EXECUTIVE SUMMARY

Nabisco management has been concerned about the market share of its Ritz crackers. Ritz has been losing market share to so-called "gourmet" crackers (http://www.corbinpr.com/ritz-crackers.html). After dominating the "butter cracker" category for many years, Ritz has lost market share to Keebler's Townhouse and Club crackers (http://thearf-org-aux-assets.s3.amazonaws.com/ogilvy/cs/Ogilvy-09-CS-RITZ.pdf). Management has engaged BlueCut Analytics to conduct research into consumer perceptions of the Ritz brand.

BlueCut Analytics' research was accomplished by using an acknowledged tool known as Perceptual Mapping. This paper will provide an introduction to Perceptual Mapping, and explain how BlueCut used it fulfill its charge. Finally, recommendations will be made for improving Ritz' market share.

INTRODUCTION

Perceptual Mapping, also known as Brand Mapping or Position Mapping, is an analytic tool which enables the researcher to analyze consumers' perceptions of a brand across many dimensions. Of course, visualizing multiple dimensions is virtually impossible, so Perceptual Mapping makes use of a statistical method known as Factor Analysis which reduces multiple dimensions down to two. Of course, such reduction results in a loss of information, but the end result is an easy to understand two dimensional graph which is proven to provide valuable insights into consumer perceptions about brands of a product, and to enable management to make data-driven decisions regarding their marketing plans.

We will begin our discussion by providing a brief explanation of the methodology used by BlueCut Analytics to conduct its research. We will then discuss those steps in detail, culminating in a discussion of what should – and should not – be done to improve Ritz' market share.

METHODOLOGY

In conducting its research, BlueCut Analytics followed the methodology proposed by Dr. Zafar Iqbal of the Kellstaedt Graduate School of Management at DePaul University. There are four steps in Igbal's methodology:

1. Identify segment relevant brand and attributes. (Qualitative research.)
2. Obtain perceptions data by developing and fielding a large-sample survey. (Quantitative research.)
3. Analyze survey results using Factor Analysis. (Statistical analysis.)

4. Draw the Perceptual Map and interpret it. (Making decisions to solve marketing problems.)

The remainder of this paper will follow the same outline as the methodology.

QUALITATIVE RESEARCH

In the Qualitative Research step, we identify the market segment wish to research. Specifically, we should identify about eight brands (including our own, of course) and ten attributes which those brands have in common. One of those ten attributes will be the preference attribute; the "I always prefer this brand" attribute. Determination of brands and attributes is not a trivial process: it is usually done by means of several focus groups. Nevertheless, one need not spend too much time with focus groups: a minimum of four focus groups totaling about thirty hours should be sufficient, as experience has shown that the researcher will begin to hear the same things over and over after about thirty hours.

BlueCut Analytics conducted four focus group sessions during the week of July 23-27, 2012. Each focus group consisted of eight to ten volunteers representing a wide cross section of the target market. These consumer groups identified the following brands of snacks and attributes:

Brands	Attributes
Food Should Taste Good (Costco)	Messy
Cheez It	Always fresh
Animal Crackers	Healthy
Ritz	Good price
Premium Saltines	Good quality
Goldfish	Allergy friendly
Chex Mix	Tastes good
Wheat Thins	Easy to find
Oreo	Attractive packaging
	I prefer this brand

QUANTITATIVE RESEARCH

In the Quantitative Research step, we take the brands and attributes identified in the previous step and create and administer a survey to collect our data. This survey should use a 1-to-7 Likert scale. The 1-to-7 scale provides a lot of flexibility: a scale of 1-to-5 does not provide enough information, while a scale of 1-to-9 can become too tedious. Finally, the use of an odd numbered scale allows the consumer to be neutral, which is important since they may, in fact, be neutral. The survey used by BlueCut Analytics can be found in Appendix A.

The survey should be sent to at least one hundred people. If there is a likelihood of a low rate of return (and there usually is), then more surveys should be distributed. While everyone favors a huge number of responses, it should be noted that, as the number of responses increases, the rate at which information is gained diminishes.[1] Where appropriate a syndicated data source, social media, or even "tweets", could be used in place of a survey.

