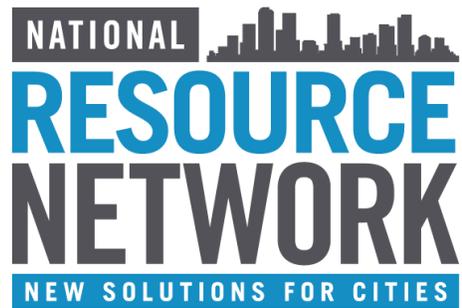


National Resource Network: Winston-Salem Report



Winston-Salem

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Jobs for the Future would like to thank the staff who have contributed to this report. Sara Lamback, Senior Program Manager, authored the report with valuable input and feedback from Program Director Lucretia Murphy. Supporting data and analysis was provided by Myriam Sullivan and design, review, and formatting was provided by Tatiana Baez, Sophie Besl, and other members of JFF’s communications team.

EXECUTIVE SUMMARY

The National Resource Network (NRN) workforce development assessment team from Jobs for the Future (JFF) was tasked with analyzing Winston-Salem's local labor market landscape to identify opportunities to develop and improve career pathways for youth and adults, particularly in the health care and manufacturing sectors. The team conducted background research, interviews with key stakeholders, and an in-depth labor market analysis to inform this report. In the analysis that follows, these research components are synthesized to highlight specific opportunities that Winston-Salem stakeholders can pursue to address concentrated poverty within the city. The recommendations in this report highlight specific opportunities for career pathways development in the health care and manufacturing sectors and provide broader recommendations to improve education and workforce development delivery.

INTRODUCTION

Winston-Salem's Engagement with the National Resource Network

The NRN conducted an initial assessment of Winston-Salem during the fall of 2015, after the city's application for NRN assistance was accepted. This assessment highlights the somewhat unique challenges that the city faces: while its overall economy is strong compared to other NRN cities, Winston-Salem is struggling with rapidly concentrating poverty: while only two census tracts had over 20 percent of residents living in poverty in 2000, there were 19 census tracts above this percentage in 2012.¹ To address this challenge, the analysis in this report aims to identify entry-level positions and opportunities that offer pathways for upward mobility for residents.

Key Report Themes

This analysis focuses on Winston-Salem's health care and manufacturing sectors, which employ approximately 15 percent and 8 percent of the local workforce, respectively because these sectors provide key opportunities for entry-level workers.² In addition, it also highlights a number of cross-sector opportunities in the Winston-Salem community with the potential to provide valuable on-ramps to career pathways. While there is no "silver bullet" for Winston-Salem to comprehensively address poverty, the community has significant assets that can be leveraged, including a set of highly committed stakeholders across the business, philanthropic, nonprofit, and education/workforce communities.

Methodology

To conduct this research, JFF relied upon a mixed-methods approach that blends quantitative and qualitative data. The analysis draws upon traditional labor market information from EMSI and other state and federal resources to understand past trends and future opportunities for growth in Winston-Salem's local labor market. In addition, "real-time" labor market information from Burning Glass Labor/Insight was incorporated to provide insight into the dynamics of local employer demand for occupations in the target sectors and the skills, credentials, and other qualifications associated with these jobs. To complement these quantitative data, JFF conducted interviews and focus groups with approximately 25 local stakeholders from the

education, workforce development, economic development, and business sectors to understand their perspectives on the city’s talent needs and to vet potential recommendations.

