

# The Use of an Objectives-Driven, Performance-Based Approach at the Champaign County Regional Planning Commission

## The Experience of a Small MPO

The Champaign Urbana Urbanized Area Transportation Study (CUUATS) serves as the transportation-focused arm of region's metropolitan planning organization (MPO), the Champaign County Regional Planning Commission (CCRPC), for the Champaign-Urbana Urbanized Area. CUUATS has adopted an objectives-driven, performance-based approach to metropolitan transportation planning that is evident throughout its recent plan, *Choices 2035*. Through the development of *Choices 2035*, CUUATS and its planning partners defined 12 regional goals, several of which tie directly to improving transportation systems management and operations (M&O). Specific objectives were identified to support each of the 12 regional goals. For each objective, measures of effectiveness to track progress toward the objective and recommended actions were identified. The plan includes an evaluation of whether the prior plan objectives were met using established measures of effectiveness (MOEs). CUUATS has witnessed a number of positive outcomes as a result of instituting an objectives-driven, performance-based approach to planning, including increased public engagement, a greater level of government accountability, and a safer, more bike-friendly community.

## Background

CCRPC is the MPO for the Champaign-Urbana Urbanized Area, an area of approximately 40 square miles with a population of over 126,000 in east central Illinois. This region is the home to the University of Illinois at Champaign-Urbana, a school with nearly 42,000 undergraduate and graduate students.<sup>1</sup>

CUUATS coordinates with the Illinois Department of Transportation, Champaign County, the Cities of Champaign and Urbana, the Village of Savoy, the University of Illinois, the Champaign-Urbana Mass Transit District, and the general public to develop the region's metropolitan transportation plan (MTP). Because of the large population of students, pedestrian and bicycle access and safety are top priorities in the region.

## Overview of the Approach in Champaign-Urbana

CUUATS first integrated the objectives-driven, performance-based approach into the development of its MTP in 2001, with the development of its 2025 metropolitan transportation

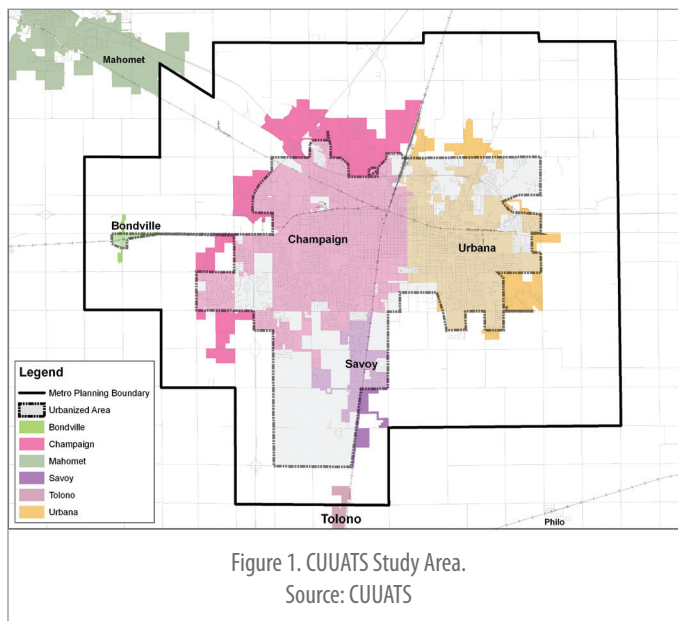


Figure 1. CUUATS Study Area.  
Source: CUUATS

<sup>1</sup> University of Illinois, *Facts 2009-2010*. Available at: <http://illinois.edu/about/overview/facts/facts.html>.



plan. In 2009 the MPO adopted its next MTP, *Choices 2035*, which used the approach to strategically plan for improvements across all goal areas. CUUATS uses a combination of goals and objectives to define the desired outcomes of *Choices 2035*, MOEs to track progress, and strategies to realize the objectives. This is illustrated by Table 1, one of 12 similar tables in *Choices 2035* created for each regional goal. As detailed in Table 1, a

list of parties responsible for implementing the strategies is associated with each objective. Carrying out the strategies is typically the responsibility of partner agencies and may be accomplished through the individual agencies' budgets rather than regional funds. *Choices 2035* also contains an evaluation of how well the previous plan's outcomes were met.

