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](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

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

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

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

<table>
<thead>
<tr>
<th>City</th>
<th>Jobs Change</th>
<th>Total Output Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston</td>
<td>+48%</td>
<td>+75%</td>
</tr>
<tr>
<td>Chicago</td>
<td>+13%</td>
<td>+13%</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>+35%</td>
<td>+20%</td>
</tr>
</tbody>
</table>

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

- **$35,761** 25th percentile wage
- **$56,795** 50th percentile wage
- **$76,534** 75th percentile wage

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

Note: Job change is from 2001-17, and total output change is from 2007-17.