

Manufacturing+ Jobs Strategy

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KEY FINDINGS

The Future CLEDA Region Economy

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1. The economy is forecast to pivot from its 2009-2012 lethargy and experience solid growth during the 2013-2018 period. The economy is expected to slow down but still experience positive growth during the 2019-2023 time period. This is without any influence from the impending impact of a new biofuels sector scheduled to come on line.
2. Excluding Healthcare, the key economic sector drivers are Manufacturing, Forest and Wood Products, and Energy for all three time periods. In addition, there is another non-traditional industry sector, Advanced Materials, with a very strong presence.
3. Three of the above sectors also appear to be moderately developed to well developed clusters with strong concentrations (LQs), supplier chains in play, training support etc. – Forest and Wood Products, Energy, and Advanced Materials.
4. Manufacturing is the key export sector and swamps everything else. In 2012 money received in the region from manufacturing exported outside the region was just under \$2.9 Billion. Mining (including Oil and Gas) was the second leading export sector bringing in \$980 Million.



Occupational Demand

For Positions Requiring Less Than a 4-Year Degree

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1. Overall employment and job openings are dominated by occupations that require less than a 4-year degree education level. For example, 84% of the 23,056 projected job openings for 2013 – 2018 period are for occupations that require less than a 4-year degree. Of these openings 69% are expected to be replacement jobs.
2. The strongest training need is for short- or moderate-term on-the-job training with over 70% of the job openings for all three time periods associated with this education/training level. This variety of non-credit and/or customized training is often provided by community and technical colleges throughout the country – especially those with dedicated manufacturing centers. There is also substantive demand for training for occupations requiring an associate’s degree or a post-secondary non-degree award.

Job Openings Requiring Less Than A 4-Year Degree

Time Period	Total Openings	Short & Moderate On-The-Job Training	Assoc. Degree or Post-Secon. Award
2009-2012	16,579	12,159	2,122
2103-2018	23,056	16,853	3,307
2019-2023	17,063	12,449	2,213



Occupational Demand (continued)

For Positions Requiring Less Than a 4-Year Degree

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- **Nine higher demand Manufacturing+ occupation categories requiring less than a 4-year degree that cross all time periods:**
 - Team Assemblers
 - Freight, Stock, Materials Movers and Handlers
 - Welders
 - Maintenance and Repair
 - Logging Equipment Operators
 - Heavy and Industry Truck and Trailer Drivers and Operators
 - Operating Engineers and Construction Equipment Operators
 - First Line Supervisors for Construction Trades and Extraction Workers
 - First Line Supervisors Mechanics, Installers and Repair.



Supply Indicators

For Positions Requiring Less Than a 4-Year Degree

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- Supply Indicators - completions for programs associated with an occupation and offered by institutions falling within the CLEDA region.
- For occupations with at least 100 openings during each projection period, the CLEDA workforce development system is producing completions at significant levels for Welding, Maintenance, First Line Supervisors as well as completions in training programs for the Wood and Forest Products cluster. The Orchard Foundation's Cenla Work Ready Network is also producing large numbers of qualified individuals.
- As a general occupational demand vs. workforce development production capacity measure, for the 2013-2018 period, 12,986 jobs are projected for positions with at least 100 openings forecast for this period. For 2012, the CLEDA regional workforce development system reported 937 completions in instructional programs associated with these occupations.



Occupational Demand & Associated Supply Indicators For Positions Requiring At Least A 4-Year Degree

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- 4,475 openings are projected for occupations requiring a 4-year degree or higher for the 2013-2018 period. This number dips to 3,279 for the 2019-2013 period.
- The highest demand categories for these occupations are:
 - management and supervisory areas
 - information technology fields such as computer applications and systems software development and systems administration
 - engineering fields – civil, industrial and mechanical.
- CLEDA region higher education institutions are producing significant numbers of completions qualified for occupations in management and supervisory fields but it is reporting zero to low completion numbers for completions qualified for the above mentioned computer and engineering fields.



Some Cluster Specific Considerations

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- In addition the 9 Manufacturing+ high demand occupation categories, here are extra higher demand occupations associated with specific key CLEDA clusters:
 - **Manufacturing and Advanced Materials**
 - ✦ First Line Production Supervisors
 - ✦ Production Work Helpers
 - **Forest and Wood Products**
 - ✦ Sawing Machine Setters, Operators and Tenders (note Logging Equipment Operators included in high demand category)
 - **Energy**
 - ✦ Construction Laborers
 - ✦ Secretaries and Administrative Assistants



#1 Overall Jobs Analysis Finding

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- The CLEDA region needs flexible capacity to provide non-credit and customized worker training for Manufacturing+-associated occupations on a fairly large scale.
- This workforce training capacity could be a centerpiece in specific strategies to support the growth and prosperity of CLEDA's three key wealth-driver clusters: Manufacturing (with Advanced Materials Focus), Forest and Wood Products and Energy.



