

Marketing Analytics Case Study IN BOATING INDUSTRY



MScA 32003 - Marketing Analysis



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Meet Our Team.



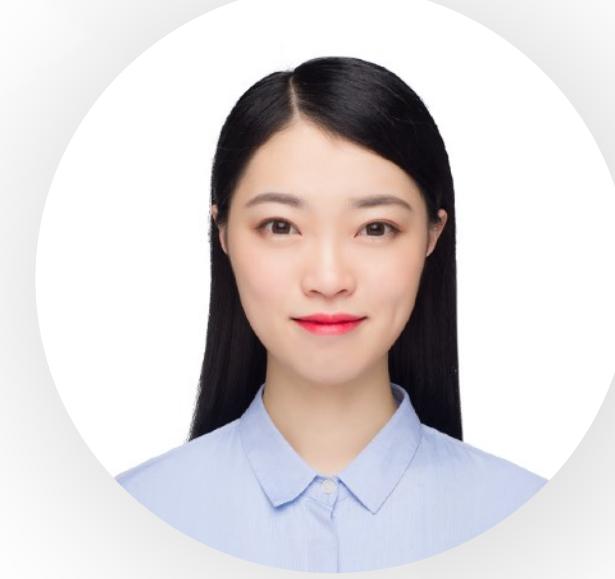
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- *B.S. in Information Management*
- *2.5 years IT project management experience*



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- *B.S. M.S in Electrical and Electronics System Engineering*
- *5 year Quality Control and Quality Assurance experience in IT industry*
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- *B.S. in Applied Mathematics and Economics*
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AGENDA

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Executive Summary

02

Data Analysis and Market Segmentation

03

Branding Strategy

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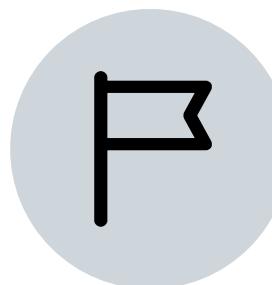
Marketing Solution



PART 01

Executive Summary

Executive Summary



COMPANY BACKGROUND

Sea Ray Boats is an American manufacturer that produces recreational motorboats. It currently operates as part of the Brunswick Boat Group, a division of Brunswick Corporation.



