

# Retail Trends Using Contextualized Foot Traffic Data

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October 2023



# Agenda

Context For Understanding Today's Retailer Health



01

02

03

04

05

## Introduction

Who is Placer.ai and how do we get our data

## Health of the Consumer

Significant shifts in consumption began during 2022 & those have compounded

## Inflation's Impact

Higher grocery prices ate away purchasing power of discretionary goods

## Monetary Tightening's Impact

Consumers chose thriftiness and purchase occasions moved to value formats

## Discretionary Spending Outlook

Should food inflation reverse, purse strings will loosen

# How Placer.ai Works

Observe. Analyze. Present.



For any location in the U.S., Placer.ai observes a portion of the visiting customers. Akin to a statistical survey, this observed data is aggregated and used to generate insights into any venue. Placer.ai then extrapolates a range of metrics that provide visibility into consumer behavior.

## 01 - Observe

Anonymized location data from tens of millions of mobile devices used as a core panel.

- Visitation Trends
- Trade Area Analysis
- Customer Demographics

## 02 - Analyze

Accurate and reliable estimations on activity across the entire U.S. population.

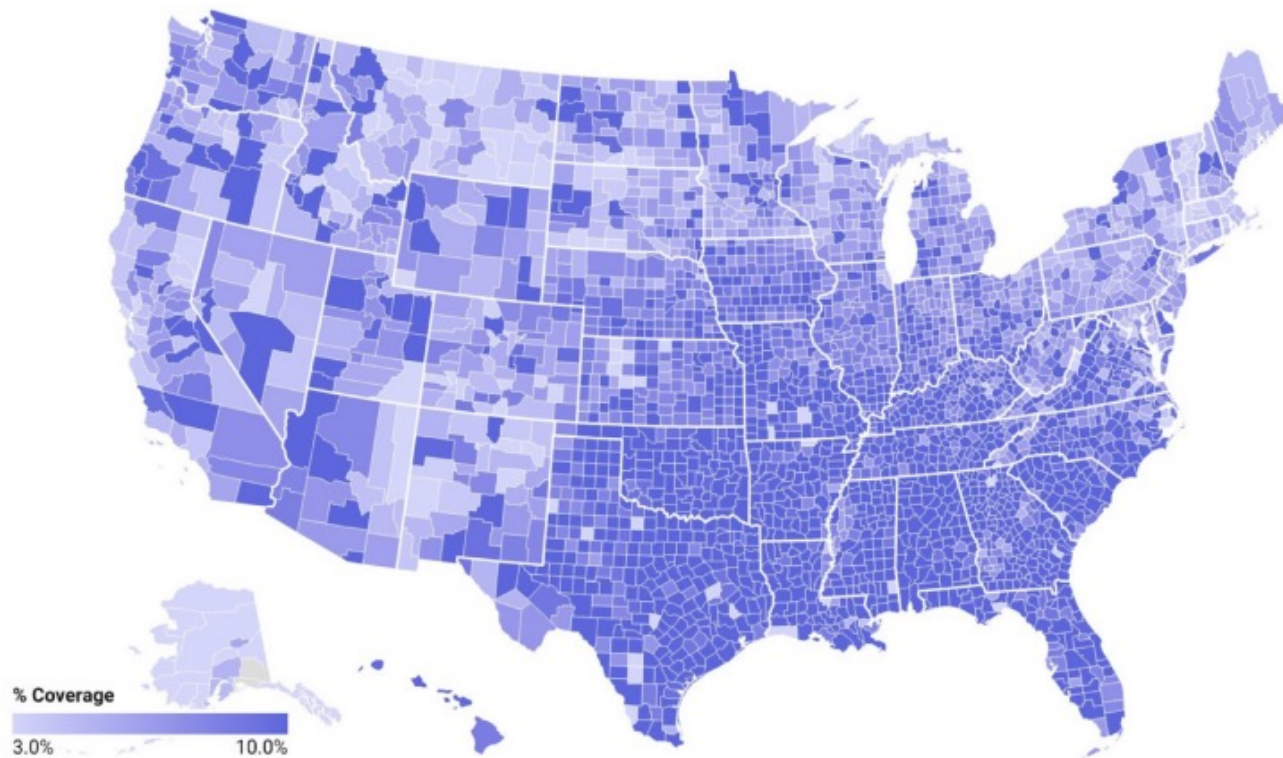
- Extrapolated Panel Data
- Normalized & Debiased
- "Ground Truth" Validated

## 03 - Present

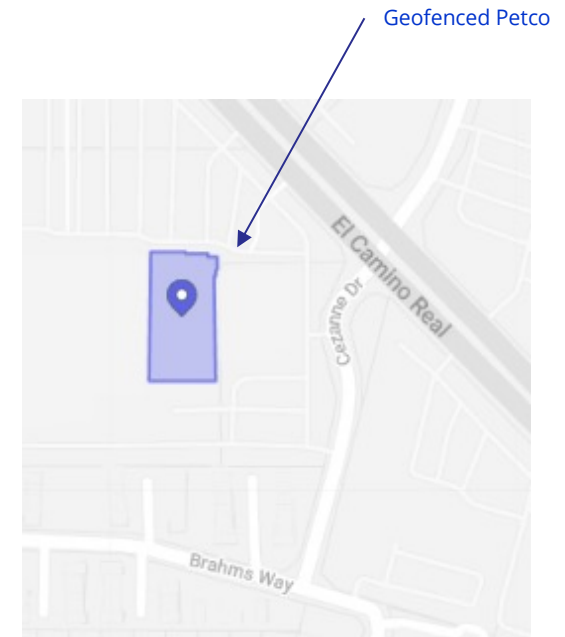
A wealth of detailed reports containing critical insights into what is truly happening offline.

- 30M Active Devices
- 1.5B Monthly Retail Visits
- 500 Mobile Apps w/ SDK

## Coverage & Representation, Placer.ai



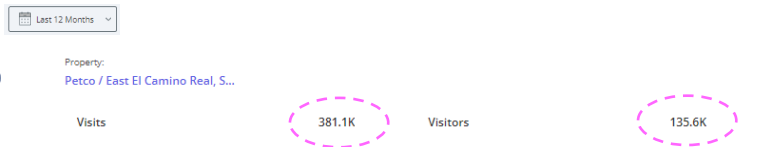
## Geofencing a Petco, this one is in Sunnyvale



# What Mobile Data Can See, Petco - Sunnyvale



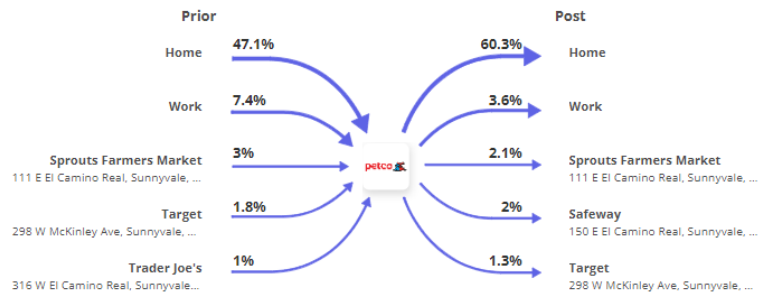
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2



