- whether its hybrid or electric, combustion engine?
2. Three areas identified in The Douglas Report identify the problems facing Nick:
	1. Demand for the different basic models-
* Nick is faced with the decision to find the best and most efficient vehicle to produce that will meet market demand.
	1. Identification of market segment/s-
* Decide on whether consumers want hybrid, electric, or combustion engines
	1. Market Efficiency-
		+ Decide on whether consumers want hybrid, electric, or combustion engines
1. Due to these problems the research objective need to satisfy each would be:

Research Objective:

To gather information from a sample representative of the U.S. population to see who are likely to purchase an automobile and the how they feel about fuel efficient vehicles to understand how that will meet market demand. Measuring on a scale of 1-5 ranging from likely to buy to not likely to buy, to decide on whether consumers want hybrid, electric, or combustion engines. Based on the information gathered the researcher will be able to forecast the profit margins and the future prices of the anticipated vehicles.

*Chapter 5 pg. 145*

1. To deal with the first set of issues I would suggest Exploratory Design. Since Nick said that we really don’t know how the customer feels about certain issues because most of our information is from industrial reports or opinions of people that are in the industry, exploratory would work the best because a lot of the information is unknown. We also want to find background information, define terms, and clarify how consumers feel about certain issues, how important these issues are to them and what terms they use to discuss these issues.
2. For the second set of issues the best type of design would be Descriptive. Descriptive design tells the researcher the answers to questions like who, what, where, when, and how. It is also used when trying to find customer attitudes and preferences
3. For the last set of issues the best type of design would be Casual because you can determine the “if-then” statement. This would be the best design because Nick is wondering if he increases some of the ZEN models mpg then would the consumer want to buy it and by how much will we need to increase it. The question he wants answered is if we increase mpg then how much will we need too to make the consumer buy the new model over the current ZEN model or other better-selling foreign models.

*Chapter 8 pg.236*

**Planning Document for Focus Group:**

* *Research question to be answered-*

Ashley Roberts from advertising is concerned with how to market the new models. Zen motors has never built a vehicle this smaller and are not exactly sure how to advertise and market the cars in a way that the customers would want to perceive them. She confronts Nick with some general plans and informs him that she would like to get more market research information and customer preferences for different types of models. Using a focus group Ashley wants to answer:

* 1. Those who prefer the smaller (scooter like model) car what do they value? (ie. Excitement or entertainment in their lives)
	2. Those who prefer the larger-sized, higher mpg car what do they value? (ie. Social Recognition or harmony with the environment or some other values)

Ashley would like to find these differences so she can better alter the values that would be emphasized in the marketing and ads both visual or copy. This needs to be done properly so Ashley and the Agency can better suit the model of the car being promoted.

* *Participant profile (description of the appropriate people to participate in the study)*

The participants in the profile would be a mix of all drivers. Would we like to pull a random sample of male and female that would be representative of the whole population of car drivers. The advertising should be focused on people that have the means to purchase the car. We would also like to focus are search on geographical locations that are better suited for a smaller fuel efficient (scooter-like) vehicles. It doesn’t matter married or unmarried or kids we are targeting all. All ethnicity and religion is preferred.

* Focus group of 6 to 12 people
* All in early 30 male and female
* Focus group member should be homogeneous
* Similar Demographic or other relevant characteristics all car owners that would feel comfortable interacting and have very similar interest)
* *Recruitment protocol (exactly how participant recruitment will occur)*

We would like a focus group of 6 to 12 participants. We would go on Ashley’s marketing database and screen participants that meet are requirement and show interest in participating in our focus group. We would do this by telephone to make them aware that they qualify and solicited them to participant. We would then, after they have approved inform them the purpose of the focus group. To peak their interest in participating we would include an incentive. We would include some back up participant in case of no shows or drop outs. Agreed participant will receive a letter of confirmation including the date and time, a thank you for participating, and description of the incentive. It will also provide contact information if the participants have any questions or concerns before the focus group. The focus group will be held a week after the confirmation letter is sent. To conclude the focus group we will send all participants that completed the focus group a thank you letter showing our gratitude for their time.

*Dear\_\_\_\_\_\_\_\_\_,*

 *Thanks you for confirming to participate in ZEN Motors Focus Group. We appreciate your time and opinion. Every discussion is valuable to better understanding our customers.*

 *The Focus group will be held a week from today \_\_\_\_\_\_\_ and will begin at 9am. Parking will be provided along with some snacks and beverages.*

 *The location is \_\_\_\_\_\_\_\_\_\_\_\_ Marketing Agency. If you have any question please feel free to email us at\_\_\_\_\_\_\_\_\_\_\_\_\_ or call \_\_\_\_\_\_\_\_. We will be happy to help!*

*See you in a week,*

 *Brianna Logan and Marc Osborn*

* *Screening questions* (the questions to be posed during recruitment to ensure qualified participants are recruited)

In the beginning of the focus group participants will be asked to fill out a quick questionnaire (6 questions) that will only take a few minutes. The moderator will be the one to decide if the participant qualifies for the focus group.

Screening Questions:

Hi my name is (moderatos name) would mind filling out a quick questionnaire on some basic demographic questions. We are conducting this focus group for Zen Motors. We really appreciate your responses. At the end of the focus group you will receive a gift card for participating. It should only take around 90 min’s to complete the focus group.

1. What is your sex?
	1. Male b. Female
2. How old are you?
	1. \_\_\_\_\_\_\_\_\_\_
3. Do you own a car?
	1. Yes b. No C. I don’t have my licenses
4. Have you heard of ZEN Motors?
	1. Yes b. No
5. Would you buy a smaller fuel efficient car?
	1. Yes b. No
6. I consider myself? (One being strongly agree five being strongly disagree and three being neutral)
	1. Creative 1 2 3 4 5
	2. Intuitive 1 2 3 4 5
	3. Cautious 1 2 3 4 5
	4. Thrill Seeker 1 2 3 4 5
	5. Environmental Cautious 1 2 3 4 5

Thank you for filling this out!

