



Rockford Metropolitan Agency For Planning

Performance Measures

RMAP 2040 Long Range
Transportation Plan Update

What is Performance Management?

- The practice of setting goals and objectives
- An ongoing process of selecting measures
- Setting targets
- Using measures in decision making to achieve desired performance outcomes
- Reporting Results

What is Performance-Based Planning and Programming (PBPP)?

- The application of performance management principles within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation process
- Data driven
 - Qualitative
 - Quantitative

MAP-21 Performance Measures National Goals Topic Areas

- **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on *all public roads*
- **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair
- **Congestion Reduction** – To achieve a significant reduction in congestion on the *National Highway System*
- **System Reliability** – To improve the efficiency of the surface transportation system
- **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- **Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment
- **Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including regulatory burdens and improving agencies' work practices

Time Frame for Performance Measures Development

- MAP-21 requires State DOT's to establish statewide targets not later than 1 year after the effective date of final rule for each performance measure category
- MPO's are required to establish targets for their entire Metropolitan Planning Area in coordination with the State DOT *not later than 180 days* after the date the respective State DOT establishes their safety targets
 - ❖ Proposed Rulemaking provides flexibility to the MPO to establish targets for their Metropolitan Planning Area by either supporting the State DOT targets or defining a target unique to its metropolitan area.

What has been done so far?

- IDOT has established a Technical Advisory Group comprised of members from all IL-MPOs
- TAG will assist in determining baselines for each performance goal and integrate into State of Illinois performance management system
- TAG will also assist in developing consensus on regional targets and make recommendation on priorities
- RMAP staff review of current 2040 LRTP
- *Draft* listing of potential metrics and data sources
- AASHTO Standing Committee on Performance Management
- USDOT NPRM on (a)Safety, (b)HSIP and (c)Planning

Performance Measures in the current RMAP 2040 LRTP

- Current Roadway Volume / Capacity
- 2040 Projected Roadway Volume / Capacity
- Future Roadway Improvements (potential capacity expansion or new roadway facilities)

| Performance Measures | | | System Reliability- <i>To improve the efficiency of the surface transportation system</i> | | |
|---|------------------------------------|--|---|---------------------------------------|---------------------------------|
| | | | Measure | Metric | Data Source |
| Safety- <i>To achieve a significant reduction in traffic fatalities and serious injuries on all public roads</i> | | | Highway | | |
| <i>Measure</i> | <i>Metric</i> | <i>Data Source</i> | Service Standards | Level of Service | MPO |
| Fatalities | | | Transit | | |
| Auto | Number | NHTSA (FARS); IDOT Traffic Safety | Vehicle Availability | Vehicles Available/ Vehicles Operated | National Transit Database |
| Motorcycle | Number | IDOT Traffic Safety | On time Performance | % On Time | RMTD |
| Bicycle | Number | IDOT Traffic Safety | Transportation Alternatives | | |
| Pedestrian | Number | IDOT Traffic Safety | Off Road Trails | Miles | Municipalities |
| Alcohol Related Fatalities | Number | IDOT Traffic Safety | On Road Designated Bike Route | Miles | Municipalities |
| Fatality Rate | | | On Road Bicycle Lanes | Miles | Municipalities |
| Auto | # of Fatalities/ VMT | NHTSA/HPMS | Sidewalks | Miles | Municipalities |
| Serious Injuries | | | Environmental Sustainability- <i>To Enhance the Performance of the Transportation System While Protection the Environment</i> | | |
| Auto | Number | IDOT Traffic Safety | <i>Measure</i> | <i>Metric</i> | <i>Data Source</i> |
| Motorcycle | Number | IDOT Traffic Safety | Emissions | | |
| Bicycle | Number | IDOT Traffic Safety | Ozone | Parts Per Million | USEPA County Air Quality Report |
| Pedestrian | Number | IDOT Traffic Safety | Particulate Matter | Microgram/Cubic Meter | USEPA County Air Quality Report |
| Injury Rate | | | Air Quality | Air Quality Index Value | USEPA Air Quality Index Report |
| Auto | # of Injuries/ VMT | IDOT Traffic Safety; HPMS | Sustainability | | |
| Transit | | | Transportation Costs | H+T Index | CNT |
| Crashes/ Injuries/ Fatalities | Crashes / 100,000 Miles of Service | RMTD | Farmland Conversion | Acres Consumed for Transportation | IDOA |
| Others | | | Green Infrastructure | | |
| Safety Belt Usage | % Observed | IDOT Traffic Safety | Permeable Pavement | | Municipalities |
| Infrastructure Condition- <i>To maintain the highway infrastructure asset system in a state of good repair</i> | | | Bioswales | | Municipalities |
| <i>Measure</i> | <i>Metric</i> | <i>Data Source</i> | Greenways | | Municipalities |
| Roadway Condition | | | Economic Vitality- <i>To Strengthen the Ability to Access national and international trade markets, and support regional economic development.</i> | | |
| International Roughness Index | % Good, Fair, Poor | HPMS; IDOT; Municipalities | <i>Measure</i> | <i>Metric</i> | <i>Data Source</i> |
| Pavement Condition Rating | % Good, Acceptable, Inacceptable | IDOT | Social | | |
| Bridge Condition | | | Income | Persons in Poverty | U.S. Census/ACS |
| Structurally Deficient | Number, % | National Bridge Inventory | Employment | Persons Unemployed | IDES |
| Functionally Obsolete | Number, % | National Bridge Inventory | Segregation | Dissimilarity Index | HUD |
| Transit | | | Civic Culture | Third Places | NETS Database (ESRI) |
| Annual Vehicle Revenue Miles | Revenue Miles | National Transit Database | Education | Persons with less than GED | U.S. Census/ACS |
| Annual Revenue Hours of Service | Revenue Hours | National Transit Database | Environmental | | |
| Annual Passenger Miles | Passenger Miles | National Transit Database | Brownfields/Greyfields | Acres of Impacted Land | EPA |
| Average Age of Fleet (Bus and Demand Response) | Average Age (Years) | National Transit Database | Sensitive Areas | Acres of Sensitive Land | MPO |
| Congestion Reduction- <i>To Reduce Congestion on the National Highway System</i> | | | Water Quality | Concentration of Pollutants | NPDES |
| <i>Measure</i> | <i>Metric</i> | <i>Data Source</i> | Economic | | |
| Truck Freight | | | Jobs | Workforce Classes | U.S. Census/ACS |
| Annual Hours of Truck Delay- Interstate | Truck VMT/Truck Freight Speed | HPMS; American Transportation Research Institute; IL Tollway Authority | Wages | Wage Differential | BLS |
| Roadway Congestion | | | Industry Mix | Gross Metropolitan Product | BEA |
| Annual Hours of Delay | VMT/Speed | HPMS; IDOT | Business Movement | Migration | BEA |
| Vehicle Flow | Level of Service | MPO; IDOT | Vibrancy | Churn Rate | NETS Database (ESRI) |
| Travel Time | Reliability Index | Unknown | | | |