SAFETEA-LU Planning Factor #4 Increase the accessibility and mobility of people and freight				
PLANNING PROCESS LEVEL	DESCRIPTION			
GOAL	5. All transportation system users will have convenient, multi-modal access to all parts of the urbanized area and will travel with increased mobility during peak traffic hours			
OBJECTIVES	Improve average vehicular travel time by at least 1.5 minutes during peak hour periods on major traffic corridors by 2035	Improve access for persons with disabilities to all parts of the urbanized area by 2035	Improve truck freight movements in the urbanized area and reduce their effect on mobility and accessibility for other transportation modes by developing and implementing a truck route plan by 2035	Improve the mobility of all transportation system users by applying the CUUATS Access Management Guidelines to selected major corridors by 2035
MEASURES OF EFFECTIVENESS	Level of Service	Number of APS Systems Installed	Truck ADT Volumes on Selected Major Corridors	Number of Corridors with Managed Access
	Travel Time Studies			
	Congestion	Number of ADA Accessible Sidewalk Ramps Constructed		
STRATEGIES	Continue signal upgrades, periodic re-timing, and coordination of all new and existing signalized intersections	Install APS systems at intersections with high traffic volumes and/or high pedestrian crossing volumes	Prepare a comprehensive truck route analysis to determine the safest and most efficient routes for trucks in the urbanized area	Review Access Management Guidelines every five years
	Educate residents about the monetary, health and environmental benefits of mode shift. Encourage the use of other modes of transportation in place of personal vehicle use	Retrofit existing ramps and crosswalk entrances to meet ADA standards	Identify congested intersections resulting from increased truck volumes and recommend solutions	Evaluate access point locations and traffic circulation patterns for all new development as part of the plan review process
	Utilize car sharing programs and park and ride facilities to remove vehicle trips from the roadway network	Fill in gaps which assist in the current sidewalk network	Set delivery times for businesses in high traffic areas, particularly on campus and in the two downtowns	Work with property owners and developers to eliminate unnecessary access points along major corridors to improve mobility and safety
	Continue adding connected pedestrian, bicycle and transit facilities to the existing transportation network, making the travel modes more efficient	Fix sidewalks that are in disrepair to make them more accessible and easier to use for disabled persons and all other users	Evaluate loading areas in the urbanized area to determine proper space, timing and roadway geometry	
RESPONSIBLE PARTIES	IDOT, CUUATS Staff, Cities and Villages, CU-MTD	IDOT, Cities and Villages, CU-MTD	IDOT, CUUATS Staff, Cities and Villages	IDOT, CUUATS Staff, Cities and Villages, Developers, Property Owners

Table 1. The Use of the Approach in *Choices 2035*.  
Source: CUUATS, *Choices 2035*.



## Motivation for Using an Objectives-Driven, Performance-Based Approach

The use of the approach was initially motivated by planners at CUUATS who were interested in finding a better way to evaluate how well the region was doing regarding improving regional safety and mobility. They conduct a variety of studies such as traffic signal, crash, and corridor studies where they collect data on safety and transportation system performance. This familiarity with data in the region and the belief by the MPO that objectives should be specific and measurable led it to develop specific objectives for a range of regional goals and performance measures to track progress toward the objectives. The approach easily gained the support of the MPO board.

## Developing Measurable Objectives

CUUATS, in conjunction with the MTP Steering Committee and other stakeholders, developed 12 regional transportation goals grouped according to the eight planning factors outlined in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The MTP goals and objectives were developed based on a combination of the SAFETEA-LU factors, local planning efforts, and stakeholder input as well as updates to the list of goals presented in the last MTP. The goals and objectives were developed incrementally through a series of reviews. CUUATS developed the initial set of goals and objectives and then worked with the Long Range Transportation Plan Steering Committee comprising MPO member agency managers and stakeholder group representatives to reach

consensus on every goal and objective. The goals and objectives were presented to the CUUATS Policy Committee for review and then to the public to obtain feedback. Initially some members of the public thought that the objectives were unattainable, while others were excited to see the opportunity for increased accountability.

