

The Competitive Workforce Alliance

2009



The State of Our Region's Economy and Workforce

WORKFORCE DEVELOPMENT: The Road to Recovery

An Update to the
2005 Charlotte Region
State of the Workforce Report

www.agreatworkforce.com



The **Corporation for a Skilled Workforce** (CSW) was formed in 1991, and has become a nationally-known non-profit workforce consulting and policy creation organization headquartered in Ann Arbor, Michigan. We have 12 satellite offices across the continental U.S. which allow us to be a part of the communities we work in anywhere in the country. We help communities innovate so that they can compete. We help businesses cultivate talent so that they can grow. And we help people learn so that they can find good jobs, or create their own.

CSW provides a variety of services to state and local government agencies, as well as local workforce boards and community organizations. We evaluate programs that affect workforce development, make recommendations for changes in those programs to improve results, and design new programs. We provide advice and assistance to workforce boards trying to build strategic plans for their future, and help government agencies and organizations determine their priorities for workforce development, and focus on achieving their specific workforce goals.

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Dear All,

On behalf of the Competitive Workforce Alliance's member boards, their Board chairs and members, the Charlotte Regional Partnership, the JobLink and One-Stop Career Center system partner agencies, and the countless supporters of local workforce development efforts in our region, we proudly present an update to the 2005 State of the Workforce Report, entitled ***The State of Our Region's Economy and Workforce – 2009***.

This study, prepared by John P. Metcalf with The Corporation for a Skilled Workforce (CSW), an Ann Arbor, Michigan-based workforce development research and consulting organization, which is nationally known for their expertise, was developed in order to share information and demonstrate that a serious commitment to workforce development is absolutely essential to the region's economic vitality. The study provides a review of the storylines from the initial 2005 report and a look at what's changed. In this difficult era of transition and change for workers and employers, we also look at how the strong assets of the region can help stimulate economic growth. The bright spots for the future are seen as well as the continuing "wicked problems" that must be resolved. Finally, as we plan for an uncertain future, the study offers us information on the demands on the workforce, specifically what new levels of talent and skills will be required by the workforce in order for our region to have sustainable economic growth.

The Competitive Workforce Alliance is proud of the work completed in last five years by the partnership of the Centralina, Charlotte-Mecklenburg, Gaston, Region C, Western Piedmont, and Catawba Regional Workforce Development Boards and the Charlotte Regional Partnership in continuing to develop a great workforce for the region. This is not an easy task, but together, we will succeed. Each year brings new challenges for our workforce and for our region. The Alliance's strong partnership allows us to work in concert to develop new solutions and grow the region's best asset – its people.

We hope that you use the study to do your part to help the Competitive Workforce Alliance and its member boards to strengthen the region's economy and develop the highly skilled and knowledgeable workers needed for employers to be successful. We welcome and appreciate the support of our communities and our leaders in making this vision a reality.

Sincerely,

David L. Hollars

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Who We Are

Dealing with employee layoffs, plant expansions, and other changes to the local economy are not new concepts for the seven organizations that focus on workforce development in the Charlotte region. In the midst of a changing economy, the Centralina, Charlotte-Mecklenburg, and Gaston Workforce Development Boards in North Carolina along with the Western Piedmont and Region C Workforce Development Boards have joined forces with the Catawba Regional and the Pee Dee Workforce Investment Boards from South Carolina and the Charlotte Regional Partnership to create the **Competitive Workforce Alliance**. The goal of the Alliance is to take a regional snapshot of workforce development in Charlotte region and create a competitive edge to ensure that there is a plan in place that helps workers become the drivers of our future economy. The Alliance currently serves Alexander, Anson, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, and Union counties in North Carolina and Chester, Chesterfield, Lancaster, and York in South Carolina.

The foundation of the Alliance's collaborative effort is North Carolina's JobLink Career Centers (known as One-Stop Career Centers in South Carolina), whose goal is to improve the region's workforce and strengthen the state's economy by offering labor market information to business and workers, providing access to career training and job placement services, and serving as the connection between employers and qualified workers.

The Competitive Workforce Alliance is **the** workforce network for the greater Charlotte Region. Together, the Alliance members are driving solutions to workforce and business issues in the region. Mirroring the Charlotte Regional Partnership's 16 counties, Alliance members saw the value in speaking as one workforce voice for the entire economic development region. This unique alliance provides resources, training, and business services through a network of JobLink/One-Stop Career Centers. Local Boards are encouraged to preserve and promote their own unique services and relationships in their counties.

The Competitive Workforce Alliance – State of the Workforce report reflects the hard work of the member Boards and their staff in identifying key issues for the workforce and providing the direction to ensure that they are properly addressed.

Information regarding the State of the Workforce Study can be found on the Alliance's website – www.agreatworkforce.com or your local workforce development board's website.

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Introduction

The 2005 State of the Workforce Report for the Charlotte region focused on the need to create a competitive workforce advantage in order for the region to achieve its goal of economic prosperity.

Significant themes and storylines were identified that defined the Charlotte region, its workforce, and its economy. It provided citizens and stakeholders with a look at both the opportunities and the challenges the region would have to resolve before it could position itself to be globally competitive.

Now, four short years later, the Charlotte region has been buffeted by a downturn in key industry sectors we once thought were invincible. We have come to realize how much the region is influenced by events outside of its purview. Most economic regions have control of less than 20% of their economy's outcomes. The price of oil, interest rates, bailouts, international conflict, and even climbing unemployment rates are largely outside of our control. Our leaders and stakeholders need to be even more aware of the dangers – and the possibilities – that exist for our region.

The creation of a competitive workforce is key to how the Charlotte region will recover from the current economic downturn.

The creation of a competitive workforce advantage is key to how well the Charlotte region responds to the current economic downturn and how long it takes to recover. Many of our stakeholders believe our region was one of the last in the nation to enter the economic downturn, and that we will be one of the first to come out of this slump, due primarily to existing assets and resources. The work that has been accomplished since the 2005 report has set the stage for the Charlotte region's economic recovery.

While a number of the demographic data sets have been updated, the most valuable input to this report has come from the interviews that were conducted over the fall and early winter of 2008. The majority of interviewees were stakeholders who participated in the 2005 report. This new report represents a thematic synthesis of those interviews and allows the reader to see the larger picture of where the region is heading and which factors will play a major role in its economic recovery.

Additional input came from reviews of existing reports and surveys, and research into demographic data sets collected from EMSI (Economic Modeling Specialists, Inc.).



Acknowledgements

Preparation of this 2009 report was a collaborative effort between the Centralina, Charlotte-Mecklenburg, Gaston, Region C, and Western Piedmont Workforce Development Boards (WDB). Logistics support provided by staff for the boards was exceptional; the tasks of gathering data and conducting face-to-face interviews would have been far more difficult without that help. A special thanks to Emily Clamp with the Centralina WDB for arranging the stakeholder interviews; and to the Western Piedmont WDB and Taylor Dellinger for collecting and developing the demographic data. Additional data was collected through research conducted by EMSI and is presented in the appendix.

The Corporation for a Skilled Workforce (CSW), an Ann Arbor, Michigan based workforce development research and consulting organization, completed research, interviews and wrote this report.

Funding for this report was provided by the individual boards.

Additional copies of this report are available from the boards.



The Goal of this Report

The goal of the 2009 report is to share information with business, economic development, government, labor, education, and other community leaders, to demonstrate that a serious commitment to workforce development is essential to the region's economic vitality. High quality human resources have always been an important component in a region's economic success. And, in this fast-paced, technology-driven economy, workforce issues must be an integral part of the debate about how to position the region for sustainable economic growth. Regional economic development cannot succeed without a strategic investment in workforce development.

This report will build on major themes for the region, but is not intended to be an exhaustive recitation of existing data. Rather, it is written as a thematic snapshot which can be used to view the major trends that are changing the region's economy and workforce.

This report will provide information about how to strengthen the region's economy by bringing together highly skilled, knowledgeable workers and highly successful employers.

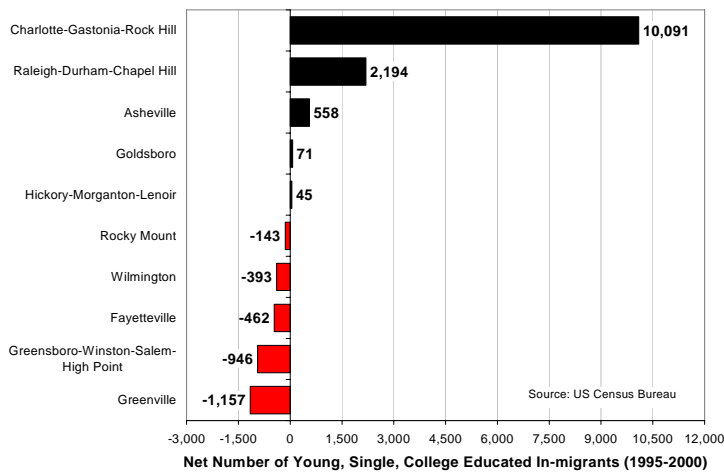


Defining the Region: Place Matters

Charlotte has great attraction value; people want to live and work here, and businesses and institutions thrive. While some say the region's population and housing growth is stalled, others say it is only paused.¹ We are optimistic that this region will remain attractive for intelligent, productive citizens with high skills and the innovative business that will employ them. A breakdown of in-migration between 1995 and 2000 is as follows:

- ❖ North Carolina 40,972
- ❖ Other states 126,199
- ❖ U.S. protectorate 469
- ❖ Other countries 26,478

¹ Mark Vitner, Business Today, December 16, 2008



North Carolina and the Charlotte region are labeled in-migration areas due to an economy that is better than most competing U.S. regions. Seeking talent from beyond the region to meet demand for high skill/high education jobs will continue to be a priority. Areas that have in-migration strategies will find they are better able to compete with other regions based on a diverse set of strengths.

A quote from Neal Pierce's Citistate Report, part 1, Special to the Observer, posted Saturday, Sep. 20, 2008, describes the Charlotte region as an immigrant gateway:

Charlotte is proving itself a 21st-century magnet for aspiring young professionals, for high-end bond traders with European experience and Mexicans with sixth-grade educations who are building the city's new skyscrapers. It is now one of the United States' top immigrant "gateway" cities. But there's a heavy measure of anti-immigrant sentiment in the region. Will diversity remain a strength, helping the region become more entrepreneurial and resilient?

North Carolina has the advantage of three distinct regions (Charlotte, the Triad, and Research Triangle) fueling the state's overall economic growth. Together they are referred to as the Golden Crescent, stretching from Rock Hill, SC to Raleigh, and soon to expand into the Fayetteville region with Ft. Bragg as the region's new demand generator.

