

# **SBM Data Visualization**

**MSMI APPLIED PROJECT 2019**

**August 14, 2019**

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# Campaign Roadmap

## STORE VISIT

Customers exposed product display in store.

## COMPLETE SIGN-UP

They submitted sign-up form through phone.

## WATCH VIDEO

They watched a video about SBM products.

## CLAIM REBATE

They got the rebate.

## NFC TAP/ KEYWORD TEXT

They used NFC or SMS to engage in the campaign.

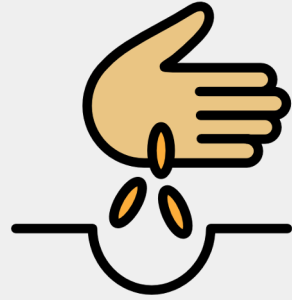
## FINISH PURCHASE

They finished in-store purchase.





# Data Description



23 days

Average duration  
for 3 campaigns

2

Data collection  
channels:  
NFC, SMS

266

URLs from  
3 different campaigns  
after removing bot data

21

All rebate claims  
(7.8% conversion)





# Research Objectives

## **Model 1:**

Identify meaningful information about in-store customer behavior.

## **Model 2:**

Analyse time-based data to better understand rebate behavior.

## **Model 3:**

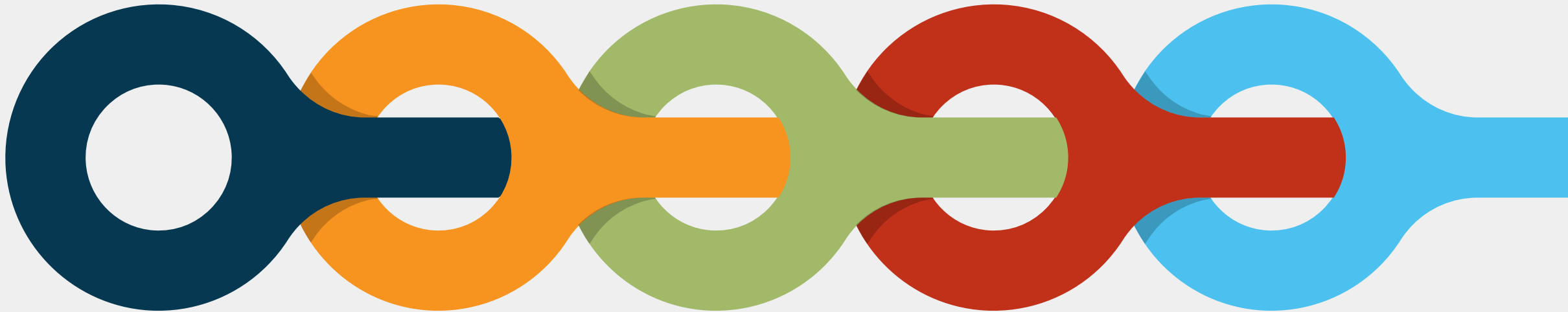
Monitor display channel to better understand rebate redemption rate.

## **Data Visualization:**

Rebate effectiveness, promotional analysis, etc.



# Research Process



## Processing Data

Cleaned up data by removing bot data & duplicated URLs.

## Building Models

We came up with models based on an initial look over the data.

## Data Visualization

We used tools like Tableau and Excel to conduct data visualization.

## Secondary Research

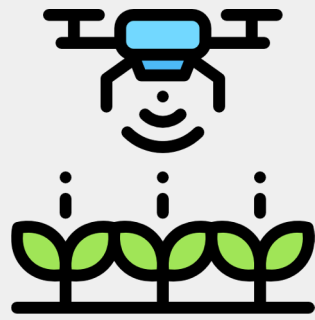
On SBM company, home gardening industries and NFC technologies.

## Conclusions

Based on results, we found certain relevant findings.



# Building Models



## 1. Rebate Performance Model

What is the relationship between rebate and campaign engagement?

## 1. Engagement Over Time - Daily, Day of Week & Hourly

Is there a specific pattern about engagement performance over time?

## 1. Channel Evaluation

How would different *channels* (SMS, aisle violator, shelf talker etc.) affect customer behavior of signing up, and receiving rebates?