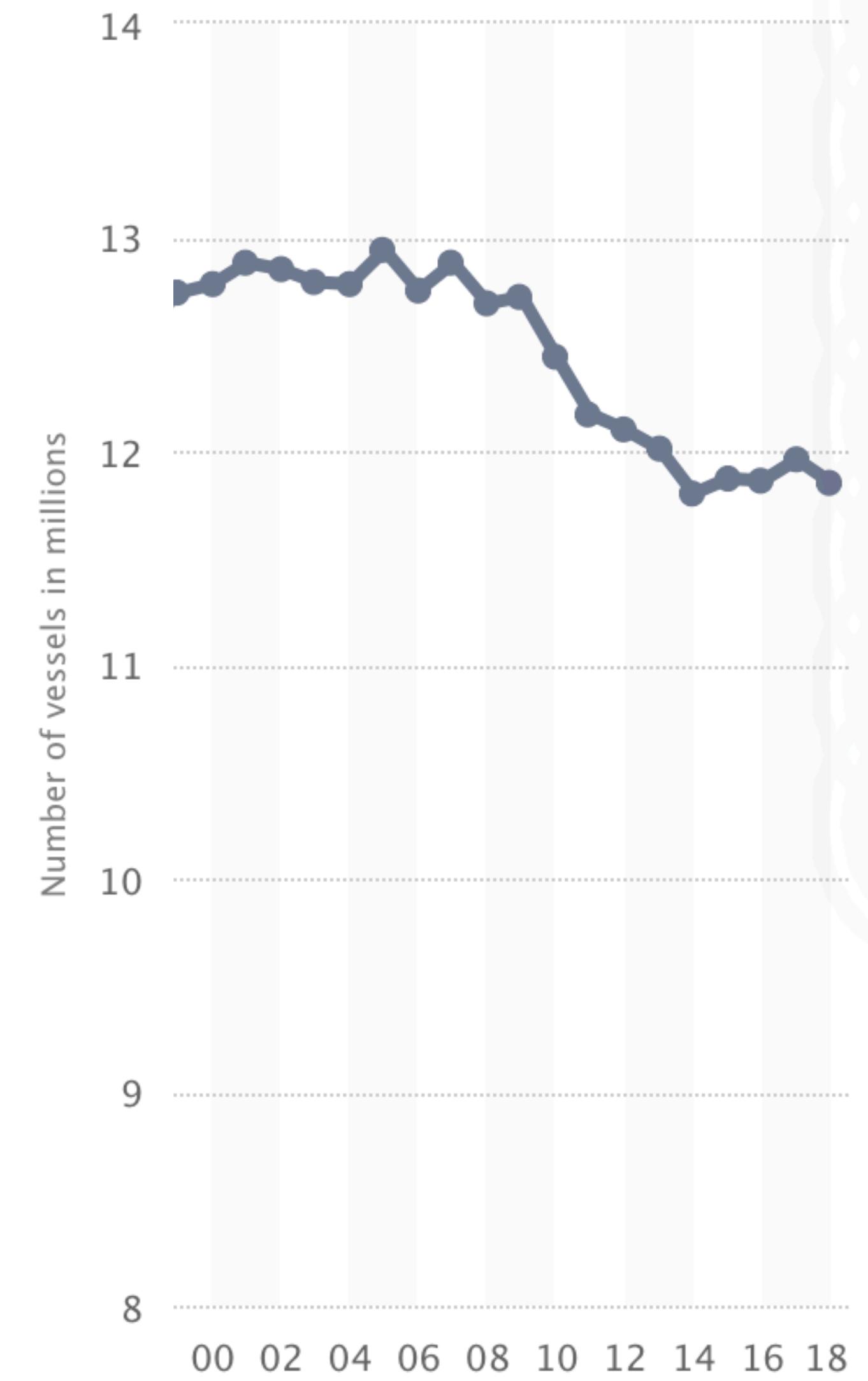
BUSINESS PROBLEM

Sea Ray boats are facing declining market share in the boating market through the past several years and find competitors in the market are having an increasingly data-intensive business environment. The management team was now exploring various growth options and realize it is becoming an immediate necessity for the company to leverage data to oversee the product development needs and resource allocation in the competitive market.



PROJECT GOAL

Generate market insight and marketing strategic advise for the North America team.



The Data

Data Source
INSEAD



Data Acquisition Methodology
Survey from boat owners
and intenders



Variables

- Attitudes/ Needs/ Motivation
- Purchase Process and Behavior
- Demographics
- Brand Equity

