

# Open Sesame

A GUIDE TO NEW SITE SELECTION FOR BRICK-AND-MORTAR RETAILERS

# At a glance

With major advancements in online shopping and VR/AR retail experience, brick and mortar retailers have to be precise in their store relocation and new site decisions. They can do so by employing an analytically driven 4 pronged approach:

1. Understand customer and competitor density
2. Understand the trade area of the store and any overlap with other stores
3. Forecast department-wise sales at a store level
4. Understand sales recapture and cannibalization effects at a store level

## INTRODUCTION

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In this new age of online shopping and retail experiences being shaped by VR/AR, retailers must be certain about their decision to open new stores. A recent study published by the University of Florida found that when stores were easily available, customers visit stores frequently and make higher purchases. Interestingly, these customers also make 29 percent higher purchases from the online channel of the retailer.

Despite the swift rise in online shopping, most of the retail purchases made in America still happen in brick-and-mortar stores. According to the U.S. Census data released in August 2017, 90 percent of all retail purchases in America were still made in brick-and-mortar locations during the last quarter. This requires retailers to be very precise in their store relocation and new site selection decisions.

Brick-and-mortar retailers need to address the following elements of customer behavior, location dynamics, and competition while deciding on a new site,

**90% of retail purchases are still made at brick-and-mortar stores making the need for data backed real estate decisions imperative**

### **1. Understanding customer and competitor density**

Which are the regions with high potential customer growth? Which regions have high competition? Where are my top performing stores located? Creating density clusters of US zip codes and analyzing store performance by density clusters is key to determine potential sites

### **2. Understanding the trade area of the store and overlap**

Often, there are multiple stores in the same city that end up sharing total sales. A thorough understanding of the store's trade area and overlap can help predict potential trade area for new locations and understand the overlap

### **3. Predicting department-wise sales**

Not all locations might be suitable for all departments of the store. Based on sales forecasts, retailers can make an informed decision on the store format and departments to be included for new sites

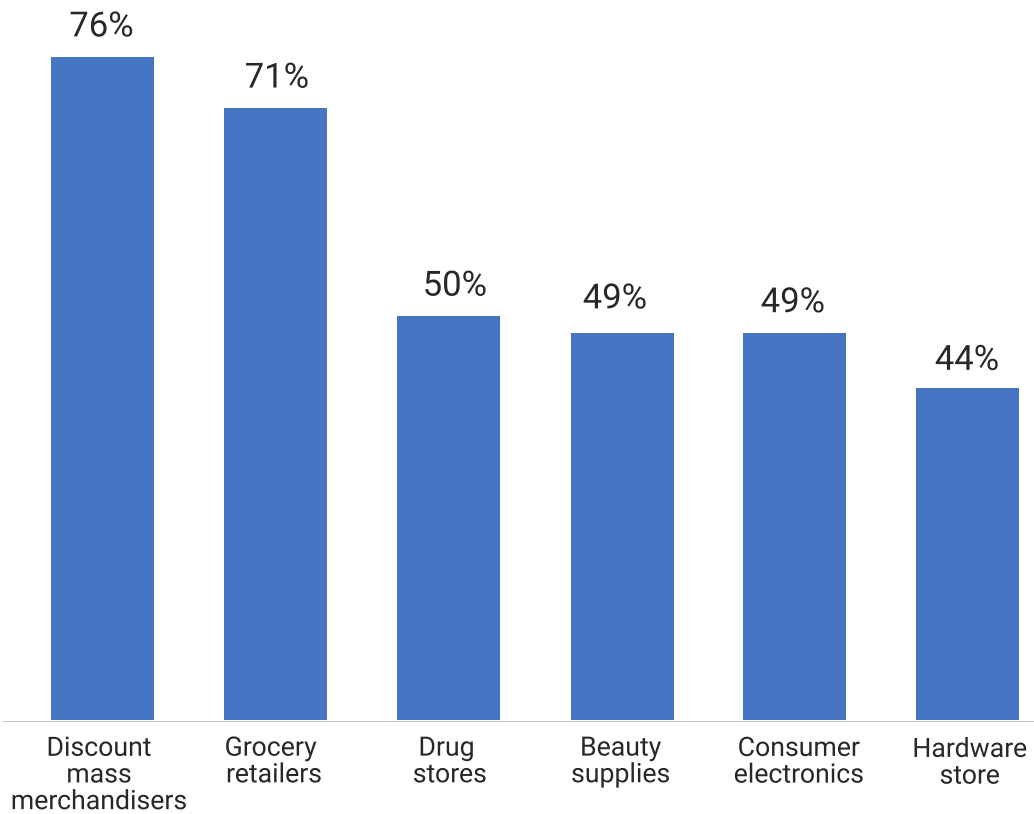
### **4. Understanding sales recapture and cannibalization**

It is very important to understand how much revenue will be recaptured in the event of a store closure or relocation. Deriving rules for sales transfer will help understand the true effect of a store closure/opening on nearby stores

## WHY DO CUSTOMERS CONTINUE TO SHOP AT BRICK-AND-MORTAR STORES?

The key drivers of store visits have been known to the industry for a long time now. Studies reveal that consumers who shop in-store reported the need to see, touch and handle merchandise as part of the buying experience, and not having to wait for delivery.

