

# Service Guidelines Task Force

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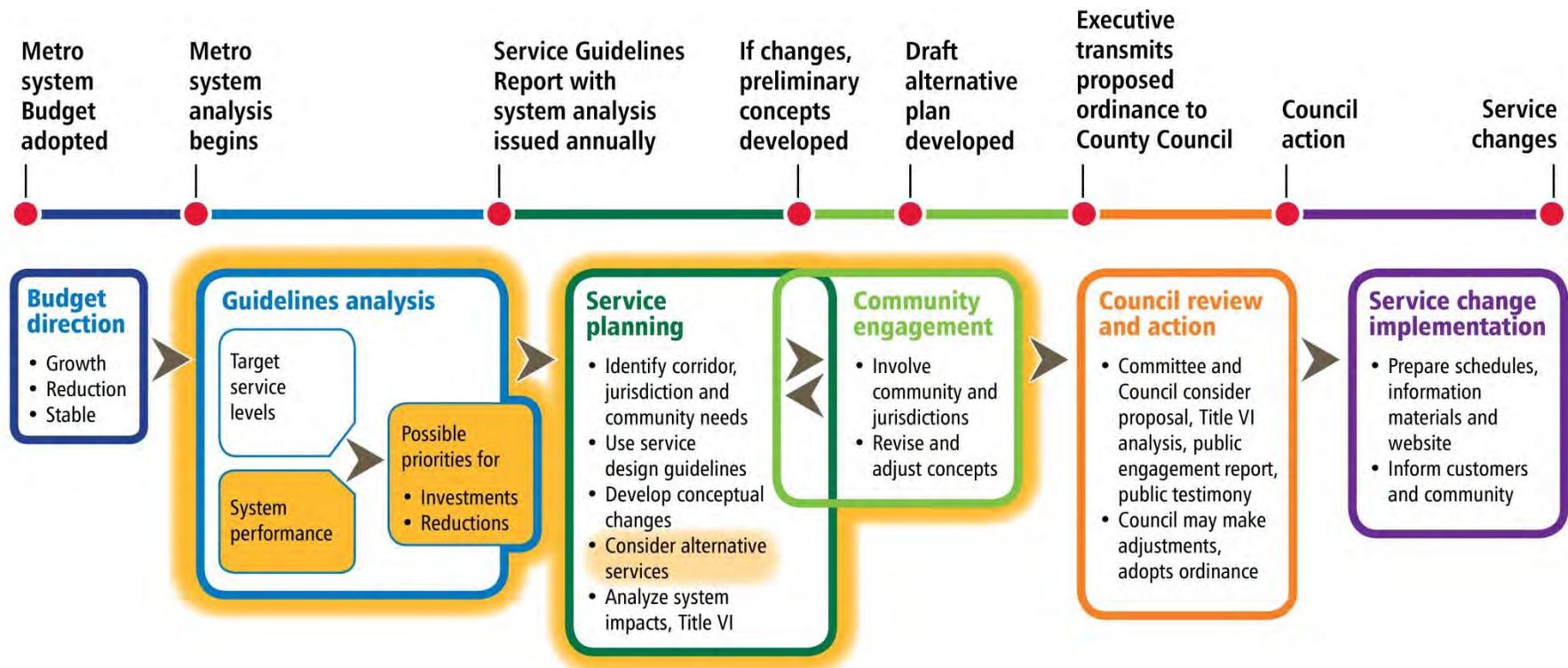
Performance Measurement, Geographic  
Value and Alternative Services

April 1, 2015

# Performance Measurement at Metro

- Overview of performance measurement in Metro's planning process
- How does Metro evaluate performance?
- What is Metro's Alternative Services Demonstration Program?
- What do other transit agencies do?
- Policy trade-offs and discussion

# Performance measurement - Metro's planning process



# How does Metro measure performance?

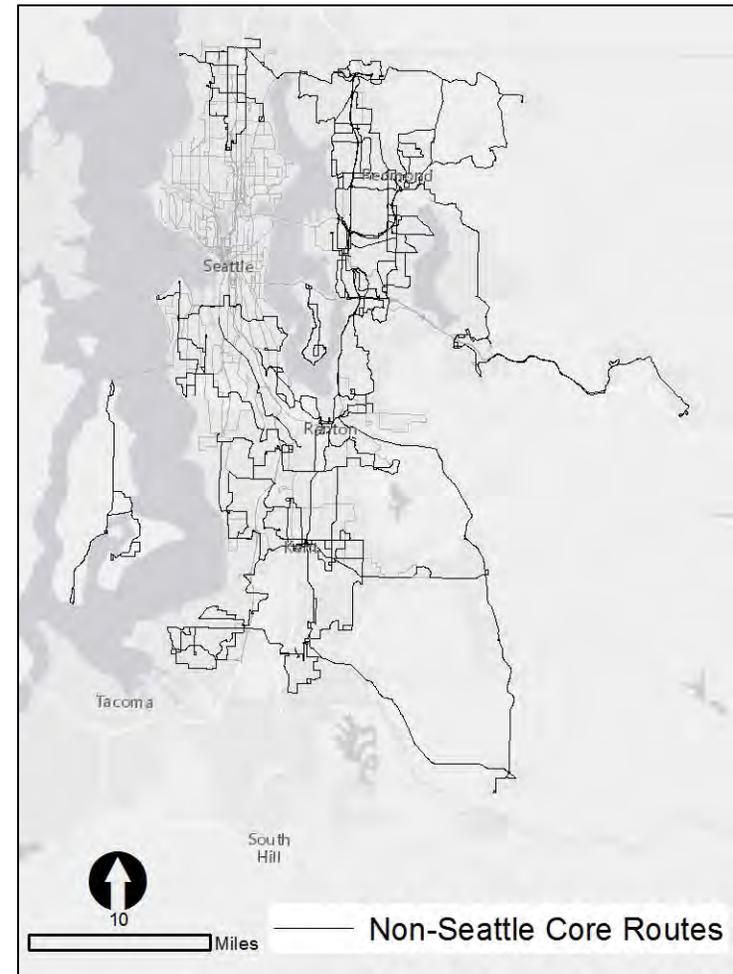
Service Types	Evaluation Method	Time Periods		
		Peak	Off-Peak	Night
Fixed-Route and Dial-a-Ride Transit	<b>Performance Metrics</b> <i>Rides per platform hour</i> <i>Passenger miles per platform mile</i>			
	<b>Additional peak-only evaluation</b> <i>Ridership and Travel Time comparison</i>			
Alternative Services	<i>Performance metrics in development</i>	<b>Under development</b>		