Scope
Total 2,813 responses,
71 questions



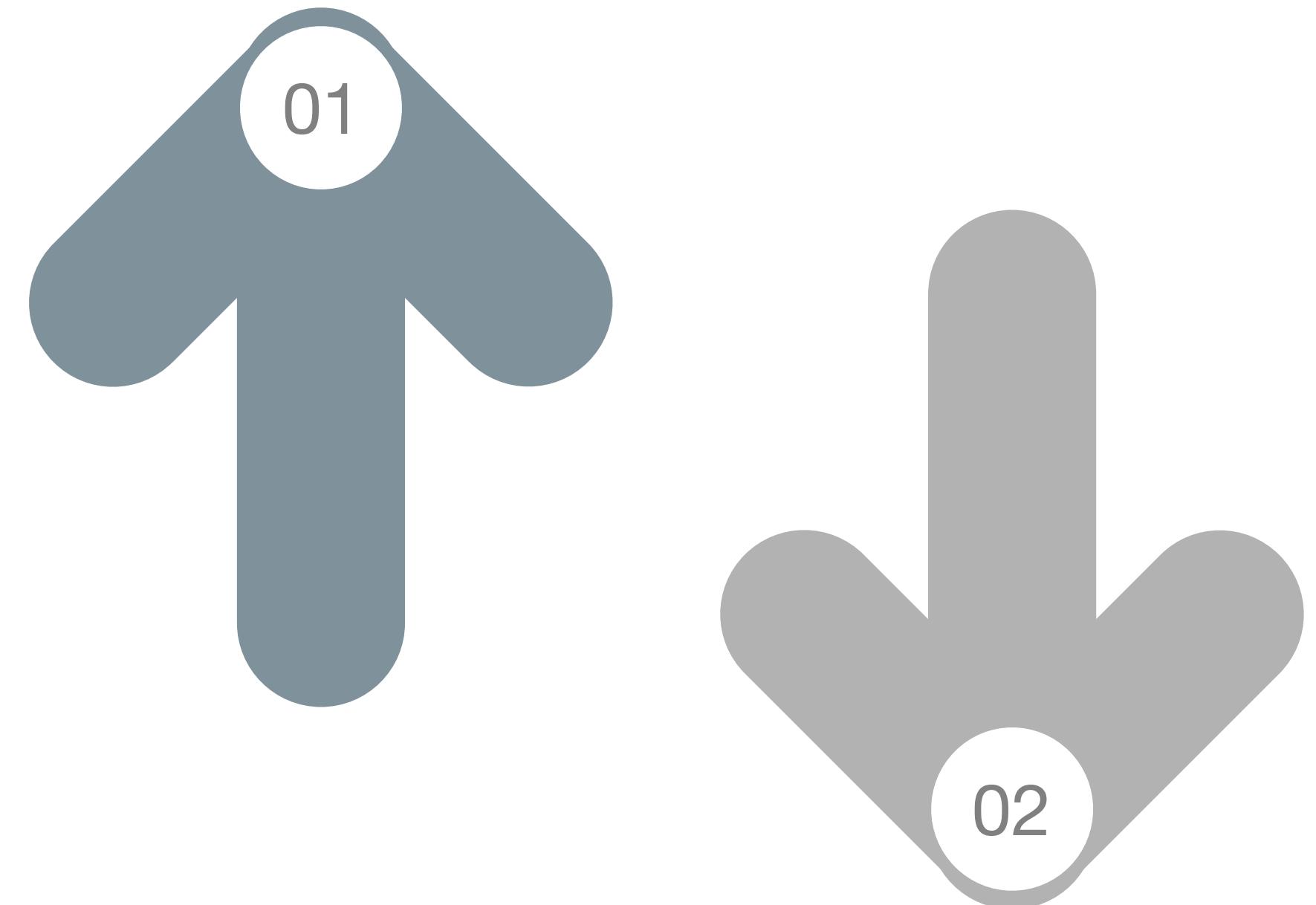
PART 02

Data Analysis and Market Segmentation

// Factor Selection Approach

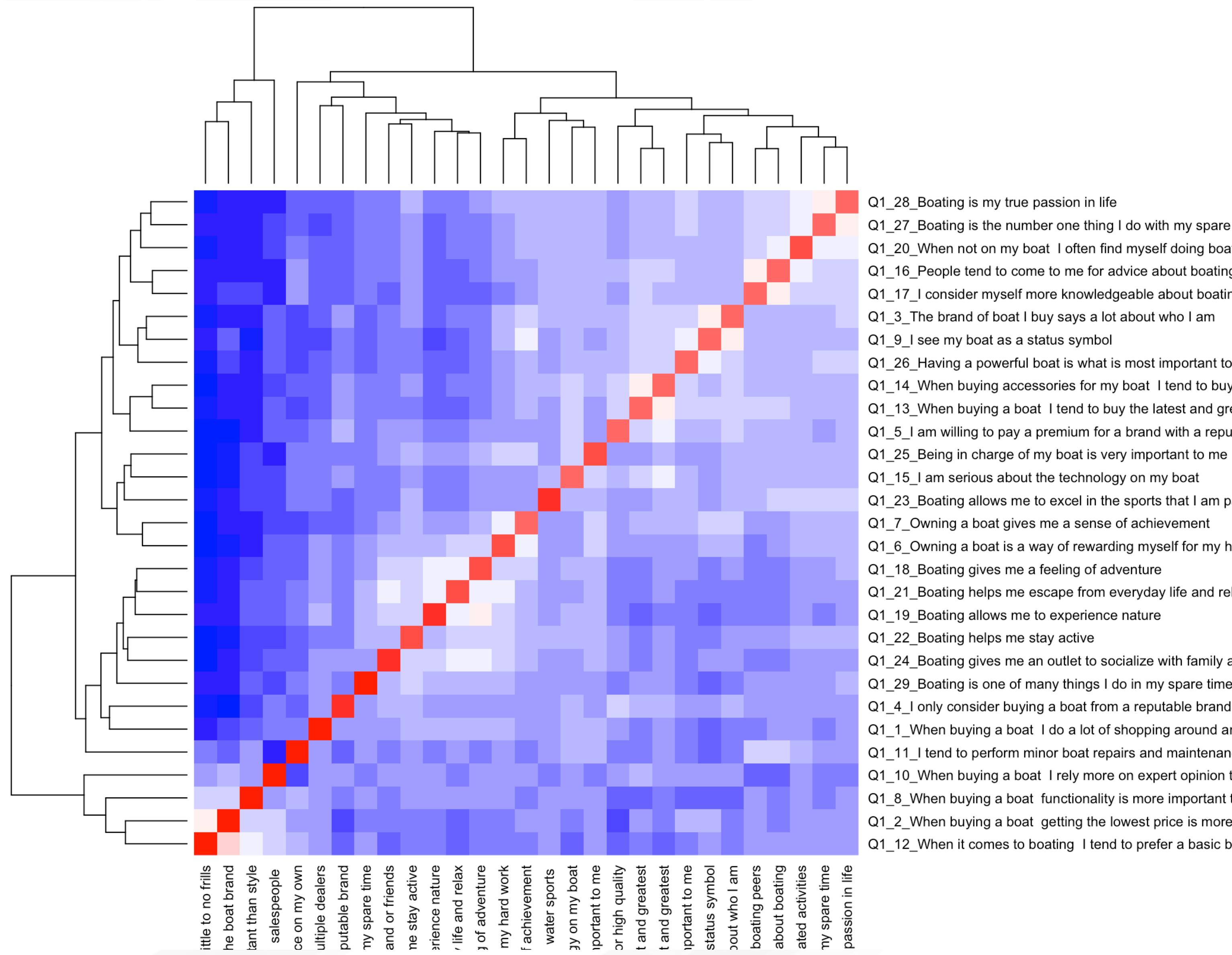
The further decision will be made to develop a segmentation that is mostly driven by attitudes that consumer held regarding boating - the attitudinal data from the 29 questions in Q.1.

All factors with eigenvalue larger than 1



Based on the cumulative variance to explain (e.g. $\geq 50\%$)

// Correlation Heat-map Snapshot



The correlation heat-map gives a first glance at the inter-relationships between variables.

