

*Replica*

Change the way you  
see your city move.



# Better data, better decisions, better planning

## What is Replica?

Replica is a shared, fully-calibrated platform that offers a complete sense of city movement patterns that allows for making informed decisions for future investments; and monitor existing projects to measure their impact and success by using real time data.



# Supporting Corridor Planning and the Comprehensive Plan

As part of our planning efforts, Replica can help inform our efforts by providing quarterly-updated data that shows:

- How service routes can be improved;
- The economic impacts of community investment;
- Show modifications to commuting patterns over time;
- See where people go and how they spend their money to make more strategic investments;
- Track where people are coming from when they visit El Paso;



# What Types of Questions Does Replica Answer?

Shows where people move;

When people move;

How they move; and

What they spend their money on.



## STRATEGIC PLAN ALIGNMENT

### GOAL 1

CULTIVATE AN ENVIRONMENT CONDUCTIVE  
TO STRONG, SUSTAINABLE ECONOMIC  
DEVELOPMENT

### GOAL 2:

SET THE STANDARD FOR A SAFE AND  
SECURE CITY

### GOAL 7

ENHANCE AND SUSTAIN EL PASO'S  
INFRASTRUCTURE NETWORK



# STRATEGIC PLAN 2019

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## 25 BY 2025

# Strategic Plan Alignment

| STRATEGIC GOAL   | FOCUS   | RESULTS   |
|--|---|---|
| <p><b>GOAL 1</b><br/>CULTIVATE AN ENVIRONMENT<br/>CONDUCTIVE TO STRONG,<br/>SUSTAINABLE ECONOMIC<br/>DEVELOPMENT</p> | <p>Goal 1.1 Stabilize and expand El Paso’s tax base<br/>Goal 1.2 Enhance Visitor Revenue opportunities<br/>(Bridges, Airport, Economic Development)<br/><br/>Goal 1.5 Stimulate economic growth through transit and bridges integration</p> | <p>Make strategic investments by leveraging our investments in places people go and spend money<br/><br/>Improve Service Routes and Scenario Planning<br/><br/>(Bridges, Sun Metro, ESD, Streets)</p> |
| <p><b>GOAL 2:</b><br/>SET THE STANDARD FOR A SAFE<br/>AND SECURE CITY</p>  | <p>2.4 Improve motorist safety and traffic management solutions;</p>  | <p>Improve Service Routes and Scenario Planning<br/><br/>(Bridges, Sun Metro, ESD, Streets)</p>   |
| <p><b>GOAL 7</b><br/>ENHANCE AND SUSTAIN EL<br/>PASO’S INFRASTRUCTURE<br/>NETWORK</p>                                | <p>Goal 7.2 Improve competitiveness through infrastructure improvements impacting the quality of life<br/>Goal 7.3 Enhance a regional comprehensive transportation system</p>   | <p>Understand Where People Go, See Modifications to Commuting Patterns and Track Economic Impacts of Community Investment<br/><br/>(Economic Development, CID)</p>                                    |

# Partnership Opportunities

**Opportunities exist to enter into partnerships with outside agencies, entities and City departments to use Replica to make transportation-related decisions.**

**Benefits include:**

- **Better coordination at the local and state level;**
- **Improved regional decision-making;**
- **Enhance transportation network; and**
- **Shared cost**

# At the center of many important transportation and land use decisions is a travel-demand model.

The development of a travel-demand model can take upwards of ten years, rendering it nearly useless by the time it has been certified.

## THE TRAVEL-DEMAND MODEL

01

**SEND A PAPER SURVEY**

Send a paper survey to approximately 0.5% of the region's population



02

**HIRE CONSULTANTS**

Hire consultants, who will spend the next 3-5 years building the model



03

**COLLECT THE DATA**

Spend 1-2 years collecting traffic and transit counts to calibrate the model



04

**CALIBRATE THE MODEL**

Spend 1-2 years calibrating the model



05

**VALIDATE THE MODEL**

Certify or validate the model **7-10 years after** the primary data was collected



This creates a significant opportunity to improve the places we live by equipping public and private organizations with better data and tools.



