

Virtual Shopper Decision Trees: Everything You Need to Know

Why do shoppers make the decisions they make when at the shelf?



What compels them to pick up one item over another? What happens when their preferred product is out of stock, or if a new item is introduced to the category? When faced with options at the shelf, there are many variables that can influence shopping behavior, including buying occasion, store conditions, and shelf effects. That's why the hierarchy of purchase behavior is a useful and important, yet tricky, aspect of market research.

For brands, constructing a consumer decision tree is a common practice, which can provide a deeper understanding when it comes to answering questions like these. It's essential to know how different products are ranked by shoppers, such as what products are non substitutable or what products might need to be reassessed. This allows you to identify the key trip drivers of the category, which can then lead to more testing on the actual positioning or arrangement on shelf.



The problem with most consumer decision tree methods is that they're typically based solely on either attitudinal data—which is inherently unreliable for predicting what shoppers will actually do—or shopper panel data, which captures the switching behavior, but doesn't provide data on why they buy what they buy. Attitudinal approaches tend to be inexpensive, but because they aren't strongly related to what shoppers actually do in store, they're not a good value. Behavioral-based approaches are fairly complex, expensive studies, so they're usually only done once every three to five years—meaning they may not be up to date when you need to make your decisions.

Thankfully, technology has caught up to the needs of market research. **Virtual Shopper Decision Trees** from InContext offer a solution to the barriers of conducting traditional decision trees. With our mixed reality technology, we put shoppers in front of a virtual shelf to learn how they make decisions in real-time, through hyper-realistic 3D simulations. Leveraging virtual allows brands to create a foundational piece of research that they can come back to again and again.



Where Traditional Trees Fall Short

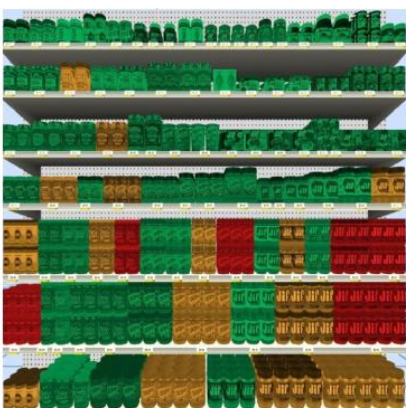
Consumer decision trees should be developed to understand consumers at the shelf, in both what they will do, and also why they do it. Traditionally, decision tree methods utilize one of these, but not both—leaving them lacking the necessary information needed for an insightful tree. What about the details that typically influence shoppers within a store, like buying occasions, shelf effects, or store conditions?

To delve a bit deeper into how innovation is helping the consumer decision tree process, we should first pinpoint where traditional methods are lacking.

There are 4 critical components to a winning decision tree:

1. Mine both behavioral and attitudinal data

This is a big point of differentiation when it comes to thinking about designing a consumer decision tree. Traditional methods can often gauge behavioral feedback from consumers—such as which products they have substituted at the shelf—but it doesn't get at the "why" behind those behaviors. Or if the approach is attitudinal based, it doesn't usually correlate to actual in-store shopping behavior. A good decision tree should measure shopper behavior, and then generate feedback straight from the shopper on why they did what they did.



- Lowest walk rate
- Highest walk rate
- Medium walk rate

2. Understand switching behaviors

When a decision tree is based on a behavioral approach, it tends to lack explanation when it comes to direct switching behavior on why switching happens. Switching behavior is essential to learning the hierarchy of products on a shelf, and what products are non-substitutable—making it a valuable piece of information for your decision tree.

3. Make no assumptions prior to research

Many times, brands make a lot of assumptions as to the barriers when developing a decision tree. That's the big shortcoming—it's what causes trees to be so similar each iteration. They often pre-determine the attributes that make up the tree structure; so instead of the shoppers telling us how they make their decisions, it's often influenced by the person setting it up. In addition, the descriptions of the groups and variables they are grouped on should come from the respondents, so the nuances of "why" are better captured in the labels of the tree structure.

