Hackathon Charlotte

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Problem we chose to solve

Geographic dispersion of customers

Identify incremental revenue potential for each store

Store – spending pattern by segment and category

Suggest ways of capturing that potential

Consumer preferences identified through social media

Demographic data for the store regions
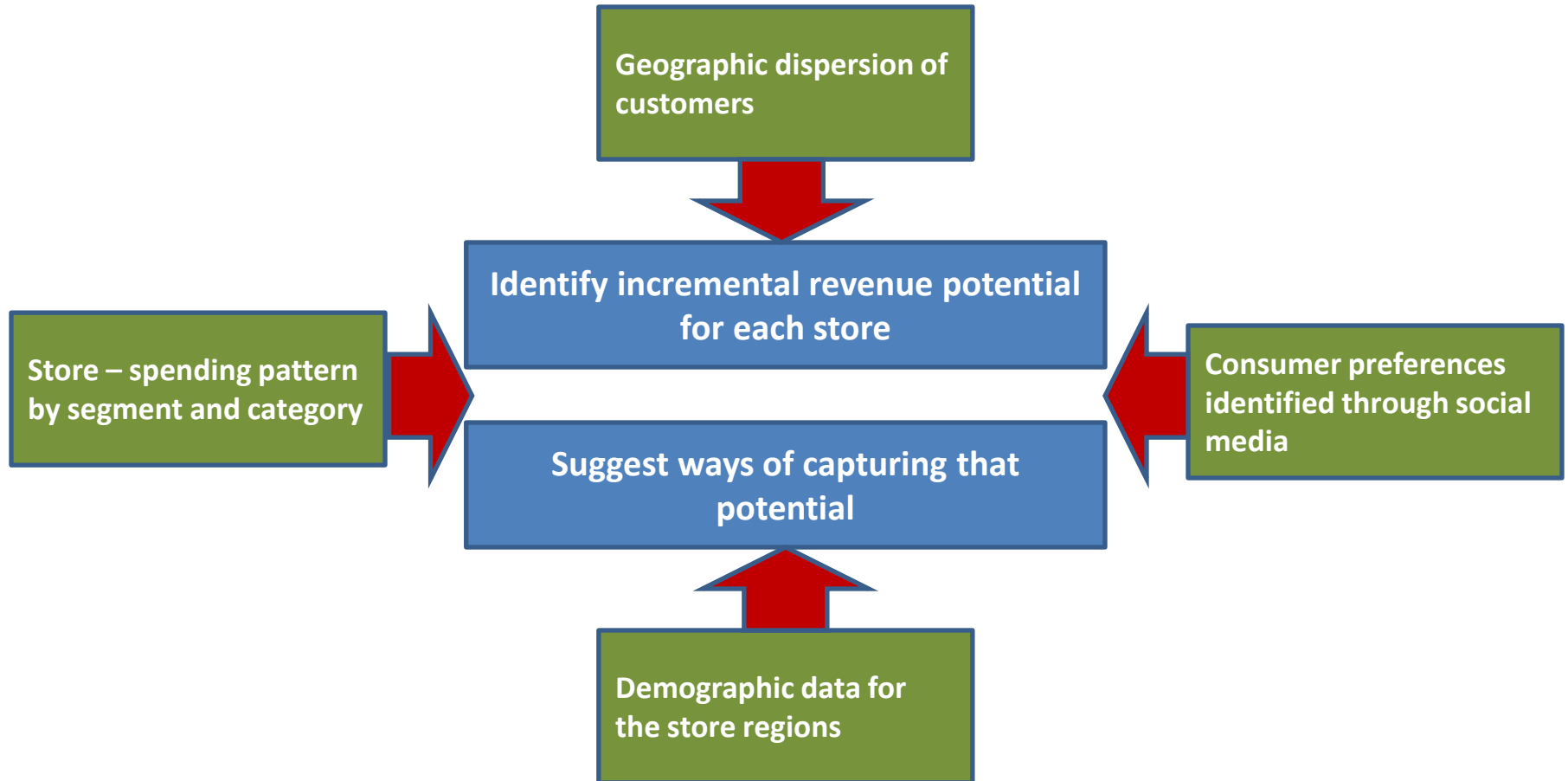
Assumptions we made

- Households in the same segment have the same spending potential

- Harris Teeter has the ability to develop customized merchandizing strategy by store

- Harris Teeter will be able to custom target segments using promotions and coupons