The Charlotte region is defined by 16 counties² where each plays a role in driving the regional economy. For the region to succeed, its leaders and stakeholders must think of it as a single economic area.

While the region is defined in part by traditional economic indicators, it is also defined by assets and resources, including well-positioned demand generators. For example, the downsizing of our financial services industry brings the opportunity for re-employment as other employers discover the talented, experienced workforce available; e.g. Hugh McColl Jr., the retired Bank of America chief executive told the *Charlotte Observer* that "displaced bank employees in Charlotte would make an attractive labor pool for other companies, with GMAC as a perfect example."

² North Carolina counties: Alexander, Anson, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, and Union; South Carolina counties: Chester, Chesterfield, Lancaster, and York

Creating a competitive workforce advantage will require collaborative planning by the region's leaders and stakeholders. Making good use of common assets and resources, and approaching challenges with a group strategy will be the threads that tie the region together.

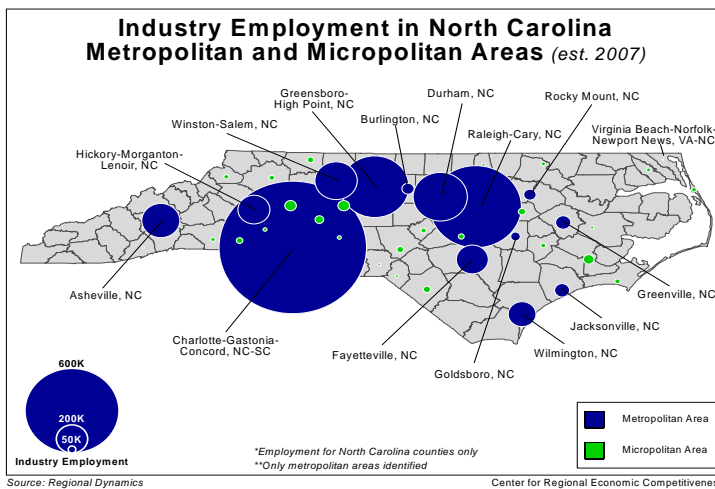
The first thread of a competitive workforce advantage is positive population growth. The Charlotte region is now listed as the sixth fastest growing region in the nation based on updated Census data released in March 2009. The region's population is expected to reach about 2,736,237 by 2013, a 7% increase from 2009.³

This is an important statistic for the region's economy because population growth fuels the labor supply and is a leading indicator of a region's ability to grow existing businesses and attract new ones. If the region continues to outpace the state and nation in its labor force expansion, it will continue to fuel the economic growth for the Charlotte region.

Acting as a Unified Region is Essential for Community Sustainability and Success

All the counties that make up a region share customers and workers. They share the economic ups and downs of their area, and need to approach challenges together in order to achieve a comfortable level of sustainability and success. Regional collaboration is required to effectively solve problems that transcend political and jurisdictional boundaries. It is proving to be an essential ingredient to sustain communities. The larger the playing field, the more resources can be applied to the problem, and the easier it is to make trade-offs among competing interests. While counties will continue to act locally, they must be open to collaboration to assure mutual success.

Previous forecasts have predicted a large number of baby boomers leaving the



workforce over the next decade; however, with the economic downturn and retirement savings devastated, it is more likely many people will be working beyond their planned retirement age.

³ EMSI Economic Modeling Specialists

The Region's Personality

The Charlotte region manifests a strong “get it done” attitude that was made clear through the interviews conducted for this report. An important question asked of those interviewed was to describe the personality of the Charlotte region. The following were the one-word descriptors that expressed the common views from across the region:

- ❖ Visionary
- ❖ Progressive
- ❖ Diverse
- ❖ Friendly
- ❖ Accommodating
- ❖ Innovative

These attributes should serve our region well in the coming years, as we struggle to emerge from this economic downturn with a stronger economy, and a more competitive workforce.

Charlotte-Mecklenburg's Influence on the Region is Strong

Since 2005, the influence of Charlotte-Mecklenburg has grown due to additional business influx, creation of destination attractions, and the opening of the light-rail system. The economic health of all 16 counties in the region is heavily influenced by Charlotte-Mecklenburg. There are plans for several new ventures coming into the area, including:

- | | |
|-----------------------------------|---------------------------------------|
| ❖ Concord Mills | ❖ Lowes Motor Speedway and Drag strip |
| ❖ Discovery Place | ❖ NASCAR Team Shops |
| ❖ EpiCentre | ❖ NASCAR Hall of Fame |
| ❖ Great Wolf Lodge | ❖ NASCAR Headquarters |
| ❖ U.S. National Whitewater Center | ❖ The ImaginOn |
| ❖ Carolina Panthers | ❖ Time Warner Arena |
| ❖ Charlotte Bobcats | ❖ Duke Energy Cultural Center |

Most of these are or will be located in Charlotte central and collectively will lure visitors, as well as attracting new residents of a younger and more mobile class who want to be close to amenities and gathering places.

Moving People and Goods to Help the Region Grow

The completion of additional sections of I-485 have stimulated population growth, but more importantly have opened new connectors to move the labor force across the region, connecting workers with employers. Having access to a wider range of workers gives employers better opportunities to tap deeper into talent sources. However, it cannot be known how future energy price increases will affect workers' decisions to drive long distances for better-paying jobs. A possible downside for the future is that the region's labor force could find itself widely distributed with pockets of labor separated from existing businesses due to both higher energy prices and the lack of adequate public transportation.

Good highways continue to allow people and goods to move easily through the region. Both I-485 and Hwy 321 will be vitally important to the planned Intermodal-port expansion at Charlotte-Douglas Airport. The addition of a third runway at the airport will expand the capacity to move both passengers and cargo by over 30%, increasing its competitiveness with airports in neighboring economic regions.

Results from the stakeholder interviews conducted for this report showed widespread appreciation for the benefits of being close to Charlotte, but also being far enough away to be able to establish a local identity.



A Review of the 2005 Storylines & A Look at What's Changed

There were six emerging storylines described in the 2005 report that called for the region's leaders to define strategies that would better position the area to reach its economic and workforce vision. New interviews with stakeholders revealed that while progress had been made on some fronts, work remained to be done to help the region reach its potential.

Job Seekers Still Outnumber Available Jobs

2005: The region was growing at a faster than normal rate and had created an imbalance between available jobs and the available workforce.

2009: With the economic downturn exacerbating the imbalance, the region is continuing to grow but has many more job seekers than jobs available as reflected in the higher unemployment rates.

Tighter Focus, Single Vision Help Unify Workforce Strategies

2005: There was more than one competing economic development plan with unnecessary duplication of effort and a lack of plan integration.

2009: With the leadership of the Charlotte Regional Partnership and its supporting county partner economic development offices, the region is enjoying a tighter focus and better attempts to assemble a single integrated strategic plan.

The region's Competitive Workforce Alliance, comprised of the seven Workforce Development Boards, is promoting a single vision to integrate workforce strategies with economic development and education strategies.

Improved Use of Technology Aids Economic Growth & Workforce Flexibility

2005: Improving the region's technology assets was deemed critical to support industry and business growth.

2009: Development of technology continues to be a requisite success factor for the region's economic expansion. We have seen improvements in technology, including better broadband service and increased wireless connectivity, both of which have contributed to the ability of workers to telecommute to jobs throughout the region.

Low Graduation Rates Will Cause Employers to By-Pass the Region

2005: Too many individuals did not have the education or the skills to enter the work environment and compete on a global basis.

2009: We are still seeing an unacceptable number of high school dropouts and low graduation rates. One of the consequence for letting these conditions continue will be that high value employers will by-pass our region for a better educated, more prepared area. If left uncorrected, job opportunities will diminish, and high unemployment will strain the service delivery systems.

The challenge is to find quality workers with the education and skills to be successful in the workplace. If these conditions do not radically improve, the careers available will be beyond the reach of current residents.

Potential for Entrepreneurs Remains Strong

2005: There was increasing demand to encourage entrepreneurship and improve our economic sectors by “growing our own.”

2009: The opportunities for new entrepreneurs continue, particularly as a way to help the workers who have been displaced from downsizing businesses find a niche and a reason to stay.

Public Transportation Is Better now, But More is Needed

2005: Our intra-regional dependence on a well planned transportation system was considered to be critical for connecting our workforce to local employers.

2009: While the new light-rail system is a step in the right direction, alone it is not enough to ease congestion on the roadways. We need to pursue other possible solutions for reducing our traffic problems in order for employers to more fully access qualified labor from anywhere in the region.



The Sectors that Drive Our Economy Are At Risk

The industry sectors that drove the region's economy in 2005 are still relevant and essential. They were and are:

- ❖ Pharmaceuticals & Bio-informatics
- ❖ Finance & Insurance
- ❖ Logistics (inclusive of Transportation and Warehousing)
- ❖ Automotive & Motor Sports.
- ❖ Manufacturing
- ❖ And back office support services

Today, most of these sectors are in decline, especially finance and construction. Banks are using stricter lending policies, and projects are coming to a standstill for lack of funding sources. The “trickle down” affect is being felt across the region. We need to expand our interests and focus on new sectors to help expand the local economy.

Following is an excerpt from an article by Ronnie L. Bryant, President and CEO of the Charlotte Regional Partnership, entitled “Region Targets Growth Sectors”

from the *Charlotte Business Journal* dated August 25, 2008. It outlines the region's economic industry/sector strategies:

As a region, our economic development strategy is fairly straightforward. First, create and maintain a competitive business environment and a great place to live. The Charlotte region has a long history of business and government working together to accomplish this goal. Second, based on the business environment we have created, it is our responsibility to continue to market and promote the region around the world to business owners and executives. This includes speaking to companies, both large and small, about the value of our location to their bottom lines. Finally, we recognize that the best strategy of all is to foster an environment in which new companies are formed within the region by local entrepreneurs with strong ties to the region and our institutions.

Continue with: manufacturing, back office, distribution and logistics, and technology operations (Google, et al);

Move ahead on: focus more narrowly on specific sectors – healthcare, life sciences, energy/environment, and defense/security. The health care/life sciences segment comprises firms engaged in pharmaceutical research, development and production; manufacturing and distribution of medical devices; biomedical; logistics; nutritional research and development; and the delivery of health-care services. Estimates place U.S. health-care spending at about 15% of gross domestic product, which is the highest in the world. That share is expected to reach nearly 20% by 2016.

Energy/environment includes companies engaged in developing and manufacturing products and services that generate energy components, biofuels, advanced materials for alternative energy sources and related services. The global renewable energy market is forecast to grow 62% by 2012, accounting for nearly \$400 billion of market value.

