



INTO THE WORK-FROM- HOME MARKET

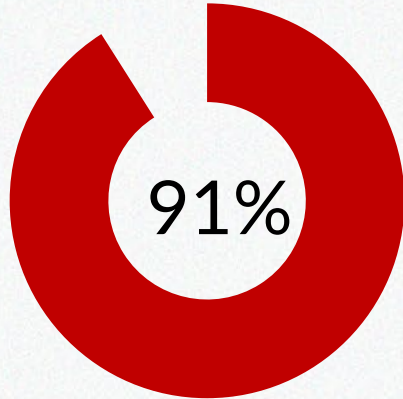
Helping Costco stay up-to-date with
the evolving customer demographics

Josh Wang
3/23/2022

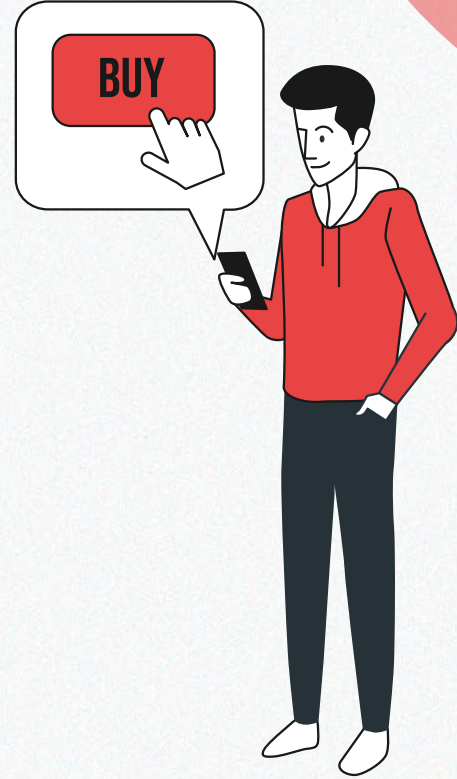
THE BACKGROUND: COSTCO

CUSTOMERS ARE EXCEEDINGLY LOYAL

- Despite limited product selection compared to Walmart and Amazon, Costco manages to fulfill its customers' needs.
- In 2020, **91%** of its customers renewed their membership.

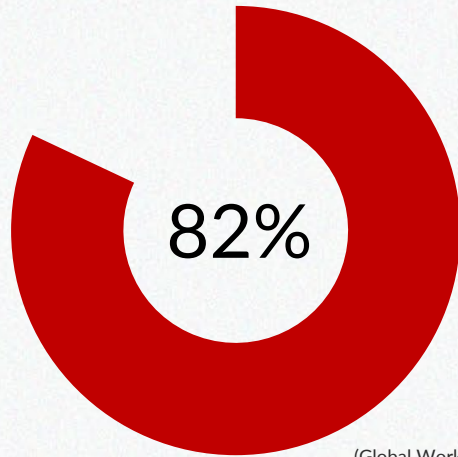


(The Motley Fool)



THE PROBLEM: CUSTOMER DEMOGRAPHICS ARE EVOLVING

- **69%** of U.S. employees worked remotely at the peak of the pandemic
- **82%** of U.S. employees want to work remotely at least once a week when the pandemic is over.



(Global Workplace Analytics)



OPPORTUNITIES

Shopping > Home > Home Office • Posted on Feb 28, 2022

35 Tech Products And Accessories For Anyone Who Works From Home

Because hiring an assistant may not be in the budget, but Alexa is a closet second.

The rise of working out while working from home

Desk-bike hybrids and office chair-friendly ellipticals are peak productivity.

By Sydney Gore | Dec 30, 2020, 9:10am EST

f t s SHARE



New product demands

What Does It Mean When Your Eyes Hurt After Working At A Computer?



COSTCO
OPTICAL

Costco Vision care

HOW WE WORK

Workcations: The travel trend mixing work and play



Costco Travel

Mar 11, 2022 - Economy & Business

Lots of Americans plan to move because of WFH

New store/depot locations, change in shipping logistics



Any many more...



WE NEED TO KEEP COSTCO UP-TO-DATE

With our service, Costco can...

