



Smart Growth America
Making Neighborhoods Great Together

Performance measures for active transportation

Transportation performance measures: why?

- MAP-21 requirements
- Accountability to goals and policies
- Transparency of decisions
 - Guidance making trade-offs
- Biggest bang for the buck
 - Incl. impact on other sectors
- Making the case for transportation projects





What gets measured, gets done.

What's measured matters.

Measure what matters so it gets done.

“We should be aware of how our performance measures relate to the values and desires of the public which we serve. If there is a substantive disconnect between the recommendations that emerge from our performance measures and the projects sought by our stakeholders, then we are using the wrong performance measures.”

Eric Dumbaugh, PhD, AICP, Jeffery Tumlin, and Wesley Marshall, PhD, PE
in “Decisions, Value, and Data: Understanding Bias in Transportation
Performance Measures” *ITE Journal*, August 2014

Should address what people want from their transportation systems:

- Convenience
- Safety
- Comfort
- Access
- Reasonable travel time
- Low cost
- Reliability
- Speed?



Different goals  Different outcomes



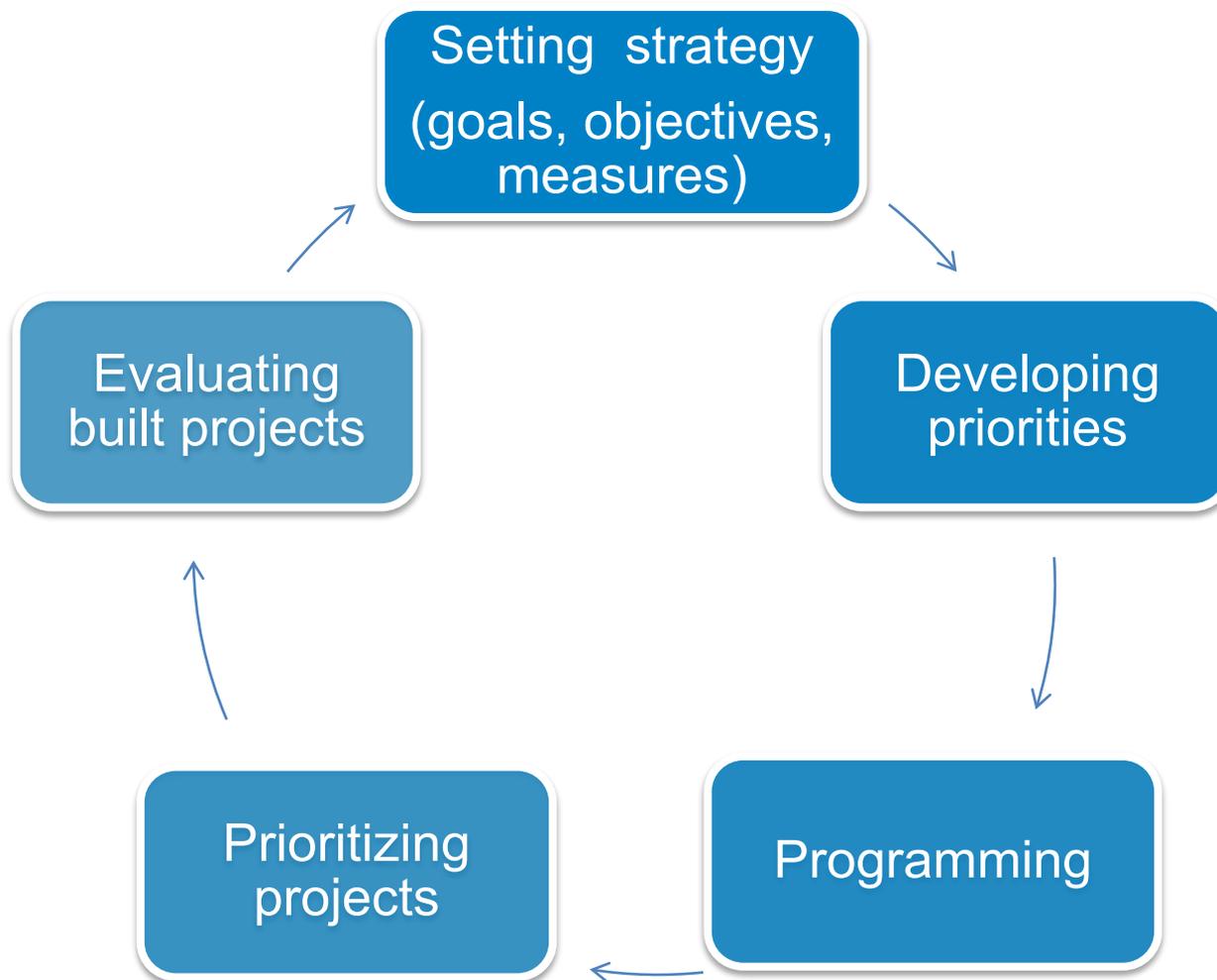
Different goals  Different outcomes



Different opportunities, different measures

- Monitor current conditions/trends (dashboard)
- Long range transportation plans
- STIPs, TIPs, CIPs
- Project selection
- Alternatives analysis
- Make design choices
- Evaluate project outcomes

Iterative process



Outcome-oriented performance measures

- Beyond mobility-based or system condition measures
 - V/C, LOS, pavement quality
- Use data to support:
 - Long term decisions
 - E.g., Program funding, LRTP, STIP
 - Short term decisions
 - E.g., Alternatives analysis, design choices
- Set goals, objectives, then measures of success

Measures flow from goals.

Goal



Measures
• Objectives



Metrics
• Data

For example:

Goal



Measures
• Objectives



Metrics
• Data

Helping people
get to A and B



Person trips
• Increase walk,
bike, transit



Active transport trips
as portion of all trips
• ACS, Household Travel
Survey, Automated
counters...

Types of results

You control outputs

Examples:

- Blocks of sidewalks, new and repaired
- Percentage of accessible bus stops
- Percentage of bike plan completed
- Miles of repaved travel lanes
- Average distance between crosswalks

You influence outcomes

Examples:

- Number of people walking
- Parking utilization
- Rate of fatalities per mode
- Retail sales
- Property values
- Amount of physical activity
- Rate of chronic diseases