4. Expertise and tools to test hypothesis, and activate

In order to get the most out of a consumer decision tree exercise, it helps to leverage experts that can develop hypotheses for activating the information in stores. Having the tools to then quickly test and iterate on your ideas to evaluate how successful they will be can close the activation loop. Decision trees are great, but if they can't feed activation then they're not worth doing.

Why Virtual is Just Better

With the right methods though, decision trees have an amazing potential to help you jumpstart your research strategy. That's where innovation and emerging technologies are taking center stage in retail insights.

At InContext, we leverage realistic mixed reality shopping experiences to collect respondent-level purchase data and combine it with attitudinal data from the moment after purchase—creating a groundbreaking new way to generate our virtual Shopper Decision Tree offering.

So how do we do it?

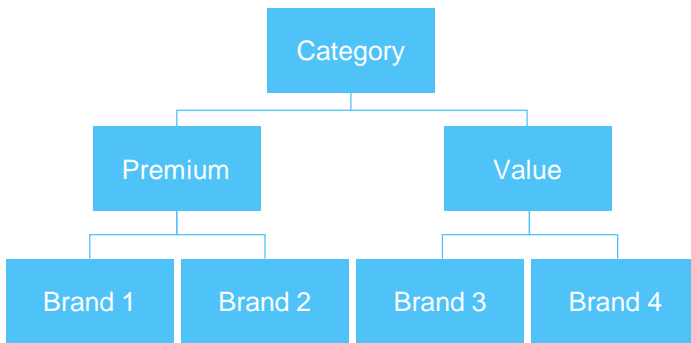
Using virtual simulations from thousands of shoppers, we are able to measure true product substitutability insights and walk rate data. We've determined that **virtual purchase behavior validates with in-store purchase at 0.9**—that is, when navigating a virtual shopping exercise, people tend to act as they normally would in a physical store. Then, we take advantage of the unique capabilities of virtual to measure what real-world exercises can't.



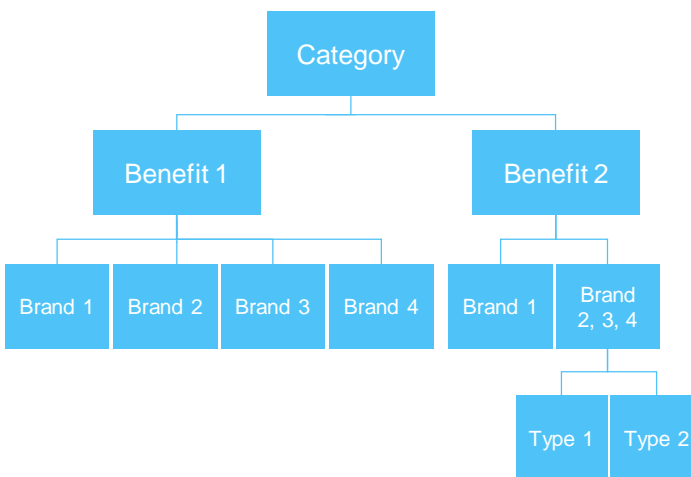
We know that actual purchase, versus perceptions of how one might purchase, are key to creating better decision trees. Without purchase data, decision trees will likely be over-simplified, be missing unconscious high-level choices, or even inverted.

When we create a virtual Shopper Decision Tree, we can deliver the true hierarchy of the shopper decision making process, and produce a summary of key purchase dynamics, including dollar and unit share and percentage of shoppers buying. Additionally, virtual gives you post-shopping survey data, with attitudinal highlights and an open-ended verbatim thematic review.