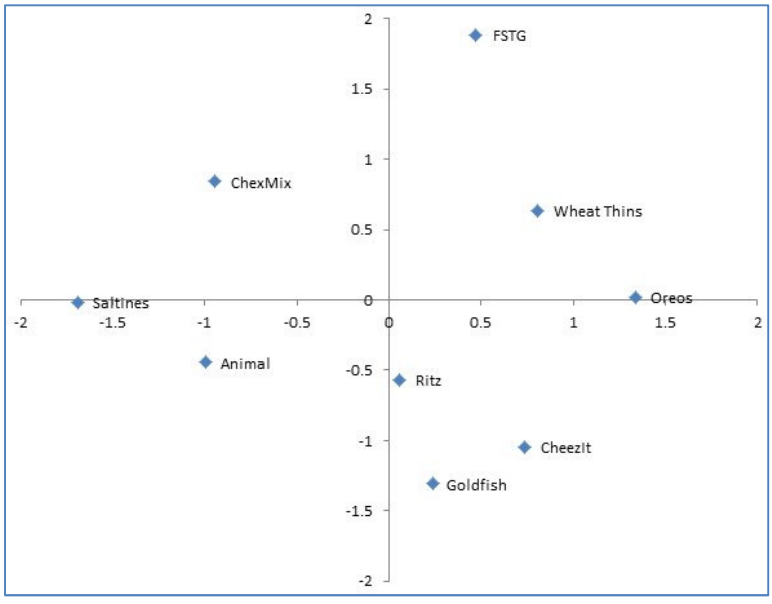
BlueCut sent surveys to 500 randomly selected consumers on August 6, 2012. Consumers were given one week to respond. There was a 27% return rate, for a total of 135 surveys.

STATISTICAL ANALYSIS

In the Statistical Analysis step, we analyze the results of our survey. Our survey consisted of 90 cells (9 brands x 10 attributes). We summarize the data as a single table of 90 cells, each containing the average consumer response for that cell. Survey response averages are shown in Appendix B.

The data is then input to a statistics package such as SPSS or SAS, and a statistical procedure known as Factor Analysis is run. We used SPSS, version 21.

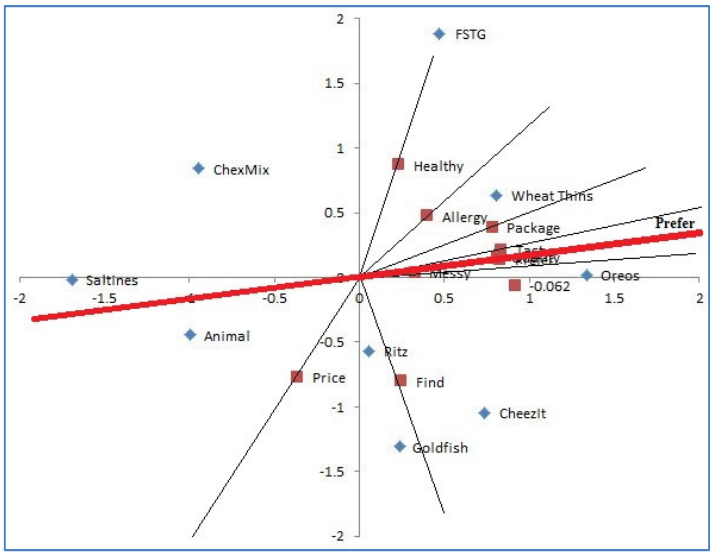
Our first check is to make sure that the data can be reasonably reduced to two dimensions: we check the "Total Variance Explained" table, "Cumulative %" column (see Appendix D). If the second row is greater than 60% (it is 64.744), then we can continue with our analysis.



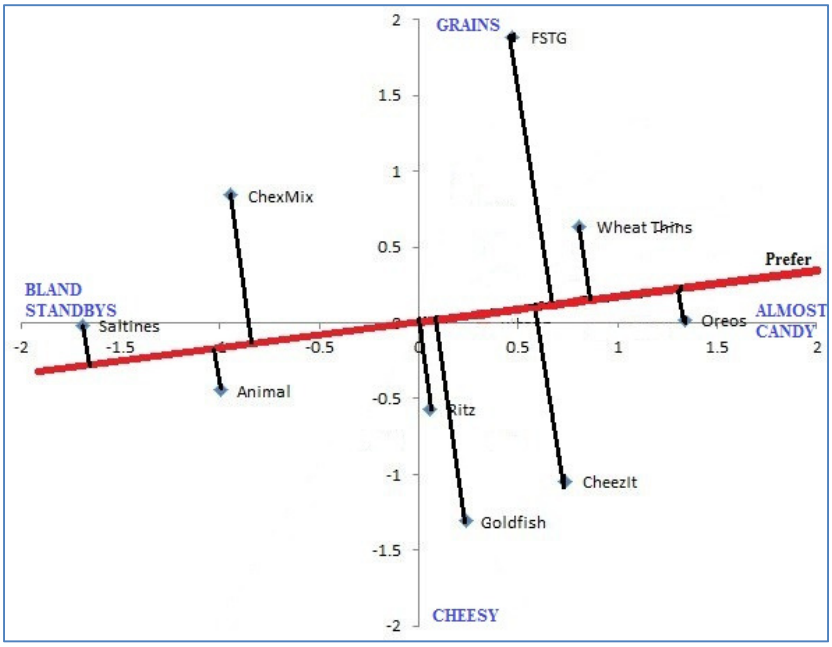
Next we plot the brands to the Cartesian plane by using Factor1, Factor2 as the (x,y) coordinates (see Appendix C). For example, Ritz would be plot at (0.053, -0.568). See Appendix E for graph, which is repeated here. The significance of this plot is that brands which are closer to each other are perceived as more similar. Note that the x- and y-values have no real meaning in and of themselves. We can see from this graph that Ritz crackers are perceived to be most similar to Goldfish and CheezIts.

