Current Planning and Programming Practice

A discussion of potential revenue sources is incomplete without a corresponding discussion of how those revenues will be spent. Therefore, the Task Force should consider current planning and programming activities in northeastern Illinois. The term "planning" here refers to the study of current issues and emerging trends, and the identification of potential policies and projects to improve system performance. The term "programming" refers to the process of evaluating, prioritizing, and selecting projects for funding. As such, programming is the process by which plans are implemented.

This document first reviews past efforts at freight planning in northeastern Illinois, focusing on four major studies conducted during the 2000s. It then reviews three cases of programming practice, illustrating the range of approaches currently used in the state and region.

Freight Planning in Metropolitan Chicago

Many plans have studied the freight system in northeastern Illinois, ranging from high-level regional analyses to more detailed studies focused on specific corridors, modes, or impacts of the freight system, such as economic development or environmental mitigation. These plans have identified potential capital improvements, operational improvements, and policy considerations. Additionally, individual implementing agencies conduct their own internal planning, both for specific projects and to develop their funding programs (see following sections for more information). While not an exhaustive survey of past planning exercises, this section focuses on four illustrative plans: (1) GO TO 2040, (2) IDOT's Freight Plan, (3) the Metropolis Freight Plan, and (4) the OECD Territorial Review.

GO TO 2040, CMAP

Adopted in 2010, GO TO 2040 calls on the region to make strategic investments in the transportation system. The plan emphasizes that the State and other transportation implementers should first prioritize efforts to maintain and modernize existing assets before expanding the system, and that investments of all types take a multimodal approach. Additionally, the plan notes that existing revenues must be spent more wisely, using performance-driven criteria rather than arbitrary formulas or politically-based calculations. Examples of enhancements and modernizations that should be pursued include more attractive and comfortable buses and trains that improve the passenger experience, better traveler information systems, targeted transit extensions and arterial improvements, and multimodal approaches such as integrating bicycling and pedestrian accommodations in roadway design.

While the primary transportation emphasis of GO TO 2040 is to maintain and modernize, the plan contains a handful of fiscally constrained "major capital projects" that will maximize regional benefits of mobility and economic development. Major capital projects are defined as large projects with a significant effect on the capacity of the region's transportation system,

including extensions or additional lanes on the expressway system, entirely new expressways, or similar changes to the passenger rail system, such as major transit modernization projects or extensions. GO TO 2040's largest major capital projects include the Elgin O'Hare Western Access project, new I-294/I-57 interchange, West Loop Transportation Center, Central Lake County Corridor, CTA Red Line south extension, and, via amendment, the Circle Interchange improvements and Illiana Expressway. The Plan also includes managed lanes on additional capacity on I-90, I-55, and I-290, the CTA North Red/Purple Line modernization, and a number of Metra improvements.

GO TO 2040 also calls for strategic investments, increased commitment to public transit, and efforts to increase the efficiency of the freight system.[1] On the investment side, the plan calls for the better use of existing resources through performance-based approaches to evaluating and selecting projects. Further, GO TO 2040 recognizes the need for additional resources to support transportation investment, and recommends developing both traditional and innovative revenue sources to do so. Those innovative sources include congestion pricing, value capture, variable pricing for parking, and public-private partnerships. The plan places an emphasis on congestion pricing, a policy that applies varying toll rates to manage traffic demand and guarantee reliable travel speeds.

Specifically on freight, GO TO 2040 calls for a national vision and federal program for freight, the completion of the CREATE program of rail improvements, regional trucking improvements (including truck routes, parking, and delivery time management), organization and public policy relating to freight, and the integration of freight needs and financing into infrastructure prioritization.

Regional Freight System Planning Recommendations Study, Cambridge Systematics

Commissioned by CMAP during the development of GO TO 2040, the Regional Freight System Planning Recommendations Study, produced by Cambridge Systematics, provides a review of the current performance of the regional freight system. In addition, it includes an analysis of the origins and destinations of freight movements, along with recent trends facing the freight industry. The study also reviews forecasted growth in freight volumes and major policy issues. Its conclusions focus on operational improvements, policy recommendations, and infrastructure recommendations. One of the primary aims of the report was to identify a list of capital improvements to the regional freight system; the study identified a total of 67 projects across four modes.

