



## MEMORANDUM

**To:** CMAP Committees

**From:** CMAP staff

**Date:** February 16, 2018

**Re:** Proposed recommendations for the ON TO 2050 chapter regarding Mobility

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This memo contains the proposed recommendations of the ON TO 2050 chapter on Mobility. Since 2016, CMAP staff have conducted extensive research and collaborated with partners to develop ON TO 2050. The recommendations described in this memo were refined through numerous [strategy papers](#) and [snapshots](#), including the [Transit Ridership Growth Study](#), the [Regional Strategic Freight Direction](#), and the [Transportation System Funding Concepts](#), [Highway Operations](#), [Emerging Transportation Technology](#), [Non-Motorized Transportation](#), Traffic Safety (anticipated publication March 2018) and [Transit Modernization](#) strategy papers. These proposals build on GO TO 2040's focus on reinvestment, supporting transit, and fostering livable communities to explore new policies and strategies and provide implementers with more specific direction. This is one of a series of memos that will be used to introduce the core concepts of ON TO 2050 and seek feedback from CMAP committees and stakeholders.

### ON TO 2050 outline

ON TO 2050 will be conveyed primarily on the web. The structure assumes that readers will not approach the document linearly. The plan will be organized around five topical areas, each containing a set of recommendations that may repeat across chapters, as will some strategies within those recommendations. Each recommendation will describe its support for the three principles of the plan: Inclusive Growth, Resilience, and Prioritized Investment. The following lists the plan sections to provide context for land use chapter:

- Introduction
- Principles to move the region forward
  - State of the region
  - The three principles
- Engagement
- Land Use
- Environment
- Economy

- Governance
- Mobility: *Proposed recommendations provided below*

## Proposed mobility recommendations

The region's transportation system is poised at a critical moment. Travel patterns are changing in response to technology that is rapidly evolving. The future is uncertain, and yet we must make decisions today that will shape the transportation network for decades to come. At the same time that we look into an uncertain future, we continue to deal with the consequences of decisions made in the past. But the region cannot focus solely on solving today's problems and ignore the opportunities to build a future-oriented transportation system that can provide seamless movement of people and goods throughout the entire region.

Achieving this vision will require collective action to that avoids the constraints of existing systems, silos and solutions. While some strategies may require action from the state or federal government, increasingly the region will need to rely upon itself.

Transportation agencies, municipalities, and counties will need to magnify coordination efforts and take unorthodox steps to adopt and regulate new technologies, make the transit system competitive, end fatal crashes, and advance inclusive economic growth. Crucially, they will need to create new revenue streams to improve conditions on the existing transportation system as well as make limited and highly targeted capacity expansions.

The three principles of ON TO 2050 are embedded throughout the Mobility chapter. This chapter outlines recommendations to prioritize investments in existing infrastructure while securing new revenues for needed enhancements; improve resilience by building infrastructure that withstands changes in climate, technology, and funding constraints; and advancing inclusive growth by improving connections and mobility options for low income communities and people of color.

### ***Harness technology to improve travel and anticipate future needs***

Transportation technology is evolving rapidly, providing opportunities to more effectively manage the region's existing transportation assets and provide more seamless multimodal travel for people and goods throughout the region. There are near-term opportunities to coordinate traffic operations, invest in communications technology, and better leverage and communicate real-time data about the transportation system. However, the rapidity of technological change challenges communities to be forward-looking and make plans, policies, and investments that help shape the effects technology has on the region.

***The following outlines strategies and associated action steps to implement this recommendation.***

*Coordinate traffic operations regionwide*



- CMAP should work with IDOT towards implementing a regional, multi-jurisdictional traffic management center, either virtual or traditional.
- IDOT, the Tollway, and local agencies should enhance communication and coordination to improve work zone management.
- Highway agencies should share operational information and coordinate operations with transit agencies.
- CMAP should work with stakeholders to develop a regional communications master plan and update the regional ITS architecture
- CMAP and partner agencies should establish a program to modernize traffic signals, including the provision of transit signal priority.
- Highway agencies should review traffic signal policies, ensure up-to-date signal timing plans to minimize delay and crashes, and should implement adaptive signal timing where appropriate.
- CMAP should continue to maintain its highway traffic signal inventory.
- CMAP should work with transportation agencies to fund and execute planning activities that work towards implementing active expressway management, active arterial management, and integrated corridor management

*Plan for system modernization while making progress toward state of good repair*

- Transportation agencies should develop long-term modernization plans that include input from all internal departments
- Transportation agencies should build discussion of modernization opportunities into project development processes

*Implement managed lanes on the region's expressways*

*Identify public investments that could catalyze emerging technologies*

*Establish pricing and regulatory frameworks that help shape emerging technologies in support of regional goals*

- CMAP and partner agencies should implement pricing strategies to manage demand
- CMAP should convene and coordinate regional stakeholders to engage in national and state-level conversations about AV/CV policy and industry standards.