Mass merchandisers and grocery retailers are the primary types of stores that customers prefer shopping in-store. This is primarily because of the ability of the customer to judge the quality and freshness of the products.



Mass merchandisers and grocery retailers are the most preferred type of stores for in-store shopping

Figure 1: Customer shopping preference by brick-and-mortar store type

## HOW SHOULD YOU DECIDE YOUR BRICK-AND-MORTAR STRATEGY?

As a first step, the key task is to understand the customer and market needs. For example, consider the market for printed books. This industry has bounced back with sales increasing by 1.8% in 2017 to 687 million units. That marks the fifth consecutive year of increase after a long slide beginning earlier this century. The once-feared demise of physical books at the hands of e-books has not happened. In fact, e-book sales have dropped almost 10% in 2017. A good market research helps in deciding whether it is the right time to go all-in vs staying put.

Once you have decided to go ahead with new potential sites, multiple angles need to be brought in to make the decision.

Location density can be defined based on customer demographics and the presence of competition to aid store strategies

### 1. Understanding customer and competitor density

Visualizing customer and competitor density and understanding how the existing stores perform across different density classes will help shortlist potential markets.

Density can be defined based on customer demographics (like income, population density, population/income growth, education type, gender etc.) and competition (competitor density, competitor options per person). It is often better to normalize these variables by population/area so that they reflect density and are not biased by the size of the region/zip etc.

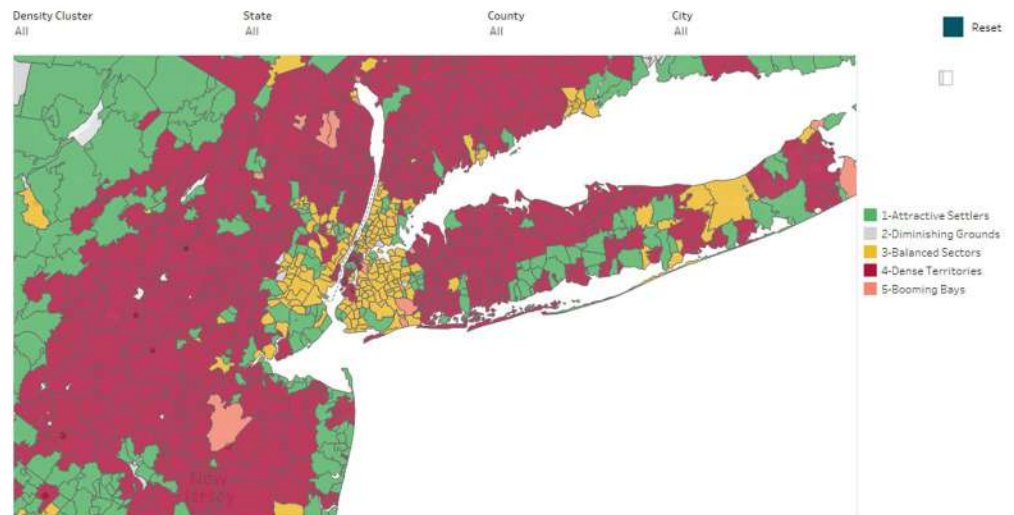


Figure 2: Illustration of density for a retailer in the US

Such visualizations can trigger rich discussions and insights that will aid your strategy. For example, we can decide if we need to go for an aggressive strategy by operating stores in highly dense areas taking on all the competitors. On the other hand, we can cash in on the next best strategy of opening stores where customer density is medium and competitor density is low. These sites may yield lower revenue for you in the short term but can lead to long-term customer engagement and loyalty.

## 2. Understanding the trade area of the store and overlap

Trade areas can help define customer preferences and demographics of a store. While there are multiple ways to define trade areas, the most widely used method is to demarcate the primary and secondary trade areas for stores. This can be done by understanding customer penetration and customer contribution of nearby regions/zips to the store.

Customer drive time plays a crucial role in defining trade areas. Our analysis for a retailer shows that customers are willing to travel no more than 30 minutes to shop at a store in the US.

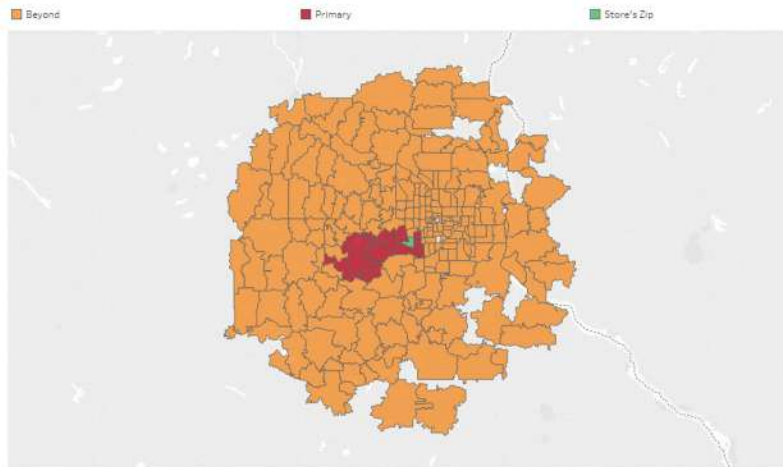


Figure 3: Illustration of a trade area for a retailer in the US

**Customers are willing to travel no more than 30 minutes to shop at a store which becomes crucial in defining a store's trade area**

Once you have the trade area defined, you can use the customer demographics within your trade area to understand what drives sales.

