Twin Cities Metropolitan Region

Transit System Performance Evaluation

June 10, 2019

Transportation Committee

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Agenda

- Introduction
- Transit Performance in the Twin Cities
- Transit Performance Peer Analysis

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Twin Cities Transportation Performance Evaluation

- Transportation Evaluation required by Minnesota State statute prior to each update of the TPP, transit performance evaluation update every two years
- Must include comparison with peer regions
- Transportation and Transit Performance Evaluations first performed in 1997 and 1999, respectively

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2040 TPP – Key Transit Outcomes

- Efficient
- Cost Effective
- Reliable, Predictable, Attractive, and Safe
- Attract More Transit Riders
- Provide More Access to Jobs
- Attract Businesses and Residents
- Support Focused Growth that Integrates Modes
- Support Equity, Clean Air, and Healthy Communities

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Transit Service Providers in the Analysis

- Maple Grove Transit
- Metropolitan Council – MTS Contracted Services (including Metro Mobility)
- Metro Transit
- Minnesota Valley Transit Authority
- Plymouth Metrolink
- SouthWest Transit
- University of Minnesota

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Transit Performance in the Twin Cities

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Performance Metrics Analyzed

- Ridership
- Efficiency – Passenger per In Service Hour
- Cost Effectiveness – Subsidy per Passenger

TPP Appendix G Table G-8: Passengers per In-Service Hour

Route Type	Route Average*	Minimum per Trip**
Core Local Bus	≥ 20	≥ 15
Supporting Local Bus	≥ 15	≥ 10
Suburban Local Bus	≥ 10	≥ 5
Arterial BRT	≥ 25	≥ 5
Highway BRT	≥ 25	≥ 5
Light Rail	≥ 70	≥ 50
Commuter Express Bus	Peak ≥ 20; Off-peak ≥ 10	Peak ≥ 15; Off-peak ≥ 5
Commuter Rail	≥ 70	≥ 50
General Public Dial-a-Ride	≥ 2	N/A
*Route average represents the average passengers per in service hour over the entire day. Individual hours may fall below standard.		
**Minimum per trip represents the minimum passengers per in service hour for individual trips on a route. Multivehicle trips, such as three-car trains, will be treated as a single trip.		

TPP Appendix G Table G-9: Subsidy per Passenger

Threshold Level	*Subsidy per Passenger*	*Monitoring Goal*	*Possible Action*
1	20 to 35 percent over peer route average	For quick review	Minor modifications to route
2	35 to 60 percent over peer route average	For intense review	Major changes to route
3	Greater than 60 percent over peer route average	For significant change	Restructure or eliminate route

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Service Types

Different service types to match different transit markets.

All-Day Services

- Core Local Bus
- Supporting Local Bus
- Suburban Local Bus
- Light Rail
- Arterial Bus Rapid Transit
- Highway Bus Rapid Transit

Peak-Focused Services

- Commuter & Express Bus
- Commuter Rail

Other Services

- Metro Mobility
- General Purpose Dial-A-Ride
- Vanpool

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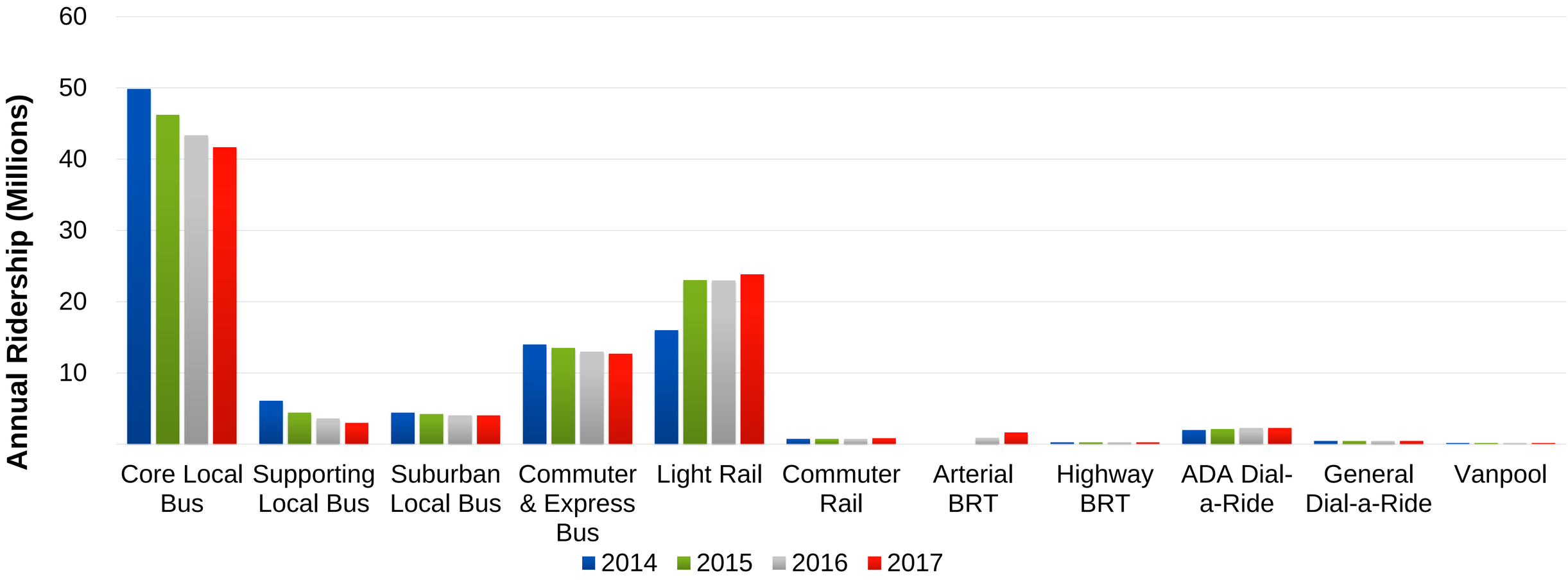
Ridership, by Service Type



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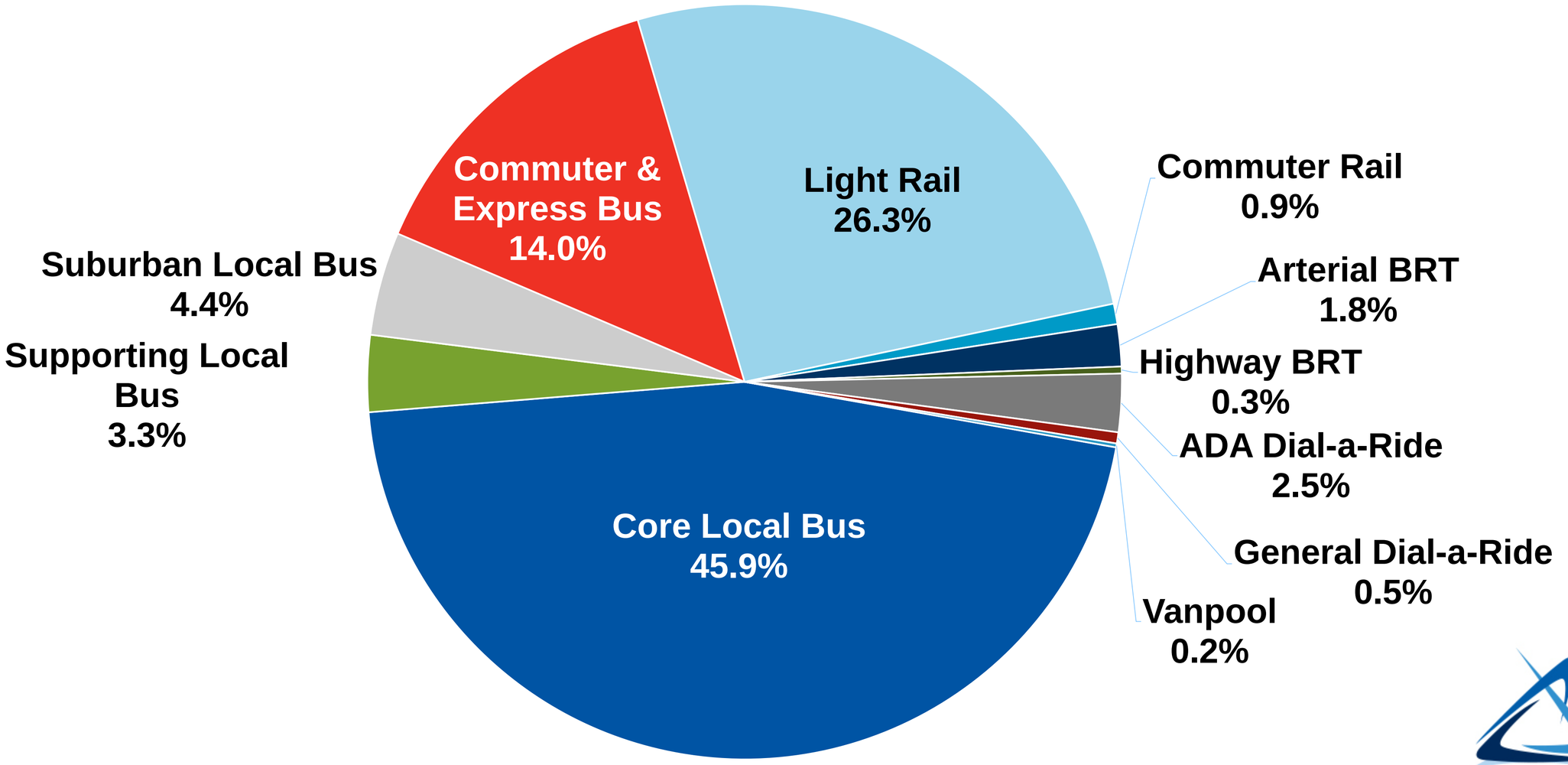
2017 Ridership by Service Type