[1] Margin of error E is inversely proporational to the square root of the sample size; that is, $E \propto 1/\sqrt{n}$.

Next we plot the attributes using the values contained in the Rotated Component Matrix: the column labeled "1" become the x-coordinates, and the column labeled "2" become the y-coordinates (see Appendix D, F). For example, the attribute Good Price would be plotted at (-.365, -.771). Note that these points are purely for convenience in drawing a vector from the origin through that point. The shortest distance (perpendicular) from any brand to any attribute vector indicates the brand's relative strength or weakness with regards to that attribute.



Having seen the brands and attributes, we are in a good position to assign labels to the axis. These labels tend to be somewhat subjective, and opposite ends of the same axis are not necessarily opposites! Proceeding clockwise from the top, we choose to label the north axis as "healthy" or "grains", the east axis as "almost candy", the south axis as "cheesy" and the west axis as "bland" or "old standby".



Of special interest to us is the Preference vector (shown in red). The position of the intercept of the perpendicular line from each brand with the Preference vector indicates consumers' relative preference for that brand (see Appendix G). We can see here that Ritz is ranked just behind Goldfish.

RECOMMENDATIONS

There are some interesting observations to be drawn from the graphs. First, notice that the Good Price attribute vector is almost perpendicular to the Preference vector. This would indicate that Preference is insensitive to Price. Likewise, the Healthy attribute vector is almost perpendicular to the Preference vector. This would indicate that Preference is insensitive to the healthiness of a snack. Indeed, if a customer wants a snack, they will buy it without too much concern for the price or the healthiness!

Quite the opposite, the Tasty and Quality attribute vectors are almost on top of the Preference vector. This could indicate that Preference is based entirely on taste (consist with our earlier conclusion), and if it tastes good, it must be good enough quality.

So what can Nabisco do to raise Ritz market share? First, do not lower the price. We have already seen that consumers are largely insensitive to price for their snacks. Second, do not attempt to make a new, healthier, Ritz cracker. One might be tempted to make a whole grain version of the Ritz cracker, but we have also seen that consumers do not choose their snacks based on their healthiness.

We have seen that Ritz is clustered with Goldfish and CheezIts. Consumers seem to perceive it more as a cheese cracker than as a butter cracker. Oreo is the aspirational brand. Our recommendation is to attempt to position Ritz closer to the "Almost Candy" side of the graph, and one does so by improving through the primary vectors of taste, packaging, and freshness. Perhaps a frosted version of Ritz could be introduced, or Ritz could be sold with Nutella spread. Some attempt to make Ritz crackers seem more like a "treat" would be an appropriate course of action. Updated packaging would also be recommended. Indeed, any marketing effort should focus on these primary vectors (see Appendix H).

APPENDIX A – Survey

This survey is designed to acquire a better understanding of your perceptions of snack crackers. Please write a number between 1 and 7 in the space provided for each brand and for each attribute. All boxes should be filled in. If you are unfamiliar with a brand, please make your best guess.

Writing a 7 in the box will indicate that you agree with the statement, and writing a 1 in the box will indicate that you disagree with the statement. Writing a 4 indicates neutrality.

Please respond within one week.

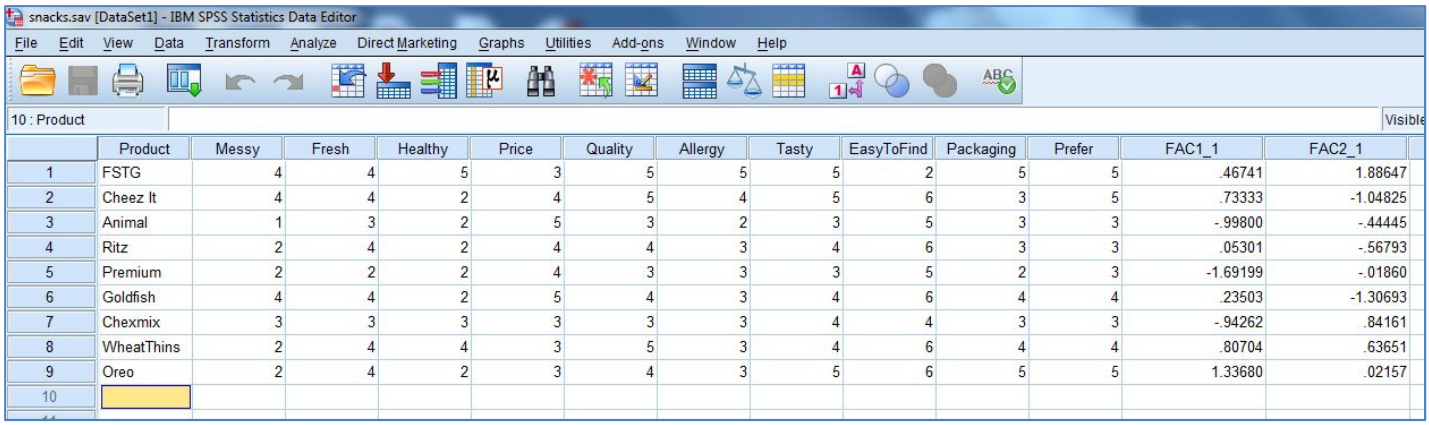
Thank you for your assistance.