DEMOGRAPHIC OVERVIEW AND KEY TRENDS

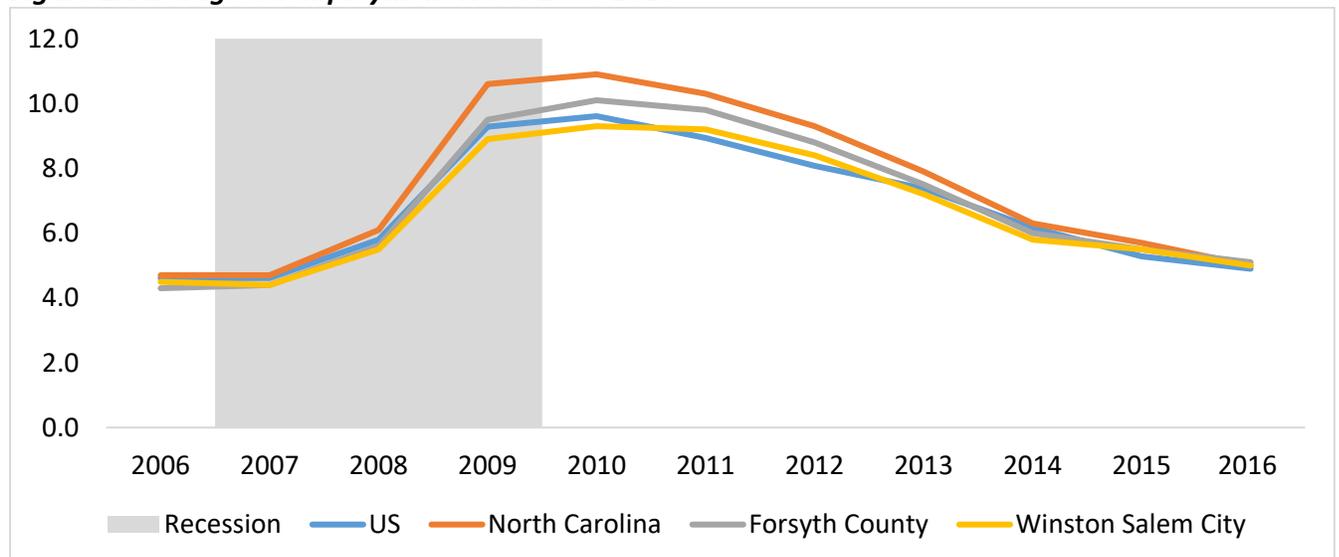
The city of Winston-Salem is home to approximately 234,500 residents. The city is racially and ethnically diverse, with approximately 57 percent white, 35 percent black or African American, 2 percent Asian, and 15 percent Hispanic or Latino (of any race). Winston-Salem has experienced a slight population growth since 2010, experiencing a 5 percent increase in residents since 2010.³

Labor Force and Employment

The city’s population 16 and older is approximately 183,000, with 63.4 percent labor force participation and 115,300 in the labor force.⁴ This is comparable to the labor force participation rate for both the nation and for North Carolina as a whole. Residents of Hispanic/Latino origin have a labor force participation rate of 73 percent, which is nearly 10 percentage points higher than that for the city’s white or African American population. A similar pattern exists nationwide, and the trend can be attributed to several factors: first, the Hispanic/Latino population tends to be younger, and therefore more likely to work; second, this group includes a greater proportion of immigrants, who have come to the United States expressly for employment.⁵ Similar forces are likely driving this pattern within the Winston-Salem community.

While Winston-Salem was hit hard by the recession—and reached an unemployment rate of 9.3 percent in 2010—the city has experienced a steady recovery in the number of jobs over the last five years, and approximately 6,400 workers have been added to the labor force since 2010.⁶

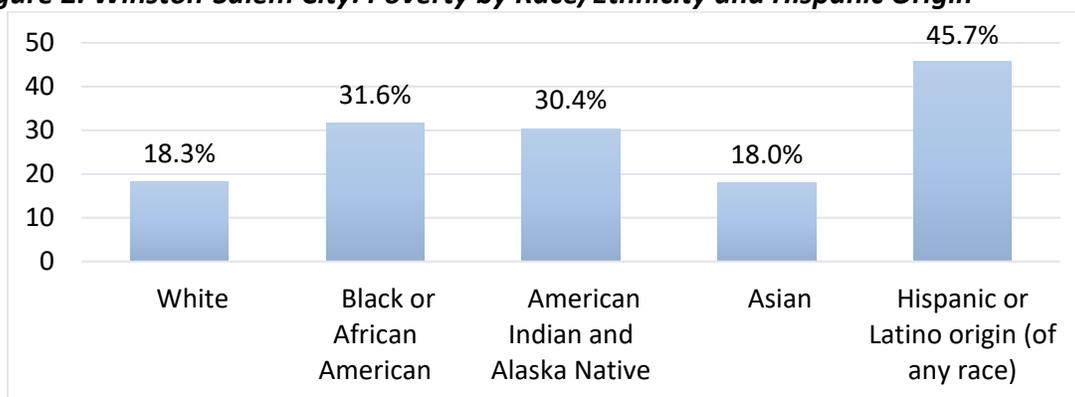
Figure 1. Average Unemployment Rate: 2006-2016