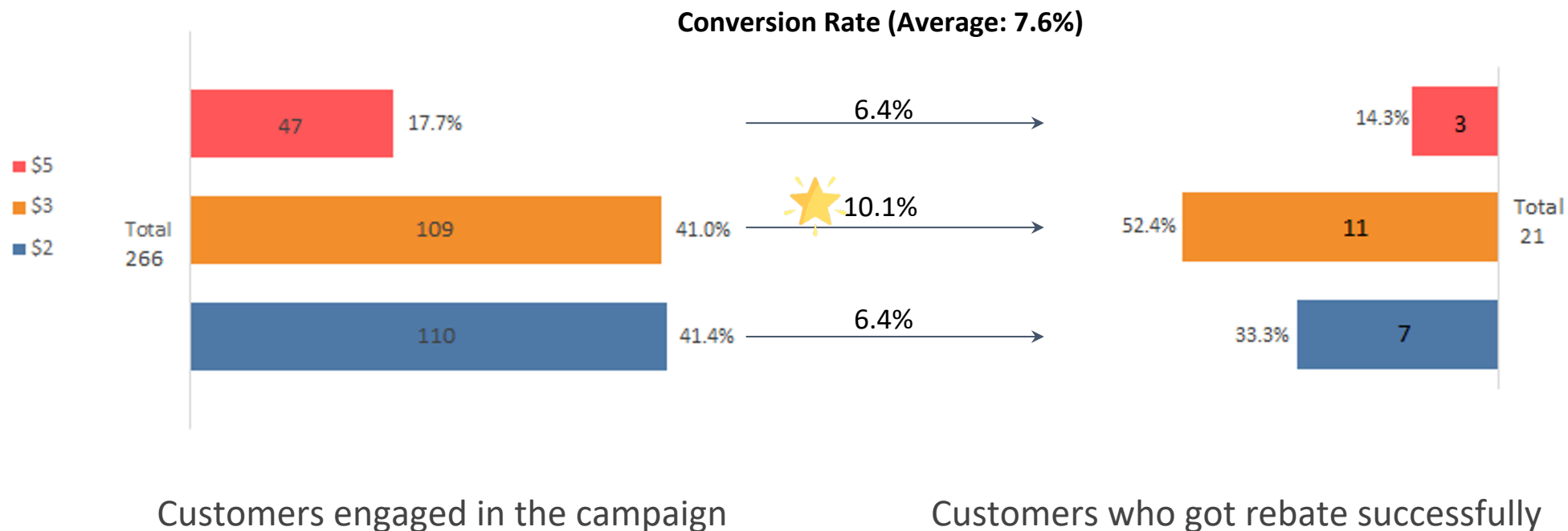
# Data Visualizations



## Model 1: Rebate Performance

There were more customers engaged in the \$2 and \$3 campaign. In terms of conversion rate, \$3 campaign performed the best.

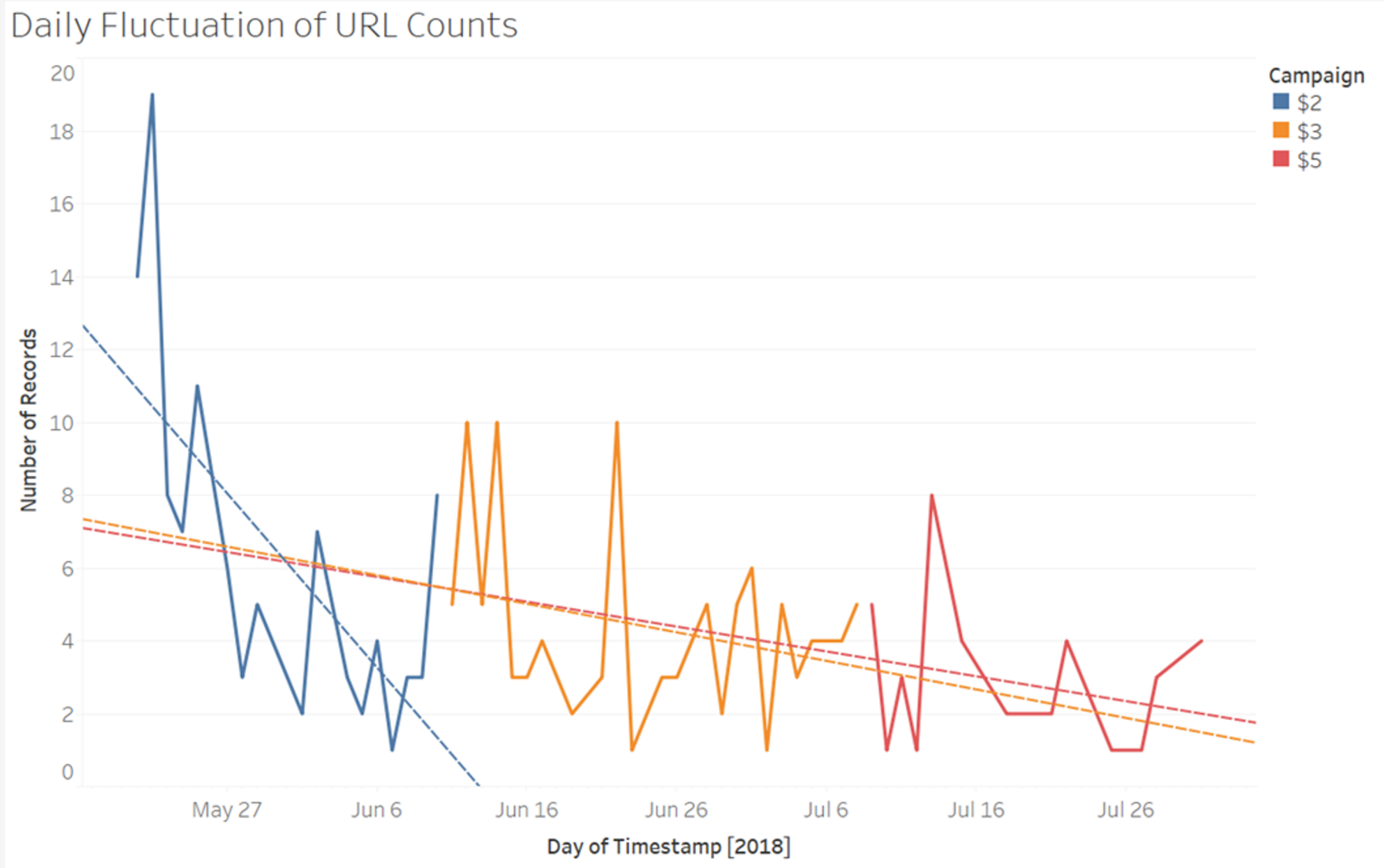
Distributions of different rebate campaigns