The defense/security sector manufactures products, materials and systems for the strategic and tactical operations of the military. The global aerospace and defense market is forecast to increase 12.5% by 2012, with defense being the most lucrative.

In 2009 and beyond, we need to place additional focus on building business and employment growth around the following industry sectors:

- ❖ Healthcare
- ❖ Life Sciences
- ❖ Energy/Environment
- ❖ Defense/Security
- ❖ Entrepreneurial Activities

The addition of these new sectors will provide a more diverse industry make-up in which to invest our resources. In turn, they will attract a widening range of talent to the region to create a more skilled workforce.

Integrating business growth, retention and attraction strategies with innovative workforce development plans will create a competitive workforce advantage for the Charlotte region.



Strong Regional Assets Help Stimulate Economic Success

An Excellent Post-secondary Education System Attracts Students, Produces Highly Skilled Workers

With nine community colleges and two dozen four-year college and specialty schools, this region is well-equipped to produce a highly skilled workforce. Further, the colleges are in touch with the communities to help identify when and where new programs need to be introduced to help satisfy employers' needs. A quality education system teamed with tuition assistance offers great opportunity for the region's citizens and businesses.

Of particular note is the University of North Carolina Charlotte (UNC Charlotte), which offers 18 doctoral programs, 62 master's degree programs and 90 bachelor's degrees. More than 900 full-time faculty comprise the academic departments and the 2007 fall enrollment exceeded 22,300 students.

UNC Charlotte is a leader in education and research that supports the region's industry and has the capacity to grow and adjust to its changing needs. The University is home to a \$35 million Bioinformatics Research Center with wet and dry laboratories and core facilities for gene expression, proteomics, microscopy, crystallography, and computing.

The University is currently creating an Energy Production and Infrastructure Center (EPIC) aimed at training engineers and upgrading knowledge in every energy field from nuclear to solar to biofuels.

CPCC regularly reviews the U.S. Department of Labor's list of high growth occupations and listens to Charlotte employers to determine which training programs need to be developed. It is this anticipatory approach to new program development that will position the college to provide relevant training for students and skilled employees, and assist in attracting high growth industries to Charlotte. The legislature seldom provides funding for new program development; categorical funding for this effort would be most beneficial.

*Dr. Tony Zeiss, President
Central Piedmont Community College
Charlotte Chamber Ventures Magazine 4Q08*

UNC Charlotte is the region's largest institution of higher education and its only research university. It is also a rapidly expanding institution in terms of enrollment, advanced degree programs, and industry and community partnerships. Five years from now we will also be an educational anchor in the Center City in our facility at Ninth and Brevard. But there aren't many shortcuts when it comes to developing a regional reputation for higher education – it begins and ends with the quality and relevance of your service to the community.

*Dr. Philip Dubois, Chancellor
University of North Carolina
Charlotte Chamber Ventures Magazine 4Q08*

The value in a region lies not just in the land where companies locate their businesses, but also in the talent behind the doors of the buildings. In Charlotte, putting the right talent in place goes a step further than many cities. We collaborate, we listen, and we manage that flow of human capital for industry, and the best example is an intensely demand-driven initiative at UNC Charlotte: EPIC – The Energy Production and Infrastructure Center. EPIC distills the negative headlines about energy into positive fuel for growth. While other organizations wince at reports of energy shortages and high costs, UNC Charlotte and energy professionals collaborated on a strategic response instead. EPIC is designed to produce a technical workforce, advancements in technology and strategic industry university collaboration for the global energy industry while supporting the Carolinas' multi-state economic and energy security.

Charlotte is at the center of this energy engineering activity. The stars all align for this center for technical distinction at UNC Charlotte.

*Charlotte Chamber Ventures Magazine
Economic Development Review 4Q08*

A World-Class Airport Helps the Region Net its Share of Global Business

Much of the success of regional industrial and business expansion over the past two decades has been attributable to the transportation system, and in particular the range of services found at the **Charlotte-Douglas Airport**. The airport supports over 100,000 direct and indirect jobs, and is a major economic asset to the local economy. The airport has attracted international, national, and regional headquarters relocations creating thousands of new jobs. It is ranked as the 10th busiest airport in the nation averaging more than 600 flights daily and moving over 30 million passengers annually. A new strategic plan for upgrading the airport infrastructure will help keep this facility at peak performance.

Demand Generators: Research, Life Sciences & Energy

NORTH CAROLINA RESEARCH CAMPUS HAS GRAND AMBITIONS

The new center for bio sciences research is located in Kannapolis, housed on a state-of-the-art 350 acre campus where David Murdoch personally invested \$1.5B. It will become home to 100 biotechnology companies. The forward looking life-sciences campus will be devoted to research, specifically nutrition and disease. It will be a one-stop destination for excellence in science and wellness ranging from research to clinical trials.

The vision is that the campus will become an eco-system where research, education, commercialization and business partnerships intersect through a collaborative model. University of North Carolina Charlotte will play a major role through its Charlotte Research Institute as a "business portal." The Institute was the first to become an academic partner to the Research Campus in 2006 demonstrating its commitment to make the campus a success.

Part of the collaborative model includes Rowan-Cabarrus Community College where a certification program in clinical research will be offered that will prepare students to fill jobs being created by the Research Campus. Additional support is provided by Central Piedmont and Gaston Community colleges.

Currently the campus area is home to more than 30 bio-tech related companies as identified by the Greater Statesville Development Corporation.

By some estimates the total employment created by the campus will approach 13,000 direct and indirect jobs by 2035, making it a substantial demand generator for the region.

HEALTHCARE SERVICES AND LIFE SCIENCES ARE EXPANDING

Due to the region's attractiveness as a place to live, work, and retire, the demand for healthcare services is expected to grow at a rapid rate. Accessible healthcare is at the top of the list for a high quality of life and is an attractive factor when businesses contemplate relocation or expansion. The region is equipped with a number of healthcare systems that are stepping up to meet the need. Topping the list is Carolinas Healthcare System, ranked first in North Carolina and third in the nation, and Presbyterian Healthcare System.

Currently, several hospitals in the region are expanding, which will lead to new construction of medical offices and other healthcare facilities. Additionally, there are a number of health and life sciences companies serving the Carolinas and the Charlotte region in particular. The region has the largest concentration of medical device manufacturing in the Carolinas. Regional health and life sciences firms employ more than 10,000 workers, and include:

- ❖ PPD Inc. Contract Research Organization
- ❖ BSN-Jobst Medical Supplies Manufacturer
- ❖ Greiner Bio-One Medical Supplies Manufacturer
- ❖ Orthofix International Medical Device Manufacturer
- ❖ Crompton Manufacturing Medicinals & Botanicals
- ❖ Microban Products Company Plastics materials & resins
- ❖ Kyphon Inc Medical Device Manufacturer
- ❖ Pelican Life Sciences Research & Development
- ❖ Chelsea Therapeutics Biopharama Development
- ❖ Fleming Laboratories Inc Medicinals & Botanicals
- ❖ Actavis Inc. Pharmaceutical Preparations
- ❖ Solectron Corporation Medical Device Manufacturer
- ❖ 3D Systems 3D Prototype Printing
- ❖ Transworld Med Corp Medical Device Developer

As an example of economic growth, Diagnostic Devices Inc., a medical equipment manufacturer of glucose meters for the blind, announced it was moving its production plant from China to Charlotte to get control over its production. It will create more than 100 new high-tech jobs.

The region is well equipped to meet the healthcare needs of its population and provide job opportunities through delivery, manufacturing, and research.

GETTING GREENER EVERY DAY

Green energy is largely believed to be the next level of innovation to become a primary industry for the region and nation. The Charlotte region's Duke Energy is leading the way under the guidance of its CEO Jim Rogers.

Rogers said, "Can we do, in energy, what we did in banking a generation ago? Why shouldn't this region – with its history of economic innovation – re-invent itself as a leader in green energy?"

That is happening now as the movement towards green energy finds its way to the Charlotte region:

Whatever its problems, nuclear energy is carbon-free, and Charlotte is a major center for nuclear energy engineering, starting with Duke Energy (a world leader in nuclear energy) plus such globally active nuclear firms as Areva, Toshiba and Westinghouse. Few U.S. regions have two nuclear power plants. Charlotte-trained or -based engineers are advising or working at nuclear plants around the world.

"It's an emerging power cluster, one we didn't recognize until recently," Tony Crumbley, economist for the Charlotte Chamber, said.

Crumbley said that in addition to Duke's major nuclear engineering concentration, it's keenly interested in battery development and wide distribution of plug-in outlets for hybrid cars. By its mere presence, Duke has helped attract more than 100 companies to this emerging energy cluster. Shaw, the largest, employs more than 1,000 engineers.

Wind power is growing in the U.S. at a 45 percent-a-year clip. This region may not have a lot of wind, but it's grabbing a piece of this market: Diversified Structural Composites in Hickory makes components for wind turbines. The company has seen its work force double to 30, and officials think that's just the start.

But solar energy has the potential to make the Charlotte area a star.

Duke Energy has contracted with Maryland-based SunEdison, the country's largest solar company, to build a \$173 million solar farm in Davidson County. It has a division prepared to spend \$40 million to install solar panels on homes and businesses. Duke is legally obligated to get 12.5 percent of its energy from renewable sources by 2030.

Sencera International announced last summer it's expanding its presence with a plant to build thin-film solar panels. SbM is a smaller voltaic panel manufacturer in Concord. MegaWatt Solar in

Hillsborough is into mirror technology that concentrates sunlight into solar cells.

With its abundance of bright young entrepreneurs and engineers, Charlotte has a great opportunity to establish itself as a leader in solar and other "green" enterprises.

*Excerpted from Citistate Report by Neal Pierce
Region Has the Power to Be a Leader on Energy
Saturday, Sept. 20, 2008*

THE REGION CONTINUES TO ATTRACT NEW TECHNOLOGY DATA CENTERS

The region is now home to Google's planned investment of \$600M in a mega technology data center located in Caldwell County. The facility was announced in 2007 and opened its doors in 2008. It is expected to have an employment of up to 200 people when the complex is complete.

Apple announced in July 2009 that it will invest \$1B in a new facility located in Cleveland County that will support its iTunes music store and iPhone app store. The facility may eventually create more than 3,000 jobs.

ENTREPRENEURISM: A PROMISING NEW SECTOR OF GROWTH

"Growing our own" begins with defining entrepreneurship as the start of a new commercial or social enterprise or a change in the way of doing business or thinking within an established enterprise. Entrepreneurship in its many forms is an important source of economic dynamism, innovation, diversity, employment, and quality of life.