Key

Seattle Core	Non-Seattle Core
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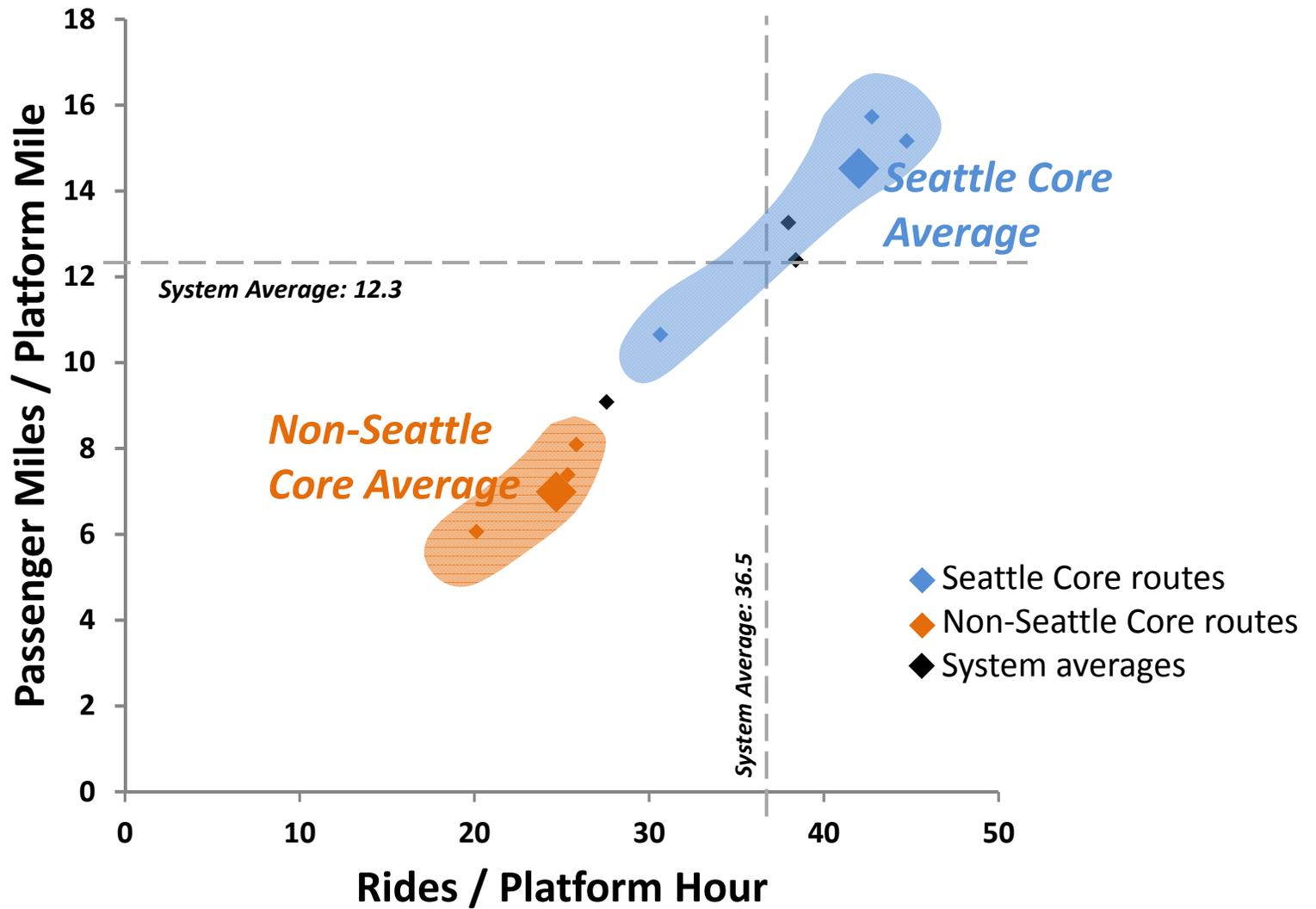
# How does Metro distinguish its services?

- **Seattle core:** Routes serving the densest areas in the county from anywhere in King County
- **Non-Seattle core:** Routes serving all other areas of the county
- Two measures of route performance to **balance diversity of transit needs** throughout the county



