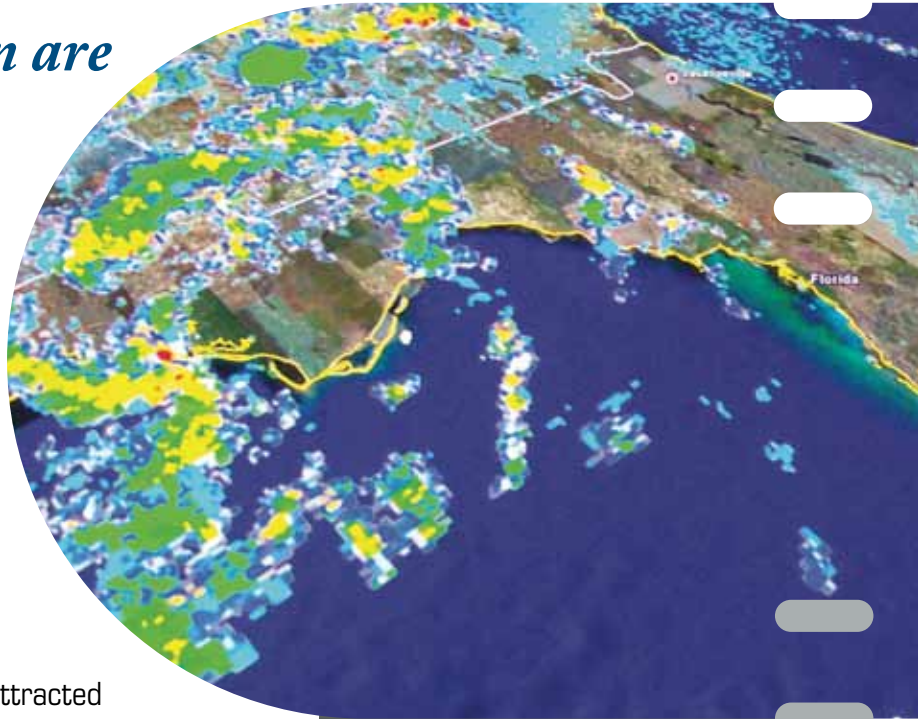


Science and Technology

EconomicDevelopmentAsheville.org

Innovation, collaboration are hallmarks of Asheville's science and high tech industries.

The same frontier ethic of hard work and helping neighbors that accompanied early pioneers to the Asheville area is alive today in the region's burgeoning science and high tech sector. Asheville is an ideal choice for companies involved in cloud computing, data management, geo-spatial visualization, and climate science.



The community's innovative streak has already attracted entrepreneurs who work in national and international markets. With advanced technologies and cutting edge resources, many specialists choose to live and raise families in the lively Asheville area instead of more costly and crowded metropolitan regions. From Asheville's airport, nearly half of the United States population is within two hours flying time, yet memorable hiking trails lie within just a few minutes of downtown.

The region's continuing investments in broadband infrastructure, colleges, and business-friendly technical schools, have proven key elements for new or expanding companies that require a highly trained and nimble workforce.



“There seems to be a lot more focus on collaboration and building the community rather than just the bottom line. People are more willing to come together for work and to share their expertise.”

— Dr. Todd Pierce, Director,
Geographic Information Systems,
Locus Technologies

Focus Report from the



Asheville-Buncombe County

Images courtesy of UNC
Asheville's NEMAC



NOAA and NCDC

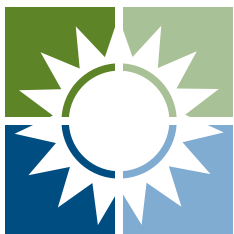
With some of the world's largest and most important weather-related databases located in Asheville, scientific data can be compiled, stored, and distributed in ways that improve the environment and help keep communities safe.

The National Oceanic and Atmospheric Administration (NOAA), under the United States Department of Commerce, plays a critical role in all facets of American life through the collection and dissemination of time-sensitive weather data and research findings. From coastal fisheries to Midwestern manufacturers, thousands of businesses rely on short-term and long-term information from NOAA. So do vacationers, local government planners, and the nation's farmers.

The National Climatic Data Center (NCDC) is a branch of NOAA and the world's largest archive of weather and climate data. NCDC is a center of worldwide communication for emerging issues in climate change and typically draws a highly educated talent pool to the region. NCDC's data can be used to help support decisions and initiatives in response to changing environmental, economic, and business needs.

Photo courtesy of UNC Asheville's NEMAC

Science and Technology Focus Areas



Climate

The Asheville area could have more climate assets than any other place in the world. No other place can say it has nearly 400 employees dealing with climate data full-time, with \$100 million (NCDC and CICS budgets) in sustained funding flowing into these operations each year.



Clear: 97.2 days
Cloudy: 151.2 days
Partly Cloudy: 111.1 days

Asheville 30-Year Normals (1971-2000)

| | |
|----------------------------------|---------------------------|
| Possible Sunshine (%) | 59% |
| Annual Precipitation | 47.07 inches |
| Annual Snowfall | 13.3 inches |
| January Daily Temperature | Max: 45.9 °F Min: 25.8 °F |
| July Daily Temperature | Max: 83.3 °F Min: 62.7 °F |
| Number of Heating Degree Days | 4,326 |
| Number of Cooling Degree Days | 818 |
| Annual Average Relative Humidity | 57% (approx. 1 p.m.) |
| Average Elevation | 2,171 ft. |

Source: National Climatic Data Center (Local Climatological Data 2010)



Sustainability

Asheville's famed lifestyle — a vibrant cultural scene coupled with an appreciation

for remarkable scenic surroundings — undoubtedly contributes to the feeling of excitement about doing business here.