Many communities anticipate small business development will contribute as much as 70-80% of future job growth. Having a strong entrepreneurship strategy puts a region's future into the hands of people who live in and care about it most and who can add depth, breadth, and character to the economic base.

Entrepreneurship is an essential ingredient in any development effort focused on economy and workforce. Entrepreneurial thinking propels both new and existing firms forward, whether through the start of an entirely new venture or the re-imagining of an existing one.

Leaders and stakeholders who want the Charlotte region to thrive must consider ways to re-employ workers AND increase the number of people who are creative thinkers and innovators. At the same time, we need to promote better understanding, processes, and pathways to facilitate turning new product or service concepts into viable business realities.

Agile, innovative, diverse communities will be the most prosperous and be best positioned to continually reinvent themselves. Entrepreneurial areas like the Charlotte region will support the greatest professional and personal options for their residents and offer the most desirable opportunities to live, work, and play.

The importance of supporting entrepreneurs cannot be understated. Many would-be entrepreneurs cannot find the help they need because the business support organizations do not know where to refer a company for services. Research has indicated that it is common for new firms to simply ignore the existing support system because it is difficult to navigate.

The Charlotte region needs to treat entrepreneurship as an emerging industry sector and develop a systemic approach to becoming an entrepreneurial “hot spot.” The region needs to provide mechanisms, assets, and resources to facilitate all manner of assistance to new entrepreneurial efforts.

A starting point is evolving with the non-profit Ben Craig Center located near the campus of UNC Charlotte. The Center provides incubation, education and advisory services for new entrepreneurs. The purpose of the Center is to help the region's small businesses reach their full potential by providing three distinct offerings – an Incubator Program, Education and Community events and Advisory services. Success in promoting entrepreneurship will require the full collaboration of the region's community colleges, secondary education, small business administration, and other assets that can be pressed into service as a collective one-stop system.



Demands on the Workforce: New Levels of Talent and Skill Required

Building a set of skills requires many resources, but the most critical ability to cultivate is a willingness to embrace lifelong learning. Having a capacity to learn means a worker will be able to acquire new skills throughout his/her working life. An individual may not require a college degree to succeed. More than 65% of jobs require less than a college degree, but many of those require continuing education to retain employment. In fact, more than 55% of all jobs require post-secondary education ending with an associate degrees and/or a certification.

You have probably heard the statistic: 90% of the fastest growing jobs and over 60% of all new jobs will require some postsecondary education or training, but not necessarily a bachelor's degree. But what does it mean? Very simply, jobs are changing. But how we educate today's students to be tomorrow's workers has not kept pace

with that shift. Once called "vocational education," resurgent career and technical education (CTE) approaches are gaining steam across the country. Recently, the U.S. Chamber's (Institute for a Competitive Workforce released "The Skills Imperative," a white paper on how CTE offers strategies for addressing the growing skills gaps between American jobs and the workforce.

The Skills Imperative
U.S. Chamber of Commerce
www.uschamber.com/icw

There have been numerous studies centered on skills that are required to be considered workforce ready. Reviewing the 2005 study, there were sets of skills outlined that are still relevant in 2009. What follows are the base skill sets required by all but a few jobs and careers:

Cross-Sector Core Skills:

- ✓ Project Management
- ✓ Task Management
- ✓ Problem Solving

Core Tech Curriculum

- ✓ Analytical Skills and Problem Solving
- ✓ Business Organization and Environment
- ✓ Coordination and Communication Skills
- ✓ Core Computer & Hardware Software Skills
- ✓ Project and Process Flows

Core Employability Skills

- ✓ Communication
- ✓ Organization
- ✓ Team Contribution and Leadership
- ✓ Professionalism
- ✓ Critical Thinking and Decision Making
- ✓ Customer Relations
- ✓ Self-Directed and Continuous Learning

The interviewees for this report were asked to identify new skill requirements that have evolved since 2005. They offered the following as the most important:

- ❖ **Business' Global Context.** Today's business and political environment requires employees to understand the impact global economic connectivity has on whether a business performs successfully or fails. Businesses must plan on the basis that their product and service half-life is now measured in months not years.
- ❖ **Entrepreneurial Spirit.** Entrepreneurism is not confined to big commercial ventures, it is alive and well inside of business as intra-preneurism. Employees need to understand that their ideas and innovative thinking can lead to new products and services that can help keep their employer competitive.
- ❖ **Technology-driven Communications.** How quickly employees can adapt to new communication technologies determines how fast ideas

move. With web-based technologies that are ported to laptops, cell phones, and PDAs, employees are virtually connected 24/7.

New technologies such as wiki pages, blogs, social and professional networks all offer individuals a way to share experiences and thoughts. Such social networking is also a great way to share ideas between co-workers, to help ensure that all good ideas get considered.

- ❖ **Collaborative Planning.** Collaboration has become essential for businesses to develop new strategies, to grow and prosper.
- ❖ **Job Retention Skills.** Employers value education and the tangible skill sets that workers offer, but they value the soft skills just as much. Getting to work on time consistently, maintaining a good attitude and being a good team player are among the most essential job skills a worker can possess.



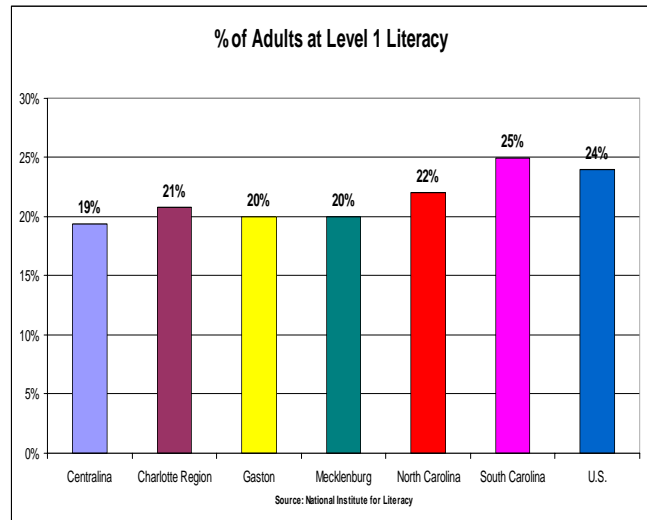
“Wicked Problems” that Must Be Solved

“Wicked problems” are those that are not easily resolved.⁴ The following is a list of some of the region’s problems that fall into this category.

- ❖ **Acculturation of In-migrants.** New citizens to the region need help to become integrated with and appreciated by their community. The region’s economic, workforce and education policies must be created to give everyone the advantage they need to succeed.
- ❖ **Decreasing Dropout Rates and Improving Appreciation for Education.** The community’s attitude toward education must be improved before the region can compete locally or globally. Accepting this challenge and working collectively to overcome it will benefit the students, workers, and businesses throughout the region.

⁴ Tackling Wicked Problems: A Public Policy Perspective, Australian Government, Public Service Commission <http://www.apsc.gov.au/publications07/wickedproblems.pdf>

- ❖ **Literacy.** If illiteracy was a virus, it might be considered pandemic in the Charlotte region. More than 20% of the adult population in the region are functionally illiterate, increasing the likelihood for low incomes and chronic unemployment. Although there has been a good literacy campaign in place since the mid 1990s, the new “Campaign for



Life-Long Learning” is expected to give literacy a push. The new program is being run by the Competitive Workforce Alliance, a collaborative effort of the Centralina Workforce Development Board, the Charlotte-Mecklenburg Workforce Development Board and the Gaston County Workforce Development Board.

- ❖ **Transportation.** A fluid workforce requires a solid transportation system. Job seekers and workers must have the means to get to employers anywhere in the region. The Charlotte region needs to look more closely at alternative forms for improving its transportation infrastructure in order to succeed economically.



Looking Ahead: Bright Spots for the Future

The Charlotte region has the assets and resources it needs to build a competitive workforce advantage. Some challenges remain, among them resolving the literacy and dropout issues, but overall, the region has reason to be optimistic. A new, stronger resolve is needed among leaders and stakeholders to forge collaborative efforts across the region with a shared goal of achieving economic success.

The focus of collaboration should be to advance new jobs, create new businesses, cultivate talent, advance sustainability, and build regional affiliations, relationships and identities to tackle those “wicked problems” that cannot be solved alone. Regional coalitions have no formal power when seeking to solve problems, but they can wield much influence as they pool resources, talent and energy. Collaborative groups are born out of the theory that together they are more powerful than the sum of their parts.

See the Appendix for a more detailed discussion that outlines the architecture and the benefits of a collaborative model that can be replicated by any organization.



Appendix A: Collaboration as Part of the Answer to “Wicked Problems”

Architecture of Collaboration

Effective collaboration rarely just happens; it needs to be thoughtfully and carefully cultivated. The following interconnected dimensions of collaboration are offered for consideration by community leaders advancing regional change efforts.

Goal setting. Collaboration begins with a shared interest or commitment to a common goal. It is typically catalyzed by an individual or small group “rallying the troops” in an effort to try a new approach to a compelling community problem. The goal can be relatively narrow; for example, increasing the number of students graduating from high school; or broader, but still confined to a single interest area, as many of the planning efforts associated with federal transportation legislation have been; or very broad, like WIRED and BRAC efforts that typically identify “regional economic and workforce transformation” as among their objectives. It is the breadth and scope of this goal that should inform the composition of the stakeholder collaborative and the sophistication of the structures that support it.

Theory of change. Collaboratives must develop a shared understanding of their theory of change – the logic and principles guiding group action. This drives the group’s strategy and sets the foundation for a host of subsequent decisions.

Role of outside catalysts/enablers. While the initial advocates for collaboration typically come from inside a region or field of interest, external catalysts can be essential for both accelerating progress and sustaining efforts.

Federal laws and national, state, and foundation grants can be excellent catalysts because they create specific deadlines, plans, and frameworks, and resources that lend structure to stakeholder efforts. Moreover, they often call for outcome reports, and include evaluations that help stakeholders learn from their ongoing activities, improving their impact over time. However, outside catalysts can also inhibit the character of a collaborative effort, leading to tension between the intent of the catalyst (e.g., funder) and the intent of the stakeholders participating in the collaborative.

Scope, scale, type of interventions. Determining the number, scope, and scale of interventions designed to achieve the goal will inform both the membership and the structure of collaborative efforts. There are a myriad of design choices about the scope and scale of interventions. The collaboratives' strategic intent, theory of change, and overall capacity are useful guides in decision-making.

