

Welcome to *The Planning Exchange*



TRANSPORTATION PLANNING INFORMATION EXCHANGE



PERFORMANCE-BASED PLANNING AND PROGRAMMING

Transportation Planning Information Exchange Webinar

March 21, 2013

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Agenda

- Recent Activities
- Moving Ahead for Progress in the 21st Century Act (MAP-21)
- Performance-based Planning and Programming
- Case Study Examples
- Q and A
- What's Next





Performance Based Planning Activities

- Peer Exchange with AASHTO on Performance Measurement, Planning, and Programming - AASHTO Annual Meeting, Palm Desert, CA - October 22 -23, 2009
- National Conference on Performance Based Planning and Programming - Dallas, TX - September 13-15, 2010
- National Workshop on Performance Based Planning and Programming, Chicago, IL - September 21-22, 2011
- Regional Workshop on Performance-based Planning and Programming, Atlanta, Georgia - March 29, 2012
- Regional Workshop on Performance-based Planning and Programming, Providence, RI - June 19, 2012
- Regional Workshop on Performance-based Planning and Programming, Denver, CO - September 18, 2012



Moving Ahead for Progress in the 21st Century Act

- Performance management
 - MAP-21 identifies national goal areas
 - USDOT establishes measures, with input
 - States set targets
 - State & metro plans describe how organizations will use program and project selection to help achieve targets
 - States report to USDOT on progress toward targets (within 4yrs of enactment, biennially thereafter)
 - Reports typically lead to corrective actions (not sanctions)
 - Consequences if conditions of NHS falls below thresholds





Moving Ahead for Progress in the 21st Century Act

- National Goal Areas:
 - Safety
 - Infrastructure condition
 - Congestion reduction
 - System reliability
 - Freight movement and economic vitality
 - Environmental sustainability
 - Reduced project delivery delays



Moving Ahead for Progress in the 21st Century Act

- Act specifies some topics measures must address
 - Safety: serious injuries & fatalities (# and per VMT)
 - Pavement & bridge condition: Interstate and remainder of NHS
 - Performance: Interstate and remainder of NHS
 - CMAQ: traffic congestion and on-road mobile source emissions
 - Freight: Interstate freight movement
 - Transit state of good repair standards
 - Transit Safety
- In addition to measures, USDOT must establish minimum thresholds for NHS pavement and bridge condition



Moving Ahead for Progress in the 21st Century Act

- Metropolitan planning
 - Population threshold for MPOs and TMAs unchanged
 - MPOs to establish performance targets
 - Long range plan incorporates other performance plans
 - TIP to be updated at least every 4 yrs
 - MPO serving a TMA selects all projects except those on NHS, which are selected by State with MPO cooperation
- Statewide & nonmetropolitan planning
 - Transition to performance-based outcome-driven planning process, with State setting performance targets
 - Long range plan includes report on conditions & performance of system relative to established performance measures
 - Long range plan incorporates other performance plans





Moving Ahead for Progress in the 21st Century Act

- Metropolitan and statewide transportation planning processes are continued and enhanced to incorporate performance goals, measures, and targets – along with reporting on the overall effectiveness of performance-based planning
- Public involvement remains a hallmark of the planning process

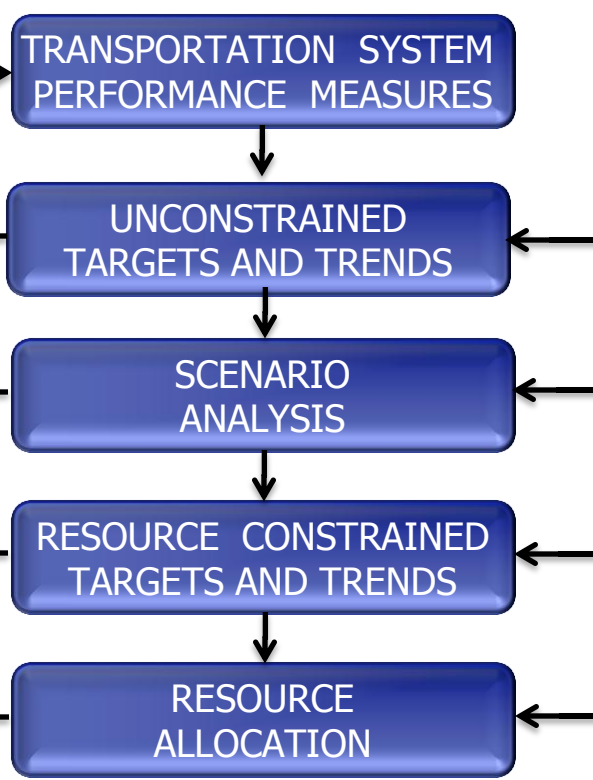
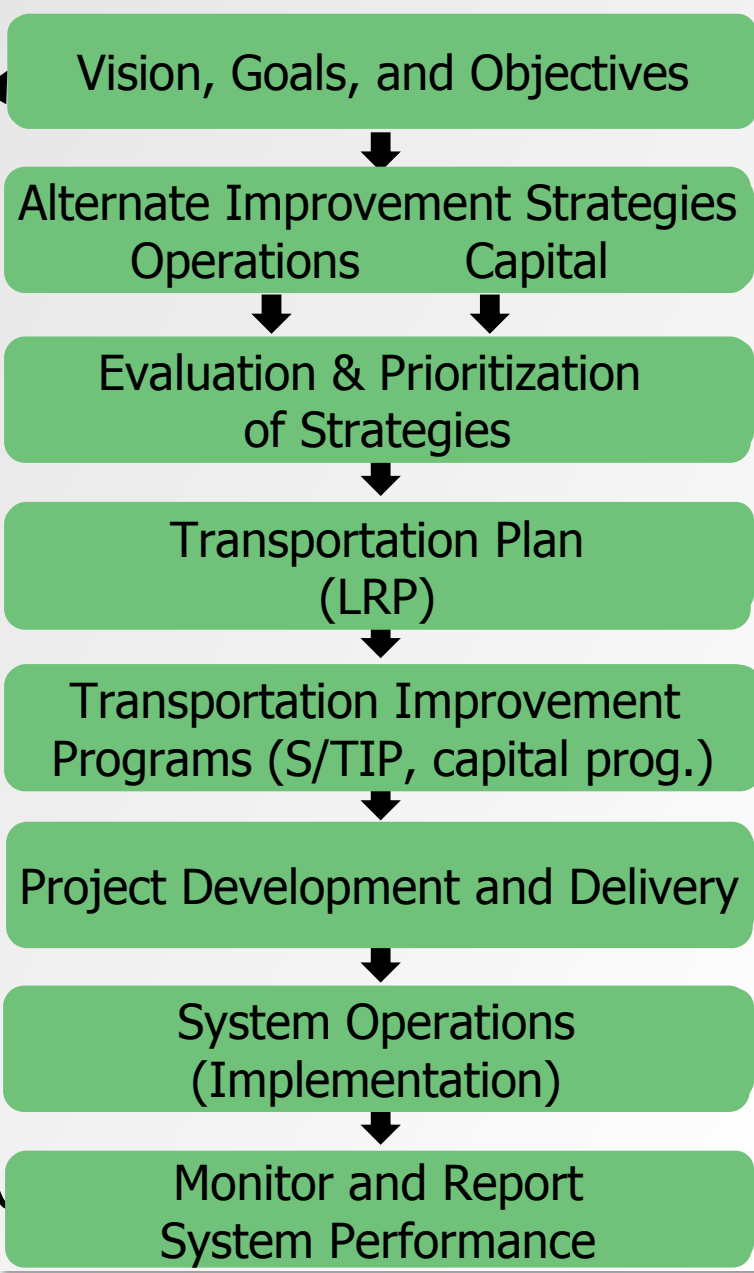


Performance-Based Planning and Programming Elements

Strategic Direction (<i>Where do we want to go?</i>)	<ul style="list-style-type: none">■ Goals and objectives■ Performance measure
Long- Range Planning (<i>How are we going to get there?</i>)	<ul style="list-style-type: none">■ Identify Targets and Trends■ Identify Strategies■ Strategy Evaluation
Programming (<i>What will it take?</i>)	<ul style="list-style-type: none">■ Investment Plan■ Resources Constrained Targets and Trends■ Program of Projects
Implementation and Evaluation (<i>How did we do?</i>)	<ul style="list-style-type: none">■ Reporting and Monitoring■ Evaluation

FEDERALLY REQUIRED PLANNING PROCESS STEPS

SUPPORTING ELEMENTS



PERFORMANCED-BASED PLANNING FRAMEWORK



Integrating Performance-Based Plans into the Planning Process

- Strategic Highway Safety Plans
- Transportation Asset Management Plans - Highway
- Congestion Management Process
- Transit Asset Management Plans
- Transit Safety Plans
- Other Performance-Based Plans



Asset Management Plan - Highway

- Risk-based asset management plan
- States encouraged to include all infrastructure assets within the right-of-way
- Plan Contents
 - pavement and bridge inventory and conditions on the NHS,
 - objectives and measures,
 - performance gap identification,
 - lifecycle cost and risk management analysis,
 - a financial plan, and
 - investment strategies



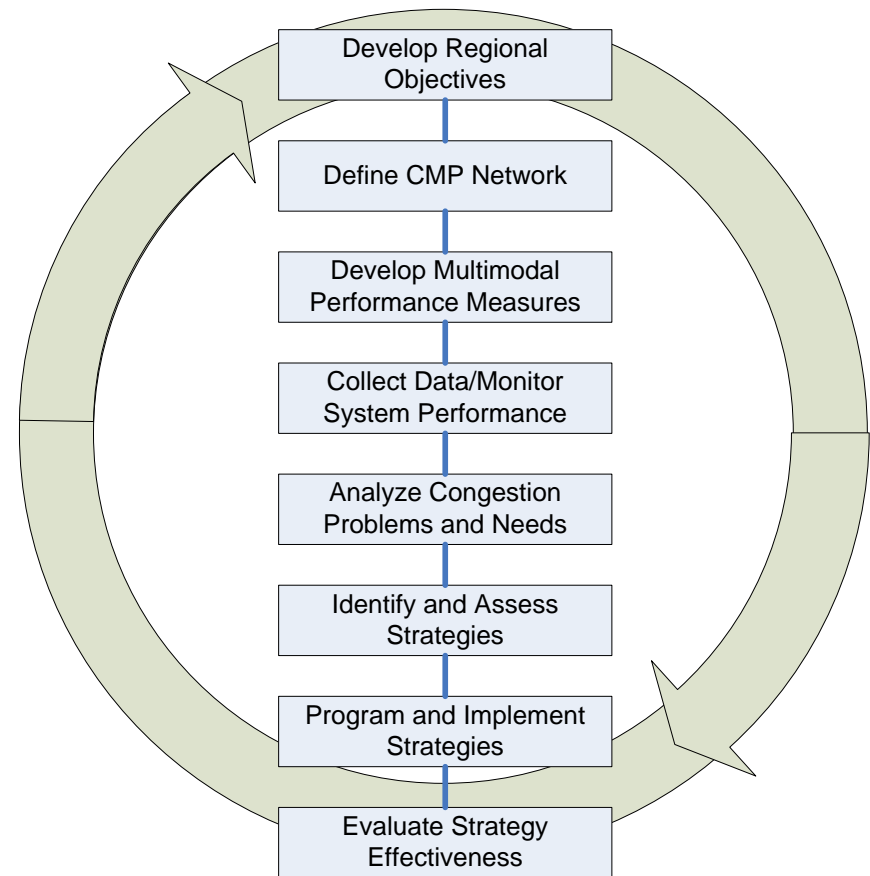
Strategic Highway Safety Plans

- SHSP is a major part of the core Highway Safety Improvement Program
- SHSP is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads
- SHSP strategically establishes statewide goals, objectives, and key emphasis areas developed in consultation with Federal, State, local, and private sector safety stakeholders



Congestion Management Process

- The CMP is intended to serve as an integrated element of the planning process
- The CMP can be an important source of information, particularly for project selection, in both the long-range plan and the Transportation Improvement Program



National Transit Asset Management System

- DOT will establish a National TAM system
- Define State of Good Repair (SGR), establishes standards within 1 year by rulemaking process
- Require recipients to collaboratively develop local TAM plans
- DOT will provide an analytical process or decision support tool and technical assistance



Recipients' Asset Management Plans

- DOT will direct recipients in drafting TAM Plans that includes:
 - Estimate capital needs
 - Capital asset inventories & condition assessments (equipment, rolling stock, infrastructure, facilities)
 - Decision support tools
 - Asset investment priorities



National Transit Safety Plan

- Safety performance criteria for all modes of public transportation
- Will rely on TAM System definition (SGR)
- Performance standards for vehicles used in revenue operations:
 - Do not apply to rolling stock otherwise regulated
 - Should consider National Transportation Safety Board recommendations and industry best practice
- Public transportation safety certification training program





Public Transportation Agency Safety Plans

- Each designated recipient of Federal transit funds or States must establish a comprehensive, board-approved agency safety plan
- Includes methods for identifying and evaluating safety risk
- Annual review and update
- Strategies to minimize exposure
- Performance targets
- Training
- Plan required within 1 year after effective date of a final rule to carry out the Public Transportation Safety Program





Case Study Examples



Using Performance Measures to **Make Goals Real**



Tom Gerend
Assistant Director of Transportation
Mid-America Regional Council

PLAN OVERVIEW

- Developed over a 2-year period
 - Adopted June 2010
- Extensive Public Input/Committee Feedback
- Segmented Approval Process
 - Policy Framework
 - Financial Assumptions and Evaluation Framework
 - Projects & Measures

POLICY FRAMEWORK

- Policy Framework Components
 - Regional Vision Statement
 - Regional Policy Goals
- Served as structure/foundation for
 - Plan's Content Development
 - Project Evaluation and Prioritization
 - Identification of Performance Measures
 - Project selection/priorities

GOALS

- System Performance
- System Condition
- Safety and Security
- Accessibility
- Economic Vitality
- Place making*
- Public Health*
- Climate Change/ Energy Use*
- Environment*

*New Goals for *Transportation Outlook 2040*

SYSTEM PERFORMANCE

Manage the system to achieve reliable and efficient performance.