Poverty

Despite an unemployment rate that is comparable to both the state of North Carolina and the nation as a whole, nearly a quarter of Winston-Salem residents live in poverty. At 24 percent, Winston-Salem's poverty rate is significantly higher than that of both North Carolina (17 percent) and the nation as a whole (15 percent).⁷ Coupled with the city's high labor force participation rate, the high level of poverty in Winston-Salem suggests that many residents are working in low-wage jobs that do not provide opportunities for upward mobility. As illustrated in Figure 2, the poverty rate disproportionately affects the city's African-American and Latino residents.

Figure 2. Winston-Salem City: Poverty by Race/Ethnicity and Hispanic Origin⁸



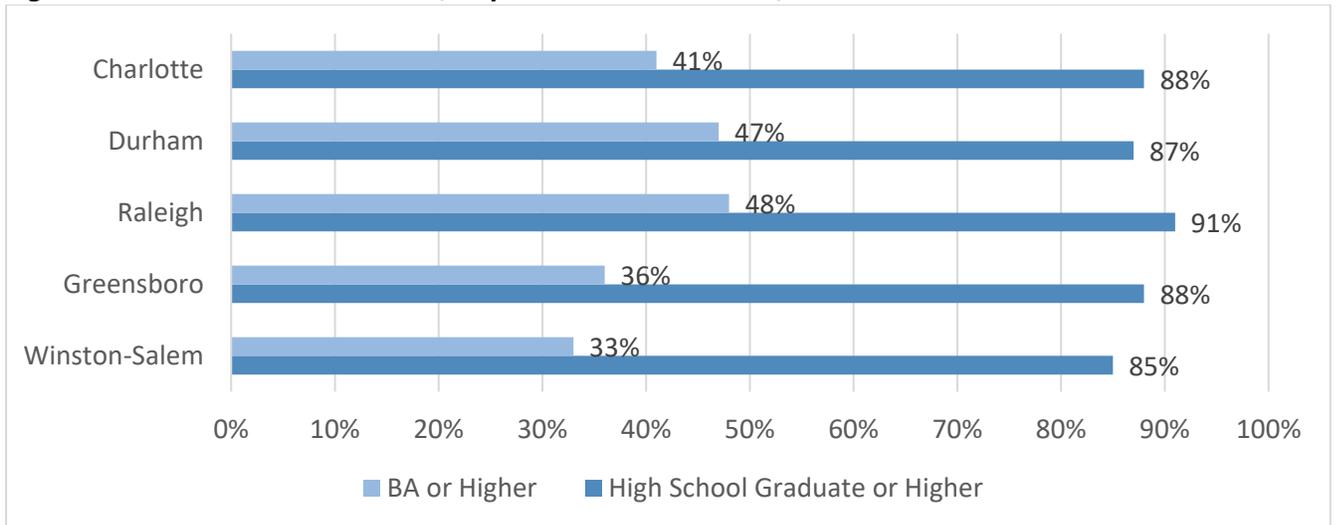
Further, according to research by Forsyth Futures, 40 percent of Winston-Salem households made less than \$31,840 per year⁹, placing a significant portion of the city's residents below the living wage, which is approximately \$42,000 per year for a family of three.^{10,11} To address this challenge, Winston-Salem's education and workforce community will need to help prepare these residents for high-quality entry-level and middle-skill jobs that offer family-sustaining wages and advancement potential.