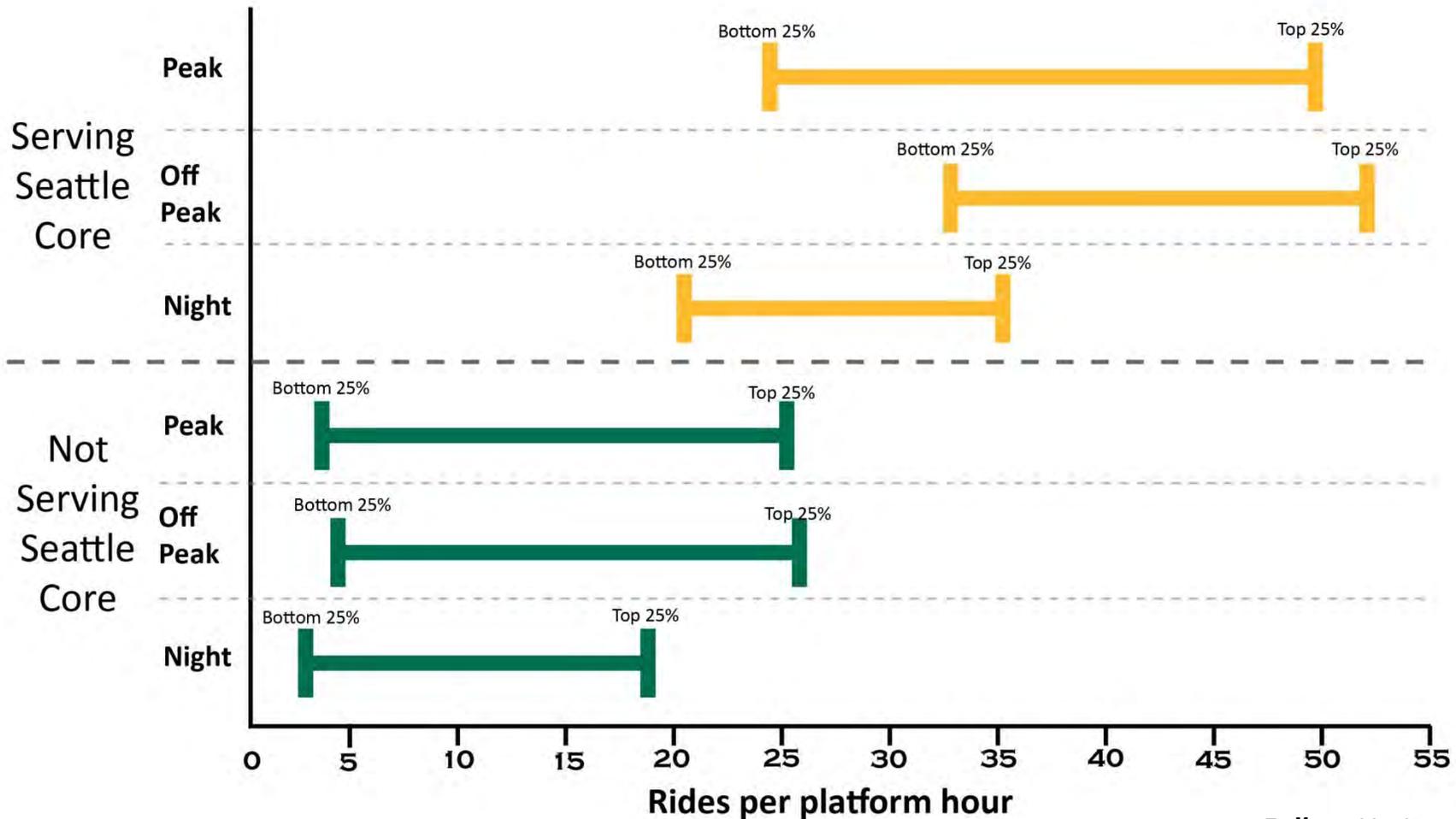
Follow Up Item 1.15, 1.17

# How does Metro's service performance compare?



# Thresholds - Rides Per platform hour

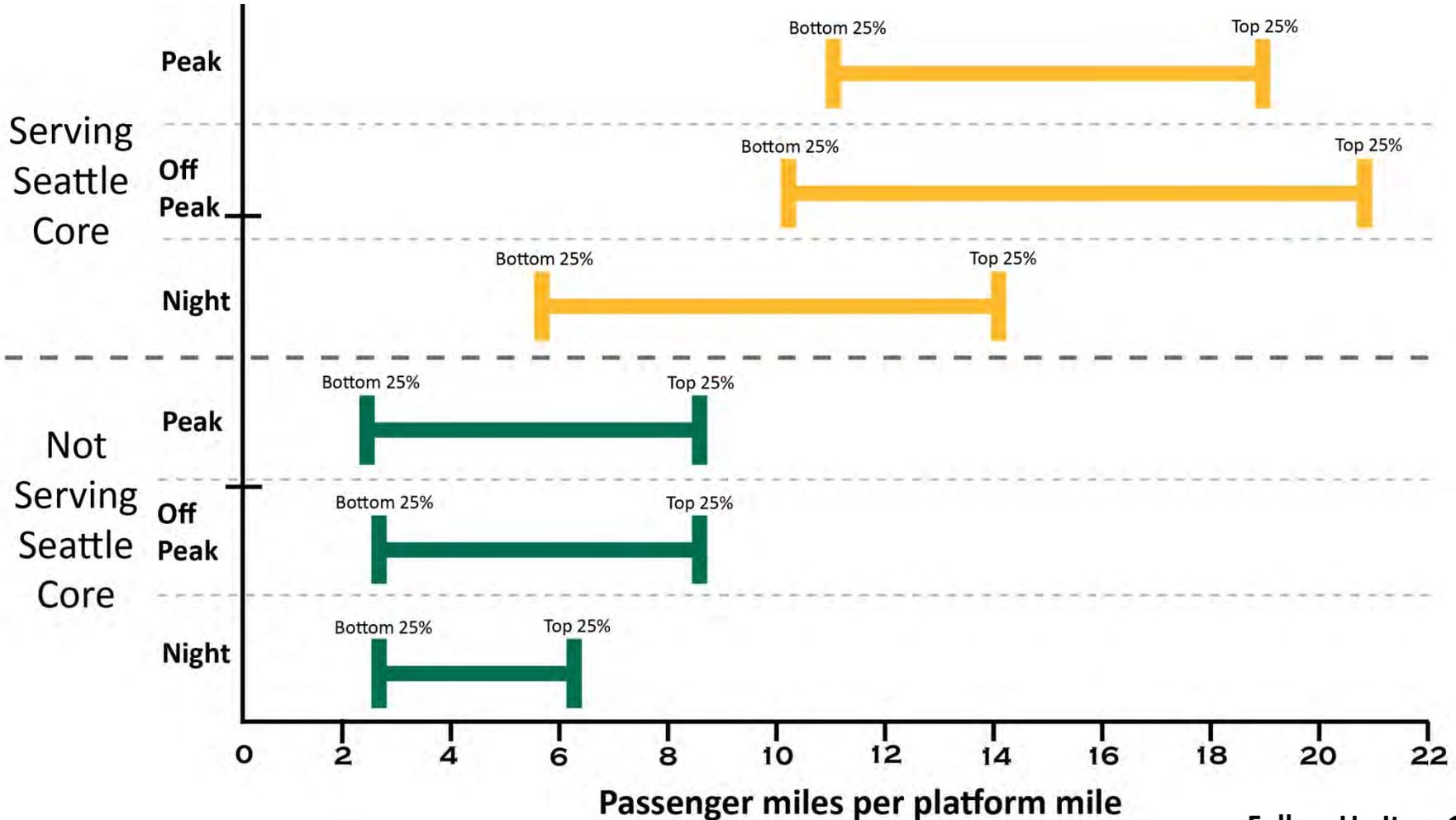
**Rides per platform hour:** Total ridership divided by the total hours from the time the bus leaves its base until it returns.



Follow Up Item 1.4, 1.8

# Thresholds – Passenger miles per platform mile

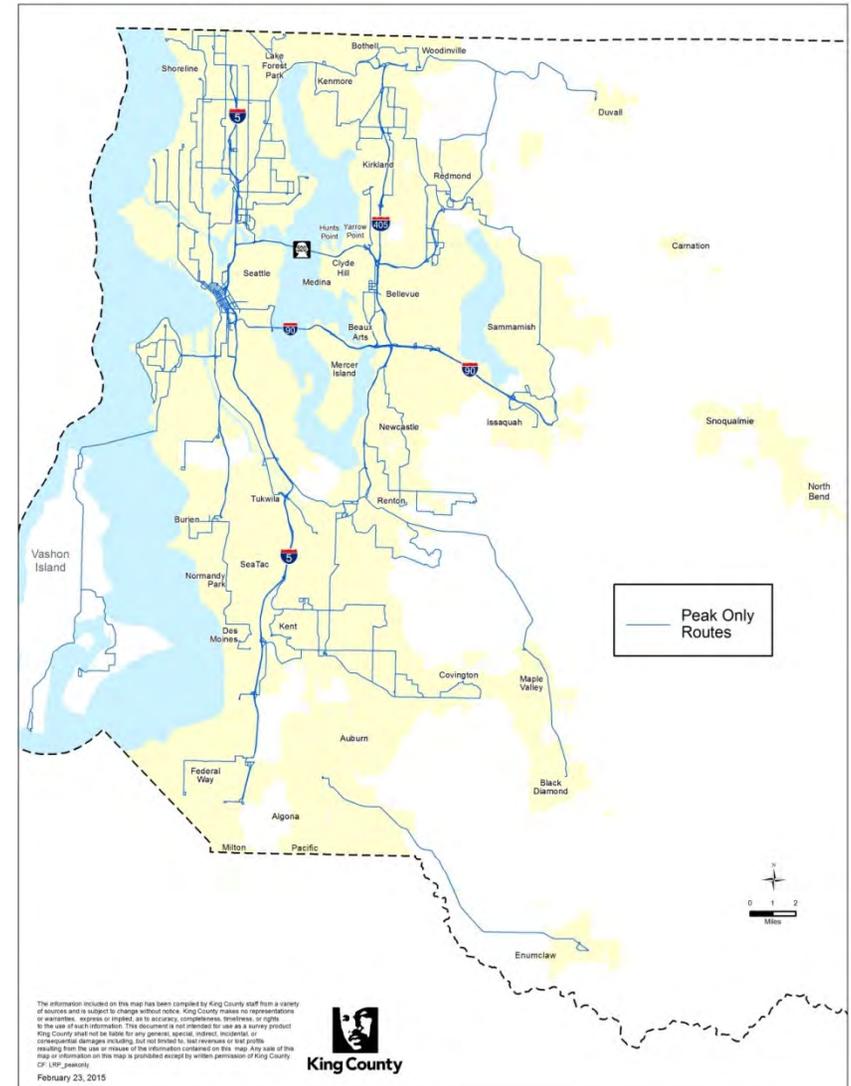
**Passenger miles per platform mile:** Total miles traveled by all passengers divided by the total miles the bus operates from its base until it returns.



Follow Up Item 1.4, 1.8

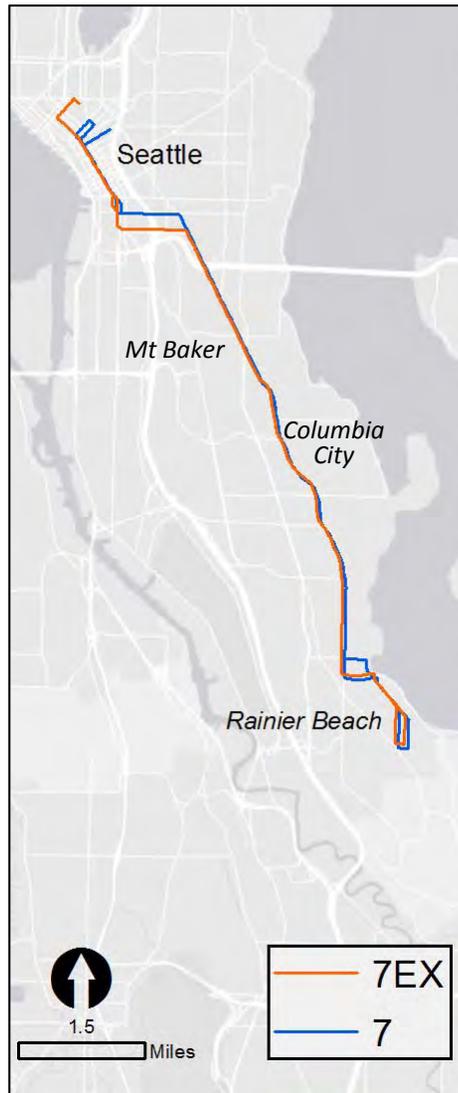
# Additional Peak-Only evaluation

- Same route performance metrics:
  - Rides per platform hour
  - Passenger miles per platform mile
- Additional evaluation:
  - **Travel time:** 20% faster than local route
  - **Ridership:** Carry at least 90% of the local route riders per trip