- CMAP and RTA should collaborate to establish regional TNC policy guidance
- CMAP should assist local governments in establishing policies for emerging technologies that support local goals.

*Design streets, curb space, and sidewalks to support emerging transportation needs and walkable communities*

*This strategy will also appear in the Land Use chapter*

*Ensure emerging transportation technologies support inclusive growth*

- CMAP should help communities identify the potential benefits and pitfalls of new technologies with regard to economic success and quality of life.
- IDOT, counties, and other transportation providers should ensure that disinvested communities are not adversely impacted by or excluded from improvements intended to facilitate new vehicle types and technologies.

*Make the collection, sharing, and analysis of public and private sector transportation data a regional priority*

- CMAP should promote responsible data stewardship among partner agencies such as the City of Chicago, RTA, transit providers, counties, and communities, and help to cost-effectively collect, process, share, and store transportation data.
- The public sector should identify ways to leverage provision of more detailed data and analysis to private companies while still protecting riders' privacy.
- Private sector partners should share data that substantially aids planning for emerging mobility services, transit, and the road network.
- Municipalities and transportation agencies should contractually require data sharing as a condition for access to public infrastructure (roadways, loading areas, etc.) or subsidies.
- CMAP and partners should improve data on non-motorized modes of transportation
- Private rail partners should provide substantive documentation of and data supporting the public benefits of future CREATE projects.

### ***Make transit more competitive***

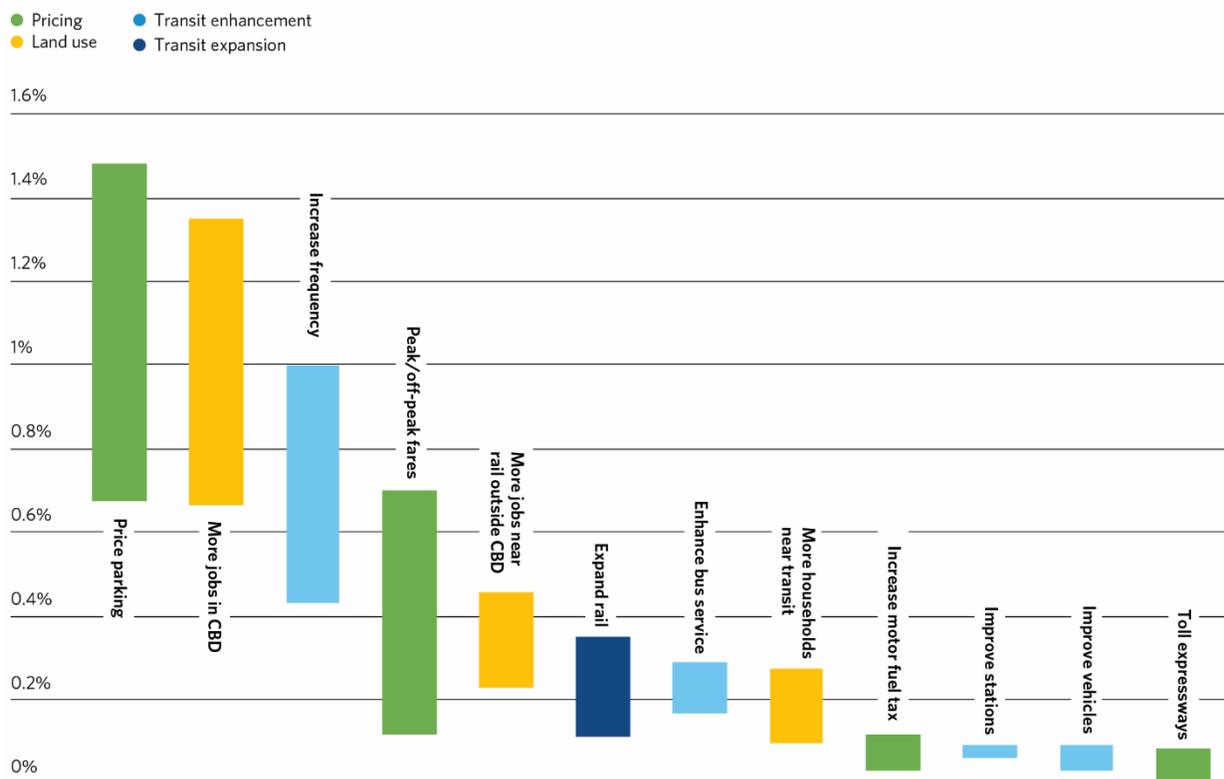
Chicago's public transit system has long been one of metropolitan Chicago's most critical assets. Even as travel patterns change and private transportation services proliferate, the region needs



to make public transit a competitive option in order to stay competitive in the global economy. Making transit competitive requires coordinated regional action, not just by transit agencies, but also by municipalities, road agencies, and funding authorities. Transit agencies need to balance increased investment in transit's core strengths – frequent, fast, reliable service in areas of moderate and high density- with its role in providing critical access to opportunity for people with limited mobility or without access to personal vehicles. Transit agencies alone cannot increase ridership. The chart below shows the range of land use, pricing, and other strategies that require action from many partners. Municipalities need to plan for transit-supportive land uses, particularly increased employment densities near transit, in order to enable future service enhancements. Road agencies need to make design and policy changes that improve transit service operating on their facilities. Most crucially, the region as a whole needs to commit to raising additional funding for needed transit improvements.