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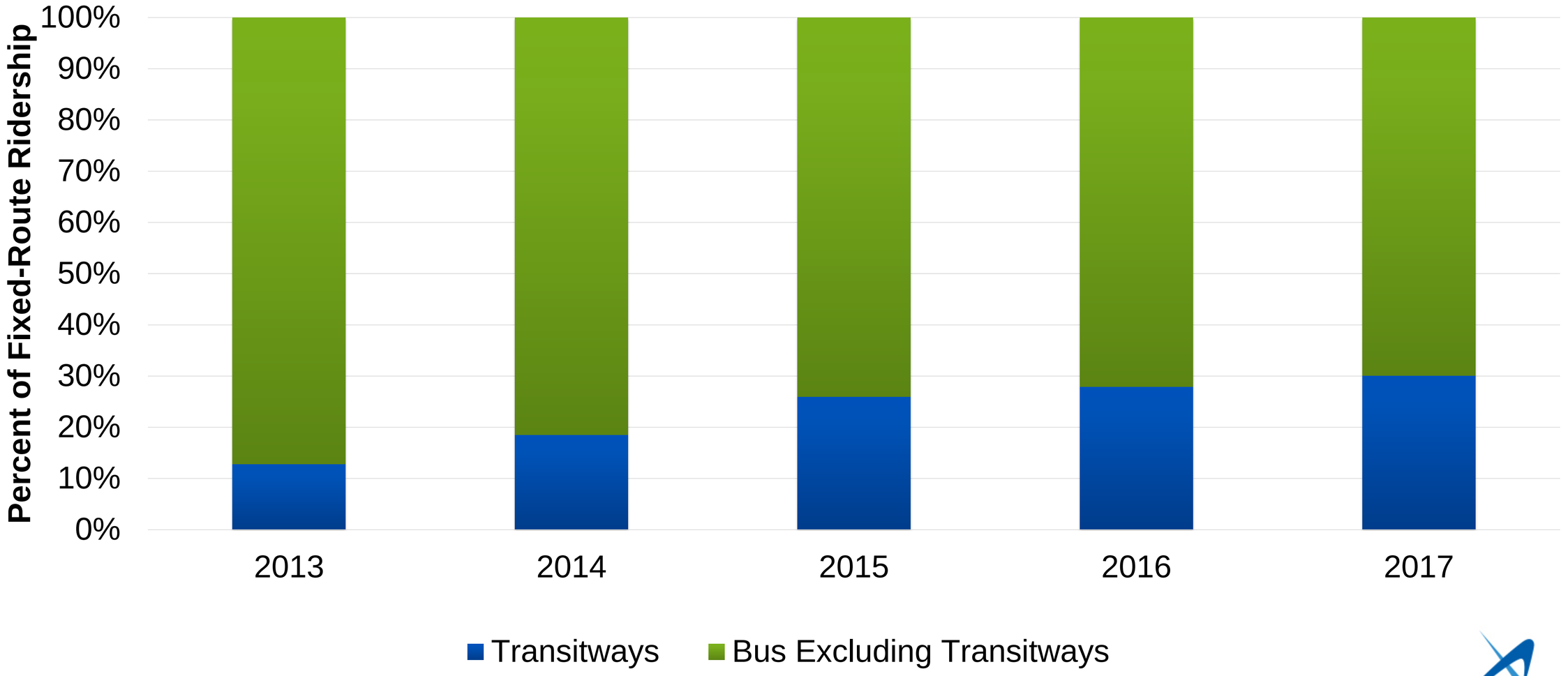
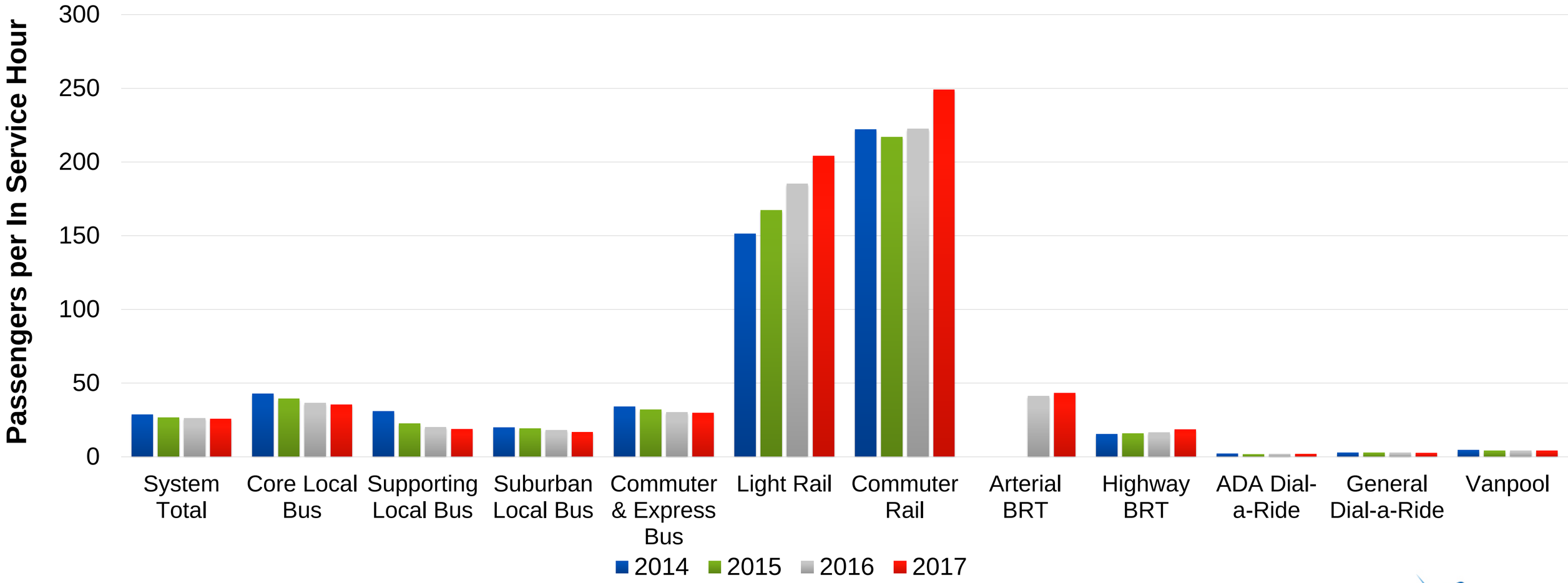
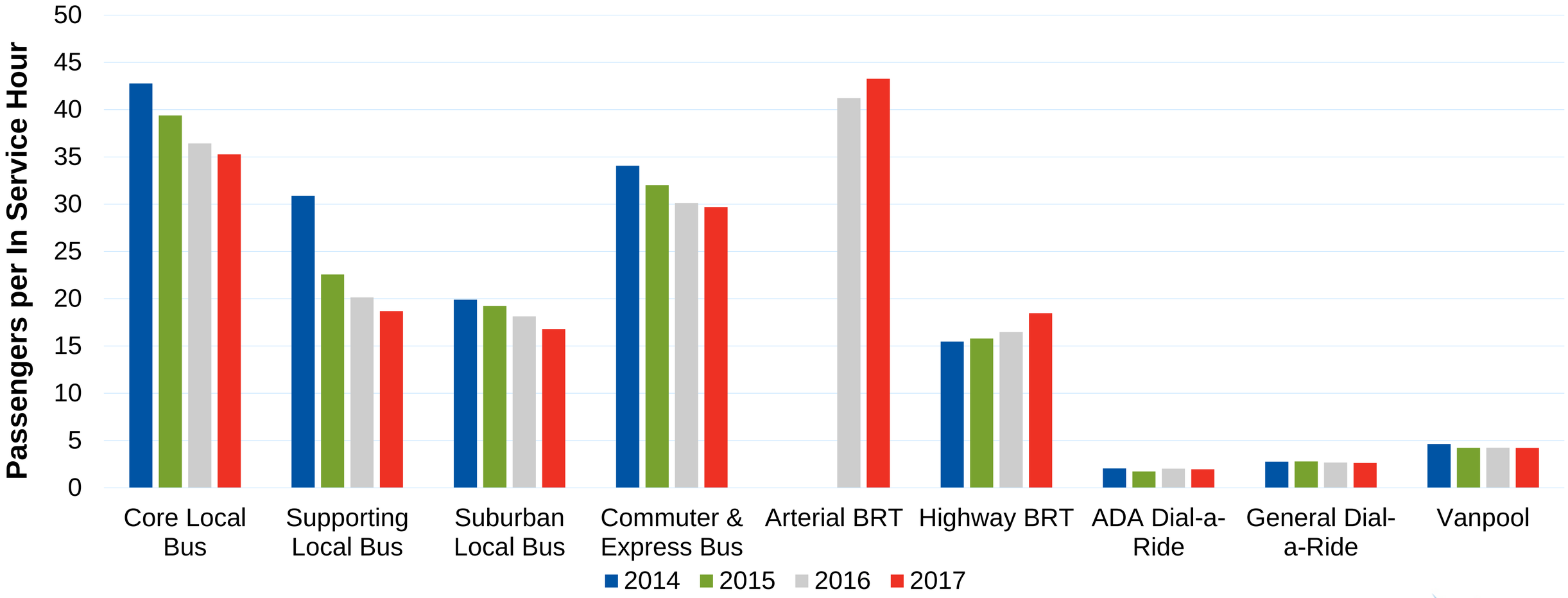
Ridership Trends, 2013-2017