	Attributes									
Brands	Messy	Always fresh	Healthy	Good price	Quality ingredients	Allergy friendly	Tastes good	Easy to find	Attractive packaging	I prefer this brand
FSTG (Costco)										
Cheez It Crackers										
Animal Crackers										
Ritz Crackers										
Premium Saltines										
Goldfish Crackers										
Chex Mix										
Wheat Thins										
Oreo Cookies										

APPENDIX B – Response Averages

	Attributes									
Brands	Messy	Always fresh	Healthy	Good price	Quality ingredients	Allergy friendly	Tastes good	Easy to find	Attractive packaging	I prefer this brand
FSTG (Costco)	**4**	**4**	**5**	**3**	**5**	**5**	**5**	**2**	**5**	**5**
Cheez It Crackers	**4**	**4**	**2**	**4**	**5**	**4**	**5**	**6**	**3**	**5**
Animal Crackers	**1**	**3**	**2**	**5**	**3**	**2**	**3**	**5**	**3**	**3**
Ritz Crackers	**2**	**4**	**2**	**4**	**4**	**3**	**4**	**6**	**3**	**3**
Premium Saltines	**2**	**2**	**2**	**4**	**3**	**3**	**3**	**5**	**2**	**3**
Goldfish Crackers	**4**	**4**	**2**	**5**	**4**	**3**	**4**	**6**	**4**	**4**
Chex Mix	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**4**	**3**	**3**
Wheat Thins	**2**	**4**	**4**	**3**	**5**	**3**	**4**	**6**	**4**	**4**
Oreo Cookies	**2**	**4**	**2**	**3**	**4**	**3**	**5**	**6**	**5**	**5**

APPENDIX C – SPSS Data View with Brand Factors


snacks.sav [DataSet1] - IBM SPSS Statistics Data Editor

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10 : Product

Visible

	Product	Messy	Fresh	Healthy	Price	Quality	Allergy	Tasty	EasyToFind	Packaging	Prefer	FAC1_1	FAC2_1
1	FSTG	4	4	5	3	5	5	5	2	5	5	.46741	1.88647
2	Cheez It	4	4	2	4	5	4	5	6	3	5	.73333	-1.04825
3	Animal	1	3	2	5	3	2	3	5	3	3	-.99800	-.44445
4	Ritz	2	4	2	4	4	3	4	6	3	3	.05301	-.56793
5	Premium	2	2	2	4	3	3	3	5	2	3	-1.69199	-.01860
6	Goldfish	4	4	2	5	4	3	4	6	4	4	.23503	-1.30693
7	Chexmix	3	3	3	3	3	3	4	4	3	3	-.94262	.84161
8	WheatThins	2	4	4	3	5	3	4	6	4	4	.80704	.63651
9	Oreo	2	4	2	3	4	3	5	6	5	5	1.33680	.02157
10													

APPENDIX D – SPSS Selected Output

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.511	55.105	55.105	5.511	55.105	55.105	4.007	40.066	40.066
2	1.878	18.777	73.882	1.878	18.777	73.882	2.468	24.678	64.744
3	1.074	10.743	84.625	1.074	10.743	84.625	1.988	19.881	84.625
4	.581	5.809	90.434						
5	.496	4.960	95.393						
6	.270	2.696	98.090						
7	.153	1.526	99.615						
8	.038	.385	100.000						
9	-1.000E-013	-1.001E-013	100.000						
10	-1.001E-013	-1.014E-013	100.000						

Extraction Method: Principal Component Analysis.