- The households who appear to reside a long distance away from the store they are shopping in have moved but have not updated their address
  - There could be households who purchased while visiting friends and relatives and we discerned them by looking at the frequency of purchase at the store (if they bought once or twice we consider them as visitors
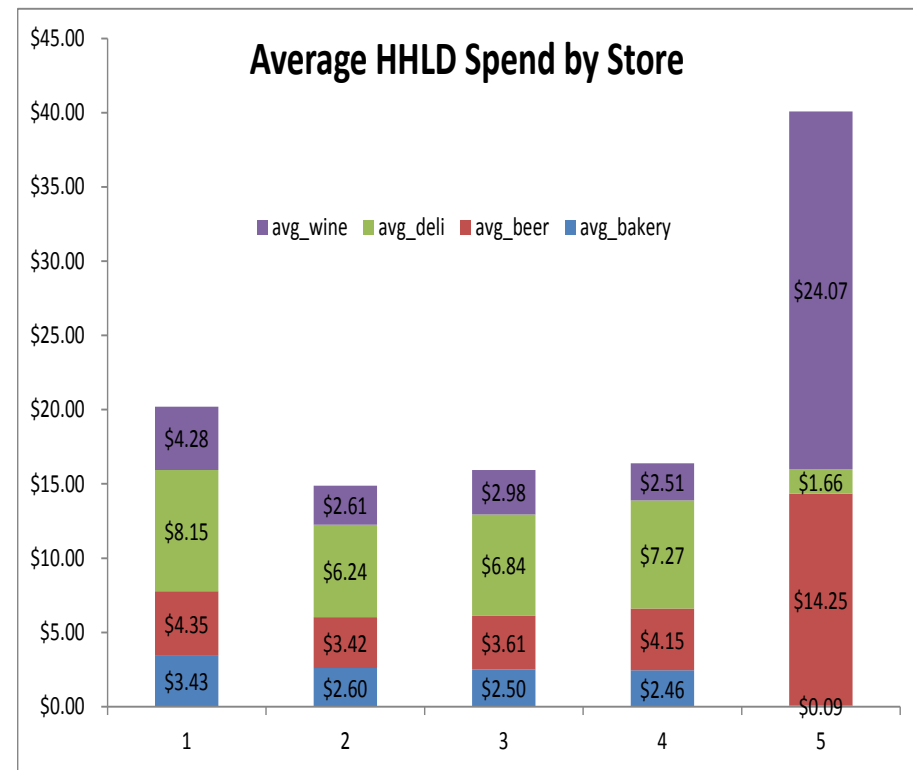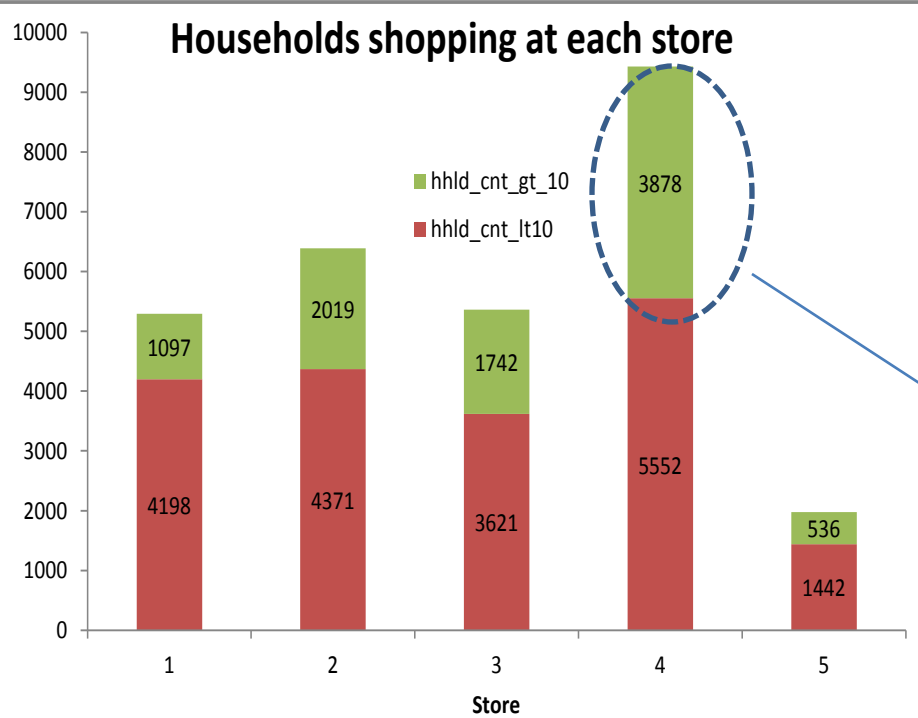
Potential estimation methodology

- We use the max spend for each segment for each category and consider that as the potential

- Then we look at each segment's spend at each store and if they are spending less than 70% of the max potential – we calculate the difference between the actual spend and max spend and consider that as the incremental spend that the store can capture