Follow Up Item 1.16

# Example peak only route evaluation



Rt 7EX	Peak Route	Rt 218
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## Performance Metrics

35.6	Rides/ platform hour	42.1
8.7	Passenger miles/ platform mile	23.4

## Additional Peak Evaluation

No	Ridership	Yes
Yes	Travel Time	Yes



Key
Top 25% route
Bottom 25% route/ Does not meet peak target

Questions?



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# What is Metro's Alternative Service Demonstration Program?



## Existing Alternative Services

Build on these successful services.

- VanShare
- VanPool
- Rideshare
- CAT
- DART



## Community Shuttle

A route with flexible service areas provided through a community partnership.

- fixed and flexible service area
- community partner provides resources and marketing



## Community Hub

Local transportation center, access to community vans, bikes and information resources.

- partner provides location, transportation info and scheduling
- regularly scheduled and one-time trips



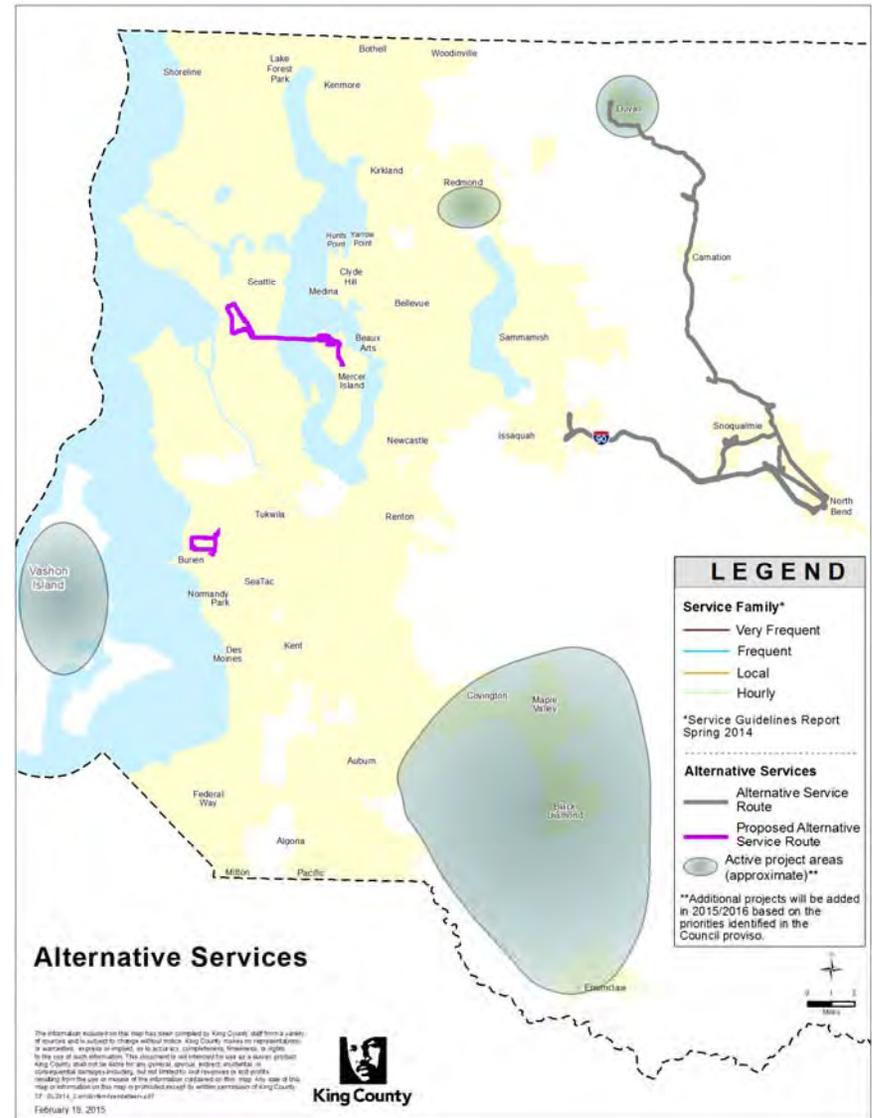
## Flexible Rideshare

Variable ridesharing via promotion of mobile and web-based app.

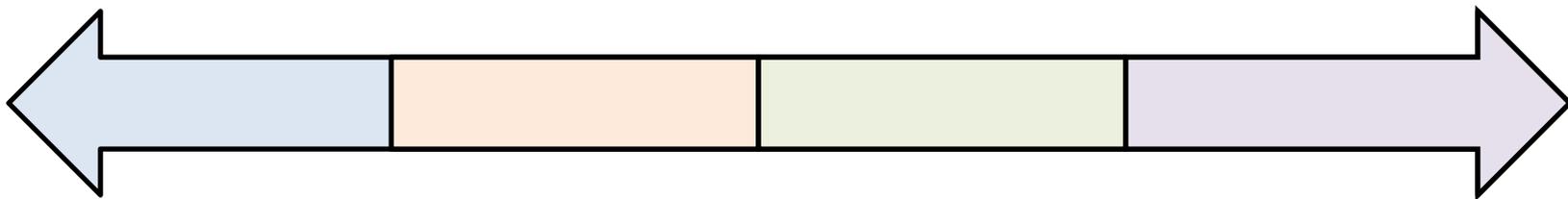
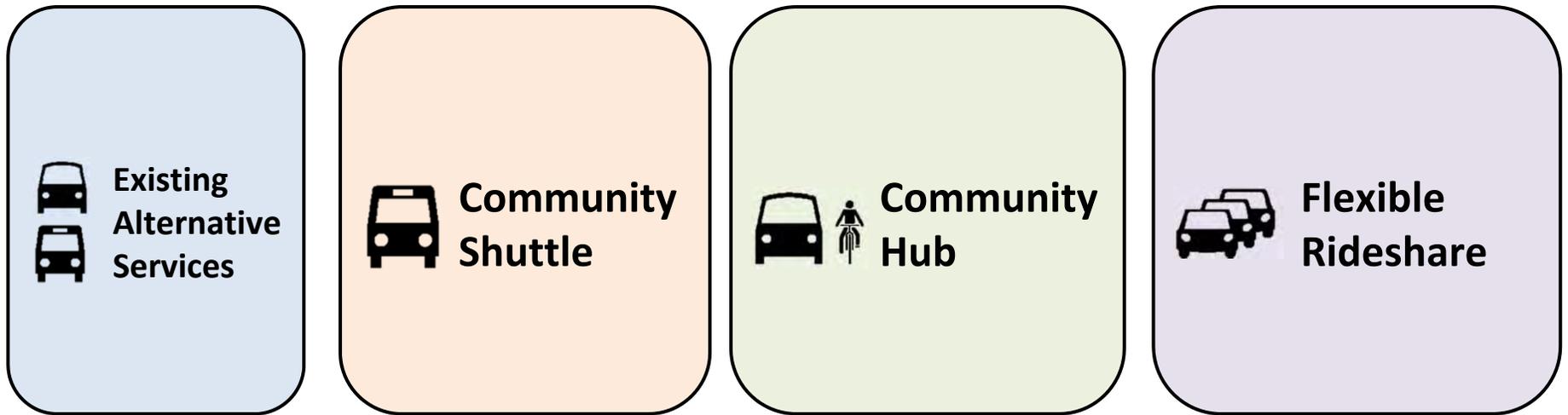
- responds to unique commuter needs
- may include set pick-up points and driver incentives

# Alternative Service Demonstration Projects

- **Current Projects:**
  - The Valley Shuttle
  - Route 628: Issaquah Highlands to North Bend
- **Projects to be implemented in 2015:**
  - Burien – Community shuttle
  - Mercer Island – Community shuttle
  - Redmond – Flexible rideshare
- **Projects in planning:**
  - Duvall
  - Vashon Island
  - SE King County



# How do we evaluate performance of alternative services?



Questions?



