SERVICE DELIVERY POLICY

January 23, 2017

Office of Performance Management & Innovation

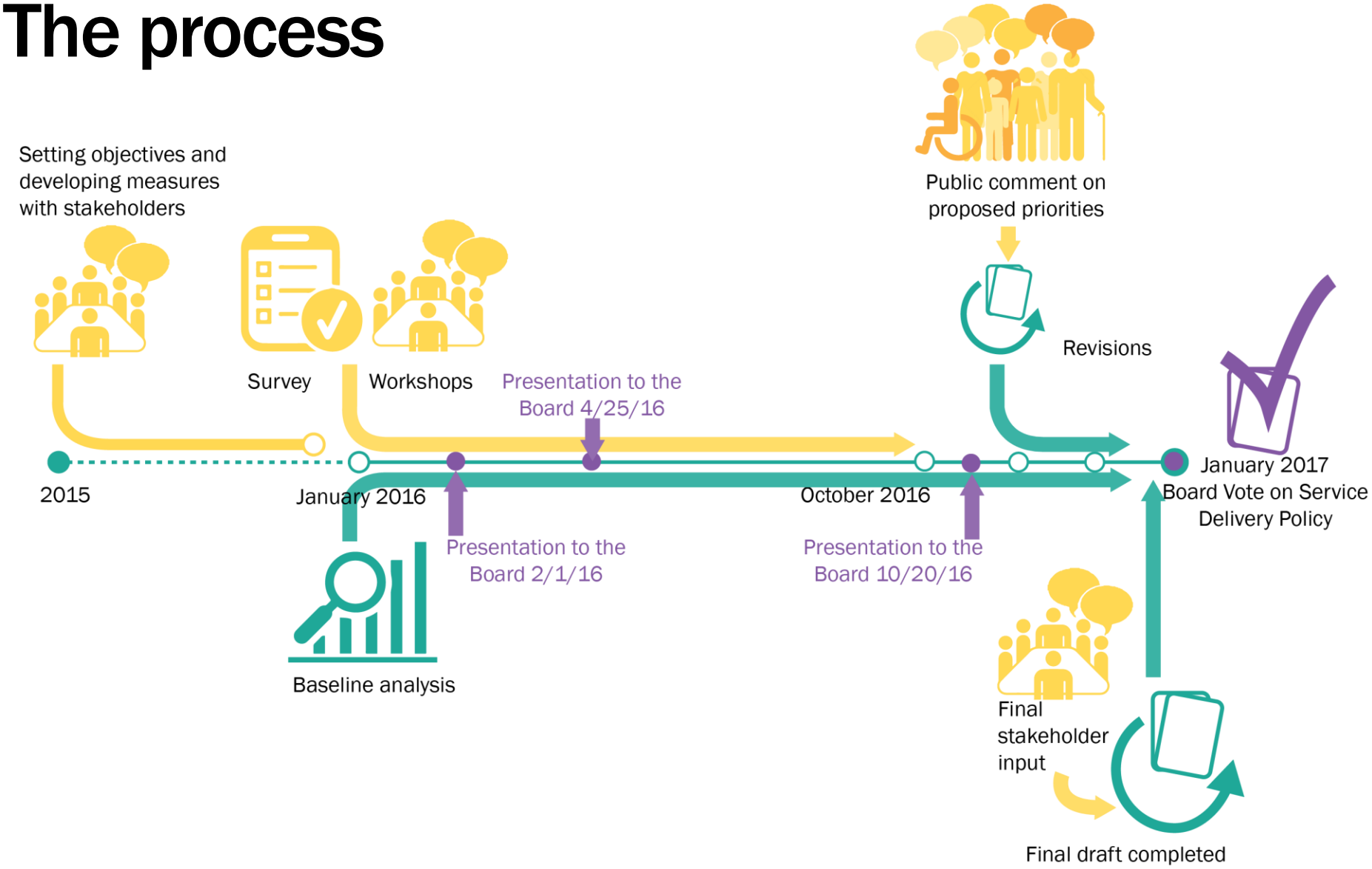
MBTA Service Planning

massDOT Massachusetts Department of Transportation

Overview

- The Service Delivery Policy sets how the MBTA evaluates service quality and allocates transit service
- Staff first presented on this to the FMCB February 1, 2016
- The MBTA has been working with stakeholders for two years to develop objectives, standards, and priorities
- The policy is a living document, and this version gives the MBTA the tools necessary to start a bus service planning process
- It creates the mechanisms to balance tradeoffs in order to improve service

The process


Setting objectives and developing measures with stakeholders
Survey
Workshops
Presentation to the Board 4/25/16
Public comment on proposed priorities
Revisions
2015
January 2016
October 2016
January 2017 Board Vote on Service Delivery Policy
Presentation to the Board 2/1/16
Presentation to the Board 10/20/16
Baseline analysis
Final stakeholder input
Final draft completed

Summary of Last Round of Public Input

- Reliability and crowding are both problems
- High frequency service is important, even more frequent than 15 minutes
- Need for overnight service
- Better communication is important
- Measure connectivity, not just access to the service
- Make transfers easier
- Need for more bus stop shelters and amenities
- Positive feedback about the new cost-benefit methodology

Service Objectives

Included in Service Delivery Policy

Service Availability (Convenience)
Reliability
Comfort

(Used in service planning)

Accessibility

Communication
(in development)

Capacity & Connectivity
(in development)

Developed and tracked through other initiatives/departments

Customer Satisfaction (Measured by the Customer Opinion Panel Survey and reported on Performance Dashboard)

Safety and Security (Safety, Security, and MBTA Police Departments)

Environmental Benefit (MBTA Environmental and Energy Department)