Stakeholder expectations for participation. Early in collaborative efforts, stakeholders typically establish ground rules—either formal or informal—about the number of members, their roles, and what the expectations are for participation. One issue that requires careful consideration is representation: when stakeholders participate, are they doing so as individuals? As representatives of firms, industries, programs or institutions? To what degree can they commit time and resources? The rules for all stakeholders need not be the same (different stakeholders could play different roles), but they should be *clear* to members of the collaborative.

Leadership, structure, and decision-making protocols. Collaborative efforts nearly always require some kind of leadership structure; a leadership, advisory, or governing board, for example. The board might or might not be incorporated as a legal entity. It might be staffed by a member, a consultant, an individual who works for one of the member organizations, or a team of people who work for the members. It might serve as its own fiscal agent or use the fiscal support of a member.

The structure of a collaborative typically informs its leadership and decision-making protocols. Are there officers? How are they selected? How are decisions made in the group? Who bears responsibility for the effects of those decisions? It also informs choices about how work gets done, through committees or work groups, centralized staff, or by the stakeholders and their organizations. There are many options but leaders should be consistent and clear about which ones they employ

Communications and collaborative infrastructure. Whether a collaborative is (or aspires to be) a legal entity or not, communications and collaborative infrastructure are central to its effectiveness. While there are many simple and affordable tools that support communications and collaboration, the responsibility for managing these tools and the communication and collaboration they facilitate should be not be taken lightly.

Tools that enable communications and collaborative working are the glue that holds these groups together.

Accountability. When collaborative efforts begin, they are typically over and above the “day jobs” of members. Demonstrating progress against shared goals

is important because it keeps collaborators at the table long enough to discover the benefits of collaboration, and begin to approach their “days jobs” differently.

Collaboratives need meaningful and appropriate measures, milestones, outcomes, or other ways to demonstrate impact in different time horizons (short, medium, and long term) and across member jurisdictions or agencies.

Broader public engagement. When collaborative efforts begin, their attention is focused inward on members, on the agenda, on structures and resources, and so on. But as they mature, broader engagement strategies are needed. For example, a collaborative working on economic transformation might select a small number of industries to invest in. As a result, stakeholders from these industries – and the associations, interest groups, training providers, and others that support them – may need to be engaged. In many cases, public engagement through information or education campaigns is an explicit focus of collaborative efforts. This is some of the most important work collaborative groups can do. Done well, public engagement strategies can geometrically increase impact as individuals outside the group begin thinking, feeling, and behaving in ways that support the group’s objectives. Recycling campaigns, for example, dramatically increased recycling rates and investments in the infrastructure that make recycling possible.

Among the key benefits of effective collaborative partnerships are:

Shared intelligence. One of the first deliverables collaborative groups typically invest in is data, either quantitative or qualitative, in the form of an asset map, survey, or an aggregation of their collective knowledge about the issues they are working on, or an externally commissioned report. This does three important things. First, it creates a common base of knowledge that can serve as a starting point for the development of a shared strategy.

Second, if disseminated, it can help the group “stake a public claim” on the issues they have committed to working on, which serves as a signal to others who care about the same issues.

Third, if disseminated, it can inform the actions of others who might not be connected to the group itself, but may have the ability to impact the group’s goals.

Efficiency. Early collaborative efforts involving multiple meetings tend not to feel very efficient. However, as groups coalesce, they begin to invest time and resources collectively. This can reduce the cost burden on individual members and make it possible for those who were not investing before to participate in a meaningful way. Regional collaboration in WIRED, for example, is characterized

by collective investments in curriculum development and training that is shared across multiple institutions, reducing the cost to everyone.

Healthy Social Networks. While we are just now beginning to quantify the impact of social networks on the economic and social health of communities, research shows that they have a profound impact on the capacity of communities to reinvent themselves.

Collaborative efforts tend to increase the depth and quality of social networks, which themselves become a key asset, both because they can accelerate progress on collaborative work, and because they enable the kind of serendipitous connecting of people and resources that leads to innovation.

Ability to impact problems that matter. Poverty, literacy, education attainment, in-migrant populations, industry transition, innovation, regional resilience are complex and multifaceted (wicked) problems and issues. They are also among the most important challenges we face. The idea of making a difference in these areas can inspire and motivate the most cynical.

Confidence. Successful collaboration can lead to more successful collaboration on a greater range of issues. This kind of virtuous spiral can lead existing collaboratives to take on new issues, and provide incentive for new partnerships that lead to innovative, entrepreneurial ideas and solutions to community needs. It can even begin to define the culture of a region.

Economic Modeling Specialists, Inc.

Gap Analysis Regional Overview

Regional Demographics, Educational Attainment, and
Top Industry & Occupation Analysis

prepared for
**The Competitive
Workforce Alliance**
www.agreatworkforce.com

region
Charlotte, USA

timeframe
2008–2013



EMSI
Economic Modeling Specialists Inc.

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Region Definition

This report uses a customized dataset with demographic, industry, and occupation data for the counties shown above. EMSI has aggregated these statistics for this customized region.

Charlotte, USA

Counties: Alexander, Anson, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, Union (North Carolina); Chester, Chesterfield, Lancaster, York (South Carolina).

Timeframe Definition:

Future employment numbers in this report are projected from past trends and controlled to published state and national projections.

Data Timeframe:

2008–2013



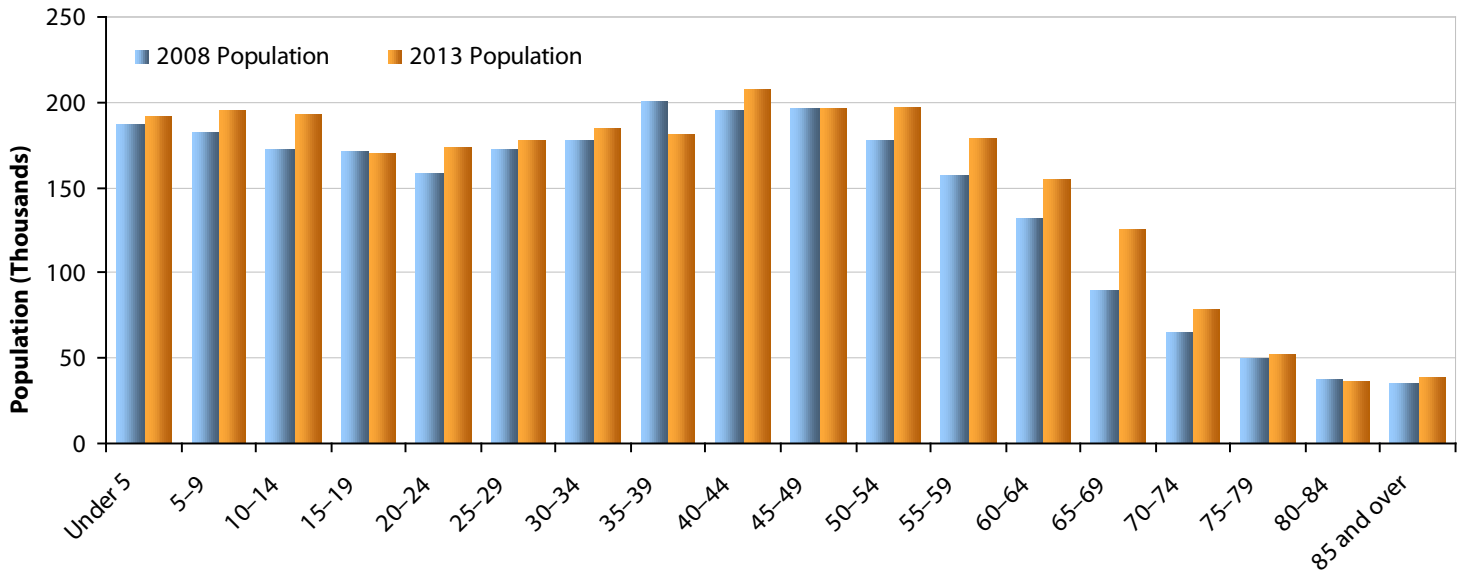
Report Outline

Demographics: The first section provides an overview of the region's age demographics, highlighting the regional population's current profile and projected change over the next five years. In addition, the region's demographics are benchmarked against state and national figures.

Regional Educational Attainment: The second section provides an overview of the educational attainment within the region. Educational attainment is based on the level of education achieved by the population over the age of 25.

Industry and Occupation Overview: The third section reveals the industries and occupations most critical to the regional economy. Industries are selected based on a combination of standard performance metrics. This section also (1) highlights occupations that are projected to experience the most growth within the critical industry sectors, (2) provides the average education levels necessary to work in these occupations, and (3) indicates the major declining occupations in the region.

Demographics



Region	2008 Population	2013 Population	Change	%Change
Centralina	2,561,320	2,736,237	174,917	7%
State*	13,647,105	14,308,806	661,701	5%

*North Carolina and South Carolina combined

The current population of the region is 2,561,320. Over the next five years the population is projected to increase by roughly 7%.

Gender	2008 Population	2013 Population	Change	%Change
Males	1,257,356	1,343,599	86,243	6.9%
Females	1,303,964	1,392,637	88,673	6.8%
	2,561,320	2,736,236	174,916	6.8%

Males and females will be almost evenly distributed.

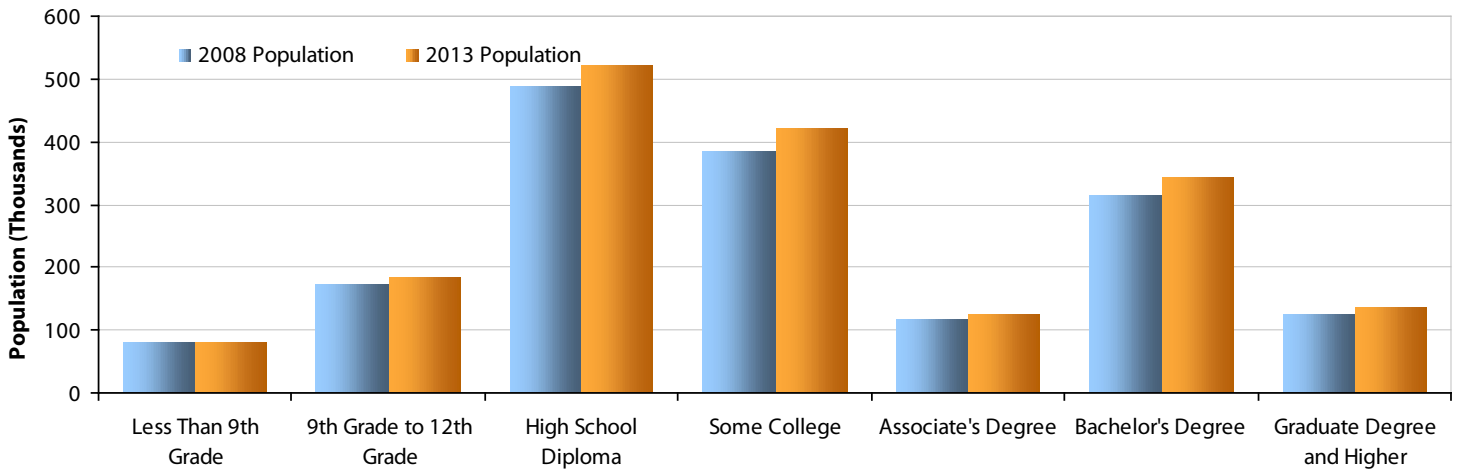
Age	2013 Population	% of Total Population
under 5	192,032	7.02%
5-9	195,665	7.15%
10-14	193,184	7.06%
15-19	170,023	6.21%
20-24	173,674	6.35%
25-29	177,820	6.50%
30-34	184,448	6.74%
35-39	181,775	6.64%
40-44	207,747	7.59%
45-49	196,310	7.17%
50-54	197,633	7.22%
	2,070,311	75.66%

In five years 76% of the population will be under the age of 55.