Safety

Data to examine:

- Number of Serious Crashes
- Number of Fatalities
- Number of Serious Crashes by VMT
- Number of Fatalities by VMT

Infrastructure Condition

Data to examine:

- Bridge Conditions/ Sufficiency Rating
- Pavement Condition Rating System
- Pavement Structural Health Index
- State of Good Repair
- International Roughness Index

Congestion Reduction

Data to examine:

- Current Level of Service
- Level of Service from the Transportation Demand Model
- Vehicle Hours of Delay
- Mode share

System Reliability

Data to examine:

- Illinois motorist survey rating of highway on traffic flow, snow ice removal, safety, etc.
- Percent of roads in acceptable conditions
- Percent of bridges in acceptable conditions
- Roadway level of service
- Travel Time Reliability Index

Freight Movement and Economic Vitality

Data to examine:

- Annual Hours of Truck Delay
- Commodity Flows
- Airport Freight / Cargo information
- Primary Freight Network – Intermodal Facilities

Environmental Sustainability

Data to examine

- Air Quality
- Emissions

Reduced Project Delivery Delays

Data to examine (IDOT)

- Total number of projects
- Total number of late projects
- Total number of extensions
- Average number of days from sponsor project to project award

Transit Performance Measures

- FTA / USDOT will establish state of good repair standards for measuring the condition of capital assets pertaining to:
 - Equipment
 - Rolling Stock
 - Infrastructure
 - Facilities

Example of Potential Performance Measures

Goal: Work to achieve a state-of-good-repair for existing transportation assets

Strategy: Develop a database of deficient infrastructure and target transportation corridors with quality design improvements where high return on investment can be demonstrated

Data Types: Pavement condition – Condition Rating Survey; Level of Service; National Bridge Inventory (NBI), etc.

Impacts on Planning Documents

- Long Range Transportation Plan (LRTP)
 - Require MPOs to describe the performance measures and performance targets it used to assess the performance of its transportation system
 - MPO must also report on the progress it achieves in meeting its performance targets in comparison with the system performance recorded in previous reports

Impacts on Planning Documents

- LRTP continued-

- MPOs must include the current transportation demand of persons and goods in the LRTP
- Specifically require MPOs to identify “non-motorized facilities” (i.e. shared-use paths, etc.)
- MPOs should integrate into the LRTP the goals, objectives, performance measures and strategies described in the HSIP, including the Strategic Highway Safety Plan (SHSP)

Impacts on Planning Documents

- Transportation Improvement Program (TIP)
 - The TIP “shall reflect the investment priorities established within the current metropolitan transportation plan (aka Long Range Transportation Plan)
 - Proposed MAP-21 language would require MPOs to design TIPs that make progress towards achieving MPO performance targets
 - Importantly, proposed language would require the TIP describe how the projects in the TIP would achieve the MPO performance targets (i.e. linking investment priorities to those targets)

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