WHO RIDES THE BUS?

Examining Transit Ridership in Marion County
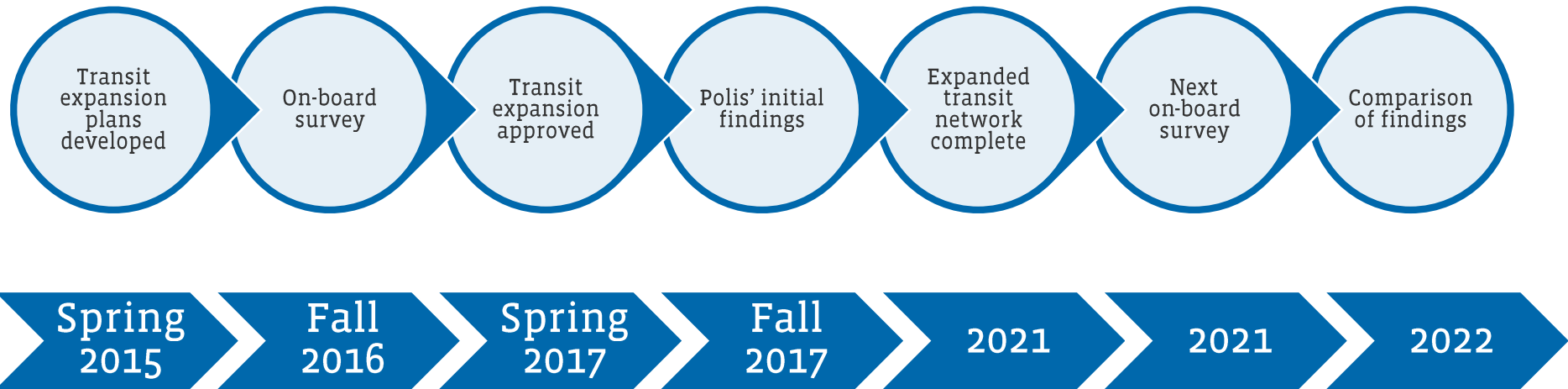
Kelly Davila, Senior Research Analyst
Matt Nowlin, Research Analyst
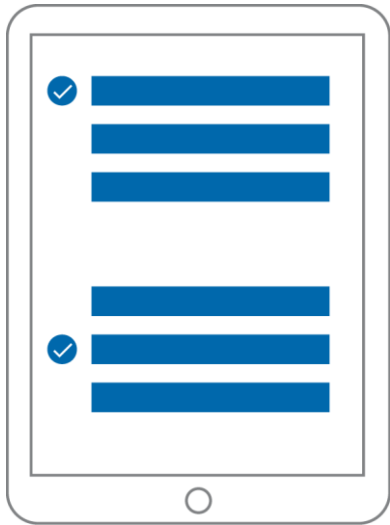Unai Miguel Andres, GIS Analyst
Deb Hollon, GIS Analyst

Timeline and Planning Context

Transit expansion plans developed	On-board survey	Transit expansion approved	Polis' initial findings	Expanded transit network complete	Next on-board survey	Comparison of findings
Spring 2015	Fall 2016	Spring 2017	Fall 2017	2021	2021	2022

On-Board Transit Survey

- Occurs about every five years
- Over 4,000 respondents
- Tracked specific locations for home, boarding, alighting, and final destination
- Logged route and time information
- Gathered additional demographic information

Friends in Indy Go Places

- We knew Indy Go had the survey data, but they had already commissioned another firm for analysis.

- Indy Go knew we were thinking about possible research on transit.

- Polis and Indy Go wanted to unite transit and neighborhood data for public report.

- Colleagues in both organizations collaborated to make that possible.