Region	2008 Population	2008 55+	% 55+	2013 Population	2013 55+	% 55+
Centralina	2,561,320	568,829	22.2%	2,736,237	665,926	24.3%
State*	13,647,105	3,324,386	24.4%	14,308,806	3,815,251	26.7%

Accordingly, in 2013, 24% of the population is projected to be over the age of 55.

Educational Attainment



Current Educational Attainment

Education Level	2008 Pop 25+	% of Pop 25+	State % Pop 25+	Nat. % Pop 25+
Less Than 9th Grade	80,352	5%	5%	5%
9th Grade – 12th Grade	174,240	10%	11%	9%
High School Diploma	488,468	29%	30%	29%
Some College	386,486	23%	22%	22%
Associate's Degree	117,400	7%	7%	6%
Bachelor's Degree	315,886	19%	17%	18%
Graduate Degree and Higher	126,692	7%	8%	10%
	1,689,524			

Projected Educational Attainment

Education Level	2013 Pop 25+	% of Pop 25+	State % Pop 25+	Nat. % Pop 25+
Less Than 9th Grade	81,640	5%	5%	5%
9th Grade to 12th Grade	183,373	10%	11%	9%
High School Diploma	521,346	29%	29%	28%
Some College	420,183	23%	22%	22%
Associate's Degree	125,475	7%	7%	6%
Bachelor's Degree	341,873	19%	17%	18%
Graduate Degree and Higher	137,769	8%	8%	11%
	1,811,659			

Note: Educational attainment is based on the education level of the population over the age of 25.

Industries & Occupations: Introduction

Introduction

To provide the best estimation of which industry clusters are most critical to the regional economy we have ranked industries at the 2-digit NAICS level by the following metrics:

- Industry size (in terms of jobs),
- Growth (jobs and % change),
- Earnings per worker (EPW),
- Shift share (or competitive effect), and
- Location quotient (or regional concentration).

For this analysis, we have weighted industry size, change, and competitive effect so the results should reflect area industries that are (1) relatively large, (2) growing, and (3) regionally competitive.

After the top industry clusters are selected we rank the top occupations within each industry. To rank the occupations we have simply selected those occupations that are larger, and are projected to growth or decline with some significance over the next five years. In addition, the analysis includes earnings and education level associated with each occupation.

As with the previous sections, this section is primarily data-driven, and knowledge of the local situation is usually required to interpret all the data correctly. This section is primarily meant as an overview of the economy that can be used as a point of departure for planning discussions.

Metrics Overview

Industry cluster performance is a many-faceted concept that cannot be easily reduced to a single metric. Accordingly, EMSI uses five major metrics to evaluate industry performance: jobs, earnings, growth, shift share, and location quotient.

Jobs: simply ranks industries by number of jobs. This metric certainly reveals important industries in the regional economy, but it does not tell a complete story. For example, a large industry may be in sharp decline, or may provide mostly low-wage jobs, or may be dependent on more basic export-oriented industries. EMSI's ranking of industries by jobs is thus balanced by using the perspectives of other metrics.

Growth: can highlight regional industries that may be small or mid-sized but show strong performance and have high potential for future growth. Growth ranking is done in terms of number of jobs added.

Average yearly earnings per worker (EPW): in EMSI's data this includes salary and benefits, indicates the quality of jobs within each industry.

Shift share: or 'regional competitiveness,' is a way of balancing the growth figures by isolating growth that can be attributed to regional causes rather than simply to national economic or industry trends. Shift share provides the 'Competitive Effect,' which is based on (1) total regional job growth minus (2) the National Growth Effect (industry growth expected due to performance of national economy as a whole) and (3) Industrial Mix Effect (regional industry growth expected due to national trends in that same industry).

Location quotient: or 'industry concentration,' is a way of quantifying how concentrated an industry is in a region. For example, if an industry is responsible for .5% of national jobs but 1.5% of regional jobs, then it has an lq of 3 in the region. By showing regional 'specialties,' this metric highlights exporting sectors that bring money into the region (and thus form the base for other dependent industries).

Industry Clusters

The table summarizes the broadest industry sectors in the regional and state economies, sorted by total 2008 jobs.

Cluster Description	Region				2008 EPW	State			
	2008 Jobs	2013 Jobs	Change	%Change		State 2008	State 2013	State % Change	State EPW
Business & Financial Services	152,462	174,643	22,181	15%	\$70,579	655,666	751,045	15%	\$58,198
Biomedical/Biotechnical (Life Sciences)*	76,766	89,471	12,705	17%	\$40,349	516,401	607,860	18%	\$47,353
Energy (Fossil & Renewable)*	67,245	72,856	5,612	8%	\$57,043	379,860	414,184	9%	\$56,764
Transportation & Logistics	55,038	63,575	8,537	16%	\$48,456	224,940	255,035	13%	\$44,138
Information Technology & Telecommunications	54,081	55,902	1,821	3%	\$75,427	288,232	307,384	7%	\$74,817
Arts, Entertainment, Recreation & Visitor Industries	48,976	55,313	6,336	13%	\$39,332	251,816	279,347	11%	\$25,745
Forest & Wood Products	48,686	49,938	1,251	3%	\$48,195	201,420	203,578	1%	\$44,941
Advanced Materials	46,660	45,369	(1,291)	(3%)	\$65,167	258,328	266,291	3%	\$76,187
Apparel & Textiles	41,868	35,165	(6,702)	(16%)	\$41,037	158,224	132,172	(16%)	\$40,397
Defense & Security*	30,077	33,798	3,721	12%	\$48,296	177,239	203,037	15%	\$56,052
Agribusiness, Food Processing & Technology	29,463	28,799	(663)	(2%)	\$44,395	225,043	220,590	(2%)	\$32,069
Chemicals & Chemical Based Products	26,972	26,035	(937)	(3%)	\$60,585	156,346	155,957	0%	\$73,051
Printing & Publishing	25,455	27,487	2,031	8%	\$58,723	111,122	120,009	8%	\$52,314
Education & Knowledge Creation	22,068	26,135	4,068	18%	\$34,317	129,217	148,294	15%	\$37,815
Fabricated Metal Product Manufacturing	18,887	19,567	681	4%	\$56,755	66,678	69,970	5%	\$52,391
Transportation Equipment Manufacturing	13,794	14,135	341	2%	\$75,687	68,256	70,372	3%	\$78,740
Machinery Manufacturing	12,292	11,752	(540)	(4%)	\$73,153	56,285	54,454	(3%)	\$67,789
Electrical Equipment, Appliance & Component Manufacturing	7,131	6,459	(672)	(9%)	\$63,757	36,676	35,528	(3%)	\$62,310
Computer & Electronic Product Manufacturing	5,858	5,540	(319)	(5%)	\$128,342	48,284	47,464	(2%)	\$119,920
Primary Metal Manufacturing	5,470	5,511	41	1%	\$75,381	14,426	14,119	(2%)	\$76,049
Glass & Ceramics	3,789	3,499	(289)	(8%)	\$51,596	16,329	14,976	(8%)	\$53,732
Mining	2,822	2,869	47	2%	\$71,623	15,031	15,123	1%	\$82,632

EPW total annual industry earnings per worker
 *Focus Industry see occupation details later in report

Note: Do not total data as some clusters overlap.

Industry Rankings

Focus Industry Clusters

For this analysis we have selected three top level industries for a more detailed analysis. These were selected based on strong performance in a combination of indicators: regional growth, earnings, number of jobs and regional competitiveness.

- Biomedical/Biotechnical (Life Sciences)
- Energy (Fossil & Renewable)
- Defense & Security

Most Competitive Industries

These industries had the highest job growth beyond that expected from national trends.*

	Competitive Growth
Biomedical/Biotechnical (Life Sciences)	3,822
Transportation & Logistics	3,778
Business & Financial Services	1,746
Education & Knowledge Creation	1,341
Arts, Entertainment, Recreation & Visitor Industries	1,325

*See the explanation of shift share on page 4.

Largest Industries (2008)

Industries most critical to this region's economy are:

	Jobs
Business & Financial Services	152,462
Biomedical/Biotechnical (Life Sciences)	76,766
Energy (Fossil & Renewable)	67,245
Transportation & Logistics	55,038
Information Technology & Telecommunications	54,081

Declining Industries, 2008–2013

Apparel & Textiles	(6,702)
Advanced Materials	(1,291)
Chemicals & Chemical Based Products	(937)
Electrical Equipment, Appliance & Component Manufacturing	(672)
Agribusiness, Food Processing & Technology	(663)

Highest Growth, 2008–2013

Industries with largest total change in jobs are:

	Change	% Change
Business & Financial Services	22,181	15%
Biomedical/Biotechnical (Life Sciences)	12,705	17%
Transportation & Logistics	8,537	16%
Arts, Entertainment, Recreation & Visitor Industries	6,336	13%
Energy (Fossil & Renewable)	5,612	8%

Focus Industry Occupations

Critical Occupations: Biomedical/Biotechnical (Life Sciences)

These are sector's occupations showing largest job change. Regional projections, change, replacement jobs, average hourly earnings and education level are included. Numbers include all jobs in the given occupation, not just in those found within the focus industry (most occupations are found within more than one industry).