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# Definitions of service types

## Route Design

Classification of routes based on **service characteristics**, such as:

- the numbers of hours a bus operates
- how often the bus comes
- how far apart the stops are
- what streets the bus uses
- where the bus travels

## Route Function

Classification of routes based on the **purpose**, such as:

- where the routes connect
- populations served
- how does it fit within the larger network

Follow Up Item 1.8

# What do other agencies do?

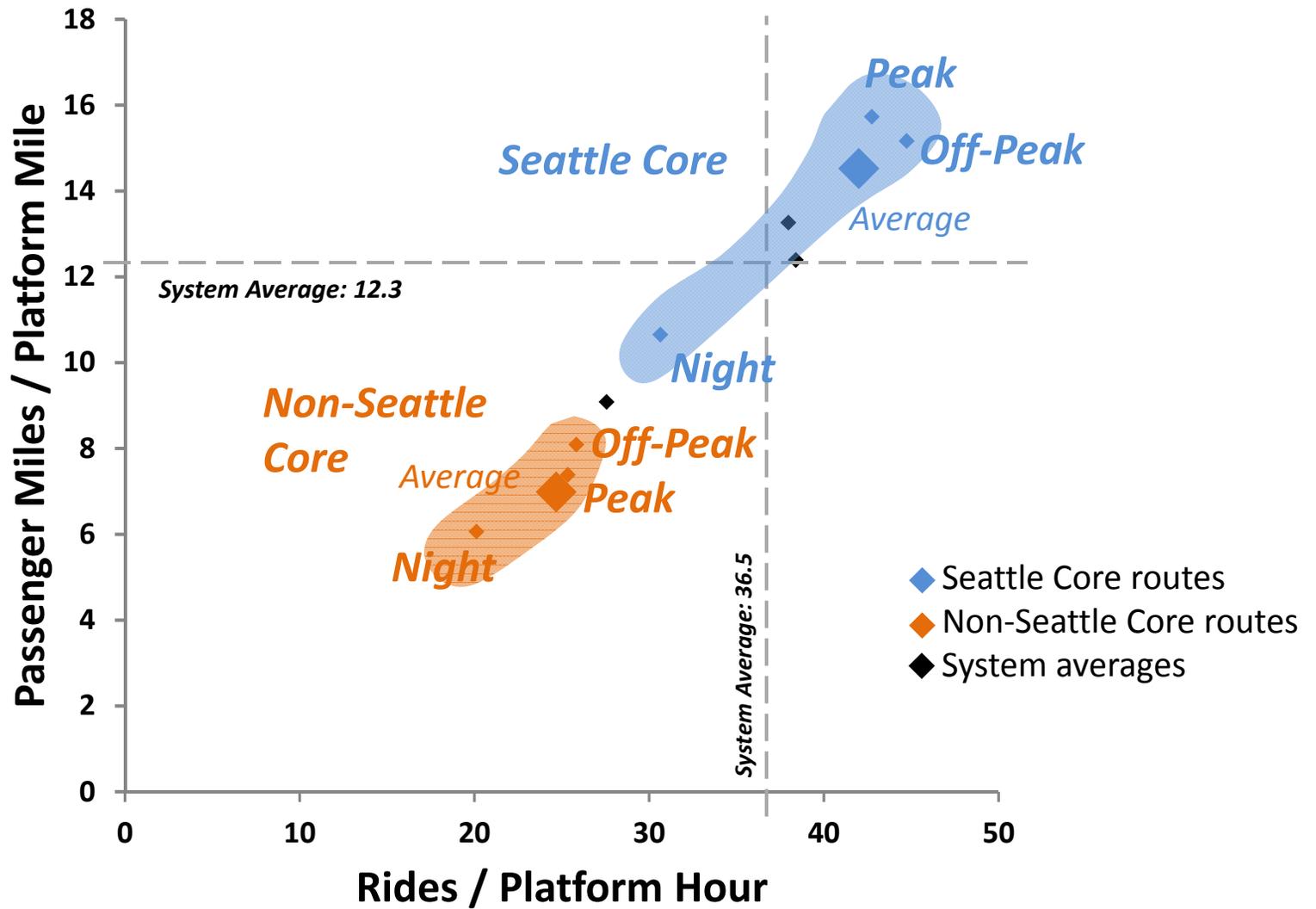


Route Design

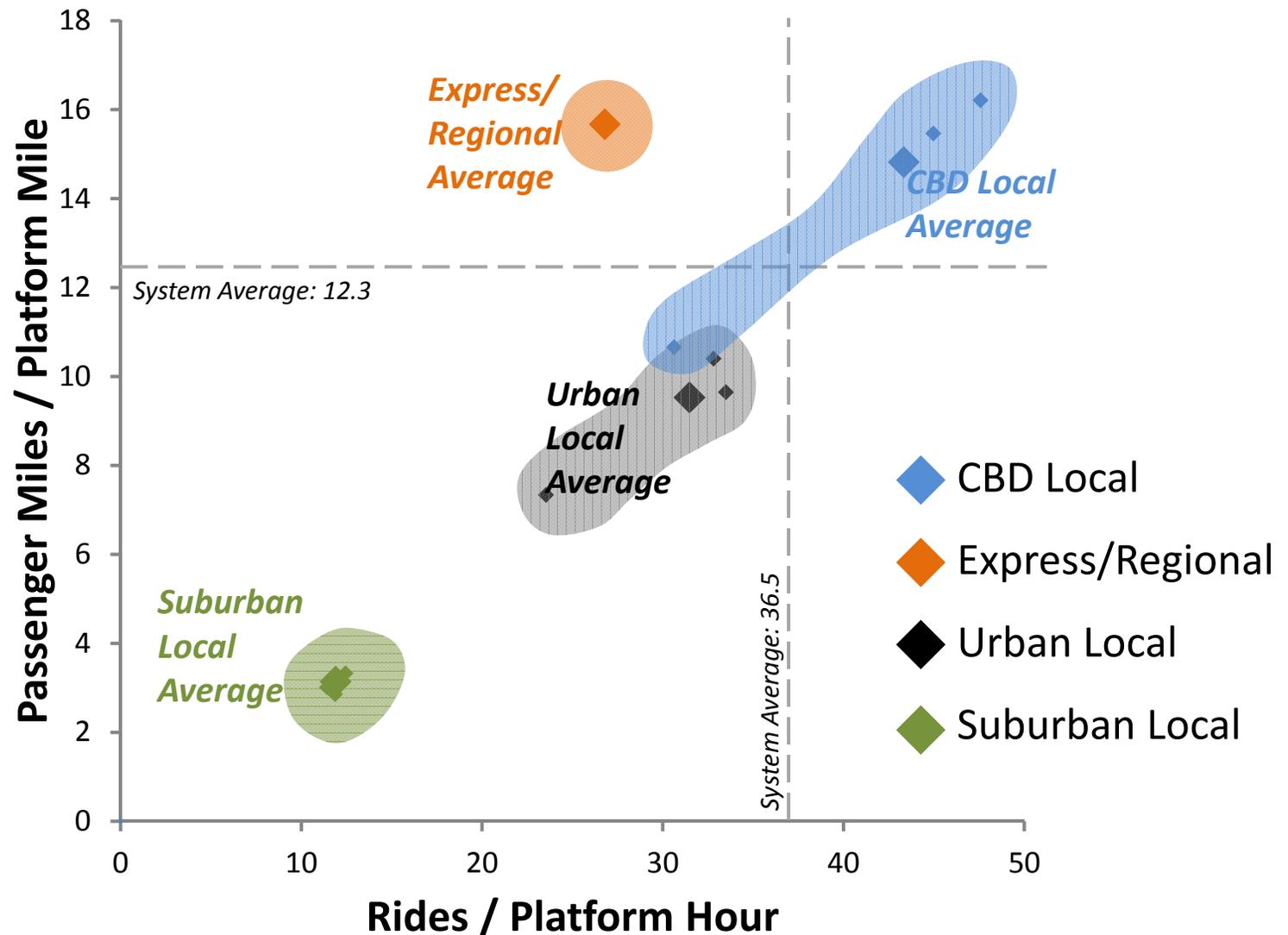
Route Function



# How do Metro's current service types perform?



# How would Metro's service types perform if using Denver RTD's service types?



# Policy and trade-offs discussion

- Should Metro change how it measures performance?  
Should Metro change its service types?
- What changes would you consider? What are the trade-offs?
- Issues to consider:
  - Impacts to investments/reductions
  - Percentage of system in each category
