# Food Access and Strategy Simulation Tool - Comprehensive User Guide

## Introduction

The Food Access and Strategy Simulation tool is a powerful resource for analyzing and simulating the effects of adding or removing stores on household food access. This guide provides clear, step-by-step instructions to help you navigate and utilize the tool effectively.

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## Key Features of the Interface

### 1. Map Overview

- **Legend:**
    - **Supermarkets:** Represented by hexagons.
    - **Convenience Stores:** Represented by small triangles.
    - **Households:** Shaped like houses.
        - **High Food Access:** Green.
        - **Medium Food Access:** Orange/Yellow.
        - **Low Food Access:** Red.
- The map is interactive, allowing you to navigate, zoom, and click on specific elements to explore detailed information about stores and households.

### 2. Household Data

- Attributes available for each household include:
    - Income
    - Household size
    - Number of vehicles
    - Number of workers
    - Proximity to the nearest store (within a mile)
    - Transit time (public and private)
    - Food access score
- Data is sourced from the Census Bureau and Google Maps, ensuring accuracy and relevance. The data reflects real-world locations as closely as possible, with granularity at the census tract level.

### 3. Community Data Bar

- Aggregated metrics displayed for the selected area:
    - Total number of households

- Number of supermarkets and convenience stores
- Average household income
- Average number of household vehicles

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## How to Use the Tool

### Step 1: Adding a Store

1. Navigate to the **Features Tab**.
2. Select **Add Store**.
3. Enter the store details:
    - **Name** (e.g., "Charlie's Market")
    - **Type** (e.g., supermarket or convenience store)
    - **Location** (choose a point on the map using latitude and longitude).
4. Confirm the addition. The new store will now appear on the map.

### Step 2: Simulating Changes

- Use the **Step Function** to simulate changes over time:
    1. Click **Step** to advance the simulation by one period (currently represents one month).
    2. Monitor changes in household food access metrics.
    3. Repeat as needed to observe cumulative impacts over time.

### Step 3: Removing a Store

1. Go to the **Remove Store** feature.
2. Select the store you want to remove (e.g., "Charlie's Market").
3. Confirm the removal. The store will disappear from the map.
4. Use the **Step Function** to evaluate the effects of this change on household food access.

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## Example Use Case

1. **Add a Store:** Place a new supermarket in an underserved area—for example, add "Charlie's Market" to a park location.
2. **Simulate:** Step through multiple months to observe how the addition improves food access, particularly for households without vehicles.
3. **Remove a Store:** Remove "Charlie's Market" and/or surrounding stores and examine how food access challenges re-emerge in the affected area.

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## Tips for Effective Use

- **Analyze Community Needs:** Before making changes, review community-level data to target areas with low food access.
- **Simulate Iteratively:** Run multiple steps to identify trends and long-term effects.

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By using the Food Access and Strategy Simulation tool, you can make informed decisions to address food access challenges and create impactful solutions. Explore different scenarios, monitor the outcomes, and leverage the tool's insights to drive meaningful community improvements. Should you need further support or wish to provide feedback, our team is here to assist.