

THE
HORIZON
INITIATIVE
CROSSVILLE - CUMBERLAND COUNTY

Target Industry & Workforce Analysis

Introduction

The Crossville-Cumberland County Chamber of Commerce sought an economic development analysis to answer two key questions:

1. How to position the area as an attractive place for business location and expansion, leveraging the excellent I-40 location
2. What is the current state and capacity of the workforce and what workforce development strategies are needed?

Introduction

Younger Associates (YA) approach to the analysis:

- Labor shed determination
- Demographic profile of the labor shed
- Analysis of the current employment base
- Workforce Survey to determine a number of key workforce factors
- Examination of the talent pipeline
- Input from local employers and educators
- Existing business, economic and occupation base review
- Locational advantages review

Introduction

Younger Associates (YA) approach to the analysis:

- Sites and buildings review
- Business sector screening by NAICS code
- Input from employers, educators and other community leaders
- Development and application of localized criteria to identify the targets
- Ongoing collaboration and consultation to identify training and develop career pathways for high demand skills and occupations

Cumberland County Labor Shed



Commute Patterns within the Cumberland County Labor Shed

<i>Inflow</i>		<i>Outflow</i>
Commute to Cumberland County to Work:	Resident County	Commute from Cumberland County to Work:
15,936	Cumberland	15,936
302	Bledsoe	426
905	Fentress	196
226	Morgan	14
200	Overton	61
236	Putnam	720
132	Rhea	256
200	Roane	490
22	Van Buren	28
173	White	263
2,396	Total	2,454

Demographic Profile of Cumberland County Labor Shed

	Cumberland		Labor Shed		Tennessee	
Description	Total	%	Total	%	Total	%
Population						
2022 Projection	61,075		336,066		6,937,103	
2017 Estimate	58,811		327,839		6,676,841	
2010 Census	56,053		320,658		6,346,105	
2000 Census	46,801		286,901		5,689,277	
Growth 2017 - 2022		3.85%		2.51%		3.90%
Growth 2010 - 2017		4.92%		2.24%		5.21%
Growth 2000 - 2010		19.77%		11.77%		11.55%

Occupations with High Concentrations (LQ) in the Cumberland County Labor Shed

SOC	Occupation	2016 Jobs	LQ	Local 5-Year Projected Change	Local Average Hourly Wages	National 5-Year Projected Change	National Average Hourly Wages
51-2092	Team Assemblers	2,873	3.43	5%	\$13.13	8%	\$15.24
51-4031	Cutting, Punching, & Press Machine Setters, Operators, & Tenders, Metal & Plastic	384	2.42	2%	\$14.36	(4%)	\$15.96
45-4022	Logging Equipment Operators	214	6.01	5%	\$13.24	0%	\$16.78
51-4122	Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders	203	4.60	-7%	\$15.44	(3%)	\$17.96
51-3023	Slaughterers & Meat Packers	296	2.92	-32%	\$10.74	5%	\$12.80
51-7042	Woodworking Machine Setters, Operators, & Tenders, Except Sawing	236	2.79	2%	\$12.76	4%	\$14.15
51-4111	Tool & Die Makers	156	2.63	4%	\$19.71	(1%)	\$24.65
51-7041	Sawing Machine Setters, Operators, & Tenders, Wood	174	3.14	-4%	\$13.49	5%	\$14.08
19-4031	Chemical Technicians	106	2.46	13%	\$21.92	7%	\$23.23
17-3026	Industrial Engineering Technicians	101	2.13	8%	\$25.56	4%	\$26.88
11-9121	Natural Sciences Managers	85	2.23	9%	\$56.98	6%	\$65.59
51-9051	Furnace, Kiln, Oven, Drier, & Kettle Operators and Tenders	82	5.85	-3%	\$17.70	2%	\$17.73
17-2131	Materials Engineers	48	2.88	13%	\$32.10	4%	\$45.01
49-3051	Motorboat Mechanics & Service Technicians	53	2.98	7%	\$15.58	5%	\$17.68
19-2012	Physicists	48	4.59	8%	\$52.87	8%	\$57.38
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	62	3.75	3%	\$15.45	(4%)	\$17.78