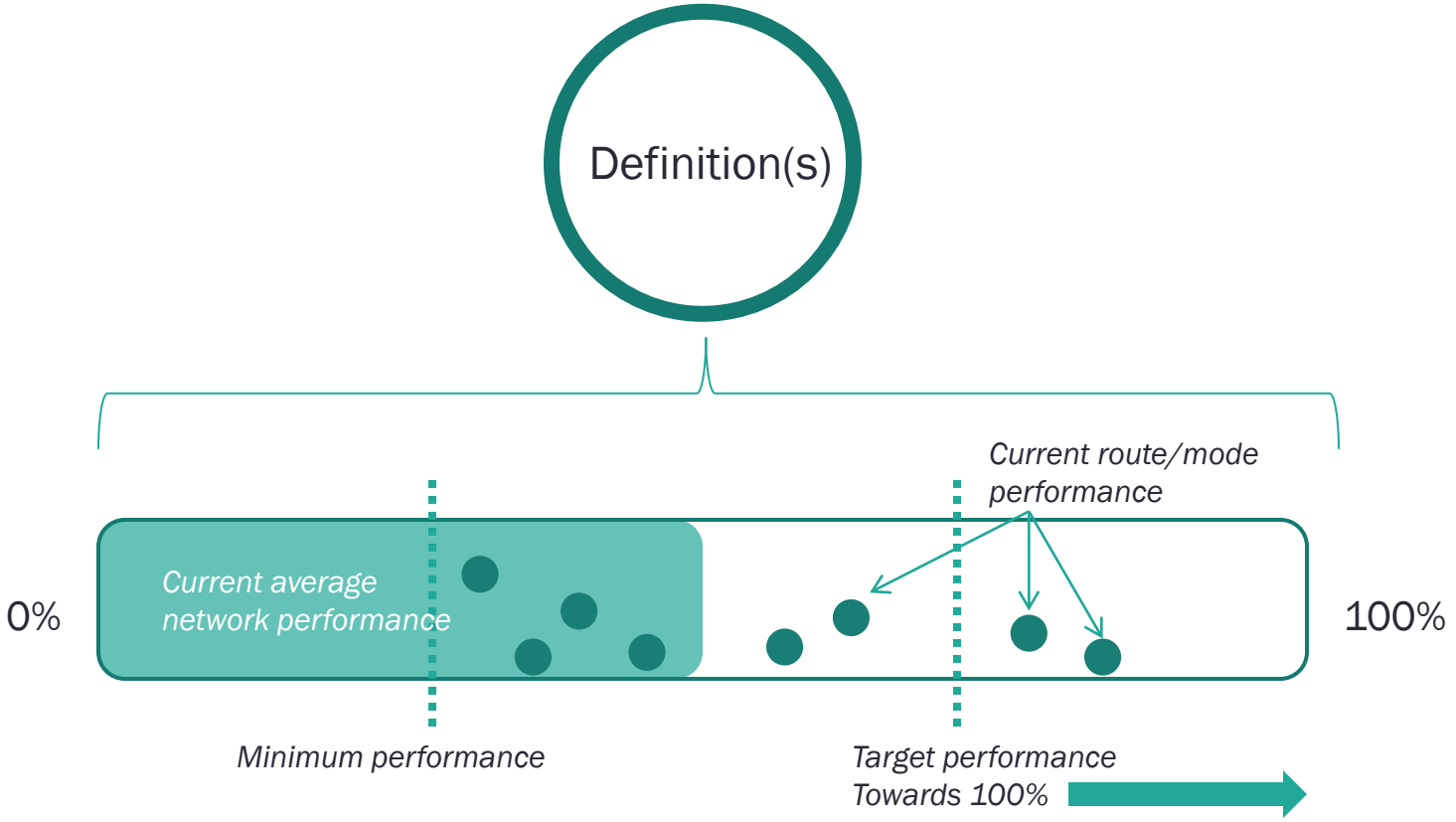
Service Standards

Service Objective	Standards	Tools to address	Title VI Implication
Service Availability	**Span of service** **Frequency of service** **Coverage:** • Coverage of the service area • High-frequency service coverage for high-density areas • Coverage for low-income households	Service planning	Service monitoring and equity analyses for major service changes
Reliability	**Service operated** **Schedule adherence** **Passenger wait time**	Service planning, operational changes, municipal partnerships	Service monitoring
Comfort	**Passenger time in crowded conditions**	Service planning, operational changes, municipal partnerships	Service monitoring
Accessibility	**Platform accessibility** **Vehicle accessibility**	Capital budget, operational changes	Elevators included in service monitoring

Setting Priorities for Bus Service Plans

- No clear agreement among riders and stakeholders on how to prioritize between standards in case of trade-offs
- Proposed mechanism includes a medium-range goal (target) while ensuring a certain baseline of service (minimum) regardless of priorities
- If a mode average falls below the minimum, this standard is prioritized in the service planning process
- If any individual route falls below a minimum on a standard, it is prioritized to be addressed in a quarterly or service plan

Structure of the Bus Standards



Can be evaluated at the network, mode or route level

MINIMUMS AND TARGETS

Accessibility measures

- No tradeoffs
- Minimum always set at the existing performance
- Proposed targets set to 100%
- Factored into capital budget, elevator uptime contracts, and operating procedures

	Minimum	Target	2016 Performance
Platform Accessibility	92%*	100%	92%*
Vehicle Accessibility (GL)	98.6%	100%	98.6%