* *Logistics for the focus group session*
* Proposed Location: Ashley’s Agency Conference room, Professional environment but will still be relaxed. We will provide water and other assortments of drinks, there will also be snacks.
* Number of groups: Their will be one group that will meet in the morning around 9am at Ashley’s agency. The focus group should last around 90 min’s but is subjective to go over time if needed. Parking will be provided at the building. The participants will receive name tags and will have a few minutes to interact before the focus group starts.
* Activities done before focus group: A small demographic survey will be completed by all participants to give us more insight after the process is completed.
* When focus group will be held: It will be held an exact week after the letter goes out to the participants. It will be held on a Saturday morning so no work schedules will be conflicted and Ashley’s Agency will not be conducting normal business hours.
* *Moderator's guide*

Moderator-

Hello and good morning! Thank you guys for coming out today, we really appreciate your time and opinions. My name is \_\_\_\_\_\_\_\_\_\_\_\_ and I will be conducting the focus group. The purpose of this discussion is to will be conducting the focus group. We are doing this discussion to gain insight on customer behavior and attitudes towards different types of automobiles and find the relationships between them. This discussion group will be and open discussion type of format, feel free to input your opinion any time. We would like to hear everyone’s feedback. The focus group should take around 90 minutes and at the end you will receive a $100 dollar visa gift card. Do you have any question before we get started?

(Paper are distributed for confirmation signatures confirming they want to participate in the focus group and agree that all opinions and responses are okay to interpreted or recorded)

Moderator- Let’s gets started! Let introduce ourselves and tell everyone our name and age (everyone should be around the age of early 30s)

(Wait for participants and record)

 Moderator- What type of cars do you all drive?

(Wait for answers if someone say a smaller car Probe another question Do you guys prefer smaller cars? Do you think smaller cars are more fuel efficient but still practical? Why did you pick a smaller car?)

If people answered a larger car directly ask them

Moderator- Why did you pick a larger car and would you drive a smaller car?

(Wait for answers)

Moderator- Why did you pick that car over another one and specific reasons?

(Probe some more question filling in some smaller model cars)

Moderator- Would you guy’s but a fuel efficient car; do you care about gas prices or the environment?

(Wait for answers, let them discuss a bit)

*Now that we found out personal car preferences and attitudes let’s look at association between the cars and the feelings between them. (Like thrill seeker, cautious, ect. We will do this through picture association and projection)*

Moderator- What do you guys like to do with your free time?

Moderator- what do you enjoy, what are some hobbies or pass times?

(Listen probe for some more answers, Do you like to spend it outdoors, shopping, be creative, ect?)

Moderator- Would you use a green product?

(Listen for answers probe would you buy a green car if had better gas mileage, do you believe in being eco-friendly?)

Moderator- I am now going to show you some pictures of automobiles. I would like you guys to tell me what comes to mind and your opinions? Please write down the first three things that come to mind? (Pass out a pen and paper to participants)

(Shows a picture of a black car in a bustling city with nightlife all around it, but the car is fuel efficient and smaller model)

Moderator- Write down the first three things that come to mind?

What do you guys think of the car, would you buy the car what are the first three things that you think this picture portrays?

(Listens and probes more answer)

(Shows a picture of the same car that is now white in a beach setting with waves and beach behind it, surfers and people catching sun in the background)

Moderator- Do the same thing like the last picture?

(Listens and lets them write and probes for more discussion)

What do you think? Could you see yourself in this car?

(Shows a picture of same car that is now gray in a family homes driveway with family about to get in the car)

Moderator- Now what do you think about this picture?

(Listens and lets them write down their answers)

Does this look like a family car? Do you think a family could use this car practically? Does the car look safe ect?

Moderator- What did you think about those pictures?

Moderator- Could you see yourselves in any of those settings? (Projective)

(Listens and discuss)

Moderator- Well thank you guys for participating we really do appreciate your opinions. The discussion held today will be very useful! I hope you all have a fantastic day and on the way out don’t forget to grab your gift card from the front desk. Thank you again!

Focus Group Schedule

|  |  |
| --- | --- |
| Introduction Q/A? | 10min  |
| Car background and opinions | 30min  |
| Picture Association and Projection into pictures  | 40min  |
| Closing note and last minute discussion | 10min |

**Unit 4 Descriptive Research, Survey Design and measurements:**

*Chapter 9 pg. 271*

1. If it is a mail survey:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pros: | Cons: | Special Considerations |
| 1. | Low cost | Non-Response Rate | Once very popular, now rarely used |
| 2. | Self-administered | Not returned or returned to late | Less people are using the mail, more on the internet  |
| 3. | No interview, training, monitor, and compensation | Self-Selection Bias | Understanding of representation |
| 4. | Mail List ready available | May not be representative  |  |
| 5. | Specific groups of individual’s | Self-Selection Respondents (People more interested with the topic)  |  |
| 6. | Targeted Responses | Slow Response of survey |  |
| 7. | Power Effective | Certain question may not be answered |  |
| 8. | Efficient according to ASA |  |  |

2. If it is a telephone survey:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pros: | Cons: | Special Consideration |
|  | Fast Turnaround | Restricted to telephone communication | Long distance calling is not a problem |
|  | Good quality control | People may not pick up |  |
|  | Reasonable cost, cost saver | Human interview error |  |
|  | Selection of target market |  |  |
|  | Interviews can study the questioner  |  |  |

3. Three data collection methods that is not likely to achieve the overriding objective:

a) Drop-Off Survey will not work for the objective because they are generally not appropriate for large-scale national survey, which is the type of survey we are trying to do.

b) As stated in the book Group Administered Surveys will not work for achieving are objective because group administer survey are good for pre-test or pilot test neither of which we are trying to do.

c) The reason why Mail Surveys will not likely to achieve the overriding objective because response rate is slow and low, and the biased of self-selection.

4. The difference between a home survey and online is that at home surveys the respondent’s complete the survey on their own while an online method uses technology as primary role in the interview work.

 a) In Home (Self-Administered)

-Relevant Pros to a Self-Administer survey consist of three important advantages. They are reduced cost, respondent control, and no interviewer-evaluation apprehension.