Identify regions and
demographics with high
WFH tendency



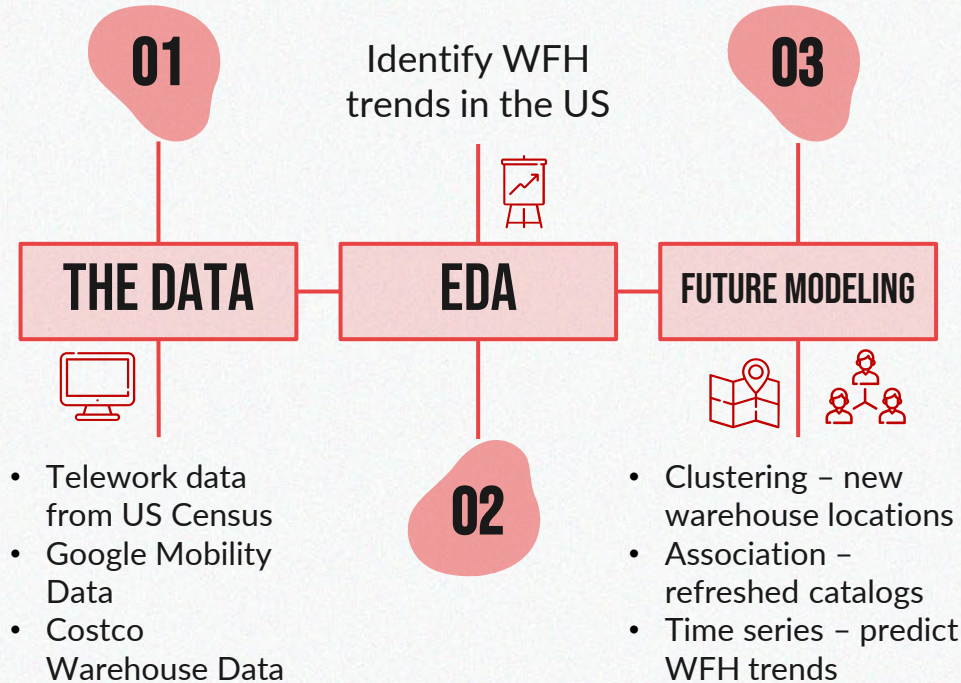
Have more **tailored**
catalogs at each
warehouse



