



# Chicago Metropolitan Agency for Planning

233 South Wacker Drive  
Suite 800  
Chicago, Illinois 60606  
  
312 454 0400  
[www.cmap.illinois.gov](http://www.cmap.illinois.gov)

## **Regional Coordinating Committee**

### **Annotated Agenda**

**Wednesday, October 14, 2015**

**8:00 a.m.**

**Cook County Conference Room**

**233 S. Wacker Drive, Suite 800**

**Chicago, Illinois**

**1.0 Call to Order** 8:00 a.m.

**2.0 Agenda Changes and Announcements**

**3.0 Approval of Minutes – June 10, 2015**

ACTION REQUESTED: Approval

**4.0 Approval of GO TO 2040/TIP Conformity Analysis and TIP Amendments**

The public comment period for the semiannual GO TO 2040/TIP conformity analysis and TIP amendments closed August 17, 2015. No comments were received. The Transportation Committee recommends that the CMAP Board and MPO Policy Committee approve the GO TO 2040/TIP conformity analysis and TIP amendments. The Regional Coordinating Committee will consider recommending approval prior to the joint meeting.

ACTION REQUESTED: Recommend approval of the GO TO 2040/TIP Conformity Analysis and TIP Amendments to the CMAP Board and the MPO Policy Committee

**5.0 Congestion Mitigation and Air Quality (CMAQ) Improvement Program and Transportation Alternative Program (TAP-L)**

The public comment period on the proposed FFY 2016-2020 CMAQ program and the 2015-2017 TAP Program ended August 17, 2015. No changes were recommended to the proposed programs. The Transportation Committee recommends approval of the proposed programs. The Regional Coordinating committee will consider recommending approval of the proposed programs at its meeting prior to the joint CMAP Board and MPO Policy Committee meeting.

ACTION REQUESTED: Recommend approval of the multi-year FFY 2016-2020 CMAQ Program and the FFY2015-2017 TAP-L Program to the CMAP Board and the MPO Policy Committee

## 6.0 Regional Clusters: Traded and Local

Staff has begun reviewing the region's industry clusters as a part of the analysis to develop a successor of GO TO 2040. Since the Plan's adoption in 2010, economists have made significant strides in understanding the contributions and roles of different industry clusters in metropolitan economies. Through a series of two recent policy updates, staff synthesized national research and examined the region's clusters. The new methodology differentiates industries by location patterns and the markets they serve. Traded industry clusters tend to be concentrated in a few regions and serve national and world markets. Local industry clusters produce goods and services that are consumed by businesses and consumers here within the region. Consequently, traded and local industry clusters present different challenges and opportunities for growing the region's economy. This new economic research could help inform state and local economic development strategies. This presentation will include an overview of the methodology and examine some of the region's strengths.

ACTION REQUESTED: Information

## 7.0 Other Business

## 8.0 Public Comment

This is an opportunity for comments from members of the audience.

The Chair will recognize non-committee members as appropriate.

Non-committee members wishing to address the Committee should so signify by raising their hand in order to be recognized by the Chair.

The Chair will have discretion to limit discussion.

## 9.0 Next Meeting- January 13, 2016

## 10.0 Adjournment

### Committee Members:

\_\_\_ Elliott Hartstein, chair

\_\_\_ Frank Beal

\_\_\_ Pat Carey

\_\_\_ Allison Clement

\_\_\_ Michael Connelly

\_\_\_ John Noak

\_\_\_ Sheri Cohen

\_\_\_ Jack Darin

\_\_\_ Al Larson

\_\_\_ Andrew Madigan

\_\_\_ Ed Paesel

\_\_\_ Leanne Redden

\_\_\_ Peter Silvestri

\_\_\_ Thomas Weisner



# Chicago Metropolitan Agency for Planning

## Agenda Item No. 3.0

233 South Wacker Drive  
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### Regional Coordinating Committee

#### DRAFT Minutes

Wednesday, June 10, 2015

**Cook County Conference Room**

**233 S. Wacker Drive, Suite 800**

**Chicago, Illinois**

#### **Committee Members Present:**

Elliott Hartstein, Chair (CMAP Board), Frank Beal (CMAP Board), Pat Carey (Cook County Department of Development-Economic Development Cmte.), Allison Clement (Metropolitan Mayors Caucus-Housing Committee), Michael Connelly (CTA-Transportation Committee), Sheri Cohen (Human & Community Development Committee), Al Larson (Village of Schaumburg-CMAP Board), Andrew Madigan (Mesirow Financial-CMAP Board), John Noak (Village of Romeoville-CMAP Board), Leanne Redden (RTA-CMAP Board) Ed Paesel (South Suburban Mayors & Managers Assoc.-Land Use Cmte.), Jack Darin (Illinois Sierra Club-Environment and Natural Resources Committee)

#### **Others Present:**

Kristen Andersen-Metra, Mike Klemens-WCGL, Jennifer Becker-Kane/Kendall Council of Mayors, Garland Armstrong-Access Living, Heather Armstrong-Access Living

#### **Staff Present:**

Jill Leary, Tom Kotarac, Joe Szabo, Gordon Smith, Jesse Elam, Jacquelyn Murdock

#### **1.0 Call to Order**

Elliot Hartstein called the meeting to order at approximately 8:10 a.m. and asked committee members to introduce themselves.

#### **2.0 Agenda Changes and Announcements**

There were no changes to the Agenda or announcements.

#### **3.0 Approval of Minutes**

A motion made by Ed Paesel to approve the minutes of the March 11, 2015 meeting was seconded by Sheri Cohen. All in favor, the motion carried.

#### **4.0 Alternatives to the Illinois Motor Fuel Tax**

CMAQ staff, Jacquelyn Murdock gave a presentation related to the evaluation of alternatives to the Illinois Motor Fuel Tax (MFT). Murdock summarized the analysis, while not providing any specific recommendations, was meant to evaluate various revenue options. Currently at \$0.19 per gallon, the state MFT has not been increased since 1991 and has failed to keep pace with inflation, while fuel consumption has declined because increased fuel efficiency and stagnated vehicle travel. GO TO 2040, Murdock reported, recommends new and enhanced sources of transportation revenue that includes long-term replacement of the MFT, but also recommends the MFT be increased by \$0.08 and pegged to inflation in the short term. Options evaluated, Murdock continued, included a mileage based user fee (i.e. a vehicle miles traveled fee), a motor fuel sales tax, and vehicle registration fees. Revenue metrics (sufficiency, stability, and growth potential) were explained related to each of the options and Murdock then summarized economic metrics (benefit principle and equity) as well as feasibility metrics (implementation and administration). Mileage based user fees appear relatively positive, although implementation and administration would be significant hurdles. A VMT fee would involve significant start up costs in technology to track mileage and privacy concerns about sharing the data remain. For tolling, the Federal government would need to lift restrictions on tolling interstate facilities that are presently un-tolled. The motor fuel sales tax, although unstable and hampered by growth potential, can be implemented under existing conditions. Motor vehicle registration fees are problematic, and are unlikely to be implemented at a level that would replace the MFT. CMAQ will continue to evaluate ways to provide sustainable revenue for its transportation system. Murdock fielded questions related to occasions where states had successfully implemented one or more of these options and which of the options would be more public-friendly (i.e., writing a check for vehicle licensing versus paying at the pump), as well as a general sales tax increase on gasoline (Virginia) and development of policy at the federal level (reauthorization principles).

#### **5.0 Fiscal Year 2016 Unified Work Program (UWP)**

Deputy Executive Director Dolores Dowdle reported that the FY 2016 Unified Work Program (UWP) the federal transportation planning program that funds CMAQ and the planning activities in the region was being presented for Board approval. Nine (9) core proposals were approved, fourteen (14) competitive proposals were received, but only three (3) are funded. Those include CMAQ's LTA program administered jointly with the RTA for projects with a heavy transit focus, CDOT South Lakefront and Museum Campus study, and CTA Brown Line Core Capacity study. A motion by Mayor Al Larson was seconded by Ed Paesel to recommend approval of the UWP program as presented to the CMAQ Board. All in favor, the motion carried.

#### **6.0 Legislative Update**

6.1 CMAQ staff Gordon Smith reported that while the General Assembly concluded its spring session on May 31, they continue to meet almost weekly and have agreed, by resolution, to continue to meet. A budget was passed, although it was \$3-4 billion out of balance. One appropriation bill, SB 2033, that includes the majority of IDOT's budget

contains a line item for “Metropolitan Planning and Research” that has historically been the source of CMAP funding. All budget bills that have passed have reconsideration motions attached, Smith continued. Former CMAP Executive Director Randy Blankenhorn was confirmed as Secretary of Transportation, Smith also reported, and most of the bills that staff had been tracking failed to pass. Exceptions included HB 2685, the RTA Working Cash Notes bill and Senate Resolution 607 directing IDOT to conduct a study on the feasibility of a mileage based user fee to replace the Motor Fuel Tax. CMAP will offer IDOT its assistance on the topic and access to the information that has already been collected. Staff will continue to monitor activity.

6.2 CMAP staff Tom Kotarac gave a Federal Transportation Reauthorization update reporting that Congress gave an extension to MAP-21 that expires on July 31, the longest amount of time before the trust fund faces insolvency (August 1). New money will need to be brought into the highway trust fund after that date. Kotarac reported that the Congressional Budget Office offered that any further extension beyond July 31, to the end of the fiscal year would require \$3 billion in new revenue, to the end of the calendar year, \$8 billion and a 6-year bill will require \$85-\$90 billion. Just over 52 days (31 legislative days) remain when this extension will expire, Kotarac continued, and the Environment & Public Works (EPW) Committee is scheduling a markup for June 24, of their portion of the bill. It is rumored this will be a six-year bill, bi-partisan, with some likely inflationary growth over current levels. From the region, all the County Board Chairs or Executives, the City of Chicago and CMAP Board Chair sent a letter to the EPW Committee, documenting the importance of freight and the new bill is hoped to include a new well-defined freight program that builds on MAP-21. Kotarac also reported that the House Ways and Means Committee announced a first hearing on the highway trust fund this Congress is expected soon.

## **7.0 Next Long Range Plan**

CMAP staff Elizabeth Schuh gave a presentation on CMAP’s next regional comprehensive plan. Required by federal regulations, the region’s long range transportation plan must be updated every four years. The update only just completed was considered a minor, technical update. The next plan is considered to be a much more substantive revisiting of the plan and while introducing new policies, will also seek to expand upon the policies of GO TO 2040. The board met about a year ago, talked about strategic direction with a decision to build on GO TO 2040 that already provides a very strong foundation considering transportation and land use for the region, Schuh continued, and the update will build up on and complement GO TO 2040, while considering new policy areas that support responsibilities while being more specific with implementation. Completion in October 2018, meeting the federal requirement of the new plan, Schuh described the focus of this year’s work in the preparation of background research and analysis to support the development of the new plan through the evaluation of existing conditions in transportation, land use, the regional economy, housing and socio-economic forecasts projecting population, household and employment. Technical elements of the plan will be considered in the coming years, with 2017 seeing scenario planning, beginning elements of the transportation plan—including the financial plan—and a call for regionally significant

transportation projects, evaluation and eventual prioritization and a draft plan for approval in 2018. Schuh also touched on likely concentrated outward pushes related to public engagement with stakeholders, through the working committee structure, during the coming year as well as throughout the plan development process. Resource groups will be used too, Schuh continued, bringing together stakeholders from multiple committees, or bringing in outside experts to discuss topics that may be out of our current expertise. Products this year will include as many as 5 snapshot reports: Regional economic clusters and trends; infill and TOD trends; demographic trends; transportation network and trends; and freight system trends. There are also 13 strategy papers planned for FY 2016, Schuh concluded. Asked to look into innovative financing related to public private partnerships, Schuh reported that conversations regarding ways to best incorporate innovative financing are currently underway. Implementation and financing were also noted as critical to the development process.