SYSTEM CONDITION

Ensure transportation system is maintained in good condition.



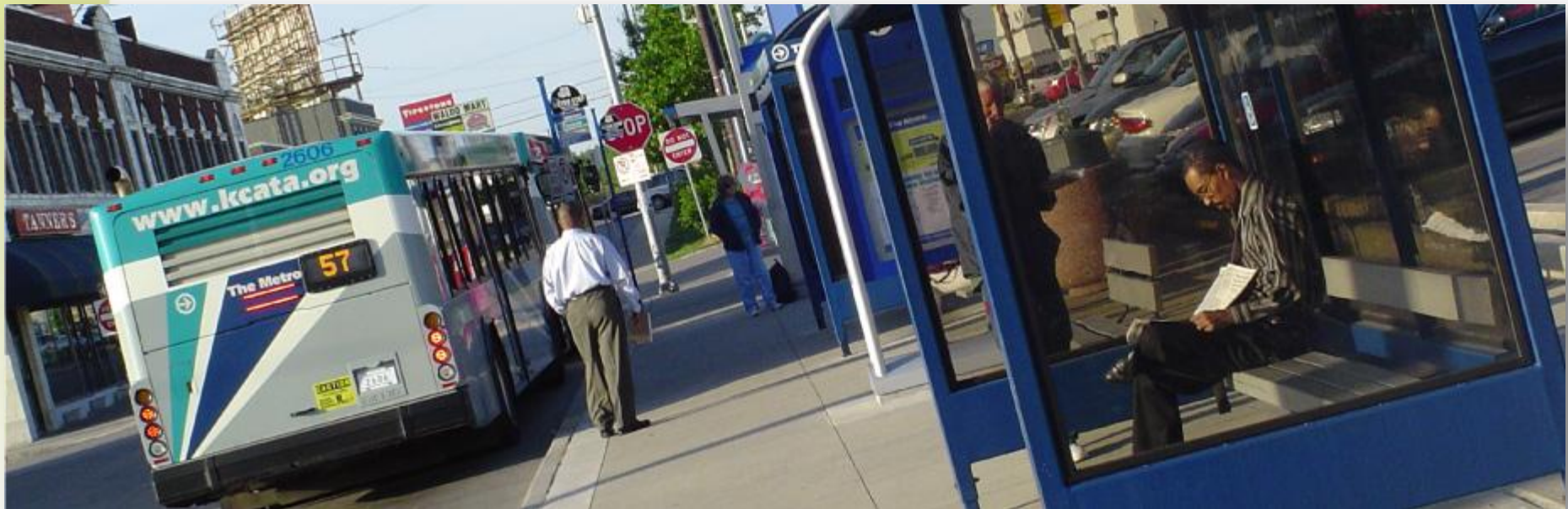
SAFETY AND SECURITY

Improve safety and security for all transportation users.



ACCESSIBILITY

Maximize mobility and access to opportunities for all area residents.



ECONOMIC VITALITY

Support an innovative, competitive 21st century economy.



PLACE MAKING

Coordinate transportation and land-use planning as a means to create quality places in existing and developing areas, and to strengthen the quality of the region.



PUBLIC HEALTH

Facilitate healthy, active living



CLIMATE CHANGE/ENERGY USE

Decrease the use of fossil fuels through reduced travel demand, technology advancements, and a transition to renewable energy sources.



ENVIRONMENT

Protect and restore our region's natural resources (land, water, and air) through proactive environmental stewardship.



APPROACH

- Used policy goals in developing measures
 - Less is more
- Used available data (annual updates)
 - Reliable sources
 - Updated on an annual basis
- Consistent geographies
- Desired trends

PERFORMANCE MEASURES PROGRESS REPORT

June 2012

Mid-America Regional Council
Transportation Department

Revised 6/27/2012

PERFORMANCE MEASURES Progress Report Summary | June 2011

The Mid-America Regional Council's long-range transportation plan, *Transportation Outlook 2040*, outlines a vision for the Kansas City region that is socially, environmentally and economically sustainable. The plan includes performance measures that will promote and track progress toward the vision over time. This summary report lists indicators that can help MARC and its planning partners understand the region as it exists today, and evaluate how well the transportation system is achieving our stated goals. Resulting trends will inform decisions about alternative strategies or investment priorities that could improve performance over time.

According to recent data, many of the indicators are moving in the desired direction, including better-maintained bridges, fewer crash fatalities and faster

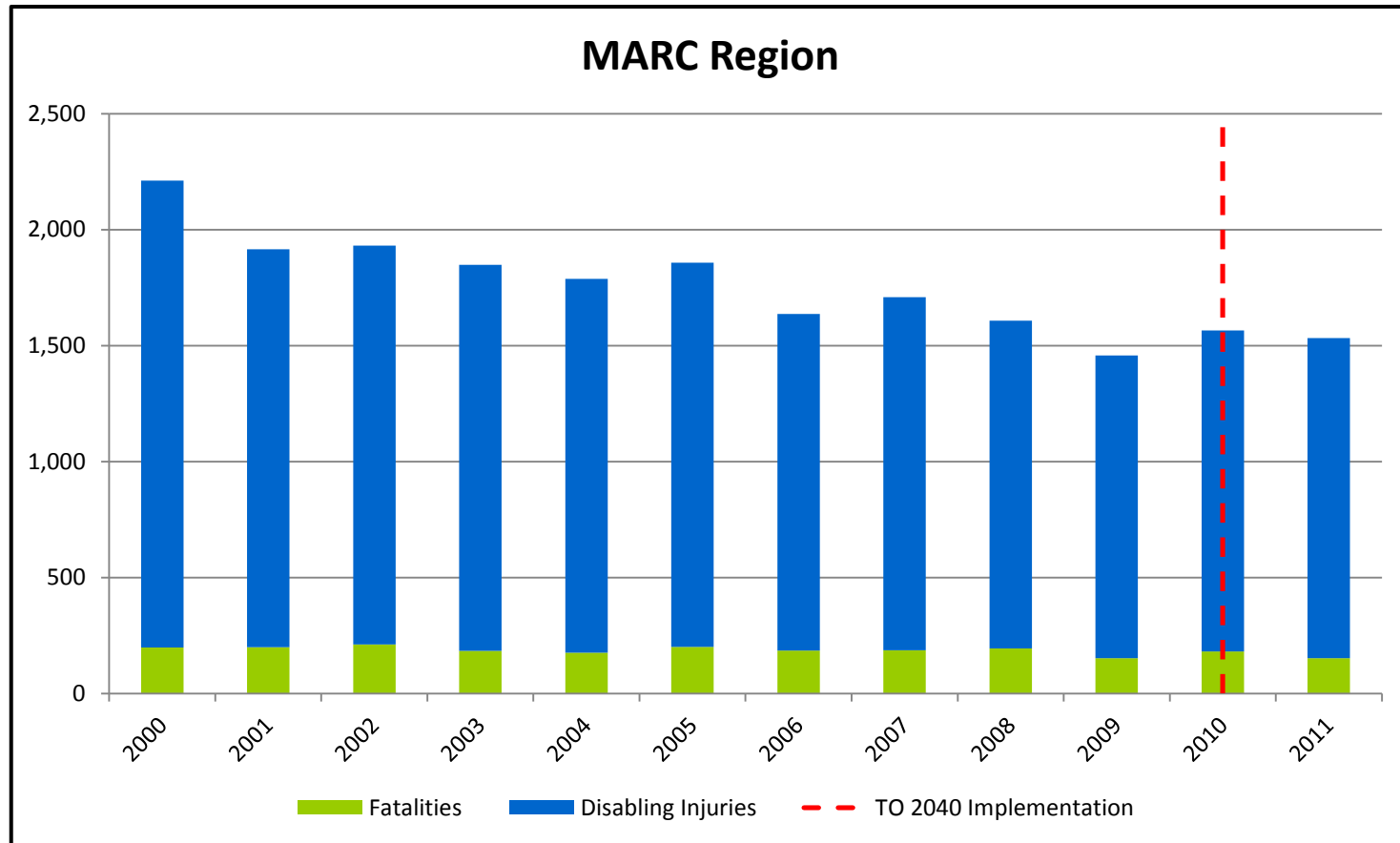
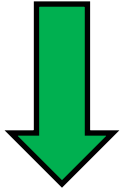
clearing of roadway incidents. Others, such as transit ridership and land-use redevelopment, suggest that we have more work to do.

A performance progress report will be compiled annually. The complete June 2011 report contains greater explanation and analysis of these trends, and cites data sources. Read it online at www.marc.org/2040.

ACCESSIBILITY		DESIRED TREND		ACTUAL TREND	
FACTOR	MEASURE				
Level of transit service	Population within ½ mile of fixed-route transit service	↑	Population living within ½ mile of fixed-route transit stops	↓	-5.27% (2000-2010)
	Ridership	↑	Annual unlinked passenger trips ¹	↓	-9.22% (2008-2009)
Environmental justice	Revenue service hours	↑	Annual hours of operating service	↑	+7.15% (2008-2009)
	Transportation investment in environmental justice tracts ²	↑	Percent of total federal funds invested in environmental justice tracts	N/A	Awaiting data release in October 2011
ECONOMIC VITALITY		DESIRED TREND		ACTUAL TREND	
FACTOR	MEASURE				
Transportation costs	Affordability	↓	Combined housing and transportation costs as a percent of median income	N/A	Awaiting release of 2010 data
CLIMATE CHANGE / ENERGY USE		DESIRED TREND		ACTUAL TREND	
FACTOR	MEASURE				
Vehicle miles traveled	System-wide vehicle miles traveled	↓	Total vehicle miles traveled	↓	-4.37% (2007-2008)
	Vehicle occupancy	↑	Total vehicle miles traveled per person	↓	-4.65% (2007-2008)
Carbon dioxide	Vehicle occupancy rate	↑	Number of vehicle occupants	↓	-0.62% (2008-2009)
	System-wide carbon dioxide emissions	↓	Tons of carbon dioxide emitted	N/A	No plans set to monitor in future
ENVIRONMENT		DESIRED TREND		ACTUAL TREND	
FACTOR	MEASURE				
MetroGreen® network	Miles of MetroGreen® trails and greenways network	↑	Completed MetroGreen® network miles	↑	+3.48% (2009-2010)
PLACE MAKING		DESIRED TREND		ACTUAL TREND	
FACTOR	MEASURE				
MetroGreen® network	Balance between modes of transportation	↑	Percent of trips using alternative modes (transit, bicycling, walking, etc.)	↓	-0.24% (2008-2009)
	Number of people driving alone	↓	Number of people driving alone	↓	-1.32% (2008-2009)
	Percentage of population growth in the Kansas City regional urbanized area	↓	Percentage of population growth in the Kansas City regional urbanized area	↓	-9.55% (2000-2010)