-Relevant Cons to a Self-Administered survey would be respondent control, lack of monitoring, and high questionnaire requirements.

 b) Online Method (Computer Administered Survey)

-Relevant Pros to a Computer Administered survey consist of speed, error-free interviews, use of picture and graphics, able to capture data in real time, and less treating to some respondent’s.

-Relevant Cons to a Computer Administered survey would be a technical skill may be required and setup cost can be high.

*Chapter 10 pg. 301*

Draft Questions that could be used:

1. What type of features are you looking for in a new car? ( list 3 features)(Nominal)
2. How frequently do you purchase scheduled maintenance? (Ratio)
3. What type of fuel do you purchase? (nominal)
4. Would you prefer a smaller car or larger car? (nominal)
5. Where do you search to find out news or media? (List) (Nominal)
6. Do you listen to the radio while driving? (Nominal)
7. Do you subscribe to a newspaper or magazine? (Nominal)
8. Do you have basic cable or cable? (Nominal)
9. Would you choose a fuel-efficient car over an economy car? (Nominal)
10. Do you believe you could help with global warming with a fuel-efficient car? (Nominal)
11. Why did you buy your current car? What features sold you on it? (Ordinal)
12. Is your car over 10 years? (Nominal)
13. Does gas price change your driving habits?
14. If gas was cheaper would you drive more often? (Nominal)
15. What is the main use of your car? (Nominal)
16. How much are you willing to spend on your car? (Internal)

*Chapter 11 pg. 335*

Dear X,

 Hello, my name is Brianna Logan and Marc Osborn from Logan and Osborn Research Firm. We’re conducting an online market survey for a major automobile provider. The survey will take place online. The market of interest that we decided to survey is all automobile owners (practically all adults qualify). This is an anonymous survey. We would like to ask you a few questions on your thoughts and preferences about automobiles and fuel-efficient vehicles. Please click on the link below and take a few minutes to fill out the survey. Your answer to the survey provides us with valuable information to the advancement of the automobile industry. To opt out of future surveys see the link below.

1. As a consumer is global warming a consideration when you’re purchasing a vehicle?
	1. Yes b. No
2. Do you believe that fuel prices will stay high or increase for several years to come?
	1. Yes b. No c. Maybe
3. If so do would you consider buying a fuel-efficient car?
	1. Yes b. No c. Maybe
4. Would you use alternative fuel-models?
	1. Yes b. No c. Maybe
5. Out of all these high mpg automobiles which one would you purchase?
	1. Very Small Autos (1 seat) very high mpg
	2. Small Autos (2 seat) semi high mpg
	3. Hybrid Compact with moderately high
6. Out of the vehicles above which do you feel the safest driving?
	1. Very Small Autos (1 seat) very high mpg
	2. Small Autos (2 seat) semi high mpg
	3. Hybrid Compact with moderately high
7. Would you consider purchasing a car with none or little trunk space but is fuel-efficient?
	1. Yes b. No c. Maybe
8. As a consumer which car would you choose out of these various combinations of trunk space?
	1. Very Small Autos (1 seat) very high mpg, no trunk space
	2. Small Autos (2 seat) semi high mpg, very limited trunk space
	3. Hybrid Compact with moderately high, compact trunk space
9. Out of these hybrids which one would you prefer?
	1. Synthetic fuel hybrid b. Electric-fuel models
10. What source of media do you use? (Circle all that apply)
	1. Reading a newspaper
	2. Watching local television news
	3. Listening to FM radio
	4. Reading magazine
11. If you selected reading the newspaper which type do you prefer? (Ignore if you didn’t choose)
	1. Local b. State c. National
12. If you selected watching local TV news, when do you watch it? (Ignore if you didn’t choose)
	1. 6am b. 8am c. 6pm d. 10pm
13. If you selected listening to FM radio which do you prefer listening to? (Select all that apply, Ignore if you didn’t choose)
	1. Talk b. easy listening c. country d. Top 40 e. oldies f. Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. If you selected reading magazine which type do you prefer? (Select all that apply, Ignore if you didn’t choose)
	1. General b. business c. science d. sports e. gossip f. Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. Are you male or female?
	1. Male b. Female
16. What is your age?
	1. Under 18 b. 18-26 c. 27-36 d. 36- 48 e. 48- 59 f. over 60
17. What is your marital status?
	1. Single, never married b. Married c. Separated d. Divorced e. Widowed
18. What is your highest level of education?
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. What is your total household income?
20. Less than $10,000
21. $10,000 to $19,999
22. $20,000 to $29,999
23. $30,000 to $39,999
24. $40,000 to $49,999
25. $50,000 to $59,999
26. $60,000 to $69,999
27. $70,000 to $79,999
28. $80,000 to $89,999
29. $90,000 to $99,999
30. $100,000 to $149,999
31. $150,000 or more

Thank you for completing our survey you answers is greatly appreciated!