#### **8.0 Other Business**

There was no other business.

#### **9.0 Public Comment**

There was no public comment.

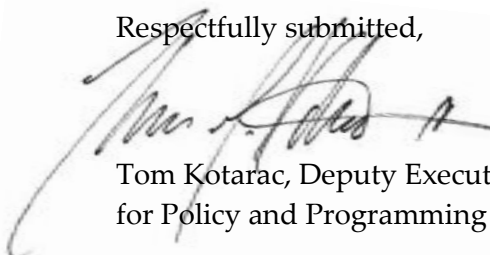
#### **10.0 Next Meeting**

The Regional Coordinating Committee meets next on October 14, 2015.

#### **11.0 Adjournment**

At 8:58 a.m., a motion to adjourn made by Ed Paesel was seconded by Mike Connelly, and with all in favor, carried.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Tom Kotarac', is written over a light blue rectangular background.

Tom Kotarac, Deputy Executive Director  
for Policy and Programming

/stk  
10-02-2015



# Chicago Metropolitan Agency for Planning

## Agenda Item No. 4.0

233 South Wacker Drive  
Suite 800  
Chicago, Illinois 60606

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[www.cmap.illinois.gov](http://www.cmap.illinois.gov)

### MEMORANDUM

**To:** Regional Coordinating Committee

**From:** CMAP Staff

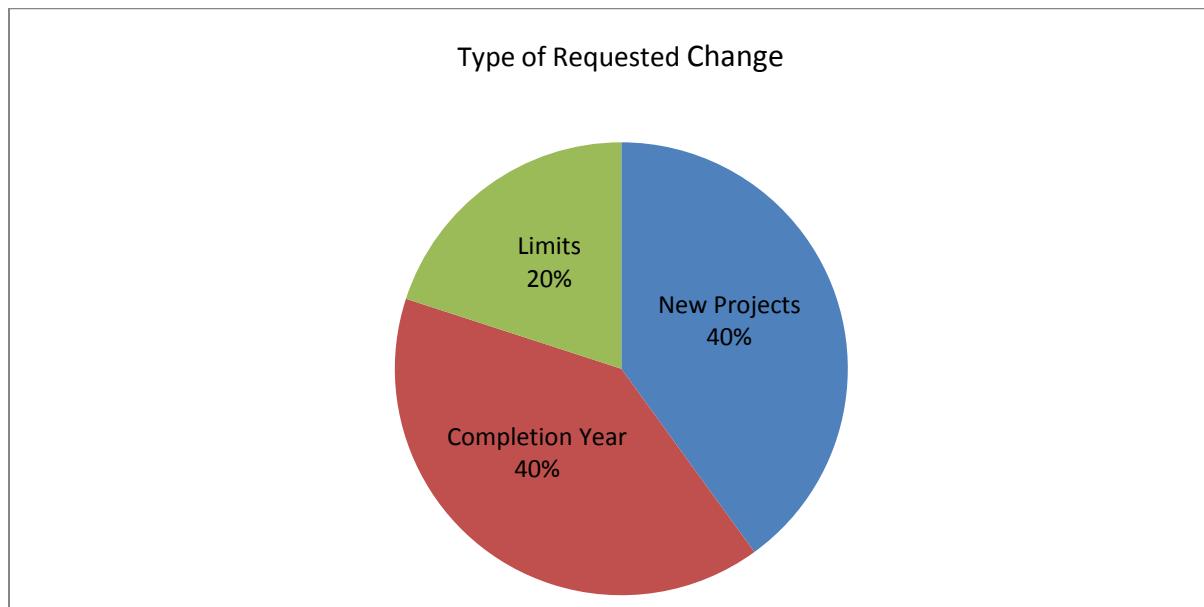
**Date:** October 7, 2015

**Re:** GO TO 2040/TIP Conformity Analysis & TIP Amendments

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In accordance with the semi-annual conformity analysis policy CMAP staff asked programmers to submit changes, additions, or deletions to non-exempt projects for inclusion in the regional air quality analysis of the Transportation Improvement Program (TIP) and GO TO 2040. Of the changes requested, five (5) projects require air quality conformity analysis. Below is a summary of the types of requested changes.



If the TIP amendments are approved, two new non-exempt projects will be included in the TIP. These types of projects are included in the conformity analysis because funding for phases beyond preliminary engineering has been identified in the TIP. Non-exempt and exempt tested projects with only preliminary engineering funding are excluded from conformity analysis.

The new projects are:

- TIP ID [09-15-0015](#): Adding lanes and replacing a bridge on US 30 from west of Dugan Road to Municipal Road.
- TIP ID [09-15-0019](#): An intersection improvement, reconstructing the current Collins Road, and extending Collins Road from Blue Heron Drive to Minkler Road.

One project requested a reduction to the original limits of the project:

- TIP ID [10-03-0005](#) Adding lanes and intersection improvements on Deerfield Road, from US 45 Milwaukee Avenue to Saunders Road in Riverwoods rather than Wilmot Road in Riverwoods.

Two projects are requesting changes to their completion year. The completion year indicates when a project is anticipated to be in service to users. The conformity analysis is conducted for selected analysis years between now and 2040. The analysis years are currently 2015, 2025, 2030 and 2040. If a change in completion year results in moving a project across an analysis year, the project must be included in a new conformity analysis. Sponsors indicated that several projects have updated completion years; two of those crossed an analysis year:

- TIP ID [03-09-0073](#): Adding lanes, resurfacing, curb and gutter improvements, and lighting on IL 19 Irving Park Road from Schaumburg Road to Bartlett Road, the sponsor has requested changing the completion year from 2015 to 2017.
- TIP ID [12-07-0021](#): Replacing a bridge, adding a continuous bi-directional turn lane, and adding lanes on Ridge Road from south of Minooka Road to McEvelly Road, the sponsor has requested changing the completion year from 2015 to 2016.

At this time no projects are requesting a scope change. The scope of a project is determined by the [work types](#) associated with the project.

- Non-exempt work types may affect air quality and must be tested for conformity. Examples of non-exempt work types are adding lanes to a road, an interchange expansion, signal timing and the major expansion of bus route service.
- Exempt tested work types do not require an air quality conformity analysis, but the region has chosen to include the impacts of projects including these work types in the travel demand model. Exempt tested projects include new commuter parking lots, rolling stock replacement, and road reconstruction with lane widening to standard (e.g., 10 feet to 12 feet).
- Exempt work types do not require an air quality conformity analysis. Examples of exempt work types are intersection improvements and rail station modernization.

TIP projects are also viewable in a [map format](#).

Each TIP ID includes a hyperlink to the [TIP database](#) for current project information. Changes can also be seen in the [Conformity Amendments](#) report which were coded in the 2015, 2025, 2030, and 2040 highway and transit networks. The regional travel demand model was run using the updated networks. The resultant vehicle miles traveled (VMT) by vehicle class, speed, time of day, and facility type were entered into US Environmental Protection Agency's MOVES



model. The model generated on-road emission estimates for each precursor or direct pollutant in each analysis year.

For ozone precursors volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>), the resulting emissions inventories estimates fell below the applicable budgets for the maintenance State Implementation Plan (SIP).

Both the annual direct fine particulate (PM<sub>2.5</sub>) and NO<sub>x</sub> emissions inventories are below the applicable budgets from the attainment SIP.

### Direct PM<sub>2.5</sub> and NO<sub>x</sub> Emissions in Tons per Year for PM<sub>2.5</sub> Conformity

Year	Fine Particulate Matter		Nitrogen Oxides	
	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2015	2,768.10	5,100.00	61,168.33	127,951.00
2025	1,824.18	2,377.00	31,224.61	44,224.00
2030	1,752.18	2,377.00	29,028.24	44,224.00
2040	1,831.11	2,377.00	29,766.07	44,224.00

conformity is demonstrated by comparison of analysis year emissions to the SIP budgets

### VOC and NO<sub>x</sub> Emissions in Tons per Summer Day for Ozone Conformity

Year	Volatile Organic Compounds		Nitrogen Oxides	
	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2015	76.66	117.23	162.53	373.52
2025	52.29	60.13	80.22	150.27
2030	50.70	60.13	74.10	150.27
2040	53.54	60.13	75.67	150.27

conformity is demonstrated by comparison of analysis year emissions to the SIP budgets

#### Notes:

Off-model benefits are not included in the total emissions estimates

Results updated as of July 1, 2015

**ACTION REQUESTED:** Recommend approval of the multi-year FFY 2016-2020 CMAQ Program and the FFY 2015-2017 TAP-L Program to the CMAP Board and the MPO Policy Committee

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## MEMORANDUM

**To:** Regional Coordinating Committee

**From:** CMAP Staff

**Date:** October 7, 2015

**Re:** Federal Fiscal Year (FFY) 2014-2018 CMAQ and FFY 2015-2017 TAP  
Proposed Programs

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Staff is requesting approval of the federal fiscal year (FFY) 2016-2020 Congestion Mitigation and Air Quality Improvement (CMAQ) and the FFY 2015-2017 Transportation Alternatives (TAP) programs. The funding recommendations can be found in the attachment to this memo as well as in spreadsheet format on the [CMAQ/TAP Program Development](#) webpage. The Transportation Committee approved these funding recommendations at its September meeting.

### Overview of process

CMAP held a joint CMAQ/TAP call for projects from January to March 2015. Staff then evaluated the projects over the spring and discussed the results with the Bicycle and Pedestrian Task Force and Regional Transportation Operations Coalition in May and June as well as with individual sponsors. Funding recommendations were considered by the CMAQ Project Selection Committee in June and the Transportation Committee in July, then released for a 30 day public comment period through July and August. Based upon the comments received, staff recommended that no changes be made to the draft program; both the CMAQ Project Selection Committee and the Transportation Committee concurred. The combined funding recommendation for the CMAQ and TAP programs is shown in Table 1.

Following the approval of the MPO Policy Committee and CMAP Board, the programs will be forwarded to U.S. DOT for project eligibility determination. Sponsors of funded projects will then attend a mandatory initiation meeting. This meeting will explain CMAP's program management policies and the process for implementing the projects, with the aim of ensuring timely project completion.