  - Simplicity vs. complexity

# Geographic Value and Alternative Services

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April 1, 2015

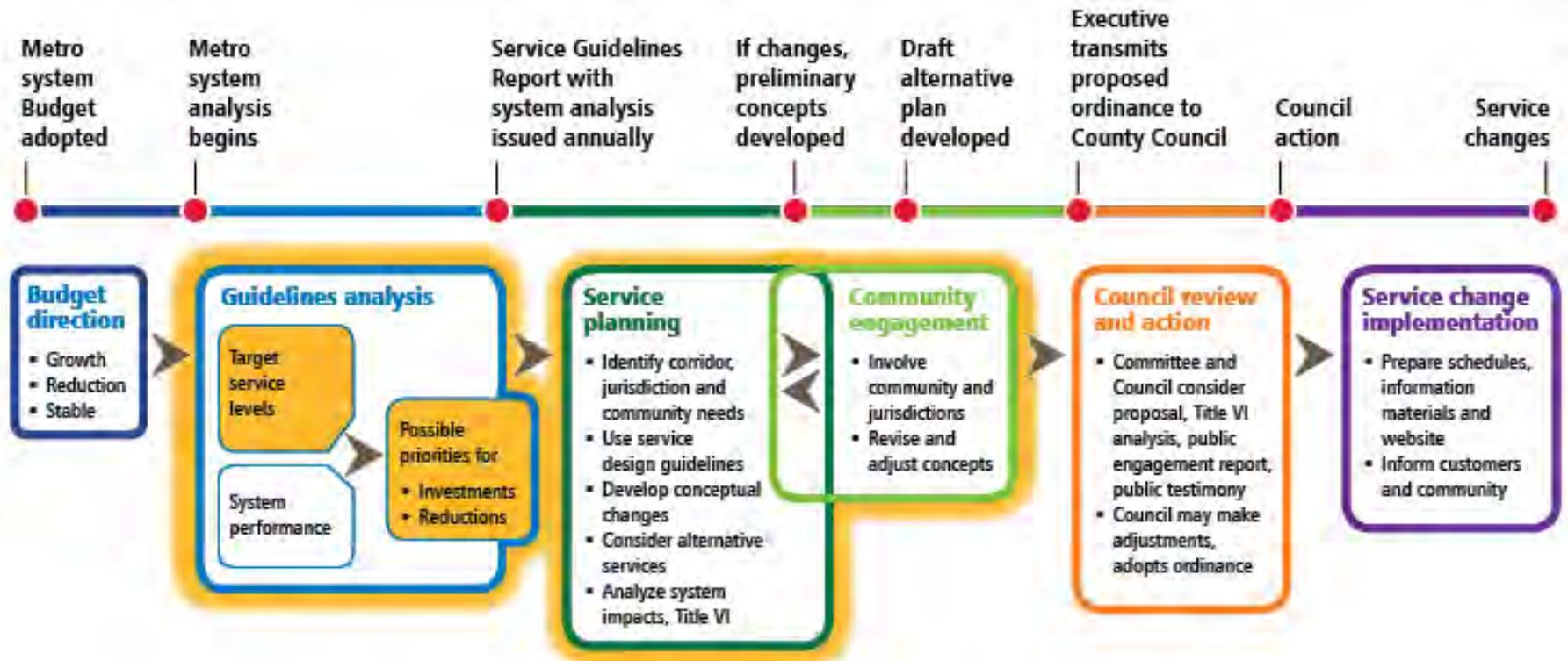


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# Geographic Value at Metro

- Overview of geographic value in Metro's planning process
- How do the service guidelines incorporate geographic value?
- How do we add centers, corridors or routes?
- How do Park-and-Rides fit in Metro's analysis?
- Policy and trade-offs discussion

# Geographic Value - Metro's planning process

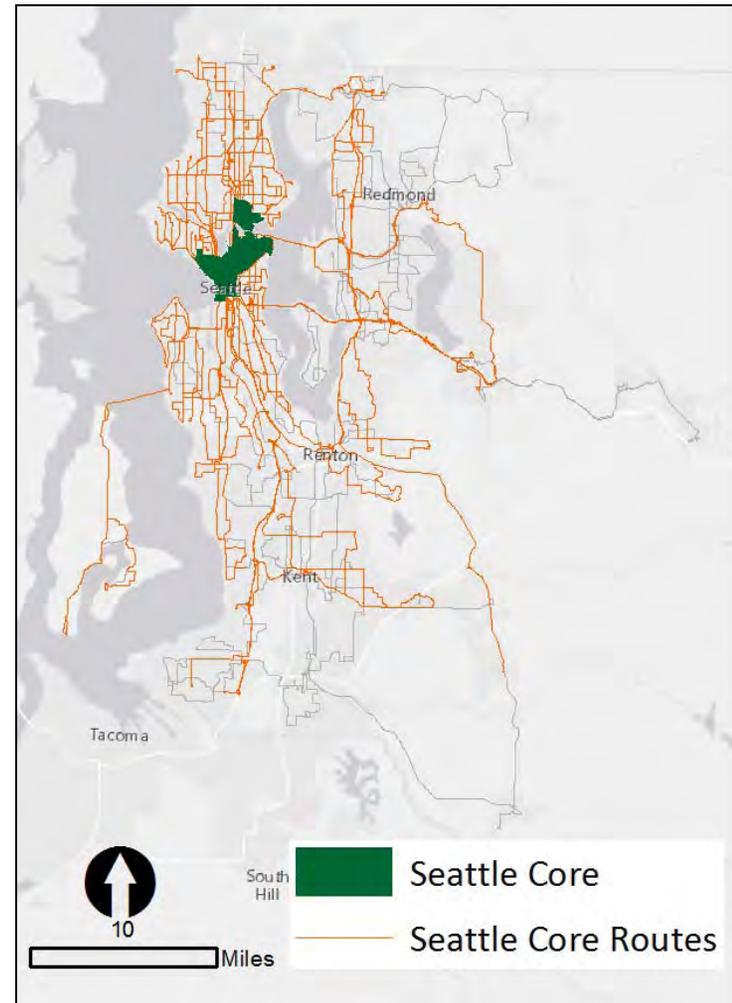


# How do the service guidelines incorporate geographic value?

- Evaluating distinct services to the Seattle Core and the Non-Seattle Core separately
- Identifying 85 centers and connecting these centers with transit service on 112 corridors
- Seeking extensive input on all service changes to impacted areas and adjusting proposals
- Preserving connections to urbanized areas of east and south King County adjacent to or surrounded by rural land