For example:

- Q1_9_I see my boat as a status symbol-Q1_3_The brand of boat I buy says a lot about who I am=**0.5789**
- Q1_13_When buying a boat I tend to buy the latest and greatest-Q1_14_When buying accessories for my boat I tend to buy the latest and greatest=**0.6382**

Factors Selection Statistics

Components	Eigenvalue	Percentage_of_explained_variance	Cumulative_percentage_of_explained_variance
Component No:1	8.43	29.08	29.08
Component No:2	2.33	8.05	37.12
Component No:3	1.86	6.42	43.55
Component No:4	1.46	5.03	48.57
Component No:5	1.21	4.16	52.74
Component No:6	0.9	3.1	55.84
Component No:7	0.82	2.82	58.65
Component No:8	0.79	2.71	61.36
Component No:9	0.78	2.69	64.05
Component No:10	0.74	2.56	66.61
Component No:11	0.69	2.37	68.98
Component No:12	0.65	2.25	71.23
Component No:13	0.65	2.23	73.47
Component No:14	0.62	2.13	75.6
Component No:15	0.61	2.1	77.7
Component No:16	0.58	1.99	79.69
Component No:17	0.56	1.94	81.62

...only showing top 17 components

10 factors explain 66.61 % of the variance



Chosen Factors and Corresponding Questions

Raw Attributes	
Factor 1	Q1_27_Boating is the number one thing I do with my spare time
Factor 2	Q1_18_Boating gives me a feeling of adventure
Factor 3	Q1_14_When buying accessories for my boat I tend to buy the latest and greatest
Factor 4	Q1_7_Owning a boat gives me a sense of achievement
Factor 5	Q1_4_I only consider buying a boat from a reputable brand
Factor 6	Q1_11_I tend to perform minor boat repairs and maintenance on my own
Factor 7	Q1_10_When buying a boat I rely more on expert opinion than my own e g consumer reports salespeople
Factor 8	Q1_8_When buying a boat functionality is more important than style
Factor 9	Q1_1_When buying a boat I do a lot of shopping around and visit multiple dealers
Factor 10	Q1_29_Boating is one of many things I do in my spare time

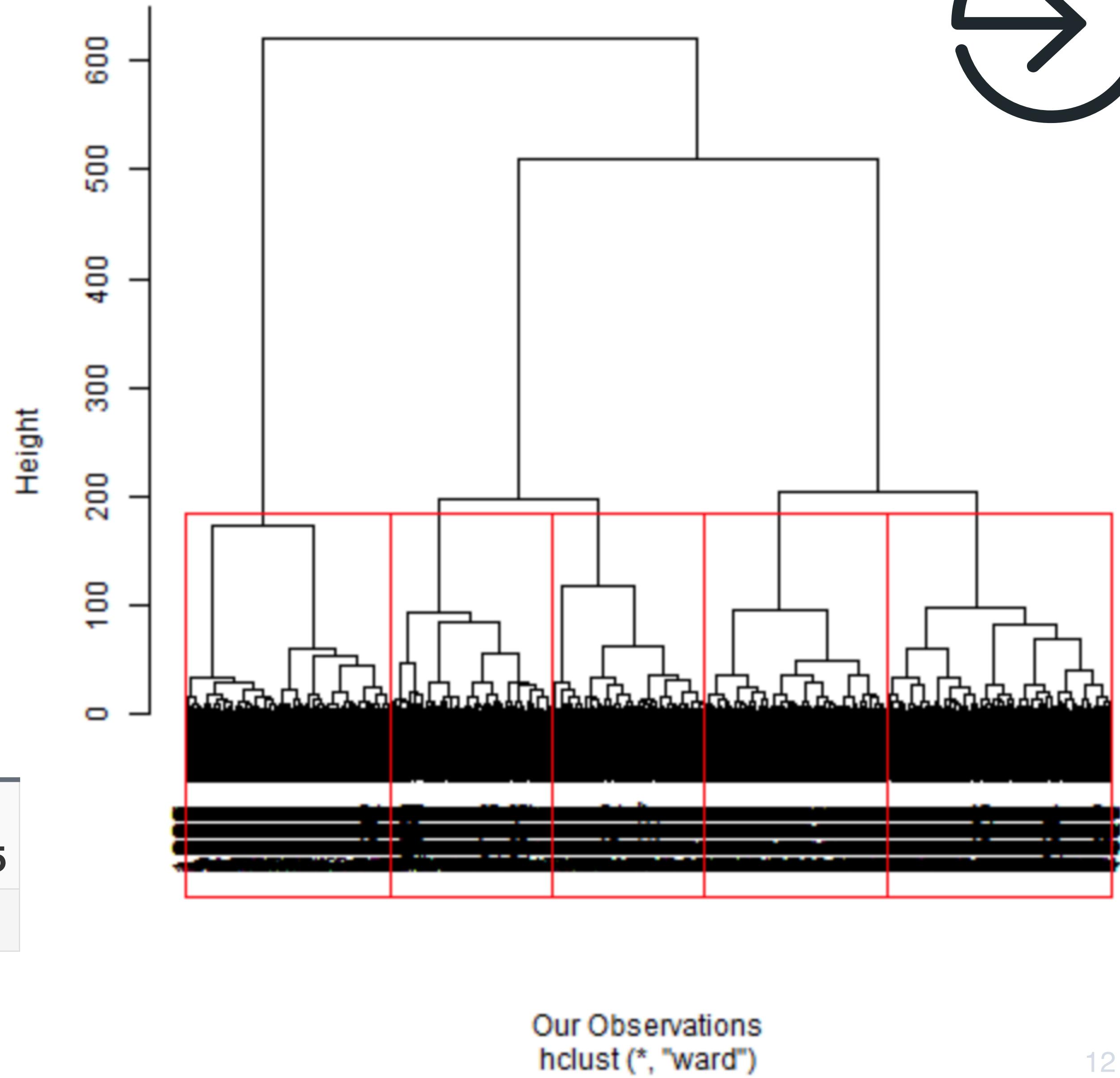
Cluster Analysis



After a few iterations we checked at a few different segment profiles (3-10 segment solutions). We have decided to move on with a 5 cluster solution as an optimal solution.