**Table 1. Summary of recommended FFY 2015-17 TAP and FFY 2016-20 CMAQ programs**

<b>Project Type</b>	<b>Recommended Funding</b>	<b>Number of Projects Recommended</b>
Bicycle Facilities	\$32,693,421	26
Bottleneck Elimination	\$10,000,000	2
Direct Emissions Reduction	\$9,692,300	2
Intersection Improvement	\$48,783,942	10
Other	\$14,762,000	3
Signal Interconnect	\$7,107,377	7
Transit Facility Improvement	\$125,000,000	1
Transit Service and Equipment	\$38,603,356	3
Transit Access	\$15,140,740	6
<b>Grand Total</b>	<b>\$301,783,136</b>	<b>60</b>

### **Congestion Mitigation and Air Quality Improvement Program**

The CMAQ program provides federal funds to air quality non-attainment areas for transportation projects that mitigate congestion or improve air quality. Northeastern Illinois has been and continues to be an air quality non-attainment area, so the region has received and programmed \$2 billion dollars in CMAQ funds since the program began in 1992. During this year's cycle, CMAP staff evaluated 118 applications requesting over \$631 million in federal funds. The proposed program commits \$274 million between 2016 and 2020 for 42 projects.

The CMAQ projects are shown ranked by the cost-effectiveness of emissions reductions within each project category. The evaluation and selection of projects also took into account transportation impact criteria and regional priorities. The transportation impact criteria were based upon project type and scored on a 30 point scale. The criteria and their weights are as shown in Table 2. More details on the scoring system can be found in the [application materials](#).

**Table 2. Transportation impact criteria for the CMAQ program**

<b>Project type</b>	<b>Criteria and Weights</b>		
Highway	Reliability 15	Safety 5	On CMP network* 10
Transit	Ridership 15	Reliability or asset condition 15	
Bicycle	Safety/attractiveness 10	Transit access 10	Connectivity 10
Direct Emissions Reduction	Benefits sensitive populations 20	Annual health benefits 5	Improves public fleets 5

\*Congestion Management Process network, which is essentially the National Highway System and the Strategic Regional Arterial system

New in this cycle was a provision for hardship funding to cover phase I engineering. Seven sponsors made requests for this funding, which were evaluated on the expected benefits of the project, as with all other applications. Two projects ranked high enough to be recommended for funding (an intersection improvement in the City of Berwyn and a bikeway in Sauk Village).

### **Transportation Alternatives Program**

TAP was created in 2012 with the last major federal transportation authorization to fund non-motorized transportation. While the CMAQ program funds bicycle facilities in addition to other types of projects, in northeastern Illinois TAP is focused only on bicycle facilities. Thus bicycle facilities could receive funding under either program, depending on how they ranked under either program's scoring criteria. The TAP criteria focus on helping to complete the Regional Greenways and Trails Plan, showing that a significant market for the facility exists (using population and employment density around the project as the metric), and improving the safety and attractiveness of bicycling. Demonstrating project readiness is also an important part of the evaluation. More details on the scoring system can be found in the [application materials](#).

In the recommended program, projects are shown ranked by the evaluation criteria scores. Each criterion had a potential score of 30 points except for the bonus, which is 10 points (5 points for having no right-of-way to acquire and 5 points for having phase II engineering complete). The maximum score is thus 100. A total of 55 projects were considered for TAP funding and 18 are being recommended.

**ACTION REQUESTED:** Recommend approval of the proposed FFY 2016-2020 Congestion Mitigation and Air Quality Improvement and the FFY 2015-2017 Transportation Alternatives programs to the CMAP Board and MPO Policy Committee

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# Chicago Metropolitan Agency for Planning

FFY 2016-2020 CMAQ Proposed Program Recommended by Transportation Committee September 18, 2015

							Air Quality			Transportation Impact	Regional Priority		
SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Bicycle Facilities	BP06164156	Orland Park	108th Av Trail Connection	\$215,700	\$150,800	\$0	\$293		57.7	22			79.8
Bicycle Facilities	BP08164123	Bensenville	IL 83 from Bryn Mawr Av to Foster Av	\$414,672	\$299,738	\$299,738	\$783		54.0	15			69.2
Bicycle Facilities	BP08164120	Bensenville	EOWA Corridor Bike Trail	\$872,200	\$693,760	\$0	\$1,059		52.0	14			66.1
Bicycle Facilities	BP10164143	Highland Park	Walker Av from St. Johns Av to Oak St	\$180,000	\$132,000	\$0	\$1,988		45.9	24			69.8
Bicycle Facilities	BP12164147	Homer Glen	Homer Glen Heroes Bike Trail-Goodings Grove Extension	\$312,001	\$249,600	\$0	\$1,993		45.9	17			62.6
Bicycle Facilities	BP02164141	Glenview	Milwaukee and Lake Av Multi-use Path	\$753,011	\$523,808	\$0	\$2,009		45.8	19			64.7
Bicycle Facilities	BP09164115	Aurora	Edgelawn Dr Bikeway Project	\$428,051	\$322,440	\$322,440	\$2,610		42.2	18			60.1
Bicycle Facilities	BP08164130	DuPage County DOT	Gary Av Trail	\$2,596,300	\$729,840	\$0	\$2,631		42.1	19			60.9
Bicycle Facilities	BP08164118	Bensenville	Church Rd from Irving Park Rd to Grove Av	\$647,024	\$477,620	\$0	\$3,285		38.5	17			55.2
Bicycle Facilities	BP08164144	Hanover Park	Hawks Hollow Forest Preserve Trail Connection	\$109,000	\$80,000	\$0	\$3,307		38.4	14			52.7
Bicycle Facilities	BP09164116	Aurora	Montgomery Rd Multi-use Path	\$567,585	\$430,068	\$430,068	\$3,438		37.8	19			56.9
Bicycle Facilities	BP08164119	Bensenville	Church Rd from Jefferson St to Grand Av	\$1,389,000	\$789,600	\$789,600	\$3,697		36.5	18			54.3
Bicycle Facilities	BP09164138	Geneva	IL 38/E State St from IL 25/Bennett St to Kirk Rd	\$717,393	\$452,550	\$452,550	\$4,199		34.1	19			53.3
Bicycle Facilities	BP05164163	Western Springs	Flag Creek Bicycle Corridor	\$2,946,000	\$2,316,000	\$0	\$6,693		24.4	16			40.3
Bicycle Facilities	BP10164152	Mundelein	Maple Av Bike Path	\$1,268,125	\$974,500	\$974,500	\$7,201		22.8	19			41.5
Bicycle Facilities	BP08164129	DuPage County DOT	Benedictine Connector	\$3,751,267	\$992,000	\$0	\$7,677		21.3	20			41.5
Bicycle Facilities	BP02164162	Skokie	Old Orchard Rd from Harms Rd to Woods Dr	\$543,500	\$376,000	\$0	\$7,681		21.3	24			45.0
Bicycle Facilities	BP07164160	Sauk Village	Sauk Trail/Cottage Grove Av Bike Path Improvements	\$1,770,000	\$124,800	\$124,800	\$7,698		21.3	13			34.8
Bicycle Facilities	BP09164148	FPD of Kane County	Fox River Trail UPRR Underpass	\$2,218,620	\$1,774,896	\$0	\$7,867		20.8	23			43.7
Bicycle Facilities	BP03164145	Hanover Park	Sycamore Av, Walnut Av and Unmarked Street Bike Lanes	\$134,000	\$99,200	\$0	\$7,919		20.7	14			34.5
Bicycle Facilities	BP10164142	Highland Park	Clavey Rd from Barberry Rd to Skokie Valley Bike Path	\$108,000	\$78,400	\$0	\$9,193		17.4	17			34.4

1 - Composite priority index is the sum of air quality, transportation impact, and regional priority scores

\* The project has the potential to provide an emissions benefit of \$12,709 to \$4,368 per kg of VOC eliminated.

							Air Quality			Transportation Impact	Regional Priority		
SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Bicycle Facilities	BP09164149	Kane County DOT	Longmeadow Parkway Bike Path Extensions	\$1,831,130	\$1,400,023	\$1,400,023	\$9,644		16.4	20			36.3
Bicycle Facilities	BP12164159	Romeoville	Multi-Use Path from Weber Rd to Airport Rd and I-55	\$1,748,000	\$1,318,400	\$0	\$11,192		13.3	17			30.0
Bicycle Facilities	BP08164128	DuPage County DOT	I-88 Central DuPage Regional Bikeway	\$3,545,579	\$2,080,700	\$0	\$13,108		10.3	20			29.9
Bicycle Facilities	BP10164050	Lake County Forest Preserves	Lyons Woods Bike Path	\$2,795,000	\$2,000,000	\$0	\$15,283		7.7	18			26.1
Bicycle Facilities	BP06164157	Palos Heights	Ridgeland Av from College Dr to 135th St	\$985,000	\$788,000	\$0	\$16,162		6.8	19			25.5
Bicycle Facilities	BP11164049	Algonquin	Highland Ave Multi-use Trail from Tanglewood Dr to Haegers Bend Rd	\$306,970	\$211,042	\$0	\$18,760		4.8	11			15.8
Bicycle Facilities	BP08164126	Clarendon Hills	Prospect Av Bicycle Route Improvements	\$86,875	\$63,500	\$0	\$21,582		3.3	19			22.5
Bicycle Facilities	BP07164158	Park Forest	Western Av from Old Plank Rd Trail to Thorn Creek Trail	\$3,223,700	\$190,900	\$0	\$22,297		3.0	18			21.5
Bicycle Facilities	BP07164155	Oak Forest	Bike to Metra	\$7,412,300	\$371,200	\$0	\$27,182		1.5	13			14.1
Bicycle Facilities	BP11164150	Lake in the Hills	Lakewood Rd from Miller Rd to Algonquin Rd	\$1,125,000	\$60,000	\$0	\$28,165		1.4	12			13.5
Bicycle Facilities	BP03164165	Streamwood	IL 19/Irving Park Rd from Schaumburg Rd to Park Blv	\$1,300,000	\$960,000	\$0	\$29,509		1.1	20			21.0
Bicycle Facilities	BP10164151	Mundelein	McKinley Av Commuter Bridge over CN at Metra	\$4,730,000	\$1,680,000	\$0	\$33,081		0.7	13			13.5
Bicycle Facilities	BP02164140	Glenview	Chestnut Av Multi-Use Path	\$597,881	\$478,304	\$0	\$42,216		0.2	21			21.1
Bicycle Facilities	BP03164161	Schaumburg	Golf Rd Path from Roosevelt Blv to Ring Rd	\$1,693,040	\$1,306,432	\$0	\$42,580		0.2	22			22.5
Bicycle Facilities	BP03164117	Barrington	US 14/Northwest Hwy from Hough St to Lake Zurich Rd	\$5,262,000	\$1,409,000	\$0	\$61,097		0.0	21			21.3
Bicycle Facilities	BP10164131	Lake County Forest Preserves	Middlefork Savanna Forest Preserve Trail	\$2,862,391	\$2,066,320	\$0	\$63,088		0.0	14			14.3
Bicycle Facilities	BP12164132	Frankfort	Harlem Av Trail from Old Plank Rd Trail to Laraway Rd	\$425,688	\$262,000	\$0	\$77,827		0.0	14			14.2
Bicycle Facilities	BP12164133	Frankfort	Harlem Av Multi-use Trail from US30/Lincoln Hwy to Laraway Rd	\$1,727,000	\$1,301,600	\$0	\$83,695		0.0	14			14.3
Bicycle Facilities	BP12164164	FPD of Will County	Black Rd Trail from DuPage River Trail to Rock Run Trail	\$3,276,270	\$1,644,630	\$0	\$112,799		0.0	20			20.0
Bicycle Facilities	BP01164125	CDOT	43rd St Access Bridge to Lakefront Trail	\$24,545,000	\$17,320,000	\$0	\$128,481		0.0	26			26.2