Education and Attainment

Approximately 126,000 Winston-Salem residents have a high school degree or higher and only 49,000 have a bachelor's degree or higher. Among the population 25 years and older, 13 percent have a graduate or professional degree, 20 percent have a bachelor's, 7 percent have an associate's, and 21 percent have some college but no degree.¹² Strikingly, based upon these data, nearly 40 percent of Winston-Salem residents do not have the necessary credentials for middle-skill jobs, which typically require some education beyond high school. Data on educational attainment among youth 18 to 24 years old is available in the Data Chartbook.

As illustrated below in Figure 3, the city's educational attainment lags behind that of other large North Carolina cities, with the percentage of residents with a bachelor's degree or higher in Winston-Salem more than 10 percentage points behind that of Raleigh and Durham, and approximately 8 percentage points behind Charlotte.

Figure 3. Educational Attainment, Population 25 and Older, Select North Carolina Cities¹³



At the K-12 level, the city is served by the Winston-Salem Forsyth County School District, a unified school district that serves 54,000 students. The district has 15 high schools as well as a career center that provides students across the district with college-level coursework, career and technical coursework, and other electives. Winston-Salem’s Early College High School, Early College of Forsyth, is based upon a national model that allows students to complete both a high school diploma and earn an associate’s degree within four years.

At the postsecondary level, Forsyth Technical Community College is the primary provider of workforce-related education and training; in addition, the community boasts a number of colleges and universities, including the North Carolina School of the Arts, Winston-Salem State University, and Wake Forest University. Stakeholders interviewed noted that a significant portion of four-year college graduates leave Winston-Salem after completing their degree—often to move to a larger city. While this challenge is not the focus of the report, it indicates that employers may also experience some worker retention challenges within highly skilled positions.

OVERVIEW OF THE WINSTON-SALEM ECONOMY¹⁴

While the city of Winston-Salem has historically relied upon manufacturing and the textile industry, the city has experienced a diversification over the last 10 years, and has an increasingly vibrant health care and high-tech sector, spurred in part by the development of the Wake Forest Innovation Quarter. Currently, the greatest number of Winston-Salem residents are employed in the health care and social assistance, government, and retail trade sectors. Table 1 provides additional information on the city’s employment by sector and other related key trends, based upon two-digit NAICS codes.

Table 1. Key Sectors of the Winston-Salem Economy by 2-Digit NAICS Code¹⁵

Description	2016 Jobs	Share of 2016 Jobs	2013–2016 % Change	2015 Establishments	Location Quotient ¹⁶
Health Care and Social Assistance	34,827	15%	6%	834	1.42
Government	20,837	9%	(2%)	169	0.67
Retail Trade	20,522	9%	2%	1,326	1.01
Manufacturing	16,859	7%	9%	346	1.07
Accommodation and Food Services	15,796	7%	2%	768	0.93
Administrative and Support and Waste Management and Remediation Services	14,518	6%	11%	626	1.26
Educational Services	10,695	5%	0%	114	2.24
Finance and Insurance	9,162	4%	3%	616	1.21
Other Services (Except Public Administration)	8,584	4%	4%	932	1.15
Total	228,616		3%	9,276	

The health care and social assistance sector employs approximately 15 percent of Forsyth County residents, making it the largest industry in the city. Government and retail trade account for approximately 20,000 jobs (9 percent of jobs in the county) and both manufacturing and accommodation and food services each account for 7 percent of jobs in the county. Winston-Salem has seen notable recent growth over the past three years in the manufacturing (9 percent) and administrative (11 percent) sectors. The city's educational services and health care sectors are particularly strong, as indicated by the high location quotients. Winston-Salem has a high concentration in these two industries; the location quotient of 1.42 in health care signals that health care is 40 percent more concentrated in Winston-Salem than in the nation as a whole.