The CLEDA Region Workforce Development System

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- **Good News: Tremendous progress realized since Beyond High School**
 - CLTCC creation, Cenla Work Ready Network (Orchard Foundation), Career & Technical Education expanded at high schools, Adult Basic Education transferred to LCTCS, emergence of Business Acceleration System, CLEDA/CAP merger and strong CLEDA workforce development presence.

- **Bad News: The 10x10 factor**
 - Although given the various governance entities, funding sources and objectives this is understandable, to the prospective customer the current system is complex and fragmented with at least 10 entities offering 10 different types of programs to five basic customer groups:
 1. Incumbent Workers (people and companies)
 2. Job Seekers
 3. Education Self Improvers (often with goal of becoming a job seeker)
 4. Companies (incumbent workers and for recruitment and newly located)
 5. High School Students



The 3 Wild Cards

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- Any one of these wild cards has the potential to make the projections in this analysis obsolete in a good way:
 1. The impending biofuels/alternative fuel presence
 - Sundrop Fuels, Cool Planet, German Pellets, et al?
 2. The new Central Louisiana Technical and Community College
 - Can become a formidable comprehensive economic development force (see Itawamba Community College in Tupelo, MS)
 3. Orchard Foundation's Cenla Work Ready Program
 - At the scale it is producing it can change the face workforce training not just in CLEDA but statewide if employers will engage



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RECOMMENDATIONS

Central Louisiana Technical and Community College as the System Hub

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1. In view of the role jobs requiring less than a 4-year degree will play in the future CLEDA region economy, CLTCC should act as the official hub for the regional workforce development system.
2. Every organization offering workforce education and training services in the region should have an office on the new CLTCC campus.
3. A small office should be established at CLTCC as the gateway to all CLEDA regional education and training services. This Cenla Workforce Development Welcome Center should function as a triage agent assessing and connecting individuals to the most appropriate programs or program mixes and serving as a conduit to training resources for companies and economic development officials.
4. As a comprehensive community and technical college and workforce system hub with a robust manufacturing center (see next recommendation), CLTCC should be a showcase for existing companies and recruitment prospects and should be an integral part of the CLEDA brand.



Support and Expand the Current CLTCC Manufacturing Center Initiative

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- CLTCC has been awarded federal and state funds to develop a Manufacturing Center of Excellence with a focus on Industrial Manufacturing with concentrations in Automation & Controls, Machine Tool Technology, Industrial Maintenance, & Instrumentation & Electronics. The Center will also emphasize on-line learning.
- The recommendation here is for regional economic development interests, public officials and the private sector to organize to support an expansion of scale and scope at this center to along three dimensions:
 1. Programs to connect to and support workforce development needs of the key wealth producing clusters
 2. Private sector support for the Center
 3. Become a comprehensive Manufacturing+ Economic Development and Workforce Development Center



Support and Expand the Current CLTCC Manufacturing Center Initiative (continued)

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1. Developing programs to connect to and support the workforce development needs of the region's three key wealth producing clusters: Advanced Materials, Wood and Forest Products, and Energy on an on-going basis.
 - Cluster or sector advisory councils should be formed and they should identify training priorities and help craft the training agendas.
 - The cluster-specific programs should also connect the Work Ready Network. Industry-based certificate programs that service these cluster should be considered.
 - Two further notes...
 - The existing training programs (Oakdale Campus) that support the Wood and Forest Products cluster would be a major component of this effort
 - The impending presence of a biofuels industry would easily fit into the energy cluster initiative.



Support and Expand the Current CLTCC Manufacturing Center Initiative (continued)

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2. Private Sector Support for the Center

- Recruit private sector support for the funding and the governance of the manufacturing center. Private sector support will be critical to the Center's long term success.

3. Become a comprehensive Manufacturing+ Economic Development and Workforce Development Center that:

- Through BAS as well as possibly through its own SBDC provides business and startup assistance, especially to companies within the key cluster target;
- Participates in entrepreneurship training endeavors on-campus including capstone courses in selected for-credit programs, incorporating entrepreneurial decision making modules within traditional training programs; and
- Promotes and participates in internship programs involving CLTCC, the Cenla Work Ready Program, and the 4-year higher education institutions with a focus on the three target cluster.