Safety and Security:

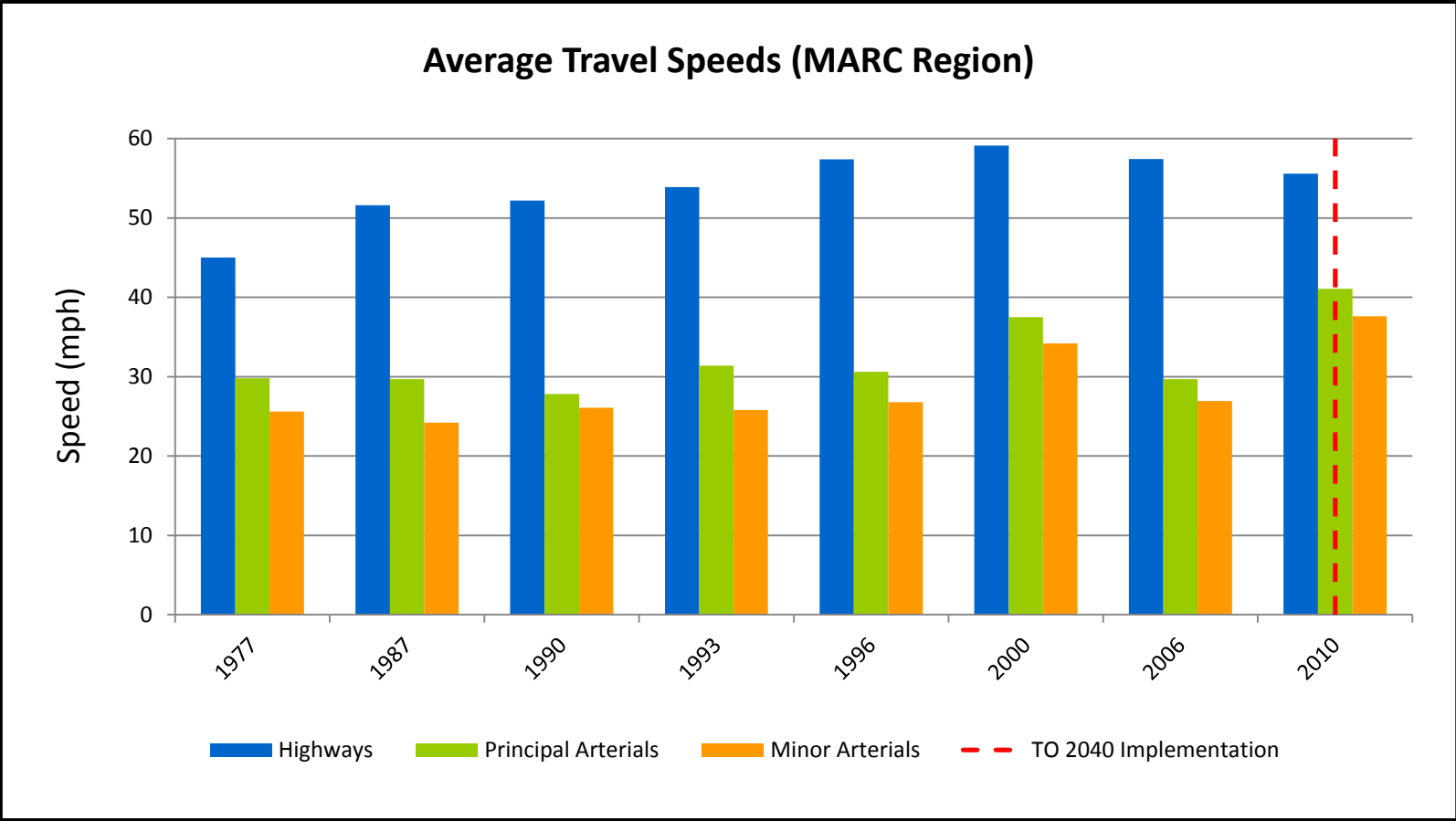
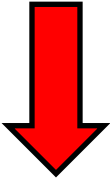
Crash Fatalities and Disabling Injuries



Sources: Missouri Department of Transportation (MoDOT) – Traffic Databases
Kansas Department of Transportation (KDOT) – Traffic Databases

System Performance:

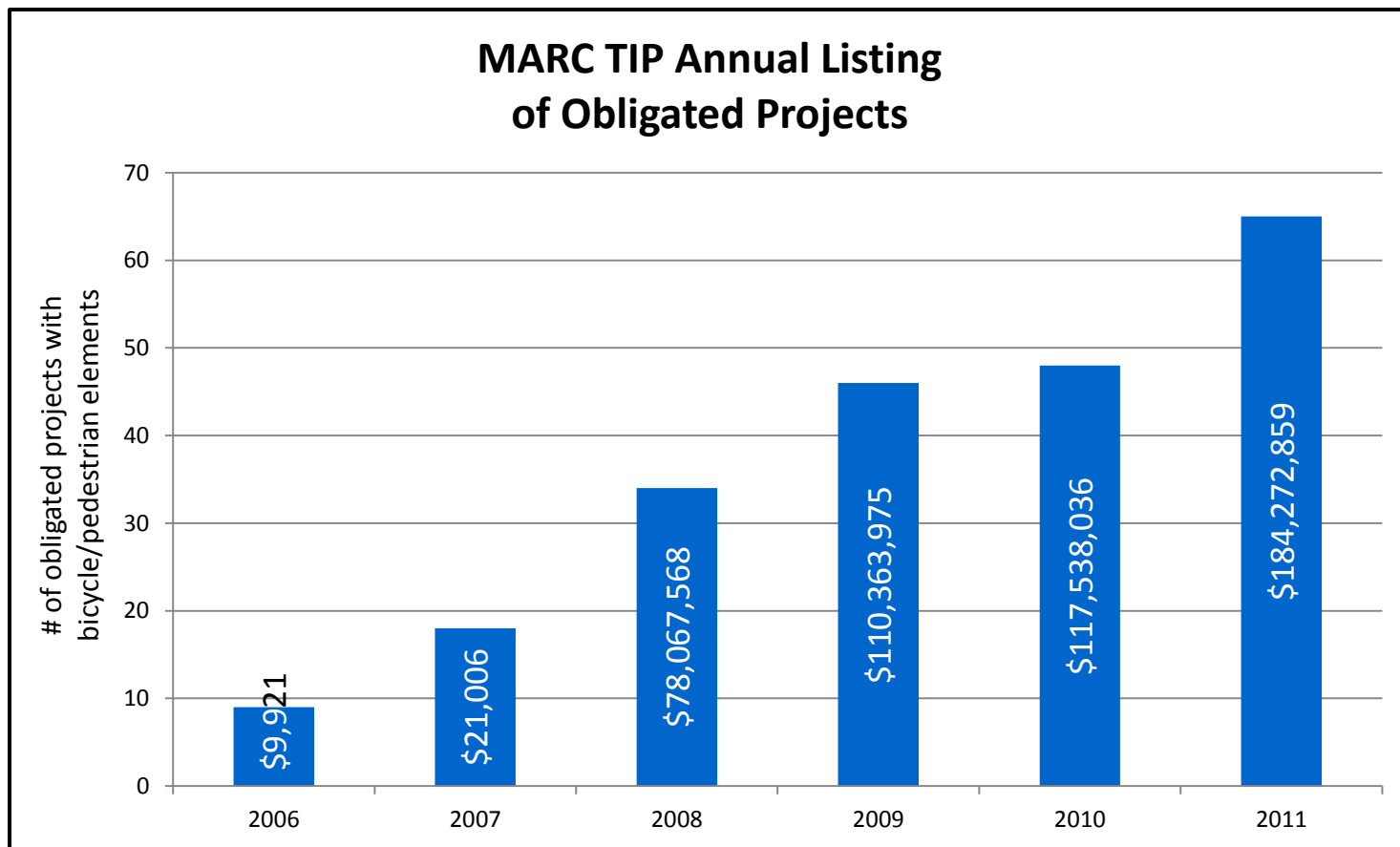
Travel Speeds



Source: Mid-America Regional Council (MARC) – Travel Time Study Reports

Accessibility:

Bicycle/Pedestrian Accessibility



Source: Mid-America Regional Council (MARC) – Transportation Improvement Program (TIP)
Annual Listing of Obligated Projects

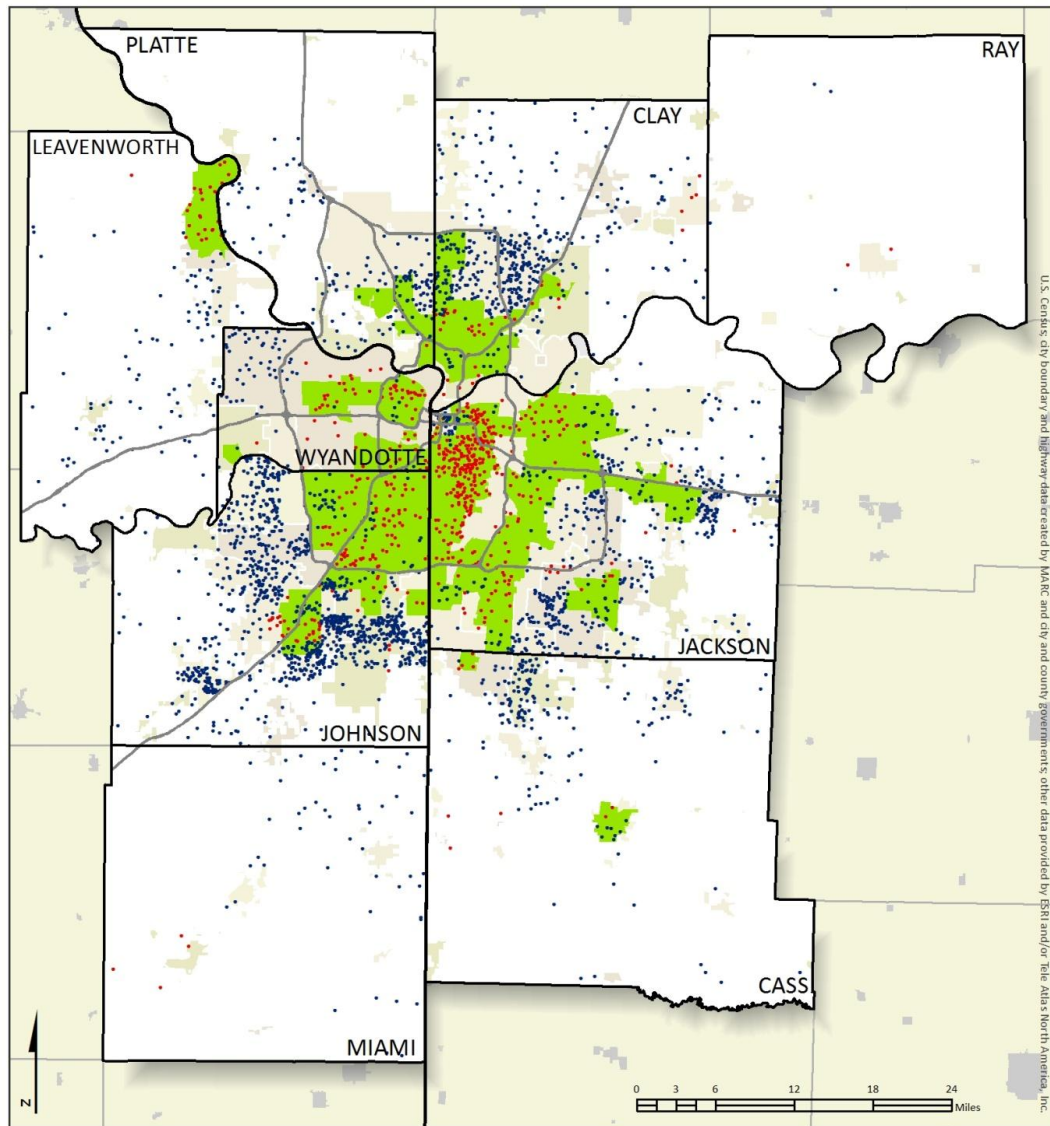
Place Making: Land Use/ Redevelopment

2000-2010 Population Change and 1990 Urbanized Areas

		Population		
		2000	2010	Change
Urbanized Area		1,144,295	1,126,110	-18,185
Region		1,672,362	1,862,753	190,391