Freight Mobility Plan, IDOT

In December 2012, IDOT prepared a Freight Mobility Plan as a component of its Long Range Transportation Plan.[2] Combined with IDOT's State Rail Plan, the document helps to understand the multimodal freight system. The Freight Mobility Plan analyzes and forecasts freight traffic by mode and industry, describes industry trends, and outlines methods to

[1] CMAP, 2010. GO TO 2040, "Regional Mobility", pp. 243-322, http://www.cmap.illinois.gov/about/2040/regional-mobility.
[2] IDOT, 2012. Freight Mobility Plan, http://www.illinoistransportationplan.org/pdfs/final_report/05_freight_mobility_plan.pdf.

measure performance and provides strategies for enhancing the freight system. Specifically, the plan discusses three main strategies to improve performance:

1. Execute freight performance measures.
2. Create a better understanding of the needs of the transportation industry.
3. Focus on intermodal freight planning.

As a component of these strategies, the plan outlines ways to improve safety, identifies bottlenecks, and assesses the effects freight has on air quality. It does not recommend a list of capital projects to improve the state's freight system.

The Metropolis Freight Plan: Delivering the Goods, Chicago Metropolis 2020 (now Metropolis Strategies)

Published in December 2004, the report documents heavy use and congestion on existing rail and highway systems.[3] It forecasts substantial growth in truck and rail volumes over the next 25 years, along with growth in water and air freight (Table 1).

Table 1. Growth in Freight Volume Projected in Chicago Metropolis 2020

	Base Year (Million Tons)	Projected Year (Million Tons)
Truck	742	1,330
Rail	412	701
Water	133	244
Air	2	6

The report includes estimates of the freight industry's contribution to the regional economy, a description of gaps and deficiencies in the existing networks, and a description of deficiencies in funding. In response to these issues, the Metropolis Freight Plan makes a number of recommendations, with the goal of meeting projected growth in freight volumes and maintaining the region's prominence as a national and international freight hub. These recommendations include policy changes, as well as a list of capital projects. These capital projects are generally in line with the recommendations provided in GO TO 2040, and several of the plan's recommended capital projects have been implemented over the past decade.

OECD Territorial Review

In early 2012, the Organisation for Economic Co-operation and Development (OECD) released an in-depth report on the 21-county tri-state area of southeast Wisconsin, northeast Illinois, and northwest Indiana as part of its series of reviews of global economic centers.[4] The report discusses many dimensions of the region's economy, including a chapter devoted to transportation and logistics. While much of the information is descriptive and illustrates the Chicago region's role as a premier freight hub, the OECD report is frank in pointing out the challenges facing the region's transportation systems. Many facilities are congested and in need of repair, some modes are poorly integrated, and the tri-state area's capacity to finance

[3] Chicago Metropolis 2020, 2004, "The Metropolis Freight Plan: Delivering the Goods", http://www.metropolisstrategies.org/documents/MetropolisFreightPlan.pdf.
[4] OECD, 2012. "OECD Territorial Reviews: The Chicago Tri-State Metropolitan Area", http://tinyurl.com/mdw8btp.

transportation projects is decreasing. Land constraints have forced logistics activities to decentralize to the fringes of the region, raising local and regional land use challenges. According to the report, these issues pose a serious threat to the mega-region's competitive advantage, and thus its long-term economic health.

To meet these challenges, the OECD calls for increased investment in transportation infrastructure, especially transit; a more strategic, data-driven approach to selecting transportation investments; better integration of transportation facilities across modes and political boundaries; and a move toward more sustainable revenue sources for transportation, including user fees. The OECD also recommends that stakeholders work across jurisdictional boundaries to advance common transportation interests through "integrated, multi-modal, long-range planning", and cites the CREATE rail program as a step in that direction. The report calls for expanded collaboration among stakeholders, including advocacy to make the case for the tri-state region to federal and state funding and regulatory agencies.

Linking Planning and Programming

The preceding discussion helps to illustrate the number of freight-related planning efforts that have been conducted for the Chicago region. The IDOT and CMAP planning efforts described above are largely policy based, and the major capital projects identified in GO TO 2040 include a small set of major capacity-adding facilities. While GO TO 2040 allocates the vast majority of the region's future financial resources toward maintenance and modernization, the plan itself does not itemize individual projects in these areas—rather, these specific programming decisions are made at the discretion of state and local implementers. The Metropolis and Cambridge Systematics plans include more detailed project lists, though neither represents an official freight plan for the region under federal or state law.

To the extent possible, regional transportation programming should be aligned with the policy goals and projects specified in GO TO 2040. CMAP supports the use of performance-based programming to achieve this overall objective. Performance-based programming uses a variety of performance measures to assist in prioritizing and selecting projects for funding. This data is used as part of a transparent, public process that also relies on the professional judgment of transportation stakeholders. Because funding is scarce, it is critical to ensure that available resources are spent wisely and transparently – and not based on arbitrary formulas – leading to a credible, defensible process.