# Model 2: Daily Engagement

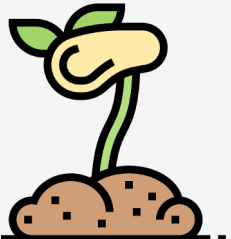
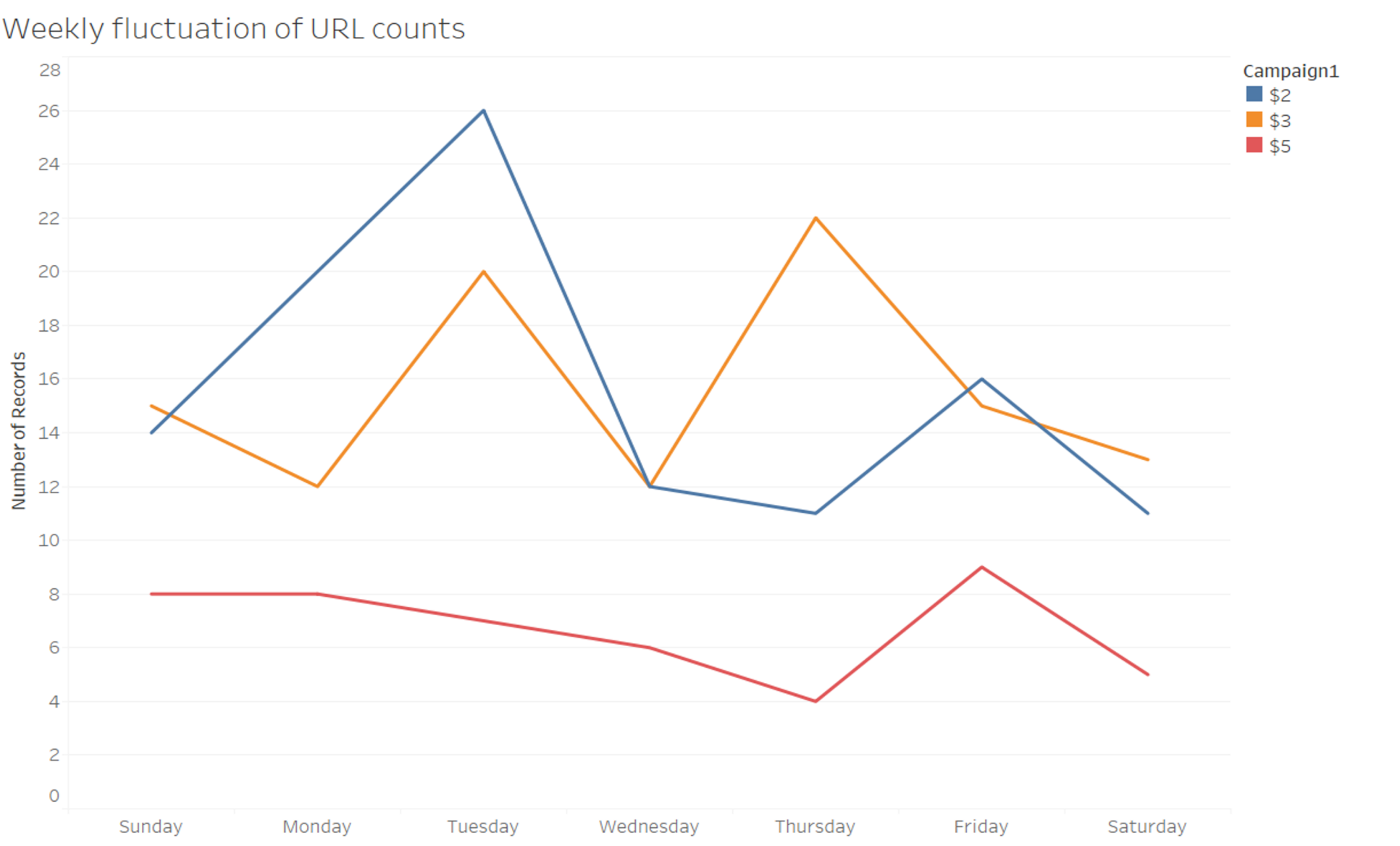
## The daily fluctuation trends of URL Counts