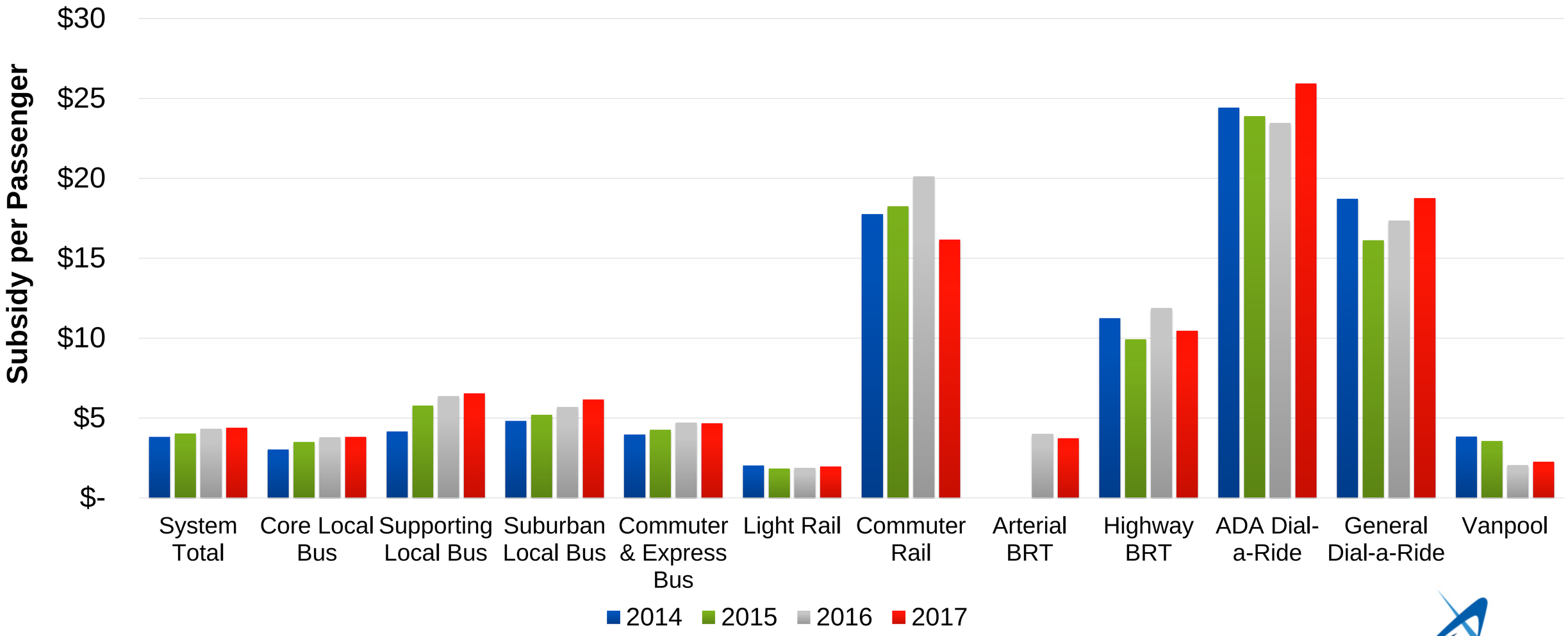
Efficiency – Passengers per Hour



Efficiency – All Service Types Excluding Rail



Cost Effectiveness – Subsidy per Passenger



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Performance Standards – Efficiency (2017)

Number of routes meeting passengers per in-service hour performance standards

Route Type (# of Routes)	Weekday		Saturday		Sunday	
	Meets	Below	Meets	Below	Meets	Below
Core Local Bus (33)	94%	6%	81%	19%	80%	20%
Supporting Local Bus (14)	86%	14%	50%	50%	20%	80%
Suburban Local Bus (39)	64%	36%	71%	29%	69%	31%
Commuter & Express Bus (127)*	69%	31%	N/A	N/A	N/A	N/A
Arterial BRT (1)	100%	0%	100%	0%	100%	0%
Highway BRT (1)	0%	100%	100%	0%	0%	100%
Light Rail (2)	100%	0%	100%	0%	100%	0%
Commuter Rail (1)	100%	0%	N/A	N/A	N/A	N/A
General Dial-a-Ride (4)	100%	0%	N/A	N/A	N/A	N/A

*Only a limited number of Commuter & Express Bus routes provide weekend service

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Performance Standard – Cost Effectiveness (2017)

Number of routes meeting subsidy per passenger performance standards

Route Type	Weekday		Saturday		Sunday	
	Meets	Below	Meets	Below	Meets	Below
Core Local Bus (33)	79%	21%	81%	19%	76%	24%
Supporting Local Bus (14)	64%	36%	50%	50%	60%	40%
Suburban Local Bus (39)	81%	19%	74%	26%	85%	15%
Commuter & Express Bus (127)*	76%	24%	N/A	N/A	N/A	N/A
Arterial BRT (1)	100%	0%	100%	0%	100%	0%
Highway BRT (1)	100%	0%	100%	0%	100%	0%
Light Rail (1)	100%	0%	100%	0%	100%	0%
Commuter Rail (1)	100%	0%	N/A	N/A	N/A	N/A
General Dial-a-Ride (4)	75%	25%	N/A	N/A	N/A	N/A

*Only a limited number of Commuter & Express Bus routes provide weekend service

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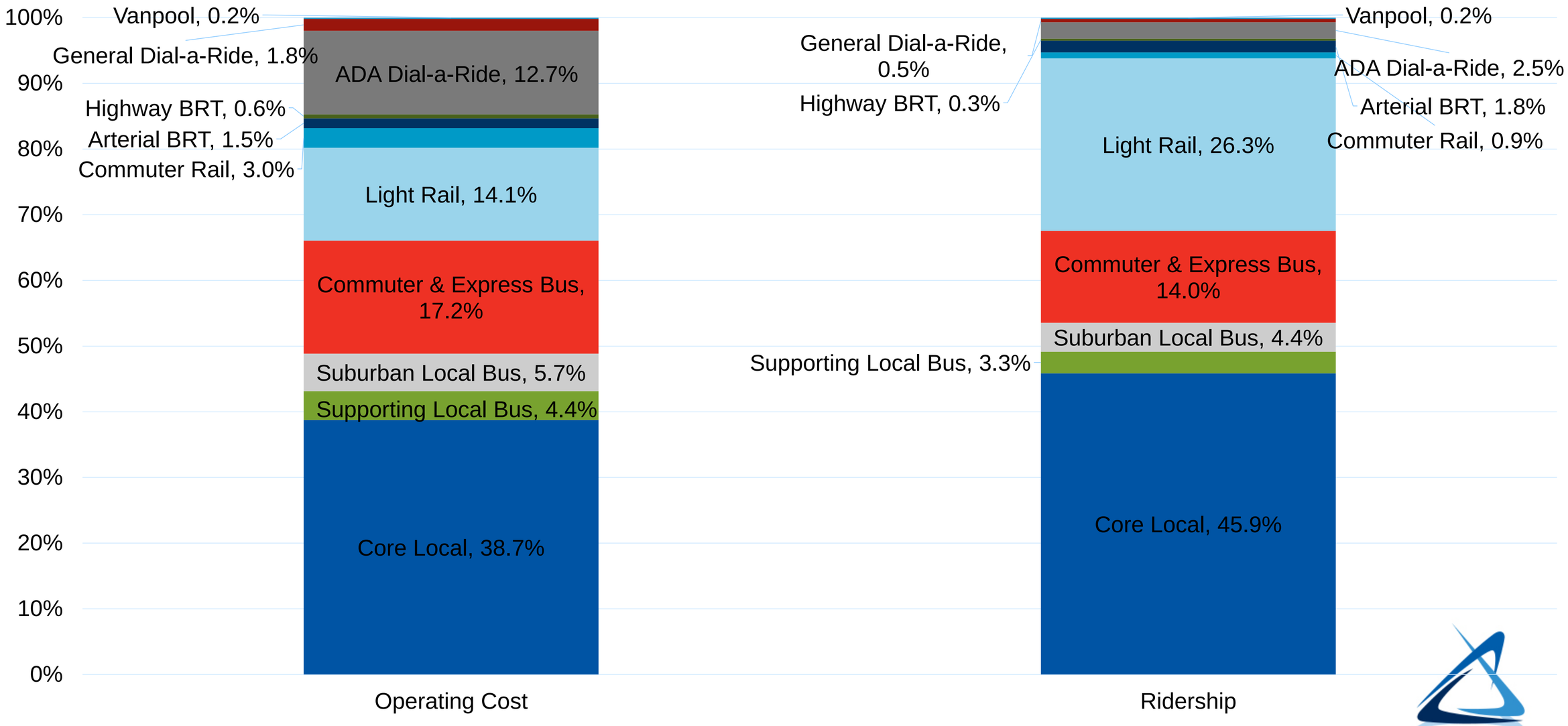
2017 Operating Spending & Ridership