**Gain in mode share at low and high levels of strategy implementation, 2015**

Source: CMAP Transit Ridership Growth Study.



*The following outlines strategies and associated action steps to implement this recommendation.*

*Diversify and increase transit funding sources*

*Invest in and protect transit's core strengths*



- The region should move forward on implementing the highest performing planned Pace Pulse routes, and CTA should commit to implementing a BRT network
- CTA and Metra should prioritize addressing capacity constraints on high ridership rail lines

*Ensure equitable transit access*

- Transit agencies should balance tradeoffs between service efficiency and providing quality service to low income areas
- Transit agencies should expand upon policies to minimize the impact of increased fares on low income residents
- Transit agencies should work with local communities and the private sector to explore new ways to provide targeted, flexible and/or on demand service in EDAs

*Plan for transit-supportive land uses*

*This strategy will also appear in the Land Use chapter*

- Municipalities, CMAP, and Metra should analyze parking utilization and supply at adjacent transit stations to evaluate the potential for alternative land uses and parking allotments to support TOD.
- Municipalities should update plans, zoning codes, and development regulations to require greater densities and mixed uses near transit, including bus service, with a preference toward employment rich land uses.
- Municipalities should structure street, pedestrian, and bike networks to support future density where desired
- Municipalities should price on-street parking to manage demand in dense areas.
- Municipalities should prioritize capital projects that enhance pedestrian and bicycle access to transit stations.
- CMAP and partners should prioritize limited federal funding sources such as CMAQ, TAP, and STP toward jurisdictions that actively plan for densities to support transit service.

*Actively manage parking*

*This strategy will also appear in the Land Use chapter*

- Municipalities should require parking facilities to be designed to facilitate future conversion to other uses



- Municipalities should reduce or eliminate minimum parking requirements, or set maximum parking limitations in some locations.
- CMAP should prioritize parking studies in the LTA program.

*Road agencies should prioritize transit improving transit service*

- Road agencies should place more emphasis on investments that improve transit service, including transit signal priority, queue jumps, and dedicated expressway right-of-way for transit vehicles
- IDOT should review its design manuals and permitting processes to facilitate transit improvements
- Road agencies should involve transit agencies in early stages of project planning
- CMAP and road agencies should update performance based programming criteria for highway and arterial projects to emphasize transit improvements
- IDOT and the Tollway should identify ways to leverage toll revenue to pursue goals such as providing high-speed, high-reliability transit service on expressways

*Make further progress in fare and service coordination*

- Transit agencies should expand upon Ventra, continuing to provide and improve seamless payment for multiple transit providers
- Transit agencies should coordinate transfers, reduced fares, and payment with other modes of transportation
- Transit agencies should continue to rationalize overlapping service

*Improve the efficiency and effectiveness of paratransit and demand response service*

- Transit agencies should continue to make progress toward universal accessibility of stations
- Counties should consolidate demand response services within their borders