The trend of sum of Number of Records for Timestamp Day. Color shows details about Campaign. The view is filtered on Exclusions (Campaign, DAY(Timestamp)), which keeps 60 members.

# Model 2: Engagement Over Day of Week

## WEEKENDS VS. WEEKDAYS

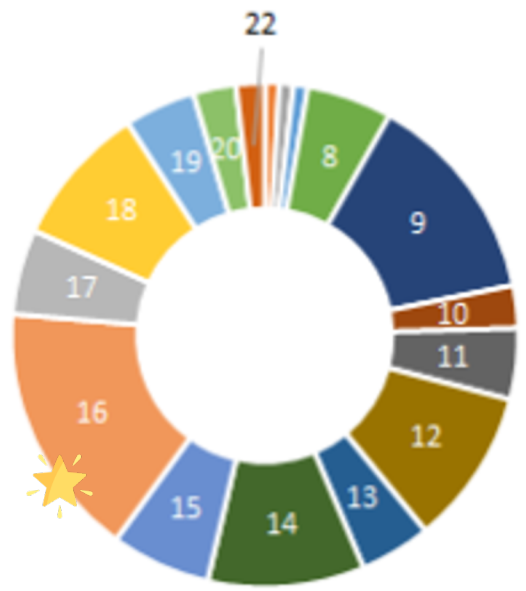


The trend of sum of Number of Records for Timestamp Weekday. Color shows details about Campaign1.

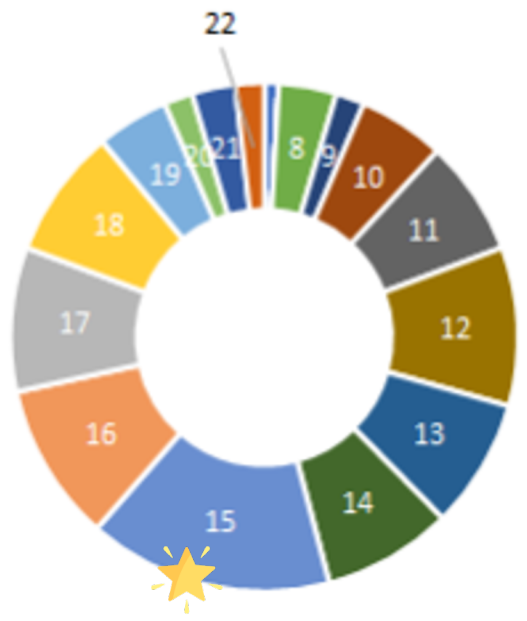
# Model 2: Hourly Engagement

PEAK REBATE URL TIME: between 3PM and 5PM

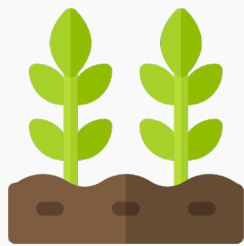
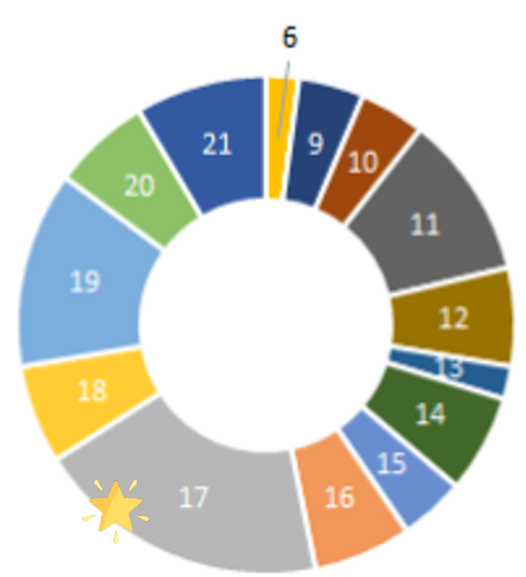
\$2 campaign - hourly distribution