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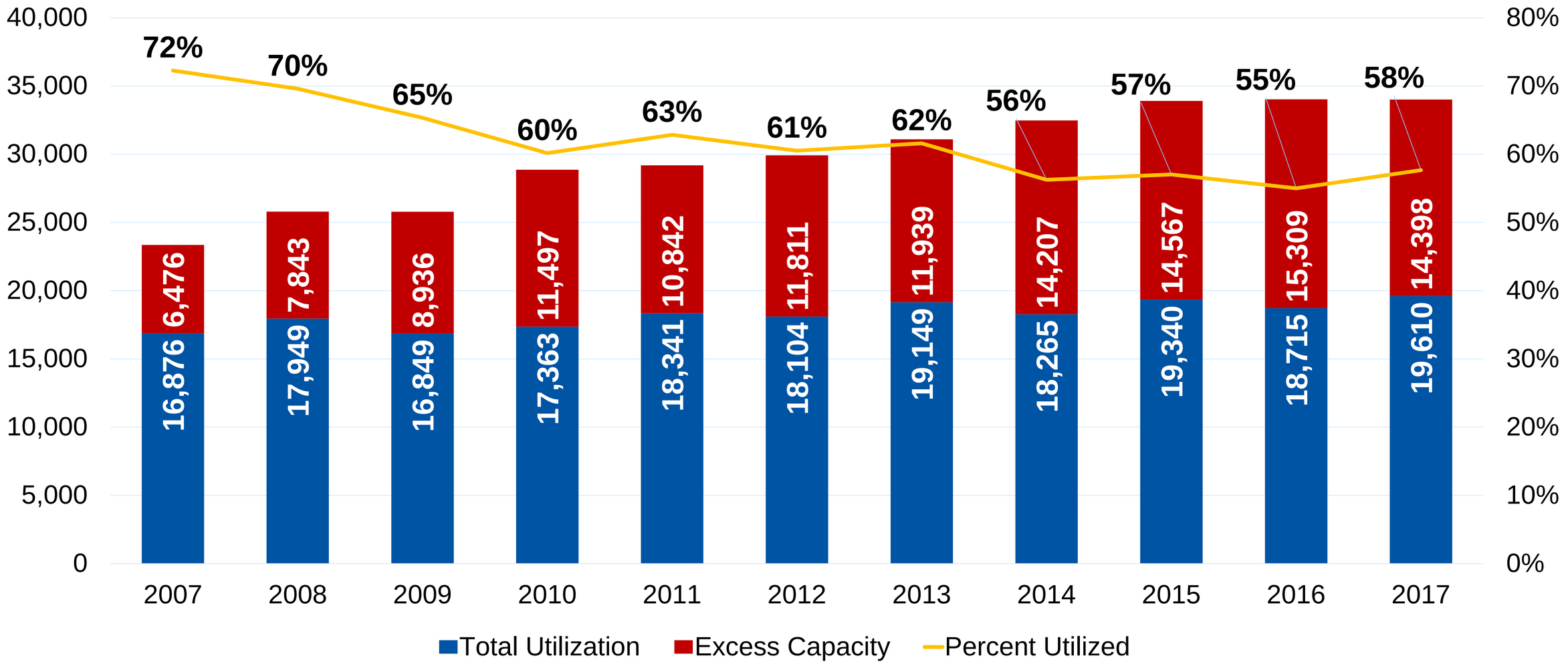
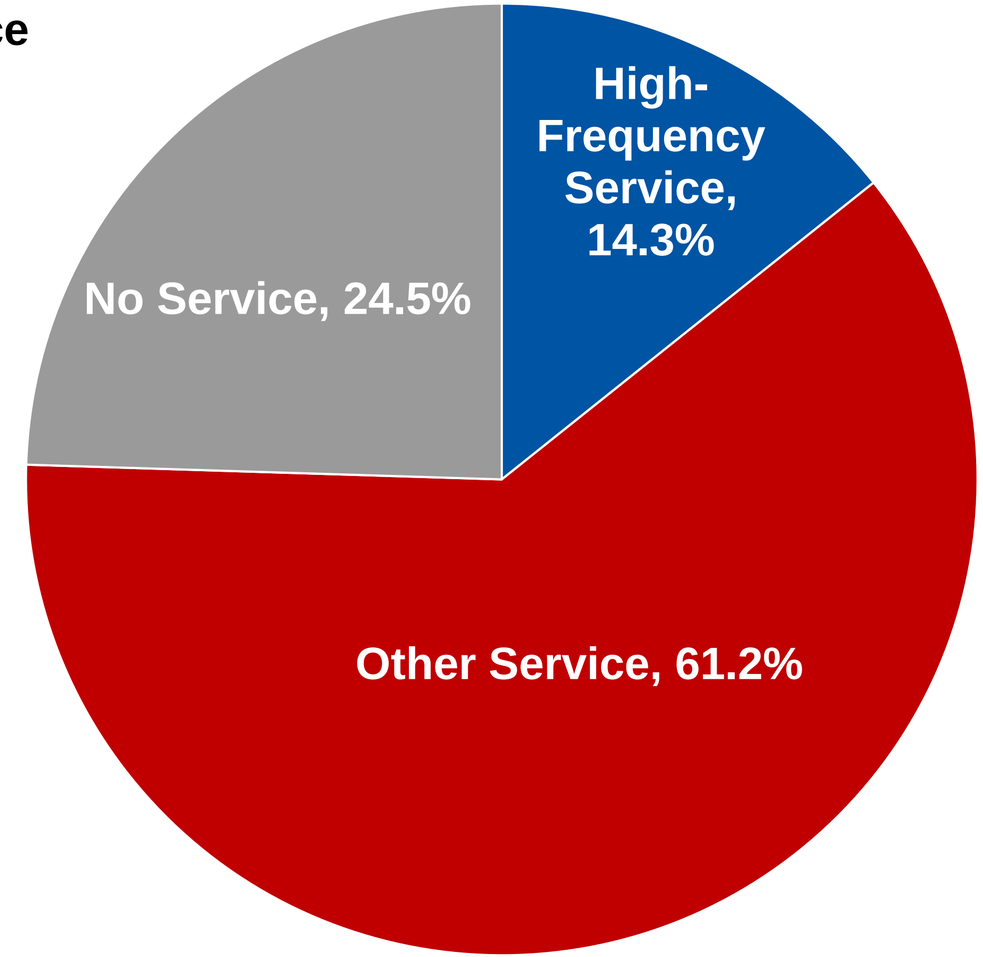
Park-and-Ride Use and Capacity