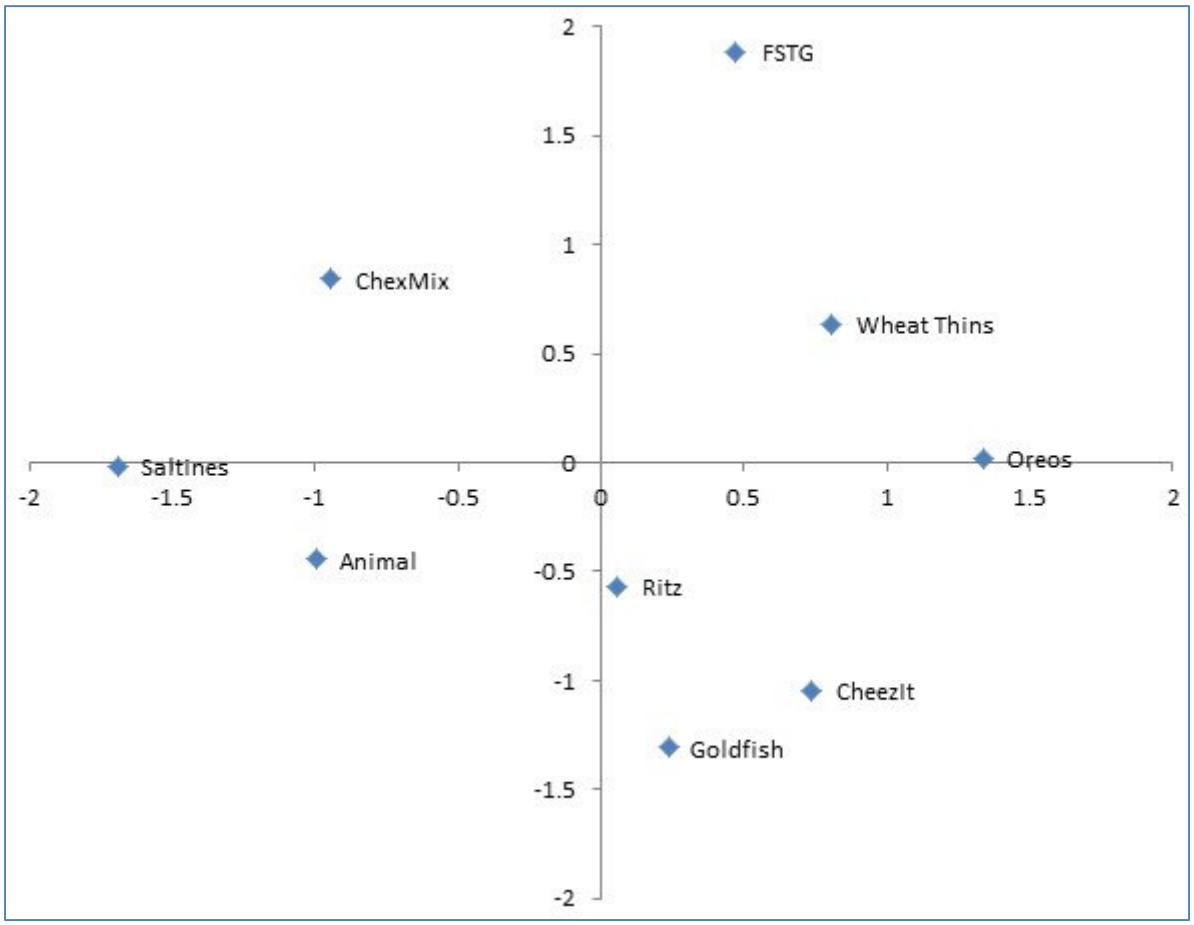
Rotated Component Matrix[a]

	Component		
	1	2	3
Zscore(Messy)	.327	.039	.891
Zscore(Fresh)	.916	-.062	.111
Zscore(Healthy)	.232	.869	.204
Zscore(Price)	-.365	-.771	.130
Zscore(Quality)	.814	.158	.335
Zscore(Allergy)	.400	.475	.742
Zscore(Tasty)	.836	.212	.370
Zscore(EasyToFind)	.248	-.803	-.430
Zscore(Packaging)	.782	.390	-.002
Zscore(Prefer)	.824	.141	.374