*Gated Rapid Transit stations, pre-Government Center reopening

The bus service planning measures

Span

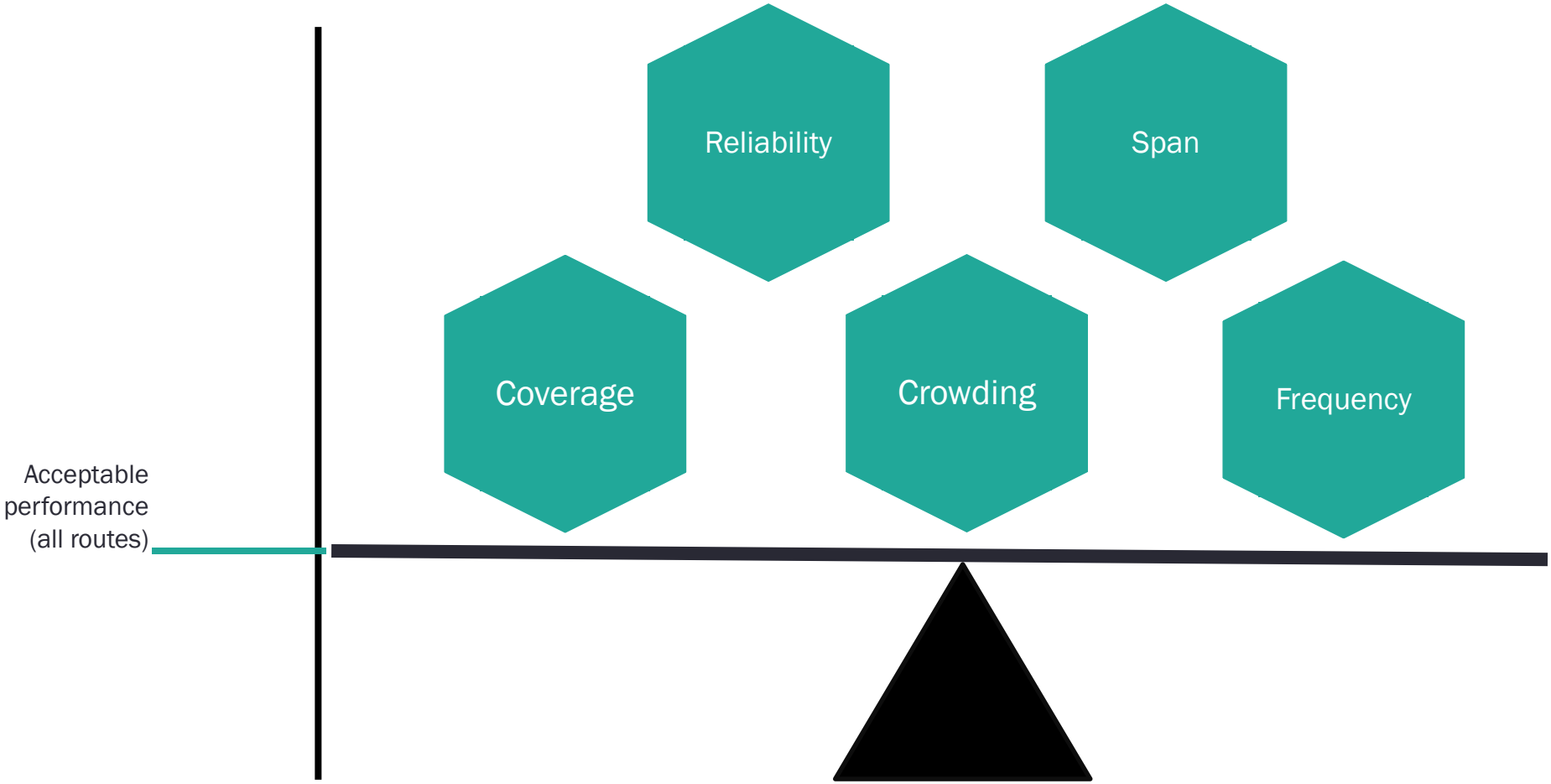
Coverage

Reliability

Frequency

Comfort

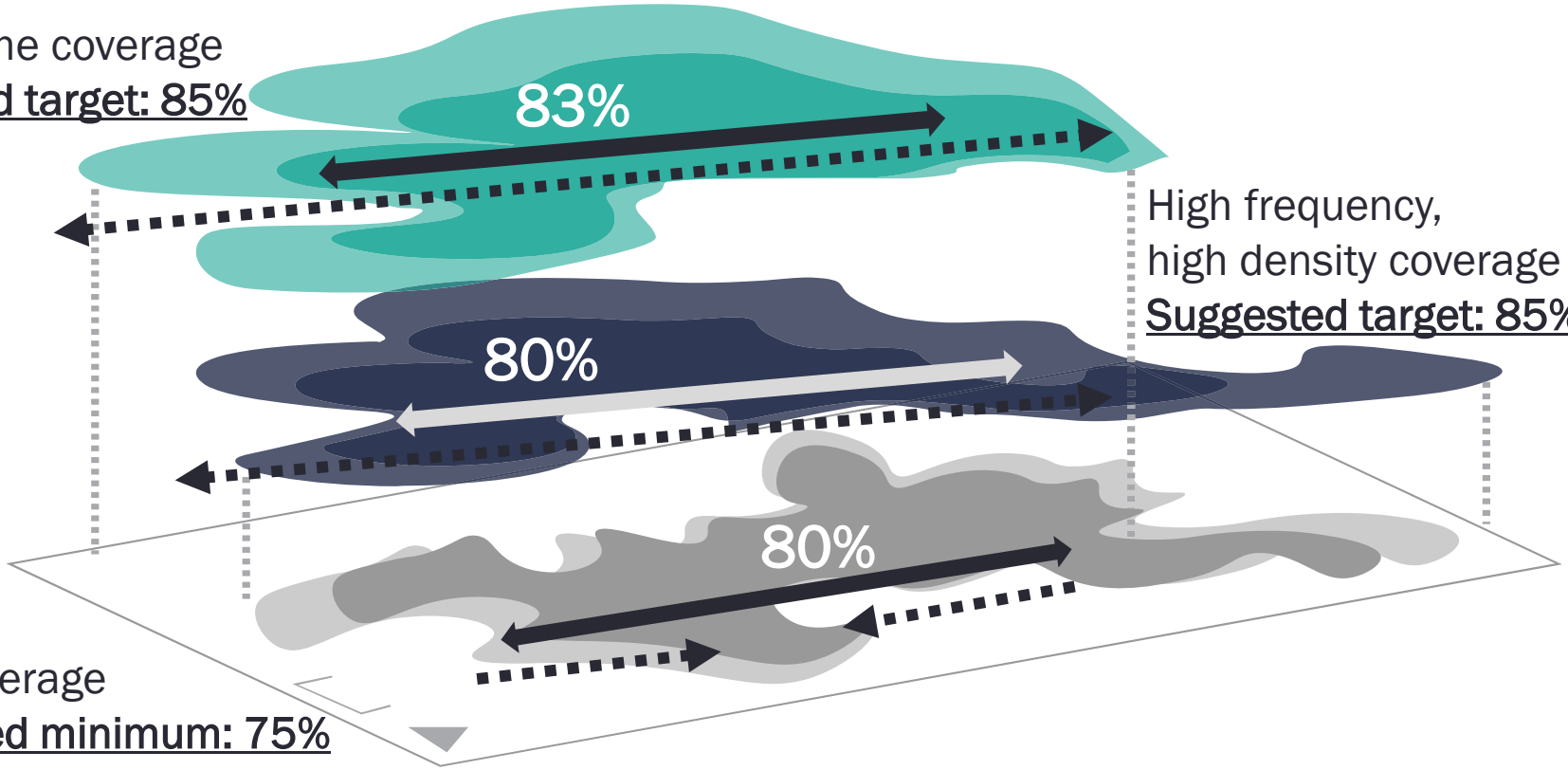
Balancing tradeoffs



Standard: Network Coverage

Proportion of residents in service area within ½ mile walk to transit

Low income coverage
Suggested target: 85%



High frequency,
high density coverage
Suggested target: 85%

Base coverage
Suggested minimum: 75%

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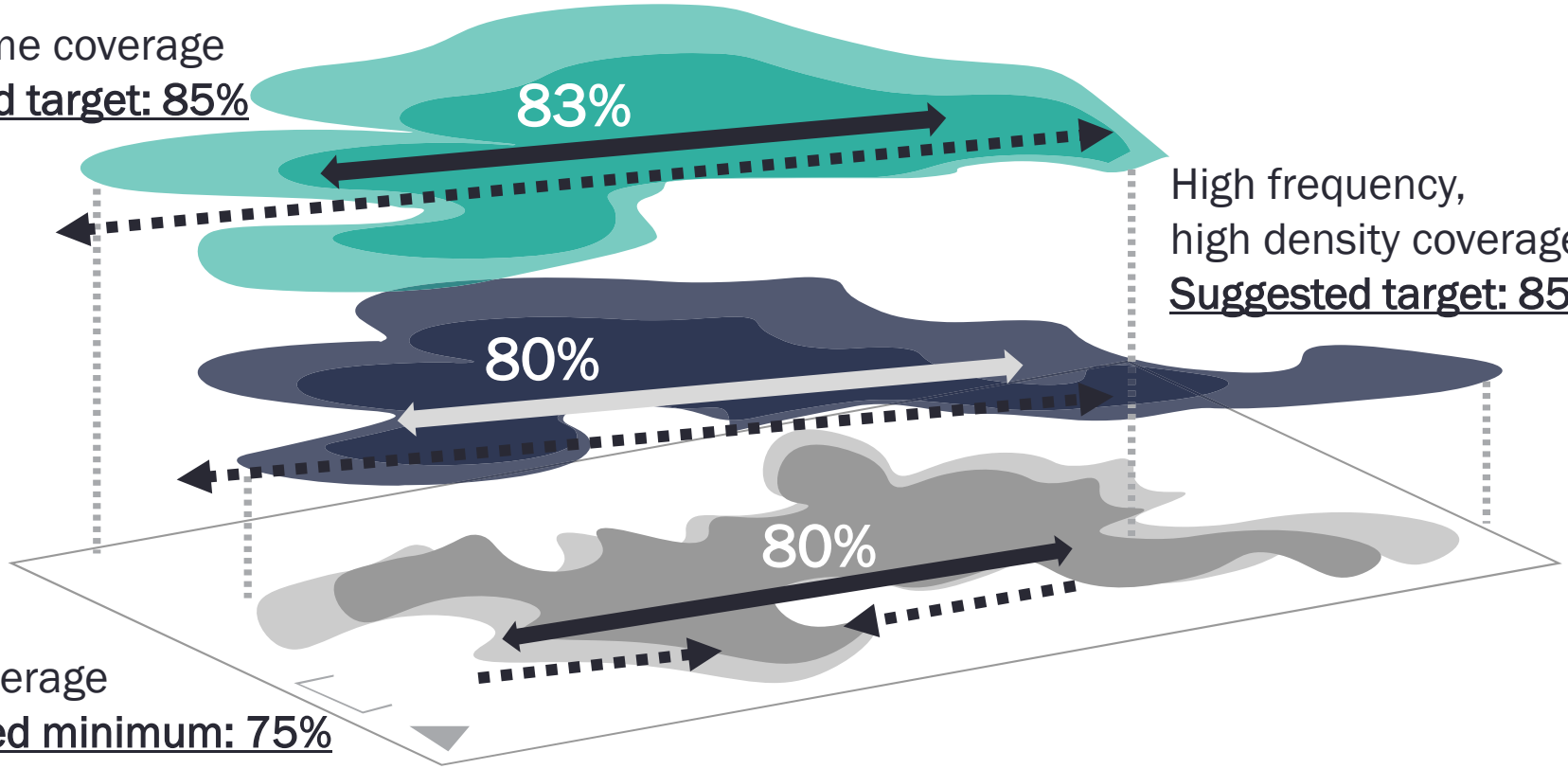