Below is number of observations in each clusters:

Size of Cluster 1	Size of Cluster 2	Size of Cluster 3	Size of Cluster 4	Size of Cluster 5
467	624	552	682	488



Segment Analysis

Based on the Average scores for all 29 attitudes for the 5 segments



Family Boaters

-16%

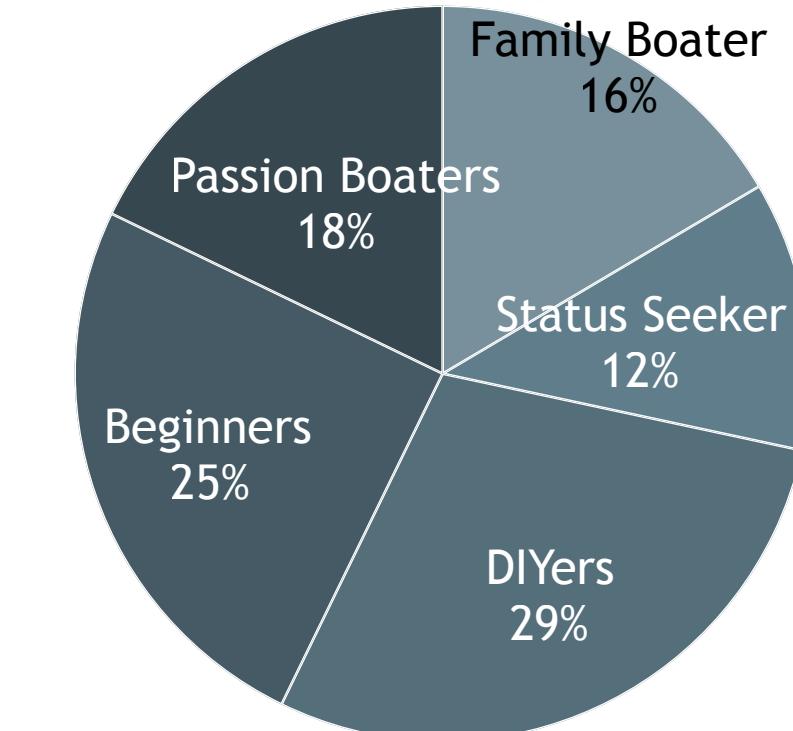
- Boating helps them stay active
- Boating allows them to excel in sports they're passionate about
- Boating gives me an outlet to socialize with family and/or friends



Status Seekers

-11.5%

- Willing to pay a premium for a brand with a reputation for high quality
- Buy the latest and greatest boats
- View their boat as a status symbol



DIYers

-19.6%

- Functionality is more important than style
- Perform repairs and maintenance on their boats
- Tend to prefer a boat with little to no frills



Beginners

-24.2%

- Rely more on expert opinion than their own
- Boating helps them escape from everyday life and relax
- Boating gives me a feeling of adventure



Passion Boaters

-17.3%

- Boating is their true passion in life
- Consider themselves more knowledgeable than their boating peers
- Boating is the #1 activity they do in their spare time

	Average of Cluster 1	Average of Cluster 2	Average of Cluster 3	Average of Cluster 4	Average of Cluster 5
1	4.0	4.3	4.2	3.8	3.8
2	3.1	2.8	2.9	2.9	2.7
3	3.3	3.8	3.1	2.6	2.7
4	3.7	4.2	4.1	3.6	3.8
5	3.5	4.1	3.7	3.1	3.4
6	4.0	4.5	4.0	3.6	3.6
7	3.7	4.4	3.7	3.2	3.3
8	3.7	3.6	4.0	3.8	3.5
9	3.1	3.6	2.9	2.3	2.5
10	3.8	3.4	3.6	2.9	3.4
11	2.8	4.1	4.1	4.0	1.8
12	2.9	2.7	2.8	3.1	2.8
12	3.2	3.7	3.1	2.4	2.7
14	3.4	4.1	3.4	2.6	2.8
15	3.7	4.2	3.8	3.3	3.2
16	3.2	3.9	3.2	2.8	2.4
17	3.1	3.7	3.2	2.9	2.4
18	4.2	4.6	4.3	3.7	3.8
19	4.1	4.5	4.3	4.0	4.0
20	3.3	3.9	3.2	2.8	2.5
21	4.2	4.6	4.3	4.0	4.0
22	4.0	4.5	4.1	3.8	3.7
23	3.6	4.1	3.7	3.2	3.1
24	4.1	4.5	4.2	3.9	3.9
25	3.8	4.4	3.9	3.5	3.2
26	3.1	3.7	3.0	2.4	2.6
27	3.6	4.1	2.9	2.6	2.5
28	3.5	4.1	3.3	2.8	2.8
29	3.9	4.4	4.1	3.9	3.7



