Analysis Results

Analysis was run by Willem on DATE

Introduction

This is a report generated by the TransitCenter Equity Scenario Comparison Application (TESCA), which conducts a comparative analysis of access to opportunties across different population groups in a specified region.

This analysis studies the changes in access resulting from a proposed network update from SEPTA. A proposed new transit network was provided by SEPTA, and the impact area over which results are summarized by population group consists of all population living within 1/2 mile of a transit stop.

We use two types of measures:

- **Cumulative measures**, which sum the total number of a given destination or opportunity reachable in a specified timeframe. With this metric, **higher is typically better**. When viewing these measures, the accompanying parameter indicates the maximum travel time within which a desination is considered reachable. For example, a parameter of 45 indicates that the measure counts all destinations within 45 minutes as reachable.
- **Travel time measures**, which measure how long it takes to reach the nth (e.g. 1st, 3rd, etc) closest destination. With this metric, **lower is typically better**. When viewing these measures, the accompanying parameter indicates which nth closest desination was used. For example, a parameter of '2' indicates that the measure counts the travel time to the 2nd closest destination.

Analysis Details

This analysis compares the following two scenarios:

1. **Business as Usual**: This is a discussion about the first scenario. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

   The analysis was run at 2023-03-29 07:00:00 and results are averaged over trips made in the subsequent 120 minutes. All modes of transit were considered in addition to walking.
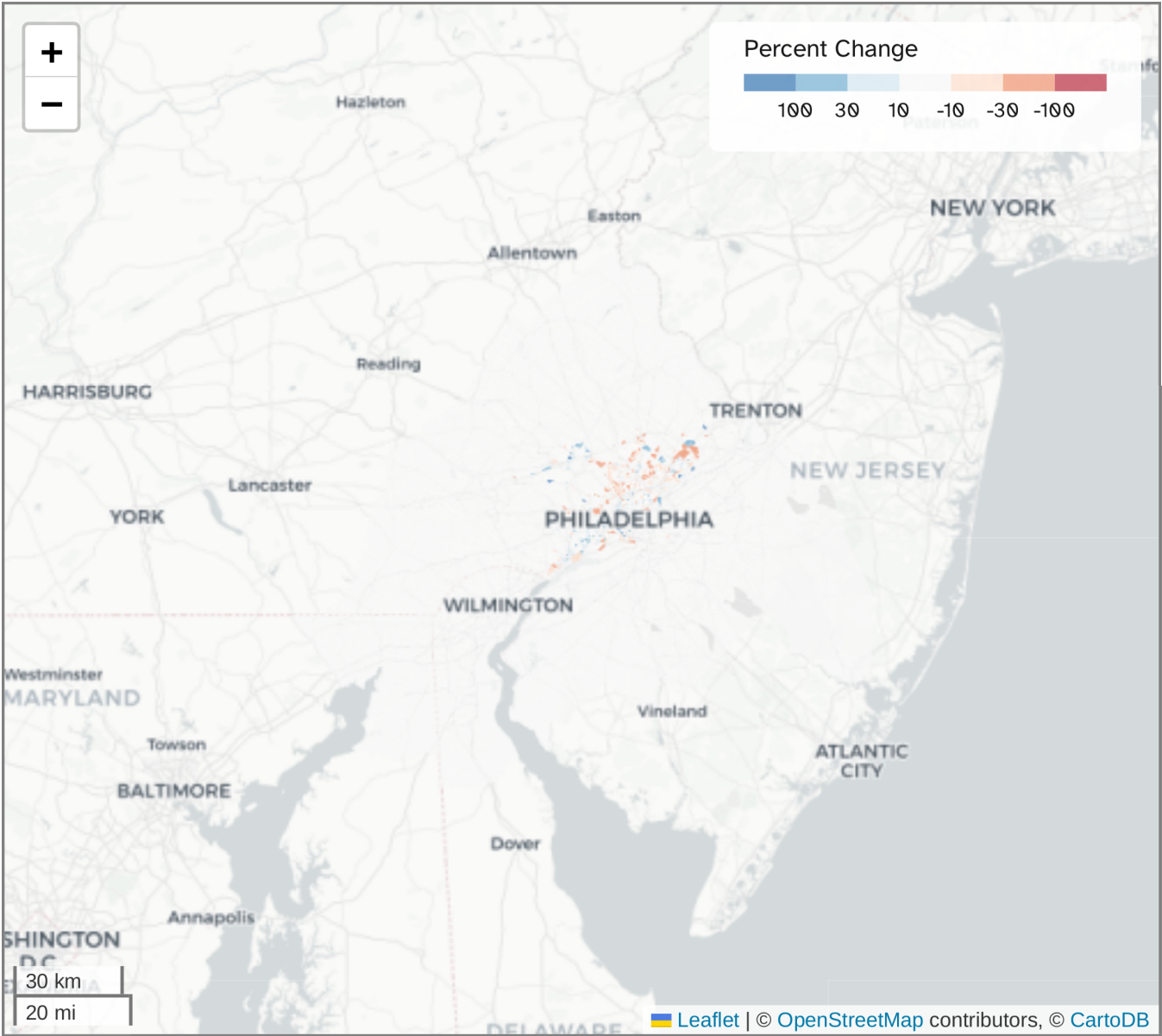
2. **SEPTA Proposed Redesign**: This is a discussion about the second scenario. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint

occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

The analysis was run at 2023-03-29 07:00:00 and results are averaged over trips made in the subsequent 120 minutes. In addition to walking, the following modes of transit were considered: subway, funicular.

Summary Map

Access to Employment (30 minutes)

Percent Change

100 30 10 -10 -30 -100

Leaflet | © OpenStreetMap contributors, © CartoDB

Scenario Comparisons

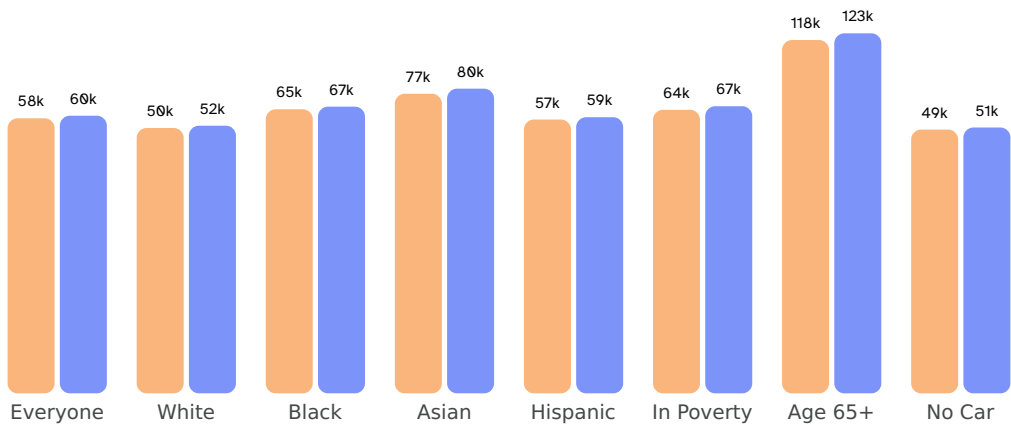In this section, we compare the two sencarios analyzed.

Employment

This is discussion about the employment opportunity. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation

ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Here are the weighted average results of access to employment compared across various demographic groups. Keep in mind that this is a cumulative measure, where **higher** values are typically better.
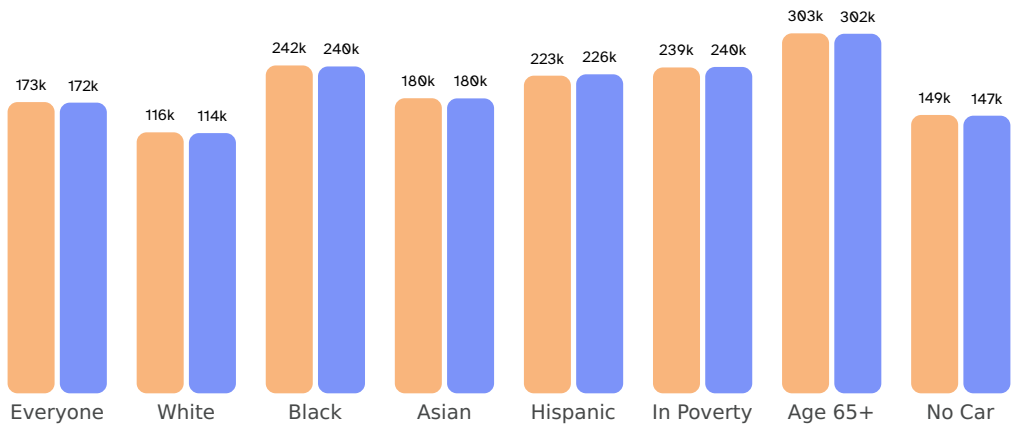
Access to Employment
Average total jobs reachable in 30 minutes on transit

- Business as Usual
- SEPTA Proposed Redesign

	Business as Usual	SEPTA Proposed Redesign
Everyone	58k	60k
White	50k	52k
Black	65k	67k
Asian	77k	80k
Hispanic	57k	59k
In Poverty	64k	67k
Age 65+	118k	123k
No Car	49k	51k

Access to Employment
Average total jobs reachable in 45 minutes on transit

- Business as Usual
- SEPTA Proposed Redesign

	Business as Usual	SEPTA Proposed Redesign
Everyone	173k	172k
White	116k	114k
Black	242k	240k
Asian	180k	180k
Hispanic	223k	226k
In Poverty	239k	240k
Age 65+	303k	302k
No Car	149k	147k

Commercial Corridor Area

This is discussion about the corridor area opportunity. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia

deserunt mollit anim id est laborum.

Here are the weighted average results of access to commercial corridor area compared across various demographic groups. Keep in mind that this is a cumulative measure, where **higher** values are typically better.

Access to Commercial Corridor Area
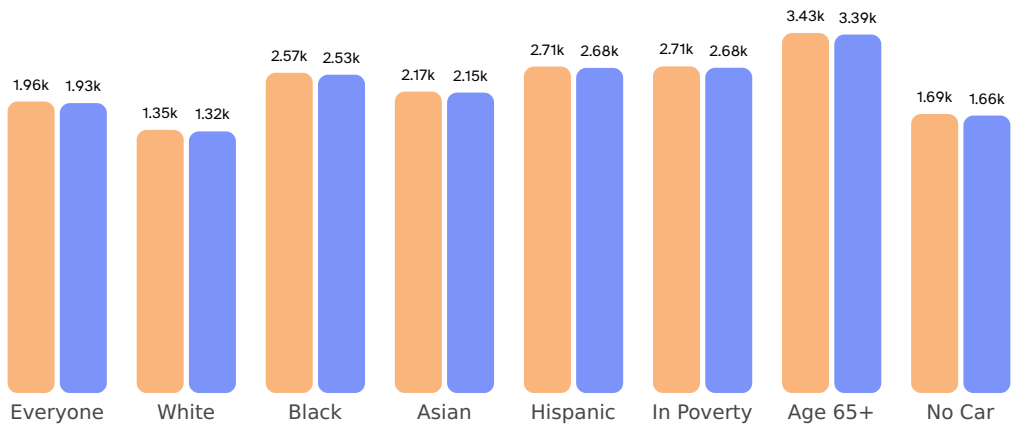Average total acres reachable in 30 minutes on transit