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							Air Quality			Transportation Impact	Regional Priority		
SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Bicycle Facilities	BP08164122	Bensenville	Jefferson St from Church Rd to York Rd	\$582,000	\$417,600	\$0	\$145,160		0.0	17			17.3
Bicycle Facilities	BP12164134	Frankfort	Hickory Creek Multi-Use Trail	\$557,000	\$426,000	\$0	\$162,352		0.0	15			14.9
Bicycle Facilities	BP12164137	Frankfort	Pfeiffer Rd from Old Plank Road Trail to Sauk Trail Rd and Sauk Trail from Pfeiffer Rd to IL 43/Harlem Av	\$1,379,034	\$1,008,000	\$0	\$175,432		0.0	12			12.2
Bicycle Facilities	BP08164154	Naperville	North Aurora Rd Underpass at CN/EJ&E	\$32,841,000	\$7,111,000	\$0	\$377,005		0.0	12			12.0
Bicycle Facilities	BP10164153	Mundelein	Midlothian Rd Multi-Use Path	\$729,709	\$562,395	\$0	\$389,910		0.0	17			16.6
Bicycle Facilities	BP12164136	Frankfort	Sauk Trail Rd from Larch Rd to 88th Av	\$1,050,000	\$800,000	\$0	\$425,156		0.0	10			10.0
Bicycle Facilities	BP11164127	Crystal Lake	Prairie Path Re-Route	\$136,696	\$109,356	\$0	\$430,384		0.0	22			21.6
Bicycle Facilities	BP12164135	Frankfort	Sauk Trail Rd from 80th Av to Harlem Av	\$752,000	\$560,000	\$0	\$470,857		0.0	6			6.1
Bicycle Facilities	BP11164048	Spring Grove	Winn Rd from Martin Dr to Elk Dr	\$396,100	\$224,410	\$0	-		-	0			0.0
Bicycle Facilities	BP12164166	Frankfort	LaGrange Rd from Pleasant Hill Rd to Nebraska St	\$166,000	\$124,800	\$0	-		-	0			0.0
Bicycle Facilities	BP08164139	Glen Ellyn	Taylor Av Underpass	\$2,860,000	\$300,000	\$0	-		-	0			0.0
Bottleneck Elimination	BE01164081	IDOT	I-90 from Cumberland Av to Harlem Av (EB Improvement)	\$15,900,000	\$9,100,000	\$9,100,000	\$209		58.3	25	10		93.3
Bottleneck Elimination	BE01164077	CDOT	71st St and CSX Grade Separation (GS19)	\$17,260,000	\$13,808,000	\$900,000	\$5,589		28.3	9	10		47.3
Bottleneck Elimination	BE03164072	Barrington	US14 Grade Separation at CN/WCL Railway	\$62,668,750	\$39,687,000	\$0	\$66,356		0.0	17			17.0
Bottleneck Elimination	BE12164087	Monee	Egyptian Trail from Monee-Manhattan Rd to Governors Hwy	\$4,348,700	\$1,420,000	\$0	\$74,402		0.0	9			9.0
Direct Emissions Reduction	DR13164111	IEPA	Railserve\Ingredion Switcher Locomotive Engine Replacement	\$4,142,000	\$2,692,300	\$2,692,300		\$36	59.8	19			78.8
Direct Emissions Reduction	OT01164101	CDOT	Chicago Water Taxi Fleet	\$1,400,000	\$1,120,000	\$0		\$320	58.4	12			70.4
Direct Emissions Reduction	DR13164112	IEPA	Chicago Area Green Fleet Grant Program	\$14,000,000	\$7,000,000	\$7,000,000		\$1,286	54.0	10			64.0
Direct Emissions Reduction	DR01164110	CTA	Purchase of Up To 25 Electric Buses and Charging Stations	\$25,000,000	\$20,000,000	\$0		\$3,009	46.8	19			65.8
Direct Emissions Reduction	DR05164108	Berwyn	Public Works 2.5 Ton Fleet Vehicle Replacement 1990	\$115,000	\$92,000	\$0	-		-	0			0.0
Direct Emissions Reduction	DR05164109	Berwyn	Public Works 1 Ton Fleet Vehicle Replacement 1999	\$85,560	\$68,448	\$0	-		-	0			0.0
Intersection Improvement	II02164080	IDOT	Golf Rd at Harms Rd	\$948,750	\$660,000	\$660,000	\$1,348		50.0	10			60.0

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							Air Quality			Transportation Impact	Regional Priority		
SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Intersection Improvement	II02164083	IDOT	Willow Rd at Pfingsten Rd	\$1,405,575	\$1,004,400	\$1,004,400	\$2,492		42.9	18			60.9
Intersection Improvement	II10164086	Lake County DOT	Fairfield Rd at IL 134	\$984,000	\$699,000	\$699,000	\$2,549		42.6	6			48.6
Intersection Improvement	II10164082	IDOT	IL 176 at Roberts Rd	\$1,221,250	\$860,000	\$860,000	\$2,895		40.6	19			59.6
Intersection Improvement	II05164075	Berwyn	16st St from Harlem Av to Ridgeland Av	\$1,653,020	\$59,600	\$59,600	\$4,630		32.2	15			47.2
Intersection Improvement	II03164089	Schaumburg	Woodfield Rd at IL 53	\$3,434,000	\$2,106,000	\$2,106,000	\$4,706		31.8	8			39.8
Intersection Improvement	II03164090	Schaumburg	IL 62/Algonquin Rd at Meacham Rd	\$4,095,000	\$2,680,000	\$2,680,000	\$6,234		25.9	16			41.9
Intersection Improvement	II04164079	Cook County DOT	I-294 at IL 64/North Av	\$39,691,908	\$29,469,874	\$29,469,874	\$8,053		20.3	30	10		60.3
Intersection Improvement	II09164076	Geneva	IL 38/E State St from IL 25/Bennett St to Kirk Rd	\$5,560,262	\$4,083,068	\$4,083,068	\$9,862		15.9	21			36.9
Intersection Improvement	II02164091	Skokie	Old Orchard Rd from Edens Ewy to Skokie Blv	\$11,882,500	\$7,162,000	\$7,162,000	\$11,432		12.9	24			36.9
Intersection Improvement	II13164078	Cook County DOT	I-294 Ramps to Franklin Av/Green St	\$56,086,251	\$40,768,334	\$0	\$14,594		8.4	19	10		37.4
Intersection Improvement	II11164085	Lake in the Hills	Lakewood Rd at Miller Rd	\$2,130,000	\$80,000	\$0	\$17,456		5.7	0			5.7
Intersection Improvement	II10164084	Lake Forest	IL43/Waukegan Rd at Everett Rd	\$2,423,500	\$1,903,200	\$0	\$27,477		1.5	17			18.5
Intersection Improvement	II11164071	Algonquin Township	Crystal Lake Rd and Silver Lake Roundabout	\$2,500,000	\$2,000,000	\$0	\$38,309		0.3	0			0.3
Intersection Improvement	II03164092	Streamwood	IL19/Irving Park Rd from Schaumburg Rd to Bartlett Rd	\$11,344,500	\$2,524,800	\$0	\$43,845		0.2	8			8.2
Intersection Improvement	II08164093	Warrenville	Old Town Roundabout (Batavia Rd/Warrenville Rd/River Rd)	\$4,017,180	\$2,521,888	\$0	\$51,443		0.1	0			0.1
Intersection Improvement	II06164073	Bedford Park	71st St at Sayre Av	\$131,000	\$96,000	\$0	-		-	0			0.0
Intersection Improvement	II06164088	Orland Park	151st St and Regent Dr	\$239,000	\$169,600	\$0	-		-	0			0.0
Intersection Improvement	II06164074	Bedford Park	Harlem Av at 71st St	\$368,000	\$256,000	\$0	-		-	0			0.0
Other	OT13164103	IDOT	Ramp metering	\$3,872,000	\$3,097,600	\$3,097,600	\$224		87.3	N/A			87.3
Other	OT13164105	IEPA	Partners for Clean Air	\$3,000,000	\$2,400,000	\$0	\$509		84.0	N/A			84.0
Other	OT13164106	Pace	Dynamic Rideshare	\$877,000	\$877,000	\$0	\$510		84.0	N/A			84.0
Other	OT13164107	Pace	Vanpools	\$26,016,000	\$26,016,000	\$11,616,000	\$924		79.5	N/A			79.5
Other	OT05164104	Riverside	Bike Parking	\$60,500	\$48,400	\$48,400	\$1,971		69.0	N/A			69.0
Other	OT01164102	CDOT	Divvy 2016 Expansion	\$6,000,000	\$4,800,000	\$0	\$9,977		23.5	N/A			23.5

