Aerospace Manufacturing

This cluster produces aircraft, space vehicles, guided missiles, and related parts as well as the necessary search and navigation equipment used by these products. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$0.8 billion
total output

3,200
jobs

30
establishments

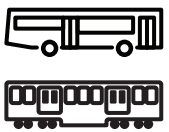
-81%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white
30% female
40% over age 50

7%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Electrical Assemblers
Fabricators
Software Developers
Industrial Engineers
Machinists

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

Chicago
+14% jobs
+19% total output

Los Angeles
-33% jobs
-9% total output

Dallas
+3% jobs
+15% total output

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$36,096 25th
$65,584 50th
$90,448 75th
wage percentiles

57%
of workers have an associate's degree or higher

34%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$10.7 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

65% Truck
27% Multimodal
1% Rail

Freight trade geography, by value

10%
Chicago region

21%
Midwest

40%
Rest of U.S.

29%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Apparel

This cluster manufactures clothing and fabric accessories (for example, hats, gloves, and neckties) for men, women, and children. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$0.2 billion
total output

3,300
jobs

190
establishments

-26%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

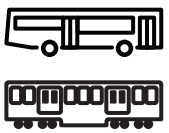
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

66% non-white

63% female

39% over age 50

8%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Sewing Machine Operator

Hand Sewers

Sales Representatives

First-Line Supervisors

Inspectors and Testers

In recent years, the cluster's competitive position **strengthened** as it remained **unspecialized** in the national context.

-48% jobs | **-23%** total output
Chicago

-57% jobs | **-31%** total output
Los Angeles

-67% jobs | **-44%** total output
New York

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$28,007 25th | **$28,635** 50th | **$37,143** 75th
wage percentiles

20%
of workers have an associate's degree or higher

25%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$6.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

60% Truck | **32%** Multimodal | **2%** Rail

Freight trade geography, by value

8%
Chicago region

30%
Midwest

49%
Rest of U.S.

13%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Automotive

This cluster manufactures completed cars, trucks, and other motorized transportation equipment (except motorcycles) and includes metal mills and foundries that produce automotive parts. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$3.0 billion
total output

17,800
jobs

260
establishments

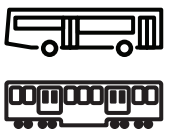
-37%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

57% non-white
27% female
35% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers
Production Workers
Machinists
Inspectors and Testers
Industrial Engineers

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-27%
jobs

+29%
total output

Chicago

-40%
jobs

-9%
total output

Detroit

+48%
jobs

+92%
total output

San Francisco

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$26,132
25th

$34,634
50th

$54,726
75th

wage percentiles

36%
of workers have an associate's degree or higher

71%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$62.3 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

75%
Truck

17%
Multimodal

4%
Rail

Freight trade geography, by value

14%
Chicago region

37%
Midwest

39%
Rest of U.S.

11%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Biopharmaceuticals

This cluster produces complex chemical and biological substances used in medications, vaccines, diagnostic tests, and similar medical applications. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$13.2 billion
total output

16,900
jobs

80
establishments

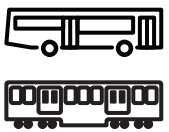
+107%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white
49% female
32% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Filling Machine Operator
Inspector
Sales Representatives
Chemists
Machine Setters

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

-7% jobs
+44% total output
Chicago

+134% jobs
+41% total output
San Francisco

-33% jobs
-11% total output
Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$35,762 25th
$59,297 50th
$75,433 75th
wage percentiles

74%
of workers have an associate's degree or higher

38%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$44.0 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

57% Truck
38% Multimodal
2% Rail

Freight trade geography, by value

24% Chicago region
32% Midwest
34% Rest of U.S.
9% Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Business Services

This cluster supports other aspects of a business like corporate headquarters or assist unrelated companies through consulting, legal, computer, engineering and architectural, and other services. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$51.0 billion
total output

323,000
jobs

20,300
establishments

+21%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

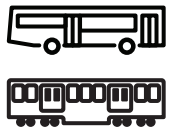
Management Analysts
Software Developers
Computer System Analysts
Customer Service Representatives
Business Operations Specialists

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white
41% female
30% over age 50

21%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

+17%
jobs

+14%
total output

Chicago

+39% jobs
+36% total output
Washington, D.C.