Better customer
retainment and overall
improved sales



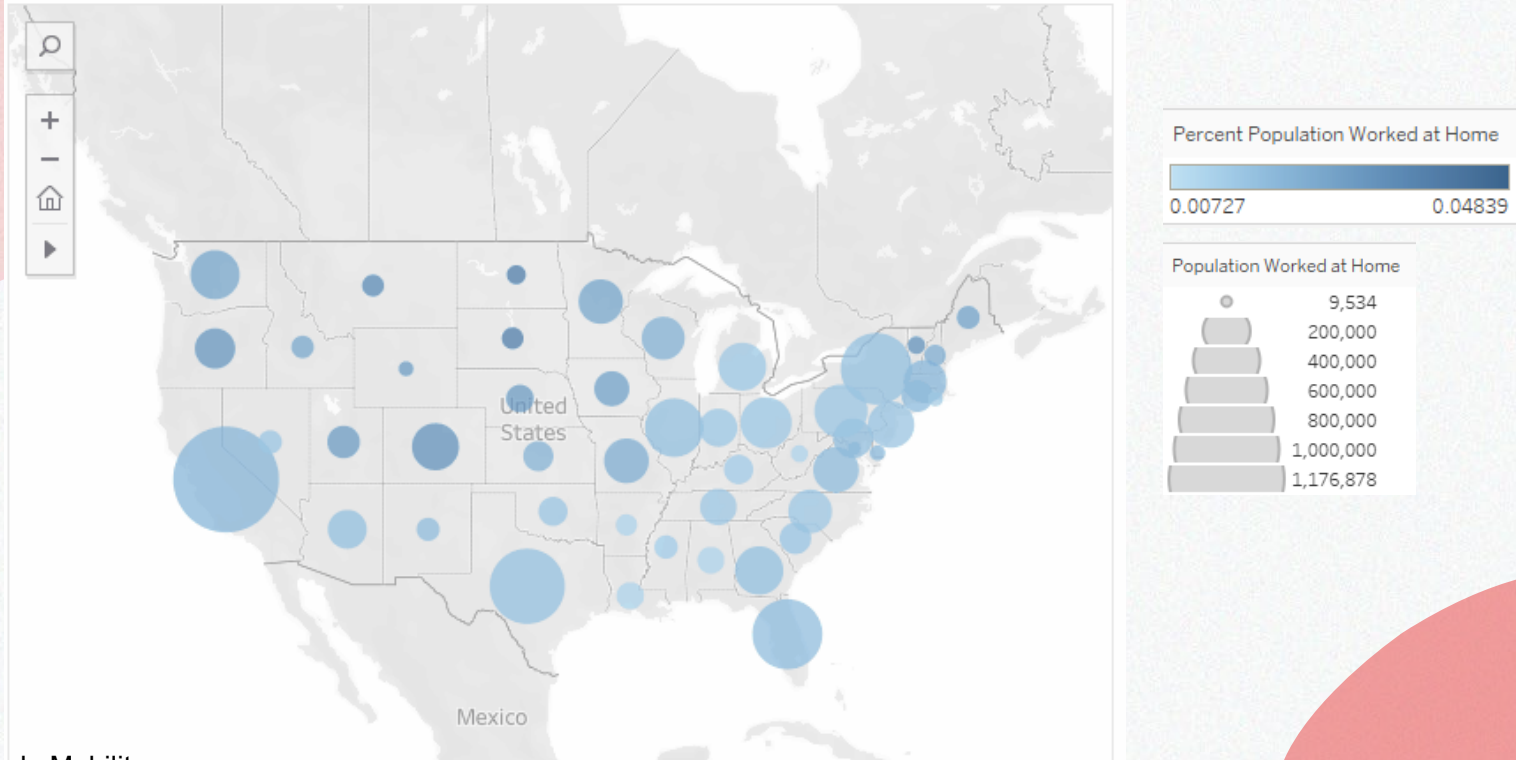
PROPOSED SOLUTION PATH



PRELIMINARY ANALYSIS – WFH TREND PRE-PANDEMIC

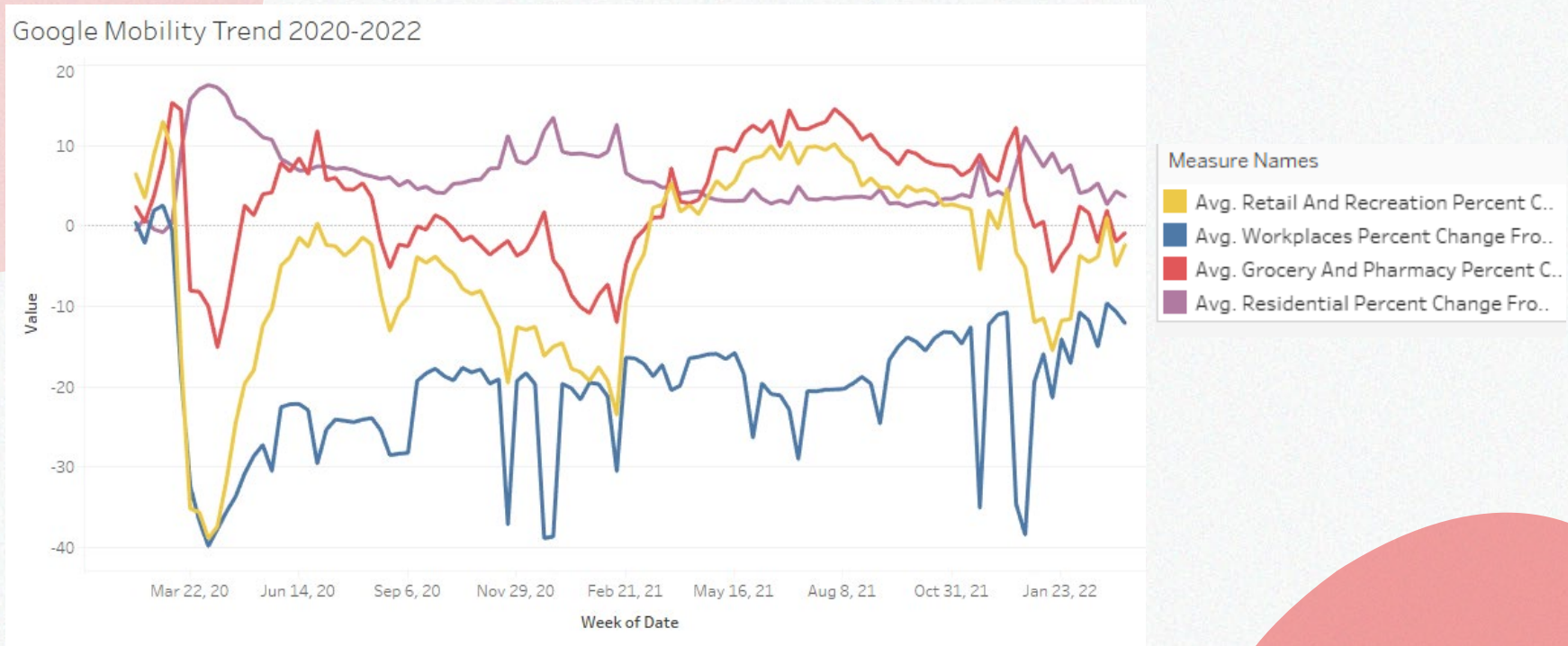
The WFH trend has been growing since before the pandemic (2004-2019)