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							Air Quality			Transportation Impact	Regional Priority		
SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Other	OT01164101	CDOT	Chicago Water Taxi Fleet	\$1,400,000	\$1,120,000	\$0	\$19,294		6.7	N/A			6.7
Signal Interconnect	SI10164098	Lake County	Butterfield Rd from Allanson Rd to Buckley Rd/Peterson Rd	\$1,019,610	\$739,690	\$739,690	\$537		55.8	18			73.8
Signal Interconnect	SI10164097	IDOT	US45/Lake St from Rollins Rd to Dada Dr/Grant Av	\$123,000	\$85,600	\$85,600	\$594		55.4	20			75.4
Signal Interconnect	SI06164096	IDOT	Wolf Rd from 153rd St to 159th St	\$159,000	\$111,200	\$111,200	\$731		54.4	12			66.4
Signal Interconnect	SI09164094	Aurora	Indian Trail Rd from IL25/Aurora Av to Pensbury Ln	\$1,140,009	\$905,607	\$905,607	\$885		53.3	19			72.3
Signal Interconnect	SI10164099	Lake County	US 12/Rand Rd from IL 176/Liberty St to Miller Rd	\$2,402,430	\$1,836,960	\$1,836,960	\$1,283		50.5	26			76.5
Signal Interconnect	SI10164100	Lake County	Sunset Av/Golf Rd/Greenwood Av from McAree Rd to IL 137/Sheridan Rd	\$2,115,400	\$1,508,320	\$1,508,320	\$3,818		35.9	30			65.9
Signal Interconnect	SI02164095	Evanston	Green Bay Rd Corridor Improvements	\$2,850,000	\$1,920,000	\$1,920,000	\$7,566		21.7	15			36.7
Transit Access	TI04164065	Rosemont	Rosemont CTA Station Pedestrian Crossing	\$720,008	\$527,206	\$527,206	\$510		56.0	3		4	63.0
Transit Access	TI09164051	Aurora	Aurora Transportation Center (ATC) Enhancements	\$14,585,612	\$8,625,982	\$8,625,982	\$858		53.4	9		5	67.4
Transit Access	TI13164114	RTA	Access to Transit Group	\$5,390,164	\$4,221,392	\$4,221,392	\$1,545		48.7	9		6	63.7
Transit Access	TI08164113	Clarendon Hills	Burlington Av Metra Station Bicycle Parking Shelter	\$58,700	\$44,160	\$44,160	\$1,991		45.9	3		4	52.9
Transit Access	TI03164067	Streamwood	US20 Sidewalk to Hanover Park Metra Station	\$430,000	\$324,000	\$0	\$3,433		37.8	3		0	40.8
Transit Access	TI03164066	Schaumburg	Schaumburg Metra Station Bike Racks and Lockers	\$52,500	\$42,000	\$42,000	\$3,900		35.5	3		7	45.0
Transit Access	TI10164061	Mundelein	McKinley Av Commuter Bridge over CN RR at Mundelein Metra Station	\$4,600,000	\$1,680,000	\$1,680,000	\$5,087		30.2	3		8	40.7
Transit Access	TI03164068	Wheeling	Milwaukee Ave at Hintz Rd Sidewalks	\$436,770	\$325,576	\$0	\$8,192		19.9	3		3	25.9
Transit Access	TI07164063	Park Forest	211th St Metra Station Area Access Improvements	\$2,269,300	\$113,520	\$0	\$15,658		7.3	3		1	11.3
Transit Access	TI07164064	Richton Park	Richton Park Station Commuter Parking Deck	\$9,757,000	\$7,320,000	\$0	\$39,494		0.3	3		6	8.8
Transit Access	TI03164062	Niles	Access to Milwaukee Av and Oakton St Bus Service	\$1,275,000	\$848,000	\$0	\$45,074		0.1	3		3	6.1
Transit Access	TI08164070	Villa Park	North Side Sidewalk Improvements	\$1,212,925	\$861,140	\$0	-		-	0			0.0
Transit Facility Improvement	TI01164054	CDOT	Washington Station Reconstruction - CTA Blue Line	\$81,500,000	\$4,900,000	\$0	\$8,432		19.3	9		10	38.3

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SubType	CMAQ ID	Sponsor	Facility to be Improved	Adjusted Project Total	Federal request	2016-2020 Recommended Total	Annualized \$ per Kg VOC Eliminated	Annualized \$ Per Kg PM2.5 Eliminated	Cost Effectiveness Score	Sum of All Criteria Scores	Major Capital Project	Transit Supportive Land Use	Composite Priority Index <sup>1</sup>
Transit Facility Improvement	TI01164052	CDOT	Monroe Station Reconstruction CTA Red Line	\$77,500,000	\$5,000,000	\$0	\$8,967		17.9	29		9	40.9
Transit Facility Improvement	TI08164056	Clarendon Hills	Prospect Ave Access to Metra Improvements	\$842,100	\$578,080	\$0	\$9,102		17.6	13		10	24.6
Transit Facility Improvement	TI08164055	Clarendon Hills	Burlington Av Metra Warming Station	\$958,750	\$671,400	\$0	\$10,362		14.9	3		4	21.9
Transit Facility Improvement	TI01164053	CDOT	State/Lake Reconstruction - CTA Loop Elevated	\$97,600,000	\$92,000,000	\$0	\$12,239		11.5	3		4	45.5
Transit Facility Improvement	TI01164057	CTA	Red and Purple Line Modernization-Phase One	\$570,000,000	\$125,000,000	\$125,000,000	\$12,709 *		10.8	24		10	49.3
Transit Service and Equipment	TI01164059	CTA	Bus Slow Zone Elimination Program	\$24,958,580	\$20,000,000	\$0	\$2,857		40.8	29	10		78.3
Transit Service and Equipment	TI13164060	IDOT	Edens Expressway/I-94 Bus on Shoulder	\$13,856,689	\$9,992,195	\$9,992,195	\$3,389		38.0	22		1	61.0
Transit Service and Equipment	TI13164168	Pace	Pulse Dempster Line	\$26,455,000	\$19,152,000	\$0	\$5,738		27.7	21		6	54.5
Transit Service and Equipment	TI01164058	CTA	Ashland Av Transit Signal Priority and Signal Modernization-Irving Park Rd to Cermak Rd	\$11,980,171	\$8,890,857	\$8,890,857	\$6,479		25.1	15		9	49.1
Transit Service and Equipment	TI13164167	Pace	I-90 Corridor Transit Access Improvement Project	\$24,650,380	\$19,720,304	\$19,720,304	\$8,679		18.6	29	10		57.1

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# Chicago Metropolitan Agency for Planning

FFY 2015-2017 Transportation Alternatives Proposed Program Recommended by Transportation Committee September 18, 2015

Sponsor	Project Title	Ranking Criteria Scores					Requested Funds	Proposed FY16	Proposed FY17
		Completion of RGTP <sup>1</sup>	Population & Employment Density	Safety & Attractiveness	Bonus	Total Points			
Cook Co FPD	North Branch Trail	30	30	30	10	100	\$ 1,600,000	\$ 1,600,000	\$ -
CDOT	43rd St Access Bridge to Lakefront Trail	25	30	30	0	85	\$ 17,320,000	\$ 11,648,000	\$ -
FPD of Kane County	Fox River Trail UPRR Underpass	30	24	30	0	84	\$ 1,774,896	\$ 143,680	\$ 1,631,216
Crystal Lake	Prairie Path Re-Route	25	24	30	5	84	\$ 109,356	\$ 10,000	\$ 99,356
Frankfort	Hickory Creek Multi-Use Trail	30	24	30	0	84	\$ 426,000	\$ -	\$ -
Orland Park	108th Av Trail Connection	30	24	24	5	83	\$ 150,800	\$ 150,800	\$ -
FPD of Will County	Black Rd Trail from DuPage River Trail to Rock Run Trail	30	24	24	5	83	\$ 1,644,630	\$ 74,540	\$ 1,570,090
Glenview	Milwaukee and Lake Av Multi-use Path	20	30	24	5	79	\$ 523,808	\$ -	\$ 523,808
DuPage County DOT	Benedictine Connector	25	30	24	0	79	\$ 992,000	\$ 712,000	\$ 280,000
Kane County DOT	Longmeadow Parkway Bike Path Extensions	25	24	30	0	79	\$ 1,400,023	\$ -	\$ -
Homer Glen	Homer Glen Heroes Bike Trail-Goodings Grove Extension	25	24	30	0	79	\$ 249,600	\$ 20,800	\$ 228,800
Barrington	US 14/Northwest Hwy from Hough St to Lake Zurich Rd	30	24	24	0	78	\$ 1,409,000	\$ -	\$ -
Lake County Forest Preserves	Lyons Woods Bike Path	25	24	24	5	78	\$ 2,000,000	\$ 2,000,000	\$ -
Lake County Forest Preserves	Middlefork Savanna Forest Preserve Trail	25	16	30	5	76	\$ 2,066,320	\$ 2,066,320	\$ -
Bensenville	Church Rd from Irving Park Rd to Grove Av	20	30	18	5	73	\$ 477,620	\$ 64,000	\$ 477,620
Romeoville	Multi-Use Path from Weber Rd to Airport Rd and I-55	20	24	24	5	73	\$ 1,318,400	\$ 89,600	\$ 1,228,800
DuPage County DOT	Gary Av Trail	10	30	24	0	64	\$ 729,840	\$ 469,840	\$ 260,000
Glenview	Chestnut Av Multi-Use Path	10	30	18	5	63	\$ 478,304	\$ -	\$ -
Skokie	Old Orchard Rd from Harms Rd to Woods Dr	10	24	24	5	63	\$ 376,000	\$ -	\$ 376,000
Schaumburg	Golf Rd Path from Roosevelt Blv to Ring Rd	10	24	24	5	63	\$ 1,306,432	\$ 80,000	\$ 1,226,432
Palos Heights	Ridgeland Av from College Dr to 135th St	10	24	24	5	63	\$ 788,000	\$ 101,677	\$ 686,323
Hanover Park	Hawks Hollow Forest Preserve Trail Connection	10	24	24	5	63	\$ 80,000	\$ 7,200	\$ 72,800
Aurora	Montgomery Rd Multi-use Path	10	30	18	5	63	\$ 430,068	\$ -	\$ -
Highland Park	Walker Av from St. Johns Av to Oak St	10	24	24	5	63	\$ 132,000	\$ -	\$ -
Mundelein	Maple Av Bike Path	10	24	24	5	63	\$ 974,500	\$ -	\$ -
Mundelein	Midlothian Rd Multi-Use Path	10	24	24	5	63	\$ 562,395	\$ -	\$ -
Bensenville	EOWA Corridor Bike Trail	0	30	24	5	59	\$ 693,760	\$ -	\$ -
Frankfort	Harlem Av Trail from Old Plank Rd Trail to Laraway Rd	10	20	24	5	59	\$ 262,000	\$ -	\$ -
Frankfort	Pfeiffer Rd from Old Plank Road Trail to Sauk Trail Rd and Sauk Trail from Pfeiffer Rd to IL 43/Harlem Av	25	16	18	0	59	\$ 1,008,000	\$ -	\$ -
Streamwood	IL 19/Irving Park Rd from Schaumburg Rd to Park Blv	10	24	24	0	58	\$ 960,000	\$ -	\$ -
Park Forest	Western Av from Old Plank Rd Trail to Thorn Creek Trail	10	24	24	0	58	\$ 190,900	\$ -	\$ -
DuPage County DOT	I-88 Central DuPage Regional Bikeway	10	24	24	0	58	\$ 2,080,700	\$ -	\$ -
Geneva	IL 38/E State St from IL 25/Bennett St to Kirk Rd	10	24	24	0	58	\$ 452,550	\$ -	\$ -