+40% jobs
+110% total output
San Francisco

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$41,663 25th
$68,080 50th
$88,702 75th
wage percentiles

68%
of workers have an associate's degree or higher

16%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Communication Inputs

This cluster involves goods and services used for communications, including cable, wireless, and satellite services, as well as telephone, broadcasting, and wireless communications equipment. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$5.2 billion
total output

9,900
jobs

390
establishments

+13%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

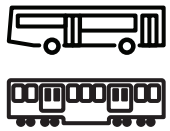
Telecom Equipment Installers
Customer Service Representatives
Sales Representatives
Business Operations Specialists
Software Developers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **as** racially diverse than the regional labor force.

44% non-white
35% female
31% over age 50

12%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

-56%
jobs

-5%
total output

Chicago

-60% jobs
+29% total output
Dallas

-59% jobs
-7% total output
Washington, D.C.

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$50,761 25th
$61,367 50th
$85,559 75th
wage percentiles

55%
of workers have an associate's degree or higher

37%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Computer Technology

This cluster manufactures information technology and analytical products like computers, software, audio visual equipment, laboratory instruments, and related standard and precision electronics like circuit boards. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$5.0 billion total output

21,500 jobs

990 establishments

-38% fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

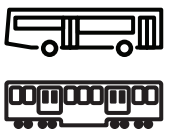
Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white

30% female

41% over age 50

7% commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Application Developers

Electrical Assemblers

Fabricators

IT Systems Developers

Industrial Engineers

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-39% jobs | **+17%** total output

Chicago

-28% jobs | **+19%** total output

Boston

-13% jobs | **+54%** total output

San Francisco

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$36,100 25th | **$69,431** 50th | **$93,002** 75th

wage percentiles

64% of workers have an associate's degree or higher

32% of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$38.8 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

59% Truck | **32%** Multimodal | **1%** Rail

Freight trade geography, by value

10% Chicago region

17% Midwest

43% Rest of U.S.

30% Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Construction

This cluster provides construction materials, components, and products like pipelines or heat exchangers, as well as services like building services for homes and industrial buildings. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.3 billion
total output

12,000
jobs

670
establishments

-53%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

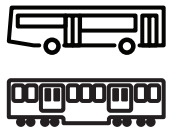
Construction Laborers
Equipment Operators
Construction Managers
Carpenters
Electrical Power-Line Installers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

37% non-white
10% female
32% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-16%
jobs

-2%
total output

Chicago

+12% jobs
+19% total output
Houston

+20% jobs
+29% total output
Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$38,349 25th
$48,710 50th
$74,695 75th
wage percentiles

22%
of workers have an associate's degree or higher

52%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Distribution and E-Commerce

This cluster includes traditional wholesalers as well as mail order houses and electronic merchants that buy, hold, and distribute products or provide support services like packaging and labeling. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$49.2 billion
total output

220,000
jobs

12,790
establishments

+30%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

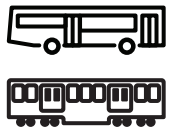
Sales Representatives
Laborers and Stock Movers
Stock Clerks and Order Fillers
Packers and Packagers
Shipping and Receiving Clerks

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **as** racially diverse than the regional labor force.

42% non-white
36% female
33% over age 50

8%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-2%
jobs

+13%
total output

Chicago

+8%
jobs

+13%
total output

Atlanta

+24%
jobs

+32%
total output

Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$27,841 25th
$39,429 50th
$60,558 75th
wage percentiles

44%
of workers have an associate's degree or higher

31%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Downstream Chemicals

This cluster manufactures complex chemical products for end users. These products include adhesives, beauty products, cleaners, dyes, paints, and lubricating oils. The technical report, Metropolitan Chicago's traded industry clusters, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$5.6 billion
total output

12,900
jobs

360
establishments

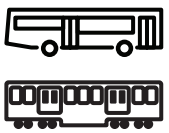
+73%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