Occupations with High Concentrations (LQ) in the Cumberland County Labor Shed

SOC	Occupation	2016 Jobs	LQ	Local 5-Year Projected Change	Local Average Hourly Wages	National 5-Year Projected Change	National Average Hourly Wages
45-4021	Fallers	52	7.90	-1%	\$14.67	(5%)	\$19.64
19-4011	Agricultural and Food Science Technicians	50	2.80	4%	\$17.17	8%	\$18.59
51-9031	Cutters and Trimmers, Hand	70	4.06	-4%	\$11.00	(1%)	\$13.96
51-9082	Medical Appliance Technicians	28	4.31	26%	\$16.98	8%	\$19.27
51-6062	Textile Cutting Machine Setters, Operators, & Tenders	68	4.21	6%	\$13.11	(7%)	\$13.09
51-7099	Woodworkers, All Other	56	3.90	2%	\$13.01	5%	\$14.99
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal & Plastic	41	2.00	14%	\$21.02	14%	\$24.96
51-6091	Extruding & Forming Machine Setters, Operators, and Tenders, Synthetic & Glass Fibers	37	2.37	12%	\$15.77	4%	\$16.40
51-2091	Fiberglass Laminators and Fabricators	45	2.12	17%	\$14.10	6%	\$15.01
51-9197	Tire Builders	13	2.03	41%	\$13.86	4%	\$19.20
17-3024	Electro-Mechanical Technicians	24	2.29	9%	\$30.12	4%	\$26.82
45-4029	Logging Workers, All Other	24	7.02	3%	\$13.34	(4%)	\$16.96
51-7031	Model Makers, Wood	23	10.88	-10%	\$13.49	7%	\$17.51
51-4061	Model Makers, Metal & Plastic	13	2.78	2%	\$19.25	(2%)	\$23.71

Source: Bureau of Labor Statistics and the Bureau of Economic Analysis. Hourly wages are calculated based on wages, salaries, overtime and bonuses, no benefits are included.

Higher Education Completions within the Cumberland County Labor Shed

Institution	Award of < 1 academic year	Award of at least 1 but < 2 academic years	Associates degree	Award of at least 2 years, but < 4	Bachelors degree	Masters degree	Post-masters certificate	Doctors degree	All Certificates	All Completions	All Degrees
TN Technological University	0	0	0	0	1,881	310	31	19	31	2,241	2,210
Roane State Community College	66	95	819	0	0	0	0	0	161	980	819
Bryan College - Dayton	0	0	9	0	330	65	0	0	0	404	404
TCAT - Crossville	39	131	0	48	0	0	0	0	218	218	0
TCAT - Livingston	0	142	0	0	0	0	0	0	142	142	0
TCAT - Harriman	23	105	0	81	0	0	0	0	209	209	0
Fortis Institute - Cookeville	74	21	45	0	0	0	0	0	95	140	45
Volunteer State CC College - Livingston	1	0	21	0	0	0	0	0	1	22	21
Total	203	494	894	129	2,211	381	31	28	857	4,356	3,499

Source: National Center for Education Statistics

Completions in Science, Technology and Programs Related to Exiting Industry in the Labor Shed

CIP Code	Title	Completions (2015)
26.0101	Biology/Biological Sciences, General	81
14.0701	Chemical Engineering	67
40.0501	Chemistry, General	30
11.0701	Computer Science	69
14.1001	Electrical and Electronics Engineering	55
15.0403	Electromechanical Technology/Electromechanical Engineering Technology	21
15	Engineering Technology, General	53
14.0101	Engineering, General	9
47.0105	Industrial Electronics Technology/Technician	10
47.0303	Industrial Mechanics and Maintenance Technology	67
48.0503	Machine Shop Technology/Assistant	10
48.0501	Machine Tool Technology/Machinist	21
14.1901	Mechanical Engineering	130
48.0508	Welding Technology/Welder	40

Source: National Center for Education Statistics

Workforce Survey

- April 6-8, 2017
- 767 Completed Surveys
- Confidence Factor 95%
- MOE +/- 3.53%
- Crosstabs
 - 18-64
 - 65+