Work from Home Census Data - 2004



PRELIMINARY ANALYSIS – WFH TREND DURING PANDEMIC

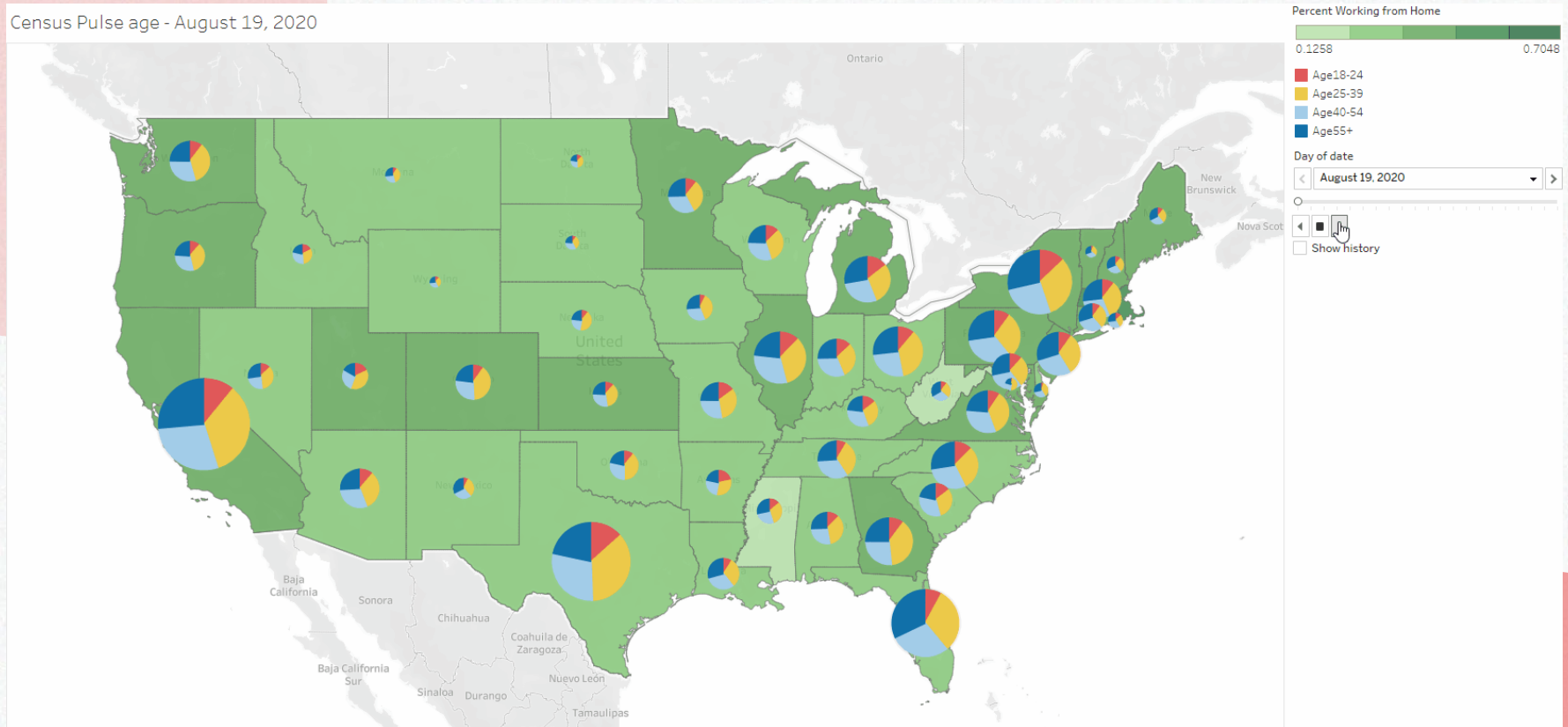
During the pandemic, people go to work less, stay at home more, but grocery/retail shopping see little change.