Winston-Salem is also developing an increasingly strong presence in information technology (IT) within the Wake Forest Innovation Quarter, and among leading local employers such as Inmar, Wells Fargo, and Wake Forest Baptist Medical, which employ large numbers of IT professionals.

Deep Dive: Manufacturing

Sector Overview

Winston-Salem's manufacturing sector has experienced strong growth in recent years and currently includes approximately 16,900 workers within the city and 190,000 workers across Forsyth County.¹⁷ While significantly smaller than the local health care sector, manufacturing offers a relatively high average annual wage of \$64,725.¹⁸ Demographically, Forsyth County's manufacturing workforce is largely (73 percent) male and a significant percentage of workers in the industry are nearing retirement. In 2016, approximately 25 percent of manufacturing workers were over 55 years of age and nearly 60 percent are 45 or older, indicating that the industry will likely be impacted by a large wave of retirements in the coming years and that engaging younger workers in the sector will be key to its continued strength within the city.¹⁹

Recent growth in manufacturing has taken place in the primary metal manufacturing, furniture manufacturing, and transportation equipment manufacturing subsectors.²⁰ Over the next five years, manufacturing is anticipated to experience an 9 percent decline overall, which is consistent with nationwide projections for the sector.

However, certain subsectors, including primary metal, non-metallic mineral products, machinery manufacturing, transportation equipment, and furniture manufacturing are projected to experience double-digit growth in the coming five years. Together, these subsectors are projected to add more than 700 new and replacement jobs, suggesting that these could be critical targets for education and workforce development efforts in manufacturing.^{21,22}

Table 2. Manufacturing Staffing Patterns and Projected Growth, Forsyth County²³

SOC	Description	Employed in Industry (2016)	Projected % Change (2016–2021)	% of Total Jobs in Industry (2016)	Median Hourly Earnings	Typical Entry-Level Education
51-2092	Team Assemblers	1,290	0%	7.4%	\$12.84	High school diploma
51-1011	First-Line Supervisors of Production and Operating Workers	583	(10%)	3.3%	\$26.32	High school diploma
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	557	(8%)	3.2%	\$14.98	High school diploma
51-9111	Packaging and Filling Machine Operators and Tenders	454	(32%)	2.6%	\$16.19	High school diploma
51-9198	Helpers—Production Workers	446	(17%)	2.6%	\$10.10	No formal educational credential
51-4041	Machinists	441	12%	2.5%	\$20.42	High school diploma
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	427	(10%)	2.4%	\$13.56	High school diploma
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	415	(57%)	2.4%	\$34.63	High school diploma
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	377	(15%)	2.2%	\$11.95	No formal educational credential
51-5112	Printing Press Operators	375	(12%)	2.2%	\$17.46	High school diploma
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	355	(14%)	2.0%	\$24.18	High school diploma
51-4121	Welders, Cutters, Solderers, and Brazers	348	11%	2.0%	\$19.56	High school diploma