Percent change within
urbanized area

-9.6%

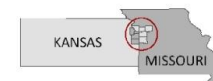


Population Change

- Gain
- Loss

1 dot = 100 people

1990 urbanized area =
1990 Census tracts with
a minimum of 1,000
population per square mile,
converted to 2010
Census blockgroups



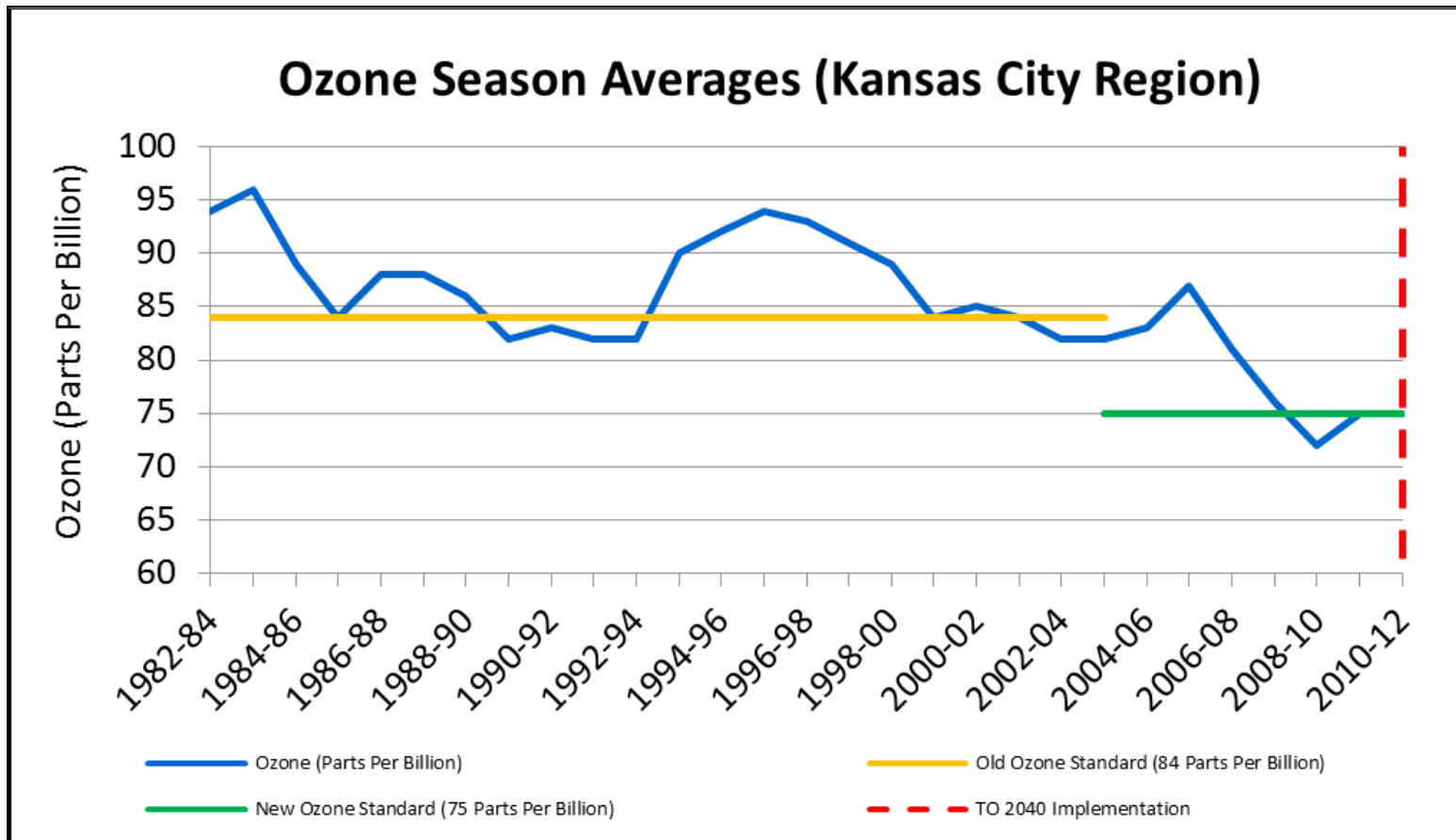
MAY 2010

MARC
Mid-America Regional Council
Geographic Information Systems

More information and data use policy available at www.marc.org/gis

Source: U.S. Census Bureau

Public Health: Ozone Pollution



Source: Mid-America Regional Council (MARC) Air Quality Reports – Ozone Season Summaries

2012 PROGRESS RECAP

Annual snapshot provides meaningful information to make progress towards reaching the region's transportation goals.

- ↑ Accessibility
- ↔ Economic Vitality
- ↓ Climate Change/Energy Use
- ↑ Environment
- ↓ Place Making
- ↓ Public Health
- ↔ System Condition
- ↑ Safety and Security
- ↓ System Performance

LESSON LEARNED/NEXT STEPS

- New territory for us initially
- Encountered data gaps
 - Had to adjust measures/create new ones
- Measures reflective of the region vs. measures reflective of corridors/places
- Targets versus no targets?
 - Currently don't have set targets established
 - MAP-21 will require us to do so

THANK YOU

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The screenshot shows the Transportation Outlook 2040 website interface. At the top, there is a navigation menu with links for 'About', 'Creating the Plan', 'We've Heard', and 'Get Involved'. Below the menu is the website logo and the tagline 'Investing in our future'. A breadcrumb trail indicates the current page: 'MARC Home > 2040 > Transportation Outlook 2040'. The main content area features a grid of images related to transportation, including a person on a bicycle, a bus, and a train. Below the images is a prominent yellow banner that reads 'CALL FOR PROJECTS 2009' with a link to 'View nominated projects >>'. To the right of the main content is a calendar for November 2009, with the 11th and 26th highlighted. Below the calendar is a link to 'View full calendar for details'. The website footer contains four columns of content: 'Welcome' with a 'MESSAGE FROM MELL', 'What We're Doing' with a 'CALL FOR PROJECTS' section, 'Get Involved' with a '2040 OPEN HOUSE' section, and 'The Vision' with a 'HOW SHOULD WE GROW?' section and a 'FRAMING THE PLAN' section.



Vision to Projects: Evolution of Performance-based Planning & Programming at MnDOT

Deanna Belden
Minnesota Department of Transportation

FHWA Webinar
March 21, 2013

Your Destination...Our Priority



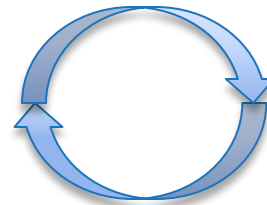
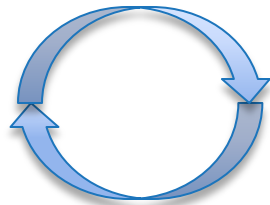
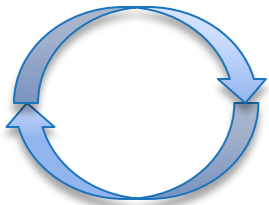
MnDOT policy direction

Family of Plans

Minnesota GO 50-year Vision
8 Guiding Principles

Statewide Multimodal Transportation Plan
Objectives & Strategies in 6 Policy Areas

MnSHIP
Capital Investment Priorities



Supporting Plans



Minnesota GO 50-year Vision

Minnesota's multimodal transportation system maximizes the health of people, the environment and our economy. The system:

- Connects Minnesota's primary assets – the people, natural resources and businesses
- Provides safe, convenient, efficient and effective movement of people and goods
- Is flexible and nimble enough to adapt to changes in society, technology, the environment and the economy



Statewide Multimodal Transportation Plan



Where are we going?
(Vision & Guiding Principles)



Where are we now?
(Transportation System, QOL, Environment, Economy)



How did we get here?
(Planning Initiatives in last 20 years)



How will we guide ourselves?
(Policy Objectives & Action Strategies)



What comes next?
(Family of Plans & Performance Measures)

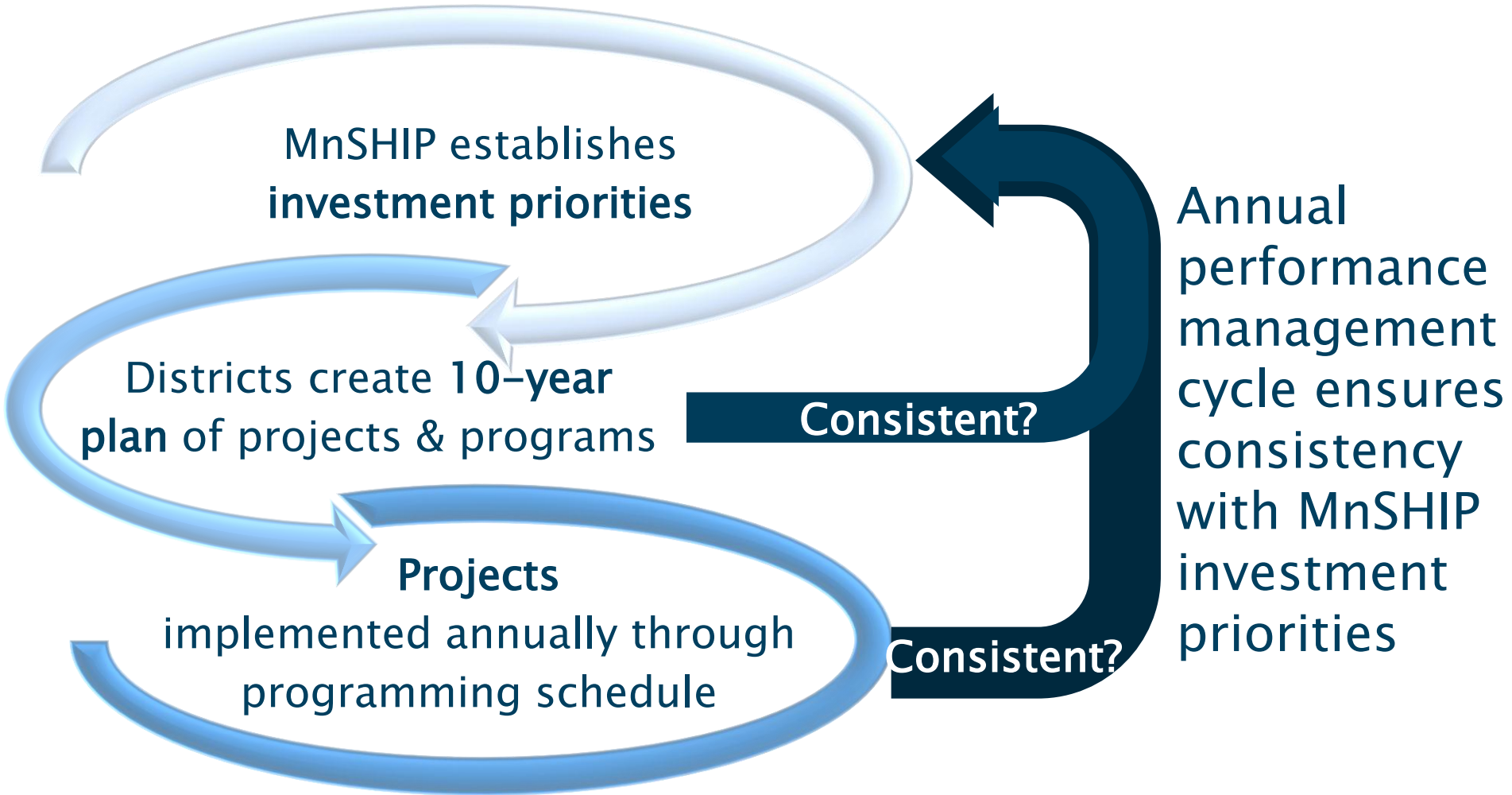


MnSHIP background

- ▶ 20-year State Highway Investment Plan
- ▶ Establishes priorities for capital expenditures on 12,000 state highway system
- ▶ Part of MnDOT's Family of Plans
- ▶ Required by state law every four years



How does MnSHIP affect planning & programming?



Performance-based Planning and Programming

Multimodal Plan

4. CRITICAL CONNECTIONS

Identify global, national, statewide, regional and local transportation corridors essential for Minnesota's prosperity and quality of life, and improve these corridors by enhancing inter-modal connections, promoting coordinated resources, and exploring new connections.