- For households who appear to be travelling more than 10 miles to shop:
  - They may be visiting friends or relatives and occasionally shoppin
  - Or they have moved and not updated their address
  - We looked at the frequency of purchase and only considered those that have bought more than twice as potential regular buyers
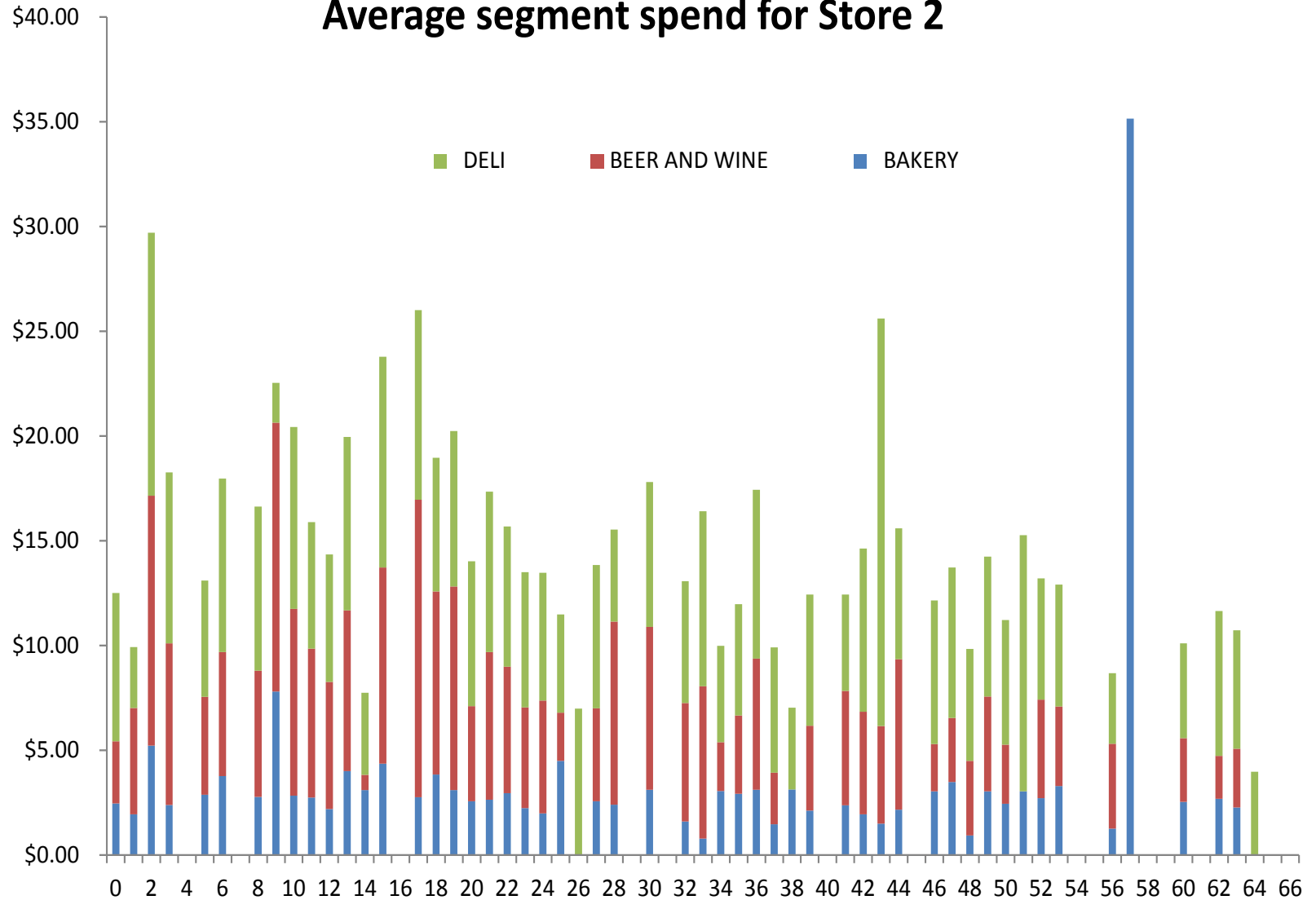
What is the opportunity

To showcase – we only look at households within 10 miles of where they shop

We have done the same analysis for households living greater than 10 miles away

Store wise Category Spend

Store 1: WINE $22,682; DELI $43,171; BEER $23,044; BAKERY $18,149
Store 2: WINE $16,659; DELI $39,897; BEER $21,879; BAKERY $16,638
Store 3: WINE $15,974; DELI $36,700; BEER $19,380; BAKERY $13,390
Store 4: WINE $23,664; DELI $68,597; BEER $39,094; BAKERY $23,226
Store 5: WINE $47,608; DELI $3,279; BEER $28,185; BAKERY $173

Legend: WINE, DELI, BEER, BAKERY

Households shopping at each store

Store 1: hhld_cnt_gt_10 1097; hhld_cnt_lt10 4198
Store 2: hhld_cnt_gt_10 2019; hhld_cnt_lt10 4371
Store 3: hhld_cnt_gt_10 1742; hhld_cnt_lt10 3621
Store 4: hhld_cnt_gt_10 3878; hhld_cnt_lt10 5552
Store 5: hhld_cnt_gt_10 536; hhld_cnt_lt10 1442

Legend: hhld_cnt_gt_10, hhld_cnt_lt10

Average HHLD Spend by Store

Store 1: avg_wine $4.28; avg_deli $8.15; avg_beer $4.35; avg_bakery $3.43
Store 2: avg_wine $2.61; avg_deli $6.24; avg_beer $3.42; avg_bakery $2.60
Store 3: avg_wine $2.98; avg_deli $6.84; avg_beer $3.61; avg_bakery $2.50
Store 4: avg_wine $2.51; avg_deli $7.27; avg_beer $4.15; avg_bakery $2.46
Store 5: avg_wine $24.07; avg_deli $1.66; avg_beer $14.25; avg_bakery $0.09