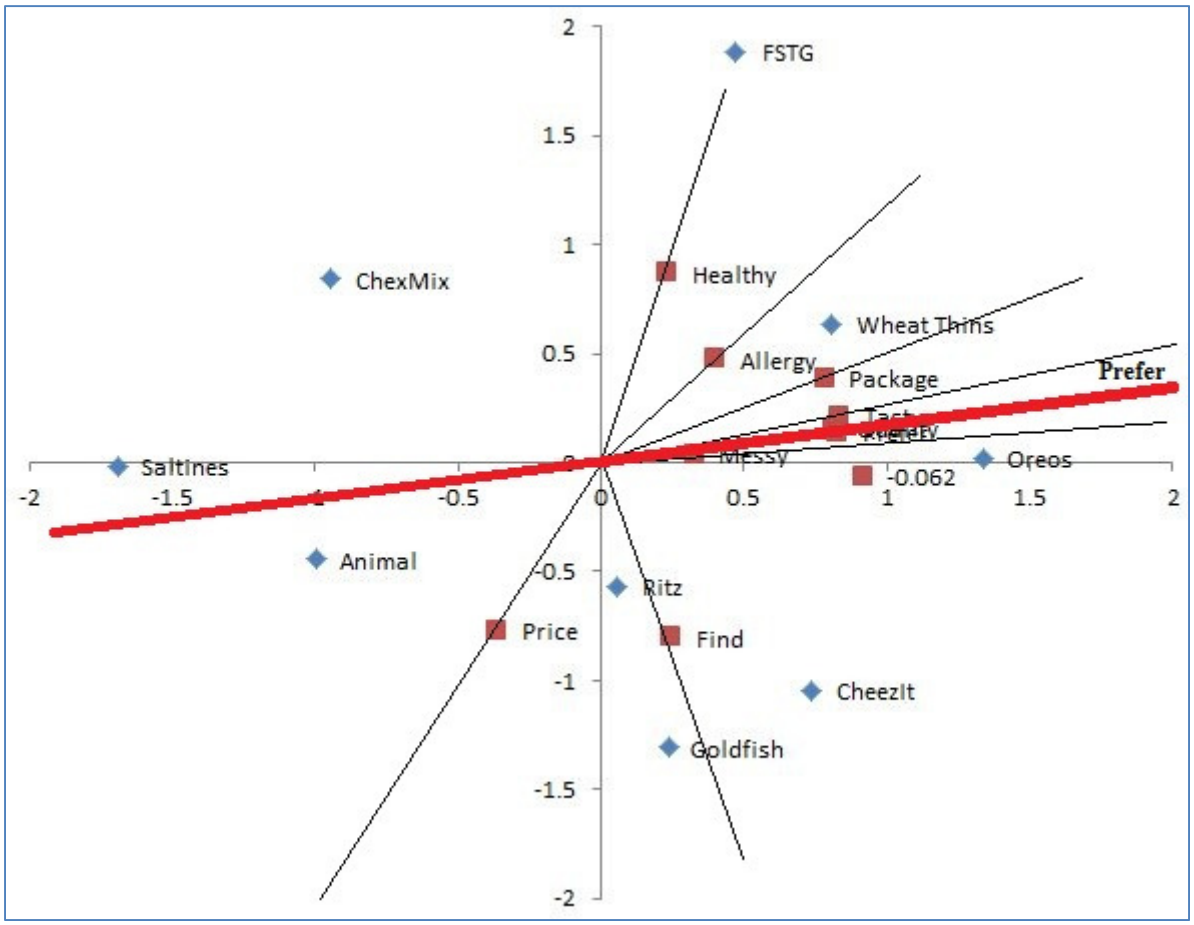
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