***Leverage the transportation network to promote inclusive growth***

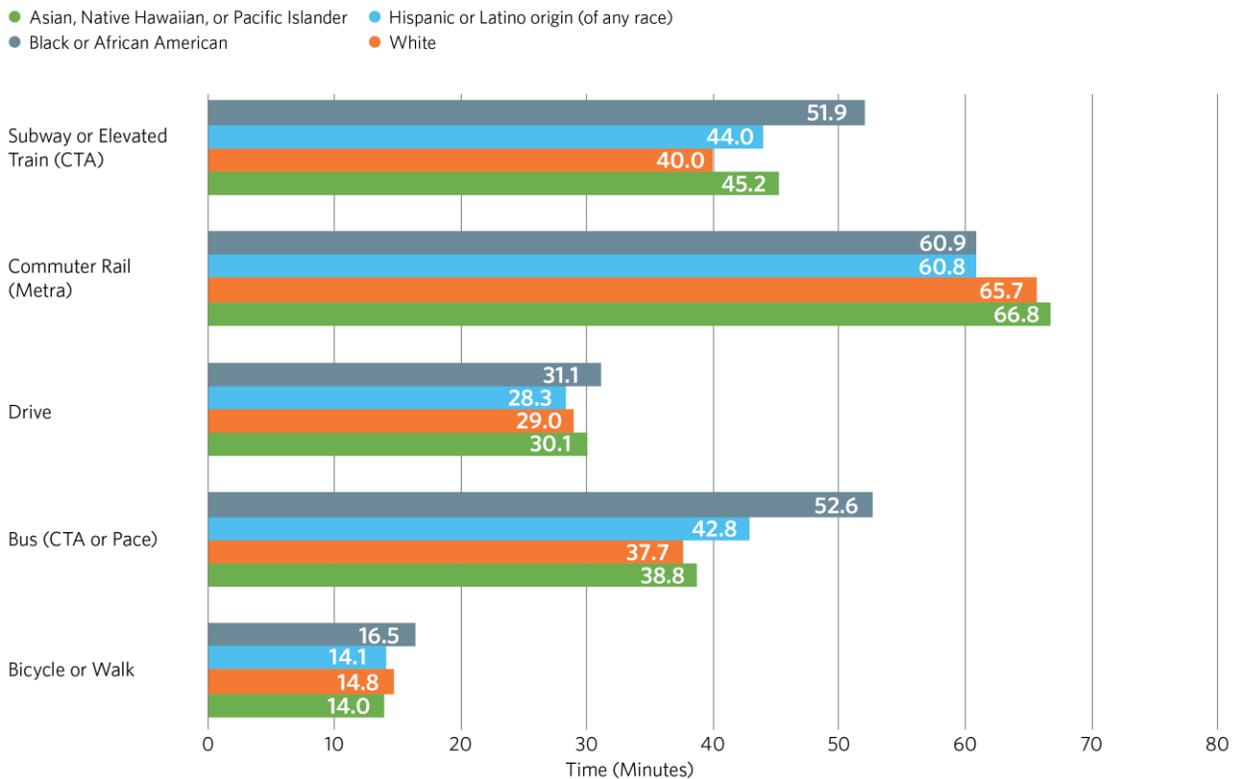
Cultivating high quality, context sensitive transportation options that link low income communities and people of color to jobs, training, and education improves quality of life and promotes inclusive growth, which can lead to longer and stronger periods of economic growth for the entire region. The policies and investments that created persistent patterns of exclusion and segregation have also led to excessive commute times between some primarily low income and minority communities and growing regional employment centers. As we pursue



aggressive strategies to maintain and improve the transportation system, we must do more than prevent marginalized populations from falling further behind. We must take intentional steps to support them in catching up. This will mean focusing resources on authentic engagement, building capacity to compete for public investments, improving commute options, and improving access to public rights of way.

**Average one-way commute time by race and mode, 2010-14**

Source: Chicago Metropolitan Agency of Planning analysis of American Community Survey PUMS, 2010-2014.



*The following outlines strategies and associated action steps to implement this recommendation.*

*Increase authentic, responsive engagement of underrepresented communities in planning and development*

*Build capacity for disinvested areas to compete for transportation infrastructure investment*

- Transportation funders should develop creative approaches to removing the financial barriers that prevent disinvested areas from accessing some transportation funding programs.
- Municipalities should develop transportation, water infrastructure, and other asset management systems to fully implement performance-driven investment practices and make the best use of the region’s limited resources.



- CMAP and partners should develop materials and trainings to help municipalities understand how their land use choices affect local revenues.
- To overcome a lack of data and technical capacity to implement asset management, CMAP and partners should assist with transportation data collection and asset management pilot projects, eventually expanding to a region-wide program.
- CMAP should research best practices and leverage its growing resources on age and condition of the region's infrastructure to develop methods for municipalities to assess mid and long term impacts of major or cumulative development processes.
- COGs and CMAP should develop trainings to assist all of the region's municipalities in implementing and improving asset management systems over the long term.

*Improve commute options between disinvested areas and employment, education and training, and services*

- Transit agencies should work with local communities and the private sector to develop pilot projects that explore new methods of providing targeted, flexible and/or on-demand services that connect EDAs to suburban job centers and other destinations
- IDOT and the Tollway should implement policies that ensure equitable access to tolled facilities, such as lifeline credits

*Improve access to public rights of way for pedestrians, cyclists, and people with disabilities*