 **Coding the survey:**

1. As a consumer is global warming a consideration when you’re purchasing a vehicle?
	1. Yes (1) b. No (0)
2. Do you believe that fuel prices will stay high or increase for several years to come?
	1. Yes (1) b. No (0) c. Maybe (2)
3. If so do would you consider buying a fuel-efficient car?
	1. Yes (1) b. No (0) c. Maybe (2)
4. Would you use alternative fuel-models?
	1. Yes (1) b. No (0) c. Maybe (2)
5. Out of all these high mpg automobiles which one would you purchase?
	1. Very Small Autos (1 seat) very high mpg (1)
	2. Small Autos (2 seat) semi high mpg (2)
	3. Hybrid Compact with moderately high (3)
6. Out of the vehicles above which do you feel the safest driving?
	1. Very Small Autos (1 seat) very high mpg (1)
	2. Small Autos (2 seat) semi high mpg (2)
	3. Hybrid Compact with moderately high (3)
7. Would you consider purchasing a car with none or little trunk space but is fuel-efficient?
	1. Yes (1) b. No (0) c. Maybe (2)
8. As a consumer which car would you choose out of these various combinations of trunk space?
	1. Very Small Autos (1 seat) very high mpg, no trunk space (1)
	2. Small Autos (2 seat) semi high mpg, very limited trunk space (2)
	3. Hybrid Compact with moderately high, compact trunk space (3)
9. Out of these hybrids which one would you prefer?
	1. Synthetic fuel hybrid (1) b. Electric-fuel models (2)
10. What source of media do you use? (Select all that apply)
	1. Reading a newspaper (0,1)
	2. Watching local television news (0,1)
	3. Listening to FM radio (0,1)
	4. Reading magazine (0,1)
11. If you selected reading the newspaper which type do you prefer? (Select all that apply, Ignore if you didn’t choose)
	1. Local (0,1) b. State (0,1) c. National (0,1)
12. If you selected watching local TV news, when do you watch it? (Select all that apply, Ignore if you didn’t choose)
	1. 6am (0,1) b. 8am (0,1) c. 6pm (0,1) d. 10pm(0,1)
13. If you selected listening to FM radio which does you prefer listening to? (Select all that apply, Ignore if you didn’t choose)
	1. Talk (0,1) b. easy listening (0,1) c. country (0,1) d. Top 40 (0,1) e. oldies (0,1) f. Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (No pre-code)
14. If you selected reading magazine which type do you prefer? (Select all that apply, Ignore if you didn’t choose)
	1. General (0,1) b. business (0,1) c. science (0,1) d. sports (0,1) e. gossip (0,1) f. Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (No pre-code)
15. Are you male or female?
	1. Male (1) b. Female (2)
16. What is your age?
	1. Under 18 (1) b. 18-26 (2) c. 27-36 (3) d. 36- 48 (4) e. 48- 59 (5) f. over 60 (6)
17. What is your marital status?
	1. Single, never married (1) b. Married (2) c. Separated (3) d. Divorced (4) e. Widowed (5)
18. What is your highest level of education?
	1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (No pre-code for fill in)
19. What is your total household income?
20. Less than $10,000 (1)
21. $10,000 to $19,999 (2)
22. $20,000 to $29,999 (3)
23. $30,000 to $39,999 (4)
24. $40,000 to $49,999 (5)
25. $50,000 to $59,999 (6)
26. $60,000 to $69,999 (7)
27. $70,000 to $79,999 (8)
28. $80,000 to $89,999 (9)
29. $90,000 to $99,999 (10)
30. $100,000 to $149,999 (11)
31. $150,000 or more (12)

**Unit 5 Sampling Consideration for AAC:**

*Chapter 12 pg.371*

1. All households in the United States, including car owner and non-car owners. We decided to do this because the new alternative fuel model has a 5-year horizon till completion. It is also possible that the new population of new car owners might be more attracted to the new type of fuel model we are offering. This way we can account for a more accurate sample by including non-car drivers. There are 111 million units of United States households.
2. If a probability method is to be used, what would be the reasonable sample frame:
	1. Telephone Survey- We could use Plus-one dialing procedure to try and target most United States households
	2. Mail Survey-We could either use systematic sampling, take the telephone book and do the systematic sampling steps or we could use cluster sampling and divide the population
	3. An Online Survey- for online we could use convince/opportunity/availability sampling
3. There are some problems associated with drawling a simple random sample of American households regardless of the survey methods. One problem deals with the representation of the population especially if the sampling method deals with starting at a random point. Also with all surveys you have the chance of sample frame error. Some errors may occur if people are not listed on the telephone directory, list you’re using, if they do not contain certain members of the population you’re targeting, ect. If these members are not included in the population they have no chance of being selected into the sample, creating a sampling error.
4. If random digital dialing was used for the sample plan some advantage disadvantages would be:

|  |  |  |
| --- | --- | --- |
|  | Advantages: | Disadvantages:  |
| 1. | Computer handles data set and quickly labels | Bias introduced by non-responders |
| 2. | Can draw a huge population in a matter of minutes  | Incomplete or inaccurate  |
| 3. | Generates a set of random numbers | Current complete listing is sometimes difficult to attain  |
| 4. | Can match random number with the unique designation of the individual in the data set to select or pull the sample  | Can contain sample frame error |
| 5. | Guarantees that every member of the population has equal chance of being selected |  |

1. Using a company such as Knowledge Network could be a good idea for AAC. Some advantages with using this company might be the vast amount of individuals they can sample. The can choose sample parameter such geographic locations, income, education, and family characteristics. Company will do the work for you and provide results. The biggest advantage would be the high response rate that ensures the final sample closely represents the researchers target population. Some disadvantages would be the cost associated with using a company to create your panel or their database might not be what AAC is looking for.

*Chapter 13 pg. 399*

|  |  |  |
| --- | --- | --- |
|  | Expected Cost | Sample Error |
| 20,000 | $201,638.31 | ±.69% |
| 10,000 | $99,958.35 | ±.98% |
| 5,000 | $48,9079.59 | ±1.4% |
| 2,500 | $24,000.00 | ±2.0% |
| 1,000 | $9,989.60 | ±3.1% |
| 500 | $4,958.68 | ±4.4% |

**Unit 6: Data Collections, Analysis, and Interpretation (Chapter 15-19)**

Chapter 15 pg. 465

The data from SPSS gives great insight into the respondent’s thoughts, preferences, and attitudes when it comes to vehicle and fuel efficient cars. The pie chart below (listed in percent’s) shows the size of respondent’s home town or city. The chart explains how about half of the respondents live in a very highly populated area. Fuel efficient vehicles are used best when they are going under 40 miles per hour and with half of the respondents living in metropolitan or bigger city areas the idea to tap into this market could work. The data shows how in highly populated areas fuel efficient vehicles could certainly be a market to enter because traffic tends to be an issue in larger cities.