- Business as Usual
- SEPTA Proposed Redesign
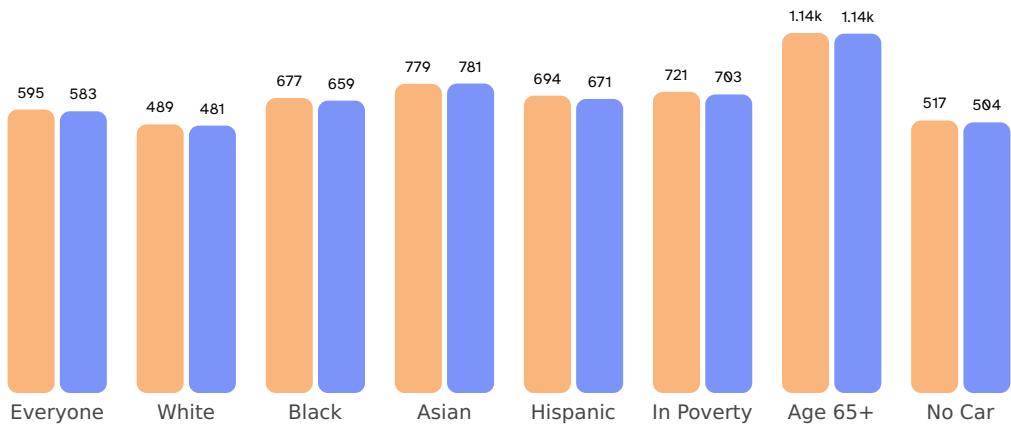
Access to Commercial Corridor Area
Average total acres reachable in 45 minutes on transit

- Business as Usual
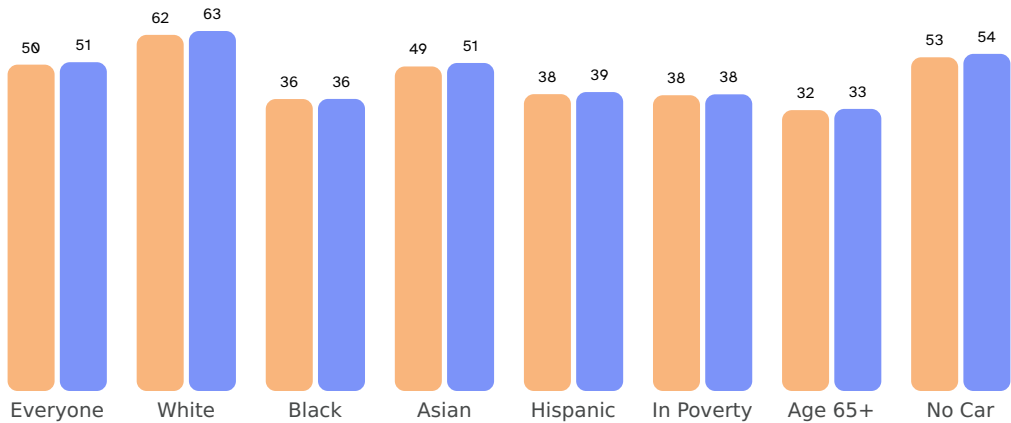- SEPTA Proposed Redesign

Hospitals

This is discussion about the hospitals opportunity. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Here are the results of access to hospitals compared across various demographic groups. Keep in mind that this is a travel time measure, where **lower** values are typically better.

Access to Hospitals
Average minutes of travel time to reach the nearest 1 hospitals

■ Business as Usual
■ SEPTA Proposed Redesign

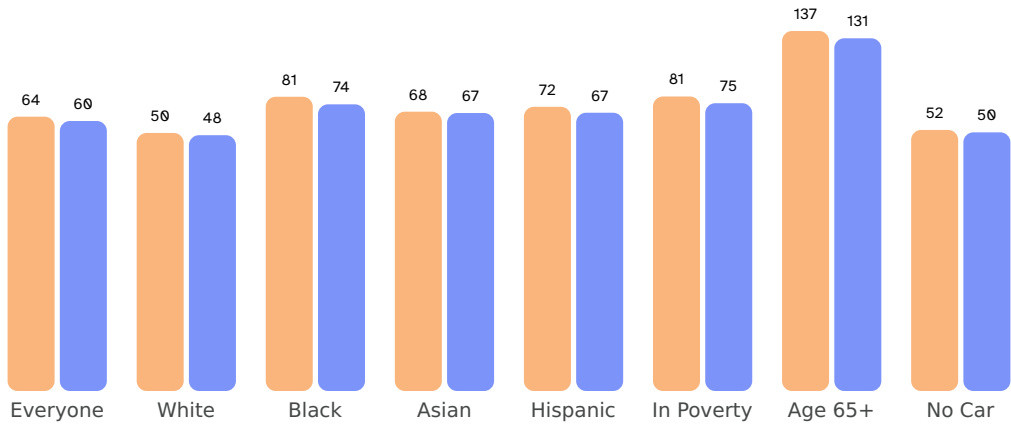| Group	Business as Usual	SEPTA Proposed Redesign
Everyone	50	51
White	62	63
Black	36	36
Asian	49	51
Hispanic	38	39
In Poverty	38	38
Age 65+	32	33
No Car	53	54