3



4

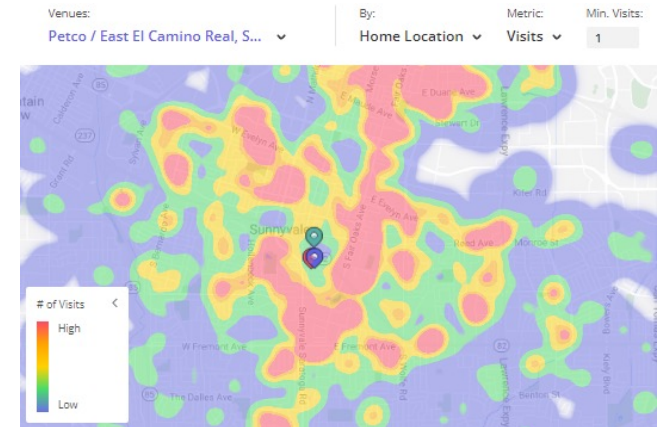
Category: Pet Stores & Services

Min. Visits: 1

Petco / East El Camino Real, Sunnyvale, CA

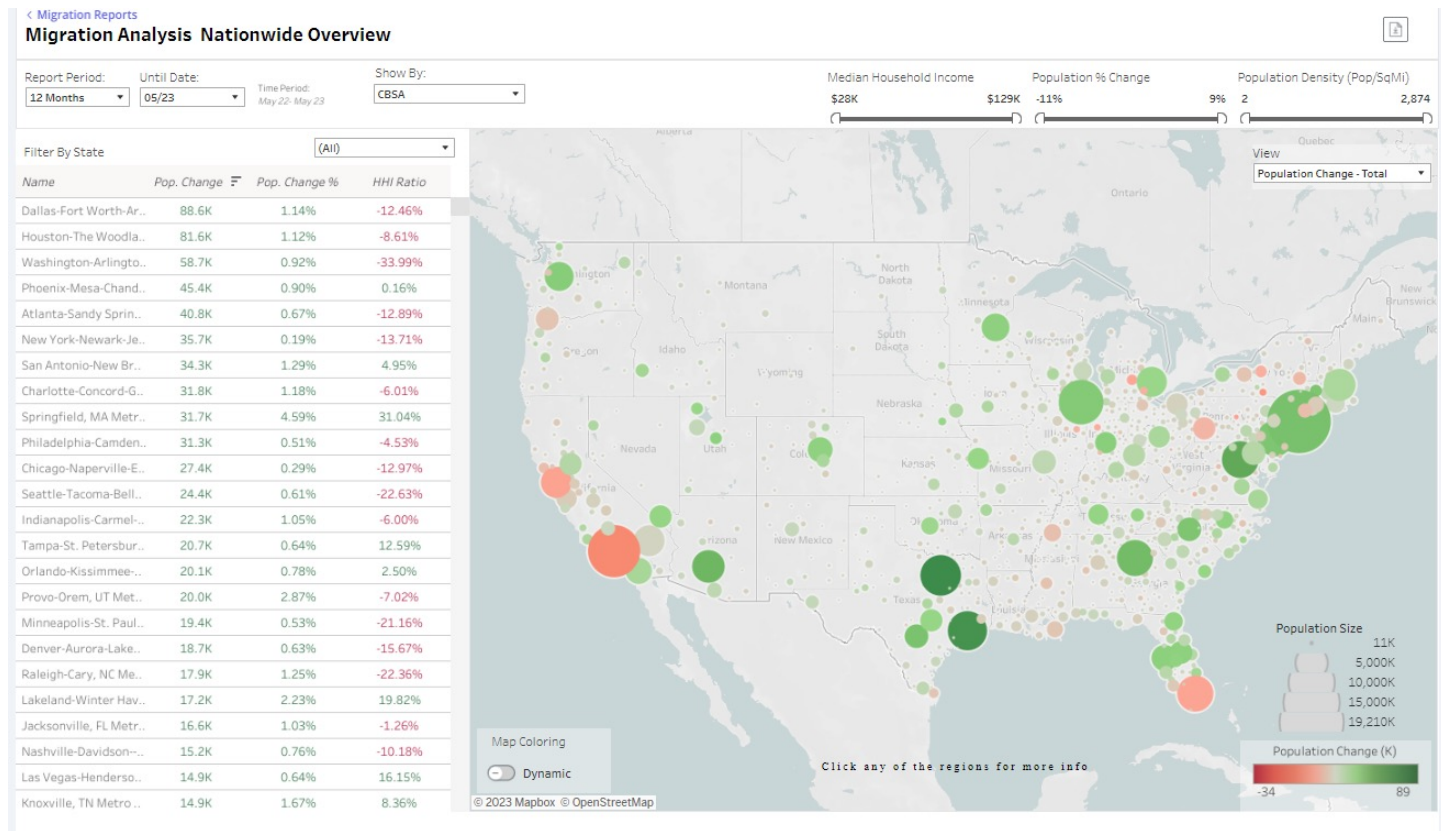
Rank	Name	Visitors
1	PetSmart / Nationwide	28.8K (21.2%)
2	Pet Food Express / Nationwide	12.9K (9.5%)
3	VCA Animal Hospitals / Nationwide	4.9K (3.6%)
4	Pet Club / Nationwide	4.9K (3.6%)
5	Banfield Pet Hospital / Nationwide	1.5K (1.1%)
6	Unleashed by Petco / Nationwide	1.4K (1.1%)

5



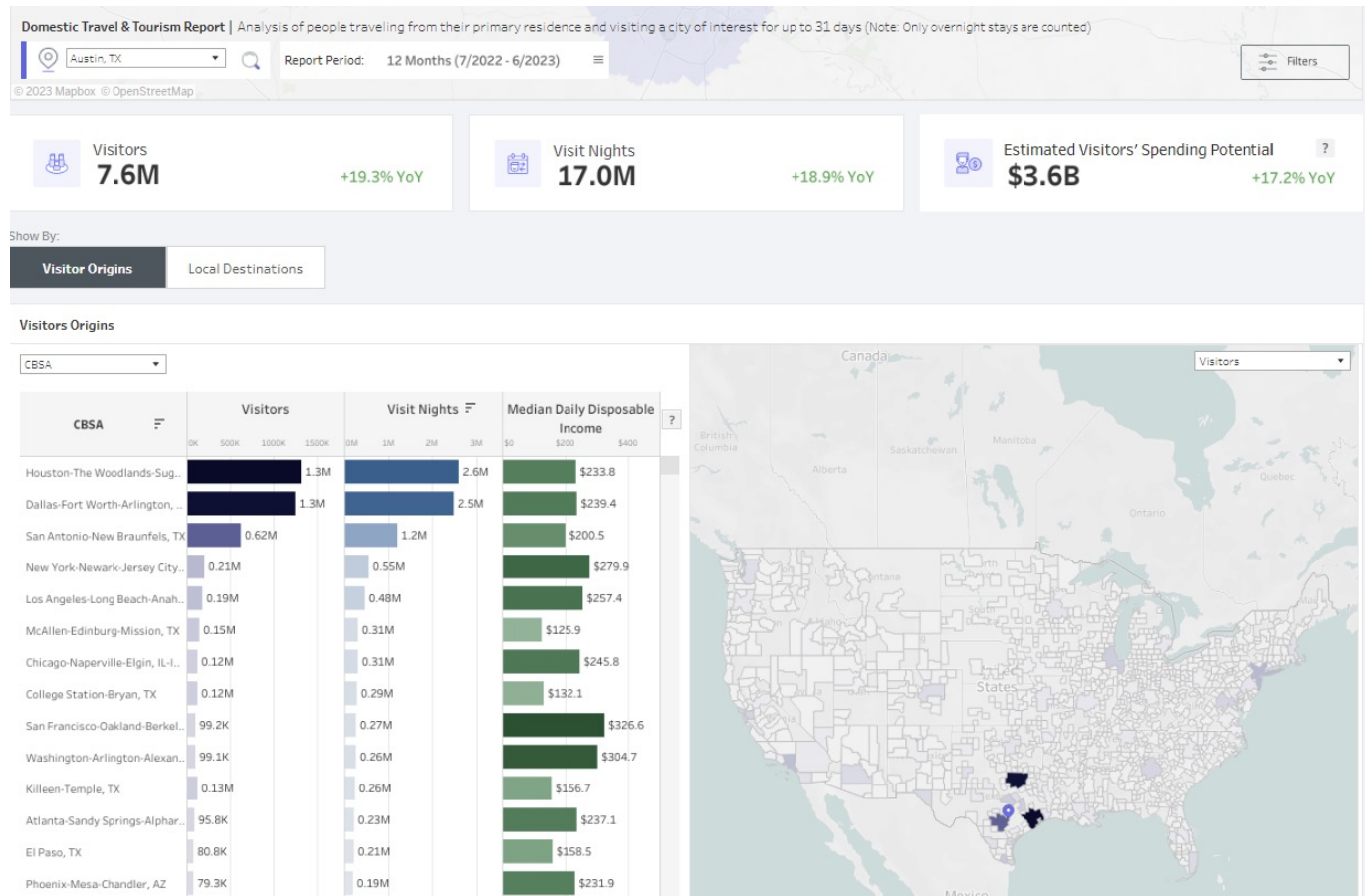
# **Other Forms of Data Aggregation**

# High-Inference Migration Analysis

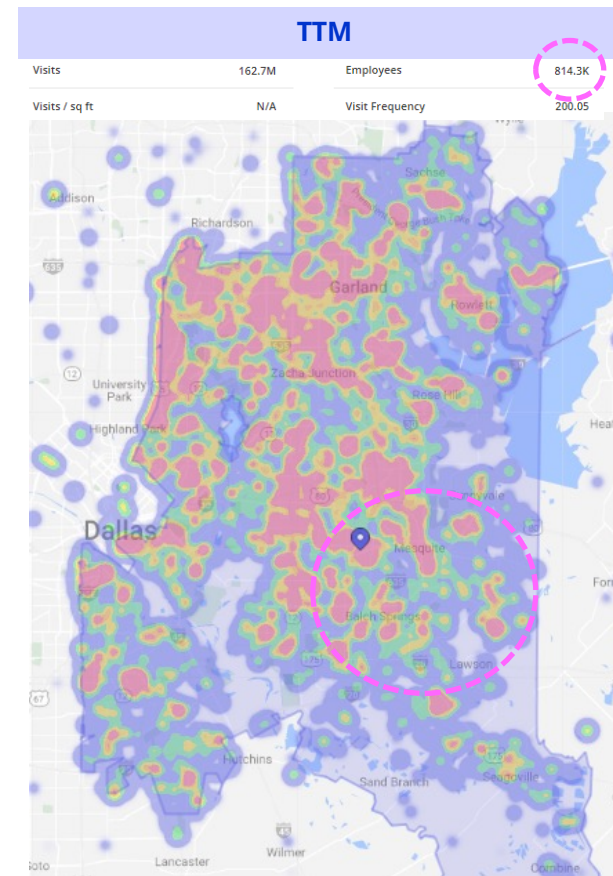
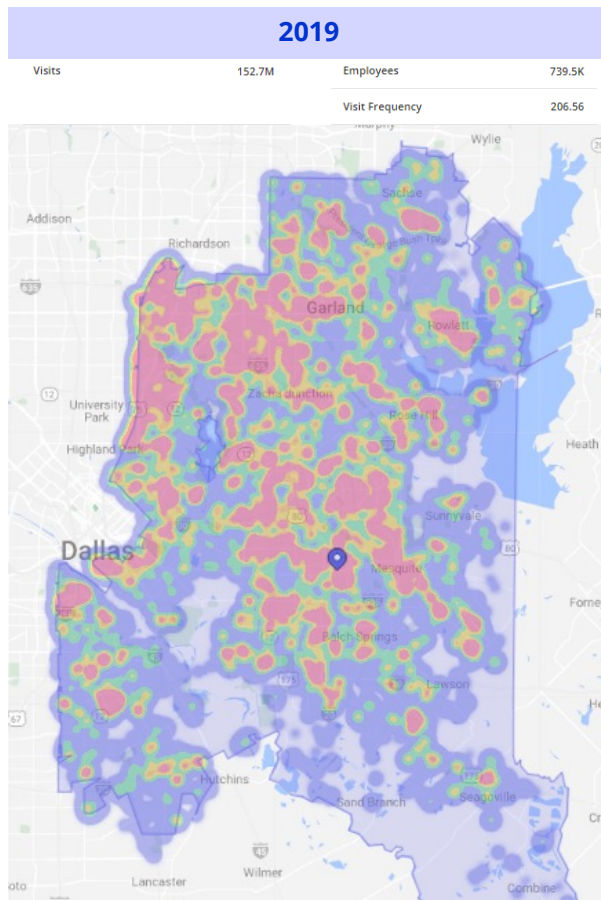