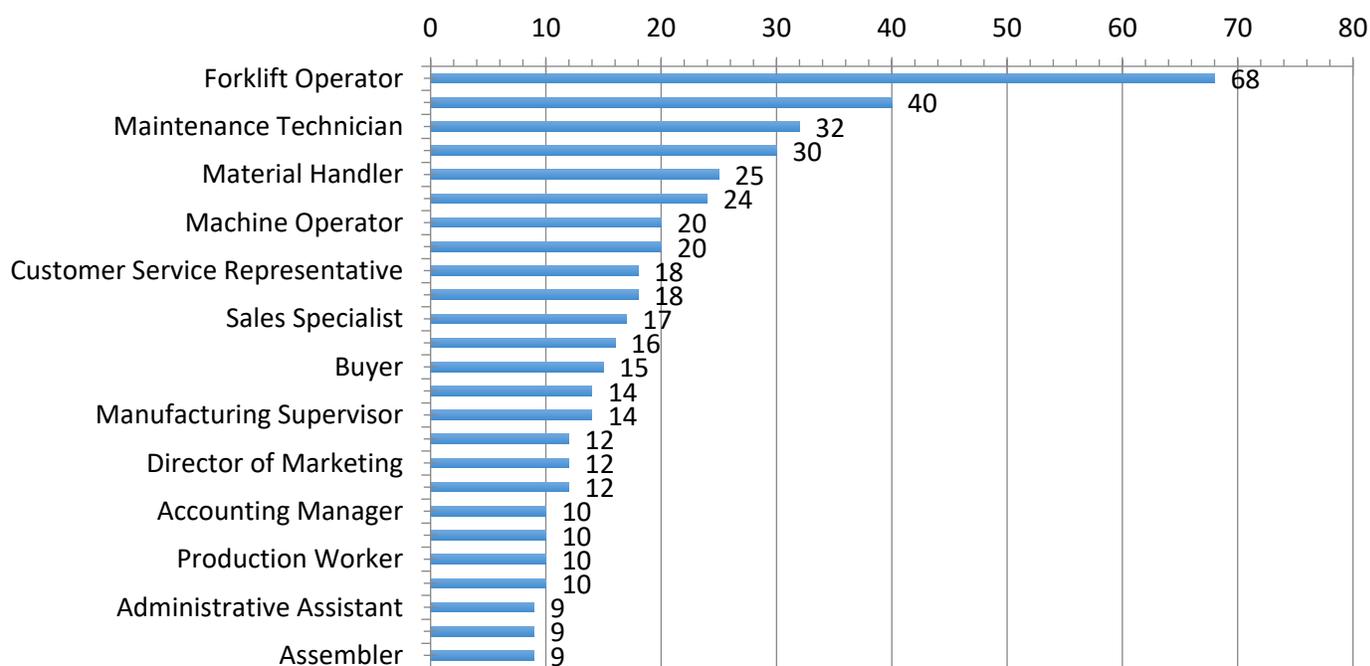
Even though many manufacturing occupations are projected to see a decline in the next five years, high levels of growth are projected for machinists (12 percent), welders (11 percent), aircraft assemblers (20 percent), structural metal fabricators (7 percent), and computer-controlled machine-tool operators (27 percent).²⁴ Further, stakeholder interviews highlighted the growing need for aircraft mechanics and maintenance specialists and customer service-related positions within the manufacturing sector. While the majority of manufacturing jobs in Table 2 do not require a postsecondary degree, they are skilled jobs and many employers seek to hire candidates who have completed an apprenticeship or who have other experience in the sector.²⁵

Current Manufacturing Demand Based Upon Job Posting Activity

Overall, job posting activity in the manufacturing sector was relatively low compared to other industries, with 1,818 postings during 2015. Job posting information by sector is summarized below in Figure 4.²⁶ Posted manufacturing jobs were predominantly found in the chemical, transportation equipment, and food/beverage manufacturing industries. Employers with the most job postings include: Herbalife, B/E Aerospace, Masco Corporation, R.J. Reynolds, and TE Connectivity.

In 2015, There were 650 postings in Forsyth County for manufacturing, and production occupations with the most demand include machine operator, assembler, quality technician, and machinist.²⁷

Figure 4. Manufacturing Top Jobs Based Upon Posting Activity, Forsyth County, 2015