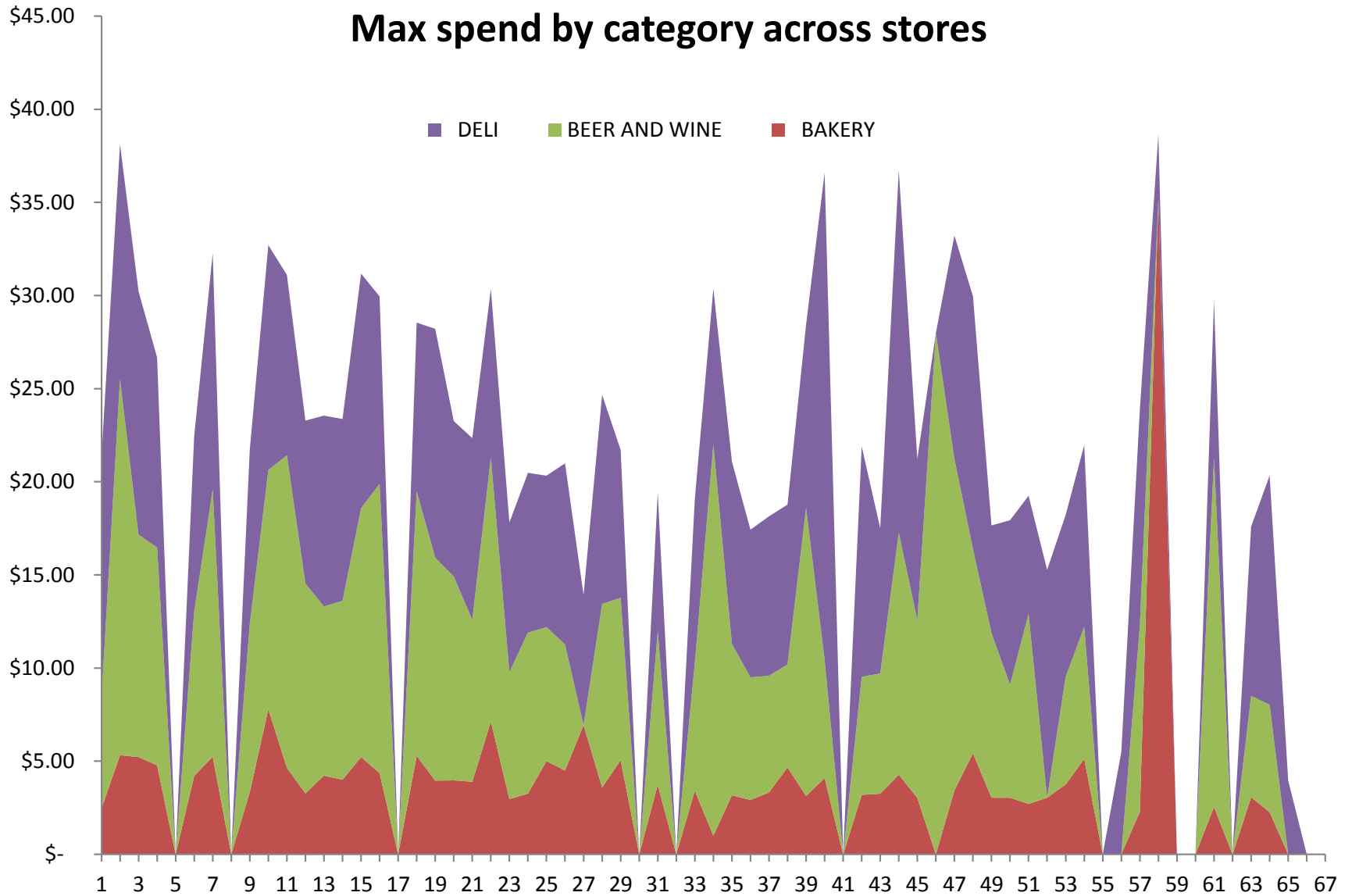Legend: avg_wine, avg_deli, avg_beer, avg_bakery

When these customers buy more than once or twice (and hence prove themselves to not be 'visitor