 Continuing to interpret the data we looked at automobile ownership profile and concluded that when it came down to price, vehicle type, and commuting; economy (45.5%) cars (43.2%) and single occupancy (58.8%) got the most responses. The significance of this shows how people tend to not travel with many other passengers in a car and prefer economy vehicles in terms of price. This gives Nick concrete evidence into the thought of trying to generate smaller fuel efficient vehicles. Seeing how the correlation between population of city size and vehicle preference and price, we were asked to determine how respondents feel about global warming and the use of gasoline. The tables show that about 40% of the respondents believe that gasoline emissions contribute to global warming and believe that Americans use too much gasoline. When questioned about how hybrid autos use alternative fuels will reduce fuel emissions, again 40% very strongly agree. However, when it came down to the question fuels will slow down global warming; the responses were very evenly distributed. When the questioned about the size of new automobiles are likely to have the most positive effect the data showed that the Runabout Sport 2 seat hybrid was most desirable. The chart listed below displays the respondent’s preferences.

The SPSS data for what type of hybrid automobile they are likely to purchase in the next 3 years is standard size synthetic fuel. The chart shows how from 20 to about 60 percent of the respondents would consider buying the vehicle in the next three years.

| **Probability of buying a standard size synthetic fuel auto within 3 years** |
| --- |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 0 | 53 | 5.3 | 5.3 | 5.3 |
| 10 | 75 | 7.5 | 7.5 | 12.8 |
| 20 | 123 | 12.3 | 12.3 | 25.1 |
| 30 | 174 | 17.4 | 17.4 | 42.5 |
| 40 | 163 | 16.3 | 16.3 | 58.8 |
| 50 | 154 | 15.4 | 15.4 | 74.2 |
| 60 | 129 | 12.9 | 12.9 | 87.1 |
| 70 | 77 | 7.7 | 7.7 | 94.8 |
| 80 | 35 | 3.5 | 3.5 | 98.3 |
| 90 | 11 | 1.1 | 1.1 | 99.4 |
| 100 | 6 | .6 | .6 | 100.0 |
| Total | 1000 | 100.0 | 100.0 |  |

Chapter 16 pg. 500

1. The percentage of the American public that own standard, luxury, economy, and no vehicles is:
* Standard 27.1%
* Luxury 17.4%
* Economy 45.5%
* No Vehicle 10%

Our results concluded that most of the American public owns an Economy Vehicle while luxury and standard together equaled the other half. Only ten percent of the public did not own a vehicle at all. Most American households are buying Economy Vehicles.

1. Of the American public around 39% Very Strongly agree that Hybrid Vehicles will reduce fuel emission. Most of the public agreed that fuel emissions will be reduced, while only a small percent disagreed. Only 12% didn’t have an opinion and neither disagreed or agreed. A large percent of the population 76% agreed or strongly agreed that Hybrid autos that use alternative fuels will keep gas prices down. Most of the public did not agree that Hybrid autos that use alternative fuels will slow down global warming, around 20% strongly agreed. The test show that the American public does believe that Hybrids will help the environment and keep fuel prices down, but the whole population is not convinced yet or hasn’t established an opinion.
2. Some of Advanced automobiles senior executives are still not convinced about the change at Zen. They still believe that Americans want the larger and more powerful automobile. They decided on some probability of the American public will want to buy a hybrid or a synthetic fuel model to see if the American public will buy these types of cars in the next three years. Despite global warming and gasoline price increases they still want to find out some more research on whether or not it would be profitable. Our test concluded the following: (all automobiles would be purchased in a 3 year horizon)

|  |  |  |
| --- | --- | --- |
| Hypotheses  | Probability | Test Results |
| Probability of Buying a very Small Hybrid (1 seat) | 5% | This hypothesis was not supported at the 95% level of confidence by the findings of the survey. The 95% of the confidence interval determined our mean was 13.78 and Standard Deviation from the mean was 13.78 |
| Probability of Buying a Small Hybrid (2 seat) | 5% | This hypothesis was not supported at the 95% level of confidence by the findings of the survey. The 95% of the confidence interval determined our mean was 20.59 and Standard Deviation from the mean was 19.285 |
| Probability of Buying an standard size Hybrid | 15% | This hypothesis was not supported at the 95% level of confidence by the findings of the survey. The 95% of the confidence interval determined our mean was 30.12 and Standard Deviation from the mean was 21.20 |
| Probability of Buying a standard size synthetic fuel auto | 15% | This hypothesis was not supported at the 95% level of confidence by the findings of the survey. The 95% of the confidence interval determined our mean was 40.17 and Standard Deviation from the mean was 21.46 |
| Probability of Buying a standard size electric model | 20% | This hypothesis was not supported at the 95% level of confidence by the findings of the survey. The 95% of the confidence interval determined our mean was 34.64 and Standard Deviation from the mean was 22.09 |

*Chapter 17 pg. 531*

To better define our market strategy Nick wants to identify the target market for each hybrid automobile type. The survey included a number of commonly used demographic factors such as Gender, Marital Status, education category, income category, and hometown size. We ran an Independent Sample t-Test and one way ANOVA with Post Hoc test to find the preferred market segments. The target description for each of the five possible hybrid models is:

1. Super Cycle one-seat: 120 mpg city, the computed *t* value was 3.742 for gender; the significance level indicates little support for the hypothesis that the means are equal. The test concludes that males prefer this type of vehicle over females when it pertains to gender. Nick should take into consideration that the number of individuals male or female is not equal. Unmarried individuals prefer this model over married individuals. Within 95% confidence interval individuals around the age of 21 computed mean was 4.94 which was significantly higher than the rest of the age categories. We can conclude that consumers under the age of 50 would prefer this model. Part of the population with an education level between 9-14 and an income level of 20.0 would prefer this vehicle. Results concluded that individuals with a higher income would not prefer this hybrid the mean for an income level of 150,000 was 1.80 while a 20,000 income level was 4.25. Lastly individual with a home town size of 1500 would prefer to purchase a Super Cycle 1 seat hybrid.
* We can target the Super Cycle 1 seat hybrid to males around the age of 21 that have at least 9-14 years of education and income of 20,000 that grew up in a larger town or city.
1. Runabout Sport two-seat: 90 mpg city, 80 mpg highway

For the next model, a Runabout Sport two-seat we can determine that either male or females would prefer this model the difference in the two means is very small but females might prefer this model a little more. The significance level indicates little support for the hypothesis that the means are equal. The means were 4.24 for males and 4.29 for females. We can conclude that the population of unmarried individuals between the ages of 30 and 21 and with an education level of 9 years prefers this hybrid within a 95% confidence interval.