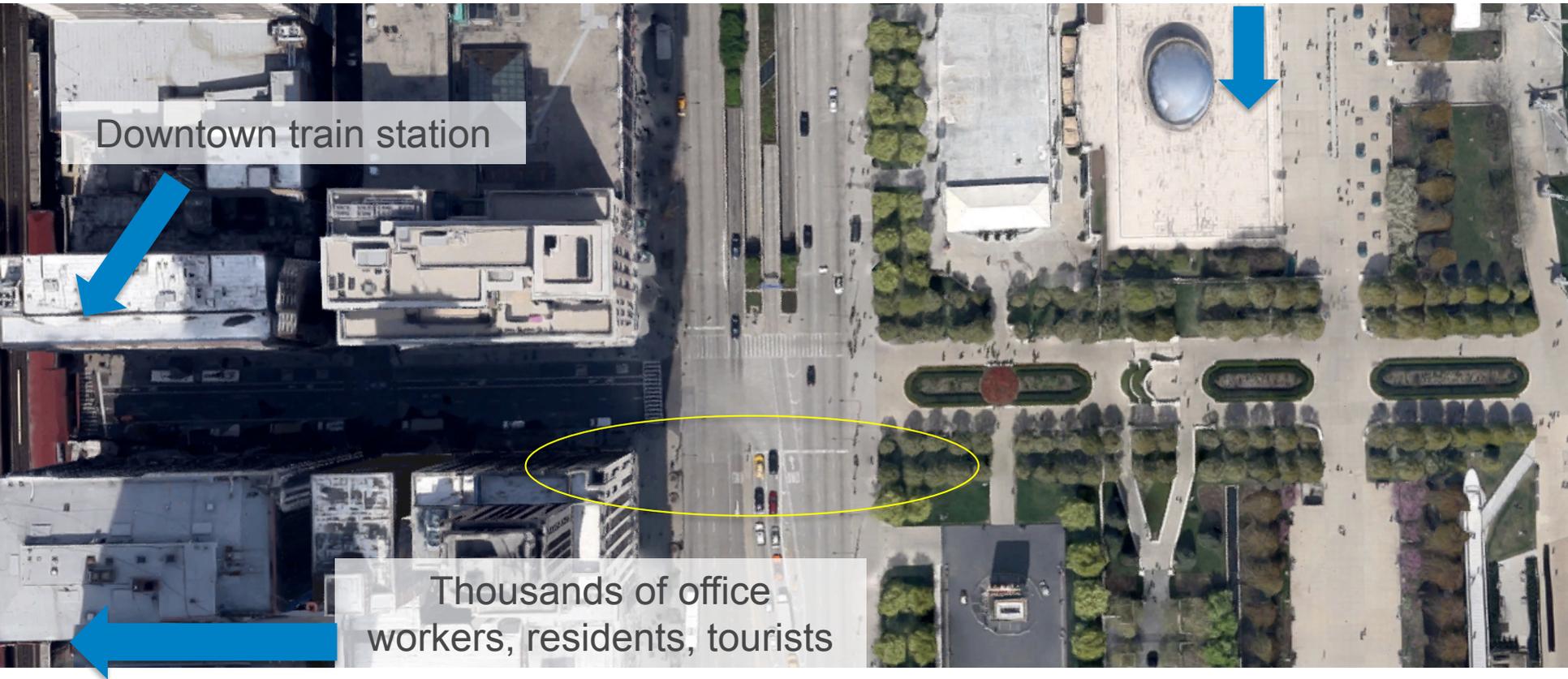
Scale matters

For example:

- LOS for development review
 - Registers impact adjacent to project, ignoring regional impact
- Mode choice on segment