52% non-white
37% female
39% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Machine Setters
Filling Machiner Operators
Production Workers
First-Line Supervisors
Material Movers

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-32% jobs | **-3%** total output
Chicago

+11% jobs | **+37%** total output
Houston

-3% jobs | **-3%** total output
Atlanta

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$31,554 25th | **$38,349** 50th | **$60,624** 75th
wage percentiles

36%
of workers have an associate's degree or higher

52%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$39.1 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

62% Truck | **6%** Multimodal | **6%** Rail

Freight trade geography, by value

8%
Chicago region

57%
Midwest

28%
Rest of U.S.

6%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Downstream Metals

This cluster manufactures metal containers, prefabricated metal structures, and end-user metal products, like ammunition, kitchenware, hardware, and metal home finishings. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$1.6 billion
total output

14,000
jobs

460
establishments

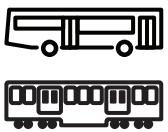
+12%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

54% non-white
23% female
39% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers
Machinists
Welders and Solderers
Machine Setters
First-Line Supervisors

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-44% jobs | **-25%** total output
Chicago

-6% jobs | **+5%** total output
Houston

-9% jobs | **-8%** total output
Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$32,754 25th | **$36,568** 50th | **$57,916** 75th
wage percentiles

24%
of workers have an associate's degree or higher

63%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$8.5 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

71% Truck | **24%** Multimodal | **1%** Rail

Freight trade geography, by value

15%
Chicago region

31%
Midwest

35%
Rest of U.S.

19%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Education and Research

This cluster contains educational and training institutions, related supporting establishments, and research and development institutions in physical and life sciences, engineering, and social sciences. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$12.0 billion
total output

130,000
jobs

2,280
establishments

+41%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

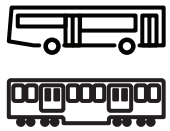
Postsecondary Teachers
Administrative Assistants
Education Administrators
Business Operations Specialists
Operations Managers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

36% non-white
55% female
32% over age 50

19%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

+13%
jobs

+13%
total output

Chicago

+48%
jobs

+75%
total output

Boston

+35%
jobs

+20%
total output

Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$35,761
25th

$56,795
50th

$76,534
75th

wage percentiles

80%
of workers have an associate's degree or higher

9%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Electrical Equipment

This cluster manufactures electronic components wiring devices, fiber optic cables, switchboards, lighting fixtures, electronic motors, transformers, and related products. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.7 billion
total output

16,300
jobs

310
establishments

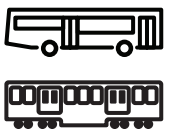
+88%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

48% non-white
35% female
40% over age 50

5%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Electrical Assemblers
Machinists
First-Line Supervisors
Mechanical Engineers
Sales Representatives

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-39% jobs
-7% total output
Chicago

+24% jobs
+7% total output
Atlanta

-35% jobs
-1% total output
Los Angeles

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$30,039 25th
$36,458 50th
$68,921 75th
wage percentiles

40%
of workers have an associate's degree or higher

54%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$31.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

62% Truck
29% Multimodal
1% Rail

Freight trade geography, by value

9%
Chicago region

15%
Midwest

41%
Rest of U.S.

35%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Environmental Services

This cluster contains establishments primarily engaged in collection, treatment, processing, and disposal of hazardous and non-hazardous waste. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$0.6 billion
total output

4,600
jobs

180
establishments

+38%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

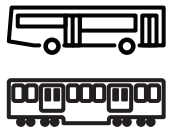
Refuse Collectors
Heavy Truck Drivers
Material Movers
Hazardous Material Removal Workers
Operations Managers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

48% non-white
19% female
30% over age 50

3%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

-3%
jobs

+15%
total output

Chicago

+86%
jobs

+92%
total output

Houston

-2%
jobs

+21%
total output

Boston

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$42,091 25th
$51,343 50th
$63,496 75th
wage percentiles

27%
of workers have an associate's degree or higher

30%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Finance

This cluster supports the transaction and growth of financial assets for businesses and individuals. These firms include securities brokers, dealers, and exchanges; credit institutions; and financial investment support. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$26.9 billion total output