High frequency,
high density coverage
Suggested target: 85%

Base coverage
Suggested minimum: 75%

DISCUSSION QUESTION: Is this the right way to approach minimums and targets for coverage?

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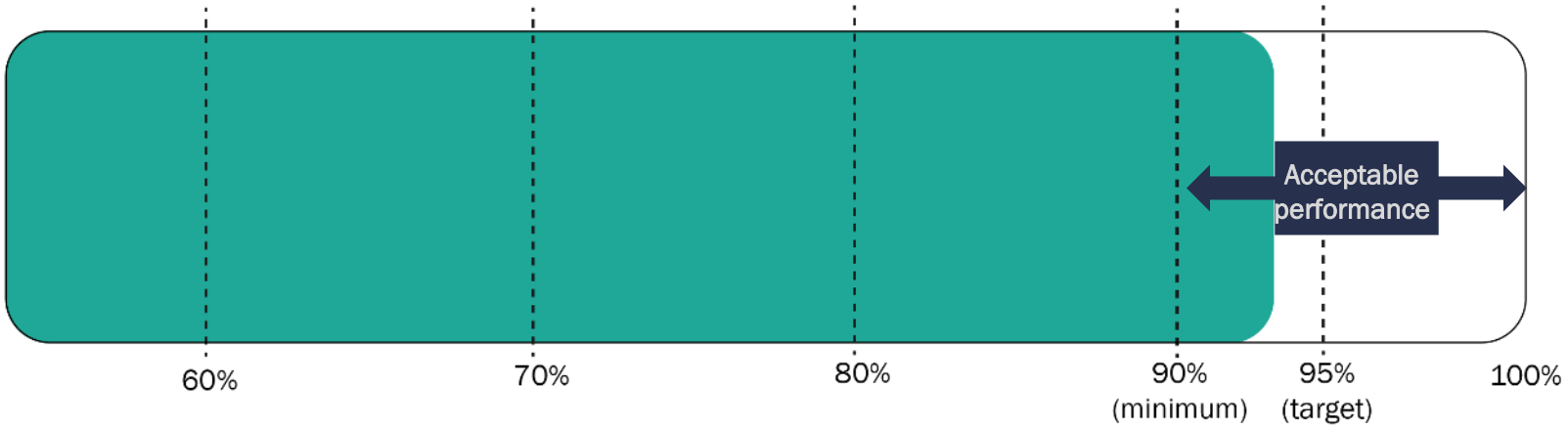
Standard - Bus Span

Percent of passenger trips on routes that meet expected span



Current average performance

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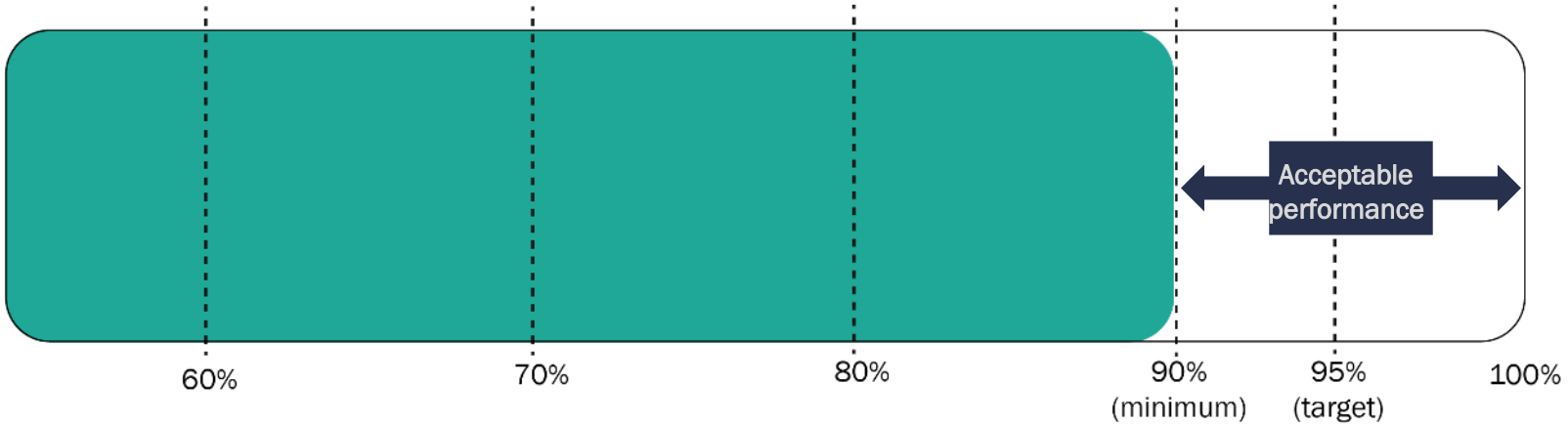
Standard- Bus Frequency