* Nick should use a target market of males or females that are educated up to 9 year to about 14 years that are younger and have an income level around 20,000 and from a city or larger rural area.
1. Runabout with luggage two-seat: 80 mpg city, 70 mpg highway

Out of 1000 males (505) and females (495) we can determine that males are more likely to prefer a runabout with luggage two-seat with the male’s mean of 3.85 and female’s mean of 3.72. Nick should take in consideration that there were more males then females. Married individuals would prefer this car over unmarried individuals. The findings have discover a meaningful difference with individuals around the age of 30 with a group mean of 4.67 which is on the positive side of the preference scale and higher than the other group means. Individuals with an education level of 14 to 16 years had the highest group mean over individuals with little education. An income level of 62.5 to 37.5 have the highest group mean and would prefer this hybrid. Larger hometown and cities have a significantly higher group mean.

* Nicks target market for a Runabout with luggage 2 seat hybrid would be a male around the age of 30 that is married, educated, and has a larger hometown or city.
1. Economy Four-Seat: 70 mpg city, 60 mpg highway

We can conclude that males or females would prefer this car, the mean of males higher than females. Males had a group mean of 3.54 and females had a group mean of 3.45 the significance level indicates that there is support for the hypothesis. We also see that married individuals prefer this hybrid over unmarried individuals. The test results determine that the older generation prefers this model with 4.58 group mean which is higher than the other group means on the preference scale and quite higher than the younger generation (21 and 30) that have a group mean of 1.82 and 2.48. Out of all the hybrid consumers with an education level higher than 16 would prefer this model with the mean grouping of 4.83 and 4.60. Lastly we can conclude the individuals who would prefer this Economy hybrid model have a salary between 100- 150 thousand dollars and grew up in a mid-size hometown or city.

* Nick should market this type of hybrid to individuals that are older generation and are married. They are highly educated with a well-paying salary that grew up in smaller but mid-sized hometowns that are either male or female but mostly male.

*Chapter 18 pg. 567*

1. After looking at each unique demographic profile we recommend the following media vehicles for radio, newspaper, television, and magazines.
2. Gender Recommendations for favorite television show for male and female together was movies and mini-series with 19.7% preferring it over other show types. Females and males both had the highest percent in this category. For favorite radio genre for both male and females had the highest total percent in easy listening over other genres like classic pop and country. Most of the population male and female read magazines that were music and entertainment oriented with 28% (total) preferring that type of magazine. Around 249 males and females preferred to read their local news in their local newspaper over other categories like sports.
3. Marital Status Recommendations for favorite television shows differed between married and unmarried. 18.7% of unmarried individuals preferred comedy or movies/mini-series. While married people would rather watch just movies and mini-series. The second highest percent was comedy which is similar to unmarried individuals. In total married and unmarried people enjoyed listening to easy listening then jazz and blues was there next highest percent (19.1%). Marital status favorite magazine type in total was 28.1% music and entertainment but family and parenting was also favored highly too. Similar to gender married and unmarried individuals favored local news and sports in their local newspaper, around 24.9% for local news and 21.3% sports.
4. Individuals with different age categories prefer different media outlets. Middle aged individuals preferred comedy around 24.6%, while younger generation favored science-fiction around 38%. Most people around the age of 21 didn’t prefer News or Documentary. Individuals around the age of 21 preferred Pop and Chart. While the highest total percentage was 22.9% prefer easy listening. Individuals under the age of 20 liked to read magazines that were about music and entertainment while individuals around the age of 50 to 75 would rather read a magazine on business and money. In total most of the population regardless of age (28.1%) favored music and entertainment. The local newspaper preferred local news over other types.
5. After conducting some research we found out those individuals with an income level higher than 100k preferred television shows that pertain to comedy and drama around 19.1% and 15.6%. While individual with a lower income level liked comedy as well and movies and mini-series around 41% preferred mini-series and movies. Individuals that make more money would rather listen to easy listening and smooth jazz, income level around 150k 41.4% preferred easy listening while 27.1% like smooth jazz. Regardless of income level most individuals preferred music and entertainment around 28.1%. In total the population preferred to read about their local news in their local newspaper. People with a lower income favored sports and entertainment.
6. We concluded for home town and city that most of the population preferred comedy around 19.7%. Regardless of hometown size most people favored a musical genre of easy listening of 22.9%. The favorite magazine type was music and entertainment around 28.1%. In their local newspaper all of the population preferred local news 24.9% and sports 21.3%.
7. The Super Cycle One-Seater population would describe their lifestyle as a novelist because it approaches .788 with our rule of thumb that indicates a strong association. The lifestyle of a novelist would be more likely to purchase this type of hybrid. Individuals that would tend to purchase a Runabout Sport Two-Seat 90mpg, 80mpg would be people that associate their lifestyle with that of an innovator the data shows a strong correlation and statistical significance of .731. The Runabout with Luggage 2 Seater would tend to categorize themselves as a trend seater. The people who would purchase the Runabout with Luggage are individuals that want to stand out and be the first of their friends to own this type of hybrid. The Test showed a significance of .713. Those individuals that want to associate themselves with the hybrid model, Economy Four-Seat 70 mpg city, 60 mpg highway chose a lifestyle choice of Forerunner (.731 correlation). The people that would purchase this car are adventurous and the first two stand out from the pack. The last model of hybrid is the Standard Four-Seater 60mpg city and 50 mpg highway. People who categorize themselves with purchasing model like this are generally mainstreams. They like the classic feel of the standard with the amenities of a hybrid.

Executive Summary

Nick Thomas CEO for ZEN Motors, subdivision, Advanced Automobile Concepts (ACC) is building a case study to determine how to counter balance the loss of market share to other competitors. ZEN motors created Advanced Automobile Concepts (ACC) in hopes of reviving the aging automobile brands by creating completely new models that are up to date with today’s changing car market or by reengineering existing models. The case project discusses ways for Nick Thomas to establish the best way to go about developing and generating the right information that will help him establish the ultimate solution and answer to have ZEN motors once again become competitive and regain the loss of market share.