Framing the Analysis
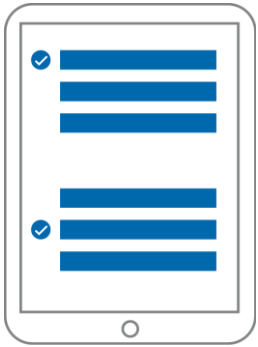
Used survey responses to find ridership habits and trends

Used GIS to link riders to their home neighborhoods

Who rides the bus?
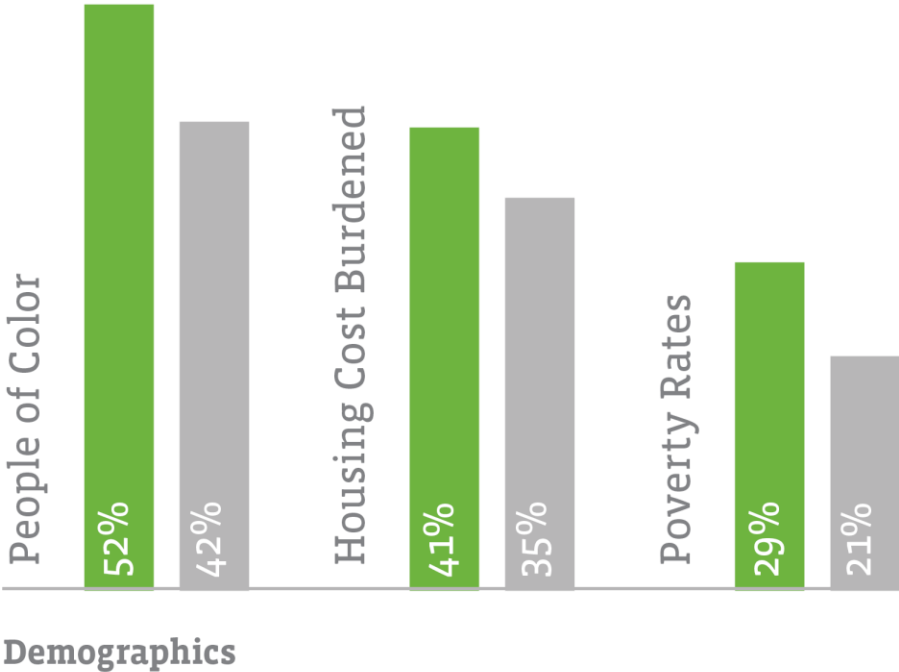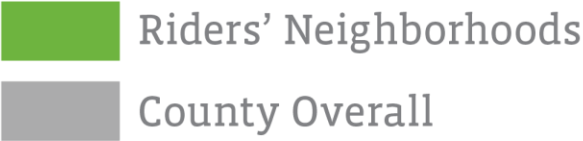
A **B** **C** **D** **E**
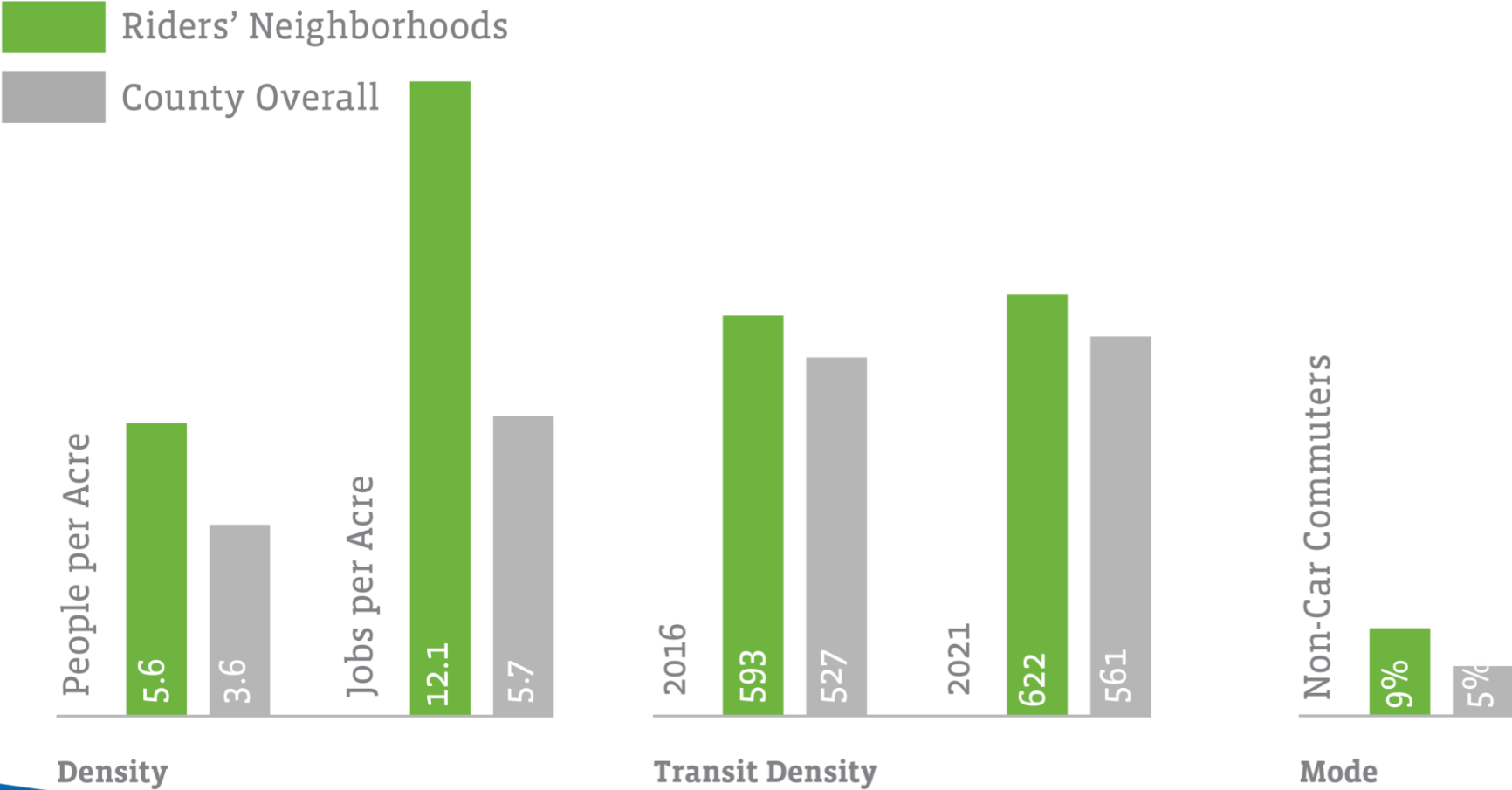
We used cluster analysis to discover the