Rental Units

This is discussion about the rental units opportunity. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Here are the weighted average results of access to rental units compared across various demographic groups. Keep in mind that this is a cumulative measure, where **higher** values are typically better.

Access to Rental Units
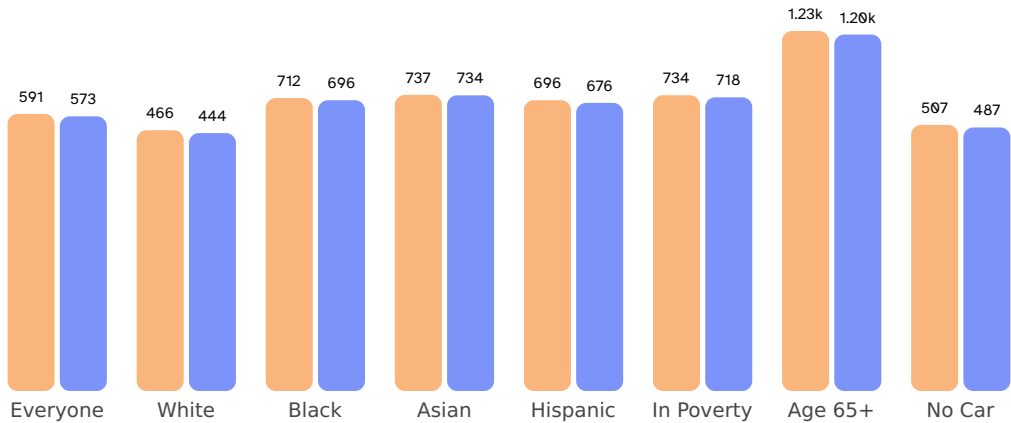Average total units reachable in 15 minutes on transit

- ■ Business as Usual
- ■ SEPTA Proposed Redesign

Group	Business as Usual	SEPTA Proposed Redesign
Everyone	64	60
White	50	48
Black	81	74
Asian	68	67
Hispanic	72	67
In Poverty	81	75
Age 65+	137	131
No Car	52	50

Access to Rental Units
Average total units reachable in 30 minutes on transit

- ■ Business as Usual
- ■ SEPTA Proposed Redesign

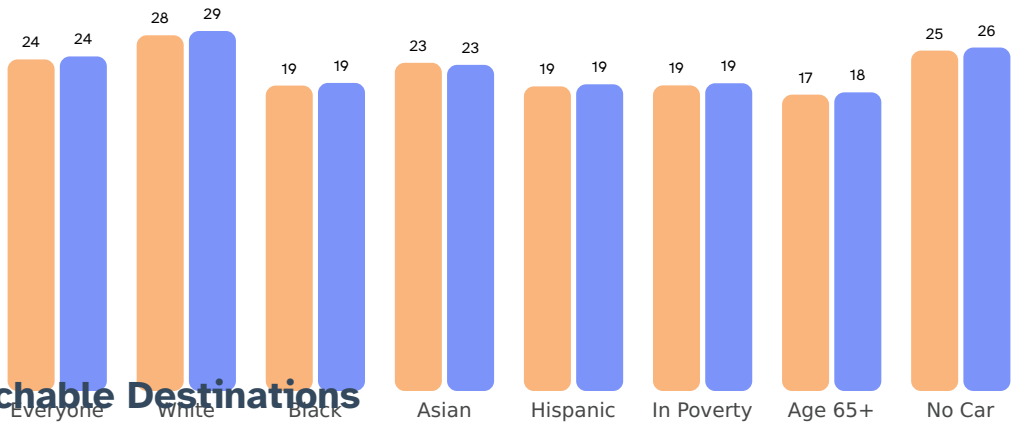| Group	Business as Usual	SEPTA Proposed Redesign
Everyone	591	573
White	466	444
Black	712	696
Asian	737	734
Hispanic	696	676
In Poverty	734	718
Age 65+	1.23k	1.20k
No Car	507	487