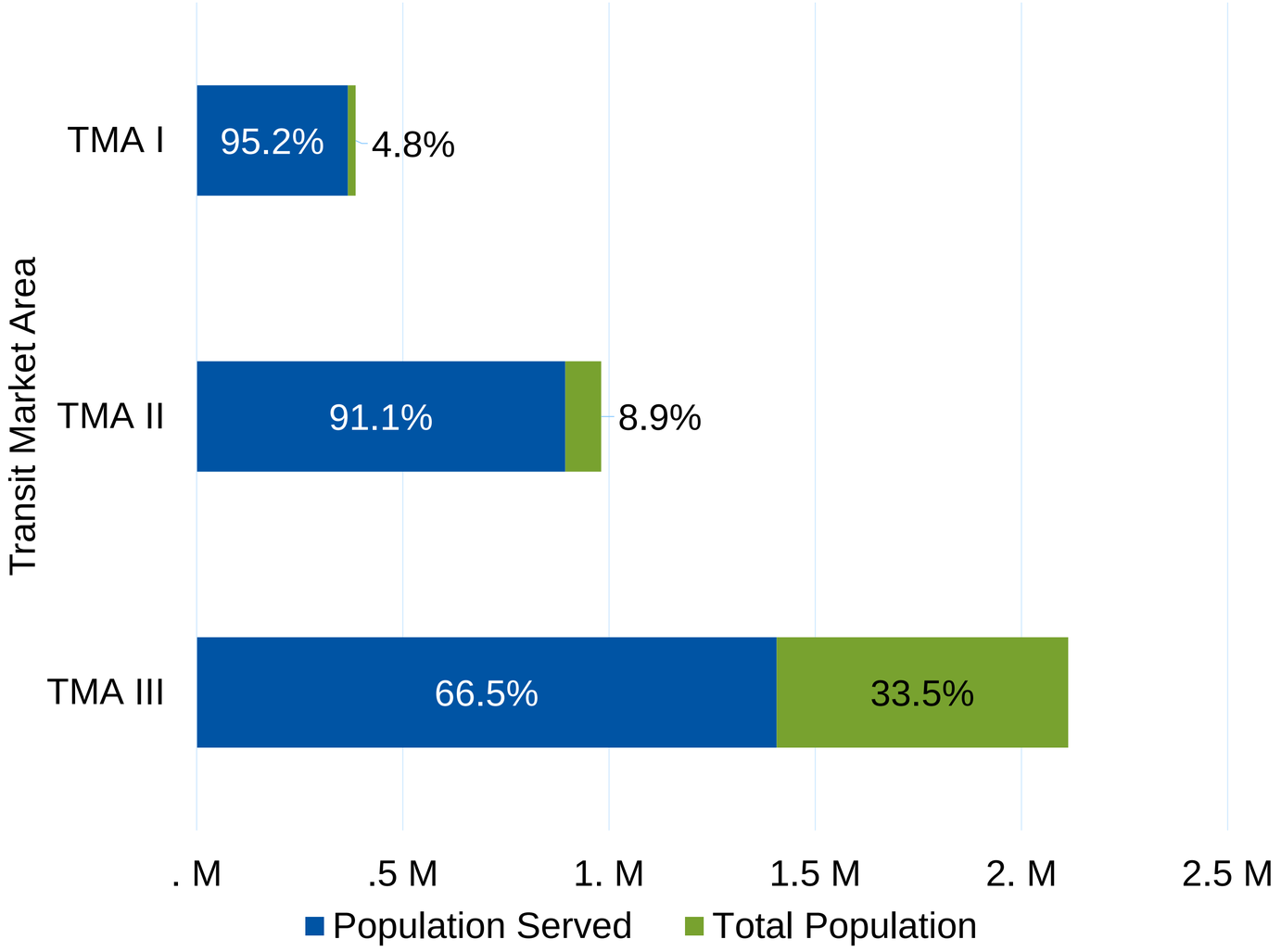
Transit Accessibility

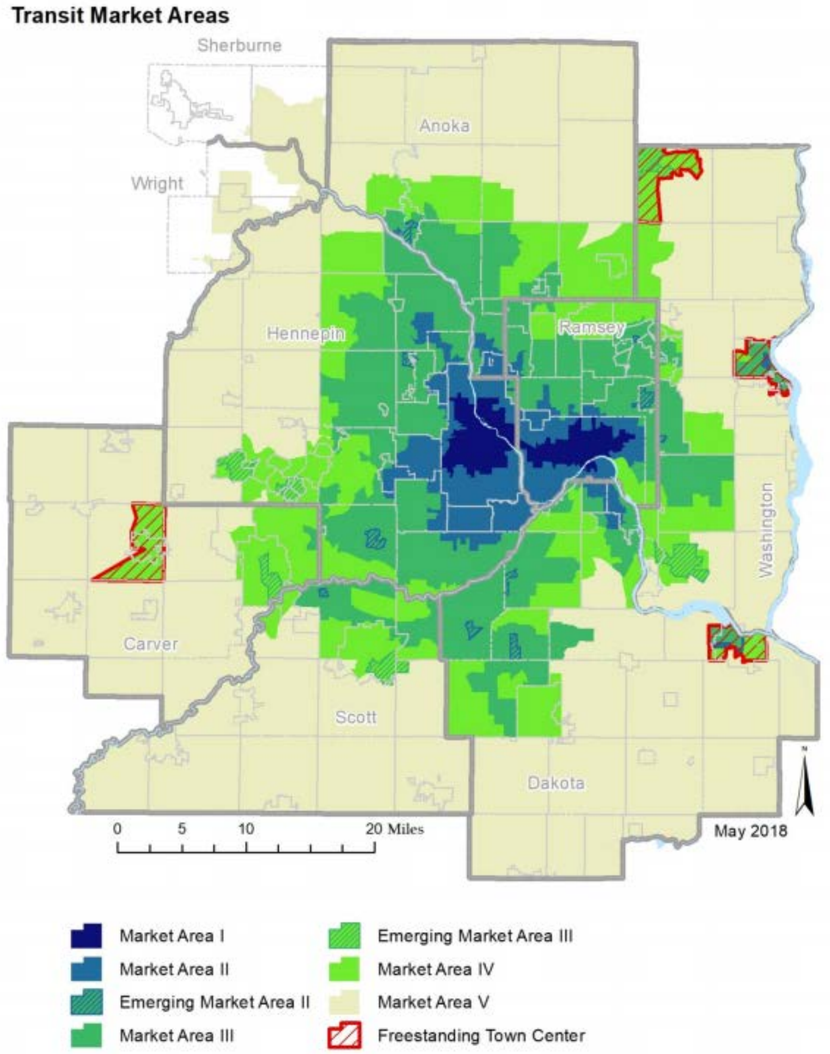
Regional Population Within ¼ Mile of Service



Transit Accessibility – Transit Market Areas

Based on Olmstead Analysis; accessibility to service meeting Transit Market Area standards





Key Takeaways – Regional Performance

- Bus ridership is declining
- Despite declining, bus service makes up the majority of ridership
- Demand for transitway service has remained strong, particularly light rail
- The introduction of arterial BRT has been successful
- Demand for Metro Mobility service is increasing and consuming a larger share of available transit funds
- Demand for park and rides has leveled off in recent years

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Peer Region Transit Analysis

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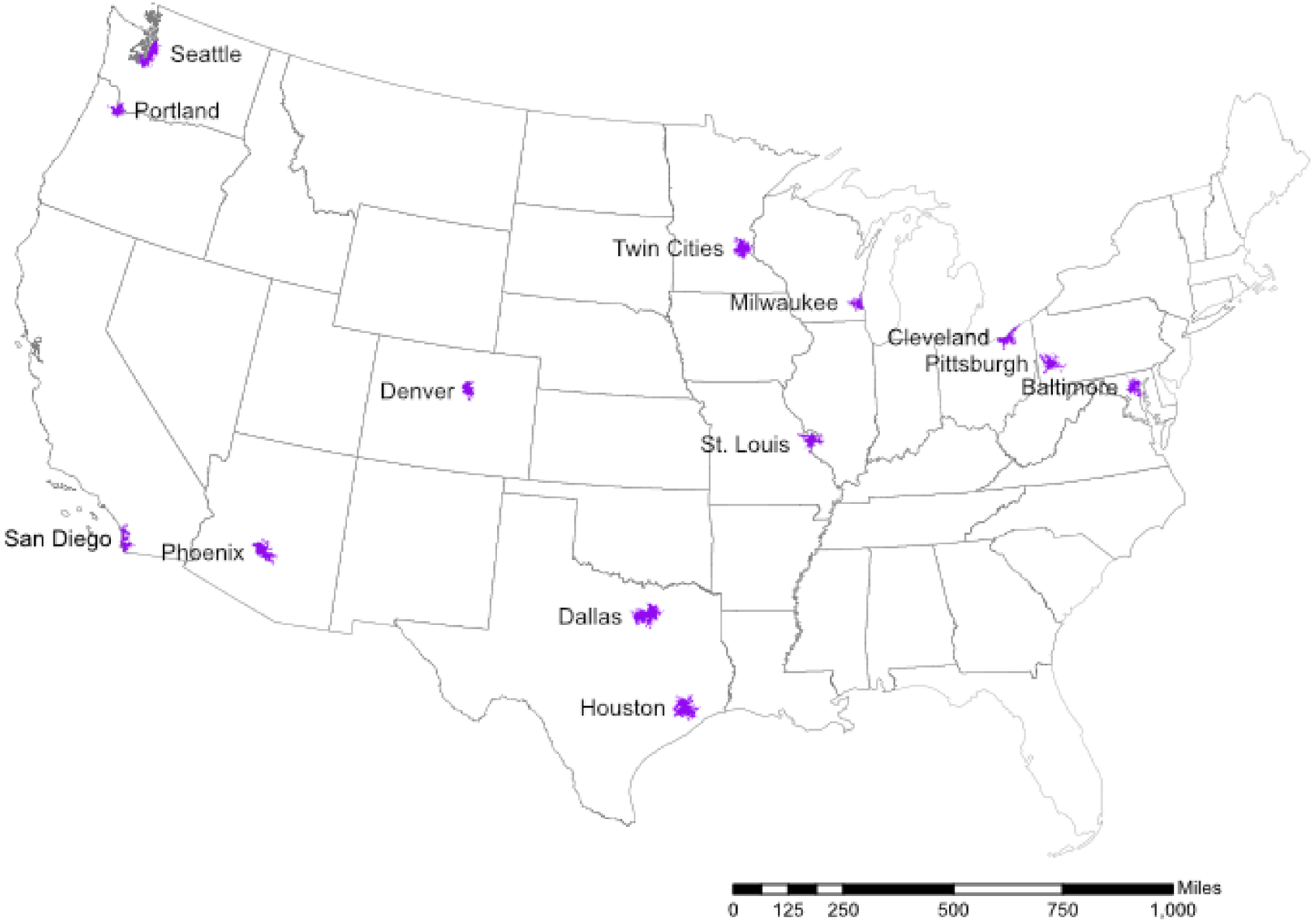
Peer Regions



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Peer Region Transit Modes (2017)

Region	Bus	BRT	Heavy Rail	Light Rail	Streetcar	Commuter Rail	Hybrid Rail	Dial-a-Ride	Vanpool	Other
Baltimore	▪		▪	▪		▪		▪		
Cleveland	▪	▪	▪	▪				▪	▪	
Dallas	▪			▪	▪	▪	▪	▪	▪	
Denver	▪			▪		▪		▪	▪	
Houston	▪			▪				▪	▪	
Milwaukee	▪							▪		
Phoenix	▪			▪				▪	▪	
Pittsburgh	▪			▪				▪	▪	Inclined Plane
Portland	▪			▪	▪		▪	▪	▪	Aerial Tramway
San Diego	▪			▪		▪	▪	▪	▪	
Seattle	▪	▪		▪	▪	▪		▪	▪	Monorail
St. Louis	▪			▪				▪	▪	
Twin Cities	▪	▪		▪		▪		▪	▪	

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Investment and Performance Measures

- Transit Spending
  - Operating Spending per Capita
  - Average Annual Capital Spending per Capita
- Ridership
  - Total Ridership
  - Ridership per Capita
- Other Performance Measures
  - Subsidy per Passenger
  - Passengers per Revenue Hour