88,000 jobs

5,290 establishments

+49% more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

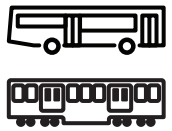
Financial Services Sales Agents
Personal Financial Advisors
Customer Service Representatives
Financial Analysts
Loan Officers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

34% non-white
48% female
28% over age 50

29% commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-22% jobs
-13% total output
Chicago

-20% jobs
+2% total output
New York

+15% jobs
+25% total output
Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$44,646 25th
$67,773 50th
$85,559 75th
wage percentiles

70% of workers have an associate's degree or higher

38% of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Food Processing

This cluster refines raw food materials and manufactures downstream food products for end users, such as specialty foods, animal foods, baked goods, beverages, packaged fruits and vegetables, and processed dairy products. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$8.1 billion
total output

33,000
jobs

700
establishments

+5%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

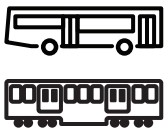
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

61% non-white

40% female

30% over age 50

9%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Packaging Machine Operators

Food Batchmakers

Hand Packagers

Stock Movers

Inspectors and Testers

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-8%
jobs

+70%
total output

Chicago

+20%
jobs

+8%
total output

Atlanta

-3%
jobs

+7%
total output

Los Angeles

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$26,132 25th

$31,461 50th

$42,091 75th

wage percentiles

33%
of workers have an associate's degree or higher

50%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$84.6 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

84% Truck

7% Multimodal

7% Rail

Freight trade geography, by value

25%
Chicago region

31%
Midwest

32%
Rest of U.S.

12%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Furniture

This cluster manufactures residential and office furniture, cabinets, and shelving of various materials as well as manufactured homes. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$0.6 billion
total output

7,700
jobs

410
establishments

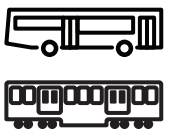
-37%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

53% non-white
26% female
35% over age 50

6%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Cabinetmakers
Fabricators
Laborers and Movers
Upholsterers
Carpenters

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-45% jobs | **-20%** total output
Chicago

-19% jobs | **+4%** total output
Dallas

-54% jobs | **-21%** total output
Los Angeles

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$28,007 25th | **$35,762** 50th | **$46,422** 75th
wage percentiles

26%
of workers have an associate's degree or higher

61%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$13.8 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

82% Truck | **14%** Multimodal | **1%** Rail

Freight trade geography, by value

31% Chicago region | **30%** Midwest | **26%** Rest of U.S. | **12%** Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Hospitality and Tourism

This cluster includes services and venues related to recreational travel, including hotels, sport venues, casinos, museums, and other attractions, as well as reservation services and tour operators. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$8.2 billion
total output

76,000
jobs

2,600
establishments

-18%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

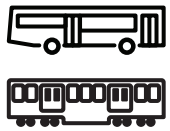
Housekeeping Cleaners
Hotel Desk Clerks
Travel Agents
Waiters and Waitresses
Maintenance and Repair Workers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **as** racially diverse than the regional labor force.

42% non-white
49% female
25% over age 50

15%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

0%
jobs

-18%
total output

Chicago

+16% jobs
+29% total output
Los Angeles

+2% jobs
+27% total output
San Francisco

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$23,327 25th
$25,943 50th
$39,561 75th
wage percentiles

40%
of workers have an associate's degree or higher

20%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Insurance

This cluster provides a range of insurance types, as well as support services such as reinsurance and claims adjustment. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$18.3 billion
total output

45,000
jobs

1,080
establishments

+14%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

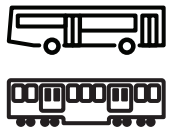
Claim Adjusters and Examiners
Insurance Sales Agents
Claim Processing Clerks
Insurance Underwriters
Management Analysts

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

31% non-white
55% female
38% over age 50

20%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-21%
jobs

+32%
total output

Chicago

+13% jobs | **+1%** total output
Boston

-12% jobs | **+14%** total output
Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$44,257 25th | **$63,801** 50th | **$76,132** 75th
wage percentiles