Percent of Surveys Completed by Location

Survey Location	% Completed
Food City - Crossville	36.0%
Food City - Fairfield Glade	7.8%
Dollar General Market	18.3%
Library	0.5%
First National Bank	11.0%
Soccer Complex	10.2%
Friday at the Crossroads	8.6%
Lowe's	7.7%
	100%

Source: Younger Associates

Survey Findings – Currently Employed

- Sizable net out-flow of workers to Putnam County, but no one industry sector is attracting the workers. Random out-migration pattern that includes health care workers, government workers and Tennessee Tech employees.
- Higher pay is by far the most cited reason why workers would change jobs (72.9%) as opposed to better benefits (17.1%).
- A slightly smaller portion of the workforce has a second job (17.8%) than other areas where we have conducted similar surveys (20-25%).
- Most people who have a second job are self-employed in their second job (60.3%).
- Only 25.9% of people who are currently employed are interested in training for new job skills; a smaller proportion than found in other labor shed areas.

Survey Findings – Not Currently Employed, But Interested in Finding Employment

- Only 9.1% of this group cited disability as the reason for not being employed. Other surveys have found this number to be as high as 40%.
- The median time for this group to have been out of the workforce is 12 months, and the median time since the last job applications was filled out was 5.5 months.
- The largest segment of this group was previously employed in business support services (finance, office administration, etc.)
- Only 58.6% of this group is interested in job training; lower than in other surveys.
- The most frequently indicated types of training desired are Computer Technology (21.1%) and Management/HR (15.8%).
- Neither transportation nor childcare was cited as a significant barrier to employment.

Survey Findings – Retirees

From questions posed to the age 65+ cohort the following resources were identified:

- Approximately one quarter of retirees would be willing to help recruit their former business to locate in Cumberland County.
- Approximately one quarter of retirees would be interested in mentoring and helping to educate students about career paths.

Potential Hidden Labor Supply – Full Time

Potential Full-Time Workers - Age 18-64	Labor Market
Not employed, but interested in working full-time	9,804
Employed part-time, but prefer full-time employment	11,420
Underemployed (and want to work in their area of skills/education/training)	12,997
Recent post-secondary graduates	4,356
Total	38,577

Potential Part-Time Hidden Labor Supply

Potential Part Time	Labor Market
Age 18- 64 , Not employed, but interested in working part-time	11,916
Retired , but interested in working part-time	4,482
Total	16,398

Industry Sectors with a High LQ within Cumberland County Labor Shed

NAICS	Sector	Bus. Units	2007 jobs	2015 jobs	Location Quotient	Region Average Earnings	2007-2016 National Change	2017-2022 National Change
311615	Poultry Processing	2	1,633	964	5.61	\$35,430	(5%)	1%
311941	Mayonnaise, Dressing, & Other Prepared Sauce Manufacturing	1	127	113	9.81	\$68,309	13%	14%
313110	Fiber, Yarn, & Thread Mills	2	46	72	3.29	\$29,982	(30%)	(7%)
313240	Knit Fabric Mills	1	29	93	17.43	\$51,611	(36%)	(4%)
314999	All Other Miscellaneous Textile Product Mills	5	56	86	3.11	\$43,359	(11%)	1%
315110	Hosiery & Sock Mills	1	40	165	24.35	\$43,773	(53%)	(19%)
315220	Men's and Boys' Cut and Sew Apparel Manufacturing	2	673	528	24.77	\$34,253	(32%)	(8%)
315280	Other Cut & Sew Apparel Manufacturing	2	16	72	6.52	\$25,650	(20%)	(3%)
321113	Sawmills	14	335	195	3.00	\$36,898	(18%)	3%
321219	Reconstituted Wood Product Manufacturing	1	87	40	3.86	\$48,224	(25%)	7%
321912	Cut Stock, Re-sawing Lumber, & Planing	2	362	136	13.10	\$50,223	(21%)	11%
321918	Other Millwork (including Flooring)	4	28	118	3.82	\$41,151	(34%)	(0%)
321920	Wood Container & Pallet Manufacturing	14	148	227	4.68	\$29,980	0%	9%
322299	All Other Converted Paper Product Manufacturing	2	39	64	5.10	\$43,762	(3%)	12%
325194	Cyclic Crude, Intermediate, & Gum & Wood Chemical Manufacturing	2	35	60	25.39	\$57,913	3%	12%