SOC Code & Description	2008 Jobs	2013 Jobs	Change	% Change	New & Rep. Jobs	% New & Rep.	2007 Median Hourly Earnings	Education Level
29-1111 Registered nurses	21,902	25,564	3,662	17%	5,439	25%	\$26.18	Associate's
31-1011 Home health aides	16,062	19,845	3,783	24%	4,477	28%	\$9.89	ST OJT
31-1012 Nursing aides, orderlies, and attendants	6,367	7,125	758	12%	1,041	16%	\$10.72	PS award
39-9021 Personal and home care aides	4,467	5,585	1,118	25%	1,480	33%	\$8.62	ST OJT
21-1093 Social and human service assistants	3,746	4,536	790	21%	999	27%	\$12.12	MT OJT
29-2061 Licensed practical and licensed vocational nurses	3,736	4,133	397	11%	902	24%	\$18.69	PS award
29-2052 Pharmacy technicians	2,766	3,256	490	18%	897	32%	\$11.98	MTOJT
11-9111 Medical and health services managers	2,017	2,314	297	15%	484	24%	\$32.97	Deg. + exp.
29-1051 Pharmacists	2,015	2,363	348	17%	521	26%	\$49.77	Professional
	63,079	74,722	11,643	18%	16,240	26%	\$18.37	

EDUCATION ABBREVIATIONS:

ST OJT	Short-term on-the-job training
MT OJT	Moderate-term on-the-job training
LT OJT	Long-term on-the-job training
Exp. in field	Work experience in a related field
PS award	Postsecondary vocational award
Deg. + exp.	Degree plus work experience
Prof.	First professional degree

Focus Industry Occupations (cont'd.)

Critical Occupations: Energy (Fossil & Renewable)

These are sector's occupations showing largest job change. Regional projections, change, replacement jobs, average hourly earnings and education level are included. Numbers include all jobs in the given occupation, not just in those found within the focus industry (most occupations are found within more than one industry).

SOC Code & Description	2008 Jobs	2013 Jobs	Change	%Change	New & Rep. Jobs	% New & Rep.	2007 Median Hourly Earnings	Education Level
41-1011 First-line supervisors/managers of retail sales workers	21,997	24,310	2,313	11%	4,624	21%	\$14.52	Exp. in field
43-3031 Bookkeeping, accounting, and auditing clerks	19,413	21,562	2,149	11%	3,652	19%	\$14.34	MT OJT
51-2092 Team assemblers	18,908	19,431	523	3%	2,512	13%	\$12.72	MT OJT
47-1011 First-line supervisors/managers of construction trades and extraction workers	11,925	13,158	1,233	10%	2,078	17%	\$21.20	Exp. in field
11-9021 Construction managers	7,153	7,989	836	12%	1,401	20%	\$22.99	Bachelor's
47-2111 Electricians	6,534	7,080	546	8%	1,418	22%	\$16.74	LT OJT
47-2152 Plumbers, pipefitters, and steamfitters	4,150	4,744	594	14%	1,033	25%	\$16.56	LT OJT
49-9021 Heating, air conditioning, and refrigeration mechanics and installers	3,051	3,468	417	14%	688	23%	\$17.83	LT OJT
47-2211 Sheet metal workers	1,816	2,036	220	12%	443	24%	\$15.17	LT OJT
47-3015 Helpers, pipelayers, plumbers, pipefitters, and steamfitters	1,708	1,955	247	14%	469	27%	\$12.44	ST OJT
	96,655	105,733	9,078	9%	18,320	19%	\$15.92	

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Exp. in field	Work experience in a related field
PS award	Postsecondary vocational award
Deg. + exp.	Degree plus work experience
Prof.	First professional degree

Focus Industry Occupations (cont'd.)

Critical Occupations: Defense & Security

These are sector's occupations showing largest job change. Regional projections, change, replacement jobs, average hourly earnings and education level are included. Numbers include all jobs in the given occupation, not just in those found within the focus industry (most occupations are found within more than one industry).

SOC Code & Description	2008 Jobs	2013 Jobs	Change	%Change	New & Rep. Jobs	% New & Rep.	2007 Median Hourly Earnings	Education Level
33-9032 Security guards	9,476	11,359	1,883	20%	2,839	30%	\$9.98	ST OJT
11-9199 Managers, all other	12,282	13,887	1,605	13%	2,832	23%	\$21.04	Exp. in field
15-1051 Computer systems analysts	5,267	6,092	825	16%	1,515	29%	\$33.57	Bachelor's
15-1081 Network systems and data communications analysts	2,756	3,450	694	25%	966	35%	\$29.99	Bachelor's
15-1031 Computer software engineers, applications	2,746	3,270	524	19%	720	26%	\$38.57	Bachelor's
15-1041 Computer support specialists	4,535	4,981	446	10%	1,143	25%	\$19.56	Associate's
15-1032 Computer software engineers, systems software	2,237	2,571	334	15%	496	22%	\$40.20	Bachelor's
49-2098 Security and fire alarm systems installers	978	1,243	265	27%	330	34%	\$16.42	PS award
33-9021 Private detectives and investigators	630	792	162	26%	225	36%	\$10.47	Exp. in field
15-1021 Computer programmers	3,665	3,623	(42)	(1%)	424	12%	\$33.72	Bachelor's
	44,571	51,269	6,698	15%	11,491	26%	\$23.37	

EDUCATION ABBREVIATIONS:

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Declining Occupations

These regional occupations show the largest decline in jobs.

SOC Code & Description	2008 Jobs	2013 Jobs	Change	%Change	New & Rep. Jobs	% New & Rep.	2007 Median Hourly Earnings	Education Level
51-6064 Textile winding, twisting, and drawing out machine setters, operators, and tenders	3,255	1,975	(1,280)	(39%)	(564)	(17%)	\$10.23	MT OJT
51-6031 Sewing machine operators	3,801	3,172	(629)	(17%)	131	3%	\$12.64	MT OJT
11-9012 Farmers and ranchers	8,229	7,715	(514)	(6%)	219	3%	\$6.58	LT OJT
51-6063 Textile knitting and weaving machine setters, operators, and tenders	2,421	1,928	(493)	(20%)	321	13%	\$11.66	LT OJT
39-2021 Nonfarm animal caretakers	3,052	2,578	(474)	(16%)	(223)	(7%)	\$7.36	ST OJT
51-6061 Textile bleaching and dyeing machine operators and tenders	1,083	645	(438)	(40%)	(163)	(15%)	\$11.35	MT OJT
53-7064 Packers and packagers, hand	10,485	10,171	(314)	(3%)	1,009	10%	\$9.06	ST OJT
51-9061 Inspectors, testers, sorters, samplers, and weighers	6,247	5,969	(278)	(4%)	425	7%	\$13.72	MT OJT
43-4151 Order clerks	2,048	1,787	(261)	(13%)	218	11%	\$13.16	ST OJT
51-1011 First-line supervisors/managers of production and operating workers	9,090	8,843	(247)	(3%)	754	8%	\$22.63	Exp. in field
	49,710	44,782	-4,928	-10%	2,128	4%	\$12.29	

EDUCATION ABBREVIATIONS:

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Exp. in field	Work experience in a related field
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Deg. + exp.	Degree plus work experience
Prof.	First professional degree

About EMSI and the Data

About EMSI

EMSI provides integrated data, web-based tools, and consulting services to analyze regional economies intelligently in terms of economic base, industry and employment trends, economic impact simulations, industry clusters, regional competitiveness, human capital, labor market supply and demand, and demographics. EMSI's integrated database is based on 70 government sources, making it much more comprehensive, accurate, and detailed than any single source available. In addition, EMSI's web-based suite of analysis tools makes the information easy to access and use. If you would like to learn more about EMSI or its products and services, please visit us online at www.economicmodeling.com, or call 1-866-999-3674.

EMSI Data

As a data provider, we gather and harmonize data from 70 state and federal sources, creating in-house a comprehensive and current database that is unsurpassed for its breadth and detail. Industry, workforce, and demographic data are available from state and county levels all the way down to individual ZIP codes, and users can build custom regions from county and ZIP code areas. In addition, by combining dozens of data sources, we can fill gaps in individual sources (such as suppressions and missing proprietors)—yielding a composite database that exploits the strengths of each source. Finally, our database is updated biannually, so our subscribers have access to the most complete *and* up-to-date information on the market.

EMSI's StrategicAdvantage™ (SA)

The report was created primarily using the Economic Forecaster, one of four modules within SA. Economic Forecaster is a powerful, labor market projection tool that will allow workforce and economic developers to create detailed industry, occupation and demographic analyses that can be used to better analyze the regional economy and workforce.

EMSI's StrategicAdvantage™ web-based analysis suite capitalizes on the company's premium database to produce accessible analysis and reports. The suite includes four main modules—Economic Forecaster, Economic Impact, Career Pathways and Educational Analyst—which each include several analysis tools that allow users to create customizable tables, graphs, and maps with the click of a button. With EMSI's StrategicAdvantage™, workforce professionals and economic developers can:

- Perform instant analyses** with an intuitive web-based interface,
- Understand current and future trends** in a regional economy (industries, occupations, demographics) with 10-year projections,
- Create presentation-ready** graphs, tables and maps,
- Draw the right businesses** to a region and maximize return on investment,
- Run impact scenarios of businesses** entering, leaving, growing, or shrinking in a region,
- Know the skills** embedded in the workforce and required by specific occupations,
- Minimize unemployment** and transition workers into high-demand, high-wage occupations, and
- Identify the businesses and workers** a region needs to recruit and retain in order to make its economy thrive.

Selected EMSI Data Sources

CD Light, LLC, d.b.a. ZipInfo.com. ZIPList5 Plus Zip Code Data.

_____. ZipInfo.com. Database on-line. Available from <http://www.zipinfo.com>; Internet; accessed May 2005.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

_____. Health, United States, 2004.

U.S. Census Bureau.