The resulting objectives were used in the MTP and followed the SMART principles: they were Specific enough to guide the approach without dictating it, could be Measured, were Agreed upon through collaboration with a variety of stakeholders, were Realistically achievable within the allotted budget, and had Time constraints for achieving the objectives. Complementary measures of effectiveness were developed for each objective based on available data.



M&O Goals and Objectives from the 2035 Long Range Transportation Plan		
GOAL	OBJECTIVE(S)	MEASURES OF EFFECTIVENESS
Goal #3: Transportation modes and facilities in the urbanized area will be safe for all users	<p>Objective 1: Reduce the total number of crashes in Champaign-Urbana by 5% by 2014.</p> <p>Objective 2: Reduce the total number of fatalities and severe injuries in Champaign-Urbana by 25% between 2009 and 2014</p> <p>Objective 3: Reduce the total number of crashes involving bicyclists and pedestrians in Champaign-Urbana by 15% by 2014</p>	<p>Total Crashes per 100M VMT</p> <p>Total Fatalities per 100M VMT, Total Severe Injuries per 100M VMT</p> <p>Total Pedestrian Crashes, Total Bicycle Crashes</p>
Goal #5: All transportation system users will have convenient, multi-modal access to all parts of the urbanized area and will travel with increased mobility during peak traffic hours	Objective 1: Improve average vehicular travel time by 1.5 minutes during peak hour periods on major traffic corridors by 2035	Level of Service, Travel Time Studies, Congestion
Goal #9: All transportation system users in the urbanized area will have access to a network of transportation modes and infrastructure that maximizes connectivity between origins and destinations and promotes the use of both motorized and non-motorized modes to travel between them	Objective 2: Travel delay will not exceed 5.5 hours per person per year on urbanized area roadways due to the completion of an enhanced arterial fringe road system around the urbanized area	Hours of Delay per Person per Year, Miles of Fringe Road System Competed
Goal #10: To the greatest extent possible, the existing capacity of the urbanized area transportation system will be maximized through innovative transportation system management approaches	<p>Objective 1: Maintain the number of vehicle miles traveled in 2005 through 2010</p> <p>Objective 2: Decrease Volume-to-Capacity (V/C) ratio to be representative of level of service "D" or better by 2035</p>	<p>Vehicle Miles Traveled per Year</p> <p>Volume to Capacity Ratio</p>

Table 2. M&O-Related Goals, Objectives, and Measures of Effectiveness.  
Source: CUUATS, *Choices 2035*.

## Achieving Objectives

The primary mechanism for achieving the objectives in *Choices 2035* is the implementation of strategies defined for each objective. These strategies are the responsibility of one or more agency in the region. Additionally, management and operations activities are typically funded and conducted by MPO member agencies. The objectives help guide the investment decisions made by the member agencies. For example, the Urbana City Council decided to allocate a portion of the city's capital improvement plan to bicycle

and pedestrian facilities in order to help achieve the regional objective of "Increase the miles of dedicated bicycle facilities and signed bike routes in the metropolitan planning area by at least 15% by 2014."<sup>2</sup>

CUUATS receives limited Surface Transportation Program (STP) funding and this constrains its ability to fund projects to meet the objectives. The MPO selects projects and investments in the region according to the "Revised CUUATS Project Assessment Guidelines for Assignment of STP(U) Funds" developed in 2001 and revised in 2008.

<sup>2</sup> Champaign Urbana Urbanized Area Transportation Study, *Choices 2035* Champaign Urbana Urbanized Area Transportation Study Long Range Transportation Plan, December 2009. Available at: <http://www.ccrpc.org/transportation/lrtp2>.