Transportation programming decisions often use a variety of different factors, including safety, reliability, accessibility, and congestion reduction. Given the vast number of criteria and local priorities, it is not always clear how projects with major freight benefits emerge from these processes. The following section surveys a sample of existing programming practices, none of which have a particular focus on freight. While existing agencies undoubtedly fund projects that facilitate goods movement, freight priorities do not necessarily "rise to the top" under current practices. Given the particular importance of goods movement to metropolitan Chicago's economic future, the Task Force should consider whether these current programming processes work sufficiently to prioritize freight needs.

Case Studies in Current Programming Practice

Numerous agencies are responsible for programming capital funds in northeastern Illinois, and these agencies employ a range of approaches in determining how decisions are made. These agencies include the State (through the Illinois Department of Transportation and the Illinois Tollway), CMAP, counties, Councils of Mayors, townships, municipalities, and transit agencies. To help illustrate the range of approaches, this section briefly surveys three examples, which operate at the state, regional, and subregional scales.

IDOT Multimodal Transportation Improvement Program

The Illinois Department of Transportation (IDOT) is responsible for constructing, operating, and maintaining a large highway network, and spends billions annually to do so. IDOT's current highway program budgets $9.53 billion in improvements across the state.[5] This program includes $7.2 billion in federal funds, $1.9 billion in state funds, and $0.4 billion in local funds. The six-year highway improvement program schedules $3.1 billion in spending for District 1 (metropolitan Chicago),[6] not including statewide line items or the local road program. A longstanding ad hoc agreement within the General Assembly directs 45 percent of transportation funds to District 1 and the remaining 55 percent to the eight downstate districts.[7]

IDOT's evaluation criteria focus largely on the physical condition of the system, including pavement condition ratings, crash statistics, and traffic volumes. For example, IDOT's Condition Rating Survey (CRS) measures pavement conditions and conducts bridge inspections every other year. From this data, IDOT develops lists of backlog and accruing needs, and determines which assets are in acceptable condition. In developing its highway program, IDOT sets a performance target of at least 90 percent of the road system in acceptable condition and at least 93 percent of bridges in acceptable condition.[8]

The above measures tend to focus on maintenance standards. Less information is available on how IDOT evaluates and selects modernization and expansion projects. The Department states multiple high-level goals (economic needs, safety, congestion relief, local support, political support), but no performance measures or targets for programming decisions. For example, while truck volumes are considered in the programming process, it is not clear how freight needs are weighed against other considerations. Additionally, relevant stakeholders, including metropolitan planning organizations, do not formally participate in these processes.

While IDOT has provided substantial resources for high-priority freight initiatives like the CREATE program, this funding has not generally come from the Department's regular funding

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[5] IDOT, FY 2014-2019 Proposed Multi-Modal Transportation Improvement Program, http://www.dot.il.gov/opp/hip1419/hwyimprov.htm

[6] IDOT District 1 includes Cook, DuPage, Kane, Lake, McHenry, and Will counties. Kendall County is located in IDOT District 3.

[7] CMAP, 2011, The 55-45 Split, http://www.cmap.illinois.gov/mobility/strategic-investment/performance-based-funding/55-45-split.

[8] Illinois State Transportation Plan 2012, http://www.illinoistransportationplan.org/pdfs/final_report/transportation_plan_2012_book.pdf
Illinois State Transportation Plan, System Management: Preservation, Maintenance, and Operations Report, September 2012, http://www.illinoistransportationplan.org/pdfs/system_management_090612_web.pdf

streams. Rather, CREATE has been supported by funds through the State's episodic capital programs, which tend to occur once a decade. The most recent state capital program, Illinois Jobs Now!, was passed in 2009 and its funds have largely been spent over the past five years.

CMAP Congestion Mitigation and Air Quality Improvement Program

CMAP administers the federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) dollars for northeastern Illinois.[9] In recent years, the region has received about $100 million annually in CMAQ funding, and the current FY 2014-2018 program totals about $495.9 million.[10] Federal law allows the CMAQ program to fund surface transportation projects that improve air quality and reduce traffic congestion in regions that fail to meet one or more EPA air quality standards.

The CMAQ program has limited flexibility. Federal regulations do not allow the CMAQ program to fund projects that expand capacity for single occupancy vehicles (SOV), with the exception of high-occupancy vehicle (HOV) lanes, routine maintenance projects, or modeling and monitoring projects.[11] Even with these eligibility requirements, many freight-related projects are funded through the CMAQ program. These projects include locomotive and engine retrofits, intersection improvements, signal interconnects, and grade separations.