STANDARD TREE



ICS SHOPPER DECISION TREE

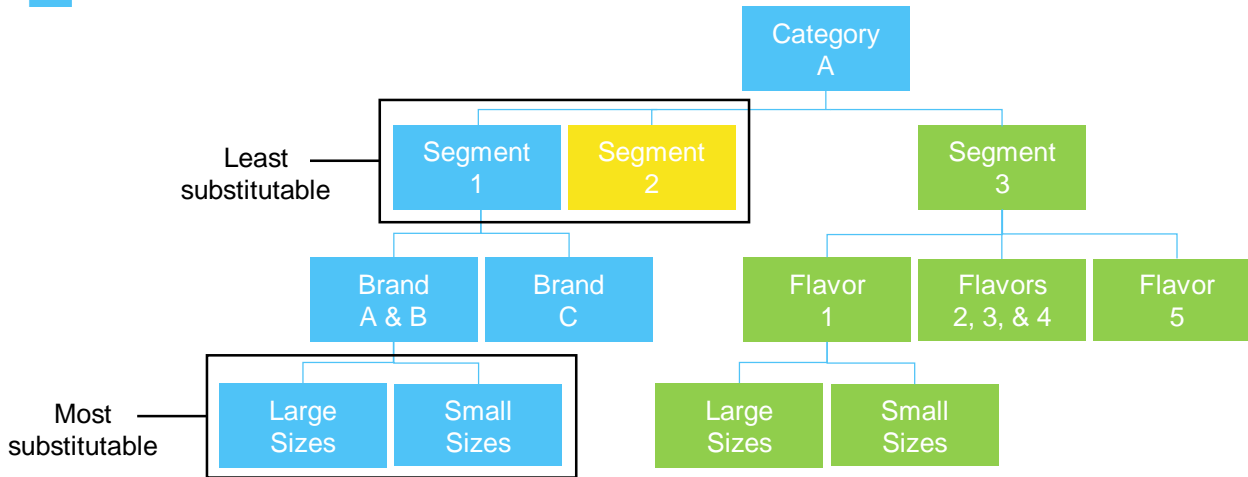


Methodology/Tree Creation

Virtual lets us understand both direct and indirect switching behavior, which better reflects substitutability and high-level tree data. Also, attributes are not pre-classified. This allows unknown attributes and characteristics to surface, leading to a more realistic tree structure. Decision trees should not be forced to be symmetrical or “load” on pre-set attributes.

Advantages of Virtual Shopper Decision Trees

- Provide both behavioral and attitudinal insights (behavioral-based trees, with refinement based on attitudinal “why’s”).
- Labeling of trees are shopper-based (instead of the project administrator just guessing). “Why’s” are determined moments after purchase choice is made.
- Do not require consistent or pre-classified product attributes.
- Provide actual product substitution for consistent occasion
- Can capture walk rates and then visualize that data in virtual
- Can include new products that are not yet available to customers
- Can capture sales data not available from standard sources (e.g., single-serve)
- Can be done against a specific retailer or channel set
- Visualize how tree shows on retailer-specific shelf
- Can be used more often, and in more ways, than traditional decision tree methods.
- Less expensive – being able to conduct a shopper decision tree every 1-2 years would be beneficial because trends can happen quite quickly.



How do you get the most value out of your tree?

Alright, you've completed your decision tree exercise, but now what do you do with it? As we said before, the way you use the data is going to help you change the course of how you further test and analyze your in-store concepts.

Using the results from a virtual Shopper Decision Tree, InContext can help ideate on future improvements for:

- Shelf layout
- POG arrangement
- Assortment
- Wayfinding signage or other POP merchandising

Then, virtually test changes to assess impact and gain commitment from retail partners. Our mixed reality enterprise collaboration and decision-support platform, ShopperMX™, will help to visualize the category changes you want to recommend to the retailer.

The great thing about virtual is this isn't just a one-off study. You are able to go back to your Shopper Decision Tree for hypothesis for iteration, and ultimately be able to tell when you need to refresh the tree as trends change.

Shopper Decision Trees in Action

Let's take a look at a couple of examples.