PART 03

Branding Strategy

Analysis of Brand Equity Attributes

Methodology: Structural
Equation Modeling (SEM)

Variables:

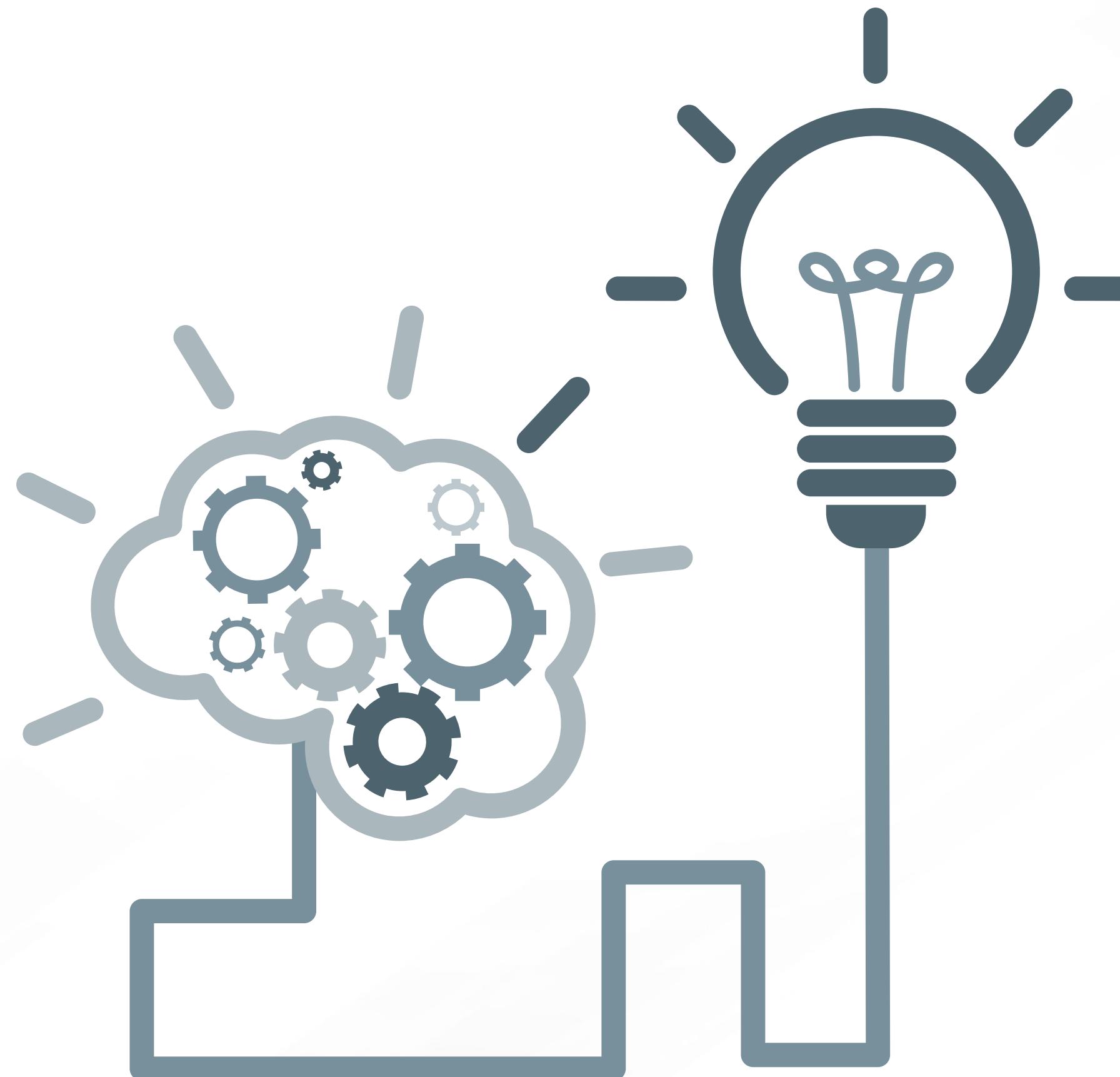
-Independent Variables:

Latent variables of brand
equity attributes

-Dependent Variables:

Preference Rating

- 0- neither purchase nor
recommend
- 1- either purchase or
recommend
- 2 - both purchase and
recommend



Goal:

To identify key brand
attributes to establish
associations between
brand and customer
purchasing and liking.