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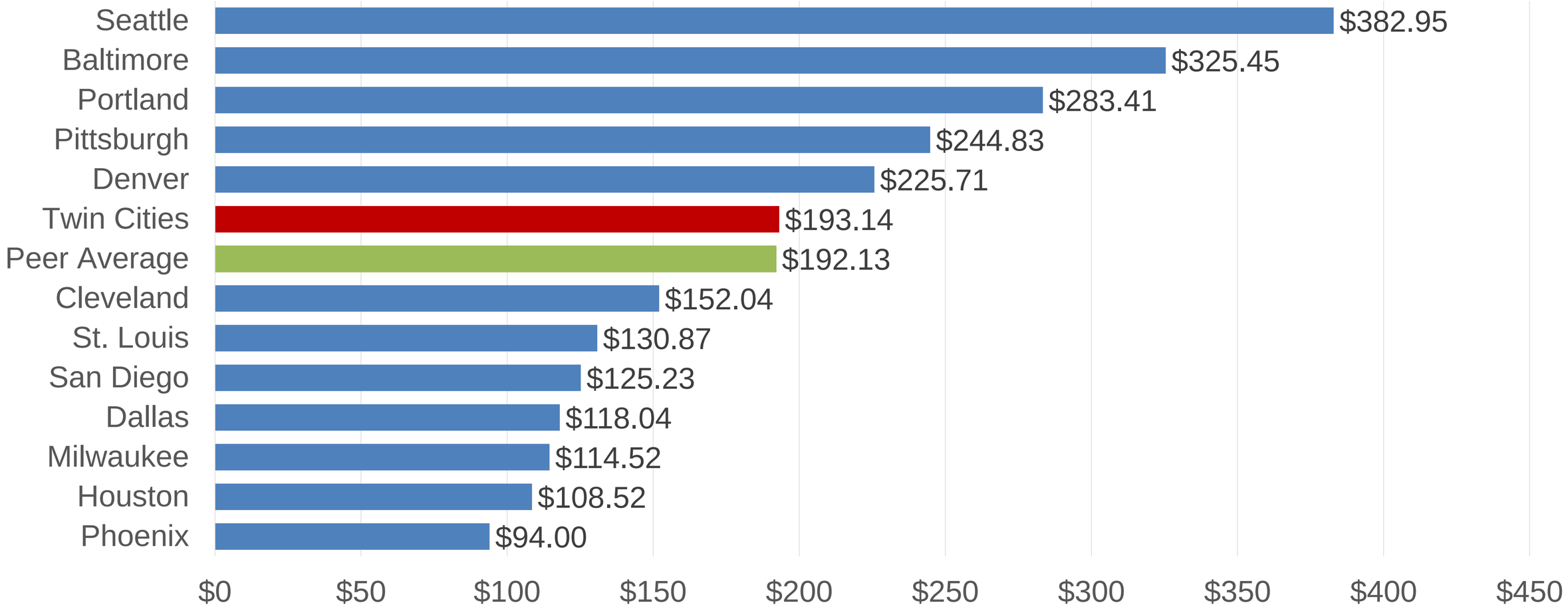
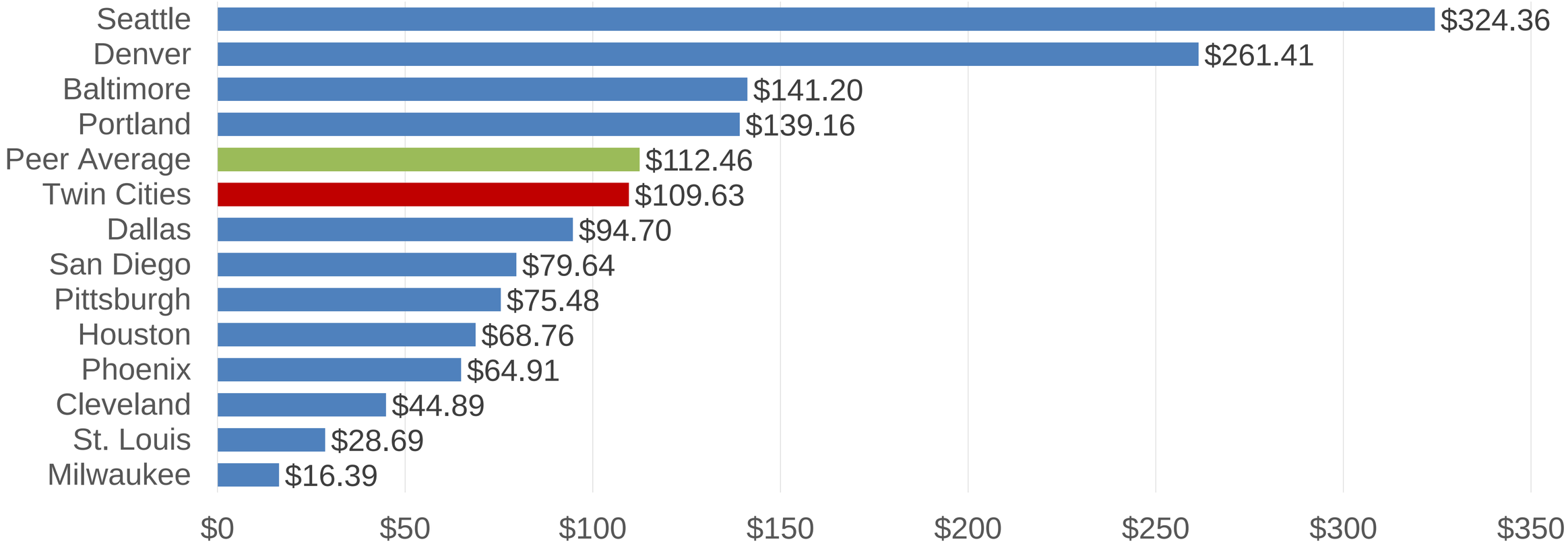
Operating Spending per Capita (2017)



Average Annual Capital Spending per Capita, 2007-2017



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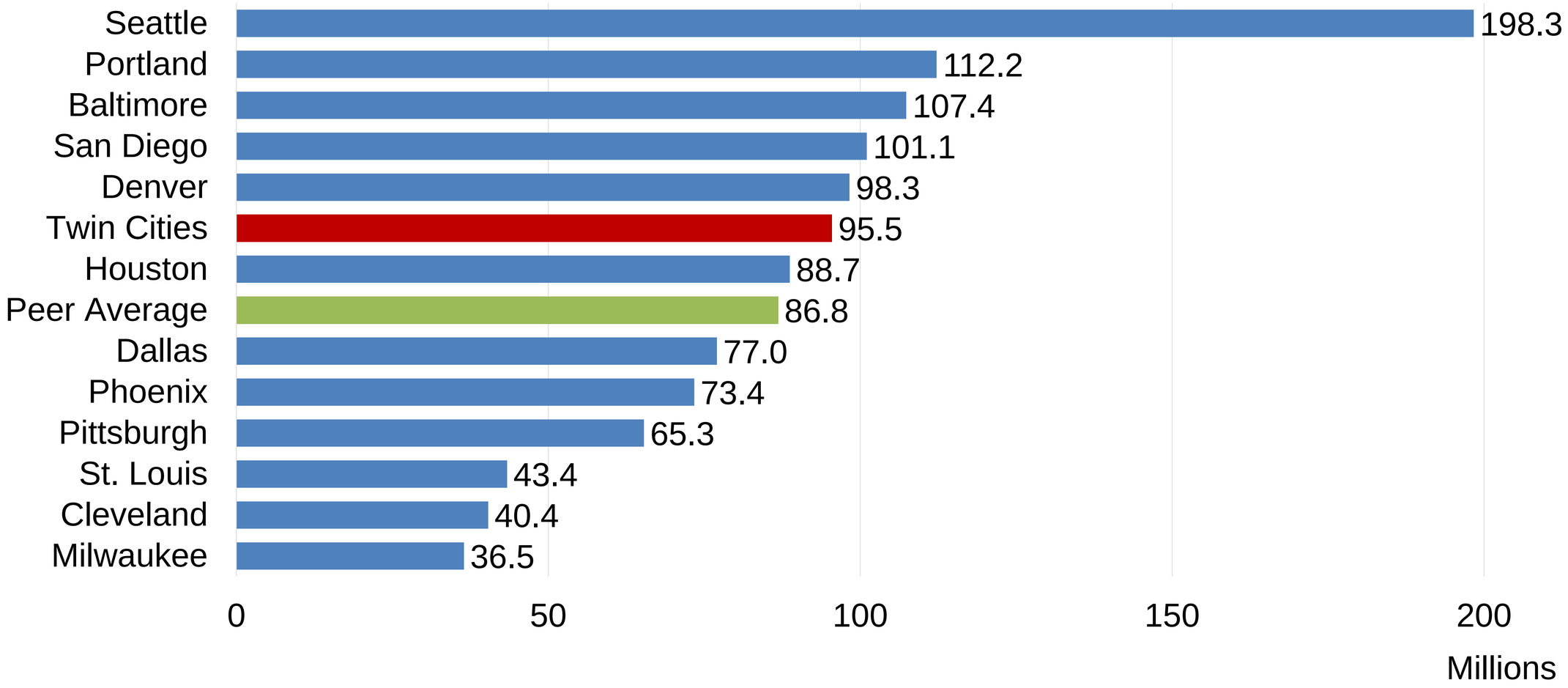
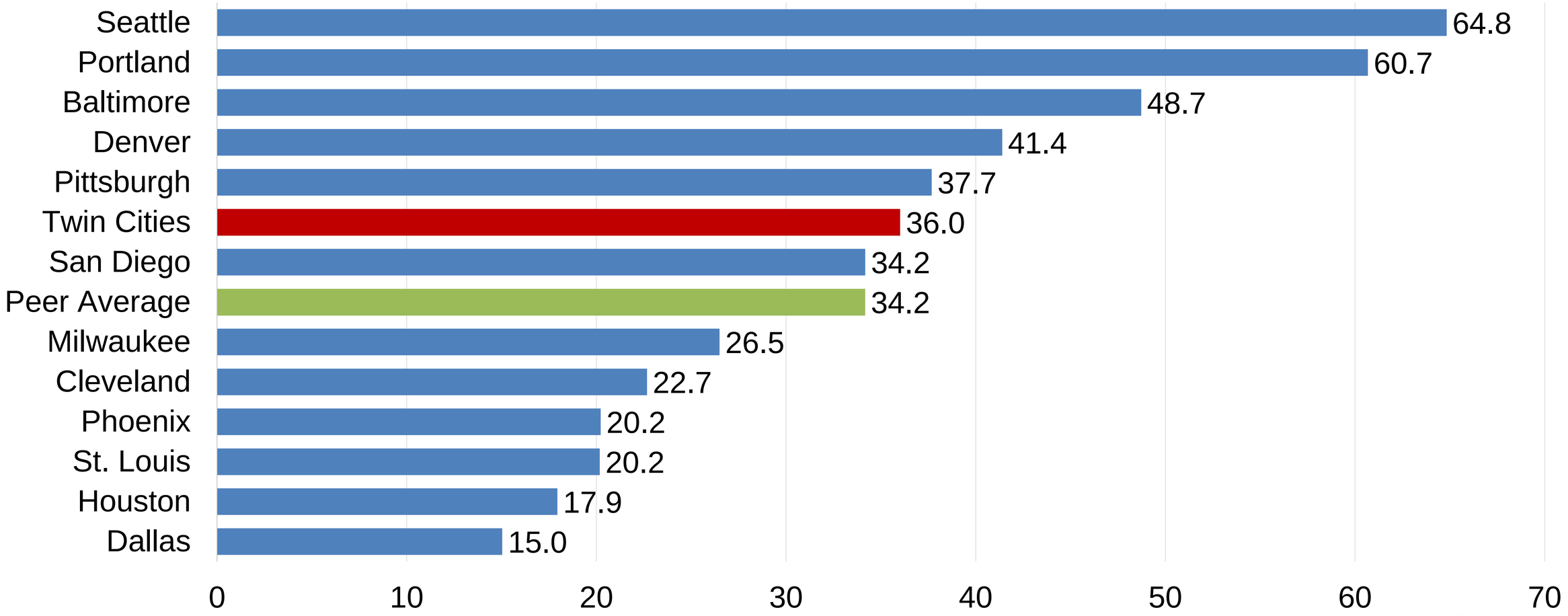
Total Ridership (2017)