\$3 campaign - hourly distribution

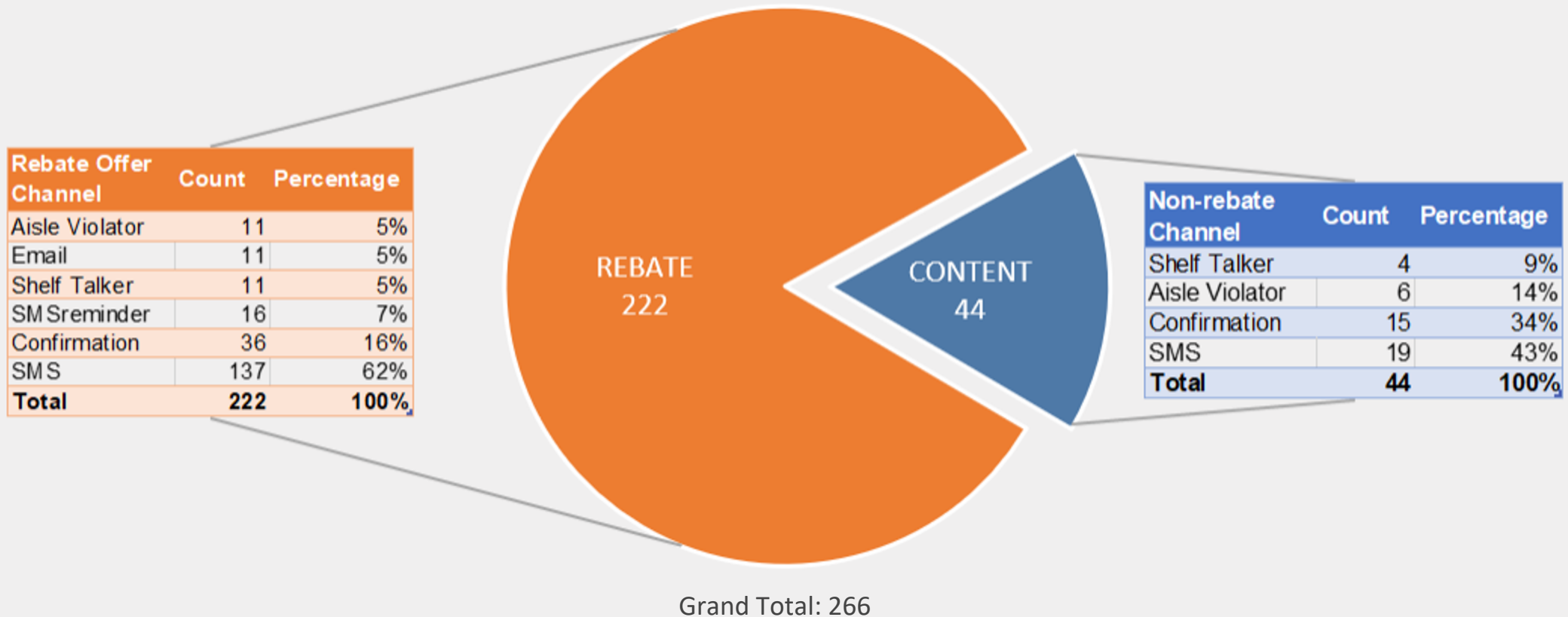


\$5 campaign - hourly distribution



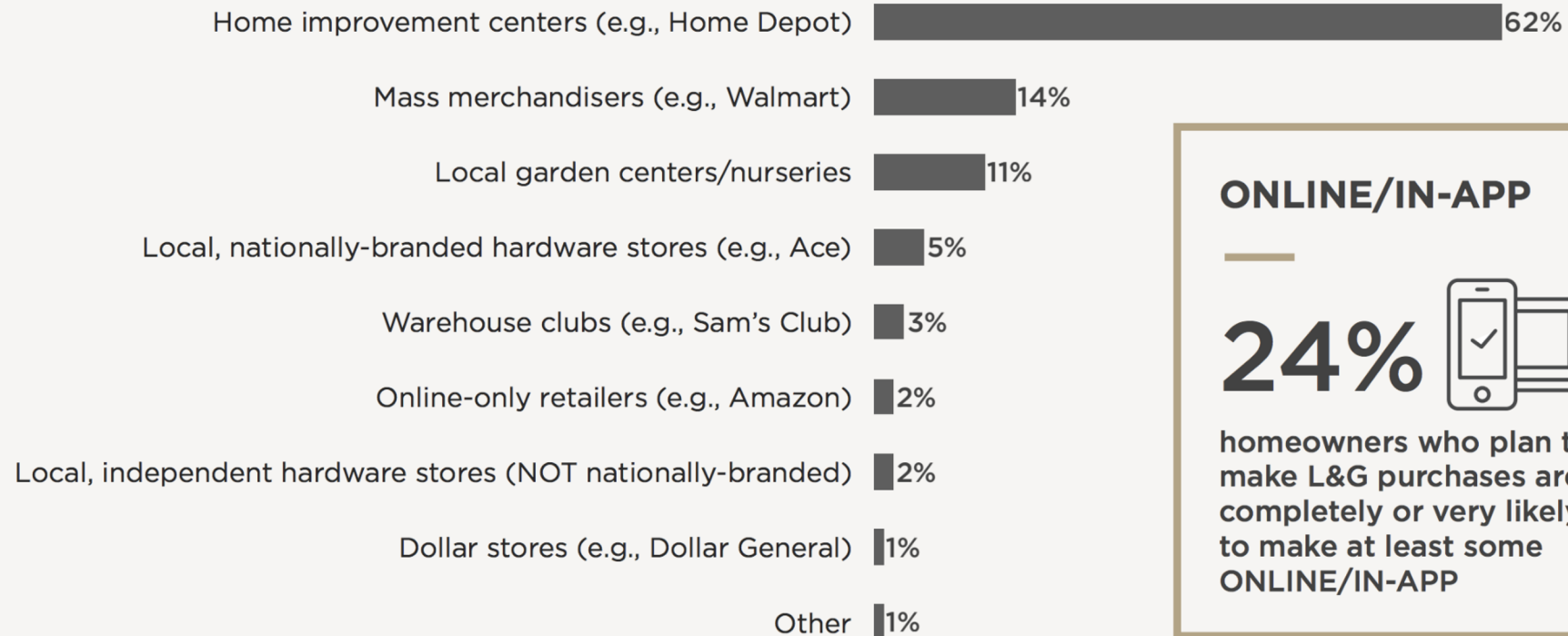
# Model 3: Channel Evaluation Model

- Rebate campaign produced 5 times more engagements than content campaign did, but obviously was more expensive.
- SMS accounted for most proportion for both content and rebate campaign.
- Shelf Talker and Aisle Violator didn't show big difference in affecting customer behavior.



62% of customers choose to purchase lawn & garden supplies in **home improvement centers**, where we should launch our campaigns