Industry Sectors with a High LQ within Cumberland County Labor Shed

NAICS	Sector	Bus. Units	2007 jobs	2015 jobs	Location Quotient	Region Average Earnings	2007-2016 National Change	2017-2022 National Change
325220	Artificial and Synthetic Fibers & Filaments Manufacturing	1	89	126	6.43	\$79,013	(18%)	(2%)
325510	Paint & Coating Manufacturing	1	99	71	2.36	\$59,732	(7%)	3%
325998	All Other Miscellaneous Chemical Product & Preparation Manufacturing	2	249	235	8.37	\$71,697	(1%)	8%
326150	Urethane & Other Foam Product (except Polystyrene) Manufacturing	1	63	59	2.22	\$48,005	2%	12%
326191	Plastics Plumbing Fixture Manufacturing	1	41	38	3.57	\$69,451	(37%)	4%
326199	All Other Plastics Product Manufacturing	9	1,326	609	2.75	\$37,207	(8%)	(1%)
326220	Rubber and Plastics Hoses & Belting Manufacturing	1	0	235	13.20	\$49,447	(14%)	2%
327120	Clay Building Material & Refractories Manufacturing	4	450	738	40.69	\$54,687	(32%)	(5%)
327215	Glass Product Manufacturing Made of Purchased Glass	5	801	757	21.32	\$49,238	(11%)	1%
327331	Concrete Block & Brick Manufacturing	3	113	30	2.02	\$60,106	(20%)	12%
327991	Cut Stone & Stone Product Manufacturing	8	103	85	3.60	\$38,904	(6%)	14%
331210	Iron and Steel Pipe & Tube Manufacturing from Purchased Steel	2	62	150	7.80	\$68,075	(8%)	6%
331410	Nonferrous Metal (except Aluminum) Smelting & Refining	1	0	46	6.66	\$71,535	(9%)	8%
331492	Secondary Smelting, Refining, & Alloying of Nonferrous Metal (except Copper & Aluminum)	1	206	52	6.69	\$50,094	6%	10%
332111	Iron & Steel Forging	2	31	132	7.64	\$53,711	(17%)	1%

Industry Sectors with a High LQ within Cumberland County Labor Shed

NAICS	Sector	Bus. Units	2007 jobs	2015 jobs	Location Quotient	Region Average Earnings	2007-2016 National Change	2017-2022 National Change
332117	Powder Metallurgy Part Manufacturing	2	111	179	26.64	\$63,048	(10%)	5%
332119	Metal Crown, Closure, & Other Metal Stamping (except Automotive)	3	176	151	3.79	\$46,533	(11%)	(0%)
332420	Metal Tank (Heavy Gauge) Manufacturing	2	112	122	4.47	\$47,994	14%	16%
332911	Industrial Valve Manufacturing	1	371	200	9.91	\$80,087	3%	9%
335210	Small Electrical Appliance Manufacturing	2	332	381	43.89	\$66,314	(30%)	1%
335991	Carbon and Graphite Product Manufacturing	1	238	132	22.72	\$99,865	(2%)	11%
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing	4	81	225	4.97	\$50,790	(25%)	4%
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	1	0	307	10.66	\$56,533	(1%)	15%
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	1	384	536	8.76	\$51,664	6%	12%
336390	Other Motor Vehicle Parts Manufacturing	4	1,233	432	3.70	\$95,724	(4%)	8%
337121	Upholstered Household Furniture Manufacturing	4	2,413	1,407	29.05	\$44,643	(15%)	2%
339113	Surgical Appliance and Supplies Manufacturing	4	25	164	2.14	\$39,787	2%	5%
339940	Office Supplies (except Paper) Manufacturing	1	381	163	16.95	\$63,448	(40%)	(12%)
339950	Sign Manufacturing	5	88	131	2.03	\$48,348	(8%)	3%
339991	Gasket, Packing, and Sealing Device Manufacturing	1	127	149	6.29	\$74,943	(12%)	1%