# Meet Replica.

A shared, fully-calibrated platform for monitoring the movement of people and goods in a privacy-sensitively way.

**FRESH** We deliver 4 models a year with data for every day of a typical week.

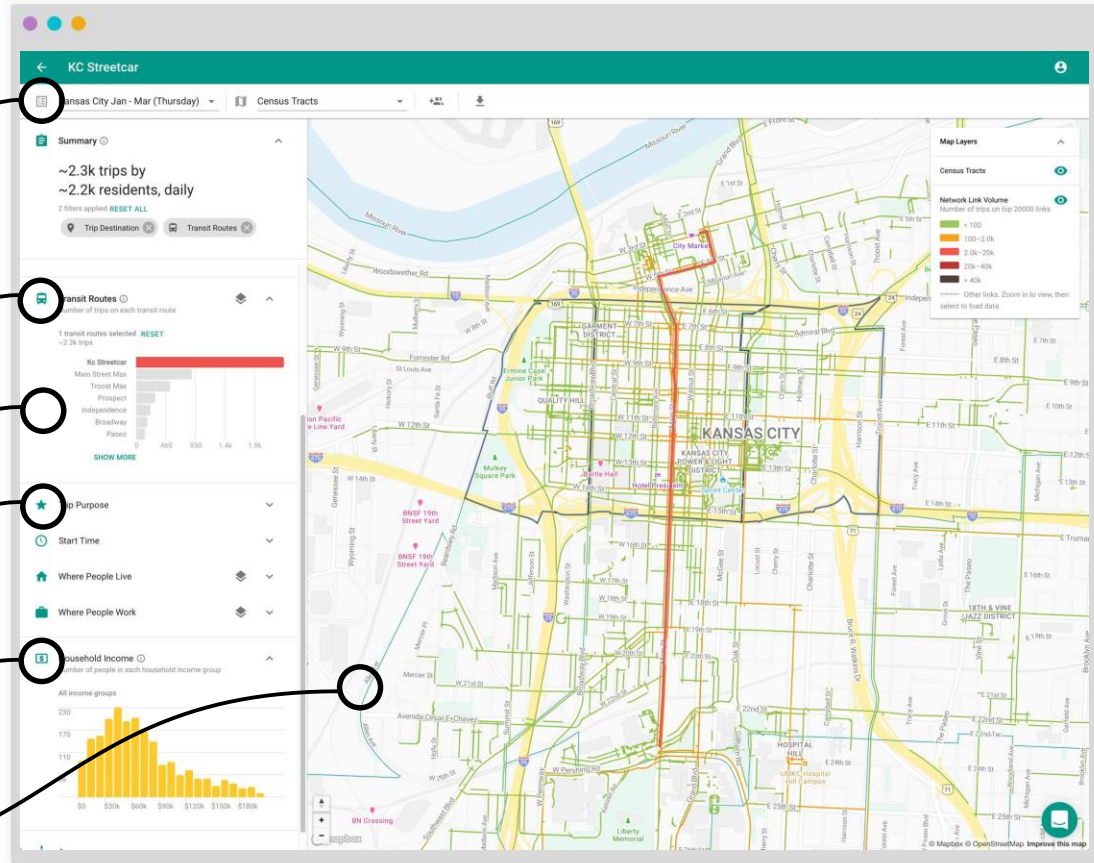
**HOW** Understand which modes, transit lines, roads and streets people are using.

**WHY** Explore why people are traveling.

**WHEN** Activities are modeled second-by-second with parcel level precision.

**WHO** Demographic info including income and age while protecting privacy

**VISUAL** High-fidelity visualizations of data on the map with choropleths, line maps and more.



No single source of data is a silver bullet for understanding movement.