Categorize Variables



Cares and Conveniences

- Provides excellent boating experience
- User friendly
- Maintenance and cleaning are easy
- Offers boats for socializing and entertainment
- Gives good feeling and peace of mind

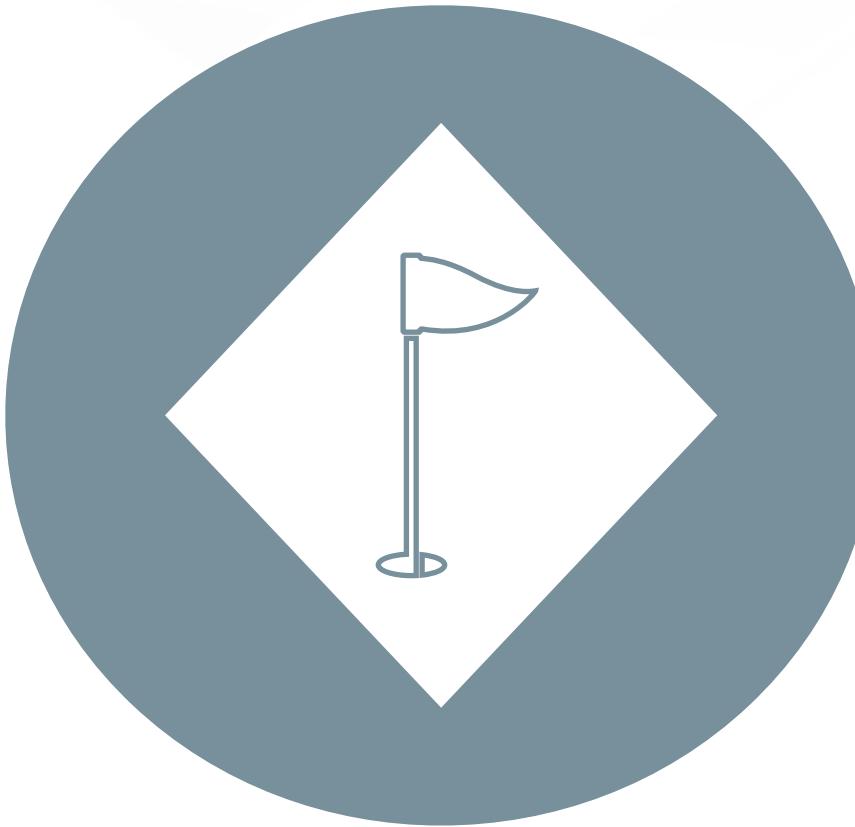


Image and Reputation

- Price
- Brand for Beginners
- Good customer service
- Strong dealer network
- Superior interior style and exterior style



Leader and Innovation

- Leader in cutting edge technology
- Leader in safety
- Innovative
- Reliable in heavy usage and rough weather
- Offers a wide range of product

Results of SEM Analysis

Evaluation Criteria	Model 1 All Latent Variables	Model 2 (Cares and Conveniences, Image and Reputation)	Model 3 (Image and Reputation, Leader and Innovation)	Model 4 (Cares and Conveniences, Leader and Innovation)
Chi-Sq	4.267638e+03	3.216280e+03	1.508098e+03	1.394966e+03
Comparative Fit Index (CFI)	8.751141e-01	8.591831e-01	9.186587e-01	9.280026e-01
Akaike information criterion (AIC)	1.632026e+05	1.324817e+05	1.010617e+05	1.036941e+05
Bayesian information criterion (BIC)	1.635651e+05	1.327551e+05	1.012757e+05	1.039199e+05
Root Mean Square Error of Approximation (RMSEA)	6.357622e-02	7.188880e-02	6.501313e-02	5.807820e-02
Standardized Root Mean Residual (SRMR)	4.397288e-02	4.896656e-02	3.893317e-02	3.527371e-02

Model 4 :
“Cares and Conveniences” and “Leader and Innovation”
Are the Key Attributes

Branding Strategy Insights

Who are the customer?

High end segment who don't care about price

What they want?

- Seeking innovative and high tech boats, which are user friendly
- Leading and top notch boats of the market
- Care about safety
- Wide range of accessories and features
- Boats for socializing and entertainment, which gives good feeling and peace of mind



PART 04

Marketing Solution

Marketing Solution

By Combining the Market Segmentation and Branding Strategy

For targeted Status Seekers and Passion Boaters that made up almost 1/3 of the customer base.



Status Seekers

-11.5%

- Willing to pay a premium for a brand with a reputation for high quality
- Buy the latest and greatest boats
- View their boat as a status symbol



Passion Boaters

-17.3%

- Boating is their true passion in life
- Consider themselves more knowledgeable than their boating peers
- Boating is the #1 activity they do in their spare time



For these two groups who are most willing to pay for their boats with a high price, Sea Ray Boats can marketing their **innovative, customizable (equipped with cutting-edge technology) and 24/7 customer-service provided boats.** In addition, Sea Ray can hash-tag their boats **on social media platforms** and initiate **networking events offline** for the registered users.

Thank You !