- Major groupings of transit riders

- Transit habits, demographics of those riders

- Neighborhoods where riders live

- Major socioeconomic trends in those neighborhoods and how those compare to the riders' sociodemographic trends

Transit Riders' and Non-Riders' Neighborhoods

Transit Riders' and Non-Riders' Neighborhoods

Legend:
- Green: Riders' Neighborhoods
- Gray: County Overall

Density
- People per Acre: 5.6 (Riders'), 3.6 (County Overall)
- Jobs per Acre: 12.1 (Riders'), 5.7 (County Overall)

Transit Density
- 2016: 593 (Riders'), 527 (County Overall)
- 2021: 622 (Riders'), 561 (County Overall)

Mode
- Non-Car Commuters: 9% (Riders'), 5% (County Overall)

Cluster Variables

Created clusters based on four variables:

Language	Race & Ethnicity	Employment Status	Transit Service Density

Transit Service Density

Imagine a one-mile-square neighborhood.
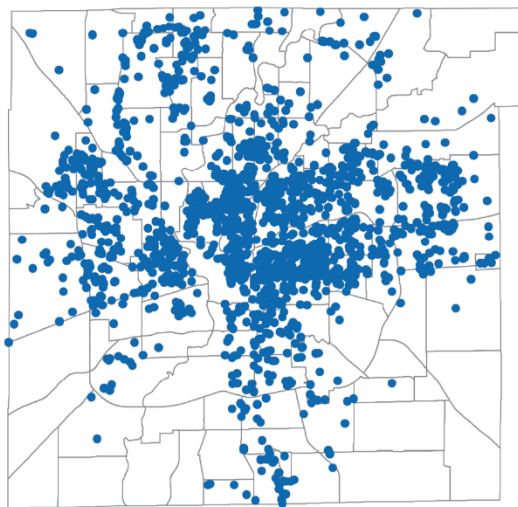
1 Mile