 - Connected network required, at minimum
 - Land use, urban design influence

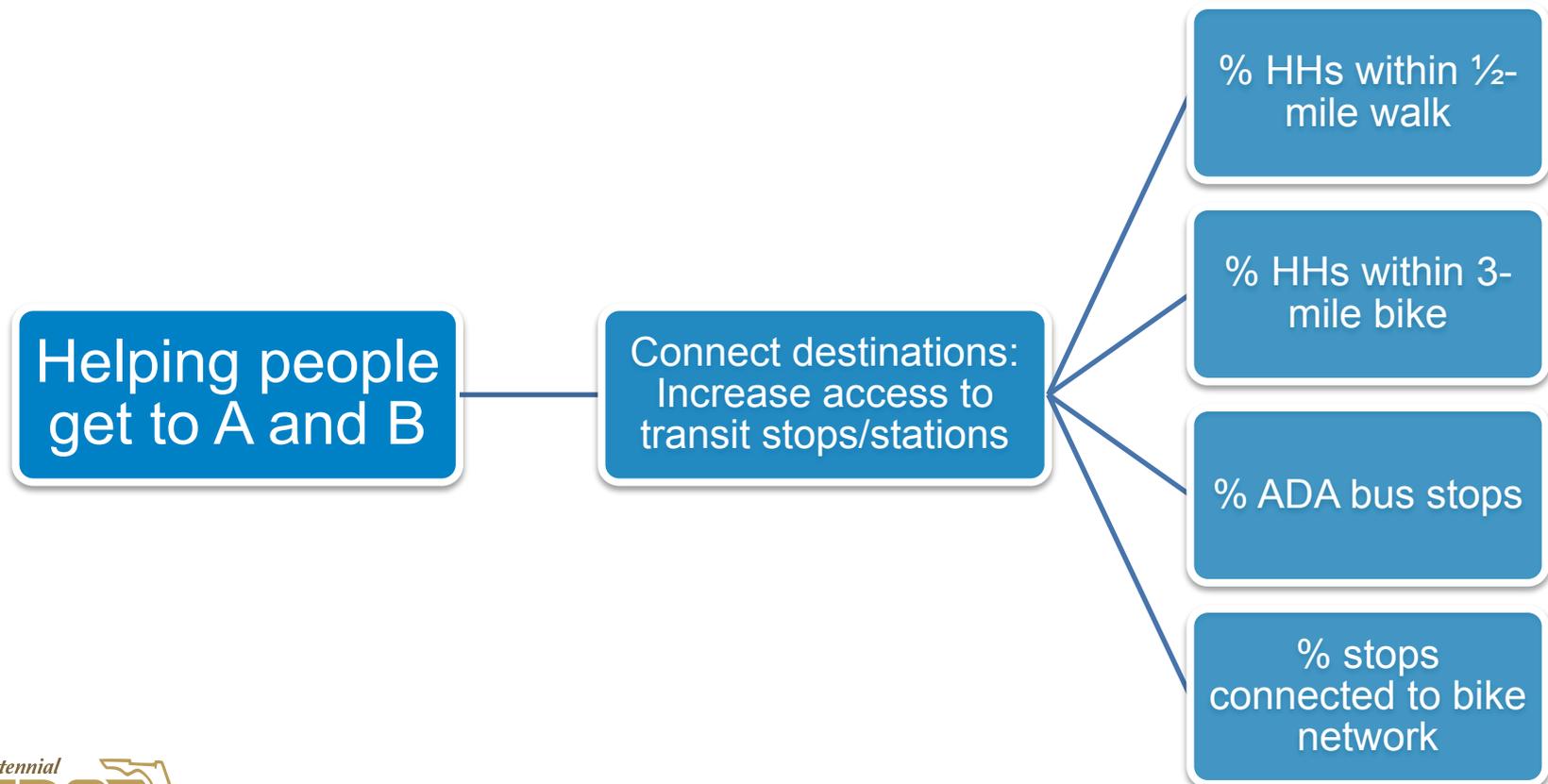
Data support decisions—don't determine decisions