66%
of workers have an associate's degree or higher

44%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Livestock Processing

This cluster contains establishments engaged in processing meat from livestock and livestock wholesaling. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$1.3 billion total output

9,000 jobs

100 establishments

-39% fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

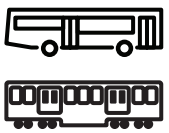
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

72% non-white

38% female

38% over age 50

9% commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Slaughters

Hand Packagers

Meat Cutters and Trimmers

Packaging Machine Operators

Butchers

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-8% jobs | **+48%** total output

Chicago

+10% jobs | **+23%** total output

Atlanta

-6% jobs | **+55%** total output

Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$25,070 25th | **$28,007** 50th | **$30,039** 75th

wage percentiles

15% of workers have an associate's degree or higher

29% of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$23.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

97% Truck | **2%** Multimodal | **1%** Rail

Freight trade geography, by value

24% Chicago region | **28%** Midwest | **42%** Rest of U.S. | **6%** Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Marketing and Publishing

This cluster provides physical and graphical design services, digital and hard copy publishing, and marketing including advertising creation, marketing research, media buying, and public relations. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$15.6 billion
total output

85,000
jobs

6,500
establishments

+75%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

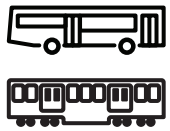
Advertising Sales Agents
Graphic Designers
Management Analysts
Market Research Analysts
Marketing Specialists

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

26% non-white
53% female
27% over age 50

26%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

+6%
jobs

+14%
total output

Chicago

+88%
jobs

+470%
total output

San Francisco

+14%
jobs

+47%
total output

New York

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$41,663
25th

$52,425
50th

$73,533
75th

wage percentiles

77%
of workers have an associate's degree or higher

20%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Medical Devices

This cluster manufactures surgical, medical, dental, optical, ophthalmic, and veterinary instruments and supplies. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$3.1 billion
total output

10,600
jobs

220
establishments

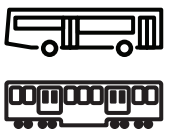
+33%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **as** racially diverse than the regional labor force.

41% non-white
40% female
38% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers
Dental Lab Technicians
Inspectors and Testers
Machinists
Opthalmic Lab Technicians

In recent years, the cluster's competitive position **strengthened** as it became **more specialized** in the national context.

+17%
jobs

+37%
total output

Chicago

-25%
jobs

+2%
total output

Boston

+19%
jobs

+11%
total output

Los Angeles

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$32,754
25th

$38,349
50th

$60,741
75th

wage percentiles

57%
of workers have an associate's degree or higher

55%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$73.5 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

43%
Truck

51%
Multimodal

1%
Rail

Freight trade geography, by value

28%
Chicago region

29%
Midwest

34%
Rest of U.S.

9%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Metalworking Technology

This cluster produces machine tools and process metal for use in metalworking, as well as downstream metal fasteners and hand tools. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$3.4 billion
total output

26,000
jobs

1,100
establishments

+93%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

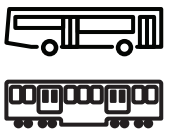
Workers in this cluster tend to be **as** racially diverse than the regional labor force.

41% non-white

19% female

41% over age 50

3%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Machinists
Machine Setters
Tool and Die Makers
First-Line Supervisors
Inspectors and Testers

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-35% jobs | **-4%** total output

Chicago

-27% jobs | **+1%** total output

Detroit

-28% jobs | **-10%** total output

Los Angeles

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$32,939 25th | **$36,458** 50th | **$54,726** 75th

wage percentiles

27%
of workers have an associate's degree or higher

66%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$22.7 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

72% Truck | **20%** Multimodal | **3%** Rail

Freight trade geography, by value

14%
Chicago region

29%
Midwest

32%
Rest of U.S.