buyers' – ask the cashier interacting with them to update their address
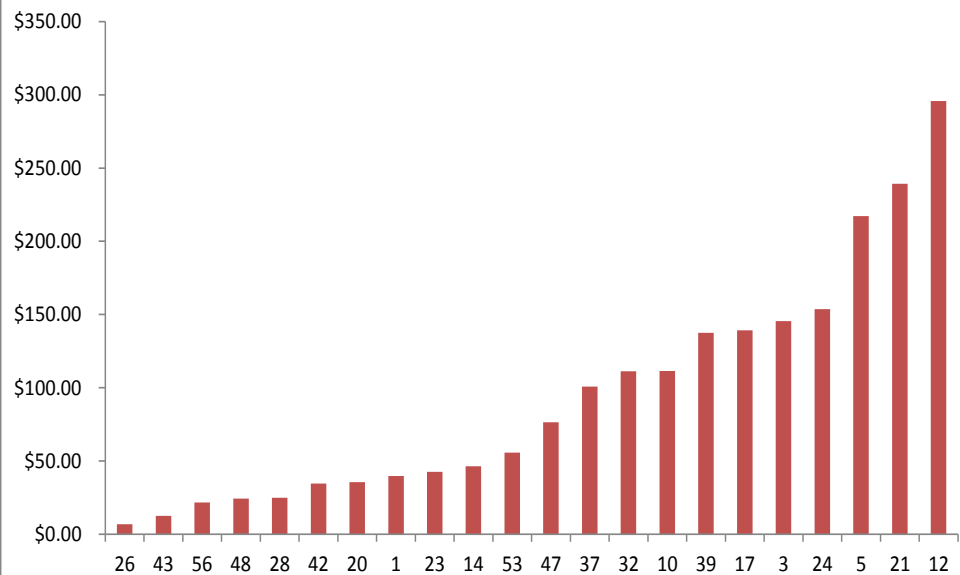
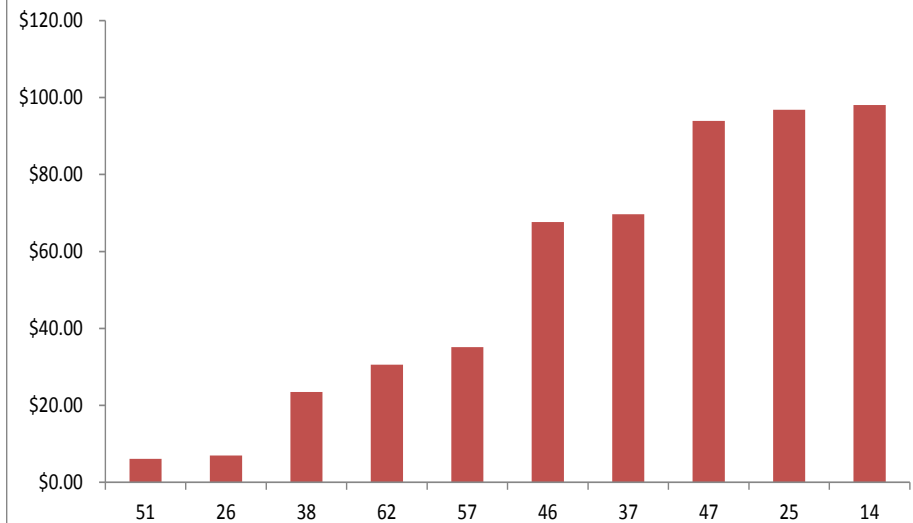Average segment spend for Store 2