# High-Inference Tourism Analysis



# Identify Workforce “Center of Gravity”



● Employees
● Days of Week / Monday, Tuesday, We...
● Length of Stay / more than / 120 min



# The Real Story Behind Any Physical Location In America

As Placer offers the best real-time data on the U.S. consumer economy, which represents >70% of the world's largest economy, thus affecting the global financial markets, interest & exchange rates, politics, and all matter of quarters



## **Four Big Shocks To Retail Over Past Year**



- 1) High Inflation In Essentials**
- 2) Recessionary Fears and Monetary Tightening**
- 3) Consumers Preferencing Experiences Over Goods**
- 4) Return-to-Office**

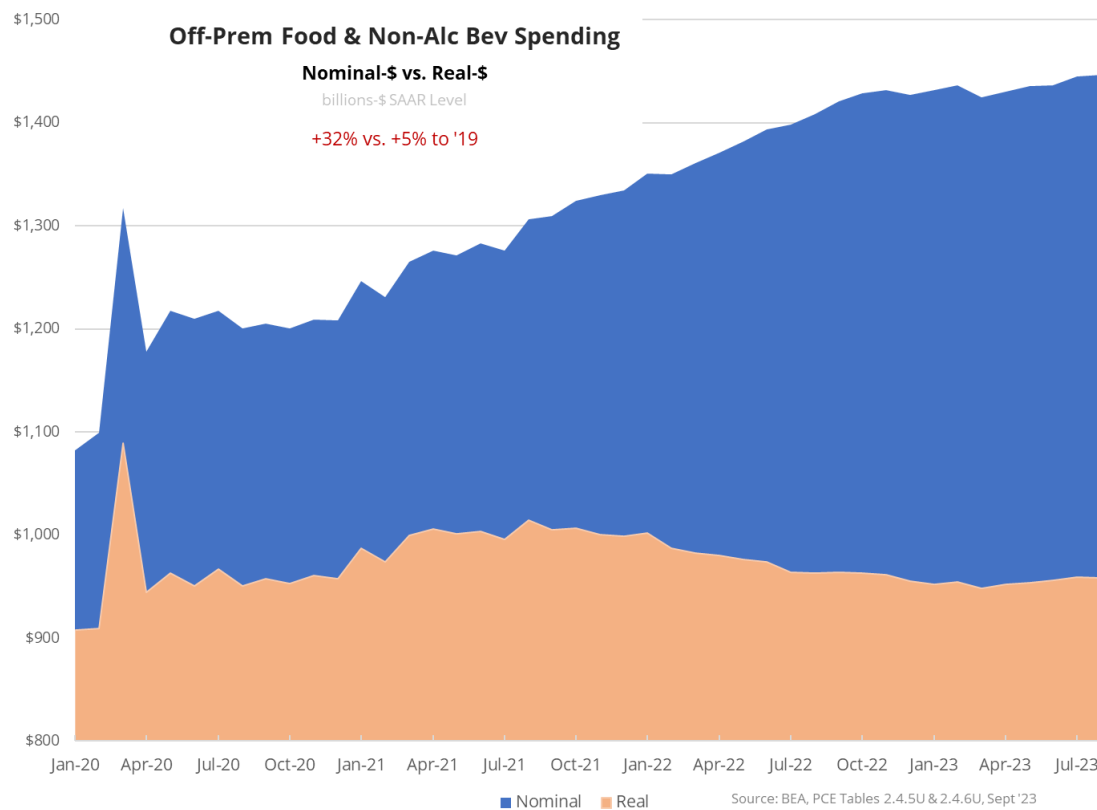
01

# **Inflation's Impact on Retail Visitation & Discretionary Expenditure**

A Big Bite Out of Discretionary & Quasi-Disc.

# Views On Inflation Are Shaped by Food Inflation

How are consumers adjusting to unprecedented food inflation?



Ate up\* discretionary spending by less affluent HHs during the 2H'22 and 1H'23

\*\$250B worth, or 1.7% of overall PCE

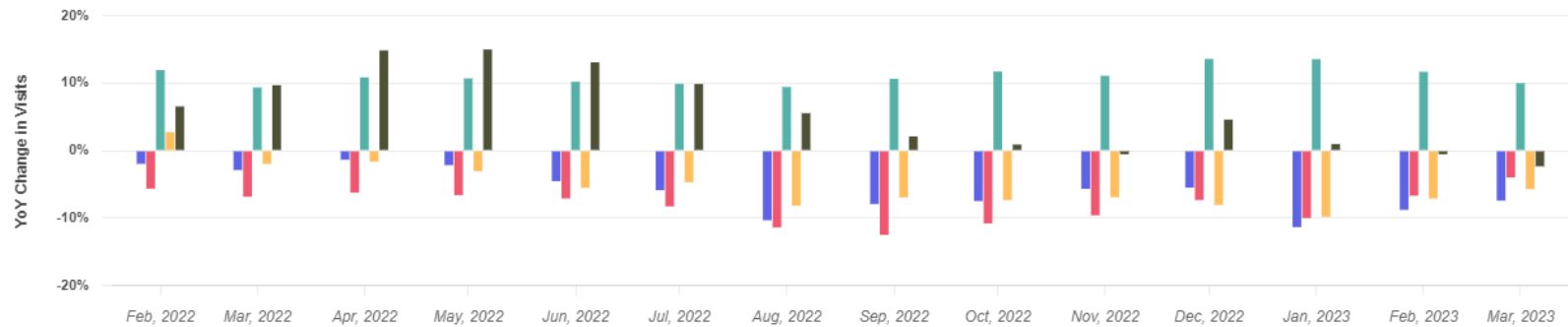
# Channel Shift to Value Formats, Building Since Feb '22



Kroger Nationwide	:	Sprouts Farmers Market Nationwide	:	Grocery Outlet Bargain Market Nationwide	:	Albertsons Nationwide	:
Food 4 Less Nationwide	:	+					

## Variance - Compare

Chains: ☒ ☒ ☒ ☒ ☒ ☐ Aggregation: Monthly Compare to: Prev. Years Compared Year: 1 Year Ago