## FROM WHICH RETAILER DO YOU EXPECT TO PURCHASE MOST OF YOUR L&G SUPPLIES THIS SPRING?

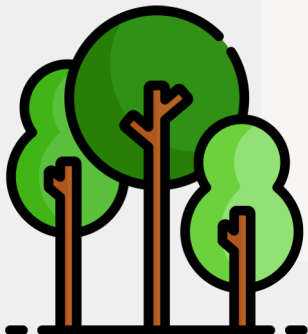


### ONLINE/IN-APP

24%

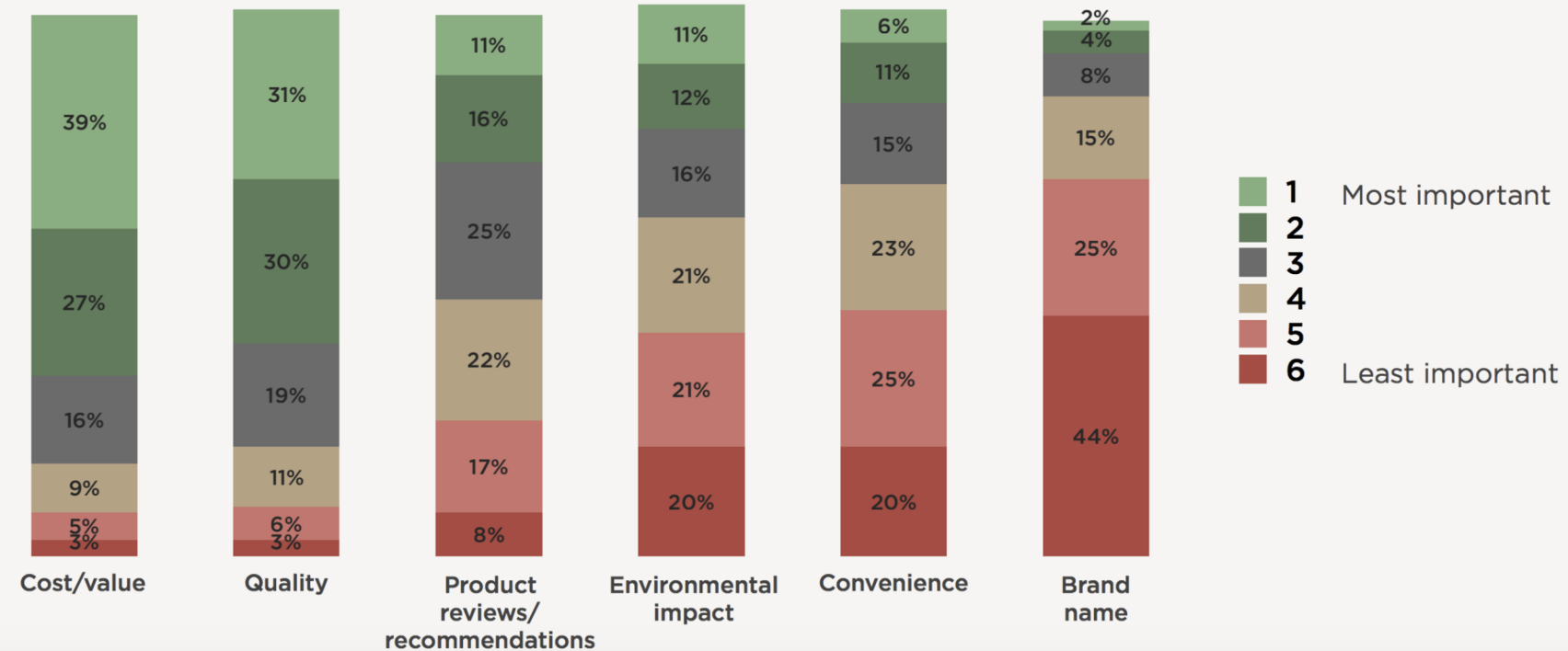