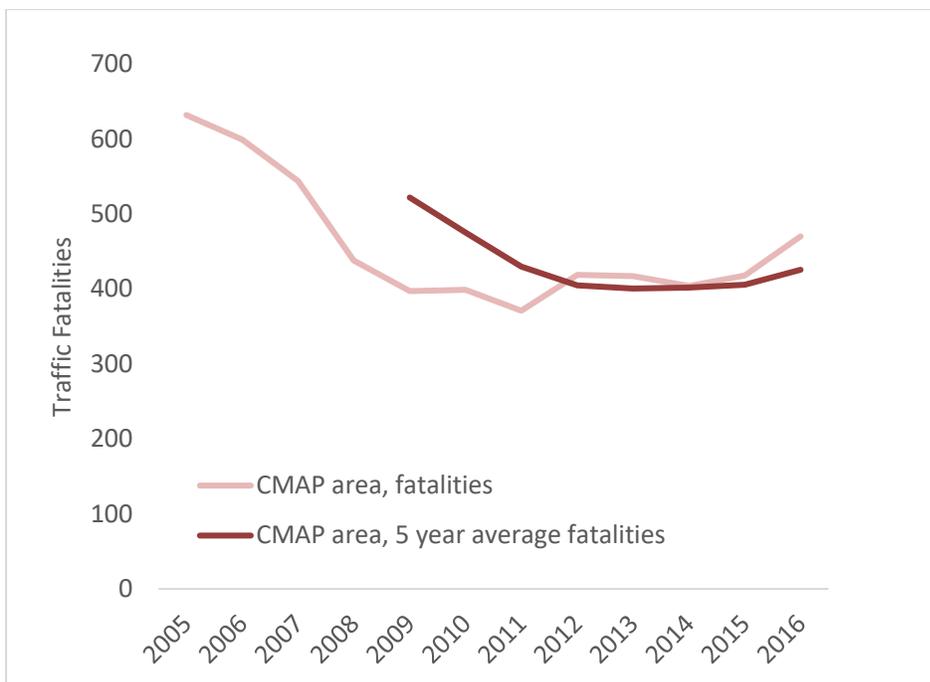
- IDOT and local agencies should ensure that sidewalk and bicycling facilities are present and as adequately maintained in low income areas as in more affluent areas
- Transit agencies should continue to make progress toward universal accessibility of stations

### ***Eliminate traffic fatalities***

Perhaps the most fundamental duty of any transportation provider is to protect the safety of those in the public right of way. Improved roads, vehicle technologies and public policies have dramatically reduced traffic injuries and fatalities over the last forty years but have yet to eliminate the driver behaviors, such as speeding and distracted driving, that are the primary causes of crashes. In fact, traffic fatality rates have been creeping up in recent years, particularly for crashes involving cyclists and pedestrians. While eliminating traffic fatalities by 2050 is an aggressive goal, it is achievable through a combination of strategies, including improving roadway design and incident management, expanding use of safety data in transportation funding decisions, and improving driver training and enforcement policies. Striking the right balance among these strategies is important, particularly in low income and minority communities that experience disproportionately high rates of serious injuries and fatalities, but also raise serious concerns around racial profiling, use of force, and disproportionate impacts of traffic fines.

Traffic fatalities in the CMAP area, 2005-16 (IDOT Crash Data)





***The following outlines strategies and associated action steps to implement this recommendation.***

*Change roadway designs to reduce speeding and reduce crashes*

- CMAP and partners should work to develop safety-related improvements and identify funding for implementation
- CMAP should develop policy guidance that help communities prioritize roads for traffic calming and other safety improvements for cyclists and pedestrians
- CMAP should more thoroughly incorporate safety benefits in projects for CMAQ, TAP and STP funding
- CMAP should assist municipalities in applying for IDOT HSIP local road funds
- CMAP should assist low capacity municipalities with implementation of safety improvement and traffic calming projects
- Highway agencies should implement alternative intersections, where appropriate, to reduce turning conflicts

*Improve incident detection and management*

- IDOT and the Tollway should explore use of traffic cameras or other sensors with automated incident detection capabilities on the interstates



- Municipalities and counties should explore feasibility of real-time probe data and CCTV cameras at critical locations
- IDOT should continue to implement its incident management training for local public safety agency personnel
- Transportation agencies should work with public safety agencies to investigate and implement, as appropriate strategies to improve the clearance time for major incidents

*Expand regional data collection and analysis on safety to support programming decisions*

*Improve driver training and equitable traffic safety enforcement policies*

### ***Improve the resilience of the transportation network***

A resilient transportation network is one that can continue to provide seamless mobility, even in the face of a financial constraints, shifting demographics, and changing climate. The region's communities must plan for fiscal sustainability and assess the long term cost of infrastructure before expanding. Implementing asset management plans for roads and transit facilities can help communities maintain better infrastructure conditions over a longer term at lower costs. The region's transportation providers need to build redundancy into critical transportation networks, which includes investing in bicycle and pedestrian networks that connect people to work, stores, and services. The region needs to anticipate worsening disruption of the transportation system caused by climate change as it invests in reconstructing and enhancing existing transportation assets. In addition, implementing the electricity and communications infrastructure that supports traffic management under normal operating conditions can enable the transportation system to respond to extreme conditions.

***The following outlines strategies and associated action steps to implement this recommendation.***

*Expand asset management practices to the entire transportation system*

- Local agencies should implement pavement management systems and base pavement management decisions on minimizing lifecycle maintenance costs.
- CMAP should pilot asset management plans employing life-cycle cost principles with local communities.
- Transit agencies should track and evaluate the impact of investments on asset condition performance targets
- CMAP should work with partner agencies toward uniformity in pavement data collection.