_____. County Business Patterns (CBP) Employment Reports.

- ____. Current State Demographic data.
- ____. Current County Demographic data.
- ____. Decennial Census Reports.
- ____. National Population Report.
- ____. Nonemployer Statistics Reports.
- ____. Projected State Demographic data.
- ____. State Population Total Reports.
- U.S. Department of Commerce, Bureau of Economic Analysis.
- ____. Regional Economic Information Systems (REIS). County Demographic data.
- ____. Regional Economic Information Systems (REIS). Employment & Earnings Reports.
- ____. State Personal Income Employment and Earnings Reports.
- U.S. Department of Education, National Center for Education Statistics.
- ____. Integrated Postsecondary Education Data System Institutional Characteristics Survey. Database on-line. Available from <http://nces.ed.gov/Ipeds/ic.asp>; Internet; accessed April 2005.
- ____. Integrated Postsecondary Education Data System Faculty Salaries Data. Database on-line. Available from <http://nces.ed.gov/Ipeds/facultysalaries.asp>; Internet; accessed April 2005.
- ____. Integrated Postsecondary Education Data System Fall Staff Data. Database on-line. Available from <http://nces.ed.gov/Ipeds/fallstaff.asp>; Internet; accessed April 2005.
- ____. Occupation to CIP (Classification of Instructional Programs).
- ____. Public Elementary/Secondary School Universe Survey Data. Database on-line. Available from <http://nces.ed.gov/ccd/pubschuniv.asp>; Internet; accessed April 2005.
- U.S. Department of Labor, Bureau of Labor Statistics.
- ____. Current Employment Statistics.
- ____. Current Year National Occupation Matrix.
- ____. National Current Industry data.
- ____. National Projected Industry data.
- ____. National Replacement Jobs data.
- ____. Projected National Occupation Matrix.
- ____. Quarterly Census of Employment and Wages. (also known as ES-202 Covered Employment & Wages Data.)

In addition to these national sources, EMSI uses employment data from nearly all 50 individual states.

If you have any questions about EMSI's data and methodologies, please contact us at 1-866-999-2674 or at info@economicmodeling.com.

Industry Cluster Breakdown

Biomedical/Biotechnical (Life Sciences) Cluster

Biomedical / Biotechnical (Life Sciences) Cluster
Medicinal and botanical manufacturing (NAICS 325411)
Pharmaceutical preparation manufacturing (NAICS 325412)
In-vitro diagnostic substance manufacturing (NAICS 325413)
Other biological product manufacturing (NAICS 325414)
Optical instrument and lens manufacturing (NAICS 333314)
Electromedical and electrotherapeutic apparatus manufacturing (NAICS 334510)
Analytical laboratory instrument mfg. (NAICS 334516)
Irradiation apparatus manufacturing (NAICS 334517)
Laboratory apparatus and furniture mfg. (NAICS 339111)
Surgical and medical instrument manufacturing (NAICS 339112)
Surgical appliance and supplies manufacturing (NAICS 339113)
Dental equipment and supplies manufacturing (NAICS 339114)
Ophthalmic goods manufacturing (NAICS 339115)
Dental laboratories (NAICS 339116)
Medical equipment merchant wholesalers (NAICS 423450)
Ophthalmic goods merchant wholesalers (NAICS 423460)
Pharmacies and drug stores (NAICS 446110)
Cosmetic and beauty supply stores (NAICS 446120)
Optical goods stores (NAICS 446130)
Food, health, supplement stores (NAICS 446191)
All other health and personal care stores (NAICS 446199)
Physical, engineering and biological research (NAICS 541710)
Social science and humanities research (NAICS 541720)
Hazardous waste treatment and disposal (NAICS 562211)
Family planning centers (NAICS 621410)
Outpatient mental health centers (NAICS 621420)
HMO medical centers (NAICS 621491)
Kidney dialysis centers (NAICS 621492)
Freestanding emergency medical centers (NAICS 621493)
All other outpatient care centers (NAICS 621498)
Medical laboratories (NAICS 621511)
Diagnostic imaging centers (NAICS 621512)
Home health care services (NAICS 621610)
Ambulance services (NAICS 621910)
Blood and organ banks (NAICS 621991)
Miscellaneous ambulatory health care services (NAICS 621999)

Biomedical / Biotechnical (Life Sciences) Cluster

General medical and surgical hospitals (NAICS 622110)
Psychiatric and substance abuse hospitals (NAICS 622210)
Other hospitals (NAICS 622310)
Nursing care facilities (NAICS 623110)
Residential mental retardation facilities (NAICS 623210)
Residential mental and substance abuse care (NAICS 623220)
Continuing care retirement communities (NAICS 623311)
Homes for the elderly (NAICS 623312)
Other residential care facilities (NAICS 623990)

Defense & Security Cluster

Defense & Security Cluster
Uranium-radium-vanadium ore mining (NAICS 212291)
Power and communication system construction (NAICS 237130)
Explosives manufacturing (NAICS 325920)
Fluid power valve and hose fitting mfg. (NAICS 332912)
Small arms ammunition manufacturing (NAICS 332992)
Ammunition, except small arms, manufacturing (NAICS 332993)
Small arms manufacturing (NAICS 332994)
Other ordnance and accessories manufacturing (NAICS 332995)
Other communications equipment manufacturing (NAICS 334290)
Search, detection, and navigation instruments (NAICS 334511)
Aircraft manufacturing (NAICS 336411)
Aircraft engine and engine parts mfg. (NAICS 336412)
Other aircraft parts and equipment (NAICS 336413)
Guided missile and space vehicle mfg. (NAICS 336414)
Space vehicle propulsion units and parts mfg. (NAICS 336415)
Other guided missile and space vehicle parts (NAICS 336419)
Ship building and repairing (NAICS 336611)
Boat building (NAICS 336612)
Military armored vehicles and tank parts mfg. (NAICS 336992)
Surgical appliance and supplies manufacturing (NAICS 339113)
Motor vehicle merchant wholesalers (NAICS 423110)
New motor vehicle parts merchant wholesalers (NAICS 423120)
Tire and tube merchant wholesalers (NAICS 423130)
Used motor vehicle parts merchant wholesalers (NAICS 423140)
Other transport. goods merchant wholesalers (NAICS 423860)

Defense & Security Cluster
Custom computer programming services (NAICS 541511)
Computer systems design services (NAICS 541512)
Computer facilities management services (NAICS 541513)
Other computer related services (NAICS 541519)
Physical, engineering and biological research (NAICS 541710)
Investigation services (NAICS 561611)
Security guards and patrol services (NAICS 561612)
Armored car services (NAICS 561613)
Security systems services, except locksmiths (NAICS 561621)
Locksmiths (NAICS 561622)
Other household goods repair and maintenance (NAICS 811490)

Energy (Fossil & Renewable) Cluster

Energy (Fossil & Renewable) Cluster
Crude petroleum and natural gas extraction (NAICS 211111)
Natural gas liquid extraction (NAICS 211112)
Bituminous coal and lignite surface mining (NAICS 212111)
Bituminous coal underground mining (NAICS 212112)
Anthracite mining (NAICS 212113)
Uranium-radium-vanadium ore mining (NAICS 212291)
Drilling oil and gas wells (NAICS 213111)
Support activities for oil and gas operations (NAICS 213112)
Support activities for coal mining (NAICS 213113)
Support activities for metal mining (NAICS 213114)
Hydroelectric power generation (NAICS 221111)
Fossil fuel electric power generation (NAICS 221112)
Nuclear electric power generation (NAICS 221113)
Other electric power generation (NAICS 221119)
Electric bulk power transmission and control (NAICS 221121)
Electric power distribution (NAICS 221122)
Natural gas distribution (NAICS 221210)
Steam and air-conditioning supply (NAICS 221330)
Water and sewer system construction (NAICS 237110)
Oil and gas pipeline construction (NAICS 237120)
Power and communication system construction (NAICS 237130)
Other heavy construction (NAICS 237990)
Residential electrical contractors (NAICS 238211)
Nonresidential electrical contractors (NAICS 238212)
Residential plumbing and HVAC contractors (NAICS 238221)
Nonresidential plumbing and HVAC contractors (NAICS 238222)
Petroleum refineries (NAICS 324110)
All other petroleum and coal products mfg. (NAICS 324199)
Petrochemical manufacturing (NAICS 325110)
Industrial gas manufacturing (NAICS 325120)

Energy (Fossil & Renewable) Cluster
Gum and wood chemical manufacturing (NAICS 325191)
Ethyl alcohol manufacturing (NAICS 325193)
Power boiler and heat exchanger manufacturing (NAICS 332410)
Metal tank, heavy gauge, manufacturing (NAICS 332420)
Mining machinery and equipment manufacturing (NAICS 333131)
Oil and gas field machinery and equipment (NAICS 333132)
Heating equipment, except warm air furnaces (NAICS 333414)
Turbine and turbine generator set units mfg. (NAICS 333611)
Semiconductors and related device mfg. (NAICS 334413)
Other measuring and controlling device mfg. (NAICS 334519)
Electric power and specialty transformer mfg. (NAICS 335311)
Motor and generator manufacturing (NAICS 335312)
Switchgear and switchboard apparatus mfg. (NAICS 335313)
Relay and industrial control manufacturing (NAICS 335314)
Storage battery manufacturing (NAICS 335911)
Primary battery manufacturing (NAICS 335912)
Other communication and energy wire mfg. (NAICS 335929)
Current-carrying wiring device manufacturing (NAICS 335931)
Carbon and graphite product manufacturing (NAICS 335991)
Miscellaneous electrical equipment mfg. (NAICS 335999)
Coal and other mineral merchant wholesalers (NAICS 423520)
Elec. equip. and wiring merchant wholesalers (NAICS 423610)
Other electronic parts merchant wholesalers (NAICS 423690)
Plumbing equip. merchant wholesalers (NAICS 423720)
Petroleum bulk stations and terminals (NAICS 424710)
Other petroleum merchant wholesalers (NAICS 424720)
Gasoline stations with convenience stores (NAICS 447110)
Other gasoline stations (NAICS 447190)
Heating oil dealers (NAICS 454311)
Liquefied petroleum gas, bottled gas, dealers (NAICS 454312)
Other fuel dealers (NAICS 454319)
Pipeline transportation of crude oil (NAICS 486110)
Pipeline transportation of natural gas (NAICS 486210)
Refined petroleum product pipeline transport. (NAICS 486910)
All other pipeline transportation (NAICS 486990)
Miscellaneous intermediation (NAICS 523910)
Miscellaneous financial investment activities (NAICS 523999)
Other heavy machinery rental and leasing (NAICS 532412)
Lessors of nonfinancial intangible assets (NAICS 533110)
Engineering services (NAICS 541330)
Geophysical surveying and mapping services (NAICS 541360)
Testing laboratories (NAICS 541380)
Environmental consulting services (NAICS 541620)
Other technical consulting services (NAICS 541690)
Physical, engineering and biological research (NAICS 541710)

About This Report

This Gap Analysis Regional Overview, created by EMSI and developed in partnership with New York based Workforce Strategy Center (www.workforcestrategy.org), is designed to provide a top-level view of regional demographics, educational attainment, top-ranking industries, and associated occupations. The goal of this report is to assist regional planners in their understanding of the region's population, economy, and labor market. The report is primarily data-driven, with some basic interpretation included to help focus the attention of local stakeholders and policy makers. Knowledge of the local situation may be required to interpret all the data correctly.

jobs

growth

earnings

education



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