NORTH CAROLINA LIFE SCIENCE INDUSTRY

OUR HOME IS YOUR HOME FOR BUSINESS
North Carolina’s winning combination of location, workforce, existing industry strength, and business-friendly environment makes it a leading destination for life science companies. The state boasts the fastest growing large economy in the U.S. and consistently ranks among the top five in internationally recognized business environment rankings.

North Carolina has the ninth largest state population in the U.S. with over 10 million residents. The state’s low cost of living, highly educated workforce, and concentration of research & development activity further contribute to its favorable business environment. Both industry giants and smaller, niche businesses have enjoyed significant growth in the state. Whatever a life science company needs, North Carolina has the resources to support it, including:

- Skilled labor force
- Business-friendly environment
- Top-ranked industry support
- Convenient market access
- Exceptional quality of life

Consider North Carolina for your next trade or investment decision, and find out why Nothing Compares.

In North Carolina we have a robust biotechnology ecosystem, multiple companies, suppliers, CROs, chemical manufacturers, that you can access through existing relationships that will allow you to move your product through development more rapidly.

-NC Company Review, 2014 Impact of Life Sciences in North Carolina, Battelle
North Carolina is home to more than 360 research & development companies and seven research parks across the state, including Research Triangle Park, the largest research park in the U.S.

North Carolina has the highest concentration of contract research and testing organizations in the world.

North Carolina is home to more than 100 life science manufacturing companies call North Carolina home.

More than 2,000 service companies across the state provide support specifically to life science firms.

North Carolina has the largest biological product manufacturing industry in the U.S.

North Carolina has the 3rd largest pharmaceutical manufacturing industry in the U.S.

North Carolina's life science industry has grown 4x that of the U.S. since 2001.

North Carolina has more than 600 life science companies.

North Carolina Biotechnology Center
The NC Biotechnology Center supports life science technology-based economic development through innovation, commercialization, education, and business growth. In addition to connecting life science companies to research and workforce development resources, the center also provides low-interest loans to life science startups and grants to advance life science research.

NORTH CAROLINA’S LIFE SCIENCE ADVANTAGE

Even as one of the world's largest and most mature life science clusters, the industry continues to expand in North Carolina. North Carolina is home to life science leaders such as Biogen, Bayer Crop Science, Grifols, Merck, Pfizer, PPD, and Quintiles to name a few. 63,000 highly skilled employees work at more than 600 life science companies across the state.

In North Carolina, the life science industry extends beyond pharmaceuticals. Drug development and contract research & testing organizations, medical device manufacturers, agricultural biotechnology companies, regenerative medicine firms, and health informatics organizations also call the state home.
UNMATCHED BUSINESS ENVIRONMENT

#1 Top Competitive State - Site Selection (2016 Prosperity Cup)

#1 Lowest State & Local Business Tax Burden in the U.S. - Ernst & Young (2016)

#2 Best State for Business - Forbes (2016)

#3 Competitive Labor Climate - Area Development (2016)

Highly Skilled Workforce
North Carolina’s 53 colleges & universities and nationally recognized, 58-campus community college system produce a highly skilled workforce.
- 108,800 degrees awarded from North Carolina colleges and universities in 2014
- 460,000 manufacturing employees
- 4.9 million in the North Carolina labor force

Low Cost of Living
The cost of living in many of North Carolina’s metropolitan areas is well below the national average.

Low Electricity Costs
North Carolina’s electricity costs run nearly 6% below the national average.
Source: U.S. Energy Information Administration, 2016

Incentives
Targeted, performance-based incentive programs complement North Carolina’s competitive business cost structure. The Economic Development Partnership of North Carolina helps companies navigate the incentive process.

Job Development Investment Grant (JDIG)
JDIG is a performance-based, discretionary incentive program that provides cash grants to new and expanding businesses to help offset the cost of locating or expanding a business facility in North Carolina. Companies can qualify for a JDIG based on the project location, number of jobs, and average wage. The grant amount is based on a percentage of the personal income tax withholdings associated with the new jobs. For high-yield projects that invest $500+ million and create 1,750+ jobs, JDIG can provide a grant worth up to 100% of personal income tax withholdings for 20 years. A company can use JDIG funds for any purpose.

One North Carolina Fund (One NC)
One NC is a discretionary cash-grant program that allows the Governor to respond quickly to competitive job-creation projects. The local government must provide an incentive to match the One NC funding. Awards are based on the number of jobs created, level of investment, location of the project, economic impact of the project, and the importance of the project to the state and region. Awards may be used for installation or purchase of equipment, structural repairs and renovations, and construction or improvements to utility lines and associated equipment in new or existing buildings.