What This is About

Each person identifies different connections as critical based on where they live and their individual needs. In urban areas, critical connections may mean providing rapid transit alternatives to driving during peak hours. In rural areas, it may mean roadway connections to regional centers for both people and goods. Critical connections also vary by type of transportation. For example, the bus connections needed for driving are far different than those for transit, bicycling or walking. There also are different scales of connections. There are connections that move people and goods across the state, connections that move people and goods throughout a region, and connections that move people and goods within a community. All of these connections are important to the overall economic prosperity and quality of life in Minnesota.

What more types of connections are important, given both resources, it is necessary to use priorities to provide consistent, efficient and affordable movement of both people and goods. Though all connections are important to someone at one time, these critical connections that move the backbone for movement across and within Minnesota. Identifying, maintaining, and enhancing these priority connections are shared responsibilities. As a state agency, MNDOT's cooperation with other transportation stakeholders, as well as to ensure connections that move people and goods across the state and within regions. This includes, but is not limited to, developing, maintaining, identifying and regular bus, airports, and rail MPOs, as regional units of government, assist in these activities, assist in critical connections that move people and goods within their community. This could mean an integrated network of local roads, with options to bicycle, transit, or statewide freight connections. All connections regardless of land, location, or transportation have need to be developed in coordination with one another to ensure a high connected Minnesota.

CHAPTER 4 HOW WILL WE MOVE OURSELVES MOVING FORWARD? PAGE 73

Investment Plans

Scenario Planning: Investment Approach

Approach C

Focus on covering infrastructure needs as efficiently, decrease investment in roadway, local and transit, and non-motorized transportation systems, accept significant deterioration in the condition of infrastructure on non-arterial highways.

Biggest Strengths

- Improved safety
- Programme made choice
- Added capacity in priority locations

Biggest Drawbacks

- Significant declines in the condition of road network
- Increased travel times on more than half of the highway system

Investment Categories & Change From Current

Investment Approach Outcomes

Category	Investment Category	Percent 2011-2040	% of Total Investment	Impact
Roadway	Interstate	\$2,194.9	25%	+
	Major Arterial	\$1,500.0	17%	+
	Minor Arterial	\$1,740.0	20%	+
	Local Road	\$1,565.1	18%	-
Non-Roadway	Transit	\$1,100.0	13%	+
	Other	\$1,100.0	13%	+

Investment Approach Impacts

- Interstate program provides 75% of total investment, 74% of total cost. Major program provides 15% of total investment, 14% of total cost. Non-arterial program provides 10% of total investment, 10% of total cost. Local road program provides 15% of total investment, 15% of total cost. Transit program provides 13% of total investment, 13% of total cost. Other program provides 13% of total investment, 13% of total cost.
- Non-arterial program provides 10% of total investment, 10% of total cost. Local road program provides 15% of total investment, 15% of total cost. Transit program provides 13% of total investment, 13% of total cost. Other program provides 13% of total investment, 13% of total cost.

Performance Monitoring

Minnesota 2011 Transportation Results Scorecard

Scorecard showing performance metrics for various transportation categories. Legend: Green (Met or exceeded target), Yellow (Close to target), Red (Missed target).

Category	Measure	Score	Result	Target	Trend
Travel Safety	Minnesota Traffic Fatalities	386	Met	400	↓
	Minnesota Traffic Injuries	10,227	Met	10,250	↓
Infrastructure Preservation	Bridge Condition - % Good and Satisfactory	85.4%	Met	85%	↑
	Bridge Condition - % Poor	14.6%	Met	15%	↓
Performance	Passenger Rail Quality Index	6.6	Met	6.5	↑
	Passenger Rail Quality Score	87.2%	Met	85%	↑

Supports Minnesota GO 50-year vision. Establishes objectives & strategies to guide investment



Integrates performance planning & risk assessment to establish priorities for projected funding. Measures impact of investments on performance targets.



Regular review of performance in each policy area



MnSHIP development process



Gather information

Current investment direction

MnDOT Policy

Federal & state laws

Revenue projections

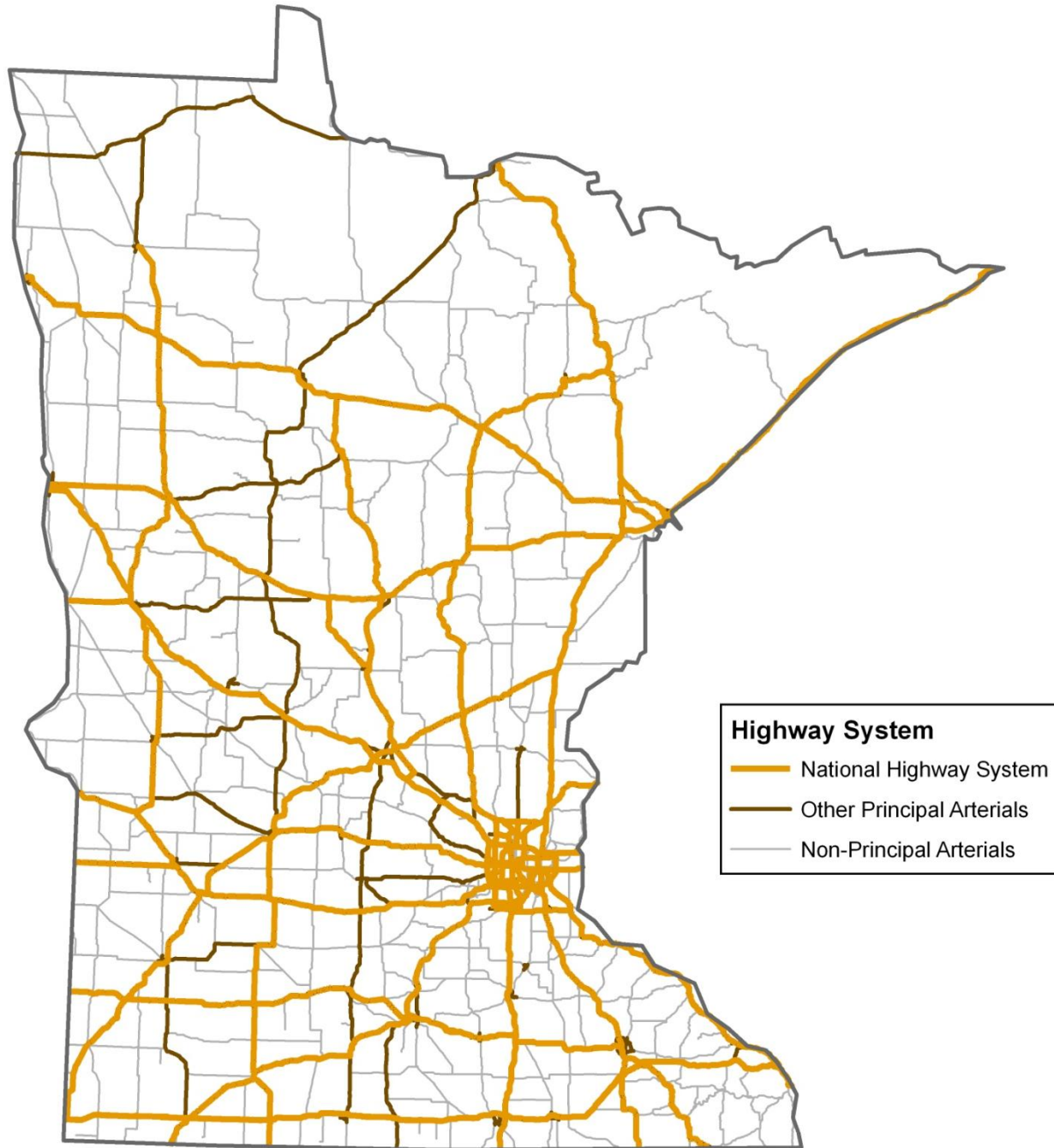
System condition projections

Risk identification



► National Highway System in Minnesota

- 45% of state highways
- MnDOT owns 99%+ of NHS



State highway revenue sources

State Programs

Federal Aid Highway Program

State Fuel Tax
31%

Vehicle Sales Tax
8%

Vehicle Registration Tax - 21%

Federal Fuel Tax
31%

State Trunk Hwy Bonds
9%

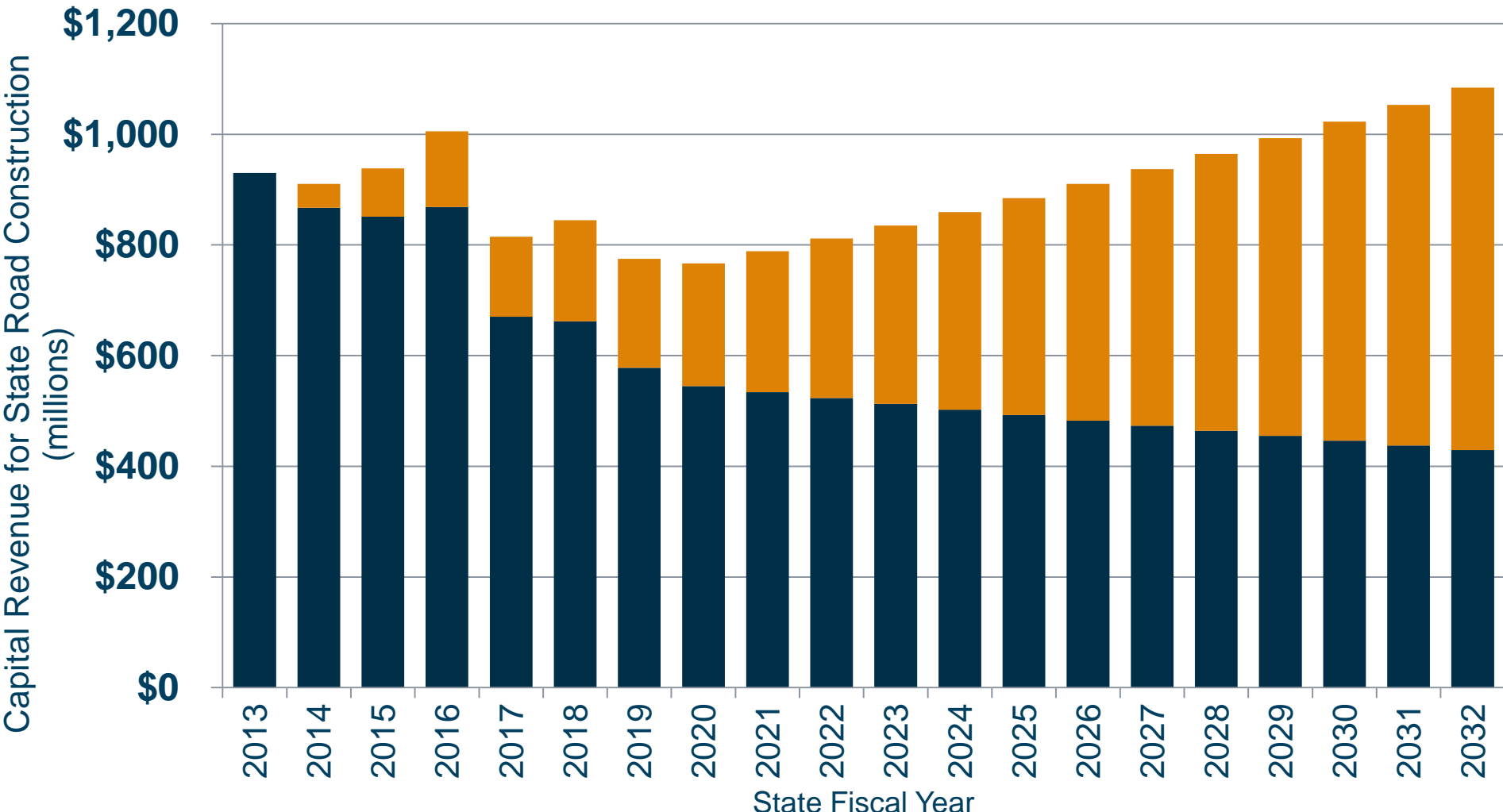
State Trunk Highway Fund

Capital revenue 2013 - 2032 = \$18 billion



Changes in inflation impacts buying power

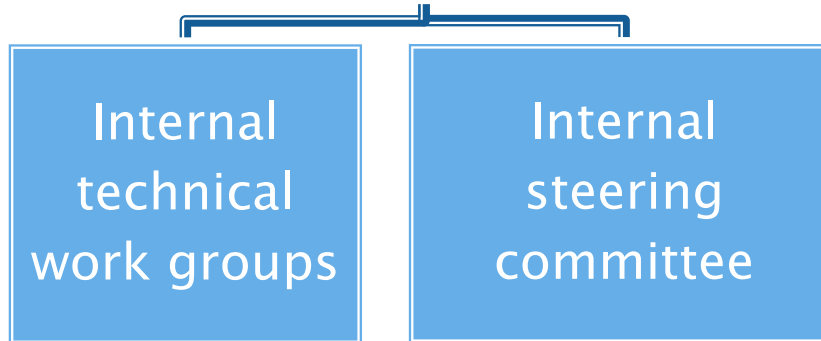
2012 dollars (in millions) under 5% inflation assumption



