Service Guidelines Task Force

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

Guidelines analysis
- Target service levels
- System performance
- Possible priorities for investments and reductions

Service planning
- Identify corridor, jurisdiction and community needs
- Use service design guidelines
- Develop conceptual changes
- Consider alternative services
- Analyze system impacts, Title VI

Community engagement
- Involve community and jurisdictions
- Revise and adjust concepts

Council review and action
- Committee and Council consider proposal, Title VI analysis, public engagement report, public testimony
- Council may make adjustments, adopts ordinance

Service change implementation
- Prepare schedules, information materials and website
- Inform customers and community
### How does Metro measure performance?

<table>
<thead>
<tr>
<th>Service Types</th>
<th>Evaluation Method</th>
<th>Time Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed-Route and Dial-a-Ride Transit</td>
<td>Performance Metrics</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Rides per platform hour</em></td>
<td>Peak: Yes, Off-Peak: Yes, Night: Yes</td>
</tr>
<tr>
<td></td>
<td><em>Passenger miles per platform mile</em></td>
<td></td>
</tr>
<tr>
<td>Alternative Services</td>
<td>Additional peak-only evaluation</td>
<td></td>
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<tr>
<td></td>
<td><em>Ridership and Travel Time comparison</em></td>
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<tr>
<td></td>
<td>Performance metrics in development</td>
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<tr>
<td></td>
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<td>Under development</td>
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</tbody>
</table>

**Key**
- Seattle Core
- Non-Seattle Core

**Service Guidelines Task Force**
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?

![Graph showing comparison of passenger miles per platform mile and rides per platform hour for Seattle Core routes, Non-Seattle Core routes, and system averages.](image-url)
Rides per platform hour: Total ridership divided by the total hours from the time the bus leaves its base until it returns.
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.

- **Serving Seattle Core**
  - Peak
  - Off Peak
  - Night

- **Not Serving Seattle Core**
  - Peak
  - Off Peak
  - Night

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

<table>
<thead>
<tr>
<th>Rt 7EX</th>
<th>Peak Route</th>
<th>Rt 218</th>
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<tbody>
<tr>
<td></td>
<td>Performance Metrics</td>
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</tr>
<tr>
<td></td>
<td>35.6 Rides/ platform hour</td>
<td>42.1</td>
</tr>
<tr>
<td></td>
<td>8.7 Passenger miles/ platform mile</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Additional Peak Evaluation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Ridership</td>
</tr>
<tr>
<td>Yes</td>
<td>Travel Time</td>
</tr>
</tbody>
</table>

Key

- **Top 25% route**
- **Bottom 25% route**
- Does not meet peak target

Service Guidelines Task Force
Questions?
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?

- Existing Alternative Services
- Community Shuttle
- Community Hub
- Flexible Rideshare
Questions?
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?

![Graph showing performance of Metro's current service types.](image)

- **Seattle Core**
  - Average: 12.3
  - Non-Peak: 9.2
  - Peak: 15.4
  - Night: 6.8

- **Non-Seattle Core**
  - Average: 10.5
  - Non-Peak: 7.9
  - Peak: 13.1
  - Night: 5.5

- **System Averages**
  - 18.8
  - 36.5

service guidelines task force
How would Metro’s service types perform if using Denver RTD’s service types?

![Graph showing the performance of different service types.](chart)

- **CBD Local**
- **Express/Regional**
- **Urban Local**
- **Suburban Local**

- **System Average: 36.5**
- **System Average: 12.3**

Service Guidelines Task Force
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

April 1, 2015
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

Metro system Budget adopted
Metro system analysis begins
Service Guidelines Report with system analysis issued annually
If changes, preliminary concepts developed
Draft alternative plan developed
Executive transmits proposed ordinance to County Council
Council action
Service changes

Guidelines analysis
- Target service levels
- System performance
- Possible priorities for: Investments, Reductions

Service planning
- Identify corridor, jurisdiction and community needs
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Service change implementation
- Prepare schedules, information materials and website
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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

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

Service Guidelines Task Force
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

Service Guidelines Task Force
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?
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
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
Questions?
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?