CMAP staff has traditionally considered air quality benefits and total costs in its evaluation of potential CMAQ projects, and ranks applicants according to their cost-effectiveness at achieving reductions. In 2011, CMAP adopted a "focused programming" approach to selecting CMAQ projects in part to advance the goals of GO TO 2040.[12] Under focused programming, applicants to the CMAQ program demonstrate their project's consistency with GO TO 2040, and projects must contribute to the program's four broad objectives: localized congestion relief, operational improvements, mode shift, and direct emissions reduction. Committees of regional stakeholders then review proposals against these criteria. These committees are organized into four focus groups based on project type:

- Regional Transportation Operations Coalition
- Bicycle and Pedestrian Task Force
- Direct Emissions Reduction
- Transit

The four focus groups prioritize projects using tailored quantitative and qualitative criteria. The prioritizations are then relayed to the CMAQ Project Selection Committee (PSC). The PSC develops a fully-funded 5-year CMAQ program for the MPO Policy Committee. The PSC considers the air quality cost/benefit ratio but also considers qualitative factors such as project readiness, project and modal mix, and regional equity in developing the CMAQ program.

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[9] CMAP, Congestion Mitigation and Air Quality Improvement Program: CMAQ Project Application Information Booklet, 2011. http://www.cmap.illinois.gov/mobility/strategic-investment/cmaq.
[10] CMAP, CMAQ Program Summary - 2014-2018, December 3, 2013. http://tinyurl.com/p7axqzm.
[11] FHWA, Interim Program Guidance Under MAP-21, http://tinyurl.com/oybly6c.
[12] CMAP, *GO TO 2040* Focused Programming Approach for the CMAQ Program, January 2011, http://www.cmap.illinois.gov/mobility/strategic-investment/cmaq/focused-programming.

In GO TO 2040, CMAP recommends that transportation funding decisions be based on transparent evaluation criteria, utilizing performance measures developed by the state, MPOs, and the region's transportation stakeholders. CMAP is currently undergoing a process review of its CMAQ program, working towards improving the project selection process to be more performance based.

Suburban Councils of Government, Surface Transportation Program

CMAP also receives federal funding through the local Surface Transportation Program (STP-L), a flexible funding program that may be applied to a wide range of projects. In federal FY 2014, the region is expected to receive $129 million in funding through the local STP.[13] Due to the extremely flexible nature of this funding – the STP can fund projects ranging from resurfacing and reconstructing roadways to carpooling projects to parking facilities to bicycle and pedestrian facilities to elements of Intelligent Transportation Systems – it is difficult to evaluate projects in a consistent manner, or to determine the program's direct relevance to freight. CMAP suballocates local STP funds to the City of Chicago and 11 suburban Councils of Mayors, which in turn evaluate and select projects for funding. The Councils of Mayors provide a forum for municipal officials to meet and discuss common issues.

The Councils of Mayors each use their own prioritization criteria in evaluating projects for inclusion in the local STP.[14] Despite some variation across councils, the prioritization criteria are generally similar. Most councils assign points based on quantitative measures such as traffic volumes, accident rates, pavement quality, air quality benefits, and project readiness. Others include measures of a roadway's functional class, the number of jurisdictions sponsoring a project, and level of service statistics or volume-to-capacity ratios. Councils use these data to rank projects from most to least preferred, with final approval typically coming from a Council's Transportation Committee.

Discussion Items

The background materials for the fourth meeting of the Regional Freight Leadership Task Force have begun to sketch potential new revenue sources for freight improvements, a rough concept of freight project costs, and potential approaches to identifying investment needs and selecting projects for funding. Each of these issues is an important topic for the Task Force to consider as it develops final recommendations for a potential Regional Freight Authority.

The following discussion questions are designed to help frame the Task Force's deliberations in these areas.

- **Planning.** Much planning around the freight system has been completed over the past decade, yet the Task Force has identified the need for greater planning. This situation raises several questions.

[13] CMAP, 2014 STP-L Marks Table, "FFY 2014 Allotment", http://tinyurl.com/khj3w5c.
[14] View the Councils of Mayors' STP selection methodology at http://tinyurl.com/lwo8nu2. Click on the links for each Council.

  - Were you aware of past planning efforts in the region? Which aspects of these plans are most relevant to regional freight needs?
  - Has past planning been insufficient in some way? If so, how?
  - Which elements should a robust regional freight plan include?
  - Who should be responsible for conducting this planning?
- **Programming.** The selection of projects for funding is potentially a key role for a potential Regional Freight Authority. Several questions must be considered to govern this decision-making process.
  - Are current programming processes sufficiently focused on freight improvements?
    - Should freight issues be better incorporated into existing programming processes?
    - Should freight issues be considered through a standalone programming process?
  - How should a decision-making process connect a project's costs to its benefits?

These questions build off the institutional design issues considered at the Task Force's meeting in January. And the answers to these questions will help guide the Task Force's future discussions.