01

MOBILE  
LOCATION  
DATA

02

CONSUMER  
/ RESIDENT  
DATA

03

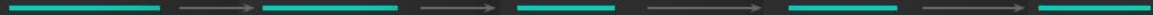
LAND USE /  
REAL ESTATE  
DATA

04

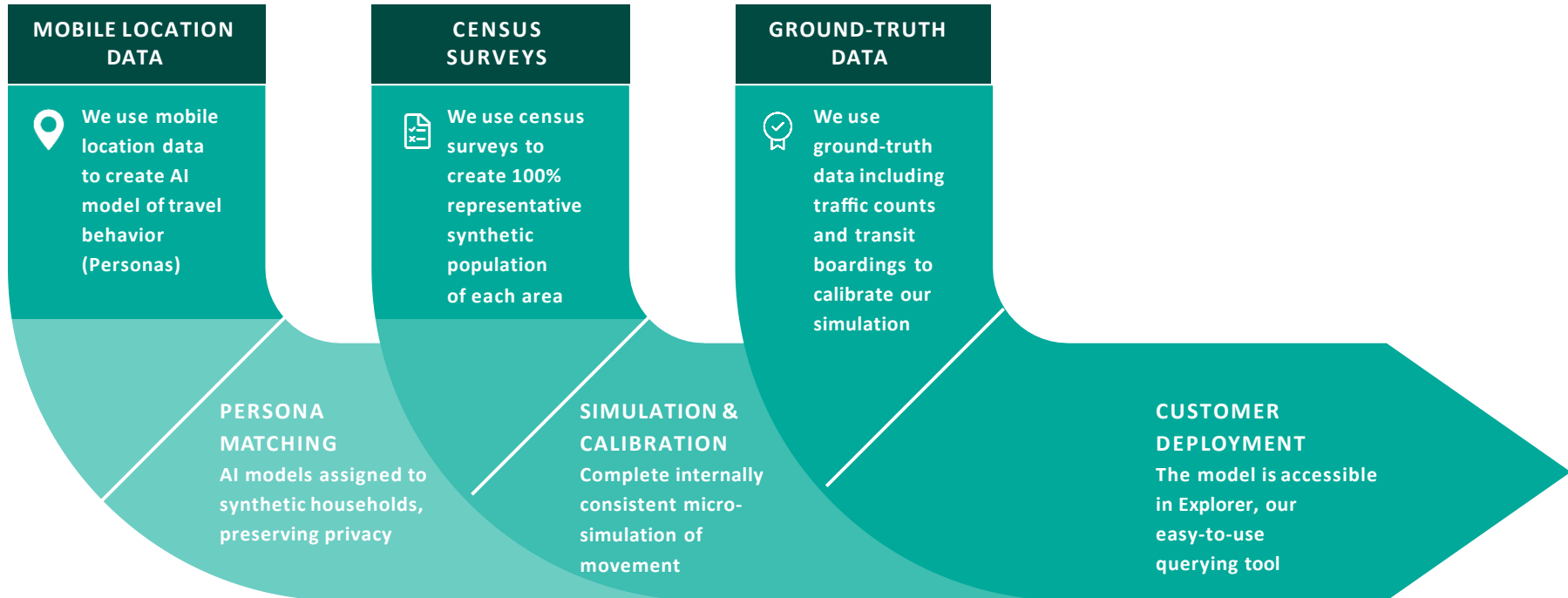
CREDIT  
TRANSACTION

05

GROUND-TRUTH  
DATA



# Complete, accurate and representative turn-key solution.



# Replica is already helping major cities solve serious problems.



## KANSAS CITY

Replica is helping Kansas City allocate \$1B in roadway and sidewalk improvements.



## NEW YORK STATE

Replica is helping the State of New York develop and implement a congestion pricing policy.



## CHICAGO

Replica will help Chicago understand why transit ridership is on the decline.



## BAY AREA

Replica will help the Bay Area understand the relationship between old and new modes of transportation.