A novel way of understanding the trade area for potential locations is to create a prediction model for trade areas. This can be done by modeling trade area against variables like drive time, competition, customer demographics, customer density etc. Such a model would go hand-in-hand with a sales prediction model for potential locations to aid new store decisions.

## 3. Predicting department-wise sales

Sales predictions for potential locations can be made by understanding key drivers of sales for each store/department. The broad categories of store sales drivers are:

- Store characteristics (Size, Location, Accessibility, Facilities etc.)
- Trade area customer demographics (Age, Income, Population, Gender, TA potential etc.)
- Competitors and Co-anchors (Types, counts etc.)

It is recommended to build the prediction model at the most granular level of decision making. For example, one of the key questions to be answered for the retailer was whether to open the music department at new locations or not. This was decided by weighing the costs of operating the department against the department-wise sales predictions provided.

### 4. Understanding sales recapture and cannibalization

While evaluating potential locations we need to know the effect of cannibalization. Cannibalization is usually a property associated with nearness to the store. Customer convenience plays a major role in deciding the type of store that the customers go to.

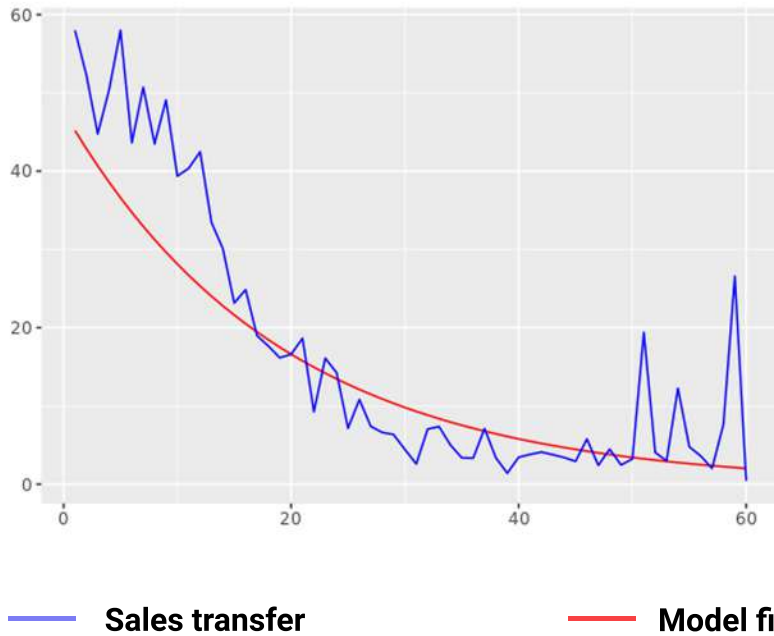
Convenience plays a major role in deciding where the customers shop and can divert sales from other stores(cannibalization)



Figure 4: Illustration of cannibalization for a retailer

By studying trends of cannibalization, we can create custom rules based on distance from zipping to the new store vs old store. These rules can be in the form of expected sales transfer that will happen given the relative distance. Using these rules, expected cannibalization can be quantified.

Based on our analysis, we observed an immediate 50% sales transfer if the new store is half the distance than the existing store. This decays exponentially with drive time.



**We observed an immediate 50% sales transfer when the new store is located within half the distance compared to the existing store**



Leveraging advanced analytics to understand customers and potential markets can provide a major competitive edge to brick-and-mortar retailers

## CONCLUSION

To be competitive in today's retail landscape, retailers need to be proactive and use all resources at their disposal. While Amazon's presence in the online space is formidable, other competitors would require a strong brick-and-mortar strategy to counter the effect.

Many challenges arise when retailers craft their brick-and-mortar strategy. Multiple aspects of customer preferences, location characteristics, sales cannibalization etc. need to be studied in detail for making potential store opening decisions.

The biggest advantage today is that tons of data on customer demographics, competition, location, market characteristics are publicly available for retailers to help make these strategic decisions. By effectively leveraging advanced analytics to understand customers, potential markets, and new site decisions, brick-and-mortar retailers can gain a major edge in this hyper-competitive world.

## REFERENCES

1. <https://news.warrington.ufl.edu/faculty-and-research/why-brick-and-mortar-retail-stores-are-still-relevant-according-to-uf-warrington-research/>
2. <https://www.retailtechnologyreview.com/articles/2017/10/17/why-90-percent-of-sales-still-happen-in-brick-and-mortar-stores/>
3. <https://apparelmag.com/new-survey-reveals-why-consumers-shop-store-vs-online>
4. <https://www.forbes.com/sites/lawrencelight/2018/06/28/why-barnes-noble-should-survive-we-need-it/#2e2c712c490b>



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