Greek Yogurt New Flavor Recommandation

MSMA GROUP 11

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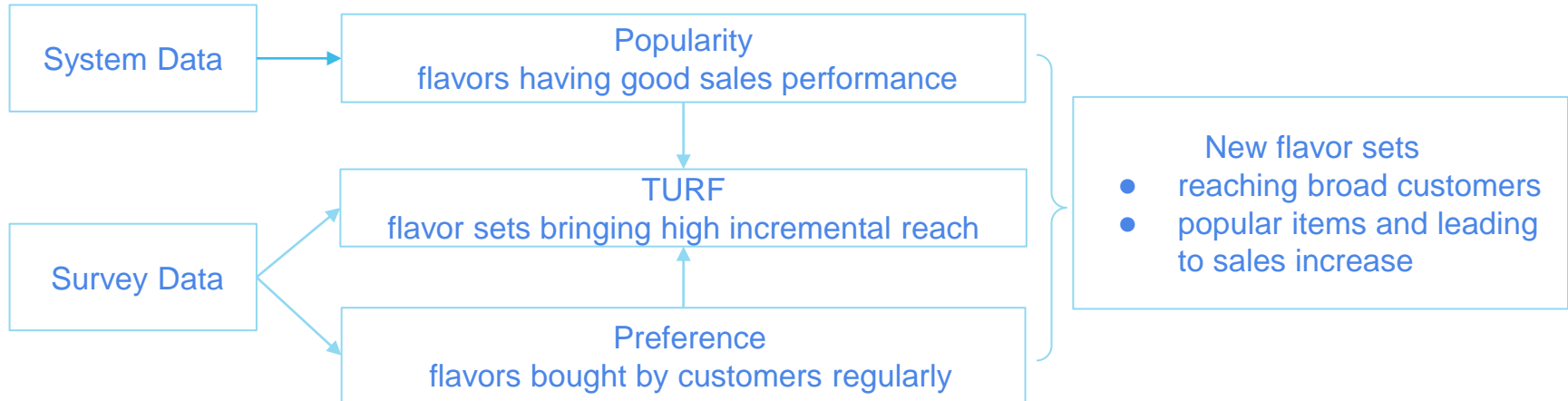
Predictive Methodology

Goal

While there is no obvious preferences between flavors of Regular yogurt, customers do have preferable flavors for Greek yogurt. Our goal is to figure out the optimal flavor portfolio.

Data	Analysis	Recommendation

System Data → **Popularity**
flavors having good sales performance

Survey Data → **TURF**
flavor sets bringing high incremental reach

Preference
flavors bought by customers regularly

New flavor sets
- reaching broad customers
- popular items and leading to sales increase

Key Insights

Black Cherry and **Raspberry** should be the next flavors to launch.

The existing flavors already let us enjoy a **97.68% reach**; Our current flavor portfolio is appealing to most customers.
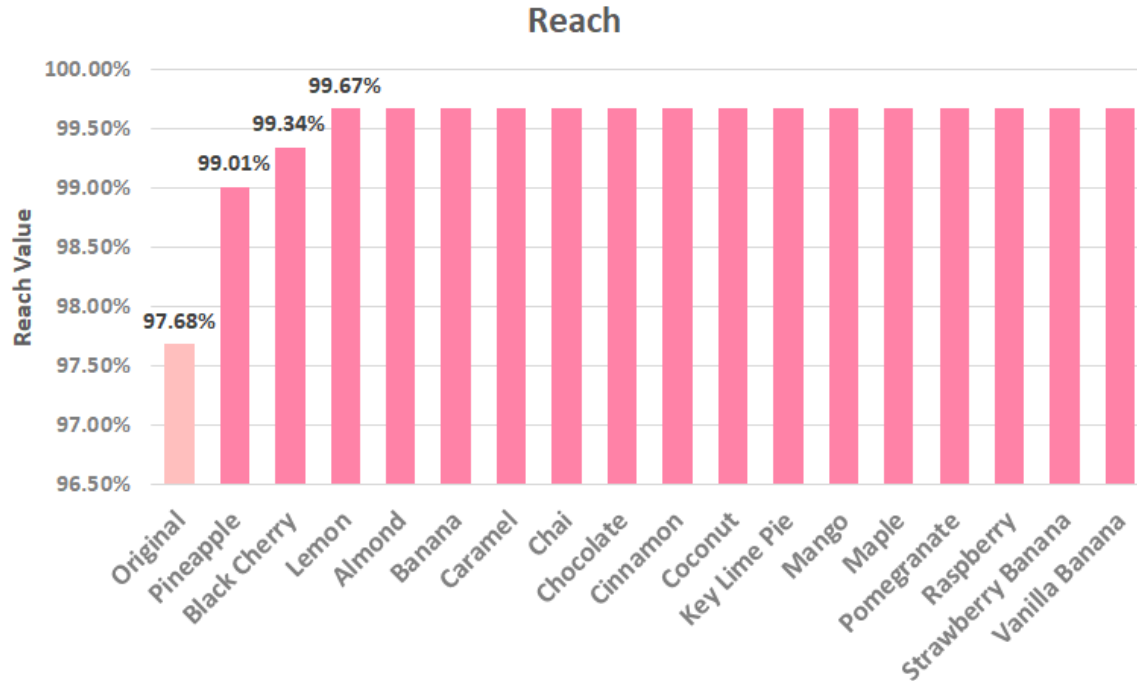
Black Cherry and Raspberry are **popular** in current Greek Yogurt market, ranking 1st and 2nd in average weekly sales, but not yet in our portfolio.