Public Infrastructure & Transportation Programs
North Carolina offers a number of different programs to fund public infrastructure development, including:
- Community Development Block Grant Economic Development Program
- Utility Account
- Rural Division’s Economic Infrastructure Program
- NC Department of Transportation’s Rail Industrial Access Program
- NC Department of Commerce & NC Department of Transportation’s Joint Economic Development Program

Building Reuse Programs
North Carolina offers two different programs that provide grants to renovate and upfit vacant industrial and commercial buildings including:
- Community Development Block Grant Building Reuse Program
- Rural Division’s Building Reuse Program

Other Incentive Programs
- NCWorks Customized Training Program
- Foreign Trade Zones
- Golden LEAF Foundation Grants

Taxes

<table>
<thead>
<tr>
<th>Tax Type</th>
<th>Rate</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Income Tax</td>
<td>3.0%</td>
<td>North Carolina has the lowest corporate income tax rate in the U.S. (of the states that levy the tax). The state will fully phase in single sales factor apportionment in 2018.</td>
</tr>
<tr>
<td>Personal Income Tax</td>
<td>5.499% (flat rate)</td>
<td>The standard deduction is $17,500 for married couples, $14,000 for heads of household, and $8,750 for single taxpayers.</td>
</tr>
<tr>
<td>Sales &amp; Use Tax</td>
<td>6.75% - 7.50%</td>
<td>The statewide sales tax is 4.75%. Counties levy an additional 2-2.75%. Aviation gasoline and jet fuel are exempt. North Carolina also has exemptions for manufacturing companies.</td>
</tr>
<tr>
<td>Property Tax</td>
<td></td>
<td>The state does not levy property tax. Real and personal property is taxed by local governments. North Carolina has exemptions for inventories and recycling.</td>
</tr>
</tbody>
</table>

Low Electricity Costs
Source: U.S. Energy Information Administration, 2016

Low Cost of Living
Index (100 = National Average)

- Durham: 89
- Raleigh: 91
- Winston-Salem: 94
- Charlotte: 96
- Wilmington: 97
- Asheville: 100

Average construction costs in North Carolina’s metropolitan areas are 18% below the national average.

North Carolina’s electricity costs run nearly 6% below the national average.

Low Construction Costs
Source: Federal Home Loan Bank of Atlanta

North Carolina has the lowest corporate income tax rate in the U.S. (of the states that levy the tax). The state will fully phase in single sales factor apportionment in 2018.

Low Electricity Costs
Source: U.S. Energy Information Administration, 2016

The cost of living in many of North Carolina’s metropolitan areas is well below the national average.

Low Cost of Living
Index (100 = National Average)
Due to the strong industry presence and three Tier 1 research universities, North Carolina is a leading center for life science education, R&D, and workforce training. North Carolina had almost $2.0 billion in academic life science R&D expenditures in 2012. Nearly 40 percent of the state’s STEM graduates concentrate in biological sciences, agriculture, and natural resources.

North Carolina’s nationally-recognized community college system has partnered with the NC Biotechnology Center to create BioWork, a robust life science training curriculum offered at community colleges across the state. NCBioImpact, another life science initiative, is a $100 million initiative to further enhance pharmaceutical and biomanufacturing workforce development.

**SKILLED WORKFORCE & INDUSTRY SUPPORT**

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**Industry Support**

**Pharmaceutical Education & Research Center (PERC) at Campbell University** PERC is a pharmaceutical contracting organization that provides high quality research, analysis, formulation development, deformation, small-scale production, and CGMP stability study services to the pharmaceutical and biotechnology industries.

**NSF Engineering Research Center for Revolutionizing Metallic Biomaterials (ERC-RMB) at NC A&T State University** In partnership with the University of Pittsburgh and the University of Cincinnati, ERC-RMB aims to revolutionize metallic biomaterials and smart coatings with built-in responsive biosensory capabilities to create novel bio-functional engineered systems.

**Center for Rapid Product Realization at Western Carolina University** The Center for Rapid Product Realization is a university-based product development center that helps clients develop and refine products and improve business practices.

**Marine Bio-Technologies Center of Innovation (MBCOI)** MBCOI facilitates research, collaboration, and commercialization of marine biotechnologies among domestic and international stakeholders.

**North Carolina Biosciences Organization (NCBIO)** NCBIO advocates for state and federal policies that encourage the growth of life science companies, support the development of a strong life sciences workforce, and promote research and technology transfer at universities and other institutions.