With many of Asheville's residents actively focused on sustainability and preservation of the region's natural beauty, green builders and LEED certified construction projects are supported throughout the community. Local machine shops fabricate components for solar power and schools offer courses that include environmental science and sustainability technologies.

Whether growing an existing business or launching a new service or product, many companies whose activities successfully promote the practice of sustainability are finding just the right atmosphere in Asheville.

New Belgium Brewing Company

In 2012, the nation's third-largest craft brewer, New Belgium Brewing Company, announced Asheville as its first brewing expansion outside of Fort Collins, Colorado. Plans to build the state-of-the-art brewery will convert a 20-acre brownfield site into a revitalized riverfront property with investments in stream restoration, storm water improvements, environmental remediation and green building technologies. The site selection was driven by factors that included water quality and the community's commitment to sustainable practices.

American Recycling

American Recycling is one of the largest independently-owned collectors, processors and marketers of recovered paper in the Carolinas. The firm offers services to all types of recovered material generators including clients in government, manufacturing and distribution, providing customized programs to increase efficiency, reduce waste and optimize environmental stewardship. American Recycling intercepts waste that would otherwise be deposited in a local landfill and sells its reclaimed fiber and various grades of post-consumer and post-industrial plastics to various end users here in the Carolinas.

In addition to a long roster of potential new clients in Asheville, the firm was attracted to a progressive business community with a demonstrated commitment to the environment. The firm's success follows a growing local and national recognition of the bottom line value of sustainability practices.

FLS Energy

FLS Energy, a solar energy generation company, was ranked 46th top-growing company in the nation by *Inc. Magazine* in 2011 and was named a Top 25 North Carolina Companies to Watch by the Council for Entrepreneurial Development.

Renaissance Computing Institute (RENCI)

Renaissance Computing Institute (RENCI) offers cutting edge experiential technology so that public decision makers from local, regional, and federal jurisdictions can visualize disaster mitigation, preparedness planning and other crucial issues together. In 2011, RENCI partnered with Locus Technologies, an enterprising company that produces software for environmental compliance and management, including new apps that provide information from underground.

“Sustainability is as much a part of our mission as it is a part of our business model.”

— Ron Moore, President, American Recycling

Wired for the Future

Innovation knows no bounds in the Asheville area and what happens here may be shared anywhere in the world with today's technologies. Within an hour's drive in Caldwell County, Google invested \$600 million to build a fully operational data center. And, Oak Ridge National Laboratory, the United States Department of Energy's largest science and energy laboratory, is approximately two hours away in neighboring Tennessee.

ERC Broadband

ERC Broadband forms the backbone of internet access across a region of challenging mountain topography, providing local and long-haul broadband service to educational and research institutions in Asheville and other western North Carolina communities.

Positioned as the upstream internet provider of choice for regional economic growth, ERC Broadband has the technological muscle to offer data center facilities and top tier weather data in the United States as well. A 501 (c)(3) organization, ERC Broadband grew from an initiative by education and business leaders in the late 1990s to expand opportunities for economic growth using technology infrastructure.

Immedion Asheville

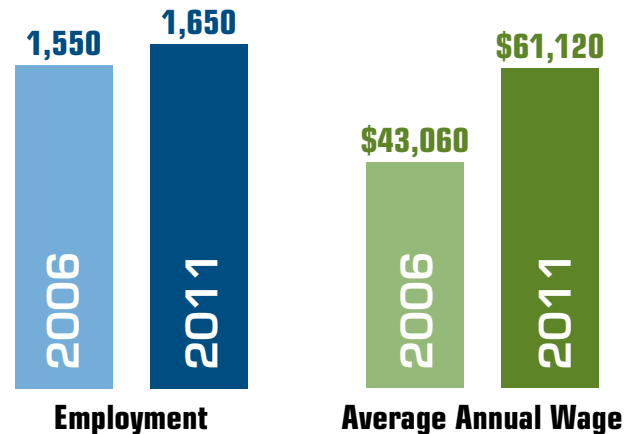
Immedion Asheville, a growing presence in private sector data hosting services, operates in a region from Asheville to the South Carolina coast. This impressive company is able to provide physical data center facilities, cloud computing support, and other managed hosting functions.

Local presence—global impact

Among top innovators tapping into the region's entrepreneurial zeal are companies based in the Asheville area with projects and sales everywhere. As diverse as the area itself, Asheville's high tech companies are state-of-the-art. Exciting leaders include:

- **AvL Technologies** manufactures mobile satellite telecommunications antennas from suitcase size to full military configurations.
- **BUILDERRadius** is an innovative building code database provider for users in the building trades, including government agencies.
- **Curious Sense** designs high tech video games with worldwide rights to create a popular series of Grateful Dead game products.
- **The Elumenati** designs immersive projection exhibits that make complex environmental information understandable by using domed projection spaces.
- **Plasticard-Locktech International (PLI)** is the world's largest keycard manufacturer and a leader in the development and manufacture of electronic keycards used by the hospitality industry, gift, and loyalty programs. PLI announced an expansion of 42 jobs and \$4.6 million investment in facilities and equipment in 2012.

Computer & Math Employment Snapshot



Source: U.S. Bureau of Labor Statistics, Asheville Metro 2011

Please contact the Economic Development Coalition for Asheville-Buncombe County for more information.

EconomicDevelopmentAsheville.org