Black Cherry and Raspberry are also the most preferred flavors which customers reported to buy **regularly**.
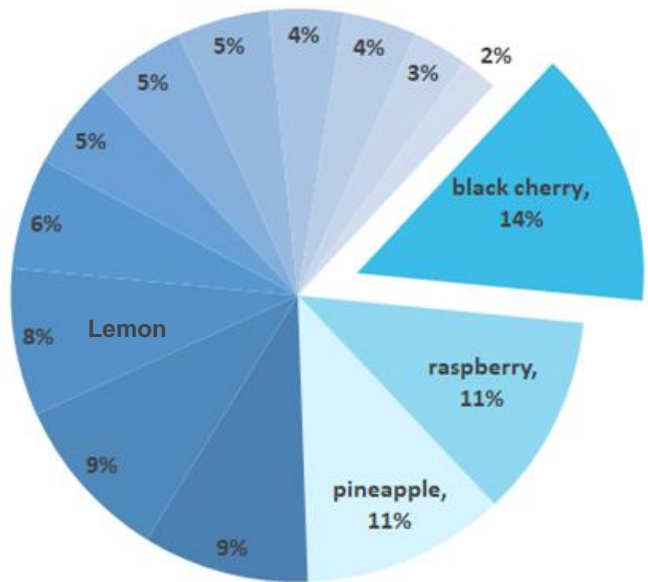
TURF Analysis shows that reach increase of launching new flavor is small

Reach

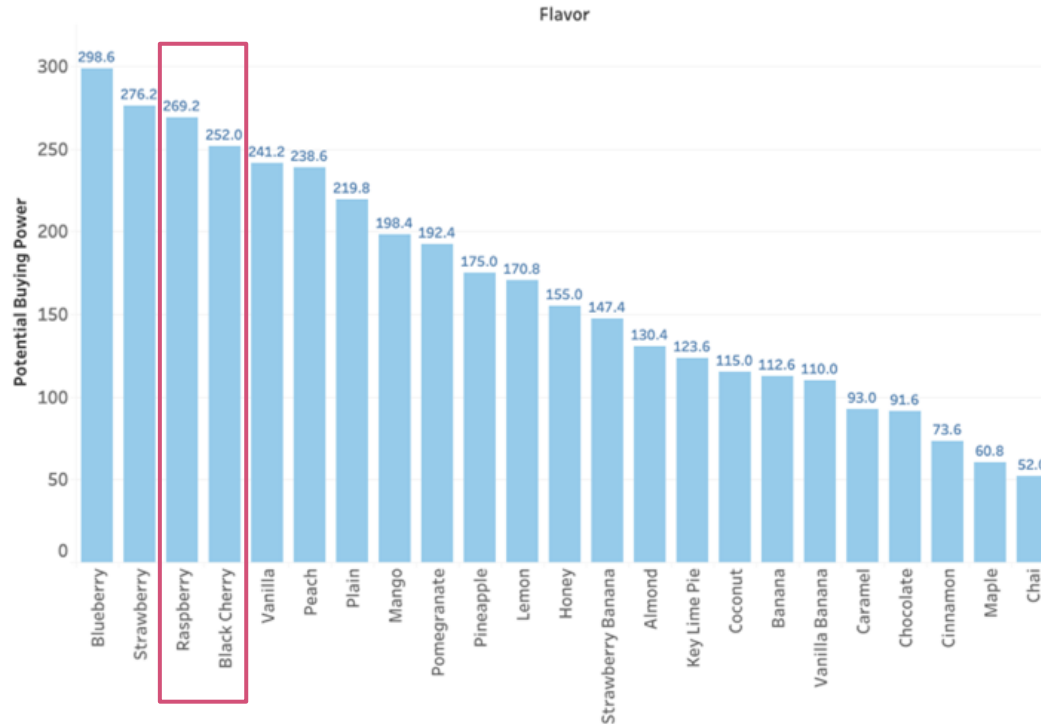Current flavors portfolio has already reach 98% of the market.