homeowners who plan to make L&G purchases are completely or very likely to make at least some ONLINE/IN-APP

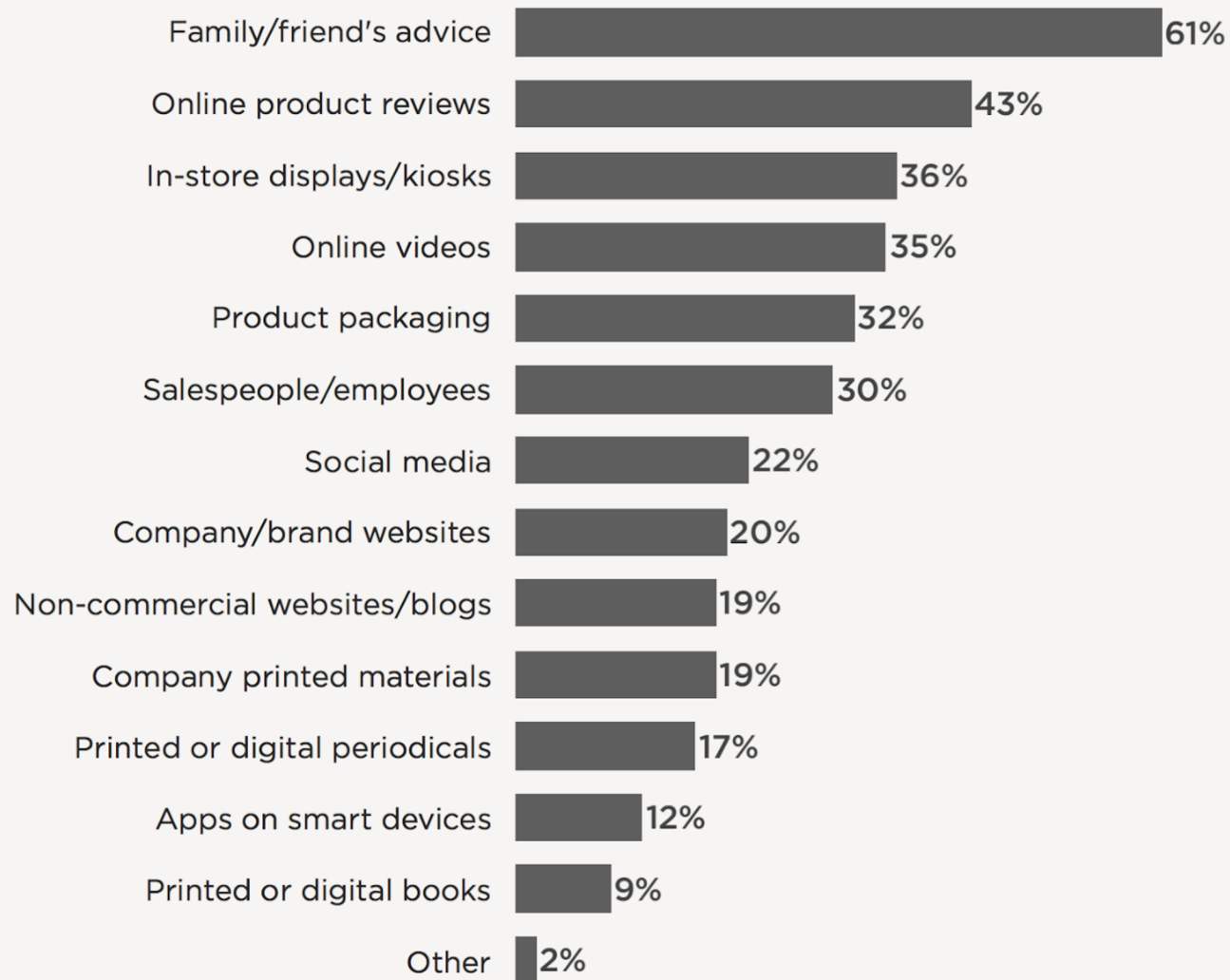
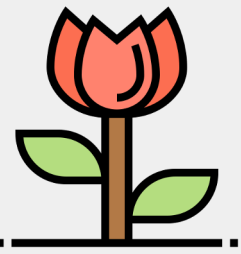