Sponsor	Project Title	Ranking Criteria Scores					Requested Funds	Proposed FY16	Proposed FY17
		Completion of RGTP <sup>1</sup>	Population & Employment Density	Safety & Attractiveness	Bonus	Total Points			
Aurora	Edgelawn Dr Bikeway Project	10	30	12	5	57	\$ 322,440	\$ -	\$ -
Highland Park	Clavey Rd from Barberry Rd to Skokie Valley Bike Path	10	24	18	5	57	\$ 78,400	\$ -	\$ -
Lake in the Hills	Lakewood Rd from Miller Rd to Algonquin Rd	10	27	18	0	55	\$ 60,000	\$ -	\$ -
Bensenville	IL 83 from Bryn Mawr Av to Foster Av	0	30	24	0	54	\$ 299,738	\$ -	\$ -
Frankfort	Harlem Av Multi-use Trail from US30/Lincoln Hwy to Laraway Rd	10	20	24	0	54	\$ 1,301,600	\$ -	\$ -
Oak Forest	Bike to Metra	10	29	6	5	50	\$ 371,200	\$ -	\$ -
Sauk Village	Sauk Trail/Cottage Grove Av Bike Path Improvements	0	24	24	0	48	\$ 124,800	\$ -	\$ -
Naperville	North Aurora Rd Underpass at CN/EJ&E	0	24	24	0	48	\$ 7,111,000	\$ -	\$ -
Clarendon Hills	Prospect Av Bicycle Route Improvements	0	30	12	5	47	\$ 63,500	\$ -	\$ -
Algonquin	Highland Ave Multi-use Trail from Tanglewood Dr to Haegers Bend Rd	0	24	18	5	47	\$ 211,042	\$ -	\$ -
Frankfort	Sauk Trail Rd from Larch Rd to 88th Av	0	24	18	5	47	\$ 800,000	\$ -	\$ -
Western Springs	Flag Creek Bicycle Corridor	0	30	12	0	42	\$ 2,316,000	\$ -	\$ -
Bensenville	Church Rd from Jefferson St to Grand Av	0	24	18	0	42	\$ 789,600	\$ -	\$ -
Bensenville	Jefferson St from Church Rd to York Rd	0	24	18	0	42	\$ 417,600	\$ -	\$ -
Hanover Park	Sycamore Av, Walnut Av and Unmarked Street Bike Lanes	0	30	6	5	41	\$ 99,200	\$ -	\$ -
Frankfort	Sauk Trail Rd from 80th Av to Harlem Av	20	16	0	5	41	\$ 560,000	\$ -	\$ -
Mundelein	McKinley Av Commuter Bridge over CN at Metra	0	30	0	5	35	\$ 1,680,000	\$ -	\$ -
Hoffman Estates	Lakewood/Eagle/Central Bicycle Connections	0	0	0	0	0	\$ 308,340	\$ -	\$ -
Bensenville	George St from York Rd to County Line Rd	0	0	0	0	0	\$ 609,191	\$ -	\$ -
Bensenville	York Rd from Washington St to Grand Av	0	0	0	0	0	\$ 1,007,200	\$ -	\$ -
Glen Ellyn	Taylor Av Underpass	0	0	0	0	0	\$ 300,000	\$ -	\$ -
Spring Grove	Winn Rd from Martin Dr to Elk Dr	0	0	0	0	0	\$ 224,410	\$ -	\$ -
Frankfort	LaGrange Rd from Pleasant Hill Rd to Nebraska St	0	0	0	0	0	\$ 124,800	\$ -	\$ -



September 25, 2015

## Policy Update: Industry clusters in the Chicago metropolitan region

*CMAP's regional economic indicators [microsite](#) features key measures of metropolitan Chicago's economy and, where applicable, compares these measures to peer metropolitan areas. The microsite and accompanying Policy Update series examine the complex factors that shape our region's global economic competitiveness. The first of a two-part series that explores new methods for studying industry clusters, this update explores the region's traded industry clusters, and an upcoming update will explore local industry clusters.*

In today's economy, metropolitan areas are the unquestioned engines of economic growth. On a global scale, roughly [80 percent](#) of the world's output this year will be generated in urban areas. That proportion is even higher in the U.S., where metropolitan areas generated over [90 percent](#) of the nation's GDP in 2013. Understanding the strengths, needs, and challenges of our metropolitan areas helps policy makers and planners develop long-range strategies to foster economic growth. One way of understanding the economic strengths of our region is to examine employment growth and concentration in the region's industries.

[Research](#) has shown that certain industries within metropolitan areas tend to develop in concert with suppliers, complementary businesses, specialized support services, and customers. The process of related industries growing alongside one another is known as "clustering." Location choice is a critical component of business success. Industries located within strong clusters benefit from better access to talent, suppliers, infrastructure, and specialized services. By enacting policies that support the infrastructure and workforce needs of our industry clusters, our region could facilitate economic growth.

This Policy Update will describe research into clusters, including CMAP's application of the U.S. Cluster Mapping methodology. It will also explore how certain types of clusters foster growth in metropolitan economies and how clusters contribute to the Chicago region's strengths. Although this update is a component of CMAP's ongoing economic analysis, it builds on the foundation of cluster analysis [established](#) in GO TO 2040. Moving forward, new methodology explored here will inform CMAP's preliminary analysis for the region's [next comprehensive plan](#), which is scheduled for adoption in 2018.

### Industry cluster analysis approaches vary

CMAP's cluster analysis in GO TO 2040 used the Purdue University cluster typologies. While these provide a strong understanding of the benefits of economic clustering, a newer approach

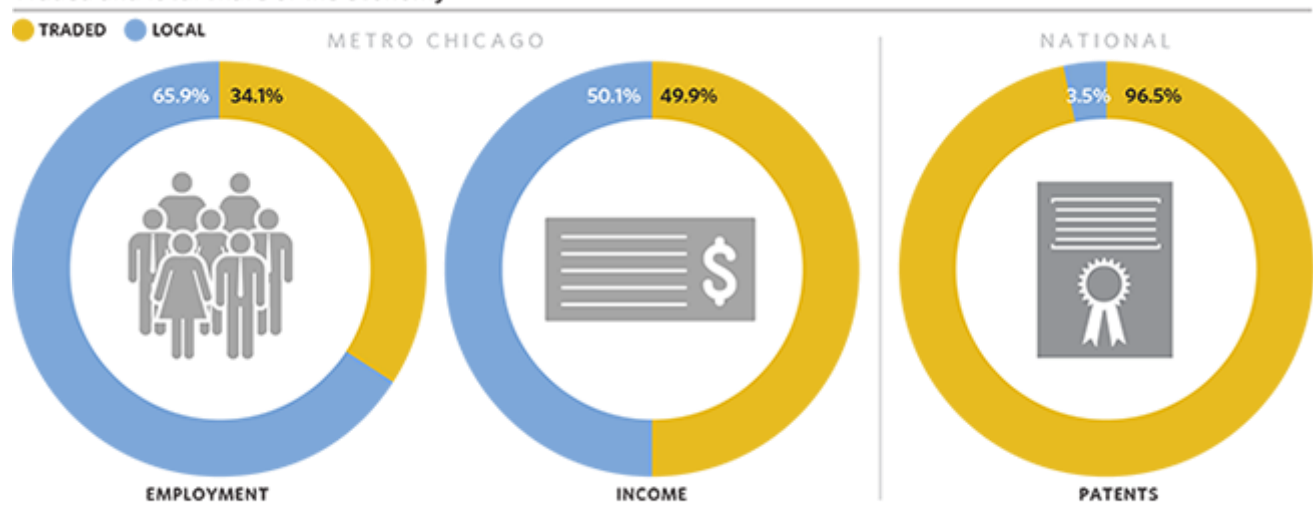
that is more suited to large, complex economies like metropolitan Chicago is available. Building on decades of research, a series of leading researchers associated with the [U.S. Cluster Mapping Project](#) recently published a [methodology](#) for [identifying](#) and categorizing industry clusters.

While [prior CMAP research](#) explored the region's freight and manufacturing clusters in great depth, the Cluster Mapping identification provides additional tools to understand how these clusters contribute to the region's economy. CMAP's cluster analysis methodology was tailored to specifically study metropolitan Chicago's industries, whereas the Cluster Mapping's methodology was designed to understand national trends. The new methodology provides a foundation for understanding and comparing industry clusters in the Chicago region and other metropolitan areas. Moreover, contributing research for the project has also led to a greater understanding of different types of industry clusters and their differing roles in the economy.

## Understanding clusters' differing roles in the economy

The U.S. Cluster Mapping methodology offers a refined look into the roles that different clusters play in metropolitan economies, distinguishing industry cluster types as traded or local. Traded industries and clusters produce goods and services that are consumed nationally and globally. They exist in less than half of all regions nationwide and are highly concentrated in just a few regions. Local industries and clusters serve regional populations with essential goods and services. They are found in all regions across the U.S. at a consistent level of employment concentration. By distinguishing between these two broad industry cluster types, regions can understand their unique human capital assets and better develop and prioritize strategies for cluster growth, since each industry cluster type has its own economic development needs.

### Traded and local share of the economy



Note: Patent data not available for the Chicago region.

Sources: Chicago Metropolitan Agency for Planning analysis of Economic Modeling Specialists International data; U.S. Cluster Mapping project.

Methods for identifying industry clusters have changed over time as researchers develop a greater understanding of clusters. The new research behind the U.S. Cluster Mapping Project identifies groupings of industry clusters by attempting to capture geographic co-location patterns, occupational sharing patterns, and input-output linkages.



To measure geographic co-location of both employment and establishments among industries, researchers used several federal data sources. The methodology uses employment and establishment counts based on Census Bureau [County Business Patterns](#) data, with higher levels of co-location patterns between industries indicating greater levels of industry inter-relatedness. Input-output linkage data from the [Bureau of Economic Analysis](#) is used to identify buying and selling relationships between industries. Industries that commonly share inputs and outputs are assigned a higher probability of being placed in the same cluster. Finally, data from the Bureau of Labor Statistics [Occupational Employment Statistics](#) survey are used to determine the extent to which industries have similar workforce requirements. Industries with similar workforce characteristics are assigned a higher probability of being put into the same cluster.

After measuring linkages using these datasets, economists scored the interrelatedness of potential industry cluster combinations. Expert judgment was then applied, and some clusters were combined or split into two by researchers. The final result of the research was the identification of 51 traded industry clusters that can be compared across regions. While there are now more clusters, identified with more detail, than in prior CMAP work, many of the core elements shared among the clusters are still present.

## **Clusters grow talent and leverage built-in advantages**

Economists have observed that industry clustering yields several beneficial economic [effects](#). Firms within industry clusters benefit from having access to large labor pools. As the labor pool within a cluster grows, firms can more easily find qualified workers, and workers within the cluster are able to find more employment opportunities. High levels of employment within an industry cluster can also lead to the development of new institutions that support the cluster, such as research collaboratives or professional organizations. As clusters grow, they can also attract specialized investors, which can fuel further growth.

The clustering of industries also provides firms with greater access to inputs and outputs than businesses within a single cluster need, but this access may benefit related clusters. In metropolitan Chicago, clustering relationships are clearly illustrated among the three metals manufacturing clusters – upstream metals, downstream metals, and metalworking technology. Fabricated metals manufacturers, for example, require significant amounts of base metals to produce their products. Thus, primary metals and fabricated metals manufacturers choose to locate in the same region. Co-location increases access to inputs, fosters innovation and process improvement among related industries, and allows for improved logistics and transportation for materials and finished products.

Firms located in concentrated industry clusters also benefit from the formal and informal sharing of ideas among workers. Research [shows](#) that areas with high concentrations of related businesses and workers often facilitate these exchanges, which economists refer to as "knowledge spillovers." Employees within a particular industry exchange ideas about how to more effectively produce a good or service. Spillovers can also occur as a result of idea sharing between individuals working in different industries with diverse backgrounds and perspectives. These interactions can lead to the development of new products and services. In either case, as employment density increases, so does the likelihood of knowledge spillover.