Percent of passenger trips during time periods that meet expected frequency

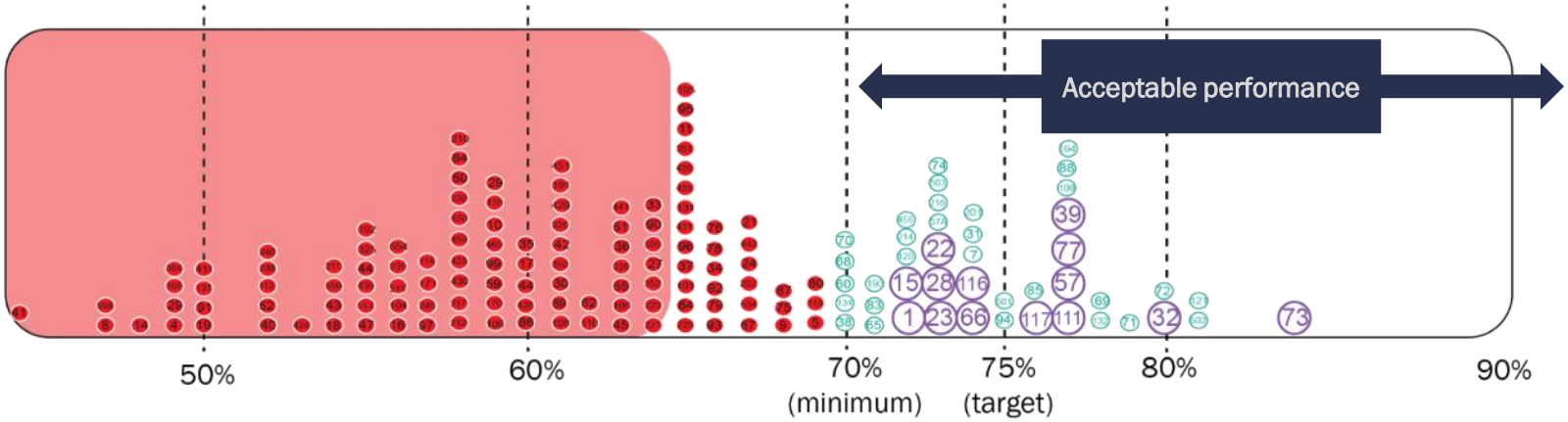


Current average performance

DISCUSSION QUESTION: Setting minimum at the current performance level gives Service Planning very little opportunity to address other standards.

Standard– Bus Reliability

Proportion of on-time service on each route



Other routes

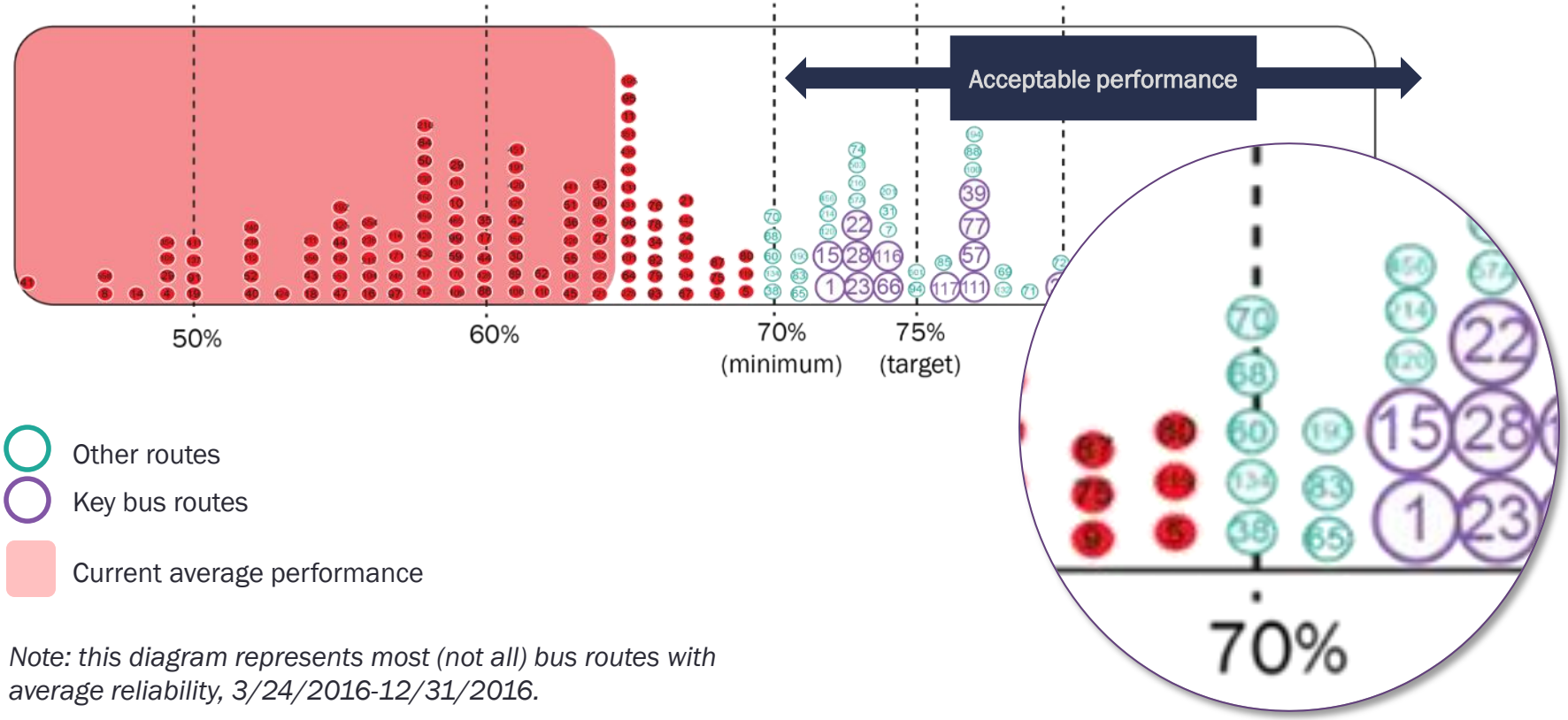
Key bus routes

Current average performance

Note: this diagram represents most (not all) bus routes with average reliability, 3/24/2016-12/31/2016.