■ Projected Revenue in Year of Construction



Develop scenarios



- ▶ For each (of ten) investment categories:
 - Identified a minimum “performance level”
 - Identified risks associated with minimum level
 - Established successive levels that manage risks



10 investment categories

Asset Management

1. Pavement Condition
2. Bridge Condition
3. Roadside Infrastructure Condition

Traveler Safety

4. Traveler Safety

Critical Connections

5. Interregional Corridor Mobility
6. Twin Cities Mobility
7. Bicycle Infrastructure
8. Accessible Pedestrian Infrastructure

Regional + Community Improvement Priorities

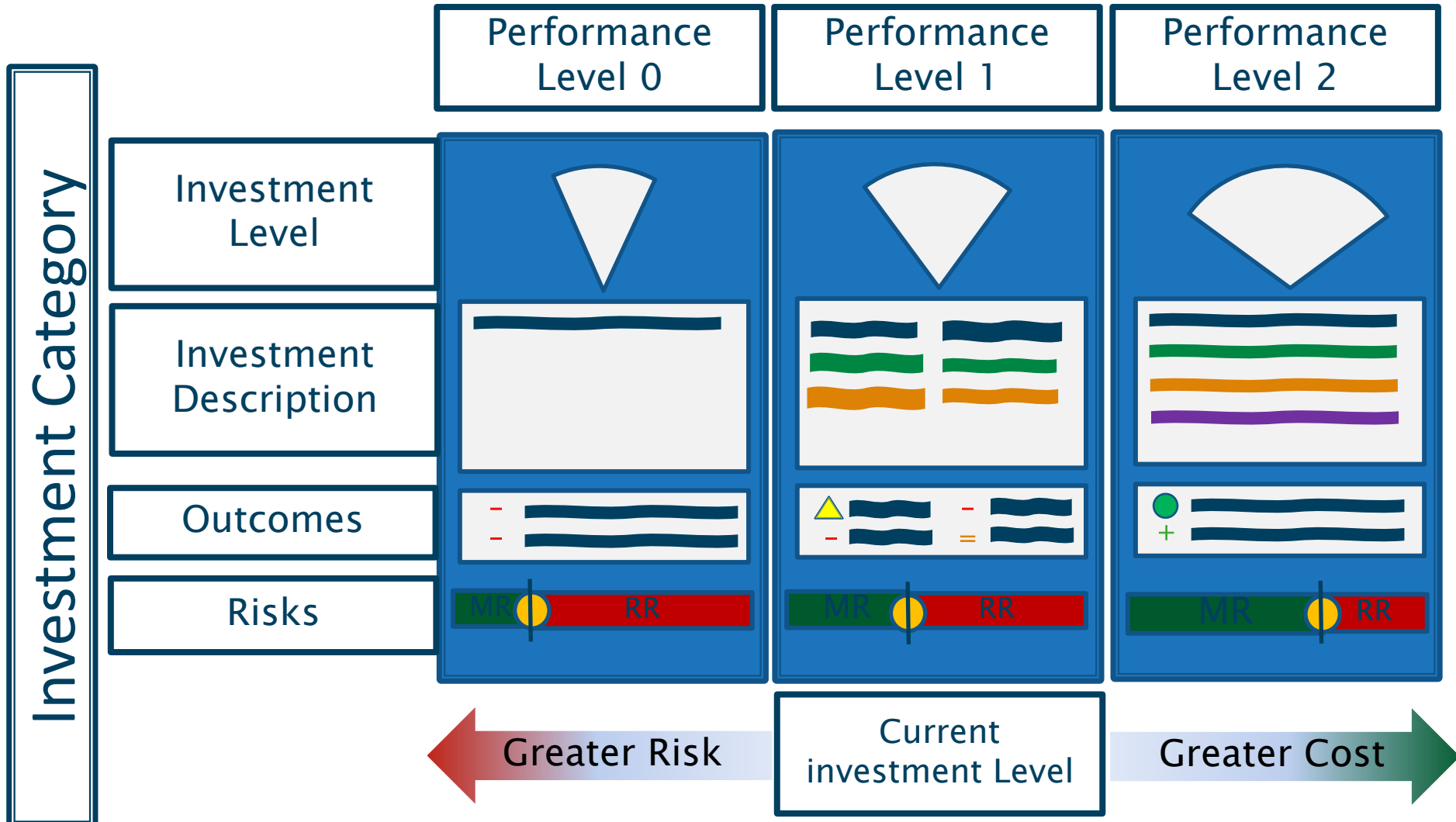
9. Regional + Community Improvement Priorities

Project Support

10. Project Support



Performance level concept

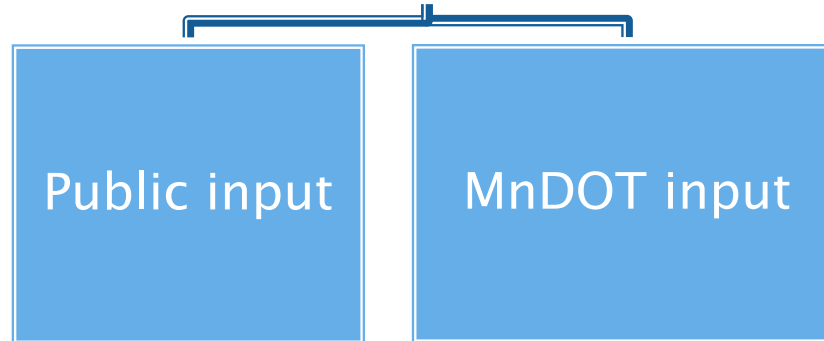


MnDOT's capital investment needs?

- ▶ \$30 billion in investment needs to meet performance targets and key objectives
 - Asset Management: \$17.6 billion
 - Traveler Safety: \$1.3 billion
 - Critical Connections: \$5.7 billion
 - Regional + Community Improvement Priorities: \$1.7 billion
 - Project Support: \$2.9 billion
- ▶ Likely many additional local and regional concerns and opportunities beyond \$30 billion



Analyze scenarios

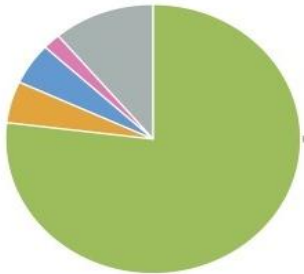


- ▶ Present work: group performance levels across each of the 10 investment categories
- ▶ Public phase did not directly address risk
- ▶ MnDOT phase incorporated risk



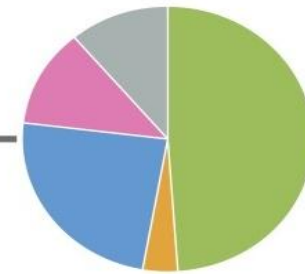
Evaluating investment approaches

Approach A

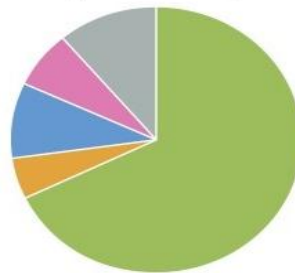


- Asset Management
- Traveler Safety
- Critical Connections
- Regional + Community Improvement Priorities
- Project Support

Approach C



Approach B (Current)



SCENARIO PLANNING: BACKGROUND						
Investment Approaches Comparison Matrix						
	Approach A	↑↓ = current investment level	Approach B (current investment direction)	↑↓ = current investment level	Approach C	↑↓ = current investment level
Investment Summary	Focus on maintaining existing infrastructure (roads, bridges, roadside infrastructure) across the entire system; reduce investment in mobility, non-motorized transportation options, and local priorities		Focus on bridges and safety; maintain current investment in mobility, non-motorized transportation options, and local priorities; accept significant decline in pavement condition on low-volume roads		Focus on meeting infrastructure needs on interstates only; increase investment in mobility, local priorities and non-motorized transportation options; accept significant deterioration in the condition of infrastructure on non-interstate highways	
Biggest Strengths	Pavement, bridge and roadside infrastructure condition approaches a state of good repair; the vast majority of roadways are smooth and bridge condition meets national performance targets		Ability to address highest priority needs across all investment categories		Improved safety; promotes mode choice and adds capacity in priority locations	
Biggest Drawback	Little to no added capacity across all modes; limited responsiveness to local concerns		Limited ability to respond to growing infrastructure and evolving multimodal needs		Significant decline in the condition of most roadways; increased travel times on more than half of the highway system	
Pavement (PA) % in Poor Condition	2% principal arterial interstate 11% other principal arterials 17% non-principal arterials	↑ \$	2% principal arterial interstate 13% other principal arterials 43% non-principal arterials	= \$	2% principal arterial interstate 20% other principal arterials 56% non-principal arterials	↓ \$
Bridges (BR) % in Poor Condition	8% principal arterials 8% non-principal arterials	= \$	8% principal arterials 8% non-principal arterials	= \$	12% principal arterials 14% non-principal arterials	↓ \$
Roadside Infrastructure (RI)	Needs addressed throughout the state, overall condition improves	↑ \$	Address strategically, manage decline	= \$	Address strategically, manage decline	= \$
Safety (TS)	Decline in fatalities likely to continue to decline but at a slower rate	↓ \$	Decline in fatalities likely to continue	= \$	Decline in fatalities likely to continue	↑ \$
Interregional Corridor Mobility (IR)	Minimal mobility investment	= \$	Minimal mobility investment	= \$	Added capacity improves flow on regional connections w/ greatest predicted delay	↑ \$
Twin Cities Mobility (TC)	Address 1+ spot mobility issues per year; one new MnPASS lane	↓ \$	Address 2+ spot mobility issues per year; two new MnPASS lanes	= \$	Address 5+ spot mobility issues per year; construct 2-3 interchanges; 4 new MnPASS lanes	↑ \$
Bicycle Infrastructure (BI)	Full maintenance of existing bike amenities; no additional facilities	= \$	Full maintenance of existing bike amenities; no additional facilities	= \$	Targeted expansion of the state's bicycle network	↑ \$
Accessible Pedestrian (AP)	Most pedestrian improvements are ADA-related	= \$	Most pedestrian improvements are ADA-related	= \$	Targeted expansion of ped. network; both ADA and non-ADA improvements	↑ \$
Regional + Community Priorities (RC)	Local concerns primarily addressed through priority and timing of bridge and pavement projects	↓ \$	Local concerns addressed through partnerships, design add-ons, and a few projects per year addressing quality of life and economic competitiveness	= \$	Local concerns addressed through partnerships, design add-ons, and several projects per year addressing quality of life and economic competitiveness	↑ \$



MnDOT scenario analysis

- ▶ Day 1: near-parallel to public input
 - Broad, 20-year outcomes
- ▶ Day 2: Focus on years 1-10, with eye towards years 11-20
 - Specific outcomes
 - Risk evaluation

Investment Approach Worksheet

Meeting Location (city): _____ Group #: _____

Minnesota GO 20-Year State Highway Investment Plan

Are you a member of MnDOT TALK Online Customer Community?

PART I. INITIAL REACTIONS

1. The 20-Year Minnesota State Highway Investment Plan (MnSHIP) presents an opportunity to adjust MnDOT's investment policies to reflect public priorities for transportation spending.
Given your values and expectations for the highway system, do you think that MnDOT should . . .