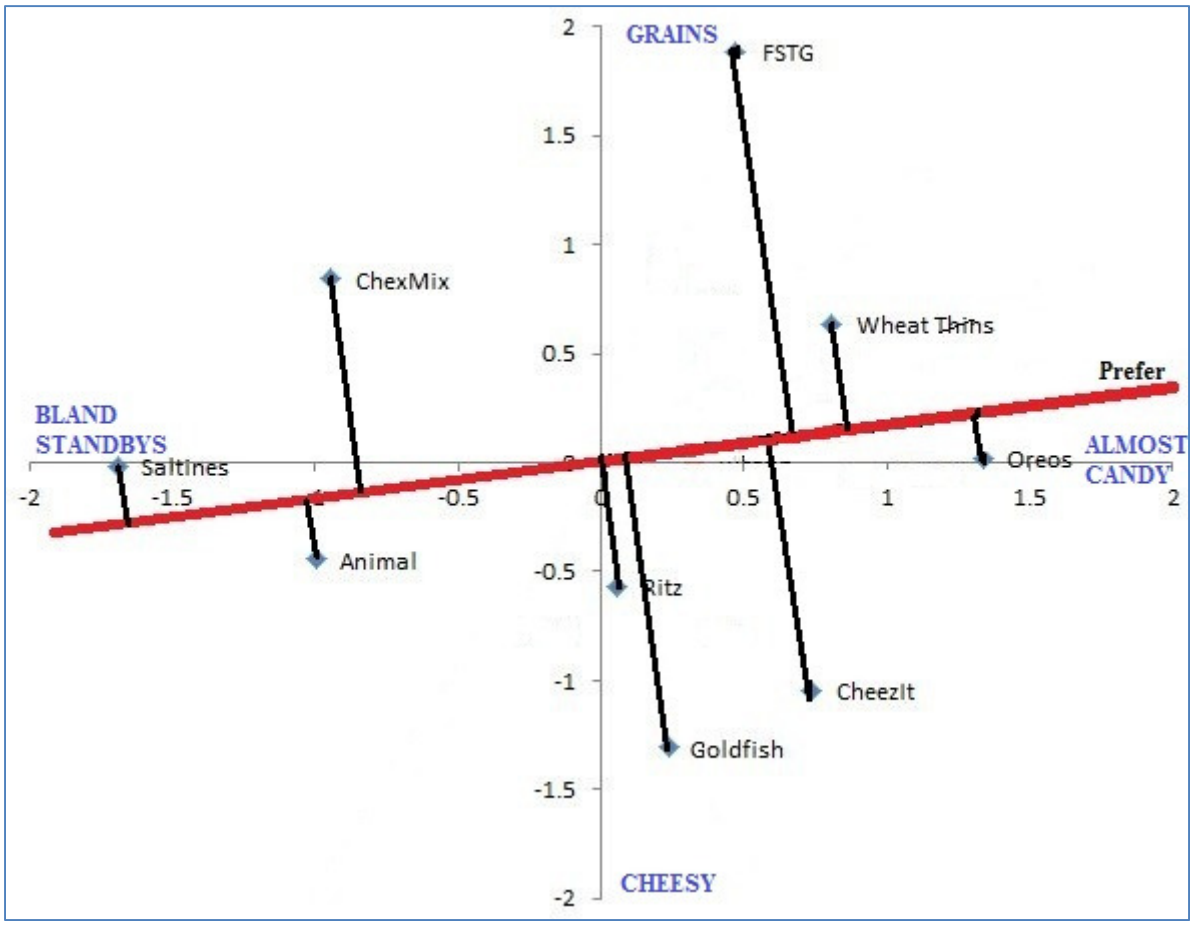
APPENDIX E – Graph of Brands Only



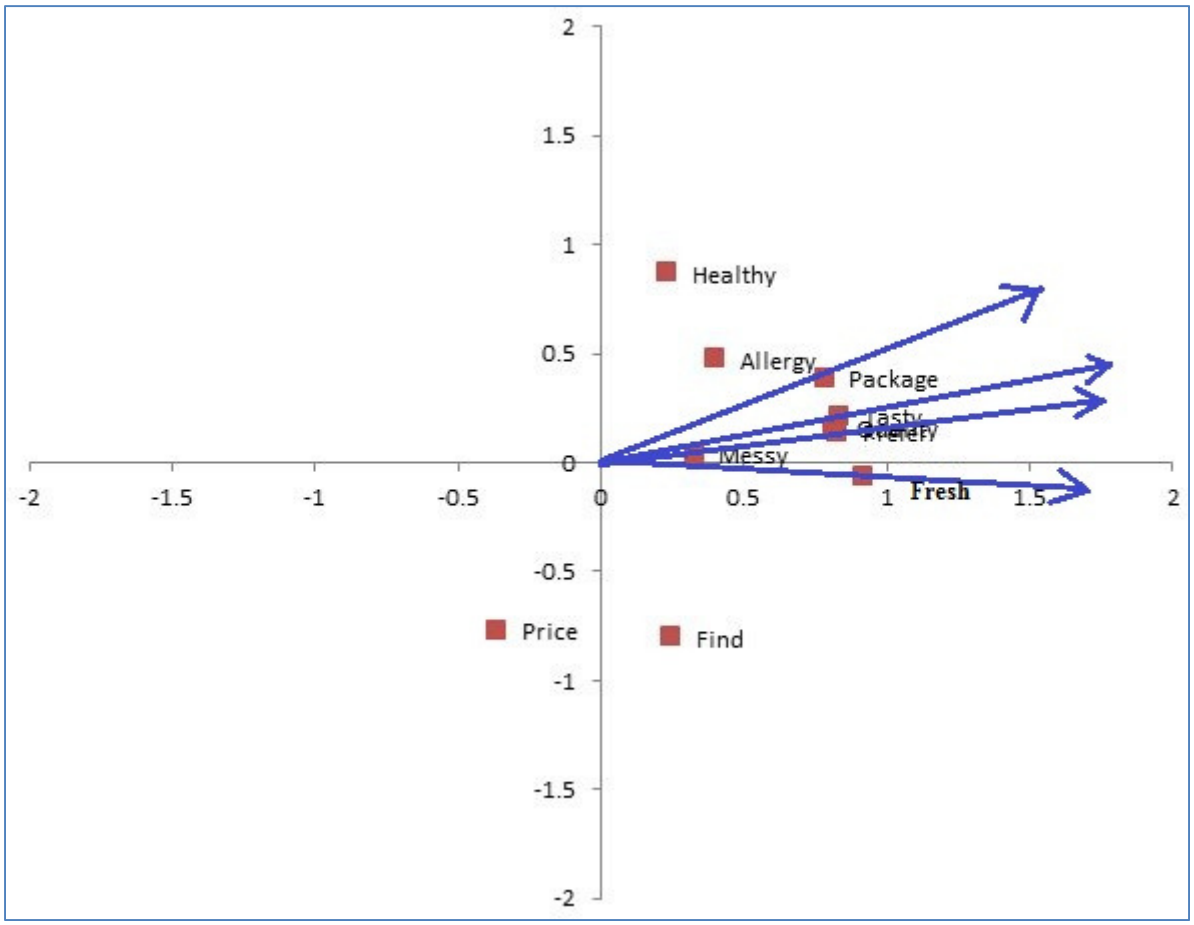
APPENDIX F – Graph of Attributes Only



APPENDIX G – Preference Graph

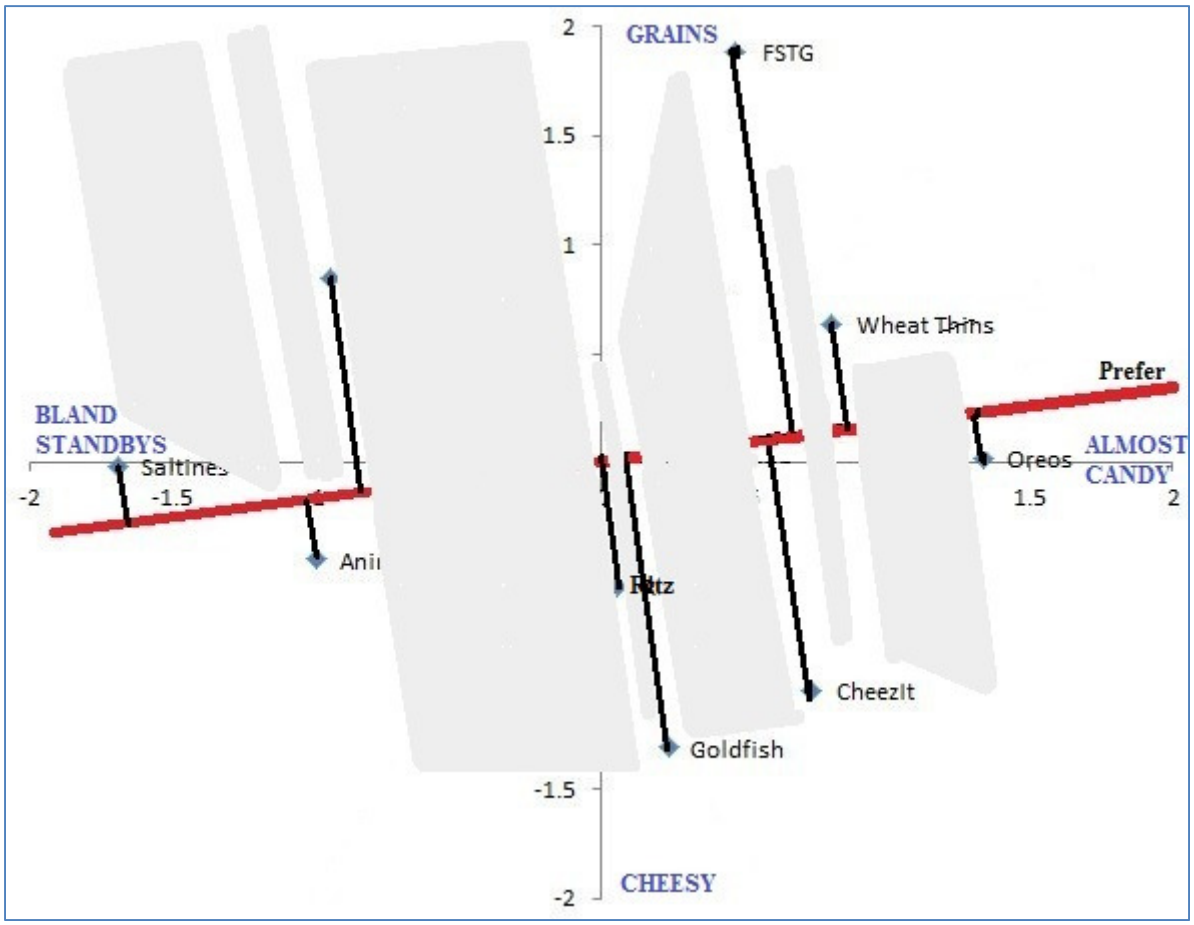


APPENDIX H – Primary Vectors



- The primary vectors are Package, Taste, Quality, and Freshness.
- Any action plan should focus on these attributes.

APPENDIX I – Gaps and Spaces



- Gaps are that portion of the preference line between two brands.
- Spaces are the projectory of gaps above and below the line.
- Therefore, if a brand moves into a space, its projection falls into a gap.