PRELIMINARY ANALYSIS – WFH AGE DEMOGRAPHIC

The majority of WFH population are above the age of 40.

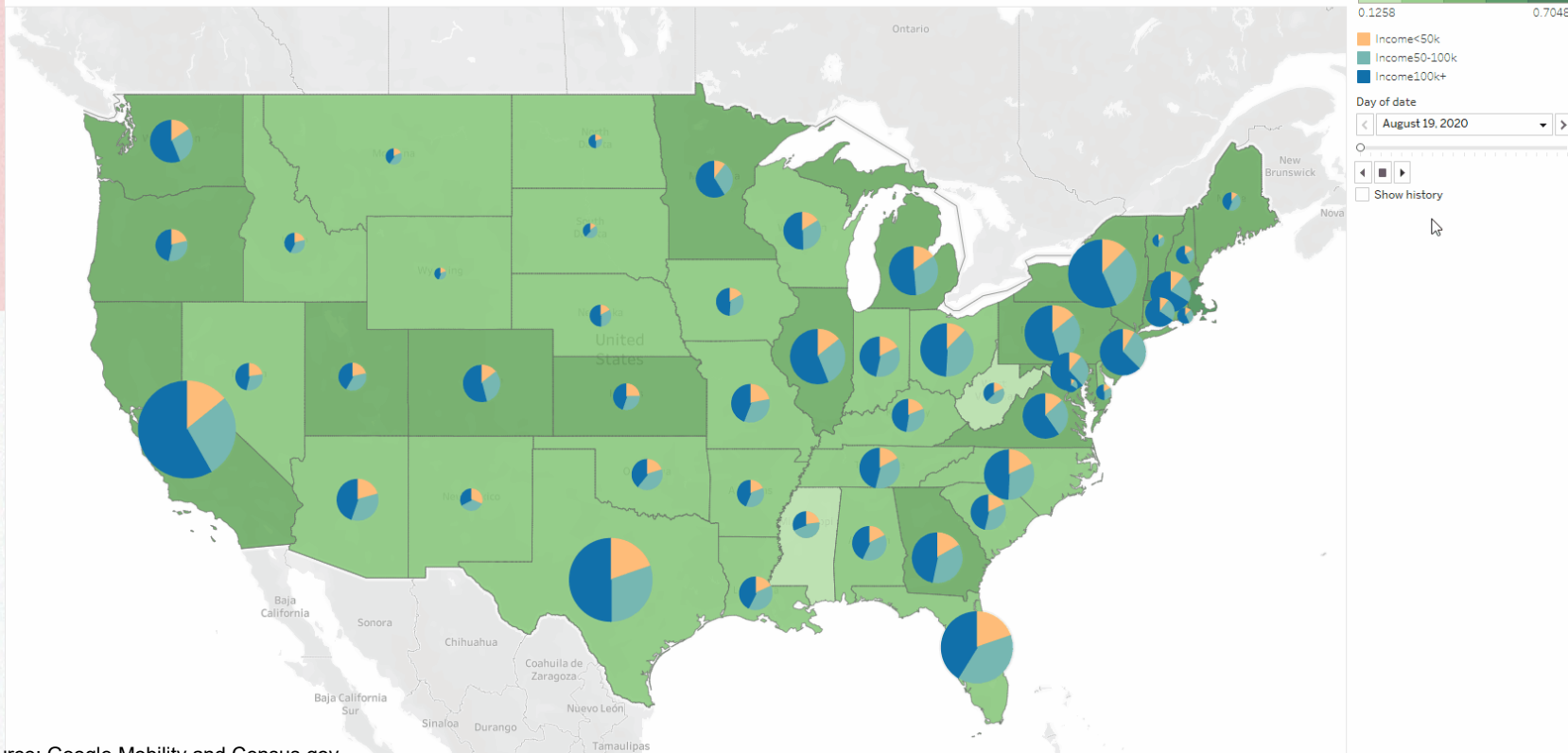
Census Pulse age - August 19, 2020



PRELIMINARY ANALYSIS – WFH INCOME DEMOGRAPHIC

The majority of WFH population make more than 100k per year.