Runs 400 Times Per Week

(200 Inbound, 200 Outbound)
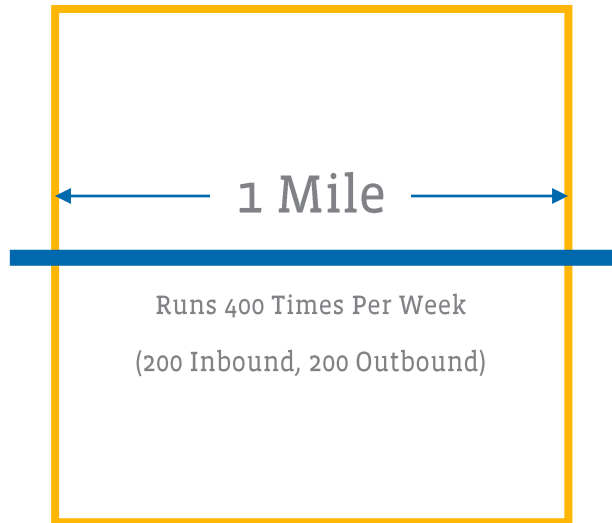
400 Revenue
Miles per Week ÷
1 square mile

Transit Service Density = 400

Group Summaries

Trip Purpose (Origin or Destination)

College Health K-12 School Shopping Work Social
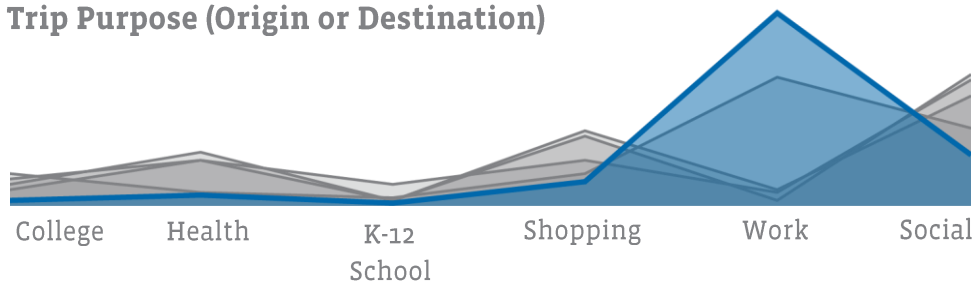
Transit Service Density (Revenue Miles per Sqmi)

2016 — 978
2022 — 1,095

Ridership by Age

0% 0-16
2% 17-18
18% 19-24
29% 25-34
31% 35-49
19% 50-64
1% 65+

Ridership by Race

59% Black
5% Hisp/Latino
29% White
6% Other
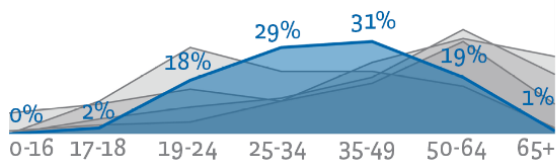
Ridership by Employment

100% Full-Time

What We Can Conclude

Current transit access in Indianapolis promotes mobility and crucial access to healthcare, education, social opportunities, shopping, and employment – more so for some vulnerable groups than the general ridership or population.

Future transit access should improve that access in certain areas, but reduce access where ridership is currently low.

Utility for Transit Planning

Clusters help transit agencies help riders.

- Riders' needs vary based on access and other factors.

- Transit habits are affected by other transportation options and attitudes.

- Expansion of transit services will change how people use transit.

Utility for Transit Planning

Neighborhood-level data provides context.

- Baseline metrics estimated before transit changes are implemented

- Framework to view how service changes may impact current riders, future riders

- Foundation for long-term partnership with transit agency