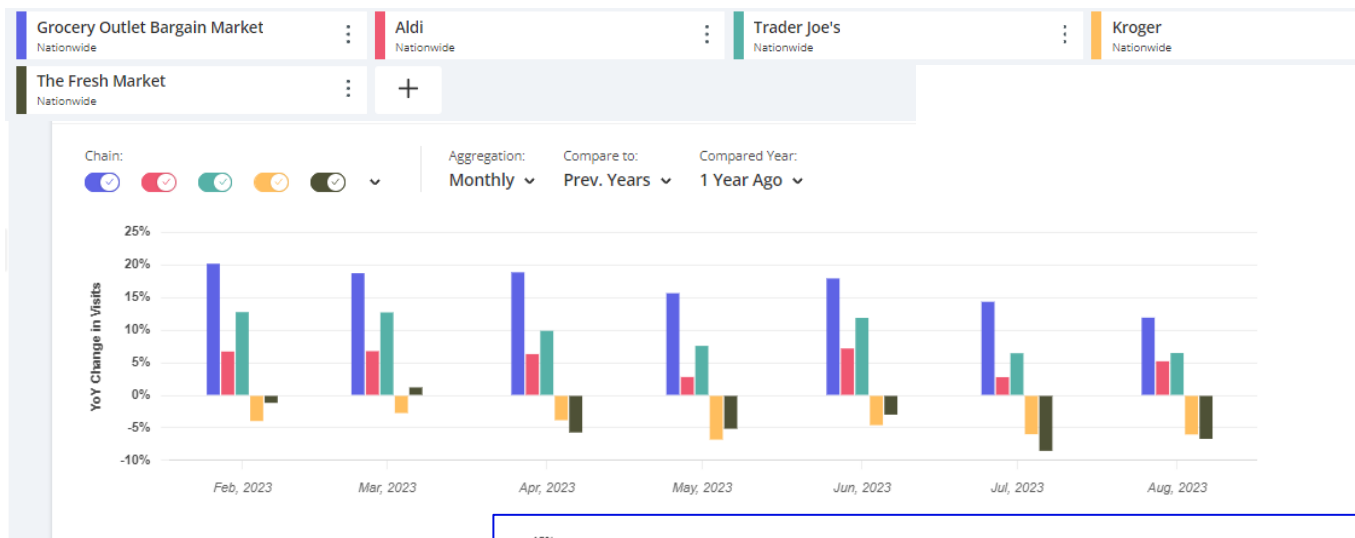
Shift Became  
Distinct Feb '22

Lapping Feb '22 &  
Down Again

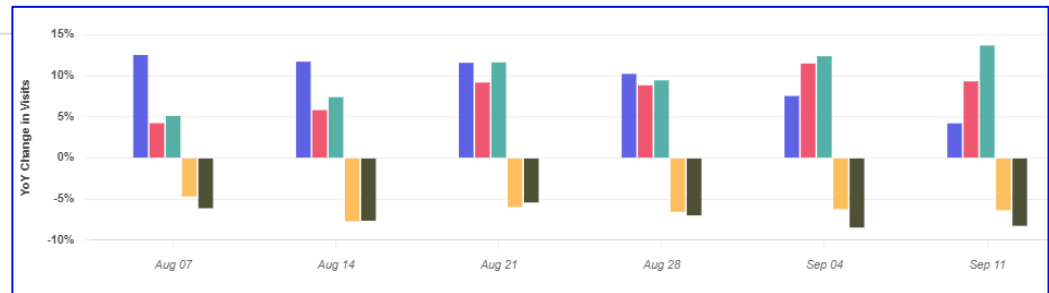
# Food Inflation -- Still Too Hot For Households



Monthly



Weekly





# Themes Impacting Retail -- Specialty Grocers Losing to Discount



## Q3 '2021

Cross Visitation	Whole Foods	Walmart	VONS	Sprouts	Smart & Final	Ralphs	Food 4 Less	Aldi	Costco Grocery Outlet	Safeway
Whole Foods		33.20%	17.10%	16.20%	16.00%	25.80%	3.90%	2.80%	52.40%	37.40%
Walmart	5.70%		14.10%	8.70%	19.10%	14.80%	14.90%	6.40%	48.10%	19.40%
VONS	14.30%	51.50%		18.50%	27.20%	33.20%	12.70%	7.90%	49.50%	8.20%
Sprouts	16.90%	50.40%	29.30%		26.10%	30.20%	11.10%	8.00%	58.90%	20.70%
Smart & Final	10.80%	61.70%	22.90%	15.60%		23.10%	16.30%	7.60%	56.90%	14.60%
Ralphs	16.90%	44.60%	27.30%	14.70%	21.70%		12.60%	7.50%	49.80%	7.00%
Food 4 Less	4.90%	66.80%	17.80%	8.50%	27.50%	20.20%		8.50%	47.10%	6.60%
Aldi	6.50%	68.60%	23.70%	15.90%	24.40%	28.00%	20.60%		54.70%	3.80%
Costco	11.10%	53.80%	17.50%	11.80%	21.60%	19.00%	11.40%	6.00%		25.10%
Grocery Outlet	10.10%	61.70%	14.00%	12.40%	16.80%	13.70%	10.70%	6.50%	52.30%	32.80%
Safeway	15.90%	49.80%	2.90%	8.90%	11.90%	3.00%	3.70%	0.80%	53.00%	14.10%

## Q3 '2022

Cross Visitation	Whole Foods	Walmart	VONS	Sprouts	Smart & Final	Ralphs	Food 4 Less	Aldi	Costco Grocery Outlet	Safeway
Whole Foods		36.40%	19.50%	17.80%	13.40%	29.90%	4.40%	3.60%	53.10%	31.90%
Walmart	6.00%		16.10%	10.40%	18.70%	13.50%	16.70%	7.40%	46.30%	20.10%
VONS	13.50%	54.40%		15.20%	21.10%	30.60%	14.30%	7.60%	47.40%	8.30%
Sprouts	19.40%	52.10%	29.60%		23.10%	29.00%	9.90%	8.50%	54.40%	17.90%
Smart & Final	10.40%	59.80%	23.20%	12.70%		23.20%	18.90%	7.60%	53.80%	16.30%
Ralphs	14.30%	48.00%	32.80%	17.30%	20.00%		14.00%	6.60%	46.10%	7.90%
Food 4 Less	2.90%	69.60%	17.60%	6.90%	21.70%	18.50%		8.70%	47.70%	6.70%
Aldi	6.10%	71.30%	26.70%	16.10%	23.90%	27.70%	22.50%		54.00%	3.80%
Costco	5.00%	54.10%	17.20%	11.40%	19.40%	19.00%	12.60%	5.70%		26.50%
Grocery Outlet	11.20%	63.20%	14.10%	9.30%	20.10%	11.10%	11.10%	8.70%	51.70%	37.10%
Safeway	16.90%	47.50%	3.30%	7.20%	10.40%	2.20%	2.80%	0.90%	54.20%	16.50%

## "22 vs. '21

Cross Visitation	Whole Foods	Walmart	VONS	Sprouts	Smart & Final	Ralphs	Food 4 Less	Aldi	Costco Grocery Outlet	Safeway
Whole Foods		320 bps	240 bps	160 bps	-260 bps	410 bps	50 bps	80 bps	70 bps	-550 bps
Walmart	30 bps		200 bps	170 bps	-40 bps	-130 bps	180 bps	100 bps	-180 bps	70 bps
VONS	-80 bps	290 bps		-330 bps	-610 bps	-260 bps	160 bps	-30 bps	-210 bps	10 bps
Sprouts	250 bps	170 bps	30 bps		-300 bps	-120 bps	-120 bps	50 bps	-450 bps	-280 bps
Smart & Final	-40 bps	-190 bps	30 bps	-290 bps		10 bps	260 bps	0 bps	-310 bps	170 bps
Ralphs	-260 bps	340 bps	550 bps	260 bps	-170 bps		140 bps	-90 bps	-370 bps	90 bps
Food 4 Less	-200 bps	280 bps	-20 bps	-160 bps	-580 bps	-170 bps		20 bps	60 bps	10 bps
Aldi	-40 bps	270 bps	300 bps	20 bps	-50 bps	-30 bps	190 bps		-70 bps	0 bps
Costco	-610 bps	30 bps	-30 bps	-40 bps	-220 bps	0 bps	120 bps	-30 bps		140 bps
Grocery Outlet	110 bps	150 bps	10 bps	-310 bps	330 bps	-260 bps	40 bps	220 bps	-60 bps	430 bps
Safeway	100 bps	-230 bps	40 bps	-170 bps	-150 bps	-80 bps	-90 bps	10 bps	120 bps	240 bps

## Observations

- In California, during Q3'21 33.2% of Whole Foods customers also visited a Walmart. During Q3'22, that increased to 36.4%.
- In California, during Q3'21, 5.7% of Walmart's customers also visited a Whole Foods. During Q3'22, 6.0% of Walmart's customers also visited Whole Foods, or +30 bps.

02

# **Recession Fears & Monetary Tightening**

Shift to Value & Disengagement from Non-Essentials

# Recession Fears & Monetary Tightening

## → 2018 as the Parallel Period

### 2018 Retail Sales: Pre-Holiday vs. Holiday Period

NAICS	YoY Growth		Change
	Jun - Oct	Nov / Dec	
GAFO (general non-food non-gas retail)	2.0%	0.5%	-151 bps
45112 Hobby, toy, and game stores	-8.4%	-25.6%	-1723 bps
45322 Gift, novelty, and souvenir stores	10.4%	-3.7%	-1405 bps
4541 E-commerce pure plays	13.2%	4.9%	-833 bps
443142 Electronics stores	3.0%	-2.8%	-577 bps
451 Sporting goods, hobby, musical instrument, and book stor	-4.9%	-11.8%	-692 bps
452111 Department stores(excl. discount department stores)	-7.0%	-11.7%	-476 bps
44831 Jewelry stores	3.4%	-1.2%	-454 bps
4422 Home furnishings stores	2.2%	-2.2%	-442 bps
442 Furniture and home furnishings stores	3.4%	-0.8%	-420 bps
443141 Household appliance stores	4.3%	0.5%	-378 bps
45111 Sporting goods stores	-4.4%	-8.1%	-368 bps
444 Building mat. and garden equip. and supplies dealers	6.7%	3.1%	-363 bps
722 Food services and drinking places	7.6%	4.0%	-362 bps
4413 Automotive parts, acc., and tire stores	2.5%	-0.6%	-317 bps
4521 Department stores inc. off-price	-2.7%	-3.9%	-124 bps
452 General merchandise stores	2.0%	2.3%	24 bps
4411 Automobile dealers	0.7%	1.0%	31 bps
44111 New car dealers	0.5%	0.7%	22 bps
44112 Used car dealers	1.9%	3.2%	127 bps
4482 Shoe stores	3.0%	4.6%	153 bps