Sources: Chicago Metropolitan Agency for Planning and U.S. Cluster Mapping project.

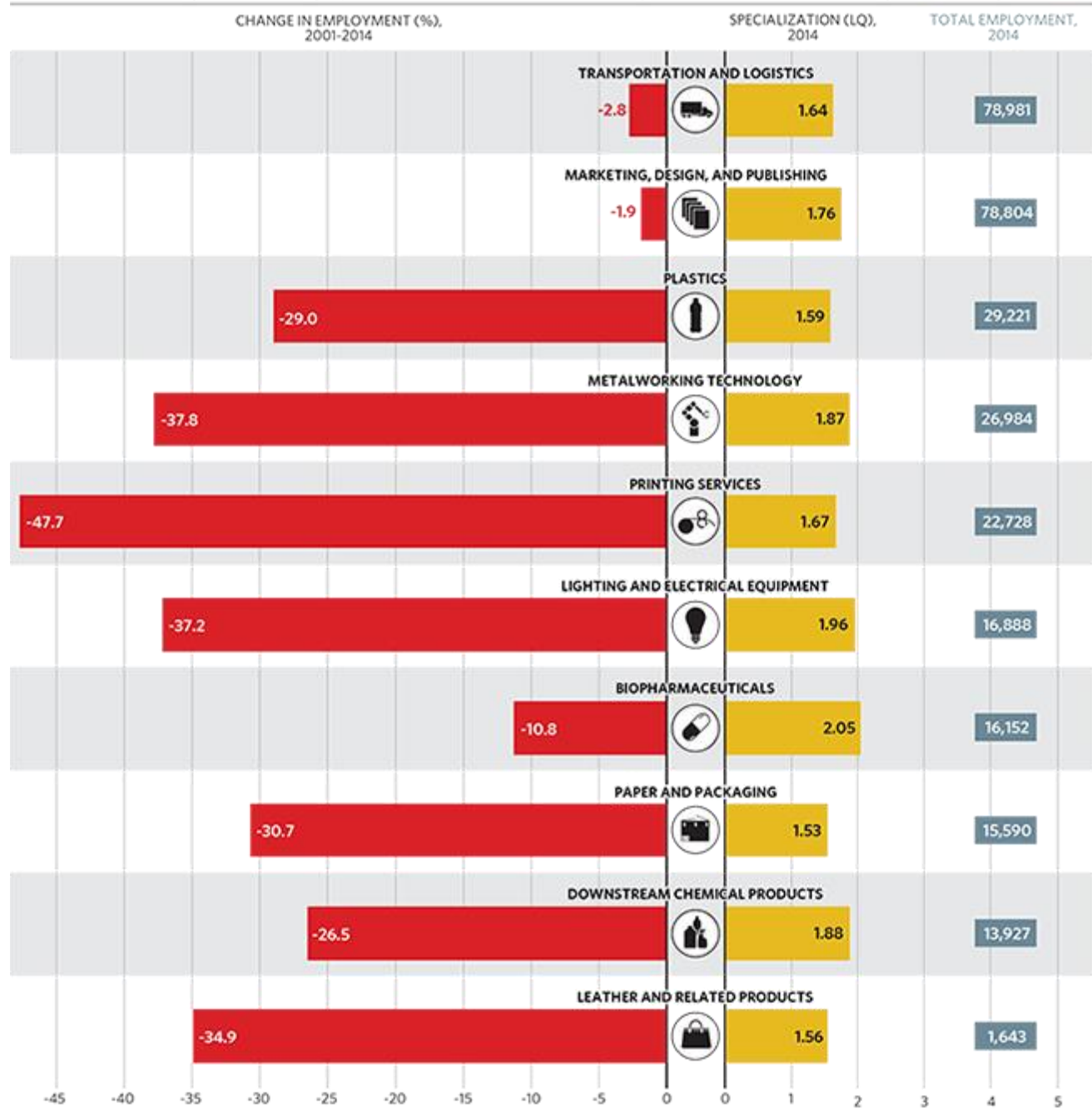
Industry clusters are [associated](#) with higher employment, growth in wages and establishments, higher levels of patenting, and higher levels of startup activity – all of which are indicators of strong economic performance. However, the benefits of clustering do not apply evenly to all industries or clusters. Local clusters, which predominantly serve local markets, see fewer benefits from clustering compared to traded clusters, which serve a national or worldwide market.

## Chicago Region Traded Cluster Strengths

Economic [research](#) shows that traded clusters, as compared to local clusters, play a significant role as drivers of wage growth and innovation. Because of their high growth potential, economic developers often focus on attracting traded industries to their region. Nationwide, traded clusters account for 33 percent of jobs but more than one-half of the payroll, as well as 90 percent of patenting activity. In the Chicago region, traded clusters make up 36 percent of the region's jobs.

Applying the Cluster Mapping approach to metropolitan Chicago shows that the region is home to a diverse economy with a number of areas of specialization, measured by [location quotient](#). These include advanced manufacturing clusters -- such as biopharmaceuticals, lighting and electrical equipment -- and downstream chemical products, along with service clusters such as marketing, design, and publishing, and transportation and logistics. These findings largely echo CMAP's [prior cluster research](#). The following table shows the ten most specialized industry clusters in the region and their change in specialization and employment since 2001. While these specialized clusters have all lost employment, the region's continued specialization indicates that we have retained these jobs at a higher rate than the rest of the country. A full list of the seven-county Chicago region's traded industry clusters and employment totals can be viewed [here](#).

## Metropolitan Chicago's top 10 highly concentrated traded clusters by specialization and employment change



Source: Chicago Metropolitan Agency for Planning analysis of Economic Modeling Specialists International data; U.S. Cluster Mapping project.

Each of the region's clusters of specialization offers an opportunity for potential economic growth and investment. This Policy Update provides a high level overview of several clusters of regional strength: metals manufacturing, lighting and electrical equipment manufacturing, transportation and logistics, and distribution and electronic commerce.

## Supporting strong clusters in Illinois

Several traded clusters have strong concentrations in metropolitan Chicago. These industries benefit from specialized talent pools, formal and informal opportunities to exchange ideas and further innovation, and specialized suppliers, consumers, and service providers. For example,

the U.S. Cluster Mapping project indicates that the Chicago region is one of the nation's largest metals manufacturing hubs. The region has above-average concentration in all three metals manufacturing clusters. These concentrated clusters are a positive addition to the region's other globally and locally traded clusters, and they benefit from being supported by a variety of entities with relevant expertise and assets.

The metals manufacturing process generally begins in the region's upstream metal manufacturing cluster, where raw metals are transformed into basic products, such as pipes, tubes, wires, or springs. Upstream metals are then sold to the region's downstream metals cluster, which then transforms these components into intermediate and refined goods, such as kitchen cookware, home fixtures, or metal door and window parts. These processes are supported by the region's metalworking technology cluster, which produces the industrial machines and tools used by the region's upstream and downstream metals clusters. The supportive relationship between these and other related industries are outlined in the following graphic. Analysis of EMSI data show that, combined, these three metals clusters contain 56,000 jobs and 2,500 establishments. The clusters created an estimated \$12 billion in output in 2013.

Clustering not only lets industries build upon strengths, it also can focus public and private sector economic development efforts. In May of 2014, the seven CMAP counties successfully competed for designations as an Investing in Manufacturing Communities Partnership (IMCP) region. The federal [designation](#) gives the region access to special economic development funds to help enact plans to support the development of the region's metals clusters. Additional efforts are underway to support the growth of metals exports from the Chicago region through the [Metro Chicago Exports](#) program.

A second area of economic strength for the region is lighting and electrical equipment manufacturing. This cluster manufactures lights, lighting fixtures and parts, as well as electrical wires, switchboards, and transformers, and accounts for approximately 17,000 jobs in the region. The lighting cluster in the Chicago region is the seventh largest in the U.S. with a location quotient of 1.96. This concentration of employment is nearly twice as high as the U.S. average.

The lighting cluster has undergone significant changes over the last decade with the introduction of new technologies such as energy efficient lightbulbs and the widespread adoption of energy efficiency systems in commercial and industrial buildings. Although cluster growth has waned since the end of the recession, the cluster presents an opportunity for future growth given the region's history as a center of innovation in building design and architecture.

In addition to strengths in goods-producing industries, the Cluster Mapping methodology also highlights the region's strengths as a provider of services across the country. The region has a large transportation and logistics cluster, as well as a sizable distribution and electronic commerce (DEC) cluster. While the Chicago region is predominantly known for its strength in manufacturing, the value that service clusters bring to the region's economy cannot be understated. In 2013, according to Bureau of Economic Analysis data, approximately three-quarters of the region's output came from service industries.



## Metropolitan Chicago's metals manufacturing cluster

### SUPPORTIVE ENTITIES

Provide capital, infrastructure, regulatory framework, and workforce training.



### RELATED CLUSTERS

Provide inputs and sell or purchase from metal manufacturing clusters' industries.



Sources: Chicago Metropolitan Agency for Planning and U.S. Cluster Mapping project.

Some of the industries contained in CMAP's prior freight cluster fall into the Cluster Mapping Project's distribution and electronic commerce (DEC) cluster. The DEC cluster is comprised of wholesalers and electronic merchants, as well as industries that support e-commerce operations, such as packaging, labeling, and equipment rental and leasing. The region's DEC cluster is the fifth largest in the nation and accounts for nearly 200,000 jobs. Within the cluster, the region has particular strengths in warehousing and in industrial equipment and metals wholesaling.

Metropolitan Chicago's strategic location makes the region a primary point for goods storage and distribution. Similarly, metals wholesalers are concentrated in the region and assist with the sale and distribution of local upstream and downstream metals cluster output.

CMAP's [freight-manufacturing nexus](#) report also examined how the concentration and co-location of freight and manufacturing fosters many interrelated activities across clusters. Freight carriers bring in raw materials and intermediate inputs, enable intraregional supply chains, and provide access for final goods through local consumption and exporting.

## Looking forward

Since the adoption of GO TO 2040, researchers have made significant strides in understanding how to study and support industry clusters. Nationally, efforts culminated in the launch of the U.S. Cluster Mapping project. In the Chicago region, [CMAP](#) and its [partners](#) analyzed the multifaceted freight and manufacturing clusters. As CMAP moves forward in its planning work, the agency will conduct additional industry cluster analysis using the U.S. Cluster Mapping Project definitions to understand the region's economic strengths, employment trends, and evolving needs.

The new methodology provides a number of insights about the region's economic strengths and weaknesses that merit exploration in greater depth. The analysis presented here is an initial glimpse of traded industry clusters in the region. Traded clusters provide a number of economic benefits to the region in the form of good paying jobs and innovative activity. The next comprehensive regional plan will offer the region an opportunity to evaluate our progress so far, improve our methods, and continue to assess economic challenges and opportunities.