*Municipalities should incorporate long-term infrastructure maintenance into development and expansion decisions*

*This strategy will also appear in the Land Use chapter*

- Municipalities should prioritize infrastructure needs of the whole community through a capital improvement plan, including an assessment of the costs generated by existing and planned developments.
- Municipalities should develop transportation, water infrastructure, and other asset management systems to fully implement performance-driven investment practices and make the best use of the region's limited resources.
- CMAP and partners should develop materials and trainings to help municipalities understand how their land use choices affect local revenues.
- CMAP and partners should assist with transportation data collection and asset management pilot projects, eventually expanding to a region-wide program.
- CMAP should research best practices and leverage its growing resources on age and condition of the region's infrastructure to develop methods for municipalities to assess mid and long term impacts of major or cumulative development processes.
- COGs and CMAP should develop trainings to assist all of the region's municipalities in implementing and improving asset management systems over the long term.

*Strengthen transportation infrastructure to withstand climate change*

*This strategy will also appear in the Environment chapter*

- Transportation implementers should design transportation infrastructure for the climate of its anticipated lifespan
- CMAP should incorporate climate resilience criteria in its evaluation of regionally significant projects and transportation programming
- Transportation implementers should conduct studies to determine the vulnerability of transportation infrastructure to climate change impacts
- State and local infrastructure agencies should review and update design manuals to ensure that the underlying climate data being used are up to date

*Integrate flooding and stormwater management into transportation planning and investments*

*This strategy will also appear in the Environment chapter*

- CMAP and partners should support continued efforts to integrate stormwater management into land use and transportation planning projects.



- IDOT should update design standards to reflect precipitation trends and green infrastructure techniques.
- IDOT should support stormwater management planning to reduce flooding vulnerability of the transportation system.
- Counties and municipalities should update development ordinances and reconstruction practices to improve stormwater management.

*Improve the operational response to weather events to ensure mobility*

*This strategy will also appear in the Environment chapter*

- Transportation implementers should expand ITS devices and traffic management capabilities to support weather responsive traffic management strategies
- Transportation implementers should coordinate snow and ice removal across jurisdictions, when possible
- Transportation operators should perform an analysis of road performance under severe weather conditions to develop planned responses
- CMAP should develop a regional pavement flooding reporting system to help plan for flood events

*Support active modes of transportation for functional trips*

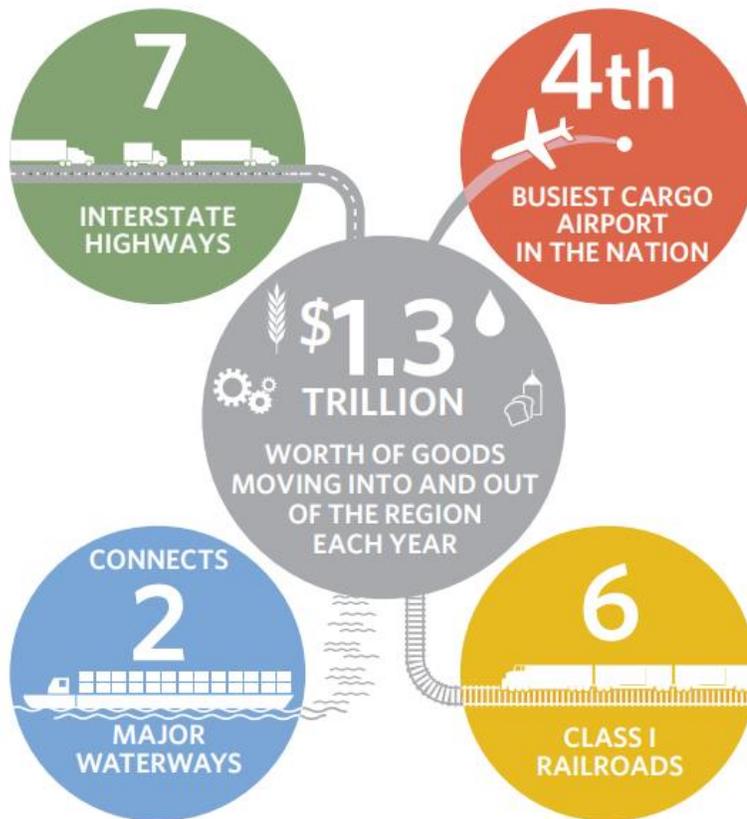
- Counties and municipalities should adopt Complete Street policies
- CMAP and partners should prioritize funding for on-street bicycle facilities
- CMAP and partners should implement the Regional Greenways and Trails Plan

### ***Retain the region's status as North America's freight hub***

The massive concentration of freight activity in northeastern Illinois provides a competitive advantage that helps to drive the regional economy. A robust freight network also ensures that residents and businesses get the goods they need in a timely manner. However, freight activity raises significant infrastructure and regulatory challenges. Effective planning for freight across the region must involve collaboration across the public and private sectors to carefully balance economic, livability, and infrastructure funding concerns. Local governments have important tools to support the efficient movement of freight, orderly development of freight facilities, and appropriate balance between local costs and benefits of freight activity, but need assistance from other stakeholders to analyze and address freight issues that cross jurisdictional boundaries.