Move in the direction of Approach A

- Focus on maintaining existing infrastructure (roads, bridges, roadside infrastructure) across the entire system
- Make strategic, proactive improvements to safety infrastructure more slowly than the current rate
- Reduce investment in mobility, non-motorized transportation options, and local priorities

Continue in the direction of Approach B (current investment direction)

- Focus on bridges and safety; maintain current investment in mobility, non-motorized transportation options, and local priorities
- Make strategic, proactive improvements to safety infrastructure at current rate; invest at select sustained crash locations
- Accept significant decline in pavement condition on low-volume roads

Move in the direction of Approach C

- Focus on meeting infrastructure needs on interstates only; increase investment in mobility, local priorities, and non-motorized transportation options
- Make strategic, proactive improvements to safety infrastructure more quickly than current rate; invest at many sustained crash locations
- Accept significant deterioration in the condition of infrastructure on non-interstate highways

2. **Why? What makes your selection a more desirable option than the other two?**

PART II. WHAT WOULD YOU CHANGE?

3. The "Investment Approach Matrix" breaks out each investment approach into nine categories.
If you could modify your preferred approach by increasing investment in one or two areas, which areas would you choose?

4. Increased investment in one area requires decreased investment in another.
In which area(s) would you decrease investment to cover increased investment in your priorities listed above (#3)?



Set investment priorities



- ▶ Present work: build upon cross cutting risks from previous work
 - Years 1–10: balance management of key risks
 - Years 11–20: focus on financial and asset risks



Management of key capital risks

Key capital investment risk statements	Managed risk by 2023 (of 3 ✓)	Managed risk by 2033 (of 3 ✓)
GASB-34: poor pavement & bridge condition could influence state bond rating	✓✓✓	✓✓
Federal policy: failure to achieve MAP-21 targets on NHS results in lose of funding flexibility	✓✓✓	✓✓
MnDOT policy: misalignment with 50-year Vision & Multimodal Policy Plan results in loss of public trust	✓✓	✓
Bridges: deferring bridge investments viewed as an unwise/unsafe strategy	✓✓✓	✓✓
Responsiveness: less flexible investment limits responsiveness to local econ. dvpt./quality of life opportunities	✓✓	—
Maintenance budget: untimely or reduced capital investment leads to unsustainable maintenance costs	✓✓	✓
Public input: investment inconsistent with MnSHIP public outreach results in loss of public trust	✓✓	—

Develop investment programs



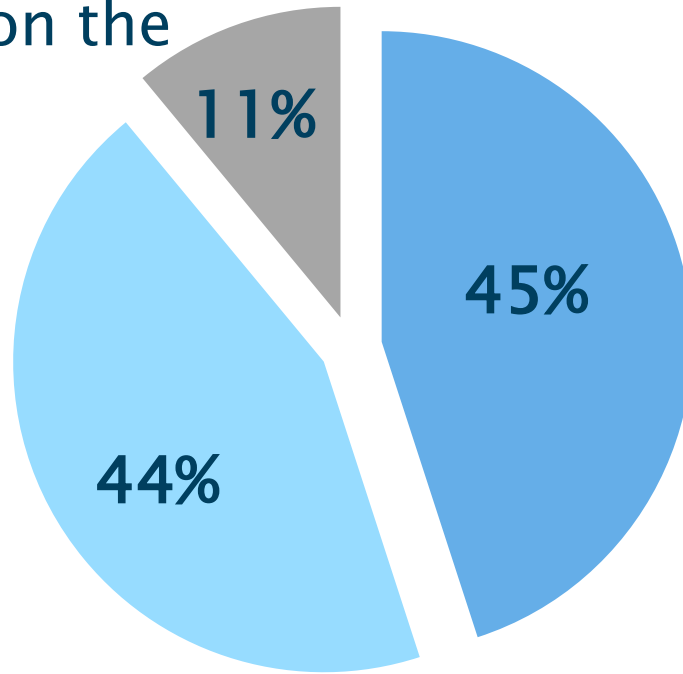
► Present work

- Years 1–4
- Years 5–10
- Years 11–20



Investment Programs: Years 4 & 5-10

Project support:
expenditures to deliver;
varies depending on the
project mix



Statewide performance program:
achieves performance that manages risk associated with statewide travel

District risk management program:
manages risk associated most closely with regional travel



Statewide performance program

- ▶ $\approx 45\%$ of revenue focused on NHS system
- ▶ Performance driven
- ▶ Investments in pavement, bridge, safety, roadside infrastructure and metro reliability
- ▶ Programmed collaboratively between central, district and specialty offices



Statewide performance program

► Outcomes

- Less 10% of NHS bridges structurally deficient
- Less 2% of interstate pavements in poor condition
- \approx 4% of non-interstate NHS pavement in poor condition
- Implement HSIP funds strategically
- Investments in the Twin Cities that improve performance



District Risk Management Program

- ▶ $\approx 44\%$ of revenue focused on non-NHS system
- ▶ Performance based; some corporate minimums based on risk assessment
- ▶ Flexibility across districts to meet minimums
- ▶ Investments span existing assets, mobility, safety, and regional + community improvement priorities on non-NHS system
- ▶ District programming; central and specialty support



District Risk Management Program

- ▶ Expenditures(DRAFT)
 - Asset management: 66%
 - \approx 13% of non-NHS pavement in poor condition
 - Gradual decline in non-NHS bridge condition
 - Traveler Safety: 8%
 - Mobility: 13%
 - Regional + Community Improvement Priorities: 13%



Timeline & Next Steps

- ▶ Spring 2013:
 - Public involvement on draft plan in May/June
 - Adopt in August
- ▶ Beyond spring 2013
 - Manage key capital investment risks through annual 10-year Work Plan update
 - Annual performance management cycle ensures consistency with MnSHIP investment priorities



Thank you!

Deanna Belden

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MnSHIP website – follow & participate

Google: MnDOT MnSHIP

<http://www.dot.state.mn.us/planning/statehighwayinvestmentplan/index.html>





Lessons from WMATA's Performance Journey

Presented :

Performance-Based Planning and Programming Webinar
March 21, 2013

Patricia Hendren, Ph.D.
Director, Office of Performance
phendren@wmata.com



Performance-Based Planning and Programming: 3 Takeaways

- The Five Components Matter
- This Works
- Just Do It

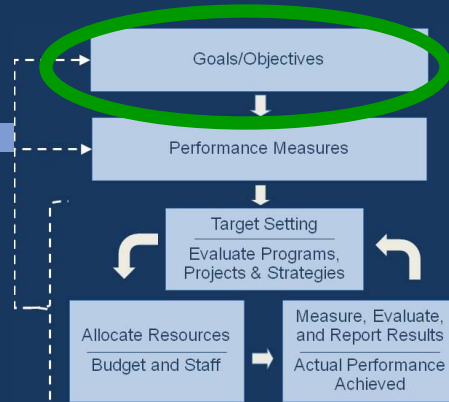


Performance-Based Planning and Programming: 5 Components





1 Goals: Board Adopted Strategic Framework (10/25/2012)



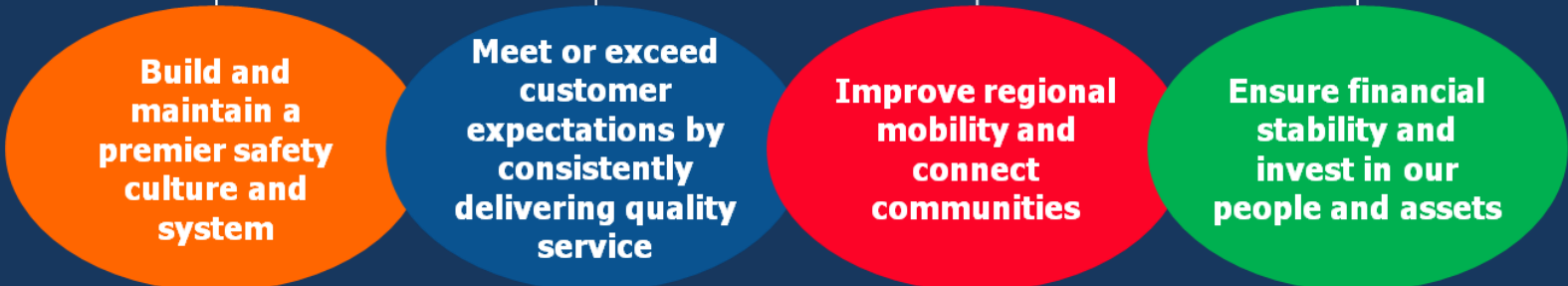
Vision

Metro moves the region forward by connecting communities and improving mobility for our customers.

Mission

Metro provides safe, equitable, reliable and cost-effective public transit.

Goals





2

Performance Measures: GM/CEO Business Plan



Strategic Goal	GM/CEO Performance Measure
Safety	<ul style="list-style-type: none"> ● Employee Injury Rate ● Customer Injury Rate ● Crime Rate
Quality Service	<ul style="list-style-type: none"> ● Bus On-Time Performance ● Rail On-Time Performance ● Access On-Time Performance ● Escalator Availability ● Customer Commendation Rate ● Customer Complaint Rate
Invest in People & Assets	<ul style="list-style-type: none"> ● Operating Expenses on Budget ● Capital Funds Expended ● Number of Positions Filled
Connect Communities	<ul style="list-style-type: none"> ● TBD





3

Target Setting: The Steps



1) Audience

- External
- Internal

Believable

Motivational

3) Inputs

- Data trends
- Actions
- Resources
- Externalities
- Peers

2) Purpose

- Stretch
- Easy to Attain
- Manage Expectations

4) Type of Target

- % Change
- Number
- Return to Base Year
- Directional

5) Timeframe

- Weekly, Monthly, etc.

Board and public

Selection based on audience

Data is your best defense

What will resonate?

Different than reporting frequency



Target Setting Example: Escalator Availability



	CY11 Data	CY12 Data	CY13 Estimate
Max Escalator Availability	100%	100%	100%
<i>Less Availability due to:</i>			
Unscheduled maintenance	10.0%	6.5%	5.6%
Scheduled replacements and rehabilitation	2.7%	3.2%	4.4%
Other scheduled maintenance	1.8%	1.0%	1.0%
Average Availability	85.5%	89.3%	89%
TARGET	89%	89%	89%

- Trend data is key
- Actions, constraints and externalities ALL impact results
- Provides opportunity to argue for resources



4

Allocating Resources: Department Business Plans



What you Do	Strategic Goals	Business Plans	Benefits to You
  	<p>Build and maintain a premier safety culture and system</p> <p>Meet or exceed customer expectations by consistently delivering quality service</p> <p>Ensure financial stability and invest in our people and assets</p> <p>Improve regional mobility and connect communities</p>	<p>+</p> <p>Actions</p> <p>Who</p> <p>Performance Measures</p> <p>Data Source</p> <p>Targets</p>	<p>=</p> <p>IMPROVE performance</p> <p>SHOW what you do</p> <p>ARGUE for support/resources</p> <p>MOVE from reactive to strategic</p> <p>FOSTER unity around goals</p> <p>FOCUS staff and resources</p>



What's In a Business Plan?

Linking Day-to-Day Work to Goals



Track progress towards achieving strategic goals

Sets expectation for action completion

Goal	Performance Measure	Target	Key Actions	Time Frame	Action Owner	Dependencies	
Meet or exceed customer expectations by consistently delivering quality service	Mean Distance Between Failure	7,700	Inspect all buses coming out of mid-life overhaul	5/1/12	Larry Skelton		
			Continue with reporting of necessary repairs on all service lanes.				
			Routinely review out of service reports, road data, repair actions, and AVM reporting; verify engine failures, assist in diagnosis and repair as needed	5/1/12	Larry Skelton		
			Provide engineering support for reliability based maintenance program (and mid-life), improve response product output, passenger appeal		Bob Golden		

Key steps necessary to move towards achieving goals

Point person for implementing action

Who is critical to action implementation

Sets end point or direction for measure / defines success



5

Monitoring Progress: Reports Customized for Audience



10 out of 12 MEASURES IMPROVED

GM/CEO MEASURE	VS. 2011
Rail On-Time Performance	●
Access On-Time Performance	●
Bus Fleet Reliability	●
Escalator Availability	●
Customer Injury Rate	●
Employee Injury Rate	●
Customer Commendation Rate	●
Bus On-Time Performance	●
Rail Fleet Reliability	●
Elevator Availability	●
Crime Rate	●
Complaint Rate	●

KPI: Rail On-Time Performance (Jan 2013) **Goal: Meet or exceed customer expectations by consistently delivering quality service**

Reason to Track: On-time performance measures the adherence to weekday headways, the time between trains. Factors that can affect on-time performance include: infrastructure conditions, speed restrictions, single-tracking around scheduled track work, railcar delays (e.g., doors), or delays caused by sick passengers. For this measure higher is better.