Census Pulse Income - August 19, 2020

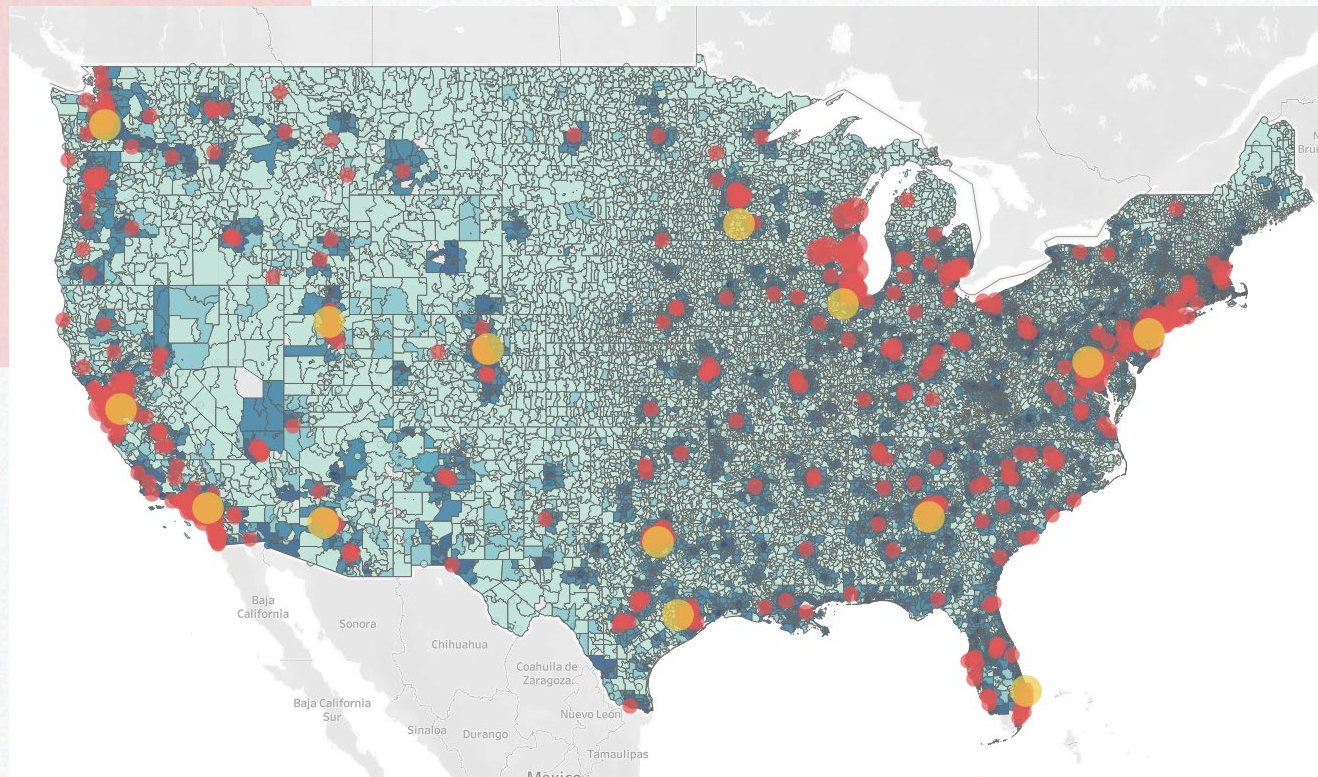


PRELIMINARY ANALYSIS – COSTCO LOCATION

Potential in the suburban market

50%

50% of urban WFH workers would move to a suburban/rural area
(Owl Labs Survey)



RUCA Score

1,000

5,000

Costco Distribution Ce...

Costco Distribution ..

