Central City in Motion Evaluation Timeline

YEAR 0

Establish Baseline

- Finalize evaluation plan.
- Collect baseline data on all performance measures before construction.

YEAR 1

Early Performance

- Evaluate the following measures shortly after the project opens:
  - **Travel Time**
  - **Crosswalk and Sidewalk Safety**
- Early performance data can help identify minor adjustments to improve the project.

YEARS 2 - 3

Project Performance

- Evaluate the following measures after the project has been open for over one year:
  - **Throughput**
  - **Satisfaction**
  - **Demographics**

YEARS 4 - 5

Network Performance and Safety Analysis

- Evaluate the following measures after three or more years:
  - **Collisions**
  - **Network Measures**
- Repeat data collection of the other measures every 2 - 3 years

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MEMORANDUM

To: Gabe Graff, City of Portland Bureau of Transportation

From: Katie Mangle and Mike Sellinger, Alta Planning and Design

Date: November 6, 2018

Re: Recommended CCIM Performance Measures

Overview

This memo outlines recommended performance measures for the Central City in Motion implementation plan. There are separate measures for each individual project and for the network as a whole. The measures are intended to evaluate if the projects meet the goals of the plan. These measures address the following questions:

- **Does the project help accommodate growth and meet Portland's mode split goals?**
- **Does the project increase safety for people traveling in the Central City?**
- **Does the project expand transportation options for everyone?**
- **Does the project increase travel efficiency and reliability?**

Performance Measures

Project Performance Measures

Alta recommends that each of the 18 Central City in Motion projects should be evaluated on the six performance measures shown in Table 1.[1] These performance measures apply to pilot projects or permanent projects. Before construction begins, data should be collected to establish the baseline values for each measure. The baseline and subsequent data should be collected at the same time of year.

Table 1. Recommended Project Performance Measures

Category	Performance Measure	Primary Data Source
Throughput	Volume of people using the corridor	Automated counts, TriMet ridership data
Satisfaction	Percent of people who approve of the project by primary mode of travel	Intercept surveys
Demographics	Gender split and age profile of people walking, biking, and scooting	Manual counts

[1] The demographics, and crossing and sidewalk safety measures do not apply to projects that only have an Enhanced Transit Corridors component.

Travel Time	Transit peak delay and delay variation, and peak period motor vehicle travel time	TriMet data and travel time surveys (bluetooth/GPS data)
Collisions	Collision rates and severity by mode	ODOT collision data
Crossing and Sidewalk Safety	Percent of bicycles and scooters riding on the sidewalk and percent of pedestrians crossing at crosswalks	Manual counts

Network Performance Measures

In addition to individual project evaluation, the entire network should also be evaluated. Table 2 displays the recommended performance measures for the entire network. Alta recommends issuing a statistically-valid telephone or online survey to help measure performance at the network level. The survey could be used to collect information on a number of topics including satisfaction with the Central City in Motion projects, changes in the perceived safety of travel by different modes, and economic vitality.

Table 2. Recommended Network Performance Measures

Category	Measure	Primary Data Source
Safety	Collision rates and severity by mode	ODOT
User Satisfaction	Percent of people who approve of the projects by primary mode of travel	Telephone/Online Survey
Perceived Safety	Percent of people feel who feel safe traveling in the Central City by mode	Telephone/Online Survey
Economic Vitality	Spending on goods and services in the Central City	Telephone/Online Survey
Shared Mobility Use	Number of BIKETOWN, scooter, TNC, and car share trips in the Central City	PBOT
Network Completion	Miles of bikeway and transit improvements, and the number crossing improvements	PBOT

Evaluation Timeline

The recommended timeline for evaluating the performance measures varies by measure:

- **Early Performance:** Changes to **travel times**, and **crossing and sidewalk safety** can be initially evaluated within months of a project's opening. The data collected for these performance measures can help identify any necessary project adjustments.
- **Project Performance:** Changes to **throughput, demographics, and satisfaction** can take longer to manifest, and should be evaluated once the project has been open for at least one year.
- **Safety Analysis:** the **collisions** performance measure should not be analyzed until there is at least three years of collision data to compare to the baseline.

- **Network Performance:** The network performance measures should be evaluated after multiple Central City in Motion projects have been open for at least three years.

Data collection should be repeated on all of the project performance measures every two to three years to observe changes over time, as the network of Central City in Motion projects grows.

Primary Data Sources

Counts

Counts provide volumes for the number of people traveling along a corridor. Count types include motor vehicle traffic counts, and both automated and manual counts for people walking, biking and scooting. The automated counts can provide data over a longer period of time, while the manual counts can collect data on changes in behavior and demographics. Automated counts should be conducted for a week or more, with a minimum of 72 hours at any location. Manual counts should be conducted for two hours, and at least three different time periods (e.g. am peak, weekday off-peak, and weekend).

Surveys

The three recommended types of surveys are: intercept survey, telephone/online surveys, and travel times surveys. Intercept surveys collect information from people traveling along a facility. Telephone and online surveys can be used to understand the opinions of a statistically representative sample of people traveling in the Central City. Travel time surveys can be used to measure changes in travel time along a corridor. This data can be collected through the use of Bluetooth and GPS cellphone data.[2]

TriMet Data

TriMet collects data on transit ridership and performance. These data are used to understand changes in the number of people using transit, transit delay, and delay variation.

Collision Data

ODOT's Crash Analysis and Reporting Unit maintains a database of collisions from police and driver reports. Collison data often varies significantly over short time periods, so should be analyzed in time periods of three or more years.

Additional Indicators

Other indictors and data sources should be considered to supplement the performance measures and provide a deeper understanding of the impacts of the Central City in Motion projects. These indicators include:

- Curb utilization (including metered parking utilization rates)
- Commercial access to loading zones
- Economic vitality (derived from intercept surveys of retailers and consumers)
- Transit run-time variability
- Ride Report bicycle comfort ratings

[2] This was the method used to analyze travel times for the Better Naito evaluation.

Finally, the availability and quality of transportation-related data is likely to change throughout the evaluation period. As a result, PBOT should investigate new and emerging data sources for opportunities to improve the performance measures.