Nick Thomas of Advanced Automobile Concepts will use marketing research to begin his case project. By identifying market opportunities and problems, generating, refining and evaluating potential marketing actions and monitoring market performance it will generate the information needed.

SWOT analysis, market demand, and product/service-use studies are ways that Nick will use to identify market opportunities and problems. In order to generate, refine and evaluate potential marketing actions ACC will have to use concept tests of proposed new products or services and new product prototype testing. ACC will also use Image analysis and customer- satisfaction studies to monitor marketing performance.

Descriptive research design will answer the who, what, when, where, and how questions to the type of research design Nick should use. Using this type of research design will find consumer attitudes, intentions and behaviors as well as the competitors and their strategies.

 Collecting primary data for ACC will find exactly what the problem is at hand and specifically find what ACC is looking for; consumers attitudes toward future oil prices and global warming. Asking specific questions to consumers about fuel price, alternative fuel, global warming and where they see oil prices in the future will provide the information to better understand consumer attitudes about those topics.

The sample plan Nick and ACC should use is American households as units that already drive or will be driving in the near future. Nick should also use a sample plan of all automobile owners.

Establishing Secondary Information Relevant for AAC’s Marketing Situation is an important piece to the information needed for Advanced Automobile Concepts. Seeking out qualitative data will find out which fuel efficient cars area selling well and which alternative fuels are the closest to being developed.

Internal and external secondary sources such as sales and marketing reports and accounting records as well as library sources and the federal government will find out which fuels are being developed and are the ideal secondary sources for Nick.

The data bases and records generated the information that consumers are feeling the effects of gas prices and in response are starting to purchase vehicles that tend to be fuel efficient. The detailed information provide in the databases generate the information needed to answer the questions to the issues AAC is facing.

AAC’s Marketing Problem and Corresponding Research Objectives; Evaluation of the Value of Exploratory and Casual Designs.

Properly identifying the problem is a crucial part to getting to the solution. Nick and ACC are faced with opportunity based problem in terms of trying to decide on what options or paths to take to get into the fuel efficient market. Faced with two problems, Nick will decide on which fuel or type of energy he needs to focus in on and he must decide on what type of vehicle to make (hybrid, electric, combustion engine).

Three areas where Nick is facing problems are demand for the different basic models, Identification of market segments and market efficiency. Finding the most efficient vehicle to produce that will meet market demand identifies the demand for the different basic models. With identification of market segments, he must decide on whether consumers want hybrid, electric or combustion engines and the same goes for market efficiency.

The research objective will help the researcher establish and answer the problems that Advanced Automobile Concepts is facing. Gathering information from a sample representative of the U.S. population to see who are likely to purchase an automobile and how they feel about fuel efficient vehicles to understand how that will meet market demand. Measuring on a scale of 1-5 ranging from likely to buy to not likely to buy, to decide on whether consumers want hybrid, electric, or combustion engines. Thus, forecasting the future prices of the anticipated vehicles and profit margins.

We suggested exploratory design to deal with the first set of issues. Exploratory design we believe would work best because a lot of the information is unknown. Finding the background information, defining terms, clarifying how consumers feel about certain issues and how important these issues are to them is also something we would suggest.

The research design that we would suggest to determine: which attitudes are strongly associated with purchase intentions of different auto models and will these relationships vary around the country and will they exist for definable market segments would be descriptive. Descriptive design tells the researcher the answers to questions like who, what, where, when, and how. It is also used when trying to find customer attitudes and preferences.

The research design we suggested for the last question dealing with determining how much of an increase in mpg will be needed for consumers to have equal preference for ZEN models as for those outselling ZEN today is casual. Casual can determine the “if-then” statement and Nick Thomas is wondering if he increases some of the ZEN models mpg then would the consumer want to buy it and by how much will we need to increase it.

With concern on how to market the vehicles they used the focus group to answer the research question:

• Those who prefer the smaller (scooter like model) car what do they value? (ie. Excitement or entertainment in their lives)

• Those who prefer the larger-sized, higher mpg car what do they value? (ie. Social Recognition or harmony with the environment or some other values)

Finding these differences are important so she can better alter the values that would be emphasized in the marketing and ads both visual or copy, better suiting the model of the car being promoted.

The participant profile for the focus group in the profile would be a mix of all drivers. Would we like to pull a random sample of male and female that would be representative of the whole population of car drivers. We would also like to focus are search on geographical locations that are better suited for a smaller fuel efficient (scooter-like) vehicles.

• Focus group of 6 to 12 people

• All in early 30 male and female

• Focus group member should be homogeneous

• Similar Demographic or other relevant characteristics all car owners that would feel comfortable interacting and have very similar interest)

The recruitment protocol (exactly how participant recruitment will occur) would like a focus group of 6 to 12 participants. We would go on a marketing database and screen participants that meet are requirements and show interest in participating in our focus group. We would do this by telephone to make them aware that they qualify and solicited them to participant. We would then, after they have approved, inform them the purpose of the focus group.

Screening questions are to be posed during recruitment to ensure qualified participants are requited. Asking group participants to fill out a quick questionnaire,(6 questions) that will be the decide if the participant qualifies for the focus group. An example question would be: have you heard of ZEN motors? Would you buy a smaller fuel efficient car?

Logistics for the focus group session consist of a proposed location: Ashley’s Agency Conference room and will meet in the morning around 9am. It is projected to last around 90mins and on a Saturday to prevent work conflicts. The moderator’s guide provides the exact script for running the focus group and poses the specific questions to be answered.

Next, came descriptive research, survey design and measurements. Mail and telephone surveys we had to come up with consisted of pros, cons and special considerations with achieving the overriding objective survey. Pros rom the mail and telephone survey are low cost, targeted responses, fast turnaround and reasonable cost. Some cons are non-response rate, may not be representative and restricted telephone communication. Special considerations for the two are less people are using the mail and long distance calling is not a problem.