Source: Census, MRTS Report, Seasonally adjusted

### Observations

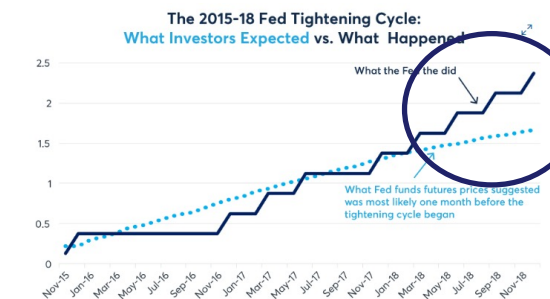
- Stock market dropped 20% in Q4 and housing skidded to a halt after a 2nd set of interest hikes by the Fed.
- Thanksgiving Nov 22<sup>nd</sup> (vs. 23<sup>rd</sup> in '17)

2018

Date	Increase	Decrease	Level (%)
December 20	25	0	2.25-2.50
September 27	25	0	2.00-2.25
June 14	25	0	1.75-2.00
March 22	25	0	1.50-1.75

2022

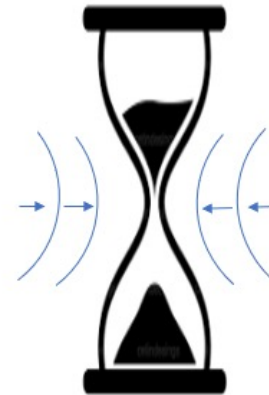
Date	Increase	Decrease	Level (%)
November 3	75	0	3.75-4.00
September 22	75	0	3.00-3.25
July 28	75	0	2.25-2.50
June 16	75	0	1.50-1.75
May 5	50	0	0.75-1.00
March 17	25	0	0.25-0.50



CME History Tool: <https://www.cmegroup.com/insights/economic-research/2022/fed-rate-hikes-expectations-and-reality.html>

	Comp Store Sales	Q3'18	Q4'18	Q1'19	Q2'19
<b>Hermès</b>	1-Year	14%	8%	10%	10%
<b>Americas</b>	2-Year CAGR	11%	7%	9%	13%
organic sales growth	3-Year CAGR	10%	6%	11%	10%
<b>LVMH - Fashion &amp; Leather</b>	1-Year	12%	8%	11%	19%
<b>United States</b>	2-Year CAGR	14%	10%	12%	16%
organic sales growth	3-Year CAGR	12%	10%	13%	14%
<b>Macy's</b>	1-Year	3%	3%	-3%	-3%
	2-Year CAGR	-1%	2%	3%	2%
	3-Year CAGR	-4%	-1%	-2%	-1%
<b>Kohl's</b>	1-Year	3%	1%	-3%	-3%
	2-Year CAGR	1%	4%	-2%	0%
	3-Year CAGR	1%	5%	-2%	0%
<b>Old Navy</b>	1-Year	4%	0%	-1%	-5%
	2-Year CAGR	4%	4%	1%	0%
	3-Year CAGR	4%	5%	3%	1%
<b>Marmaxx</b>	1-Year	4%	5%	5%	2%
	2-Year CAGR	4%	5%	5%	5%
	3-Year CAGR	4%	4%	3%	4%
<b>Ross Inc.</b>	1-Year	3%	4%	2%	3%
	2-Year CAGR	3%	4%	2%	4%
	3-Year CAGR	5%	4%	3%	4%
<b>Target</b>	1-Year	5%	6%	5%	3%
	2-Year CAGR	3%	5%	4%	5%
	3-Year CAGR	2%	3%	2%	4%
<b>Walmart-U.S.</b>	1-Year	3%	4%	3%	3%
	2-Year CAGR	3%	3%	3%	4%
	3-Year CAGR	2%	3%	2%	3%
<b>Dollar General</b>	1-Year	3%	4%	4%	4%
	2-Year CAGR	4%	4%	3%	4%
	3-Year CAGR	2%	3%	3%	2%

## Hourglass Consumption Pattern

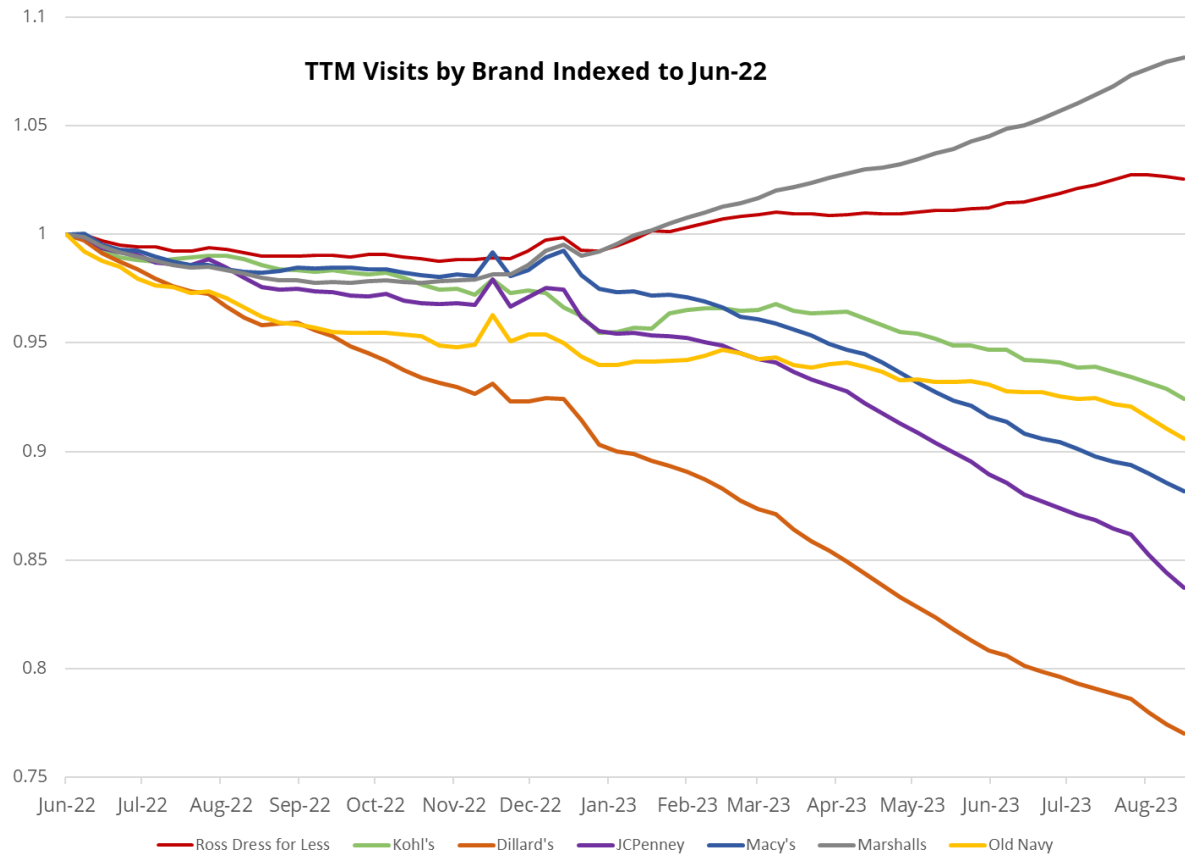


Hourglass Effect =  
Middle-Class Squeezed  
Share of Consumer Spending  
Floats Upwards & Downwards

## Consumers Either Disengaging or Seeking Out Treasure Hunt Value



## Consumers Either Disengaging or Seeking Out Treasure Hunt Value



# Consumer Disengagement Across Geographies



Shopping Centers Nationwide	:	Shopping Centers New Jersey	:	Shopping Centers Florida	:	Shopping Centers Texas	:
Shopping Centers California	:	Shopping Centers Illinois	:	Shopping Centers Ohio	:	Shopping Centers New York	:

Industry:



Aggregation:

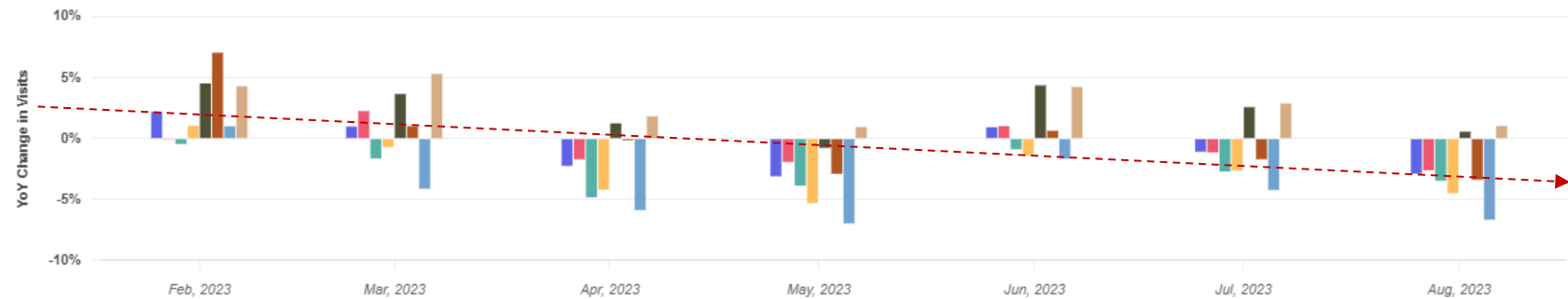
Monthly

Compare to:

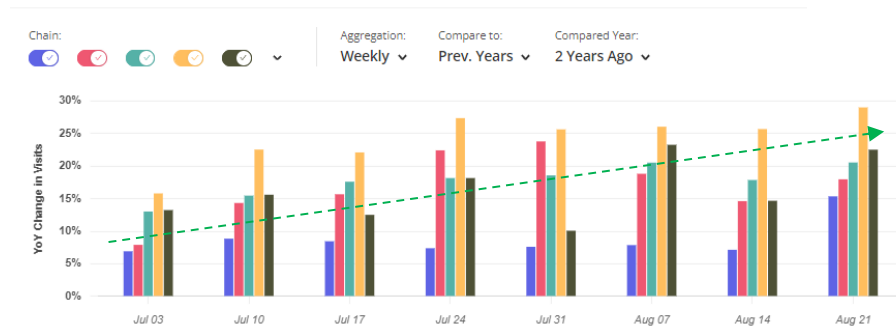
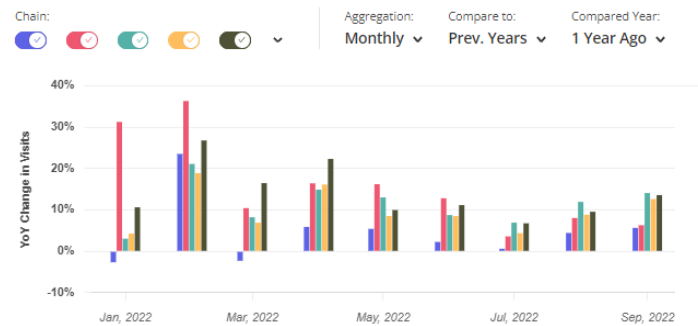
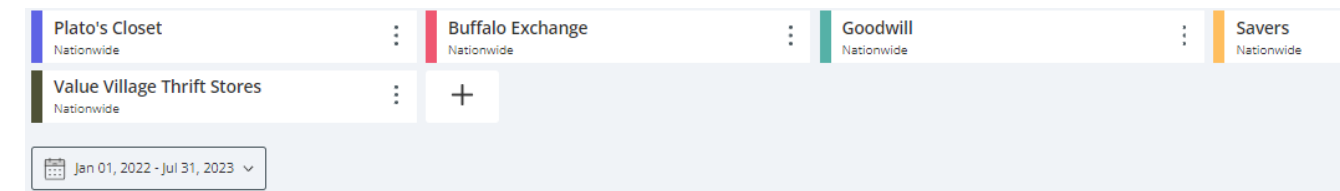
Prev. Years

Compared Year:

1 Year Ago



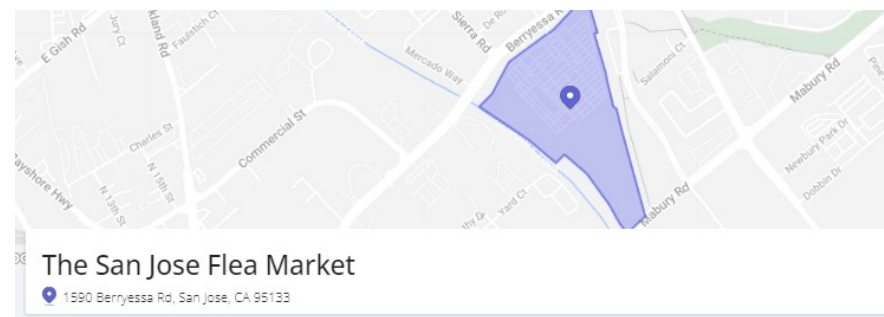
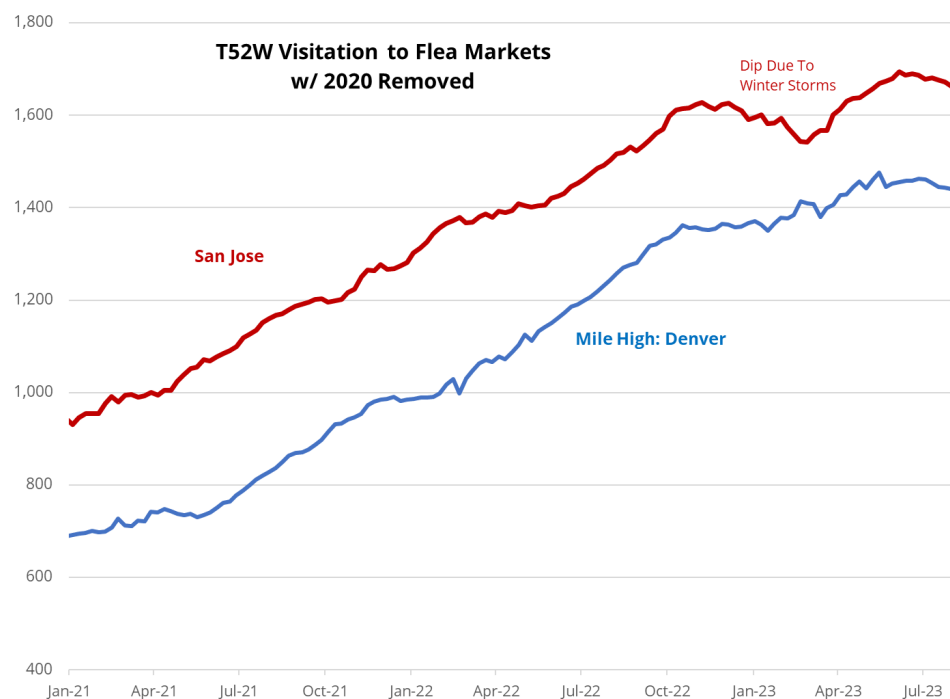
# Thrift / Secondhand In Style, When Food Inflation Is Hot



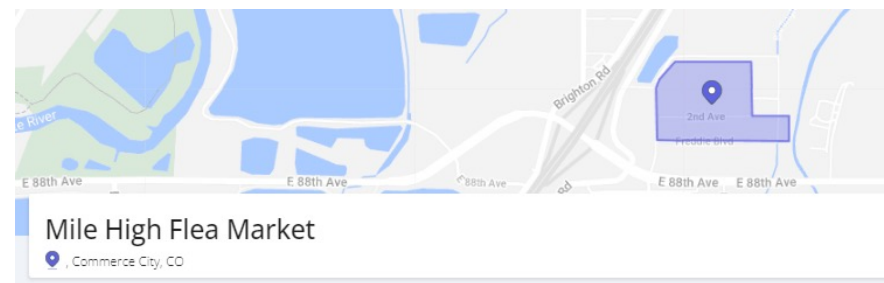


## Treasure Hunt In Style, When Food Inflation Is Hot

Visitation & Visitors +80% to '19



Visitation & Visitors +90% to '19



Only visitors staying > 30 minutes and during markets' hours.

03

# Experiences Over Goods

Consumers became more choiceful and prioritized  
in-person experiences

## Unprecedented Liquidation Sales On Marketplaces Creating Distortions in Spending

### Normalization Towards Long-Term Averages On-Going



**Nominal Personal Consumption Expenditure By Type, Indexed to 2019**

	Dec-22	Jan-23	Jul-23	Aug-23
Personal consumption expenditures	1.00	1.00	1.00	1.00
Goods	1.06	1.06	1.06	1.06
Durable goods	1.11	1.12	1.12	1.11
Furniture and furnishings	1.11	1.09	1.08	1.07
Televisions	1.00	1.06	1.05	1.05
PCs, tablets, & software	1.32	1.37	1.37	1.36
Nondurable goods	1.04	1.03	1.02	1.03
Off-prem food & beverages	1.06	1.04	1.03	1.03
Clothing and footwear	0.98	0.96	0.97	0.97
Services	0.97	0.97	0.97	0.97
Amusement parks	0.88	0.84	0.83	0.82
Motion picture theaters	0.55	0.66	0.72	0.88
Live entertainment, excluding sports	0.86	0.93	0.92	0.93
Casino gambling	0.98	0.93	0.93	0.94
Meals at limited service eating places	1.06	1.10	1.10	1.10
Meals at other eating places	1.06	1.08	1.08	1.08
Hotels and motels	0.99	0.97	0.96	0.94
U.S. travel outside the United States	0.93	0.94	0.95	0.95
Foreign travel in the United States	0.64	0.66	0.67	0.70

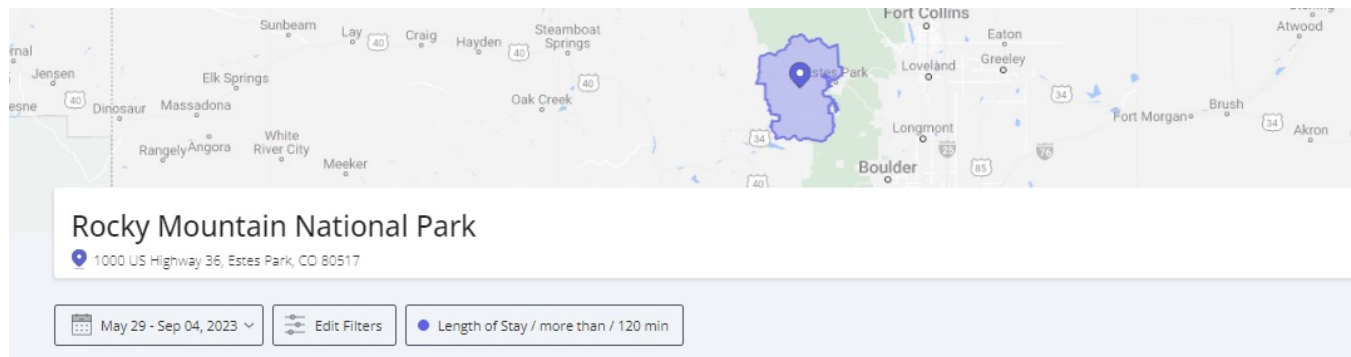
Like with apparel in January, manufactures are offloading production to off-price, and liquidators such as Ollie's, Big Lots, Grocery Outlet, flea markets and 3P sellers on Amazon and Walmart.com