Locational Advantages

- Proximity to U.S. markets and population centers, located within a one-day truck delivery of approximately 70% of major markets
- Proximity to Nashville, Knoxville and Chattanooga for larger metropolitan amenities and access to specialized good, services and commercial air service
- Located on Interstate 40 and U.S. 127; I-40 visibility and access is excellent
- Outstanding natural beauty of the Crossville-Cumberland with numerous outdoor recreational opportunities
- Access to higher education including three TCATs within the labor shed
- Effective collaboration among local leadership, particularly among the city and county mayors and the chamber
- Success in attracting grant funding to develop industrial site development
- Excellent availability of sites under preparation using local and grant funds, and potential new sites that can be added to the inventory for business and industrial development

Locational Advantages

- Steady progress in meeting goals and objectives from previous strategic plans
- Development of sites
- Development of a business incubator
- Focus on local educational opportunities
- Community as a whole has a pro-business attitude
- Good community support for industry-focused workforce development, particularly with the Crossville TCAT, County School System and Horizon Initiative Participants
- Presence of an active business incubator
- Very active arts community
- Downtown area with huge potential for development with great building stock and a good existing mix of retail and services
- Ability to attract tourism and retirement is a good companion for developing amenities that attract other business and industry, and potentially new working age residents

Recommended Targets

Rationale

- Already represented in the economy and workforce
- Annual average wage of greater than \$50,000
- Projected national five-year growth rate of 10%
- Additional rationale for the selection of targets:
 - The talent pipeline can provide an ongoing supply of talent for these industries in the areas of technology and engineering.
 - Sites exist to accommodate new industry location and existing industry expansion in the sectors.
 - Transportation infrastructure is in place to bring raw materials in and transport finished products to market efficiently and economically.

Primary Recommended Industry Targets

332 – Fabricated metal product manufacturing

332117 – Powder Metallurgy Part Manufacturing

332420 – Metal tank manufacturing, heavy gauge

332911 – Metal valve manufacturing

335 – Electrical Equipment component manufacturing

335991 – Carbon and Graphite Product Manufacturing

336 – Motor Vehicle Manufacturing (maybe mid-term to long-term target)

336320 – Motor Vehicle Electrical and Electronic Equipment Manufacturing

336330 – Motor Vehicle Steering & Suspension Component Manufacturing

336350 – Motor Vehicle Transmission and Power Train Parts

Primary Recommended Industry Targets

321—Wood Product Manufacturing

321912 - Cut stock, re-sawing lumber and planning

327 - Non-metallic Mineral Product Manufacturing

327331 - Concrete Block and Brick Manufacturing

327128 - Clay Building Materials and Refractory Manufacturing
(Ceramics)

Secondary Recommended Industry Targets

311 – Food Manufacturing

311941 – Mayonnaise, dressing and other prepared sauce manufacturing

325 – Chemical Manufacturing

325194 – Intermediate, and Gum and Wood Chemical Manufacturing

Listed as secondary targets because many of the operations in this industry require high water capacity

Meets Screening But Not Recommended

331—Primary Metal Manufacturing

331491 - Secondary smelting, refining and alloying of nonferrous metal

Other Target Business & Industry Sectors

- High projected national growth rates
 - Do not currently have a major presence within labor shed due
 - Transferability of skills from local existing occupational clusters
-
- 333, Machinery Manufacturing, specifically 333100 – Agricultural, construction and mining machinery manufacturing
 - 339, Miscellaneous Manufacturing, particularly 339100 – Medical equipment and supplies manufacturing
 - 454100 – Electronic shopping –
 - 561433 – Electronic marketing and other contact centers

Wholesale Trade Sectors within Cumberland-Cumberland County Labor Shed

NAICS	Sector	LQ	Annual salary	2011-2016 Growth	2017-2022 Growth
423440	Other Commercial Equipment Merchant Wholesalers	2.28	\$55,464	2%	8%
423820	Farm & Garden Machinery & Equipment Merchant Wholesalers	2.37	\$62,533	1%	6%
424480	Fresh Fruit & Vegetable Merchant Wholesalers	2.01	\$70,921	16%	10%
424590	Other Farm Product Raw Material Merchant Wholesalers	3.82	\$18,664	(10%)	16%
424910	Farm Supplies Merchant Wholesalers	2.70	\$32,996	5%	5%

Source: BLS, BEA, EMSI, YA economic analysis

Due to highway access and central location within the region, any area of wholesale trade, warehousing and distribution that has a strong growth outlook, and wages equal to or higher than the local annual average, should be included in this target sector.