**Universities**

**Undergraduate and Advanced Graduate Degrees**

Elite higher education institutions across the state support North Carolina’s workforce.

North Carolina has 53 colleges and universities. The state’s three Tier 1 research universities: North Carolina State University, Duke University, and the University of North Carolina at Chapel Hill, are at the cutting edge of education and R&D. Many of the state’s colleges and universities offer programs that support North Carolina’s life science industry. The Biomanufacturing Research Institute and Technology Enterprise (BRITE) at North Carolina Central University and the Biomanufacturing Training and Education Center (BTEC) at North Carolina State University provide educational and training opportunities to develop biotechnology professionals. The Joint School of Nanoscience and Nanoengineering at NC A&T State University and UNC Greensboro prepares students to conduct research in nanoscience and nanoengineering.

**Community Colleges**

**Vocational Degrees**

Pioneering the nation’s most advanced programs in vocational and technical education.

The North Carolina Community College System (NCCCS) is widely regarded as offering some of the most comprehensive and advanced vocational and technical programs in the U.S. More than 800,000 students enroll at one of NCCCS’s 58 schools each year, and every North Carolina resident lives within a 30-minute drive of a community college. NCCCS’s BioNetwork provides education, training, and laboratory resources for North Carolina’s life science industry. Pitt Community College and Eastern Carolina University developed the Biopharmaceutical Work Force Development and Manufacturing Center of Excellence to create a laboratory-based education and training network for North Carolina’s pharmaceutical industry.

**NCWorks**

**Customized Training Programs**

Providing customized training and recruiting services for North Carolina businesses.

The North Carolina Department of Commerce partnered with the North Carolina Community College System (NCCCS) to develop NCWorks: a free, customized job training and recruiting program for new and expanding businesses. NCWorks offers comprehensive training via NCCCS’s extensive catalog of programs as well as customized curricula tailored to address specific needs. The NC BioNetwork has spent 834 hours training incumbent workers for NCWorks customized training programs.
MARKET ACCESS & TRANSPORTATION INFRASTRUCTURE

North Carolina’s robust transportation infrastructure connects companies to domestic and international markets. Four international and eleven regional airports connect North Carolina to major cities in the U.S. and abroad. North Carolina also has the second largest state-owned highway system and major controlled-access arteries such as I-95 (running the length of the East Coast), I-85, and I-40 (running from NC to California). Two deepwater seaports and an integrated rail system ensure that North Carolina companies stay connected to suppliers and customers.

North Carolina was chosen for the location, for the utility and transportation advantages, and the state contains an exceptional workforce. In addition, we can service our customer base quicker and provide more cost-effective transportation.

Gerardo Muraira,
Operations Director, Nutec Group

PORTS

North Carolina has two deepwater seaports:
North Carolina’s ports offer fast turn times and capacity for ships carrying up to 7,000 TEUs (soon to be 10,000 TEUs). Inland terminals in Charlotte and Greensboro provide easy market access.

Port of Wilmington
- General cargo and bulk handling facility
- Inside harbor channel depth of 42 feet M.L.L.W.
- 101,000-square-foot on-terminal cold storage facility

Port of Morehead City
- Container and general cargo operations
- Inside-harbor channel depth of 45 feet M.L.L.W.

AIR

The world’s sixth-busiest airport is located in Charlotte: North Carolina offers nonstop service and easy connections to major domestic and international destinations.

Four international and 11 regional airports provide easy access to domestic and global markets. International airports include:
- Charlotte-Douglas International Airport (CLT)
- Piedmont Triad International Airport (GSO)
- Raleigh-Durham International Airport (RDU)
- Wilmington International Airport (ILM)

ROADS

Second-largest state-owned highway system: North Carolina’s roads stretch for more than 90,000 miles (145,000 km). The state’s central East Coast location offers easy access to the country’s most important transportation corridors.

Major controlled-access arteries include:
- I-95, running the length of the East Coast
- I-40, linking North Carolina to California
- I-85, stretching through the manufacturing heart of the Southeast

RAIL

Largest consolidated rail system in the country: North Carolina’s rail connections extend to key markets in the South, East, Midwest, and Canada.

Rail system highlights include:
- More than 3,200 miles (5,100 km) of track
- Two Class 1 carriers: CSX Transportation and Norfolk Southern
- Class 1 service to 22 states in the U.S.
- 19 short-line railroads
- Six intermodal terminals and rail hubs