Three data collection methods that are not likely to achieve the overriding objective are drop off survey, group administered survey and mall intercept survey. Drop-Off surveys do not match the objective because they are generally not appropriate for large scale surveys (which we are conducting). Group administered surveys will not work for the objective because they are strong for pre or pilot tests. The last reason the mail survey will not likely work is because response rate is slow and low and the biased of selection.

For AAC we had to compare the use of in-home method to the use of an online method. A couple of the pros for In Home (self-administered) consist of reduced cost, respondent control and no interviewer evaluation apprehension. As for cons, it is concluded that respondent control lack of monitoring and high questionnaire requirements.

The on-line method (Computer Administered Survey) pros are speed, error free interviews, the use of pictures and graphs, and to capture data in real time. Cons to a computer administered survey would be: a technical skill may be required and setup cost can be high.

 Drafting questions that will be used in the online survey needed to be intuitive and ease for respondents to relate to. When we determined the questions, it was also needed to describe the scale of the questions as well. An example question would be what type of features are you looking for in a new car? (List 3 features) (Nominal)

The survey design is a big part in the case project and coding the survey is very valuable. The design questionnaire we generated is suitable for administration to an online panel for adult consumers. Once the questions were generated the code sheet is provided to understand variable numbers and response codes for all variables contained in the questionnaire.

AAC is continuing the research process and is now confronted with the sample selection. The specification of the population definition includes all households in the United States, including car owners and non-car owners. Looking at some practical problems associated with drawing a simple random sample, we see that the representation of the population especially if the sampling method deals with starting at a random point. Also, with all surveys you have the chance of sample frame error. Some errors may occur if people are not listed on the telephone directory, list you’re using, if they do not contain certain members of the population you’re targeting. Concluding, that it could be a good idea for AAC to use a probability online sample.

Calculating the possible sample sizes, the associated expected cost of the panel sample and the sample error. The work is shown to make clear and precise conclusions to the expected cost of the panel sample and the sample error.

The data collection, analysis and interpretation for the type of demographic of the sample are the size of the home town or city for each respondent. Automobile ownership profile of respondents in the survey showed that economy, cars and single occupancy got the most responses. Looking at how the respondents feel about global warming and the use of gasoline, about 40 percent of the respondents believe that global warming is affected by gasoline and that Americans consumer to much gas.

 The runabout sport 2 seat is the most desirable new automobile that will have the most positive effects.

The SPSS data for what type of hybrid automobile they are likely to purchase in the next 3 years is standard size synthetic fuel. SPSS generated how from 20 to about 60 percent of the respondents would consider buying the vehicle in the next three years.Interpretation of the data for the percentage of Americans that own a standard, luxury, economy, and no vehicle showed again how economy vehicles are what Americans prefer to drive today. At 39% the American public very strongly agreed that hybrid vehicles will reduce fuel emissions. A very large percent of Americans believe that hybrid autos that use alternative fuels will keep gas prices down however most of the public did not agree that alternative fuels will slow global warming down.

Even with executives at ZEN motors doubting the idea that people will want smaller vehicles the probability of purchasing a hybrid, synthetic, or electric vehicle in the next three years is relatively low however, with the right vehicle or a high spike in fuel cost that probability could change.

To better define our market strategy Nick wants to identify the target market for each hybrid automobile type. Using a number of commonly used demographics for each target description of the five possible hybrid models, we ran an independent sample t test and a one way ANOVA with post hoc test to find the preferred market segments.

The super cycle one seat: 120 mpg city had a t-value of 3.742 for gender concluding that males prefer this vehicle of females. We can target the Super Cycle 1 seat hybrid to males around the age of 21 that have at least 9-14 years of education and income of 20,000 that grew up in a larger town or city.

 For Runabout Sport two-seat: 90 mpg city, 80 mpg highway: Nick should use a target market of males or females that are educated up to 9 year to about 14 years that are younger and have an income level around 20,000 and from a city or larger rural area.

Runabout with luggage two-seat: 80 mpg city, 70 mpg highway: Nicks target market for a Runabout with luggage 2 seat hybrid would be a male around the age of 30 that is married, educated, and has a larger hometown or city.

Economy Four-Seat: 70 mpg city, 60 mpg highway: Nick should market this type of hybrid to individuals that are older generation and are married. They are highly educated with a well-paying salary that grew up in smaller but mid-sized hometowns that are either male or female but mostly male.

After looking at each unique demographic profile we recommend the following media vehicles for radio, newspaper, television, and magazines. The unique demographics for marital status, income level, age, and size of city or home location and how they relate to the media vehicles.

For Nick Thomas and ZEN motors the research and data conducted and generated provides them with the information to decide on whether or not they want to consider creating new models that are up to date and reengineering existing models.

Discussion:

Based on Logan and Osborn’s analysis and interpretations we conclude that the research is very conducive to the work that Nick Thomas and ZEN motors are trying to create. The research shows that placing the fuel efficient vehicles in certain locations around the right age group and other demographics will generate a buzz for ZEN motors and Nick Thomas. Issues that they are facing involve Americans and how they will continue to drive larger vehicles no matter what of the price of gas. It also shows how people do believe that global warming is a growing issue however they might not necessarily want to personal make that change by purchasing a fuel efficient vehicle.

Some of the limitations that face ACC are that they only use certain demographics. Reaching out to all ages is a possible option considering the future drivers are the ones that will ultimately be face with extremely high gas prices and small vehicles in return.

Recommendation:

Logan and Osborn believe that AAC should go ahead and do both, create completely new models that are up to date with today’s changing car market and by reengineering existing models. The reason we feel this is the right decision is because this is the way the car market is heading. In order to stay competitive in the industry, innovation is a very important for AAC. Even at times when the data showed some rejection levels, the survey results concluded that people believe that gas prices will rise. As the price of gas increases this makes a justification on why economy cars and fuel efficient vehicles are the way of the future. The generation of new models will help AAC gain back the competitive edge they once had and if built correctly gain a solid start into the future that is the fuel efficient vehicles.

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