25%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Oil and Gas

This cluster includes firms involved in locating, extracting, refining, and transporting petroleum products, as well as those that provide the necessary equipment and support services. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$3.2 billion
total output

2,600
jobs

80
establishments

-86%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

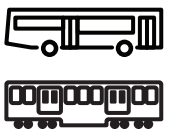
Workers in this cluster tend to be **less** racially diverse than the regional labor force.

26% non-white

23% female

38% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Refinery Operators

Industrial Machinery Mechanics

Blending Machine Operators

Operations Managers

Heavy Truck Drivers

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

+8%
jobs

+5%
total output

Chicago

+12%
jobs

-33%
total output

Houston

+40%
jobs

-22%
total output

Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$38,349 25th | **$60,136** 50th | **$74,695** 75th

wage percentiles

54%
of workers have an associate's degree or higher

50%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$80.4 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

39% Truck

1% Multimodal

1% Rail

Freight trade geography, by value

35%
Chicago region

13%
Midwest

20%
Rest of U.S.

32%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Paper and Packaging

This cluster contains the paper mills and manufacturers of paper products used for shipping, packaging, containers, office supplies, personal products, and similar products. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.0 billion
total output

15,700
jobs

250
establishments

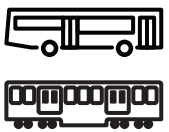
+54%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

64% non-white
31% female
37% over age 50

5%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Machine Setters
Printing Press Operators
Stock and Material Movers
Hand Packagers
First-Line Supervisors

In recent years, the cluster's competitive position **held steady** even though as it became **more specialized** in the national context.

-32% jobs | **-5%** total output
Chicago

-29% jobs | **-11%** total output
Atlanta

-46% jobs | **-16%** total output
Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$31,554 25th | **$36,096** 50th | **$49,902** 75th
wage percentiles

24%
of workers have an associate's degree or higher

55%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$28.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

84% Truck | **8%** Multimodal | **7%** Rail

Freight trade geography, by value

22% Chicago region | **34%** Midwest | **34%** Rest of U.S. | **9%** Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Performing Arts

This cluster produces, promotes, and supports live artistic performances, including those by theater companies, dance troupes, musicians, and independent artists. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$1.7 billion
total output

18,000
jobs

1,200
establishments

+2%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

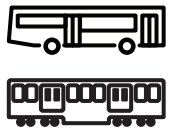
Musicians and Singers
Writers and Authors
Actors
Fine Artists and Illustrators
Ushers and Ticket Takers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

29% non-white
39% female
27% over age 50

15%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

+28%
jobs

+25%
total output

Chicago

+45% jobs
+49% total output
Los Angeles

+29% jobs
+40% total output
New York

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$28,248 25th
$31,461 50th
$39,654 75th
wage percentiles

63%
of workers have an associate's degree or higher

44%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Plastics

This cluster manufactures plastic materials, components, resins, and products, as well as the industrial machines used to manufacture plastics. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$4.7 billion
total output

28,700
jobs

500
establishments

+60%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

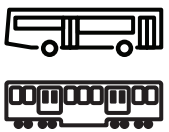
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

54% non-white

33% female

38% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assembler and Fabricators

Machine Setters

Hand Packagers

Inspectors and Testers

First-Line Supervisors

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

-26%
jobs

+28%
total output

Chicago

-18%
jobs

+27%
total output

Detroit

+3%
jobs

+28%
total output

Atlanta

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$29,136 25th

$34,072 50th

$53,794 75th

wage percentiles

28%
of workers have an associate's degree or higher

58%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$39.5 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

73% Truck

15% Multimodal

10% Rail

Freight trade geography, by value

16%
Chicago region

30%
Midwest

39%
Rest of U.S.