Still a lot of runway to go

Source: BEA, PCE Table 2.4.5U, Sept '23 revision

Type share of PCE in '19 set to current \$-level of PCE. 27

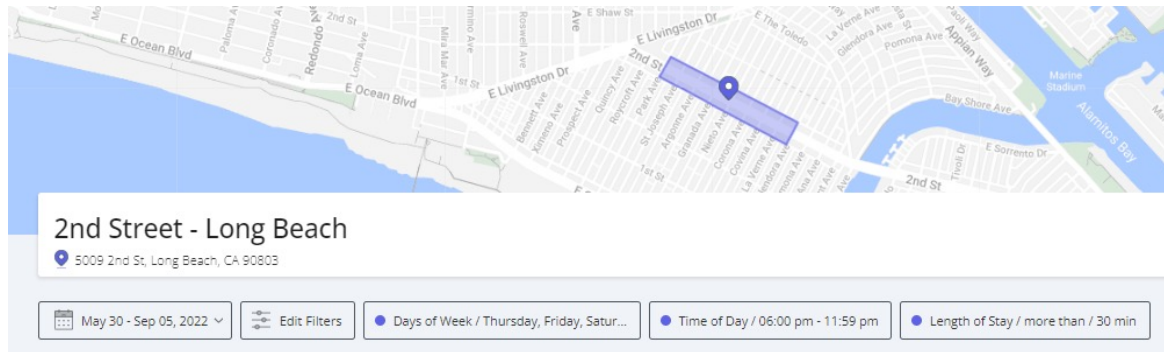
## 2022 Was Out & About, But Clustered & Domestic, 2023 Was Shorter Visits & Abroad



2019	Visits	321.4K	Visitors	201K	Average Stay	526 min
2022	Visits	349.5K	Visitors	215.2K	Average Stay	495 min
2023	Visits	336.7K	Visitors	234.8K	Average Stay	381 min

More visitors, shorter duration stays

## Visitation To Long Beach's Night Life District -- 2023 Up Strongly



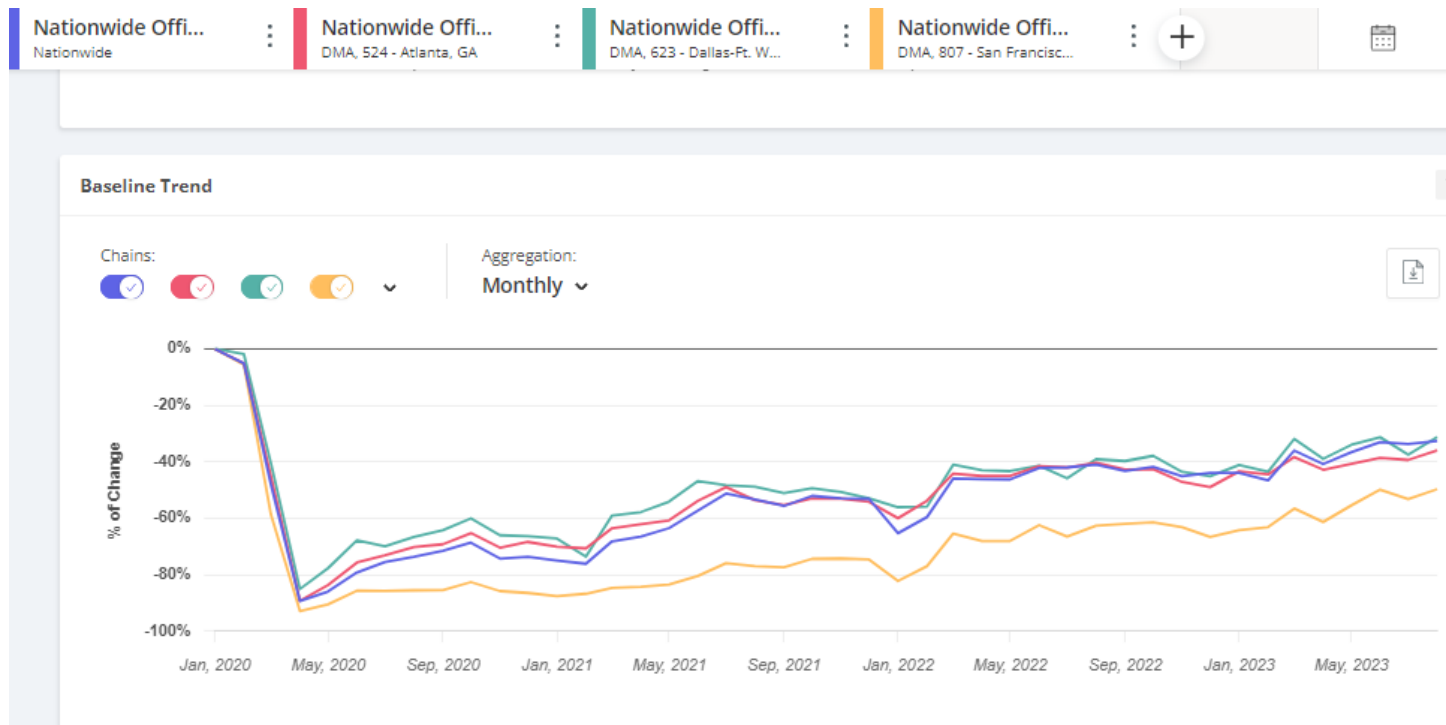
### Memorial Day - Labor Day

	Visitors	Visits	Average
	(thousands)	(thousands)	Stay
			(min)
2019	125.7	183.2	114
2022	136.9	191.4	120
2023	151.4	214.0	120

04

# **Return to Office**

## Return Ongoing



August '22 to '23: Nationwide +838 bps, GA +434 bps, Dallas +780 bps, San Fran +1294 bps

## Return To Office

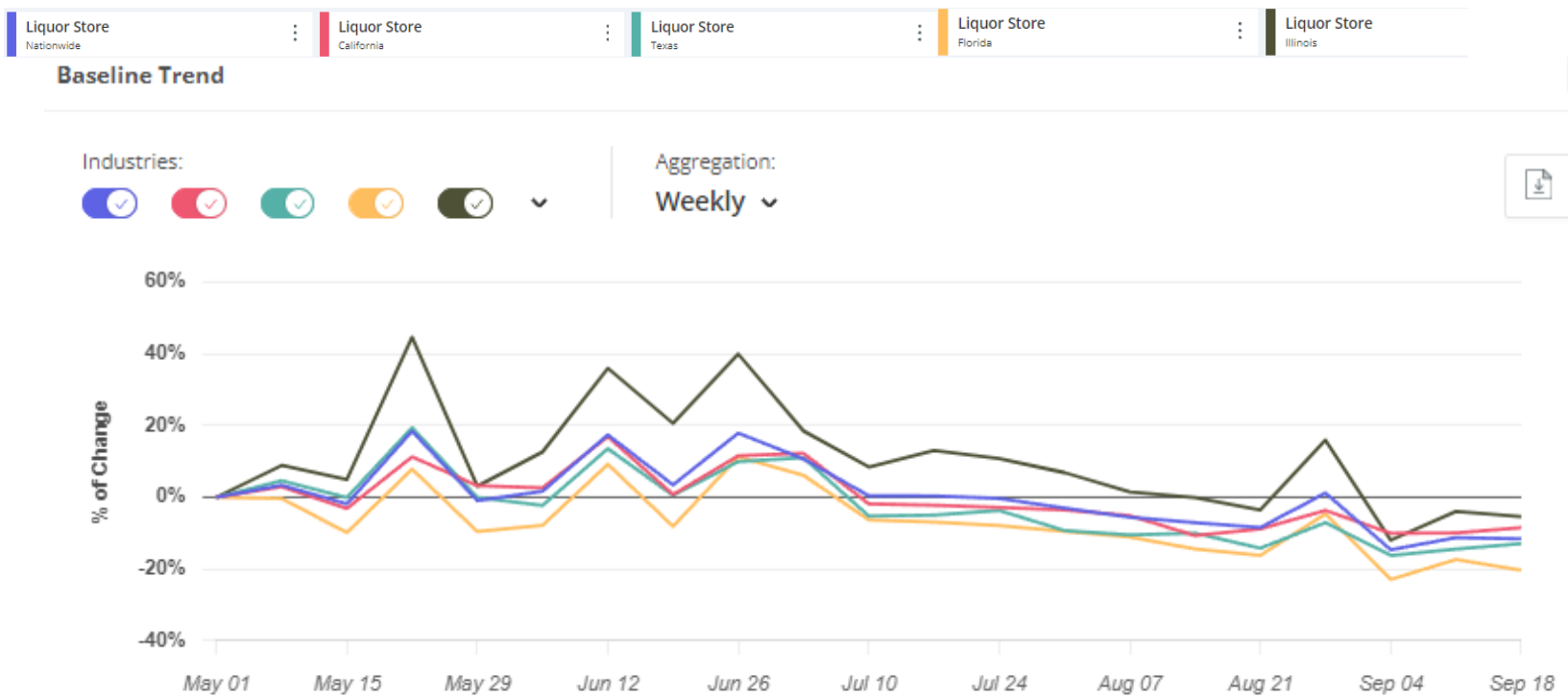


Effects Both:

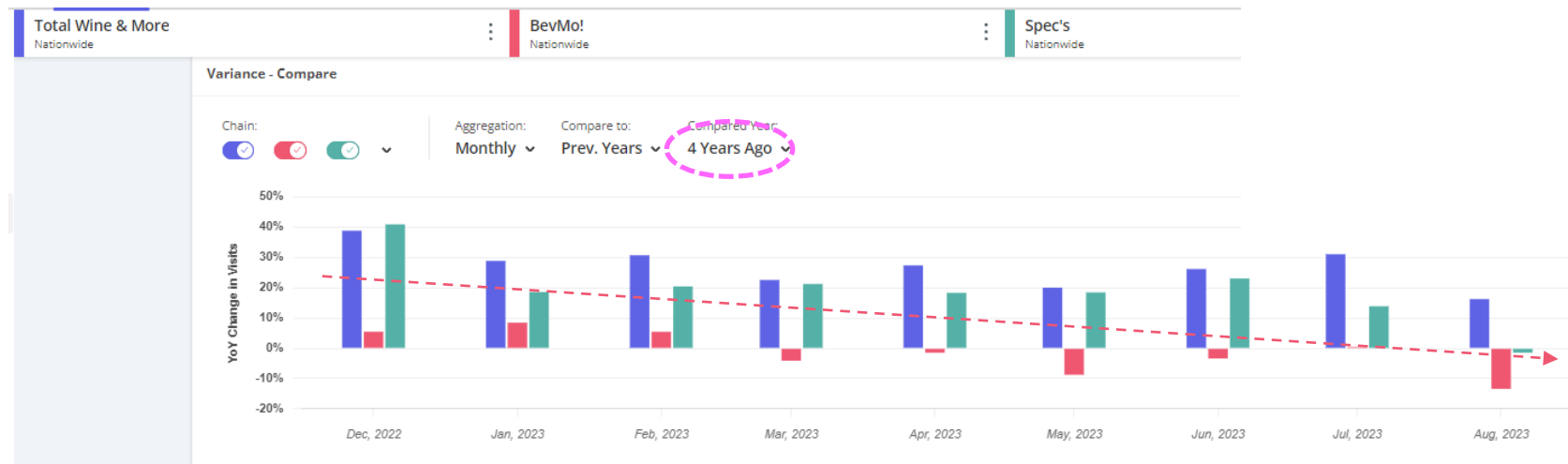
- ❑ Household discretionary spending as WFO spending such as childcare, commute costs, coffees, and lunches crowds out other categories. And,
- ❑ Spending occasions – less of **afternoon cocktails**, fewer lunches at home of ready-to-serve soup, more dry pet food for fluffy vs. wet pet food and fewer pet treats, etc.



## More In-Office Work Means Less Afternoon Cocktails



## More In-Office Work Means Less Afternoon Cocktails



### 2023 Growth vs. 2019

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
NAICS								
4453 Beer, wine, and liquor stores	30%	30%	27%	29%	27%	29%	24%	?

Source: Census Bureau, MRTS, Sep 23 release. Not adjusted figures

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## **2H Discretionary Outlook**

## Overall Retail Industry Outlook

1. Value and thrift will remain the consumer's choice until food prices break lower.
2. We are watching packaged food prices and their stock prices closely. They are getting close to a correction.
3. Should a food price correction occur, we would expect traffic and sales for discretionary retailers (and the category for discount and dollar) of less affluent households to improve, ceteris paribus.
4. Factors that could be non-ceteris paribus – student loan repayments, workers strikes, sharp change in interest and mortgage rates, and acts of God.



# Thank You

[www. Placer.ai](http://www.Placer.ai)

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## About Us:



### **Director of Research & Business Development, Placer.ai**

Thomas Paulson spent 20 years as a Wall Street analyst and a member of significant asset management teams at AllianceBernstein and Cornerstone Capital where he represented top-50 ownership positions in such companies as Target, Home Depot, Ralph Lauren, Nike, Disney, Comcast, Amazon, Google, and many more. Thomas' industry expertise is consumer related industries, including retail, CPG, financial services, telecom, entertainment, and internet services, as well as consumer insights and economics. Thomas is well versed in most mid- to large-size enterprises within these verticals and their histories, industries, and markets. Prior to this tenure, Thomas was an economist, mechanical engineer, and an early-stage-VC.

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### **Placer.ai**

Placer.ai went commercial in 2018. Its over 600 full time employees support over 3,000 enterprise customers that include most of the US' large commercial retail real estate operators, retailers, municipalities, theme parks & entertainment entities, as well as many consumer product manufacturers and investment / asset managers. Firms become customers through an annual licensee contract.



# Appendix

### Monthly Retail Sales % Change 2022

versus 2021 Comparable Period

NAICS Code	Jan	May	Sep	Oct	Nov
Retail and food services sales, total	13%	9%	9%	8%	6%
442 Furniture and home furnishings stores	0%	2%	0%	0%	-3%
443142 Electronics stores (estimate)	-1%	-8%	-9%	-15%	-10%
444 Building mat. and garden equip. and supplies	9%	8%	10%	9%	4%
445 Food and beverage stores	7%	7%	7%	7%	9%
448 Clothing and clothing access. stores	18%	4%	6%	3%	2%
45111 Sporting goods stores (estimate)	0%	-1%	5%	4%	9%
4521 Department stores	7%	-1%	2%	-2%	-3%
45291 Warehouse clubs and superstores (estimate)	4%	1%	6%	3%	6%
4541 e-Commerce pure-plays (estimate)	14%	14%	12%	9%	18%
722 Food services and drinking places	25%	17%	14%	13%	14%

Source: Census Bureau Monthly Retail & Food Service, Dec 15th release. Non adjusted numbers

### Monthly Retail Sales % Change 2022

versus 2019 Comparable Period

NAICS Code	Jan	May	Sep	Oct	Nov
Retail and food services sales, total	29%	30%	35%	32%	31%
442 Furniture and home furnishings stores	18%	18%	18%	17%	12%
443142 Electronics stores (estimate)	-13%	-7%	-9%	-8%	-17%
444 Building mat. and garden equip. and supplies dealers	26%	34%	42%	32%	38%
445 Food and beverage stores	19%	19%	25%	25%	24%
448 Clothing and clothing access. stores	12%	16%	22%	17%	16%
45111 Sporting goods stores (estimate)	48%	46%	55%	50%	62%
4521 Department stores	1%	-2%	7%	5%	-4%
45291 Warehouse clubs and superstores (estimate)	22%	14%	24%	24%	21%
4541 e-Commerce pure-plays (estimate)	82%	76%	80%	71%	97%
722 Food services and drinking places	23%	34%	37%	37%	33%

Source: Census Bureau Monthly Retail & Food Service, Dec 15th release. Non adjusted numbers



## Examples of POIs



1. Discount store, shopping center, and restaurant, and cohorts and chains of these.
2. Movie theater, theme park, cruise terminal, and cohorts and chains of these.
3. Arenas, museums, Time Square, Rocky Mountain National Park, and the state of Colorado
4. Rodeo Drive, 5<sup>th</sup> Avenue, Interstate 77, and every thoroughfare in the US.
5. Empire State Building, Seagram's Building, Hudson Yards, Liberty Building and any cohorts and portfolios of these.
6. Large manufacturing plants (Tesla, Ford, John Deere, Texas Instruments, Eli Lilly, Moderna, etc.), warehouses / fulfillment centers (Amazon, Wayfair, UPS, Fastenal, etc.), mines, smelters, refining, etc., and cohorts and portfolios of these.

# How Placer.ai Works

Observe. Integrate. Aggregate. Report.



## Observe Every Location

Observe anonymized foot traffic data from tens of millions mobile devices comprising a representative panel of US consumers.



## Integrate Consumer Data

Enhance visitation data with demographic, psychographic, and behavioral data describing visitors to each location.



## Aggregate Chains & Regions

Aggregate granular location data to enable analysis of chains, markets, regions, industries, and more.



## Report Actionable Insights

Generate robust and statistically significant insights for any retail location, hundreds of chains, and every market.

- True Trade Area
- Customer Journey
- Socio-Demographic Profiling
- Spending Patterns
- Cross-Shopping
- Brand Dominance
- Store Ranking
- Top Chains
- Migration Trends



Loved and trusted by 2k+ industry leaders

### Retail



### Manufactured Goods



### Grocery



### Finance



### Civic



### Restaurants



### Out of Home



### Entertainment & Leisure



### CRE



### Aviation



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