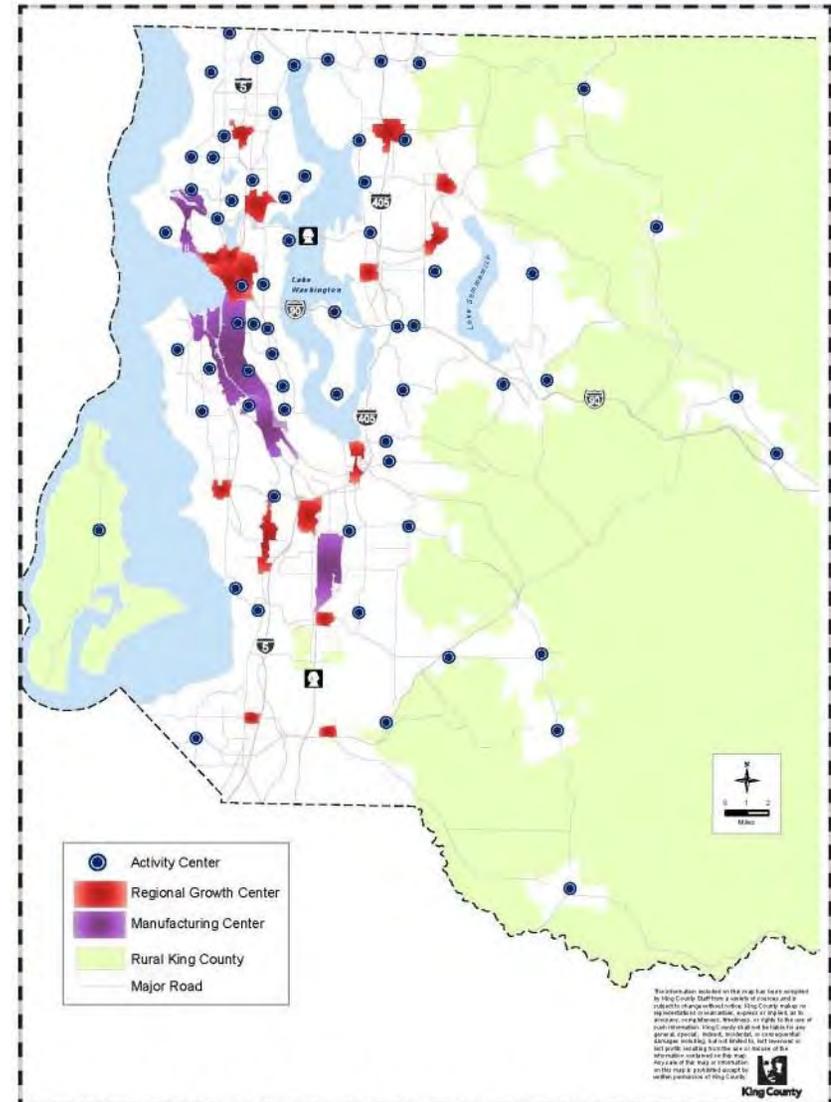
# Evaluating distinct types of service separately

- **Seattle core:** Routes serving the densest areas in the county from anywhere in King County
- **Non-Seattle core:** Routes serving all other areas of the county
- Two measures of route performance to **balance diversity of transit needs** throughout the county



# Corridors and centers provide connections throughout the transit network

- 85 centers geographically distributed throughout King County
- Analyze 112 corridors that connect all 85 centers
- Target service levels determined: frequency a corridor *should* have based on:
  - Productivity
  - Social Equity
  - **Geographic Value**



# Connections are valued in the data analysis

Productivity	Social Equity	Geographic Value
Households	Riders in low-income areas	<b>Connections to regional centers</b>
Jobs and Students		
Ridership	Riders in minority areas	<b>Connections to transit activity centers</b>
50%	25%	<b>25%</b>

# Planning and Community Engagement Process

- All planning processes include outreach to impacted geographic areas
- Outreach informs the development of concepts, alternatives, and proposals
- Service restructures focus on preserving service in impacted areas
  - Accommodate expected loads
  - Plan for growth
  - Maintain local connections



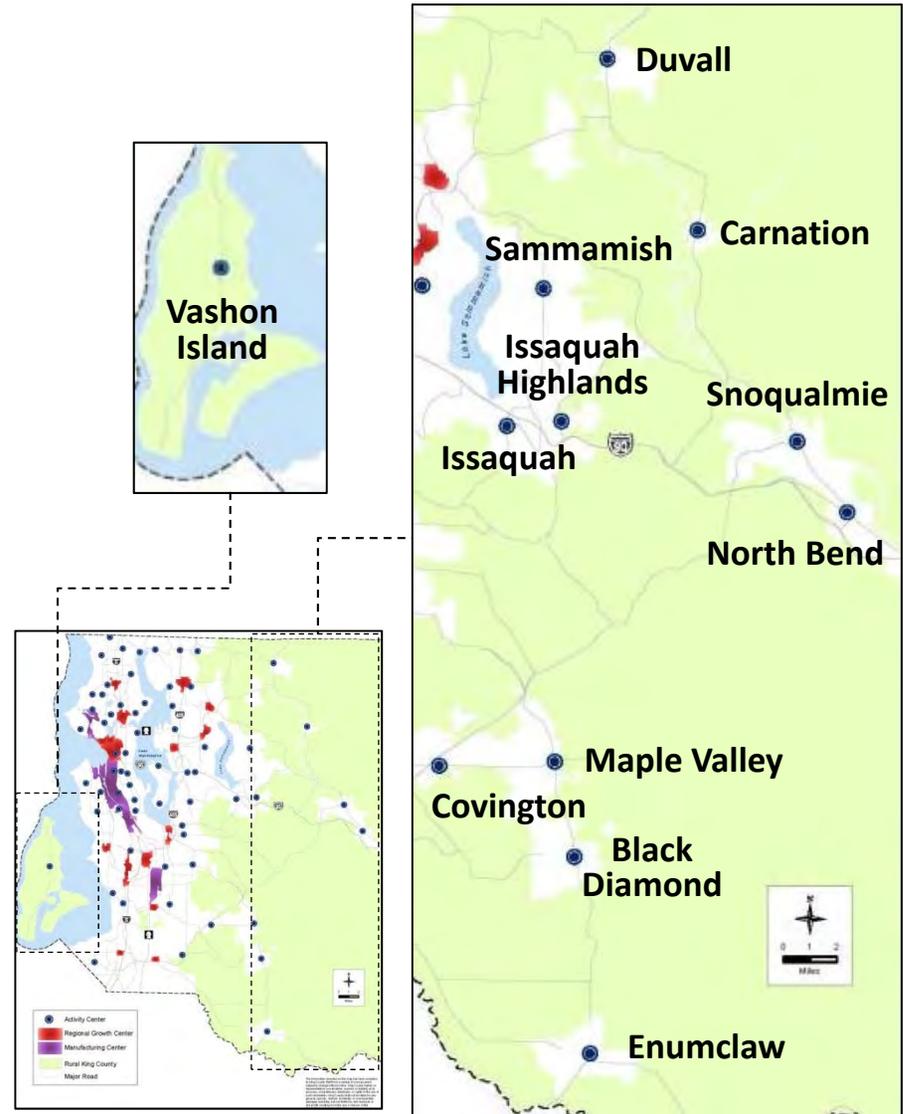
# Concept that changed – Route 21

- 2012 C Line Restructure changed the way service was delivered in West Seattle
  - The Arbor Heights tail of Route 21 was slated for deletion
  - Peak period service provided by Route 21 Express
- Community outreach raised concerns
  - Route 22 was restructured to provide all-day service between Arbor Heights and Alaska Junction
  - Serves Arbor Heights, Westwood Village, Chief Sealth High School, Alaska Junction



# Preserving coverage to urban areas

- Connections to urbanized areas of east and south King County adjacent to or surrounded by rural land are maintained to preserve coverage regardless of productivity



Questions?