14%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Printing Services

This cluster provides commercial printing, digital printing, and binding services, as well as upstream inputs like ink and prepress services. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.4 billion
total output

21,000
jobs

1,090
establishments

+61%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

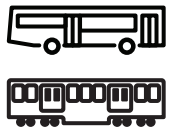
Printing Press Operators
Binding and Finishing Workers
Graphic Designers
Sales Representatives
Hand Packagers

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white
33% female
41% over age 50

7%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-51%
jobs

-33%
total output

Chicago

-46% jobs
-35% total output
Los Angeles

-47% jobs
-32% total output
Philadelphia

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$33,025 25th
$39,429 50th
$50,761 75th
wage percentiles

39%
of workers have an associate's degree or higher

49%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Production and Heavy Machinery

This cluster produces machines designed to manufacture parts and devices used in industrial, agricultural, construction, commercial industry, material handling, and related purposes. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$4.9 billion
total output

33,000
jobs

850
establishments

+27%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

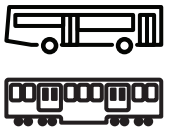
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

48% non-white

28% female

39% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers and Fabricators

Welders and Solderers

Mechanical Engineers

Sales Representatives

First-Line Supervisors

In recent years, the cluster's competitive position **held steady** as it **remained specialized** in the national context.

-30% jobs | **-17%** total output

Chicago

+16% jobs | **+17%** total output

Houston

-15% jobs | **1%** total output

Detroit

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$31,051 25th | **$36,568** 50th | **$60,558** 75th

wage percentiles

37%
of workers have an associate's degree or higher

60%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$58.8 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

69% Truck | **20%** Multimodal | **4%** Rail

Freight trade geography, by value

13% Chicago region | **29%** Midwest | **31%** Rest of U.S. | **27%** Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Recreational Goods

This cluster manufactures end use products for recreational and decorative purposes, such as toys, bicycles, motorcycles, sporting goods, office supplies, home accessories, and certain small, simple electric goods. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$1.0 billion
total output

6,600
jobs

290
establishments

+22%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

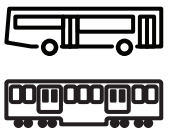
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

51% non-white

32% female

35% over age 50

8%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers and Fabricators

Machine Setters

Operations Managers

Stock and Material Movers

Machinists

In recent years, the cluster's competitive position **held steady** as it **remained specialized** in the national context.

-42% jobs | **-24%** total output

Chicago

-39% jobs | **-25%** total output

Los Angeles

-37% jobs | **-11%** total output

Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$26,132 25th | **$34,654** 50th | **$57,719** 75th

wage percentiles

38%
of workers have an associate's degree or higher

58%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$29.8 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

61% Truck | **35%** Multimodal | **2%** Rail

Freight trade geography, by value

16% Chicago region | **27%** Midwest | **44%** Rest of U.S. | **12%** Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Transportation and Logistics

This cluster contains all air, rail, bus, water, and freight transportation services, as well as related operation and support activities such as inspections, maintenance, security, and loading/unloading. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$17.0 billion
total output

97,000
jobs

4,700
establishments

+47%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

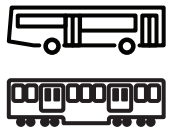
Heavy Truck Drivers
Freight and Material Movers
Pilots and Flight Engineers
Cargo and Freight Agents
Aircraft Mechanics and Technicians

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **as** racially diverse than the regional labor force.

42% non-white
24% female
34% over age 50

9%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **strengthened** as it became **more specialized** in the national context.

+3%
jobs

+39%
total output

Chicago

+13% jobs
+37% total output
Atlanta

+4% jobs
+52% total output
Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$39,191 25th
$46,752 50th
$58,156 75th
wage percentiles

32%
of workers have an associate's degree or higher

36%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Upstream Chemicals

This cluster manufactures basic organic and inorganic chemicals or gases, in particular separate elements that could be used as inputs for more complex downstream chemical products. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.1 billion
total output

3,100
jobs

70
establishments

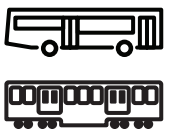
-32%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

45% non-white
31% female
37% over age 50

2%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Chemical Equipment Operators
Blending Machine Operators
Chemical System Operators
Filling Machine Operators
Chemists

In recent years, the cluster's competitive position **strengthened** as it remained **unspecialized** in the national context.

Chicago
+23% jobs
+72% total output

Houston
-16% jobs
+79% total output

Philadelphia
-54% jobs
+17% total output

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$35,762 25th
$44,843 50th
$66,434 75th
wage percentiles

44%
of workers have an associate's degree or higher

52%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$10.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

58% Truck
17% Multimodal
19% Rail

Freight trade geography, by value

11%
Chicago region

20%
Midwest

47%
Rest of U.S.