■ DELI   ■ BEER AND WINE   ■ BAKERY
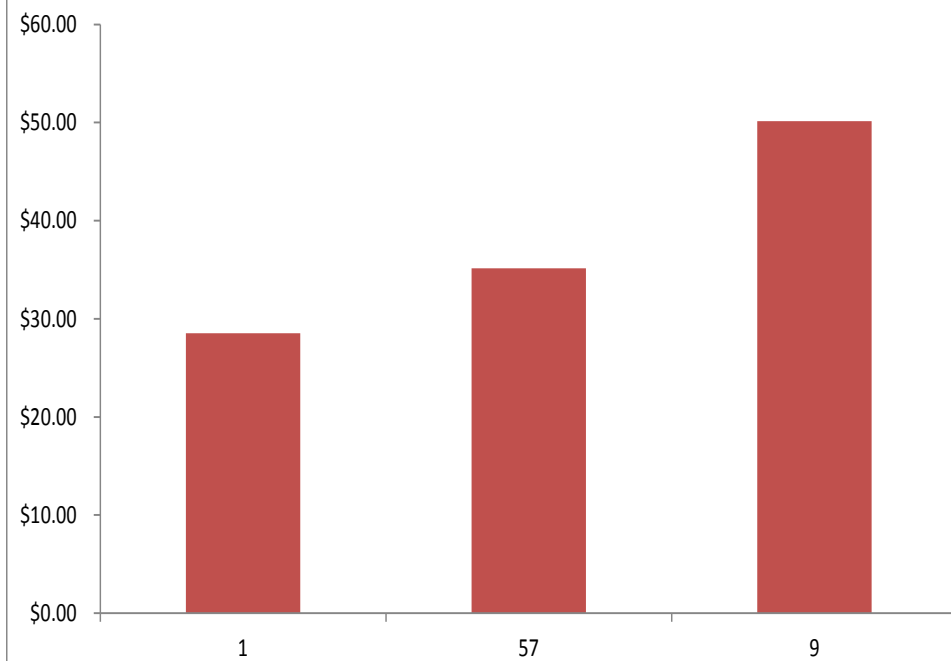
Max spend by category across stores

DELI   BEER AND WINE   BAKERY

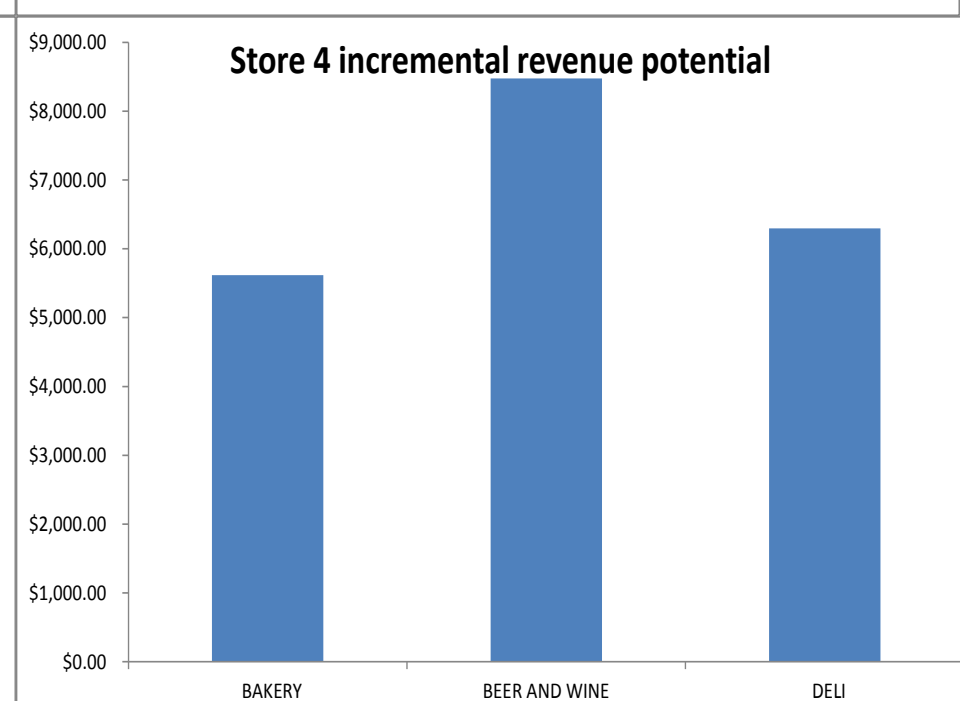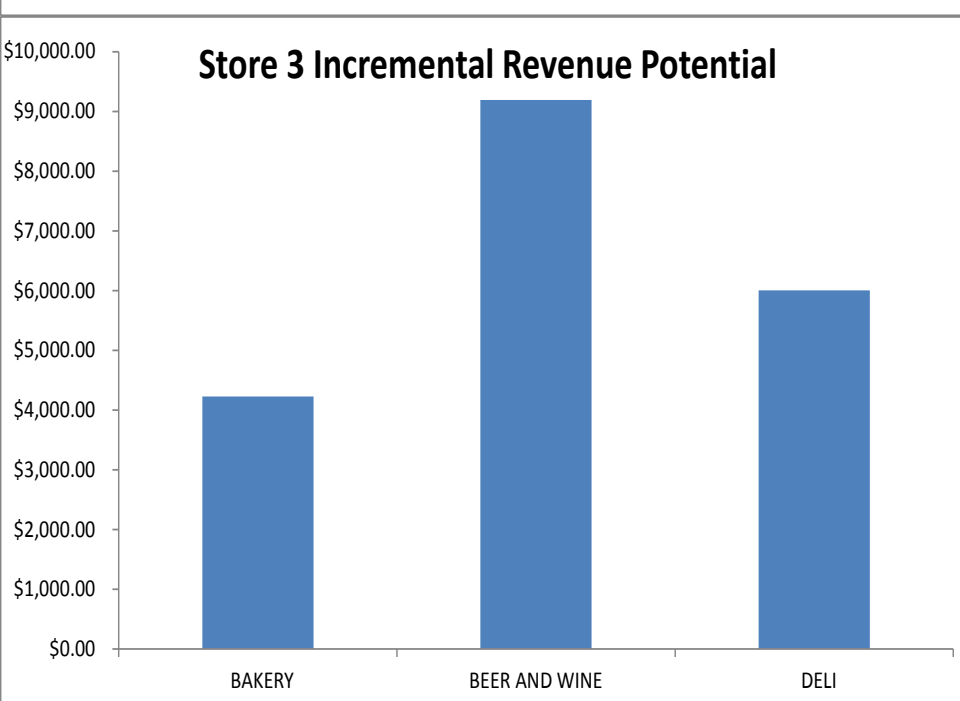**Store 2 potential for incremental Bakery Revenue**

