





**22k**

**Degrees and Certificates  
Conferred in Fields  
Hired by Regional  
Advanced Manufactures**  
2017-2018 School Year

## Advanced Manufacturing Industry Overview

Advanced Manufacturers thrive in Wake County and the Research Triangle region due to an advantageous business environment and a diverse economy anchored by innovative industries. Advanced Manufacturing companies pull from a **disruptive and educated talent pool, and leverage unique world-class resources from throughout the region**. As businesses compete on a global-level, the adoption of technology is crucial for industry success and Wake County's strong economic foundation is leading the way in high tech.



**19.4%** **Increase in Advanced Manufacturing Jobs**  
Wake County, 2014-2019 | Compared to a National Rate of 4.3%

Manufacturing is shifting away from mass production techniques towards highly specialized, adaptive, and customizable production. Wake County and the region is home to the technologies making these shifts possible - **IoT, data analytics, software development, autonomous systems, and robotics**. When pairing this with a strong workforce of technical and trade skills, the advanced manufacturing industry is able to **integrate cutting-edge technology with processes and systems to increase efficiency and reduce costs**.

**NO. 1**

**Lowest Unionization  
Rate in the U.S.**

North Carolina

*Bureau of Labor Statistics | 2019*

**NO. 5**

**Best States for  
Manufacturing**

North Carolina

*Site Selection Group | 2019*

**NO. 9**

**State for Manufacturing  
Employment**

North Carolina

*Business Facilities | 2019*

## TALENT PIPELINE

Advanced Manufacturing companies are choosing Wake County and the region to pull from one of the best talent pools in the world. All levels of the area's education and workforce development system are proactive in developing talent to meet industry needs.

The region touts a rigorous K-12 system with schools specializing in developing future manufacturing employees. Going beyond the classroom, apprenticeship programs are connecting high school students with companies, through industry-led ApprenticeshipNC, Wake Tech Apprenticeship Program, and North Carolina Triangle Apprenticeship Program (NCTAP). Higher education institutions also offer degrees sought by industry hiring managers.



Industry leaders like **Buhler and GlaxoSmithKline Inc.** are using innovative apprentice programs to fill key positions in their operations including **welding technicians, machinists, and industrial maintenance mechanics.**

The university ecosystem is advancing industry technology through applied research and development, and cultivating exceptional talent through academic programs and internships.

# 161,755

**Students in the Wake County Public School System (K-12)**

Largest in North Carolina  
14th Largest in the U.S.

# 74k+

**Students Enrolled at Wake Tech Community College**

4,600 Complete a Degree or Certificate Related to Advanced Manufacturing

# 4,300+

**Engineer Degree Completions across NC**

Data from Integrated Postsecondary Education Data System (IPEDS) | 2017

## WORLD-CLASS RESOURCES

Wake County and the Research Triangle reside in a region boasting **organizations producing top talent and catalyzing innovation.** Local organizations provide professional opportunities, political advocacy, talent development and attraction, and sector promotions. Additionally, colleges and universities actively expand traditional classroom education by providing real-world application and research on campus.

# 3

**Tier-1 Research Universities**



**NC State Participates in Half of the 14 Manufacturing USA Institutes — and Hosts PowerAmerica on its Campus**

# 12

**Local Colleges and Universities**



**Largest Community College in North Carolina**

**North Carolina State University Programs**

- Center for Additive Manufacturing & Logistics
- Nanofabrication Facility
- Wilson College of Textiles
- Industrial Expansion Solutions (IES)
- Bio Manufacturing Training & Education Center

**Industry Support Programs**

- NC Manufacturing Extension Partnership
- NC BioNetwork
- Board of Science, Technology & Innovation
- NC RIoT

**Additional Local College Resources**

- North Carolina Central University Fab Lab
- Wake Tech Manufacturing Center



“The Research Triangle region's partnership through the university system helps advanced manufacturing thrive in the Research Triangle. Conducting Research in tandem with leading experts in engineering, computer sciences, and other disciplines leads to new technologies and faster breakthroughs. In addition, the partnerships allow companies like ABB to access talent, develop the future workforce of Manufacturing in North Carolina, and other parts of the U.S.”

**- ANDERS SJOELIN**

Regional Manager, North America and Country Managing Director, USA for ABB Power Grids

## INDUSTRY CONVERGENCE

Wake County and the Research Triangle is not defined by a single industry, **allowing the area to have a strong foundation of traditional manufacturing workforce** – assemblers, welders, line supervisors, technicians, etc., in addition to specialized engineers working across Advanced Manufacturing, Tech, and Cleantech companies.



**140%** Growth in Computer Related Positions  
Wake County, 2009–2019 | Advanced Manufacturing

### TECHNOLOGY & SOFTWARE SUBSECTORS:



Cloud Computing



Big Data



Artificial Intelligence



Enterprise Resource Planning Systems

## AFFORDABILITY

Advanced Manufacturers are locating or expanding in the region to capitalize on the market's affordability. Doing business in Wake County is more cost effective than other metros, partly due to state having the **lowest state corporate income tax (2.5%)**. The area **GDP is projected to grow by 3.8%** over the next 3 years, and this growth is taking place in a stable environment with both the **state and county holding a AAA bond rating**.

### Advanced Manufacturing growing the Region's Economy

There are **more than 22,000 workers** employed across the industry in Wake County. These jobs are at **global companies with a strong presence in the region**, leading to substantial and robust economic growth. Some of the more than **300 advanced manufacturing companies** include:

Agricultural,  
Construction, &  
Mining Machinery



Computer  
& Peripheral  
Equipment



Electrical  
Equipment  
& Component



Navigational,  
Measuring, &  
Control Instruments



Pharmaceutical  
& Medicine



## THE FUTURE OF ADVANCED MANUFACTURING

Advanced Manufacturing is growing the region, and with technology rapidly re-shaping how products are made, **Wake County and the Research Triangle region are uniquely positioned to remain an industry hub for the future**. You can learn more about the Advanced Manufacturing ecosystem at [www.raleigh-wake.org/target-industries](http://www.raleigh-wake.org/target-industries).

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– **LE TANG**

Head of U.S. Corporate Research Center, *ABB Inc.*