# Replica is the first step in a virtuous cycle of planning and operational tools for cities.

Replica enables customers to understand “what is” – what is happening today and in the nearpast?

Scenario allows customers to ask “what if” - what if we implemented congestion pricing? What if required higher density?

Scenario uses Replica as a baseline to simulate future conditions and their impacts.

## 01 REPLICA

What is happening today and in the near past?



## 02 SCENARIO

What if we implemented congestion pricing? What if we required higher density?

## 03 PILOT & IMPLEMENT

Pilot new policy or implement changes and monitor the effects in an updated Replica.

# Scenario provides a view into a future state.

A primary responsibility of public agencies is to imagine and plan for a better future. The process today includes a lot of dreams, but very little empirical support.

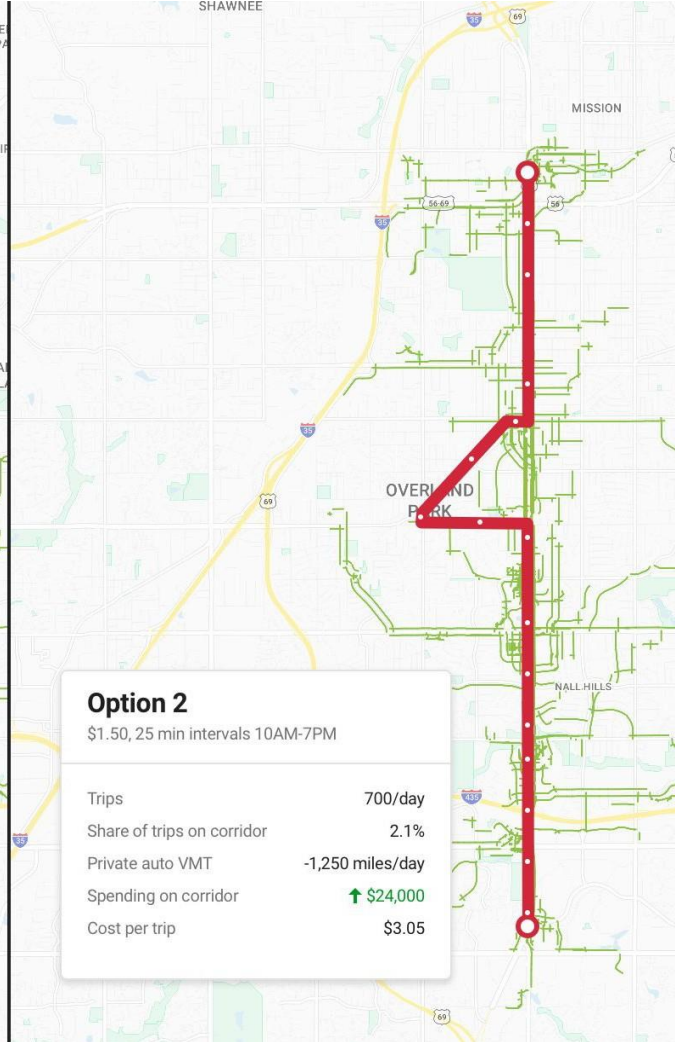
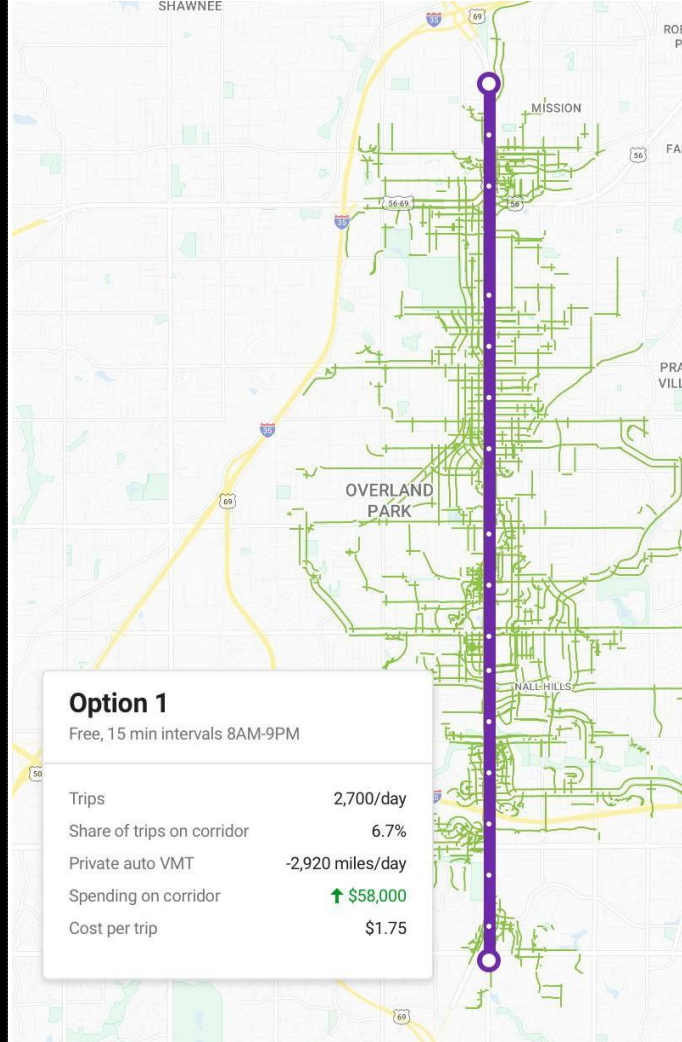
Scenario allows cities to ask questions like:

**WHAT IF TRANSIT WERE FREE?**

**WHAT IF AVS COME TO MY CITY?**

**WHAT IF WE STOPPED ALLOWING CARS IN DOWNTOWN?**

**WHAT IF WE BUILD MORE HOUSING?**



## Kansas City, MO

SELECT A DIFFERENT AREA



TRIPS JOBS & COMMUTING **SPENDING** STREETS & HIGHWAYS TRANSIT RESIDENTS SAVE DOWNLOAD SHARE

ALL SPENDING IN THIS AREA ALL SPENDING BY RESIDENTS OF THIS AREA

Jump to section: Resident spending overview Travel & spending Demographics & spending

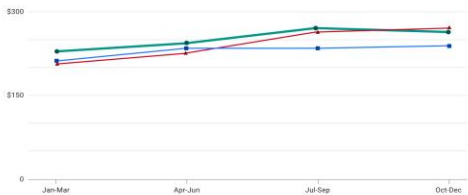
### Resident spending overview

#### How much are residents spending locally each week?

Residents of Kansas City, MO Fall 2018 vs Similar Areas

**\$267** Median local spend per resident per week  
 Down from **\$276** in Summer 2018  
 Compared to **\$378** in Entire Region

Median amount spent locally per resident per week



Legend

- Kansas City MO
- Overland Park, KS
- Olathe, KS

See spending by census tract



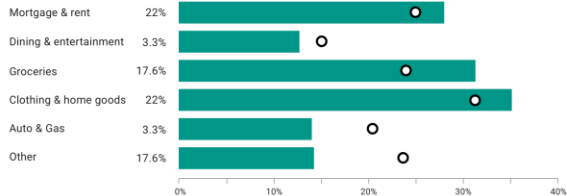
### What are residents spending money on?