Why Did Performance Change?

- Rail OTP was 3% better than January 2012 as Metro balanced OTP with the need for track work and maintained even train spacing due to fewer delays and more railcars in service.
- This January, weekday track work was limited to the evenings on the Red, Blue and Orange Lines, reducing OTP at a time when the fewest customers are in the system (6% of weekday station stops are in evenings). Last January, track work also occurred during mid-days, impacting more customers (25% of station stops are in mid-day) and significantly reducing OTP.
- Fewer railcar and public delays and better railcar availability (improved 7% compared to January 2012) enabled Metro to maintain even train spacing.
- On Inauguration Day, Metrorail achieved 93% on-time performance over the course of 17 hours of peak service, moving 783,000 riders to their destinations.

Rail On-Time Performance

---●--- CY 2012 -■- CY 2013 — Target

Actions to Improve Performance

- Expand evening track work to all Lines in order to accelerate improvements to Metro's rail system infrastructure.
- Following January's Green Line arcing insulator incident, improve communication with customers during service disruptions.
- Remove speed restrictions following the completion of track repairs and monitor impact on OTP.
- Develop tool to better manage afternoon car availability so that gap trains are positioned strategically to respond to delay incidents.

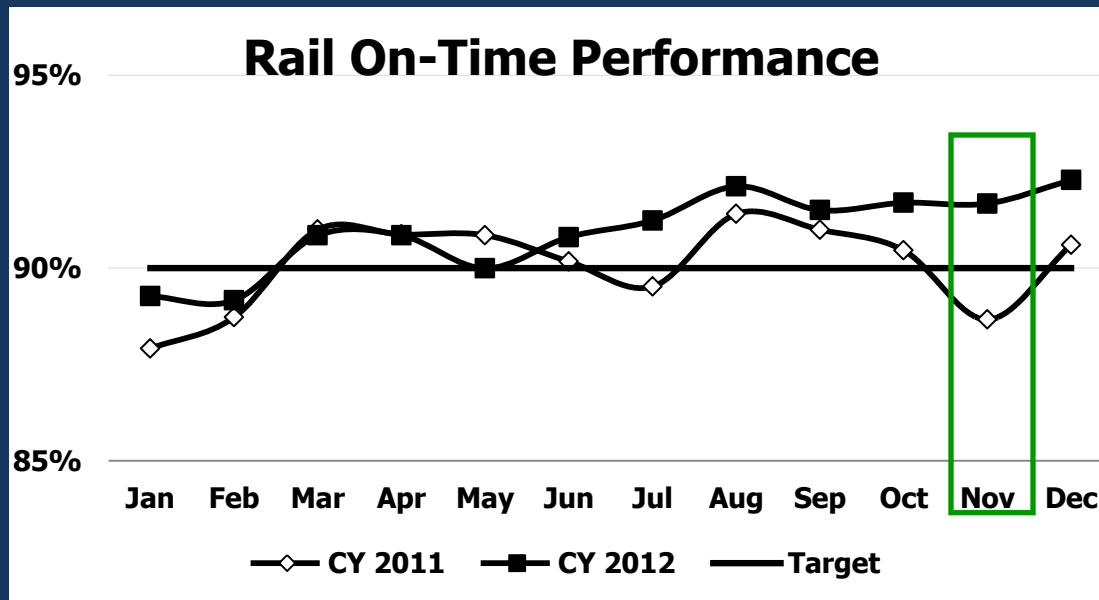
Conclusion: Rail OTP improved 3% this January as fewer delays and more railcars in service enabled Metro to maintain even train spacing. In addition, weekday track work was limited to evenings, minimizing the impact to weekday OTP (occurred in mid-day and evening last January).

Escalators Outages at Stations (Unscheduled and Scheduled)
03-15-2013 06:00 AM
AM Report

Strategic Goal: Deliver Quality Service		# of Units	Rev. Hours Out of Service (OOS)
Escalators at Stations		589	
Escalators in Service		534	
Out of Service (OOS)		54	21,744
Unscheduled		19	433
Scheduled		35	21,290



PBPP Works: Balances Conflicting Goals

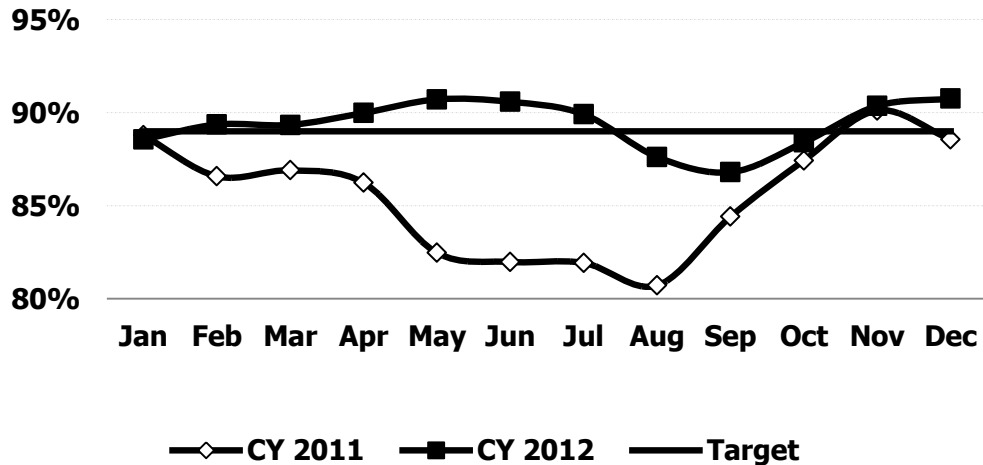


- Agency goals can conflict:
 - Deliver Quality Service
On-time performance
 - Invest in Our Assets
Track work



PBPP Works: Provides explanations using “sub-measures”

Escalator System Availability



- Why buried in sub-measures
 - Mean Time to Repair
 - Mean Time Between Failure
 - Preventive Maintenance Compliance



PBPP Works: Provides explanations using “sub-measures”

Preventive Maintenance Compliance

44% in 2010



64% in 2011



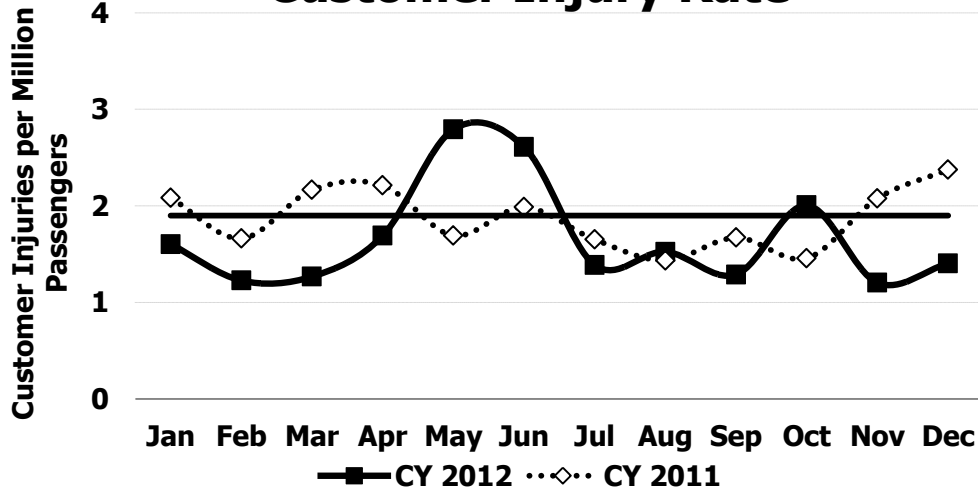
89% in 2012





PBPP Works: Data Analysis Identifies Actions People Can Take

Customer Injury Rate



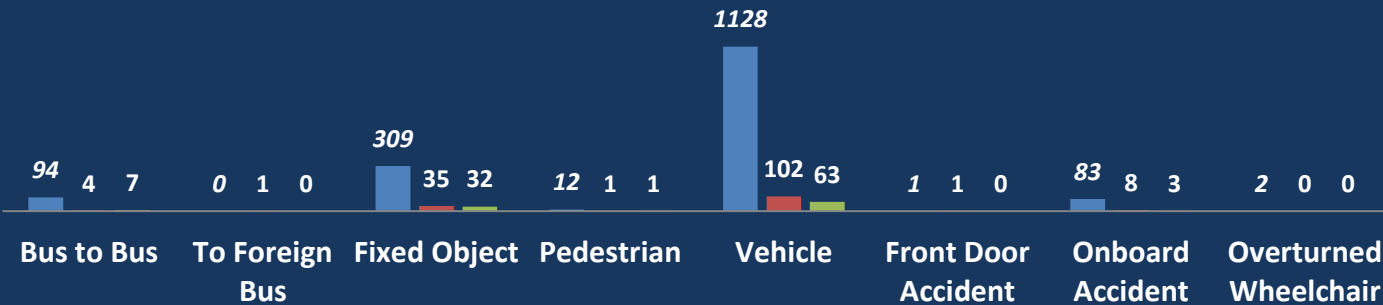
- Bus collisions #2 cause of customer injuries
- Dive down to a level of detail where individuals can act
- Prioritize and customize actions to improve results



PBPP Works: Data Analysis Identifies Actions People Can Take

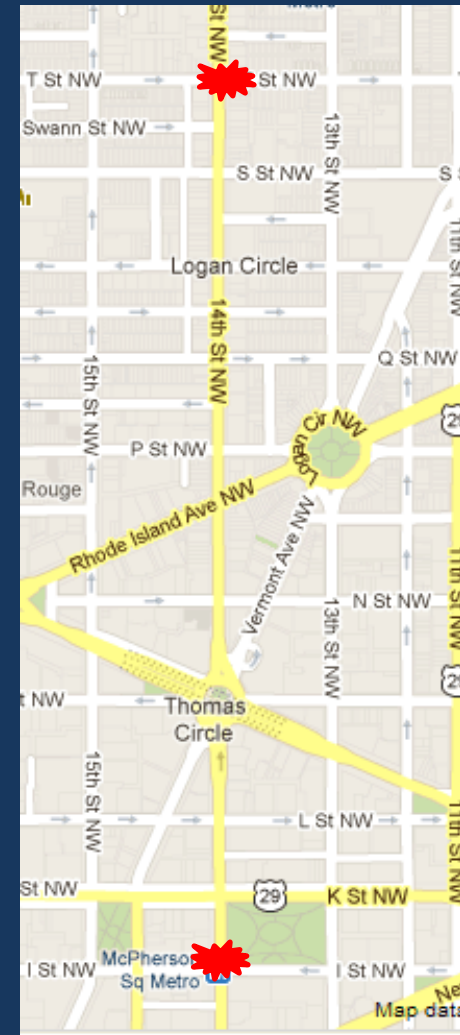
Type of Accidents (YTD-Sept)

Weekday Saturday Sunday



Actions

- Jersey wall repositioned
- Trees trimmed
- Training customized
- Results posted on Bus News Network



Takeaways: 5 Components Matter



** Leadership support is key to success





Takeaways: PBPP Works





Takeaways: Just Do It



Q AND A





What's Next





The PBPP Guidebook Series

- The PBPP Guidebook Series includes -
 - Performance Based Planning and Programming (PBPP) Guidebook, and
 - Model Long-Range Transportation Plans: A Guide for Incorporating Performance Based Planning (LRTP)
 - Performance Based Electronic STIP (E-STIP)



Performance-Based Planning and Programming

Performance-based planning and programming website presents the information that FHWA, FTA and our partners have developed to date featuring:

- Case Studies
- PBPP White Paper
- Recurring Newsletter
- Workshop Reports

www.fhwa.dot.gov/planning/pbp/





OUTREACH

- Next Steps: Workshops
 - Regional
 - State Specific
 - Peer Exchanges

www.fhwa.dot.gov/MAP21



FTA Resources to learn more, get involved

MAP-21

- www.fta.dot.gov/map21

National Online Dialogues

Transit Provider Representation on MPO Boards, through March 25

- Open until March 25
- <http://transitmpo.ideascale.com/>

Transit Asset Management

- Closed now to new ideas, but great FAQ and info to browse
- <http://tam.ideascale.com/>

State of Good Repair

- <http://www.fta.dot.gov/about/13248.html>
- Info on workshops, TERM-Lite tool, TAM Pilots



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