Standard– Bus Reliability

Proportion of on-time service on each route



Other routes

Key bus routes

Current average performance

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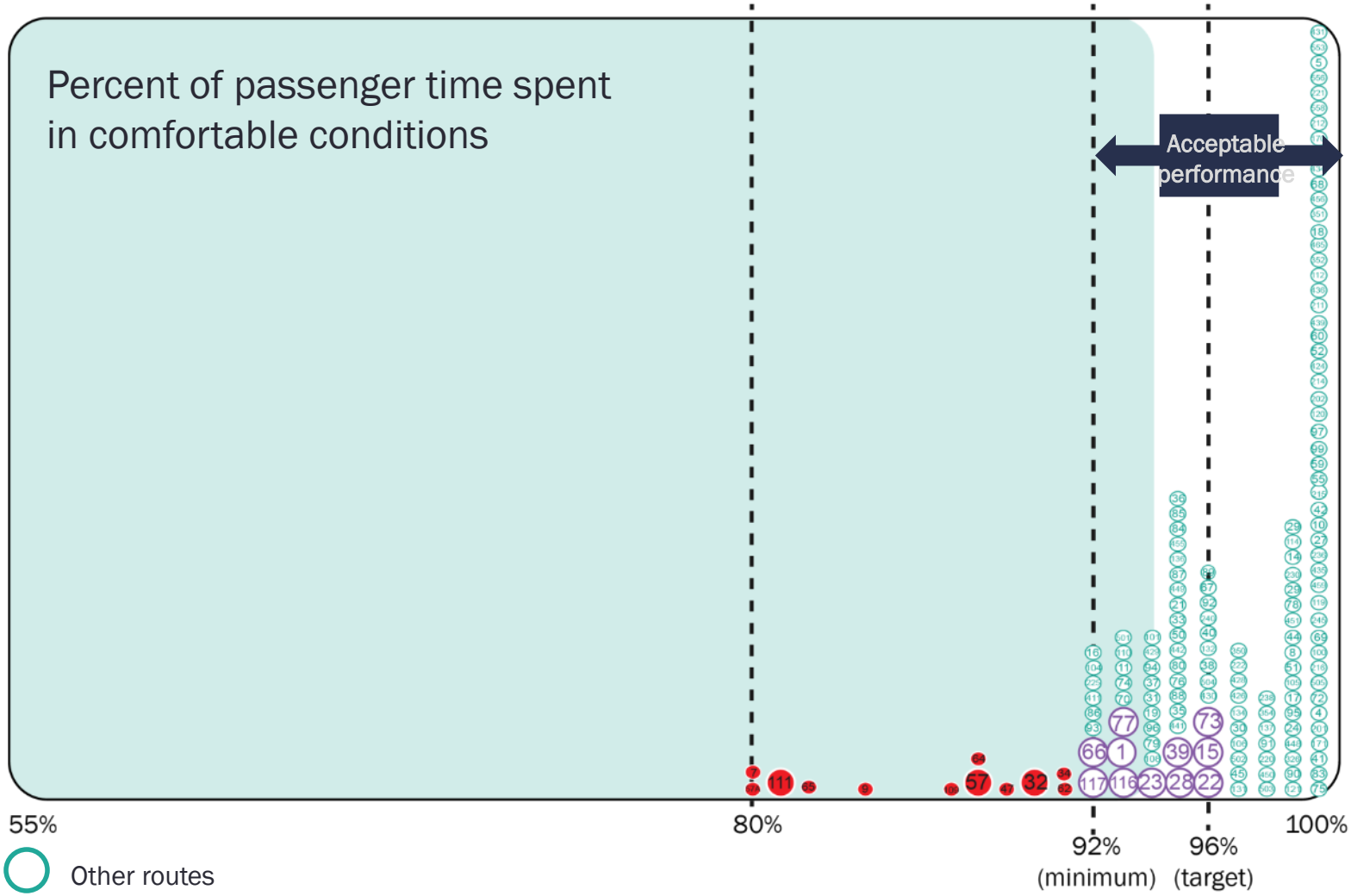
Standard–Bus Crowding



Note: this diagram represents most (not all) bus routes with average weekday crowding, 9/1/2015 – 12/14/2015.

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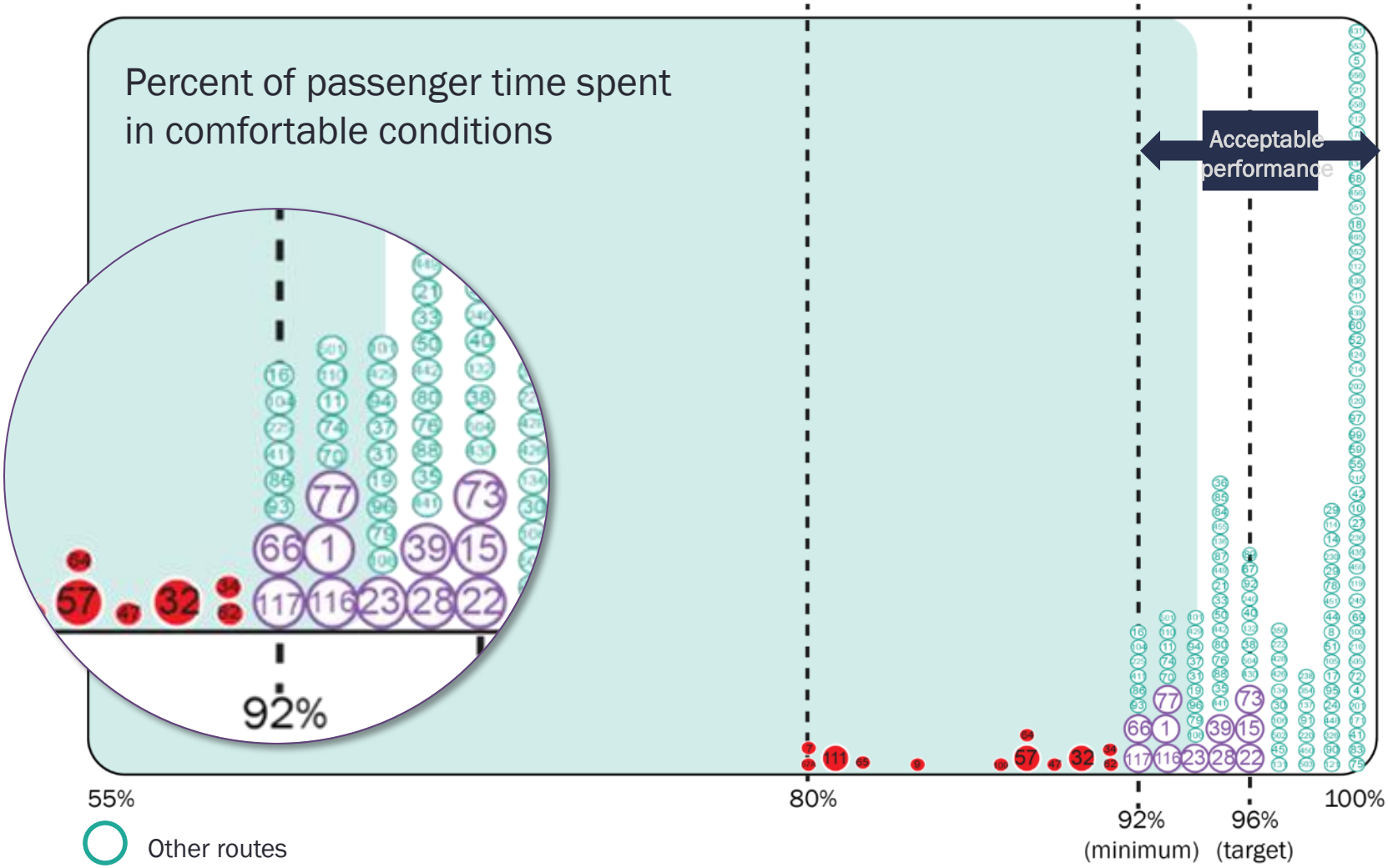
Standard–Bus Crowding



Note: this diagram represents most (not all) bus routes with average weekday crowding, 9/1/2015 – 12/14/2015.