Appendix-Survey Questions

Attitudes/ Needs/ Motivation

(29 Questions)

1. Listed below are some statements regarding attitudes and beliefs you may or may not have regarding boating. Using the scale provided, please indicate how much you agree or disagree with each statement.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

- When buying a boat, I do a lot of shopping around and visit multiple dealers
- When buying a boat, getting the lowest price is more important than the boat brand
- The brand of boat I buy says a lot about who I am
- I only consider buying a boat from a reputable brand
- I am willing to pay a premium for a brand with a reputation for high quality
- Owning a boat is a way of rewarding myself for my hard work
- Owning a boat gives me a sense of achievement
- When buying a boat, functionality is more important than style
- I see my boat as a status symbol
- When buying a boat, I rely more on expert opinion than my own
- I tend to perform minor boat repairs and maintenance on my own
- When it comes to boating, I tend to prefer a basic boat with little to no frills
- When buying a boat, I tend to buy the latest and greatest
- When buying accessories for my boat, I tend to buy the latest and greatest
- I am serious about the technology on my boat
- People tend to come to me for advice about boating
- I consider myself more knowledgeable about boating than the rest of my boating peers
- Boating gives me a feeling of adventure
- Boating allows me to experience nature
- When not on my boat, I often find myself doing boating related activities
- Boating helps me escape from everyday life and relax
- Boating helps me stay active
- Boating allows me to excel in the sports that I am passionate about
- Boating gives me an outlet to socialize with family and/or friends
- Being in charge of my boat is very important to me
- Having a powerful boat is what is most important to me
- Boating is the number one thing I do with my spare time
- Boating is my true passion in life
- Boating is one of many things I do in my spare time

Appendix-Survey Questions

Purchase Process and Behavior

(9 Questions)

2. How many powerboats do you currently own?

3. How likely would you be to purchase a new boat in the future?

1. Definitely will not
2. Probably will not
3. Might or might not
4. Probably will
5. Definitely will

4. Not including any taxes, fees or accessories, approximately how much did you pay for your boat?
How much are you planning to spend on your new boat?

1. Less than \$10K
2. \$10K to \$19,999K
3. \$20K to \$29,999K
4. \$30K to \$49,999K
5. \$50K to \$74,999K
6. \$75K to \$124,999K
7. \$125K to \$199,999K
8. \$200K to \$499,999K
9. \$500K to \$999,999K
10. \$1,000,000 or more
11. Don't know

5. What is the horse power of your engine? What horse power are you looking for?

1. 0 - 14 HP
2. 15 - 60 HP
3. 61 - 115 HP
4. 116 - 150 HP
5. 151 - 200 HP
6. 201 - 250 HP
7. 251 - 350 HP
8. > 350 HP
9. Don't Know

6. What is the length of your boat? What is the length of the boat you are considering buying? (e.g., 20 feet)

7. Which of the following statements best describes WHO you boat with? For each question please use the scale provided in the table below.

Never	Rarely	Sometimes	Often	Most of the time
1	2	3	4	5

1. I normally boat alone
2. I boat with my spouse or significant other
3. I boat with my family, including kids
4. I boat with my friends

Appendix-Survey Questions

Demographics (4 Questions)

11. What is your gender?

Male 1
Female 2

12. We would like to get a better estimate of your total HOUSEHOLD income in the past 12 months before taxes.

Less than \$5,000 1
\$5,000 to \$7,499 2
\$7,500 to \$9,999 3
\$10,000 to \$12,499 4
\$12,500 to \$14,999 5
\$15,000 to \$19,999 6
\$20,000 to \$24,999 7
\$25,000 to \$29,999 8
\$30,000 to \$34,999 9
\$35,000 to \$39,999 10
\$40,000 to \$49,999 11
\$50,000 to \$59,999 12
\$60,000 to \$74,999 13
\$75,000 to \$84,999 14
\$85,000 to \$99,999 15
\$100,000 to \$124,999 16
\$125,000 to \$149,999 17
\$150,000 to \$174,999 18
\$175,000 or more 19

13. Are you now married, widowed, divorced, separated, never married, or living with a partner?

Married 1
Widowed 2
Divorced 3
Separated 4
Never married 5
Living with partner 6

Appendix-Survey Questions

Brand Equity (29 Questions)

16. Below are various statements that could describe brand's PRODUCTS, IMAGE or REPUTATION. Please indicate how much you agree or disagree with the statements for the following brand that you are familiar with: *INSERT BRAND THAT NEEDS TO BE RATED* (e.g. Alumacraft, Bayliner, etc.)

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

Origin/ Heritage

1. Is a brand that has been around for a long time
2. Has best in-class customer service
3. Has a strong dealer network

Brand leadership

4. Is a leader in cutting edge technology
5. Is a leader in safety
6. Is known for its innovative products

Users of the brand

7. Is a brand for people who are serious about boating
8. Is a good brand for people that are new to boating
9. Is a brand I see in the water all the time

Boating Experience

10. Offers boats that provide a fast and powerful boating experience
11. Offers the best boats for socializing
12. Offers the best boats for water sports (e.g., tubing, ski, wakeboard)

Aesthetics

13. Offers boats with superior interior style
14. Offers boats with superior exterior style
15. Offers boats that stand out from the crowd
16. Offers boats that look cool

Product Quality/ Reliability/ Innovation

17. Offers boats that can handle rough weather or choppy water
18. Offers boats that can handle frequent and heavy usage
19. Offers a wide breadth of product offerings and accessories

Product Safety

20. Offers boats that I can move around safely