**Figure 1. Metropolitan Chicago freight assets**



Note: Total freight value includes all modes designated by the Freight Analysis Framework.

Source: Chicago Metropolitan Agency for Planning analysis of Federal Aviation Administration, Freight Analysis Framework data, 2012.

*The following outlines strategies and associated action steps to implement this recommendation.*

*Develop a unified regional approach for freight transportation issues*

- CMAP and partners should establish principles for the use of federal freight funds.
- CMAP and partners should develop a process to develop, coordinate, and prioritize responses to federal freight funding opportunities such as INFRA.
- IDOT should utilize performance-based programming for freight formula funding sources such as the National Highway Freight Program.
- CMAP and partners should pursue stable and sustainable funding for the region's freight network.

*Invest strategically in the freight network*



- The CREATE partners should complete the 75th Street CIP and then complete the remaining projects in the program.
- Private rail partners should provide substantive documentation of and data supporting the public benefits of future CREATE projects.
- CMAP and highway agencies should prioritize rail grade crossings for improvement.
- CMAP and highway agencies should prioritize addressing truck bottlenecks in future improvements.
- CMAP and highway agencies should explore truck lanes, truck only routes, and other options to aid goods movement and reduce conflicts on the region's expressway network.
- Counties and local government should coordinate oversize/overweight permitting across jurisdictions and ensure they are consistent with the state permitting process.

*Improve local and regional planning for freight*

- Local governments should implement policies to improve delivery management in urban areas, including encouraging overnight freight delivery.
- Local governments should take a proactive approach to designating truck routes and should reevaluate truck restrictions.
- CMAP, counties, and other partners should provide technical assistance and develop policy guidance (toolkits, best practices, model ordinances, etc.).
- IDOT should review truck-route designations for state-jurisdiction highways to provide a well-developed backbone of Class I and II truck routes that local governments can incorporate into their planning efforts.
- The state and counties should provide easier access information on truck routes and restrictions as well as oversize and overweight permitting processes.
- The State should facilitate a transition from local truck restrictions to local truck routing.
- CMAP should study the transportation and land use impacts of emerging freight distribution strategies and develop policies, data, and best practices to address these impacts.
- CMAP and transportation providers should collaborate with O'Hare, Midway, and the Port of Chicago to facilitate surface transportation access to and supportive land use planning around these facilities.



*Mitigate the negative impacts of freight activity on adjacent areas, particularly economically disconnected areas*

- CMAP and partners should continue to identify and provide information on mitigating the negative impacts of freight developments and infrastructure.
- CMAP, highway agencies, municipalities, and other partners should balance quality of life concerns with economic impacts when investing in freight development and infrastructure
- Transportation agencies should consider additional outreach, analysis, and mitigation activities for freight-related improvements in economically disconnected areas.
- CMAP should give additional weight in the CMAQ, TAP, and STP programs to road and rail projects that address freight-related environmental justice issues.