Ridership per Capita (2017)



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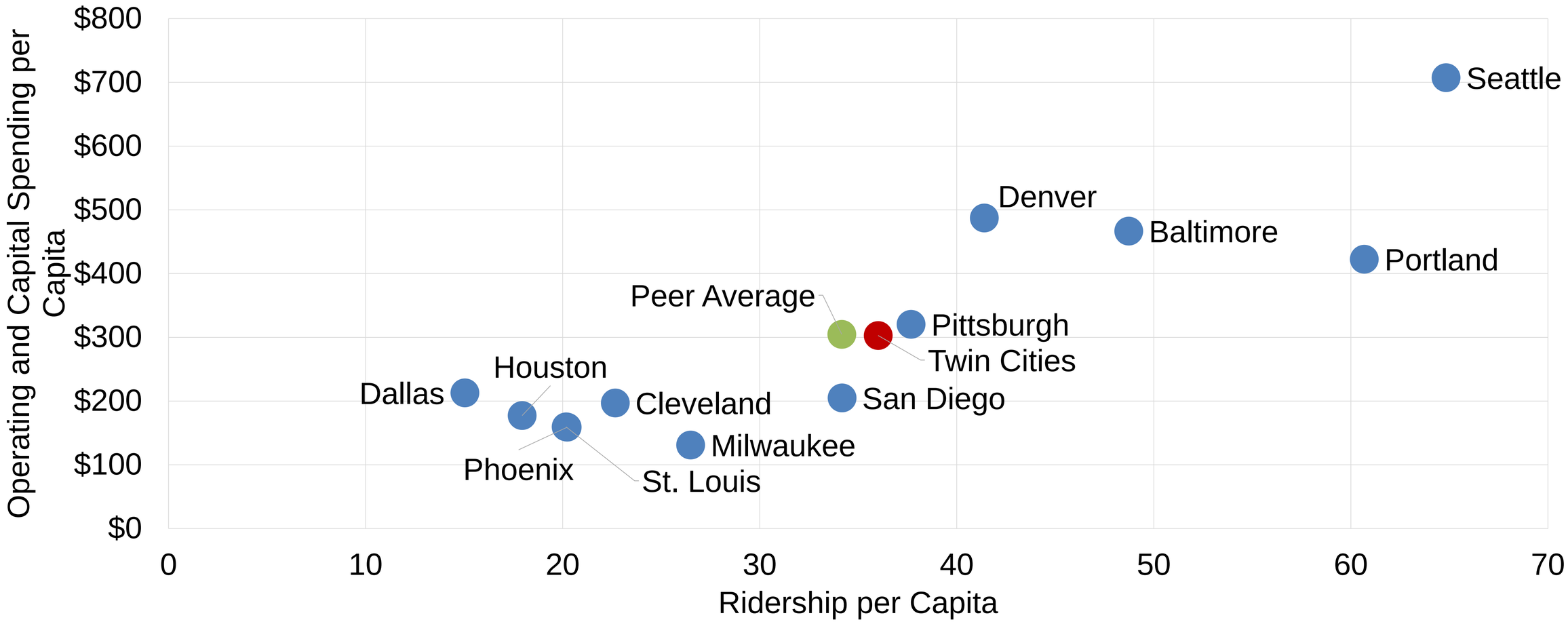
Spending per Capita vs. Ridership per Capita (2017)



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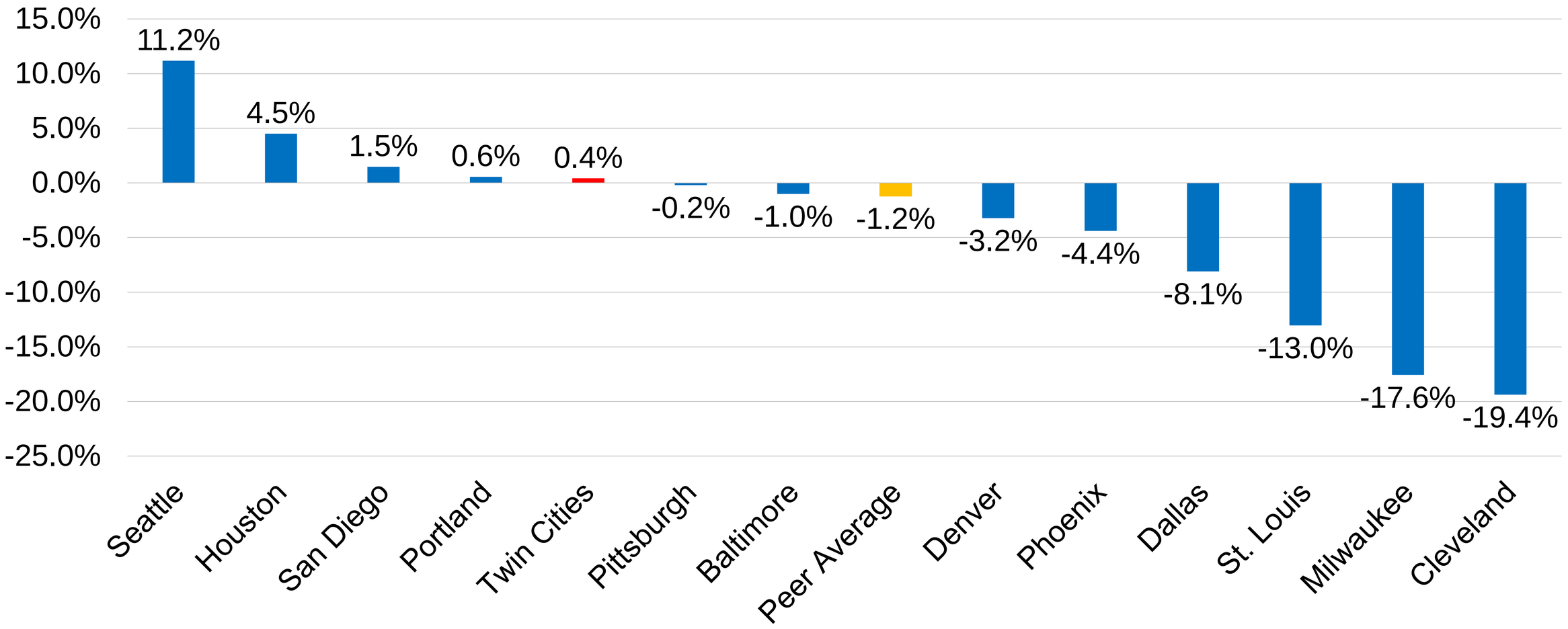
Percent Change in Ridership (2013-2017)