Tourism Related Targets

- Specific Recommended Tourism Developments
 - Natural attractions
 - Sporting attractions
 - Conference center hotel
 - Cross-over with retiree attraction
 - Cross-over with worker/talent attraction

Downtown Development

An unusual opportunity to create a vibrant center that will increase enjoyment by local residents, help attract new residents/workers/talent, help maintain the attractiveness of the county for retirees and boost tourism

- Attractive building stock
- Uncommon mix of existing retail
- Historical, cultural assets
- Art Community

Can be an economic development driver such as downtown Franklin, TN

Medical-Related Target Support

The local demographics point to the fact that there will be continuing need for growth

National growth rates:

- Services for the Elderly (41%),
- Freestanding Ambulatory Surgical and Emergency Centers (29%),
- Offices of Health Practitioners (27%),
- Offices of PT/OT/ST (25%)
- Home Health Care (24%),
- Miscellaneous Ambulatory Health Care Services (24%),
- Kidney Dialysis Centers (24%),
- Special Needs Transportation (21%),
- Psychiatric and Substance Abuse Hospitals (20%)
- Assisted Living Facilities (20%)

Other Recommendations

- Continue development of existing industrial sites and implement plans for utilizing the recently won grant funds to improve infrastructure.

Other Recommendations

- Continue to option and/or acquire additional sites and buildings that will be needed to support major business expansions that are possible and to attract those targets that need the fast track start-up and require existing buildings.

Other Recommendations

- Pursue the list of target companies that fall within the list of target business and industry sectors provided with this study.

Other Recommendations

- Develop a career path communication strategy to inform not employed workers, as well as employed workers, about potential for advancement with proper training. The number of people who are interested in seeking training must be increased through better communication of opportunities.

Other Recommendations

- Create and implement an informational campaign that promotes the availability, ease of access and importance of training. This campaign can be an important tool in changing the mindset of the local workforce, where a large proportion of workers are currently not interested in any type of training.

Other Recommendations

- Most employers interviewed from manufacturing and distribution noted a need for Industrial Readiness Training to better prepare new workers for the workplace. This training can also help to lower turnover, which is typically higher among new workers. Fortunately, TCAT-Crossville is already pursuing a form of this training and seeking the best curriculum program to implement.

Other Recommendations

- Rigorously pursue introducing career mentoring and education in early grades, but do not neglect high schools. High school students may be more difficult to influence, but they represent the short-term solution to growing the local workforce.

Other Recommendations

- Connect retirees and others seeking part-time work with tourism entities, small businesses and work-from-home businesses. Create a part-time employment database to serve the large number of people seeking part-time employment.

Other Recommendations

- Explore a program through the Roane State incubator to teach online retailing and home-based customer support/technical support services. There are examples of this type of program that can be reviewed in developing this program.

Other Recommendations

- Reinvigorate 4-H in schools. Fully utilize UT-Extension Service – Crossville in this effort. Local agriculture entities are willing to engage in and support this effort, particularly Aviagen.

Other Recommendations

- Dedicate a portion of the local hotel/motel tax to pursue tourism as aggressively as possible in order to lay the groundwork for the development a conference center hotel; reverse the projected slowing of population growth; and serve as a mechanism for attracting more talent/workers.

Other Recommendations

- Update the Crossville-Cumberland County website with a contemporary design that better communicates the region's attributes and is clearer and easier to locate information for target business attraction. The site should also clearly invite workers/talent to explore and consider Cumberland County as a place to live.

Other Recommendations

- Develop cross-promotional materials to be sent with tourism and retiree packages that invite workers/talent to visit Cumberland County and retirees to “bring the whole family” when they retire to Cumberland County.

Other Recommendations

- Prepare a brief welcoming overview of Cumberland County that can be emailed with tickets purchased from the Cumberland County Playhouse. The Playhouse has indicated they would be willing to help cross-promote the county.

Other Recommendations

- Seek to grow the workforce through talent attraction. In collaboration with tourism efforts, emphasize natural amenities that appeal to young talent, such as parks, trails, eco-tourism and the local arts community.



Thank you!



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