Black Cherry and Raspberry has proved popularity in current market

Greek Yogurt Weekly Sales by Flavor

Source: Loyalty Card System, see details in Appendix A

Raspberry and Black Cherry are the most preferred yet unlaunched flavors

Assumption:

Frequency	Weight
Regularly	0.8
Occasionally	0.2
Never	0
NA	Ignored

Source: Consumer Survey Data; Sample Size = 618, see details in Appendix B

*Potential Buying Power = sum(Number of consumers of different frequency*weight)

Appendix A – Sales Percentage Calculation

```
####### OUTPUT FOR SLIDE 3 #######
greekdt$SalesPercent <- greekdt$Sales.Week/sum(greekdt$Sales.Week)
regdt$SalesPercent <- regdt$Sales.Week/sum(regdt$Sales.Week)
greekdt
```

```
##         Flavor1 Sales.Week SalesPercent
## 1   black cherry  409.56306   0.14409692
## 2      raspberry  324.23641   0.11407637
## 3      pineapple  302.74007   0.10651330
## 4    pomegranate  261.64670   0.09205538
## 5       strawban  257.58329   0.09062575
## 6          lemon  225.62832   0.07938300
## 7          mango  160.62281   0.05651206
## 8          peach  153.64463   0.05405692
## 9      blueberry  145.36000   0.05114213
## 10       vanilla  137.00854   0.04820383
## 11    strawberry  124.35788   0.04375294
## 12         plain  110.47254   0.03886765
## 13         honey   82.12116   0.02889276
## 14        cherry   65.32754   0.02298424
## 15         chpom   44.63794   0.01570501
## 16       keylime   37.32404   0.01313175
```

```
regdt
```

```
##                   Flavor1 Sales.Week SalesPercent
## 1   strawberry/blueberry  76.765011   0.024467542
## 2       raspgoji/blueacai  73.288786   0.023359555
## 3             strawchsck  73.078067   0.023292392
## 4        strawberry/peach  70.803555   0.022567430
## 5                lmntorte  70.274193   0.022398705
## 6               chocrasp  66.743320   0.021273299
## 7  strawberry/peach/vanilla  65.697507   0.020939964
## 8               orgmango  59.756589   0.019046397
## 9              cookiecrm  59.547512   0.018979757
## 10              boscrmpie  57.433221   0.018305863
## 11             mnmvanilla  54.704808   0.017436228
## 12                vanilla  54.558251   0.017389515
## 13                cherry  52.951208   0.016877298
## 14             bancrmpie  52.646834   0.016780283
## 15                banana  52.188651   0.016634246
## 16               cocpnple  51.793744   0.016508376
## 17               blkbrypie  50.764091   0.016180191
## 18              strshortck  50.036713   0.015948352
## 19               keylime  49.661280   0.015828689
## 20                orange  49.173633   0.015673260
## 21              chocolate  48.290154   0.015391666
## 22             strawberry  48.224766   0.015370824
## 23                 peach  47.898937   0.015266972
## 24              blueberry  47.596124   0.015170456
## 25             raspberry  47.486160   0.015135406
## 26              raspchsck  47.119852   0.015018652
## 27  strawberry/raspberry  47.026998   0.014989056
## 28            mixed berry  46.097119   0.014692673
## 29              apltrnovr  45.503319   0.014503410
## 30          vanilla/keylime  45.325204   0.014446639
```

```
####### OUTPUT FOR SLIDE 6 #######
survques <- as.data.frame(t(survques))
survres <- survres[survres$Q1 != 2 & survres$V10 != 0, ]

greekres <- survres[, c(15:37)]
names(greekres) = sub('......$', '', substr(survques[c(15:37),], 105, 130))
greekres <- greekres[-which(apply(greekres,1,function(x) all(is.na(x)))), ]
for (i in c(1:ncol(greekres))){
    a <- nrow(greekres[which(greekres[, i] == 0),])*0.8 + 0.2*nrow(greekres[which(greekres[, i] == 1),])
    greekres[605, i] <- a
}
yogrank <- t(greekres[605, ])
yogrank <- yogrank[order(yogrank, decreasing = TRUE),]
yogrank
```

```
##          Blueberry       Strawberry        Raspberry      Black Cherry
##              298.6            276.2            269.2            252.0
##            Vanilla            Peach            Plain            Mango
##              241.2            238.6            219.8            198.4
##        Pomegranate        Pineapple            Lemon            Honey
##              192.4            175.0            170.8            155.0
## Strawberry Banana           Almond     Key Lime Pie          Coconut
##              147.4            130.4            123.6            115.0
##             Banana   Vanilla Banana          Caramel        Chocolate
##              112.6            110.0             93.0             91.6
##           Cinnamon            Maple             Chai
##               73.6             60.8             52.0
```