Massive investment
in signature park



Simple measures can be good measures

Some goals need complex measurements, but they're not the only ones you can use.



Partnerships yield data

- Hospitals, emergency responders
- Public health researchers
- Universities
- SRTS programs
- Main Street programs
- BIDs, Chambers
- Community groups
- Who else can help?

It's ok if the results aren't dramatic

Often not a failure, but a learning opportunity



Tell your story!

SAFETY

C
S

23

capital projects planned for the 1.4 mile Brooklyn Waterfront Greenway

ON-STREET PROT

PROTI

98%

of riders satisfied with Fordham Road Select Bus Service

Fordham Road Bus:

The Fordham Road-Pell Bx12 Select Bus Service replaced Bx12 Limited from the Inwood neighborhood in Manhattan to Co-Op City in the Bronx in June 2008. The first SBS route, the Bx1 transfer opportunities to subway lines and Metro in the Bronx as it travels through the borough.

The project resulted in improvement in travel time. 98% of riders "satisfied" with the service route experienced a 10 in ridership.

Pedestria

750

benches installed since 2012

SEATING AND THE STREET SEATS PROGRAM



City Bench

A key part of bringing social and economic vibrancy to city is having places for visitors and residents to sit. New public seating in New York City is popular in part because New York has long represented the contradiction of being a walking city with no place to sit down. When pedestrians are unable to find public seating, they will often resort to finding alternative seating which is often dangerous or obstruct the flow of other pedestrians. Having a place to sit creates a vibrant streetscape for retailers, increases transit use, and is a welcome relief for seniors and park-loving younger kids. Through the City Bench and Street Seats programs, NYC DOT is working to remedy this problem throughout the city, not only in places where there are opportunities

MOBILITY

INFRASTRUCTURE

Chapter 12 21st Century Streets

Keeping city streets in good condition is vital to safe and efficient travel and is an essential function of DOT. The agency's street infrastructure projects range from pothole repair to milling and repaving to full reconstruction of the street. Every year DOT lays millions of cubic yards of asphalt and repairs hundreds of thousands of potholes.

PlaNYC set ambitious goals for resurfacing at least 1,000 lane-miles of city streets per year. Through increased investment, the city has made progress towards improving street conditions. The city committed additional resources to resurfacing over the past six years, totaling over \$997 million since 2007. The improvement in street conditions reflects this investment. This funding has been used to resurface over 6,500 lane miles of streets. The percentage of our streets in a state of good repair increased from 66% in fiscal year 2008 to over 73% in fiscal year 2012.