Supermarkets

This is discussion about the supermarkets opportunity. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Here are the results of access to supermarkets compared across various demographic groups. Keep in mind that this is a travel time measure, where **lower** values are typically better.

Access to Supermarkets
Average minutes of travel time to reach the nearest 1 supermarkets

- Business as Usual
- SEPTA Proposed Redesign

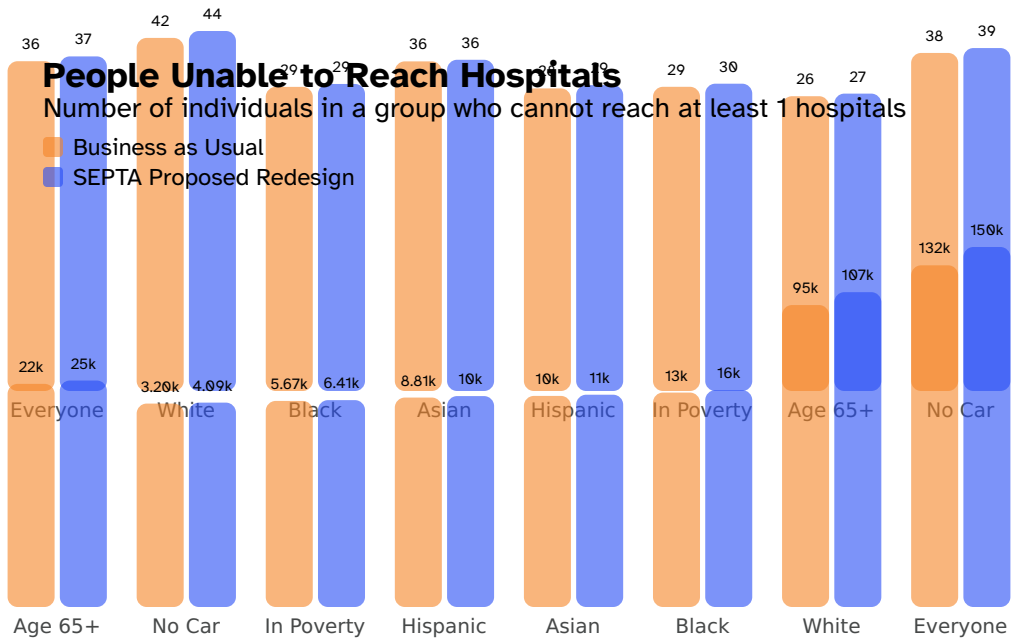|	Everyone	White	Black	Asian	Hispanic	In Poverty	Age 65+	No Car
Business as Usual	24	28	19	23	19	19	17	25
SEPTA Proposed Redesign	24	29	19	23	19	19	18	26

Unreachable Destinations

Uncreachable destinations are those which cannot be reached in the specified maximum travel time of 2 hours. For travel time measures, a value of 180 minutes was used for locations with excessive travel times. Here we plot for each destination the number of people in each demographic group who cannot reach any of a specified destination.