Store 2 potential for incremental Beer and Wine Revenue

Store 2 potential for incremental Deli Revenue

Store 1 incremental revenue potential (includes closure of store 5)

Store 2 Incremental Revenue Potential

Store 3 Incremental Revenue Potential
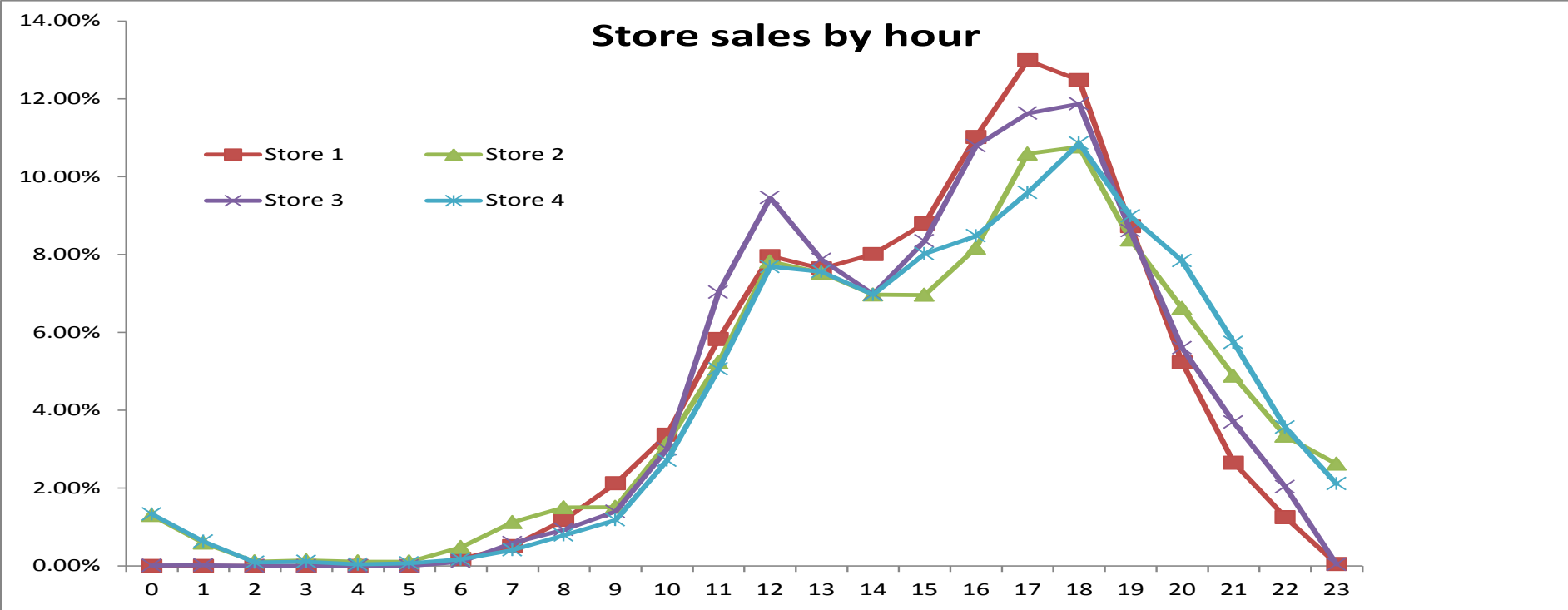
Store 4 incremental revenue potential
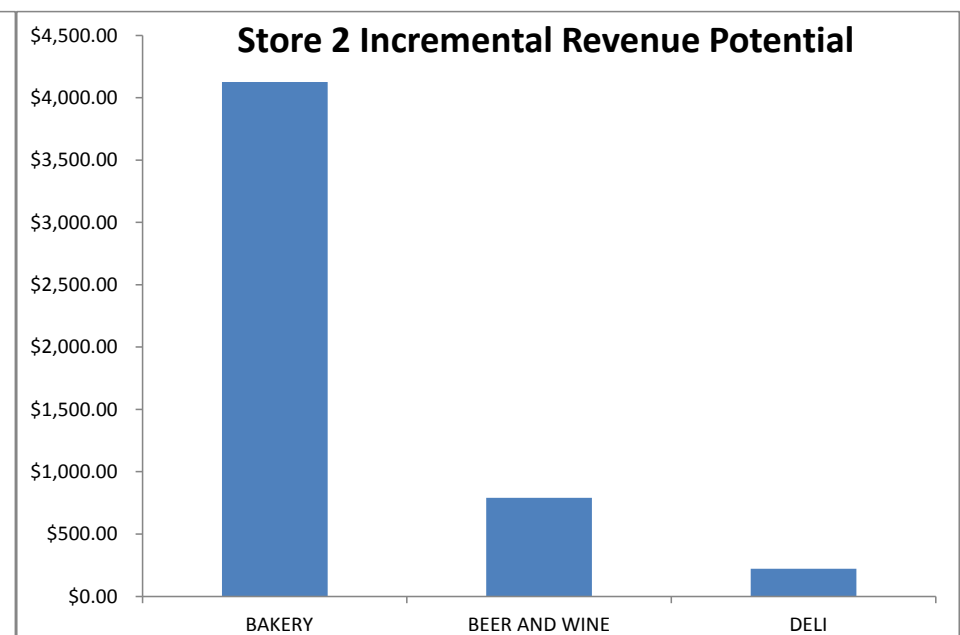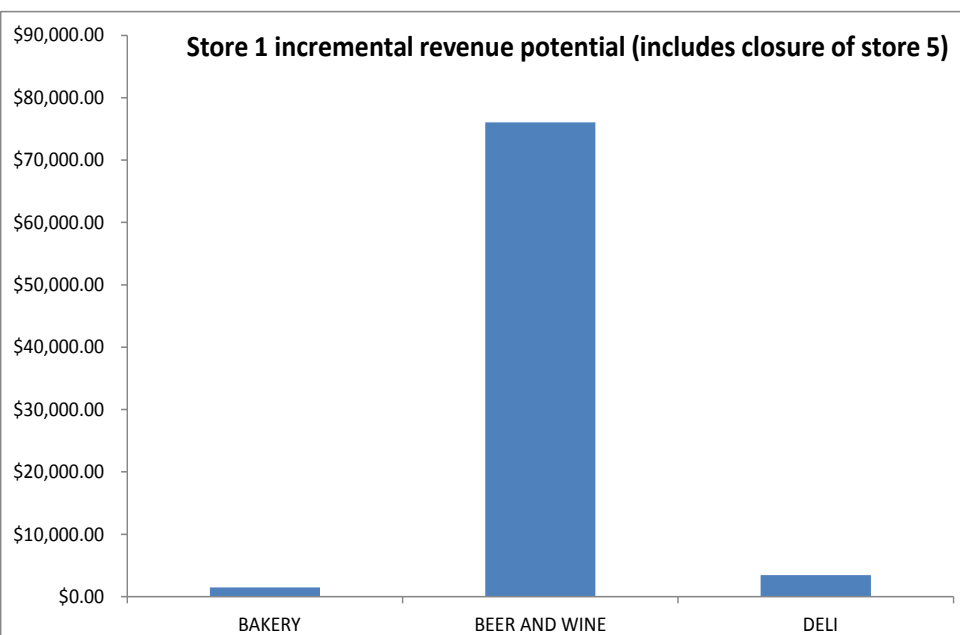
How do we get to the opportunity

We took a few examples of how Harris Teeter can integrate public and social data to target relevant stores, segments and households using