*Advance the major freight facility development principles*

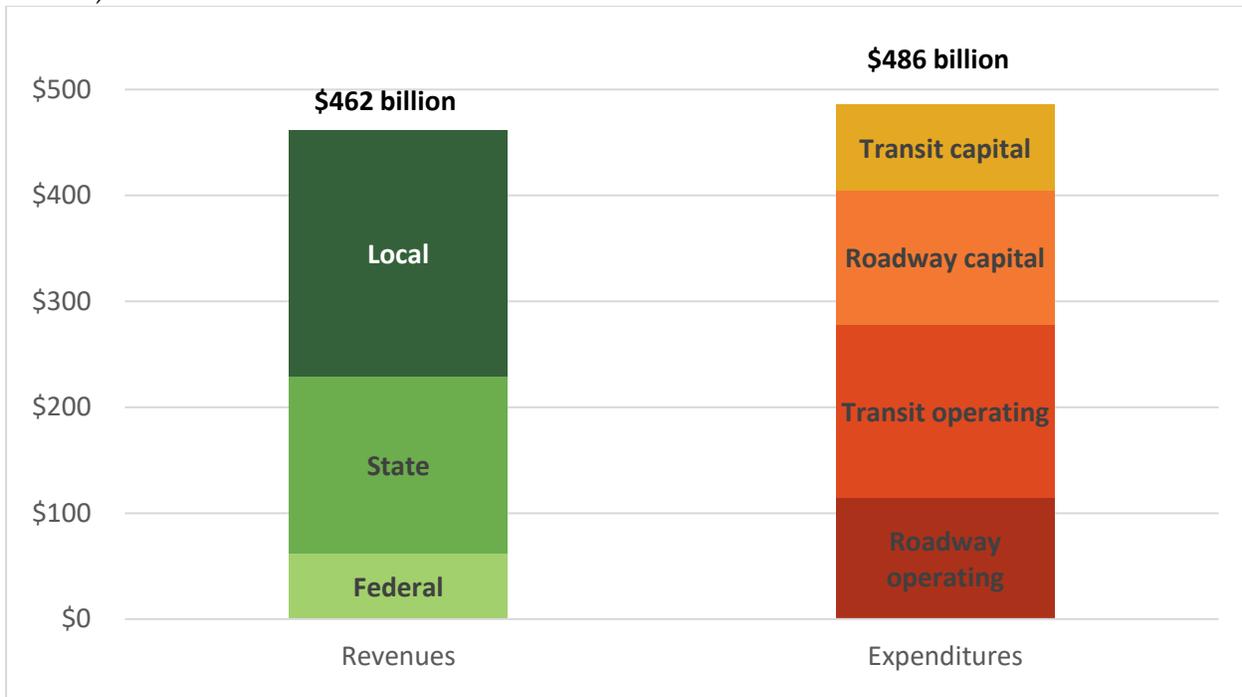
- CMAP should analyze new freight facilities to assess their regional impacts
- Municipalities should collaborate with CMAP, IDOT, adjacent jurisdictions, and other partners when reviewing the needs, benefits, and impacts of large new freight developments.
- CMAP should support municipalities in incorporating the major freight facility principles from the Regional Strategic Freight Direction into their land use and development decisions
- Municipalities, IDOT, private railroads, developers, and others partners should collaborate with affected jurisdictions to assess the needs for and impact of major freight facilities.

### ***Fully fund the region's transportation system***

Northeastern Illinois needs to invest in maintaining and enhancing the transportation system to keep up with demand and promote regional economic vitality. However, traditional transportation revenue sources can no longer keep up with increasing costs, and without additional sustainable, dedicated, adequate revenue sources, the region will be unable to maintain the system in its current state of repair, let alone implement needed enhancements. The region, state, and federal government must raise existing revenues and transition to more modern user fees in the near term. Leveraging local sources like value capture, congestion pricing, and other tolling opportunities can provide funding while contributing to larger goals such as transportation demand management and effectively matching the costs of the transportation system to those who benefit from its use.



Forecasted transportation revenues and expenditures, 2019-50, in billions (year of expenditure dollars)



*The following outlines strategies and associated action steps to implement this recommendation.*

*Implement sustainable, adequate revenue sources for transportation investments*

*Increase the MFT and replace with a VMT fee*

- The State should increase the MFT by at least 15 cents per gallon and index the overall rate to an inflationary measure.
- The State should take the steps necessary to replace its MFT with a mileage based user fee, such as a vehicle miles traveled fee of at least 2 cents per mile indexed to an inflationary measure.
- The federal government should increase the federal gas tax rate, index it to an inflationary measure, and in the long-term replace the MFT with a mileage based user fee such as a VMT fee
- The federal government should work with states to develop a national solution to implementing VMT fees at the state level.



*Expand the sales tax base*

*Implement a federal cost of freight service fee*

*Create a regional revenue source*

*Expand priced parking*

- Municipalities should pursue opportunities to price parking spaces
- CMAP should provide technical assistance to municipalities interested in pricing and other parking management strategies

*Implement tolling*

- The federal and state government should expand authority to toll existing capacity
- IDOT and the Tollway should implement priced managed lanes on all new expressway capacity, save for short or isolated segments, as well as implement tolling to help fund needed expressway reconstruction projects

*Further implement value capture to support transportation improvements*

- The State should expand TFIA provisions for transit projects.
- Local governments should implement TFIA districts for projects with sufficient travel benefits and property tax base to support improvement costs.
- CMAP, IDOT and county DOTs should evaluate and consider a new policy to require local contributions for major arterial expansions.
- Local governments should continue to leverage existing special districts to fund transportation improvements

*Use public-private partnerships strategically*

### ***Build regionally significant transportation projects***

*This recommendation is still under development, pending Regionally Significant Projects selection process.*

***The following outlines strategies and associated action steps to implement this recommendation.***



*Continue to implement performance-based programming*

- CMAP and partners should continue to evaluate regional transportation programs to improve project selection
- RTA and transit agencies should commit to a performance based competitive approach for as much of the capital funding as possible, including ICE
- Municipalities and counties should use asset management approaches in their programming

*Transportation implementers should identify strategies to make progress toward federally-required performance targets*

*Build constrained regionally significant projects*

RECOMMENDED ACTION: Discussion