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# How do we add new centers?

- **PSRC-designated:** Regional Growth Center, Regional Manufacturing/Industrial Center
  
- **Metro:** Transit Activity Center, meets three criteria:
  1. The pathways through the center must be on **arterial roadways**.
  2. The new center must result in a **new primary connection** between two centers.
  3. Analysis of new corridor through/to the center must result in **30-minute service frequency** or better.
    - Center must have combination of jobs, housing, minority and/or low income populations, and must provide connection to centers to warrant this level of service

Follow Up Items 1.20, 1.21

# How do we add new corridors or routes?

## How to add a new corridor?

- Service restructures
- Addition of new centers

## How to add a new route?

- Service restructures
- Partnerships, including state grants
- Addition of new primary connection or corridor

Follow Up Item 1.13

Questions?

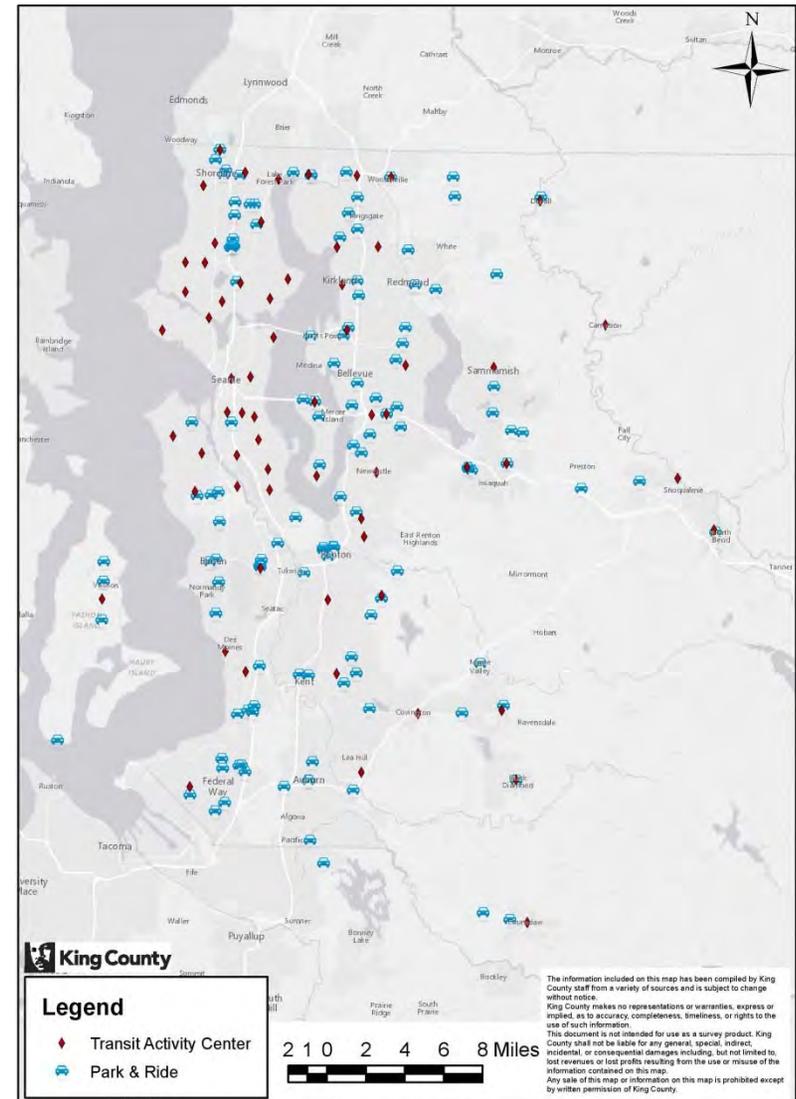


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# Park-and-Rides in Metro's analysis

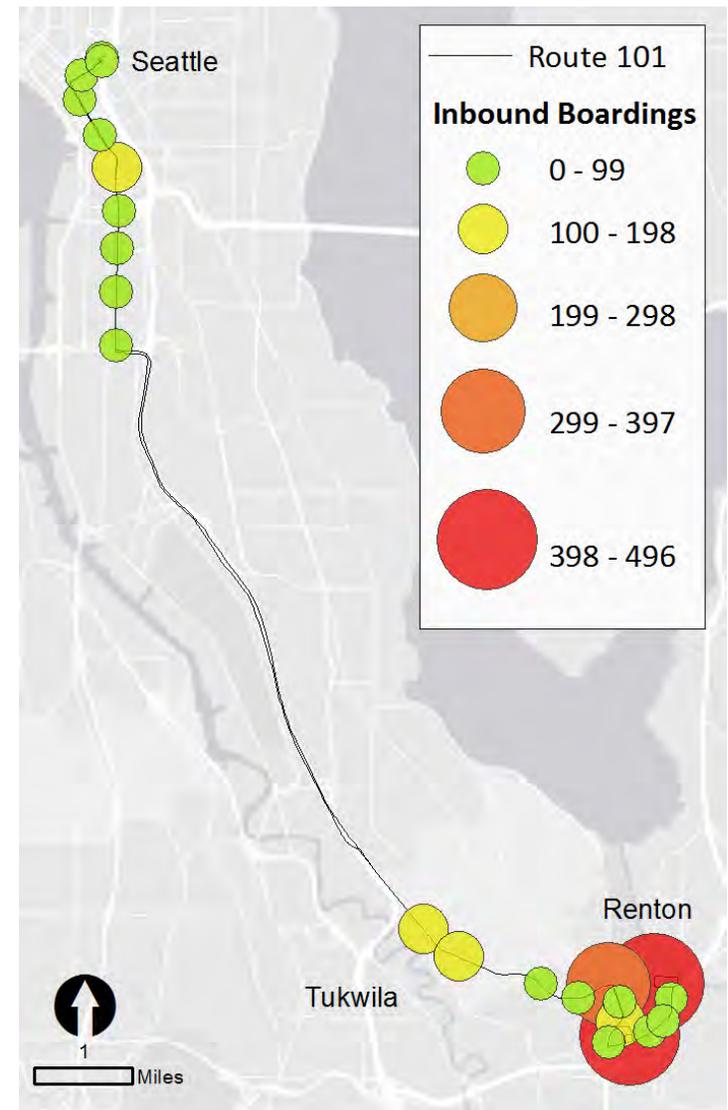
- Park-and-ride service is not evaluated separately
  - 56% of Metro's 64 permanent park-and-rides are in Activity Centers or Regional Growth Centers
  - Ridership on routes that go via park-and-rides included in productivity evaluation

Follow Up Item 1.22



# Example: Route 101

- Park-and-Ride ridership at Renton Transit Center, City Hall and the South Renton park-and-rides boosts target frequency on Route 101 during peak periods
- 25% of inbound Route 101 boardings are within two blocks of a park-and-ride



Follow Up Item 1.22

# Policy and trade offs discussion

- What Geographic Value concerns are we trying to address? How should those concerns be addressed? What are the trade-offs?
- Are park-and-rides appropriately valued in the service guidelines?