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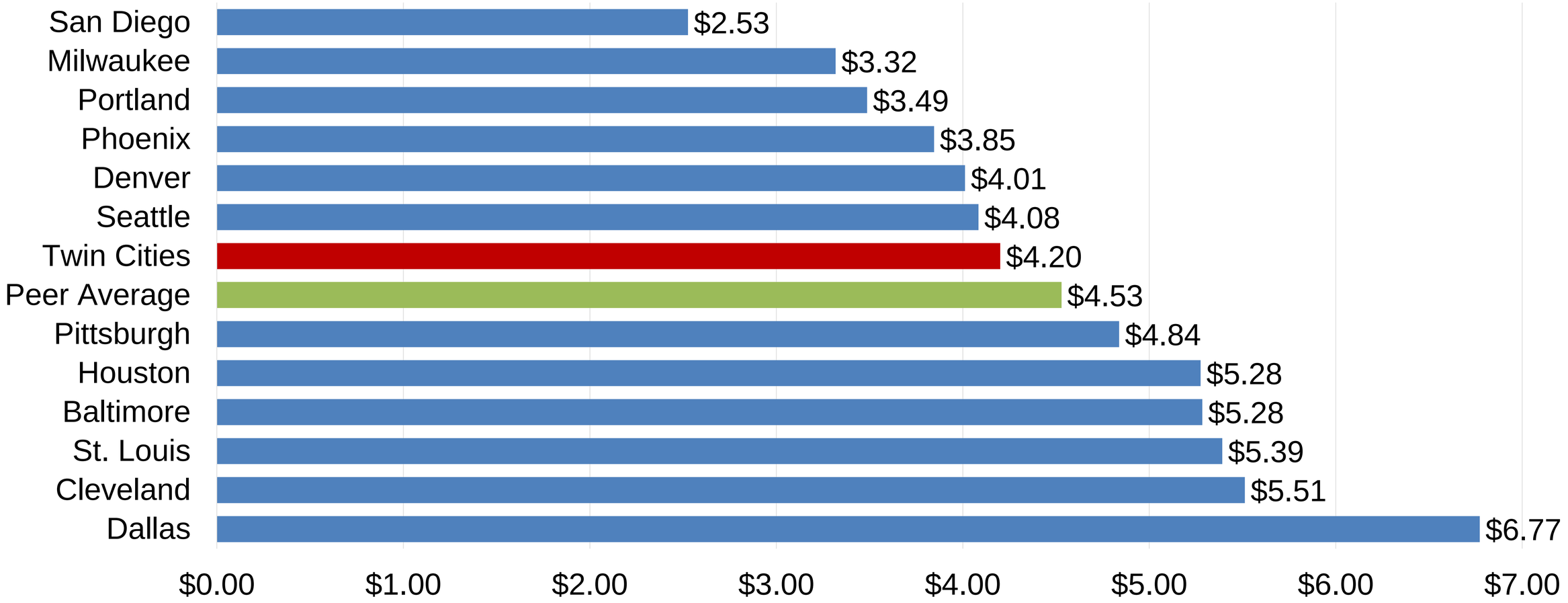
Subsidy per Passenger (2017)



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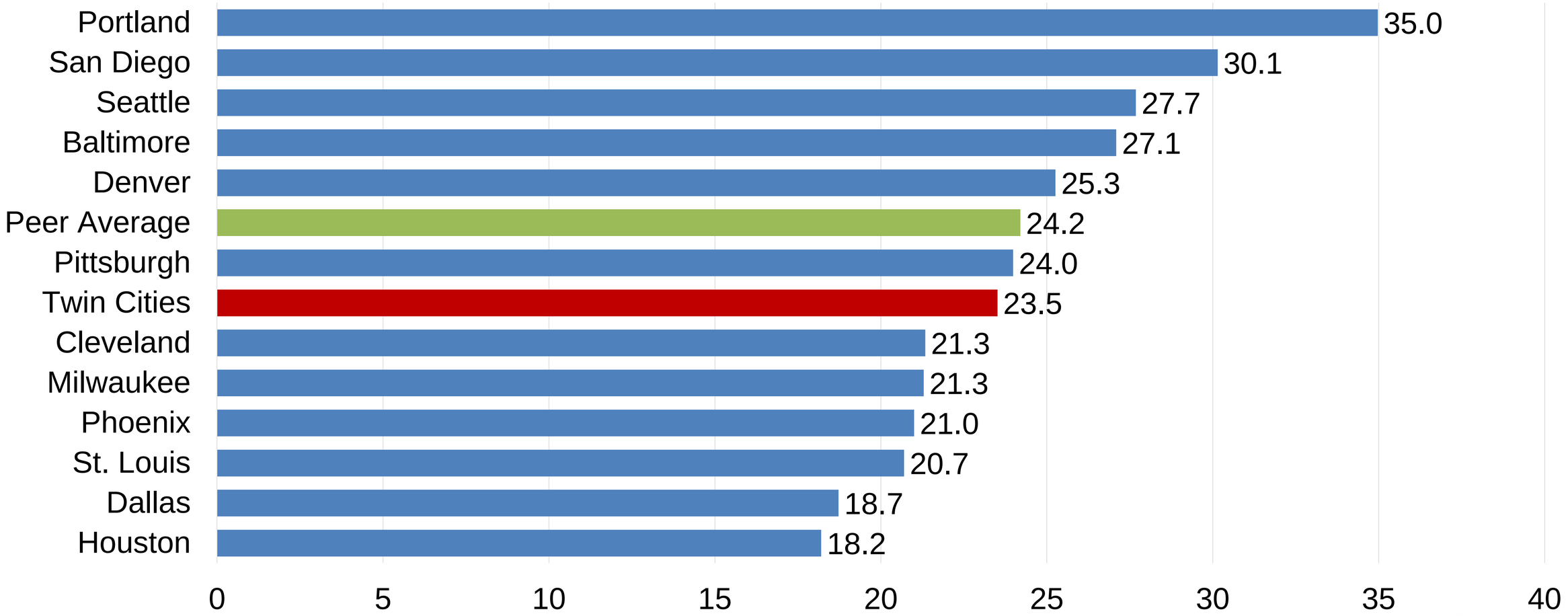
Passengers per Revenue Hour* (2017)



*Revenue Hours used in lieu of in-service hours for peer comparison

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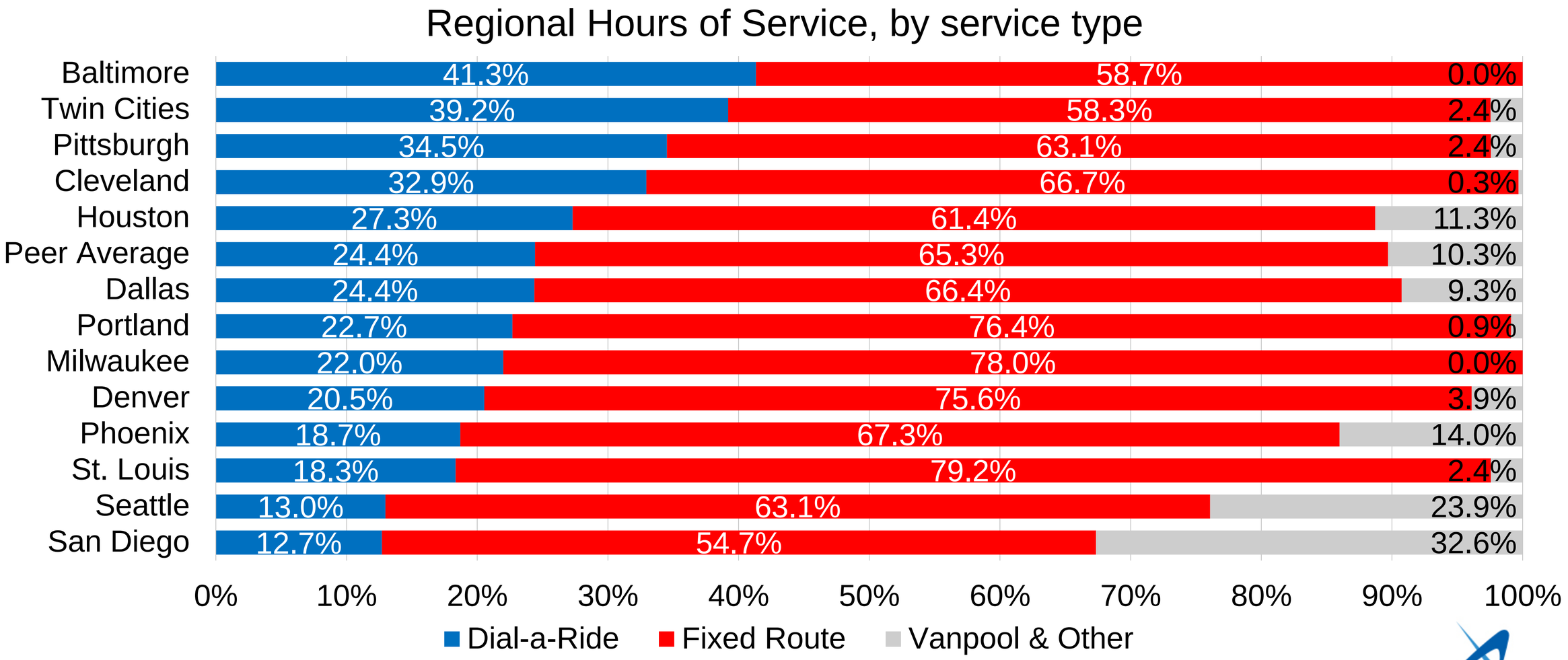
Factors that Impact Performance



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Key Takeaways – Peer Comparisons

- Positive relationship between transit investment and ridership
  - Seattle, Portland, and Baltimore top 3 regions in operating spending per capita, capital spending per capita, and ridership per capita
  - Seattle ranked first for all three
- Generally, ridership has been declining across the peer regions from 2013-2017, with a few exceptions; Seattle was only region to have ridership increases every year from 2013-2017
- Trend in decreasing productivity across peer regions generally matches with trend of declining ridership
- High share of dial-a-ride service impacts transit performance in Twin Cities region compared with peer regions

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Questions

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