The Manufacturing+ Internship and Apprenticeship Program

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- It is recommended that CLEDA develop and establish the CLEDA Manufacturing+ Internship and Apprenticeship Program
 - Participants include the 4-year colleges and universities, CLTCC, the Cenla Work Ready Network, the region's high school, the Manufacturing+ Center and BAS.
 - Through a competitive award process, internships will be awarded to promising students and trainees and apprenticeships to graduating seniors and graduates from the region's high schools, CLTCC community college campuses and colleges and universities.
 - The awards should emphasize but not be limited to selected fields of importance to the Manufacturing+ target sectors and should also be connected to capstone programs within these fields.
 - This program affords the awardees to serve as interns or apprentices in both early stage and startup companies with strong growth potential as well as established companies.
 - The salaries should be relatively high range for these types of positions: \$15-\$20/hour.
 - The program would be responsible for paying half of the salary, the employer would pay the other half.
 - The program would develop and qualify talent for these important jobs, seek to retain promising talent within the region, expose students and graduates to careers in these fields, and provide a great deal to the employer.



The Role of CLEDA

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- In view of its mission, it is recommended that CLEDA serve as the connective tissue between the workforce system and the private sector in at least two areas:
 1. CLEDA should take the lead in encouraging and enabling employer engagement with Cenla Work Ready Network Program. In spite of the outstanding accomplishments of the program, its success will ultimately be governed by the degree of employer participation.
 2. CLEDA should take the lead in developing the Manufacturing+ Internship and Apprenticeship Program.
 3. CLEDA's Workforce and Manufacturing should serve as valuable assets for the implementation of these two recommendations.



Colleges and Universities

- Continue to produce significant numbers of graduates qualified to fill supervisory and management positions within the region's key clusters.
- Could play a major role in developing biomanufacturing training presence when the biofuels industry begins to gear up.
 - Best Practice Benchmark: NC's Biomanufacturing Technology & Training Center – partnership between NC State U. and the NC Community College System
- In view of the impending biofuels presence, the advanced materials cluster and lack of formal engineering education programs, the institutions might want to examine the possibility of developing a degree program in Innovation Engineering.
 - Interdisciplinary program developed by U of Maine and Eureka Ranch prepares students to become the next generation of innovators and entrepreneurs as they learn fundamental concepts and methods for creating, communicating, and commercializing meaningful and unique ideas. To date, 13 universities and colleges have been licensed to offer this curriculum, including McNeese State.
- CLEDA region colleges and universities should also play a major role within the Manufacturing+ key cluster advisory councils from both a workforce development and technical assistance standpoint.



A Note on Articulation Agreements

- A seamless effective and easily understood and practiced Comprehensive Articulation Agreement can be a major asset for community colleges, 4-year+ colleges and universities and for economic developers' efforts to nurture and retain talent. This has certainly been the case in North Carolina where it is widely known and understood that a “C” or better in every course on the way to an Associates Degree will automatically place you in a top flight public university if you so desire.
- Here is an excerpt from a description of North Carolina’s agreement:
 - The North Carolina Comprehensive Articulation Agreement (CAA) is a statewide agreement, approved by the Board of Governors of the University of North Carolina and the N.C. State Board of Community Colleges, governing the transfer of credits between N.C. community colleges and N.C. public universities. Under the provisions of the CAA, students who transfer to a UNC system university after completing an AA/AS degree or the general education core, with a grade of "C" or better in each course, at a NC Community College should be considered to have completed their general education requirements at the university.



Best Practice Benchmarks for Recommendation Areas

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- **Internship and Apprenticeship Programs**
 - ✦ Tri-County Technical College, Pendleton, SC
 - ✦ Central Piedmont Community College, Apprenticeship 2000, Charlotte, NC
- **Manufacturing Centers**
 - ✦ Gateway Community and Technical College, Center for Advanced Manufacturing, Florence, KY
 - ✦ Gadsden State Community College, Bevill Manufacturing Center, Gadsden, AL
 - ✦ Lawson Community College, Alabama Center for Advanced Technology and Training, Bessemer, AL
- **Cluster Hubs**
 - ✦ Eastern Iowa Community College, Advanced Technology Environmental and Energy Center, Davenport, IA
 - ✦ Catawba Valley Community College Furniture Division (and training facility), Hickory, NC
 - ✦ Walla Walla Community College, Institute for Encology & Viticulture (wine-making), Walla Walla, WA
- **Entrepreneurship Training and Education**
 - ✦ Lorain County Community College, Innovation Fund American & Great Lakes Innovation and Development Enterprise, Elyria, OH
 - ✦ Haywood Community College, Entrepreneurship Program, Clyde, NC
 - ✦ Arkansas State University-Beebe, Entrepreneurship Program, Beebe, AR