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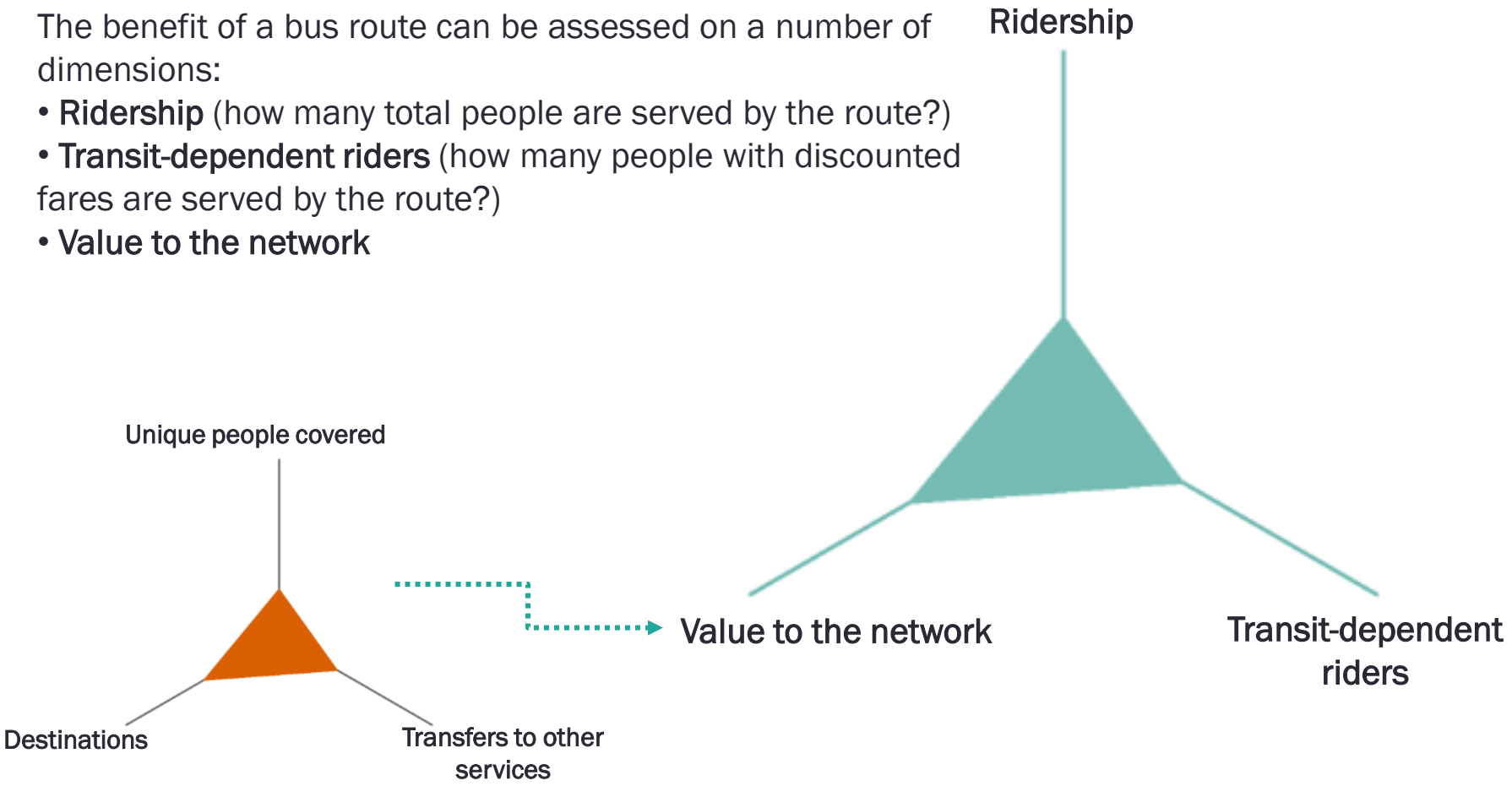
COST EFFICIENCY

Measuring the benefits of a route

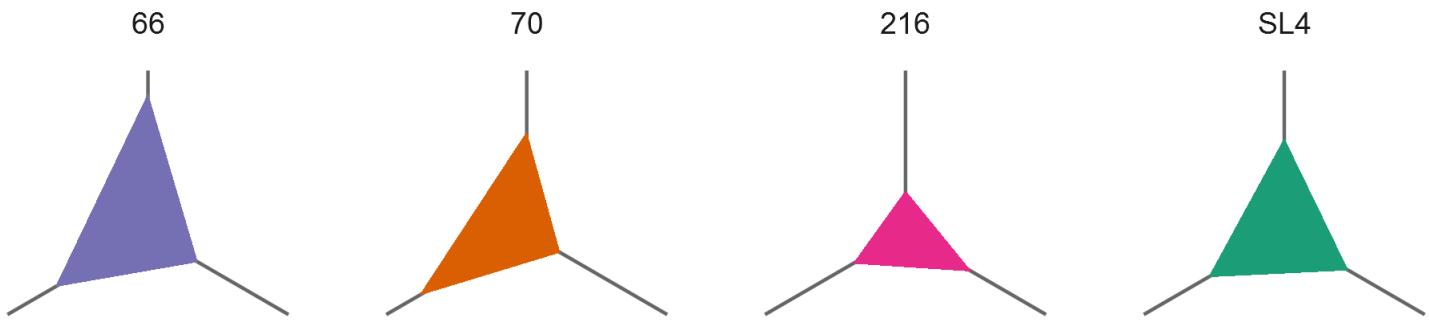
The benefit of a bus route can be assessed on a number of dimensions:

- **Ridership** (how many total people are served by the route?)
- **Transit-dependent riders** (how many people with discounted fares are served by the route?)
- **Value to the network**



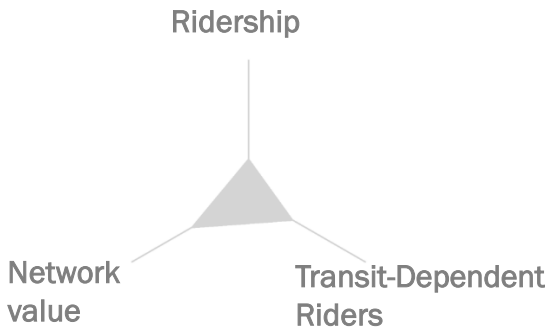
Diagnostic cost-benefit methodology

Allows for a more targeted approach for improving performance compared to previous method, which included only ridership and cost.