22%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Upstream Metals

This cluster consists manufacturers of metal products such as pipes, metal closures, wires, springs, and related products, as well as iron and steel mills and foundries and related metal processors. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$2.2 billion
total output

16,800
jobs

420
establishments

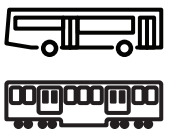
+55%
more jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **more** racially diverse than the regional labor force.

56% non-white
20% female
44% over age 50

4%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers and Fabricators
Machine Setters
Inspectors and Testers
First-Line Supervisors
Welders and Solderers

In recent years, the cluster's competitive position **weakened** as it became **less specialized** in the national context.

-42% jobs
-16% total output
Chicago

-26% jobs
-4% total output
Detroit

+2% jobs
+1% total output
Houston

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$32,782 25th
$36,458 50th
$56,965 75th
wage percentiles

32%
of workers have an associate's degree or higher

63%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$31.2 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

87% Truck
8% Multimodal
3% Rail

Freight trade geography, by value

14% Chicago region
41% Midwest
33% Rest of U.S.
13% Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.

Video Production

This cluster produce and distribute motion pictures and other video, including specialized viewing venues like drive-in theaters. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$1.1 billion
total output

4,300
jobs

530
establishments

-53%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Largest occupations

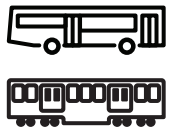
Producers and Directors
Film and Video Editors
Actors
Camera Operators
Audio and Video Equipment Technicians

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

32% non-white
35% female
26% over age 50

8%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

In recent years, the cluster's competitive position **weakened** as it remain **unspecialized** in the national context.

-10%
jobs

+11%
total output

Chicago

+31%
jobs

-1%
total output

Los Angeles

+40%
jobs

+27%
total output

New York

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **less** opportunity than the regional average.

$36,343 25th | **$52,425** 50th | **$54,710** 75th
wage percentiles

63%
of workers have an associate's degree or higher

17%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

Vulcanized and Fired Materials

This cluster produces construction and other materials at extremely high temperatures, such as goods made of tile, brick, ceramic, glass, and rubber. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.

In the Chicago region in 2017, this cluster consisted of

$0.6 billion
total output

4,200
jobs

180
establishments

-42%
fewer jobs than national average

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).

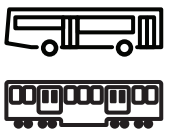
Workers in this cluster tend to be **more** racially diverse than the regional labor force.

50% non-white

33% female

43% over age 50

6%
commute by transit



Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey data.

Largest occupations

Assemblers and Fabricators

Heavy Truck Drivers

Tire Builders

Molders and Casters

Machine Setters

In recent years, the cluster's competitive position **held steady** as it remained **unspecialized** in the national context.

-31%
jobs

+42%
total output

Chicago

+2%
jobs

+36%
total output

Atlanta

+1%
jobs

+14%
total output

Dallas

Source: CMAP analysis of Economic Modeling Specialists International data (Emsi 2018.4).
Note: Job change is from 2001-17, and total output change is from 2007-17.

Middle-skill workers have **greater** opportunity than the regional average.

$29,136 25th

$34,634 50th

$46,892 75th

wage percentiles

29%
of workers have an associate's degree or higher

59%
of jobs typically require at least 2 months of on-the-job training

Source: CMAP analysis of Integrated Public Use Microdata Series, 2017 American Community Survey and Economic Modeling Specialists International data (Emsi 2018.4).

In 2016, this cluster generated approximately

$6.0 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

80% Truck

11% Multimodal

6% Rail

Freight trade geography, by value

22%
Chicago region

30%
Midwest

35%
Rest of U.S.

13%
Global

Source: CMAP analysis of Freight Analysis Framework data (FAF 4.4.1).
Note: Data includes only the Illinois portion of the U.S. Census Bureau combined statistical area. Freight data is not provided for service clusters.