Residents of Kansas City, MO Fall 2018 vs Entire Region

Any household income level Low (\$0-\$30k) Medium (\$30k-\$90k) High (\$90k+)

**24%** Share of spending on mortgage or rent  
 Up from **21%** in Summer 2018  
 Compared to **29%** in Entire Region

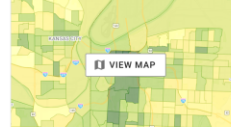
Share of total spending for each purpose



Legend

- Kansas City MO
- Entire Region

See reason for spending data by census tract



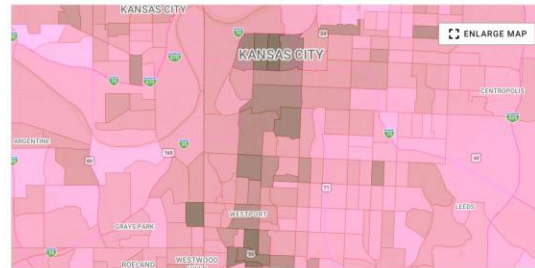
### Where are residents spending money?

Residents of Kansas City, MO Fall 2018

Any reason Groceries Entertainment Clothing & home goods

**67%** Share of spending occurring within Kansas City MO  
 Down from **71%** in Summer 2018

Amount of money spent per square mile by census tract



Legend

- \$10k/sq mi
- \$20k/sq mi
- \$30k/sq mi
- over \$40k/sq mi

## Travel & spending

### How do residents get to the places they spend money?

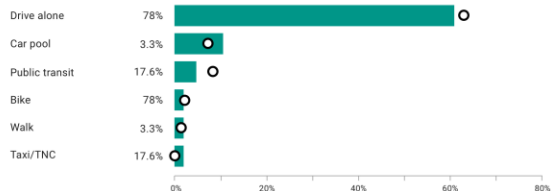
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Residents of Kansas City, MO   Fall 2018   vs Entire Region

Any reason   Groceries   Entertainment   Clothing & home goods

**83.5%** Share of residents driving or using Taxi/TNC for spending activities   Up from **77.3%** in **Summer 2018**   Compared to **81.3%** in **Entire Region**

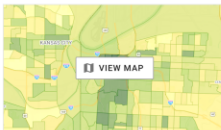
Share of trips by each mode



Legend

- Kansas City MO
- Entire Region

See commute duration data by census tract



### How does household income relate to spending?

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Residents of Kansas City, MO   Fall 2018

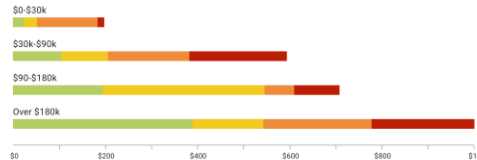
**56%** Median share of income spent on housing, groceries & essentials   Down from **57.5%** in **Summer 2018**   Compared to **65%** in **Entire Region**

Share of spending on each category

All income levels



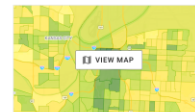
Amount of spending on each category for each income level



Legend

- Housing (mortgage & rent)
- Groceries & essentials
- Dining & entertainment
- Other

See commute quality data by census tract



## Demographics & spending

### How does spending vary by age?

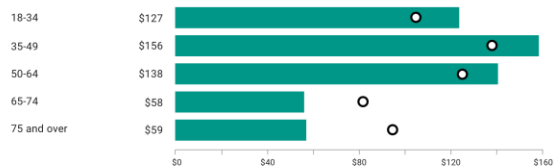
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Residents of Kansas City, MO   Fall 2018   vs Entire Region

Any reason   Groceries   Entertainment   Clothing & home goods

**\$267** Median spend per trip for all age groups   Up from **\$31** in **Summer 2018**   Compared to **\$45** in **Entire Region**

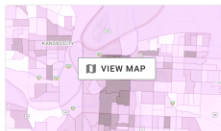
Median amount spent per week by age group



Legend

- Kansas City MO
- Entire Region

See age data by census tract



# Procurement Summary

- **Solicitation advertised on December 17, 2019 and December 24, 2019**
  - **1 firm submitted bids, 0 local vendors**
- **Recommended Actions:**
  - **To award solicitation 2020-224R Travel Demand Model to Replica Inc. for an initial three (3) year estimated award in the amount of \$510,000.00.**