



## Manufacturing Sector Profile

Written by the New York City Labor Market Information Service.

### 1. What is Manufacturing?

Establishments that work in Manufacturing convert raw materials or parts into finished goods. For example, a paper mill turns wood from trees or recycled materials into paper. A garment manufacturer turns fabric into clothing. Some manufacturers make parts for other manufacturers to use. For example, one manufacturer may make the parts another business needs to assemble an airplane or a computer. Manufacturers make products in different ways, for example, some make items by hand, others produce items using the latest technology and/or produce large amounts of standardized products using an assembly line. Establishments in this sector use these techniques to make a wide range of products such as apparel (clothes), computers and electronic equipment, aluminum, glass, concrete, tractors and televisions.

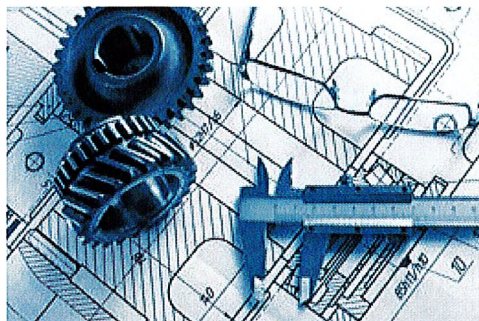


Image: <http://www.nabasoft.com/wp-content/uploads/2016/04/Manufacturing-MABlogImage.jpg>

### 2. The History of Manufacturing in New York State

For much of its history, New York State was a powerhouse of Manufacturing activity. New York City was its largest Manufacturing center, particularly known for apparel Manufacturing in the 'garment district', a neighborhood that is still known for fashion and design. Manufacturing jobs were also a source of economic prosperity for upstate communities that hosted large Manufacturing plants, such as Kodak and Xerox in Rochester, General Motors and the auto industry in Buffalo, and General Electric in Schenectady and Utica. Cities such as Binghamton, Elmira, Syracuse, and the Albany-Troy-Rensselaer area produced everything from shoes to aircraft simulators and automobile parts.

During the last 50 years, Manufacturing employment in New York State has steadily declined. Between 2000 and 2010, the number of jobs in Manufacturing in the State fell from 752,300 to 457,800. More recently, between December 2015 and December 2016, the sector lost 9,900 jobs. Despite these losses, Manufacturing still represents about 5% of total employment in New York State and is a significant industry in some regions. For example, the Capital Region gained 3,000 Manufacturing jobs between 2009 and 2014. These new jobs were concentrated in chemical Manufacturing, fabricated metal product Manufacturing, machinery

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Manufacturing, and computer and electronic product Manufacturing. Across the State there are efforts to revive Manufacturing, and parts of the industry are expected to grow between now and 2024.

### 3. Who Works in the Manufacturing Sector?

The average age of workers in Manufacturing in New York State is 47 years old. This is older than the average age of all workers across all industries in the state, which is 42 years old. As these workers begin to retire and exit the workforce, new workers will be needed to take their places. Many of the jobs that will become available as these retirees leave the sector will be in the skilled trades. Examples of jobs in the skilled trades are welders, electricians and machinists. Some skilled trade jobs pay well above New York State's overall median annual wage and many do not require more than a high school degree or equivalent. People who work in the skilled trades often go through apprenticeships and receive on-the-job training.

### 4. Technology's Impact on Manufacturing

Employers in this sector are increasingly using high-tech production processes to make their work more efficient and precise. Manufacturers need fewer workers in today's technologically advanced factories than they did in the past because automation is replacing workers. The workers they hire need more advanced technical skills than those who worked in the industry previously. Manufacturing workers use technology at work to do tasks such as collecting, organizing and analyzing data; creating products or parts of products; managing production processes; keeping track of the hours people work; communicating with colleagues; and scheduling their appointments. Basic computer skills are needed for most jobs in the industry.

### 5. Outsourcing Abroad

Some manufacturers have moved their production facilities abroad or contract with companies in other countries to manufacture parts or products. In general, the cost of labor and raw materials is cheaper in these countries. Manufacturing abroad can save manufacturers money, but it reduces the number of jobs in the United States. Because Manufacturing has become so automated, some experts say that manufacturing products in the United States is becoming cheaper, so some companies are starting to do work in the U. S. that they used to do abroad.

### 6. Jobs in Manufacturing

**Five very common occupations in Manufacturing in New York State are:**

1. **Team Assemblers**—work as part of a team that assembles finished products or finished parts. Their responsibilities may include: performing quality



checks on the items they assemble; preparing finished products for shipment; cleaning work areas; and reviewing work orders to make sure everything has been done properly. They typically need a high school diploma or equivalent. In 2016, there were 38,400 team assemblers across New York State earning an average annual salary of \$31,080.

- 2. First-Line Supervisors of Production and Operating Workers**—supervise and coordinate the activities of production and operating workers, such as team assemblers. Their responsibilities may include: making sure safety and sanitation rules are being followed; coordinating the employees; planning with other supervisors; setting work schedules and assignments to meet production goals; and inspecting materials, products, or equipment to detect defects. These supervisors typically need a high school diploma or equivalent. In 2016, across New York State, there were 25,650 Manufacturing first line supervisors and they earned an average annual salary of \$65,860.
- 3. Inspectors, Testers, Sorters, Samplers, and Weighers**—inspect, test, sort, sample, or weigh raw materials, parts or products to see if they are damaged. Their responsibilities may include measuring the dimensions of a product to make sure they are correct; reading manuals and other materials; recording data; and determining which products are acceptable and which should be rejected. They typically have a high school diploma or equivalent. In 2016, across New York State, there were 20,681 of them and they earned an average annual salary of \$41,650.
- 4. Machinists**—set up and operate a variety of machines to produce specific metal parts, instruments and tools. Their responsibilities may include calculating dimensions; securing tools, accessories, or materials onto machines; measuring, examining, or testing completed products to check for defects. Machinists typically need a high school diploma or equivalent. In 2016, across New York State, there were 13,480 machinists and they earned an average annual salary of \$44,460.
- 5. Sales Representatives**—sell products to businesses or groups of individuals. Their responsibilities include contacting existing and potential customers to tell them about the products they are selling; recommending products to customers, based on the customers' needs and interests; estimating prices and delivery dates; and following up with customers after they have purchased a product to resolve problems and to provide support. Sales representatives typically have a high school diploma or equivalent. In 2016, across New York State, there were 89,800 Manufacturing sales representatives and they earned an average annual salary of \$72,640.

The specific titles and responsibility of these jobs are likely to vary by employer. All five occupations are expected to grow between now and 2024. •