October 2, 2015

## The Chicago region's local industry clusters

CMAP's regional economic indicators [microsite](#) features key measures of metropolitan Chicago's economy and, where applicable, compares these measures to peer metropolitan areas. The microsite and accompanying Policy Update series are a resource for economic development professionals, planners, and others who seek to understand the complex factors that shape our region's competitiveness in the global economy. The second of a two-part series that explores new methods for identifying industry clusters, this update explores the region's local industry clusters, while the [first update](#) explored the region's traded industry clusters.

Metropolitan Chicago is home to a multi-faceted economy that has numerous areas of economic strength that are often characterized by patterns of closely related industries or industry clusters. Research shows that the existence of these clusters leads to a number of economic benefits that facilitate growth and that identifying and supporting industry clusters helps spur additional regional economic growth. Launched in July 2014, the [U.S. Cluster Mapping project](#) provides researchers and economic developers with a data-driven methodology for identifying and classifying industry clusters. A key conclusion drawn by cluster researchers is that the economic impacts of clustering vary from cluster to cluster. Traded industry clusters, which produce goods and services that are consumed nationally and globally, tend to experience accelerating output as cluster size increases. Local clusters -- which produce goods and services that are consumed by businesses and consumers within the same region -- experience different development patterns.

The [previous Policy Update](#) in this series of two explored the region's traded industry clusters. This Policy Update is CMAP's first look at local industry clusters. It examines the role of local clusters in the region's economy, the ways they serve consumers and other businesses, and the implications for economic development. This analysis will contribute to the development of the region's next long range comprehensive plan, building on the foundation established by [GO TO 2040](#). Examining the Chicago area's local industry clusters from this new perspective lets CMAP build upon [prior cluster research](#) to better understand the region's economy and opportunities for growth.

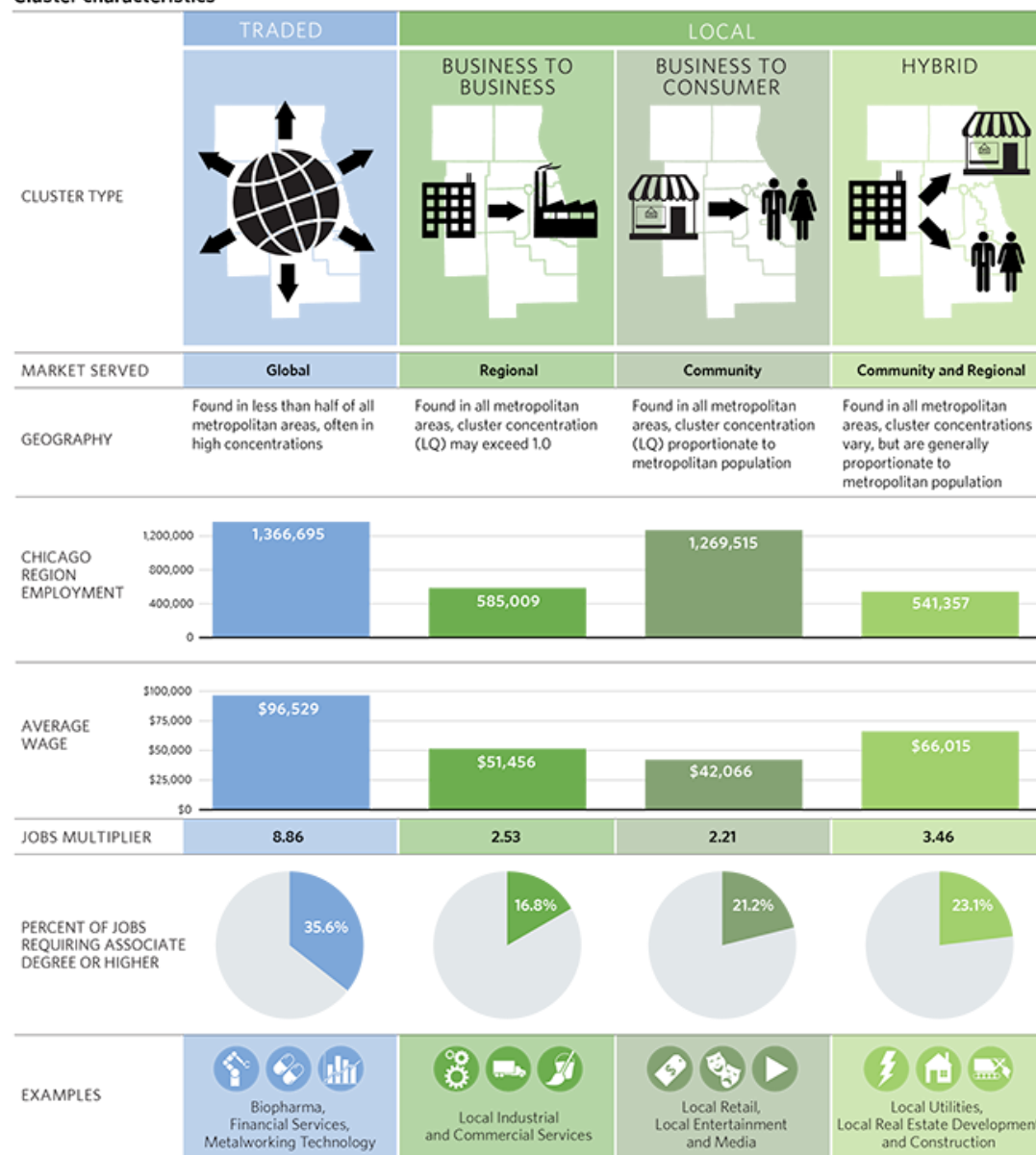
## The role of local clusters in regional economies

Although local industry clusters do not provide the regional economic growth potential that their traded counterparts do, they still play an important role in the Chicago area's economy. Local clusters account for 63 percent of jobs in the CMAP region and make up the underlying infrastructure that supports the development of traded industry clusters. Local

clusters fall into three broad categories based on the type of market and geography they serve. Business-to-business (B2B) clusters, such as industrial and commercial products and services, provide goods and services to businesses across the region. Business-to-consumer (B2C) clusters, such as local retail or local health services, serve consumers within a community. Some local clusters (local utilities, financial services, real estate, and community and civic organizations) serve both businesses and consumers and cannot be easily classified as either B2B or B2C. These are known as "hybrid" clusters. A full list of the Chicago region's local industry clusters can be found [here](#).

In aggregate, local industry clusters have less economic impact than traded clusters. The average local cluster job pays slightly more than half the wage of the average traded cluster job and has a lower jobs multiplier. For example, adding one local cluster job to the region's economy, on average, leads to the creation of an estimated two additional supporting jobs, while adding one traded cluster job to the region's economy results in the creation of an estimated eight supporting jobs.

#### Cluster characteristics



Source: Chicago Metropolitan Agency for Planning analysis of U.S. Cluster Mapping and Economic Modeling Specialists International data, 2014.



## Metropolitan Chicago's local clusters

Economic [analysis](#) shows that growth of local industry clusters tends to be limited by the population of the local market that they serve, and their employment concentrations across regions are consistent. For example, the concentration of health care providers or local retailers does not vary significantly among metropolitan areas. B2B and hybrid clusters are also generally found at consistent concentrations across regions. Serving both local residents and providing products and services to traded clusters, however, allows B2B and hybrid clusters to exist at higher levels of concentration than B2C clusters.

The region's fastest growing B2C cluster is health services, which grew by 22 percent between 2001-14 as demand for health care rose both nationwide and in the region. Three-quarters of the 79,000 health care jobs added in the region during that period had entry-level education requirements of an associate degree or less, making the cluster a significant source of entry-level jobs that provide upward mobility. CMAP's [previous policy update on STEM occupations](#) highlighted the robust growth of health care occupations in the metropolitan area.

The region is home to two B2B clusters and one hybrid cluster with significantly greater than average regional employment concentrations: local commercial services, local industrial products and services, and local financial services. The region's local commercial services cluster, which has a [location quotient](#) of 1.37, comprises companies that provide outsourced business services, such as temporary staffing, legal and accounting services, or building services. Nearly half of the jobs in the region's local commercial service cluster are temporary staffing jobs, followed by legal service providers, janitorial workers, and security guards. The services provided by these businesses often cater to traded cluster businesses that outsource tasks that are not among their core competencies, and it is not uncommon for large metropolitan areas to have above-average concentrations of local commercial service providers.

The region also enjoys an above average concentration of employment in local industrial products and services, with a regional location quotient of 1.14. Metropolitan areas with large manufacturing clusters, such as Detroit, Houston, or Los Angeles, tend to have high concentrations of industrial product and service providers. Within the Chicago region, this high concentration is due to the prominence of local machine shops, which play a key role in supporting traded manufacturing activity. Local machine shops are businesses that receive unfinished parts or raw materials from manufacturers and use machines to shape, cut, and form these materials before returning them to manufacturers. Machine shops provide additional capacity to manufacturers during periods of high demand. These shops must have strong engineering capabilities and must operate efficiently in order to succeed in this fragmented and highly competitive market. The region's concentration of traded fabricated metals manufacturing industries creates high demand for local machine shop services.

Local financial services, a hybrid cluster, is also concentrated in the region with location quotient of 1.25. This cluster includes businesses such as commercial banks, credit unions, collections agencies, tax preparers, and insurance firms, and serves both consumers and businesses. Over half of the jobs in Chicago's local financial services cluster are in commercial banking. The region is the headquarter location for a number of large commercial banks, including BMO Harris, MB Financial, and Northern Trust Banks. These banks, along with numerous regional banks, help form the base of the region's financial infrastructure that

supports metropolitan Chicago's traded business services cluster in addition to providing services to individual customers.

## Looking forward

It is important for policymakers and economic developers to understand the intricacies of local and traded clusters when planning for economic growth. Although traded and local clusters serve different customers and markets, these cluster types share an important economic relationship. Businesses in traded clusters can bring economic growth and prosperity but require the economic foundations that local B2B and hybrid clusters provide. By virtue of their nature, the growth of traded industry businesses facilitates the growth of local B2B clusters.

Each industry cluster type -- traded, local B2B, local B2C, and hybrid -- has a discrete function in the regional economy that drives economic development decisions, land use, and infrastructure needs. Traded clusters, for example, require infrastructure that connects our region on a global scale, while local B2B clusters depend on a transportation system that moves goods efficiently within the region. Further exploration of the region's traded and local industry clusters will help policy makers plan for these needs. On a regional scale, a balance of each cluster should be sought in order to facilitate economic growth.

Through its tax policy and land use work, CMAP has analyzed regional policies that influence business attraction and development. GO TO 2040 examined the challenge of balancing development decisions to meet local needs and grow the region's economy. CMAP staff have analyzed the [fiscal and economic impact](#) of development decisions, as measured by revenues and job multipliers across retail, office, and industrial developments, and the tradeoff between [incentivizing](#) local-serving retail development versus region-supporting business types. Moving forward, CMAP will continue to explore traded and local clusters in metropolitan Chicago to inform stakeholders about the composition of the region's economy.