Most notable trait:

- Balanced
- Value to the network
- Ridership
- Transit-dependent riders



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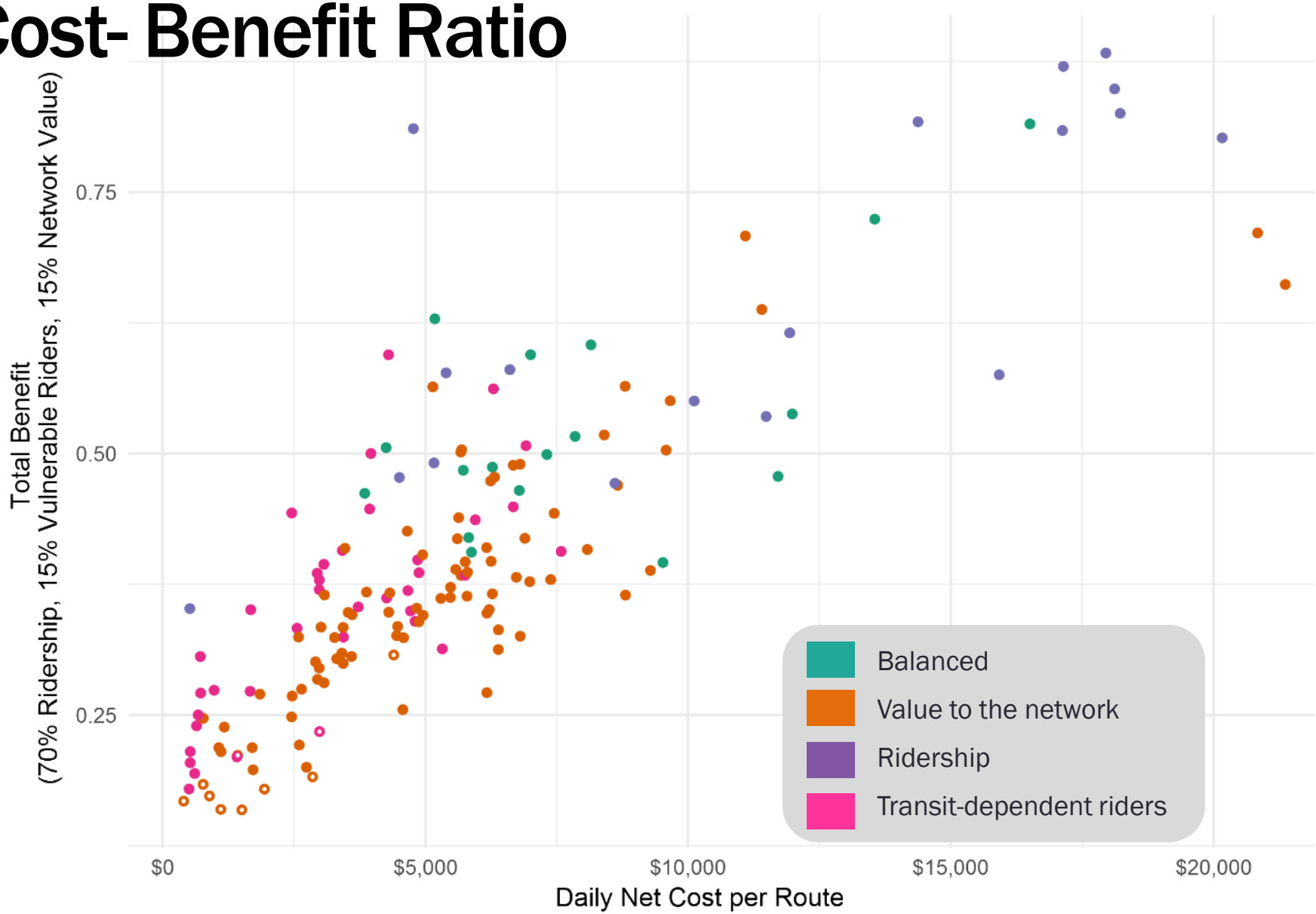
Cost- Benefit Ratio



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Using the Cost-Benefit Ratio

- Suggested weights: Emphasis on Ridership
  - Ridership 70%
  - Transit Dependent 15%
  - Network Value 15%
- Routes whose cost/benefit is in the bottom ~10% percentile will be examined for service changes
- Routes in the top ~10% percentile will be examined for lessons on high performing routes

DISCUSSION QUESTION: Weights and threshold for review.

Next Steps

- Vote to adopt Service Delivery Policy
- The Service Delivery Policy will be updated:
  - To add Communication, Connectivity and Capacity standards as soon as complete
  - As we get better data
  - As priorities change or targets are met
  - With any changes to the standards for contracted service
- Start Service Planning Process

APPENDIX

Performance, Minimums, Targets

Standard	Minimum	Target	2016 performance	2016 data
Span of Service Standards (minimums, targets, and 2016 performance apply to weekdays only)				
Bus	90%	95%	93%	Spring 2016
Heavy Rail	—	100%	100%	Dec 2016
Light Rail	—	100%	100%	Dec 2016
Commuter Rail	—	100%	100%	Dec 2016
Boat	—	100%	100%	Dec 2016
Service Frequency Standards (minimums, targets, and 2016 performance apply to weekdays only)				
Bus	90%	95%	90%	Spring 2016
Rapid Transit	—	100%	100%	Dec 2016
Boat	—	100%	100%	Dec 2016
Coverage Standards				
Base	75%	—	80%	Fall 2016
Frequent service in dense areas	—	85%	80%	Fall 2016
Low-income households	—	85%	83%	Fall 2016

Performance, Minimums, Targets

Table D1: All Service Standards, continued

Standard	Minimum	Target	2016 performance	2016 data
Accessibility Standards				
Platform Accessibility (Rapid Transit, gated stations)	92%	100%	92%*	Apr 2015– Mar 2016
Vehicle Accessibility (Green Line)	98.6%	100%	98.6%	Jul 2015– Jun 2016
Reliability Standards				
Bus Reliability	70%	75%	65%	Mar–Dec 2016
Rapid Transit Passenger Wait Times	—	90%	89%	Mar–Dec 2016
Commuter Rail Reliability	Contract requires 92% (adjusted)		93.8% (adjusted)	Jan–Dec 2016
Boat Reliability	—	99%	98%	Jul 2015– Jun 2016
Bus Service Operated	—	99.5%	98.5%**	Jul 2015– Jun 2016
Light Rail Service Operated	—	99.5%	96.5%**	Mar–Dec 2016
Heavy Rail Service Operated	—	99.5%	99.1%**	Mar–Dec 2016
Commuter Rail Service Operated	Contract sets fines for canceled service		99.8%	Jan–Dec 2016
Passenger Comfort Standards				
Bus Passenger Minutes in Comfortable Conditions	94%	92%	96%	Weekdays, Sep–Dec 2015

*Pre-Government Center re-opening

**Data subject to change due to changes in methodology