Hospitals

People Unable to Reach Hospitals
Number of individuals in a group who cannot reach at least 1 hospitals

- Business as Usual
- SEPTA Proposed Redesign

	Age 65+	No Car	In Poverty	Hispanic	Asian	Black	White	Everyone
Business as Usual	36 / 22k	42 / 3.20k	29 / 5.67k	36 / 8.81k	29 / 10k	29 / 13k	26 / 95k	38 / 132k
SEPTA Proposed Redesign	37 / 25k	44 / 4.09k	29 / 6.41k	36 / 10k	30 / 11k	30 / 16k	27 / 107k	39 / 150k

Supermarkets

People Unable to Reach Supermarkets
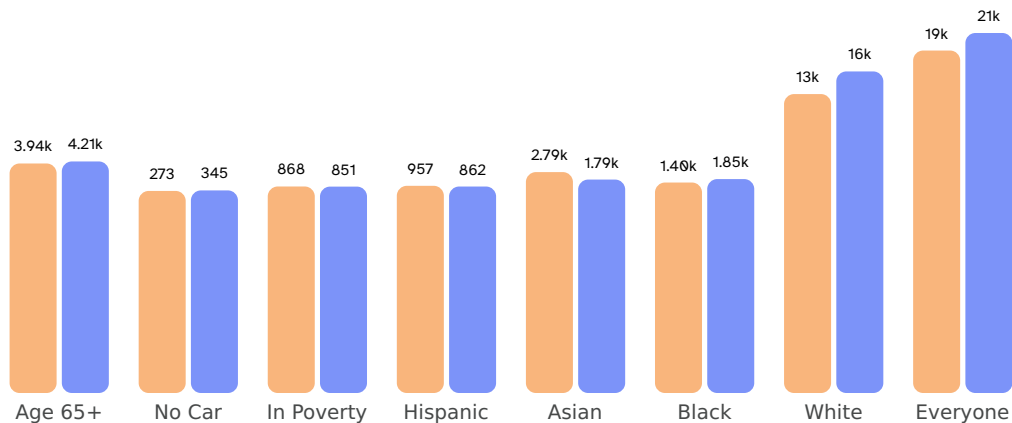Number of individuals in a group who cannot reach at least 1 supermarkets
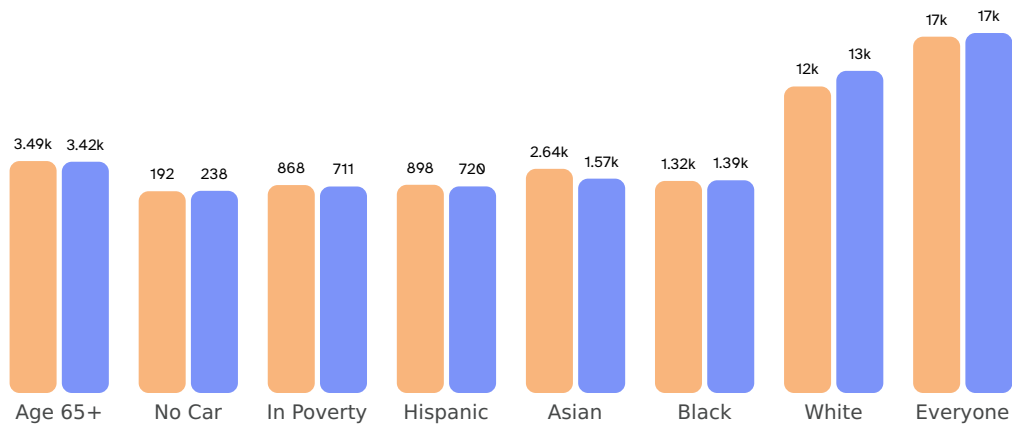
■ Business as Usual
■ SEPTA Proposed Redesign

Group	Business as Usual	SEPTA Proposed Redesign
Age 65+	3.49k	3.42k
No Car	192	238
In Poverty	868	711
Hispanic	898	720
Asian	2.64k	1.57k
Black	1.32k	1.39k
White	12k	13k
Everyone	17k	17k

People Unable to Reach Supermarkets
Number of individuals in a group who cannot reach at least 3 supermarkets

■ Business as Usual
■ SEPTA Proposed Redesign

Group	Business as Usual	SEPTA Proposed Redesign
Age 65+	3.94k	4.21k
No Car	273	345
In Poverty	868	851
Hispanic	957	862
Asian	2.79k	1.79k
Black	1.40k	1.85k
White	13k	16k
Everyone	19k	21k

Notes

Things that could go here:

- Any relevant papers or documentation?
- Detailed methodology outline?
- Other specific things to note