Understanding Purchase Influences

A CPG manufacturer client had recently secured the Category Captaincy, and wanted to maintain their reputation as a thought leader. They needed to gain deeper insights into the core drivers impacting decision-making at shelf in the convenience channel. They decided to partner with InContext Solutions to utilize our virtual

Shopper Decision Tree solution which could then help narrow down specific concepts to further test, while saving time and money in the process.

With virtual, they were able to learn product substitutability insights and walk rate data for a convenience channel that is traditionally hard to track, while determining what influenced shopper purchases and why they made the choice they did.





Key Takeaways

The manufacturer was able to learn what factors differentiated products from one another, what defined “category” and why, as well as what types of SKUs were most important to have on shelf. Utilizing virtual decision tree solutions allowed them to extract these deep insights from a traditionally hard-to-track channel otherwise not possible with traditional behavior based decision tree methods. They ultimately were able to distinguish opportunities to test expanded assortment and expand SKU offerings, saving them time and money on testing down the road.

So, why do shoppers make the decisions they make when at the shelf? The answer to that question is invaluable to the world of shopper insights, and can't be fully understood without innovative technologies like mixed reality. Virtual Shopper Decision Trees allow for deeper, more accurate insights that can be mined in less time than ever before. They help create data that can be tested and re-tested over and over again— providing reliable insights into shopper decisions at the shelf, exactly when you need them.

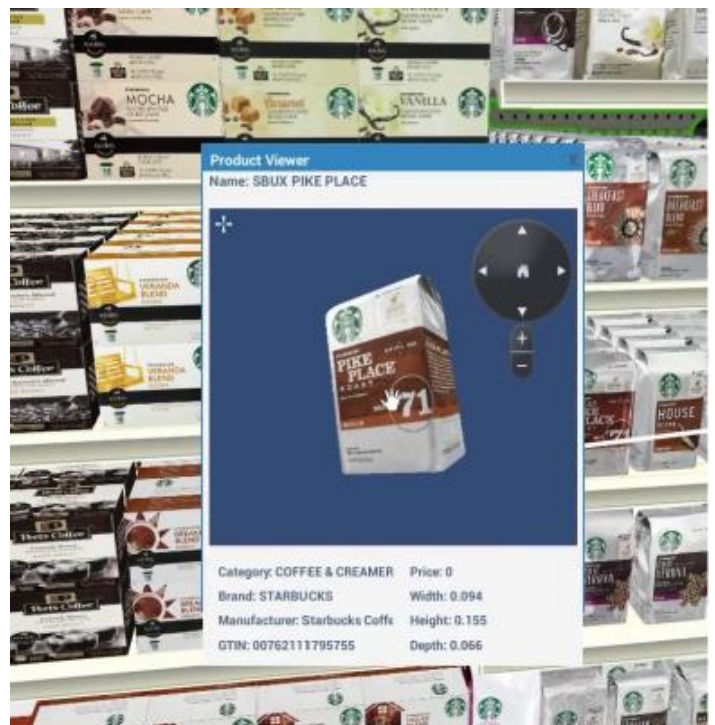
Understanding Options for Category Growth

Another CPG client had products in a smaller, fragmented, and evolving category. They needed to understand how the category was changing and where their opportunities for category growth should come from. They also wanted to better partner with retailers by bringing knowledge about shopper behavior to the table.

By leveraging a virtual Shopper Decision Tree, the company uncovered important nuances of how consumers were shopping the set. The tree was not symmetrical, with different shopper needs in different segments. Many current retailer sets did not include all the necessary assortment to meet shopper needs—their brands competed in different places on the tree, instead of only on one as previously thought, and some brands were more substitutable vs. others.

Key Takeaways

By working with InContext, the client was able to develop several alternative assortment/layout changes and test them with virtual to demonstrate the impact that activating these ideas might have. By iterating, refining, and testing these ideas they were able to find an option that significantly grew the category, their brands, and improved their relationship with their retailers.



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