1) Promotional offers
2) POS Coupons
3) Custome Merchandising

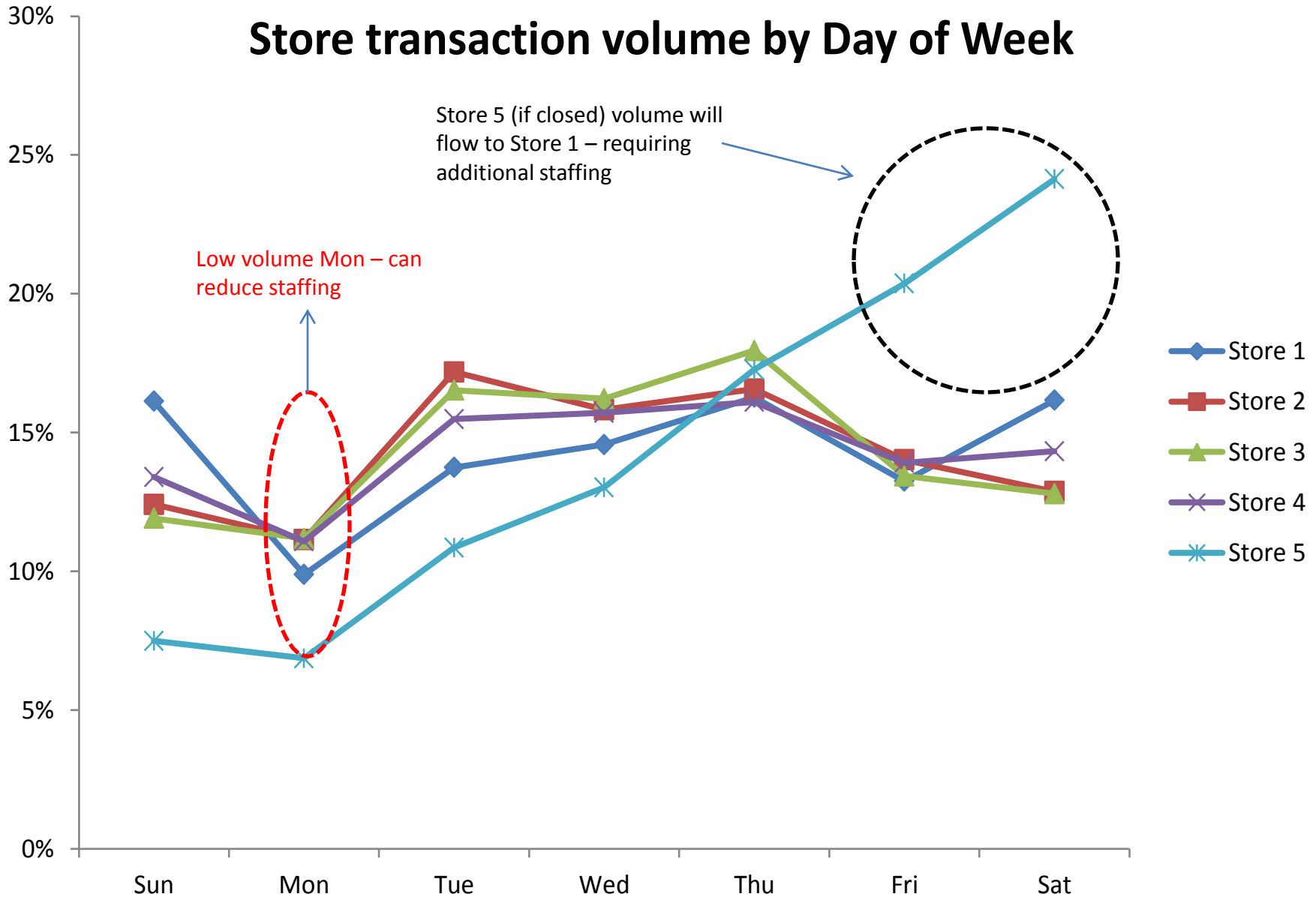|	Store 2,3	Store 1,5	Store 4
Median Income ($)	50,538	61,899 (B)	41,340
Cost Of Living Index	146	164	116
Median Mortgage To Income Ratio (%)	21	21.7	22.9
Owner Occupied Homes (%)	47	71	51
Median Rooms In Home	5.1	5.9	4.8
College Degree (%)	45	46	24
Professional (%)	42	49	27
Population	17,753	42,701 (A)	25,948
Average Household Size	2.5	2.6	2.7
Median Age	27.1	31.1	28.7
Male To Female Ratio (%)	107.9	96.8 (C)	108.8
Married (%)	44	63	46
Divorced (%)	6.8	8.1	8.9
White (%)	59.9	62.1	32
Black (%)	26	27.4	45.5
Asian (%)	7	4	3
Hispanic Ethnicity (%)	4	(D) 4	17

A After closing store 5, open another store at a logical distance

B Target relevant segments stimulating higher volume purchase (buy 2, get 1 free) and/or coupons on higher margin/priced items

C Stock more beer in stores 2,3,4 and wine in store 1. Also can target gender based products

D Opportunity to stock more Hispanic foods in store 4, Asian food in store 2,3 and corresponding promotional coupons

Store sales by hour

Store 1 · Store 2 · Store 3 · Store 4

Store sales by hour

Store 1 · Store 2 · Store 3 · Store 4

People buying online
Targeted promotion
And push in other stores

Store transaction volume by Day of Week

Store 5 (if closed) volume will flow to Store 1 – requiring additional staffing

Low volume Mon – can reduce staffing

Legend:
- Store 1
- Store 2
- Store 3
- Store 4
- Store 5

X-axis: Sun, Mon, Tue, Wed, Thu, Fri, Sat

Y-axis: 0%, 5%, 10%, 15%, 20%, 25%, 30%

From Facebook API

Social Media Indicators (Aggregated results using Facebook Graph API)			
Source	Category	Likes	Post/ Topic
Facebook Graph API	Organic Foods	33	TELL US: What are your MUST BUY organic products and why?
Facebook Graph API	Daily Specials	39	Today feels like a good day for snacks! TODAY ONLY e-VIC members can purchase 13.7 oz. Cheez-Its
Facebook Graph API	Deli	268	Beef for dinner? Yes please! USDA Choice Harris Teeter Reserve Angus Beef Boneless Top
Most liked Post			
Facebook Graph API	Daily Specials	871	Hey SuperMoms! Cantaloupes and Blueberries are BOGO this week. Which do you prefer feeding your kids? Like for cantaloupes,

HT can identify likes and comments on posts like these (by geography) and use the preferences to target similar pushes in store (like focus on Organic promos in the geography where most Organic likes are coming from)

Architecture