These guidelines include a scorecard for evaluating projects based upon how well the project addresses regional priorities such as congestion and safety. The document has evolved since 2001 to incorporate current regional requirements, such as the “Complete Streets” requirement that requires all new roadways to have multimodal options incorporated into its design (e.g., bicycle facilities, traffic calming measures, access management, intelligent transportation systems, accessible pedestrian signals, etc.). The guidelines support the achievement of many MTP objectives, but are not directly tied to the objectives at this time.

## Tracking Progress

CUUATS evaluates system performance against how well the region has achieved MTP objectives by developing specific performance measures designed to help local agencies track the progress of each objective during the 5-year period between MTP updates. Local agencies collect data related to the performance measures through various M&O studies. Most of the region’s data collection efforts began in 2009 as the 2035 MTP is the first plan with which results from the first objectives-driven plan could be compared (2025 MTP from 2004). The MPO developed a database that is updated annually with the most current data on performance measures such as vehicle miles traveled (VMT), crash rates, travel time delay, among others. Data is collected by local agencies, Illinois Department of Transportation, US Census, and MPO staff and is reported to local agencies along with recommendations for transportation system improvements. The MPO’s geographic information system (GIS) inventory is also updated with the new data in order to produce a map of the region’s progress in meeting performance objectives for distribution community-wide.

The results of the region’s performance in meeting the 2025 MTP’s objectives in the past 5 years are documented in the

2035 plan. The plan gives the results of the measures of effectiveness a good, neutral, or poor rating noted by a thumbs up, left pointed thumb, or a thumbs down. The “thumbs” approach to displaying data on regional performance in meeting objectives was a simple way to clearly demonstrate to the public how well the region performed in various areas.

## Challenges and Lessons Learned

The primary challenge that CUUATS has encountered in implementing an objectives-driven, performance-based approach is resource availability including data and funding. CUUATS has experienced difficulties in demonstrating the effects of proposed bicycle and pedestrian improvements because its current travel demand model only accounts for automobile travel. CUUATS applied for and recently received funding from the Illinois Department of Transportation to expand its model to incorporate additional modes.

CUUATS has benefited from a rich pool of prospective employees graduating from the University of Illinois, but it has recently had to decrease the number of its personnel due to budget cutbacks. This lack of resources has presented challenges for the MPO in carrying out the approach and it is now looking to bolster its group of staff by hiring interns from the planning and engineering departments at the University of Illinois. CUUATS reports that the MPO is able to maintain a high level of technical expertise because it provides a variety of engineering studies and planning services to the member organizations. The member organizations, in turn, provide funding to CUUATS for the studies and other services.

Funding constraints have led the MPO to rely more on the efforts of member agencies to carry out strategies defined in the MTP for achieving the region’s objectives.



## Benefits of the Approach

CUUATS has witnessed many positive outcomes as a result of using the objectives-driven, performance-based approach. One of the most significant impacts is that the nature of transportation planning has evolved. In the past, the public and outside stakeholders paid less attention to what CUUATS was striving to achieve. The general perception was that the MPO's main purpose was to implement requirements for transportation agencies and local jurisdictions. The MPO has witnessed an increase in public input and local agency feedback as the objectives-driven, performance-based approach has forced the MPO to work more closely with the community on addressing issues and identifying goals and objectives that match the needs and desires of the region's residents.

With the new approach, CUUATS perceives that accountability is now highly important to the region and that stakeholders are holding CUUATS accountable for the goals and objectives the region aspires to achieve. This is seen by CUUATS as a great challenge to produce positive results and it has helped the MPO to make even more changes that the community wants to see. The MPO noted many positive benefits as a result of the performance-based approach including the City of Urbana receiving a formal designation as a "bicycle-friendly" region, witnessing a decrease in the number of automobile collisions and fatalities, and improvements in public education about transportation.

CUUATS plans to continue to use the objectives-driven, performance-based approach to focus planning efforts and funding decisions in the region. The MPO will explore ways to demonstrate the impact of future multimodal projects and M&O strategies on achieving MTP objectives.

## References

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