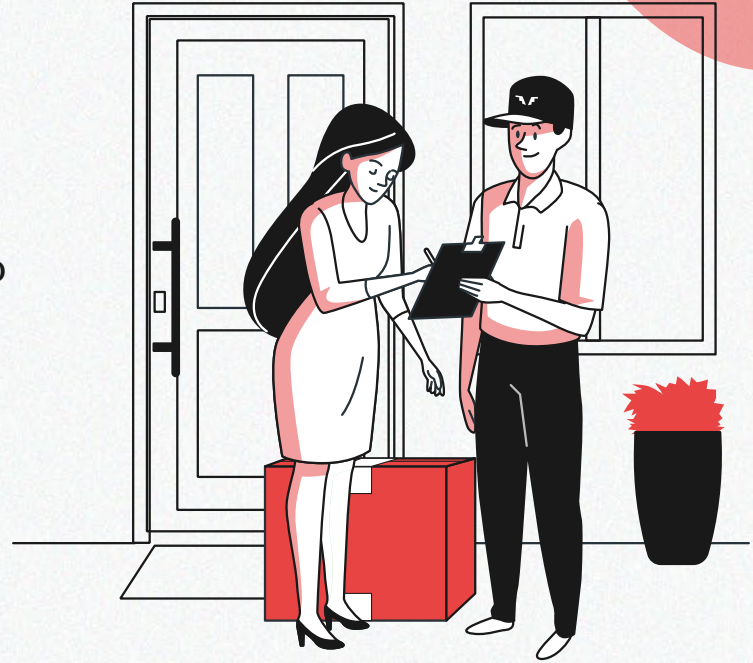
Costco Stores

Costco Store

FUTURE WORKS

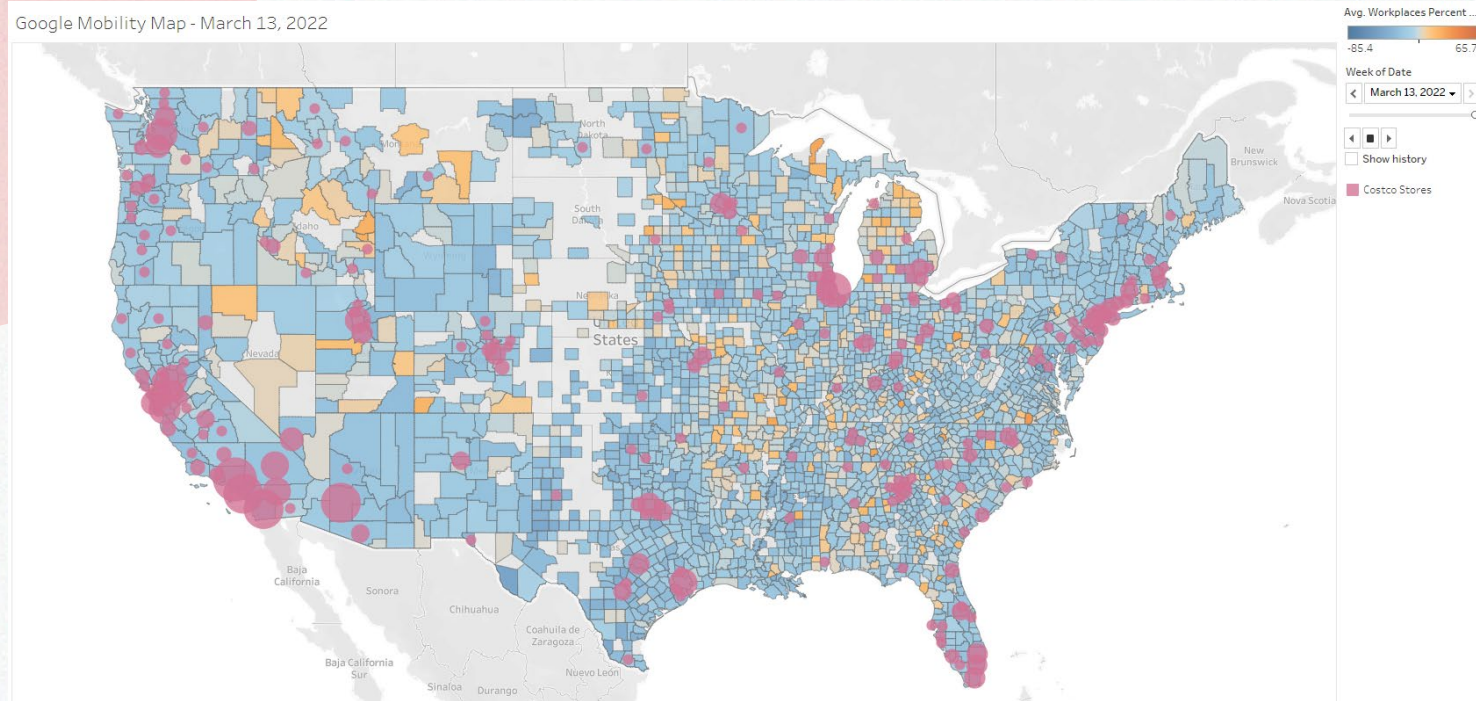
Predictive models:

- Time series to predict future WFH trends
- Identify geographical regions for new Costco depots/stores
- Association and recommender analyses to improve on-site and online shopping experience

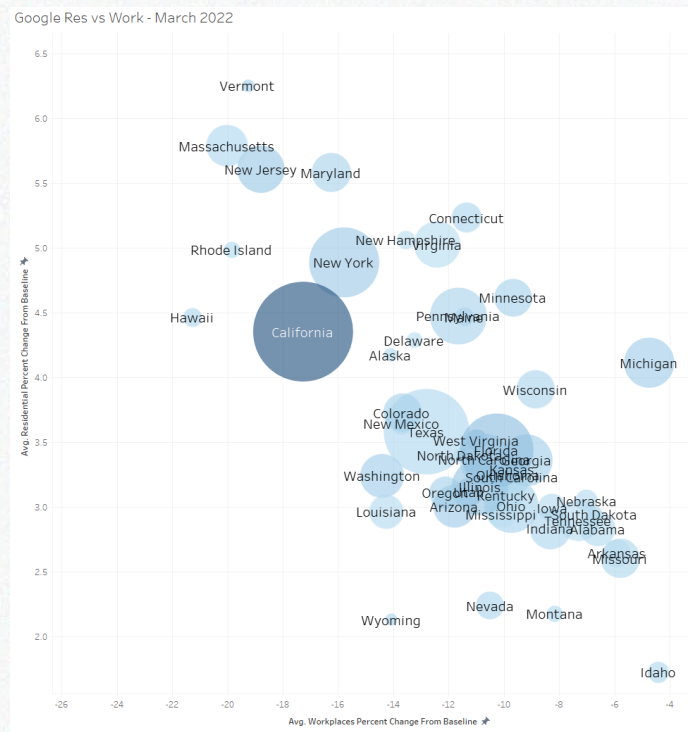
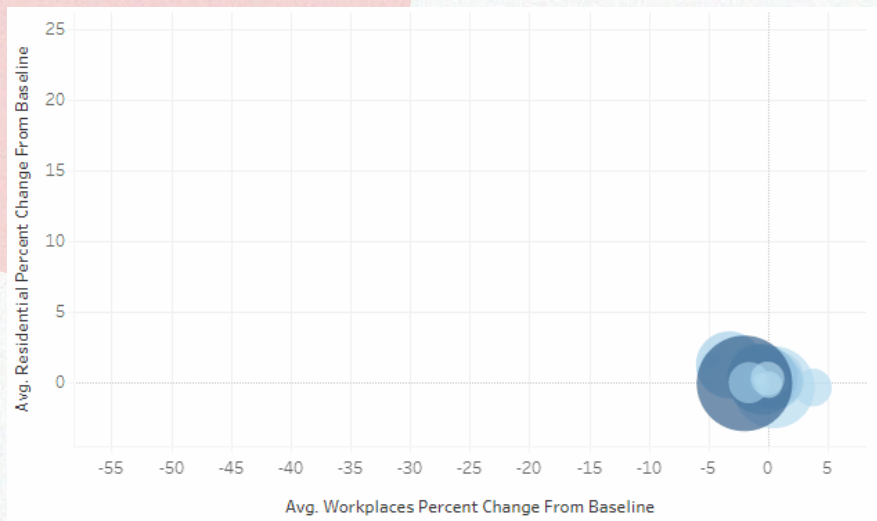




APPENDIX – COSTCO LOCATIONS VS GOOGLE MOBILITY



APPENDIX – COSTCO LOCATIONS VS GOOGLE MOBILITY



APPENDIX

Abstract

This working paper explores how working from home (e.g. telework) may or may not have changed daily travel--both how and why you go places. This is of particular importance in light of mandated work from home events such as the COVID-19 pandemic. While total driving and vehicle-miles-traveled may have declined slightly due to telework and shelter-in-place orders that reduced work-based trips, data illustrates an increase in total trips from 3.97 to 4.45 in total and that these additional 26% of trips have been induced by working from home. This means that while VMT and the share of driving may have declined, the number of trips and engine cold starts may have gone up. This provides a cautionary lesson to planners and engineers seeking to address climate and congestion goals through telework efforts and underscores the importance of thinking critically about the future of urban development, transit and behavioral strategies.

Keywords: COVID-19, telework, travel behavior, mode substitution