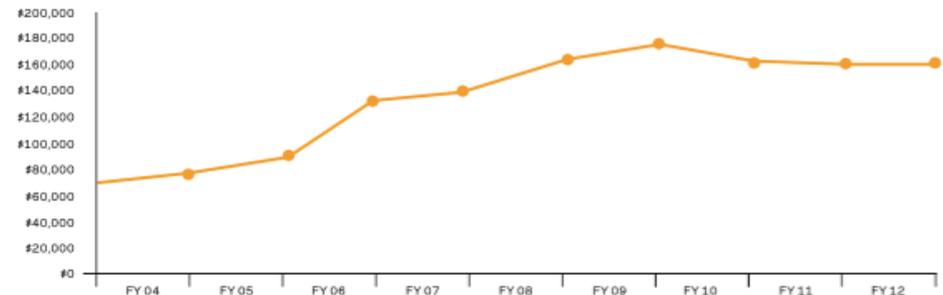
NYC LANE MILES RESURFACED, BY FISCAL YEAR

FISCAL YEAR	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12
TOTAL	924.91	964.15	1,006.75	828.85	1,003.98	1,007.64

Even devastating events haven't stopped DOT from continuing to make progress in street conditions. Hurricane Sandy hit the city in October 2012, and the percentage of streets in good condition dropped only slightly the following fiscal year, to 70%, despite extensive damage to the street system.

The harsh winter of 2010 also battered city streets, and the number of pothole complaints increased. Mayor Bloomberg responded with an additional \$2 million allocation to DOT for pothole repair. During the first quarter of 2011, DOT crews filled 50% more potholes than the prior year—an additional 40,000 potholes were repaired.

SPENDING ON ROAD RESURFACING



Fort Collins Pedestrian LOS

- Five areas for LOS
- NOT combined
- Prioritize activity areas, schools, parks, transit
- New public AND private development must adhere

Target Levels of Service by Pedestrian Facilities Plan Areas					
	Directness	Continuity	Street Crossings	Visual Interest and Amenity	Security
Pedestrian Districts	A	A	B	A	A
Activity Corridors and Centers	B	B	C	B	B
School Walking Areas	B	B	B	C	B
Transit Corridors	B	C	C	C	B
Other Areas within City	C	C	C	C	C

Measuring transit performance

- Linked to purpose and functionality desired
- Variable, based on point of view – which “performance” is being measured?
- Data integrity and management can be challenging
- Choice rider service versus captive rider service debate

		PERFORMANCE MEASURE EXAMPLES	
COMMUNITY	VEHICLE/DRIVER	TRAVEL TIME	• Transit-Auto Travel Time • Transfer Time
		AVAILABILITY	• Service Coverage • Service Denials • Frequency • Hours of Service
		SERVICE DELIVERY	• Reliability • Comfort • Passenger Environment • Customer Satisfaction
		SAFETY & SECURITY	• Vehicle Accident Rate • Passenger Accident Rate • Crime Rate • % Vehicles with Safety Devices
		MAINTENANCE & CONSTRUCTION	• Road Calls • Fleet Cleaning • Spare Ratio • Construction Impact
	AGENCY	ECONOMIC	• Ridership • Fleet Maintenance Performance • Cost Efficiency • Cost Effectiveness
		TRANSIT IMPACT	• Community Economic Impact • Employment Impact • Environmental Impact • Mobility
		CAPACITY	• Vehicle Capacity • Volume-to-Capacity Ratio • Roadway Capacity
		TRAVEL TIME	• Delay • System Speed

Figure 1. Transit Performance Measure Points of View, Categories, and Examples

Figure from TCRP 88, A Guidebook for Developing a Transit Performance Management System, 2003

Resources, with examples



t4america.org/maps-tools/performance-measures-report

smartgrowthamerica.org/the-innovative-dot

smartgrowthamerica.org/guides/evaluating-complete-streets-projects-a-guide-for-practitioners

Where should active transportation fit?

Performance Highlights		Our Goals	Core Measure Highlights
Safety		Providing a safe and secure transportation system for all users	Fatalities and Serious Injuries
Maintenance		Proactively maintaining and operating Florida's transportation system	Pavement Condition Bridge Condition Maintenance Transit
Mobility		Improving mobility and connectivity for people and freight	Travel Quantity Travel Quality Accessibility Utilization
Economy		Investing in transportation to support a prosperous globally competitive economy	Return on Investment Projects On-Time Projects Within Budget
Environment		Making transportation decisions that support communities and promote responsible environmental stewardship	Air Quality

Source: FDOT

Last updated 3/12/15

Discussion:

Which measures, at different scales, would you like to use?

What challenges do you face in using these measures? How can you overcome them?



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