- **Cost/value and quality** are the most important factors to lawn & garden purchases.
- Therefore, rebate and contents that emphasize quality are able to stimulate purchase.

## RANK THE FOLLOWING CRITERIA BY HOW IMPORTANT THEY ARE TO YOUR LAWN AND GARDEN PURCHASES?



Source: Lawn & Garden 2019 Report, Field Agent



## INFLUENTIAL RESOURCES

Homeowner's were asked, "Which of the following do you use to inform/guide your purchases of lawn and garden products and brands?"

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***"Not being a lawn care expert, I value advice and product recommendations from folks in the business."*** - Agent Quote

Source: Lawn & Garden 2019 Report, Field Agent

Since **word of mouth** and **product reviews** are the most important factors that will influence customers' purchasing decision, quoting positive reviews from other customers on in-store display ads is a good way to promote products.

## WHAT DO YOU DISLIKE ABOUT LAWN & GARDEN SHOPPING?

12 MOST-FREQUENTLY APPEARING THEMES AMONG HOMEOWNERS' FREE-FORM RESPONSES

### NOT KNOWING WHAT TO BUY

*"It's hard to know what I really need and what really works especially on weeds or invasive grasses."*

### TOO MANY OPTIONS

*"I dislike having to sort through a bunch of products trying to find the one I need or best fits the project I'm working on."*

### TOO EXPENSIVE

*"Sometimes the things I need are expensive. I realize not everything is free, but some stuff is so pricey I have to forego purchasing it."*

### DIFFICULT TO CARRY

*"It's hard for me to carry a 40 lb bag of soil."*

### DIFFERENTIATING PRODUCTS

*"I dislike that there are so many redundant products on the market and are packaged in a way that make it difficult to differentiate between them."*

### FINDING KNOWLEDGABLE HELP

*"Very few associates willing to help and are knowledgeable in my project."*

**It is just too complex to make a purchase decision.** We can design a brief quiz in the initial stage of the campaign, to help customers find the most appropriate products based on their specific needs.





# Recap & Conclusions

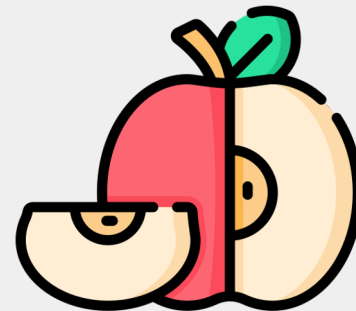
**1. Conversion rate is quite low! Less than 8% (266 → 21).**

The current customer journey is too complex. Simplify the customer journey; a short quiz may help.

**1. \$3 campaign performed better than \$5!**

We recommend for an A/B test for further evaluation.

**1. Content Matters!** Even though the rebate campaign performed 5 times better than Content campaign, it is a good contender to look into because it is cheaper.



A photograph of a person's hands holding a small plant with soil in a garden. The plant has green leaves and small purple flowers. In the background, a woman in a blue hoodie is smiling. The scene is outdoors with a wooden fence and trees.

***THANK YOU***