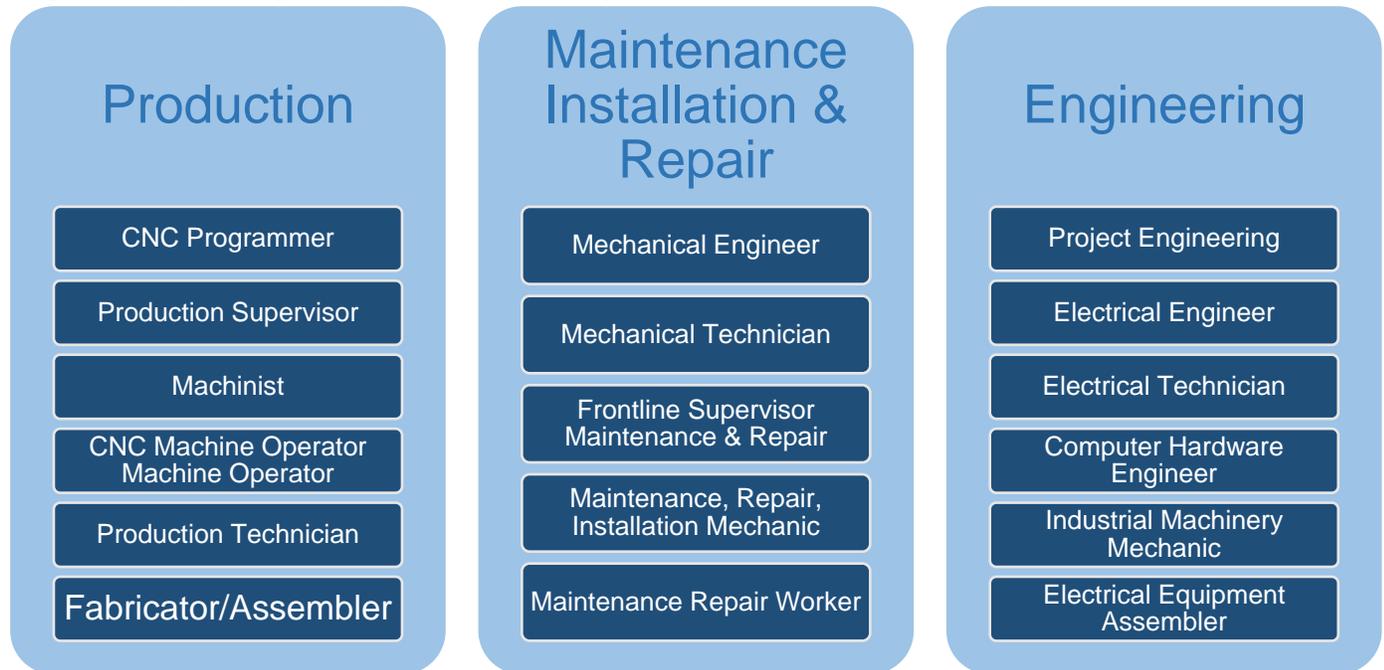


Potential Manufacturing Career Pathways Opportunities

Figure 5 highlights occupations in production, maintenance installation and repair, and engineering manufacturing career pathways. Each pathway illustrates the progression from entry-level to middle skills, and then on to more advanced occupations. As a complement, the top specialized skills for manufacturing and production occupations in Forsyth County are provided in the Data Chartbook. High-demand specialized skills include: inspection, repair, Microsoft Excel, and operating hand tools. In addition, workforce readiness skills such as communications, organizational skills, and problem solving were frequently mentioned in postings for manufacturing positions. During interviews, stakeholders underscored the demand for communication and collaboration skills in particular, and noted that many of the occupation-specific manufacturing skills can be readily taught by employers, as long as

candidates can demonstrate basic workforce readiness and a commitment to working in the sector.

Figure 5. Key Manufacturing Career Pathways



Major Themes and Takeaways: Manufacturing

In interviews with stakeholders, misconceptions about the manufacturing industry emerged as a significant barrier to attracting young people to the sector. Several employers noted that young people and their parents often had an outdated understanding of the sector and are not aware of—or interested in—the high-quality pathways it can offer. Though manufacturing occupations are projected to see declines in the coming years, the sector has a rapidly aging manufacturing workforce, and will need to identify strategies to help young people enter into the sector.

Work-based learning opportunities such as apprenticeship and pre-apprenticeship programs represent one avenue to help young people learn about and prepare for careers in the sector through valuable on-the-job training. Forsyth Technical Community College is well positioned to address this demand, as the school offers an industrial systems technology program and was recently recognized as a leader in manufacturing training based upon a \$3 million investment in new equipment and a pilot program it will deliver in collaboration with the National Association of Manufacturers.²⁸ Nevertheless, more work may need to be done to ensure that middle school and high school students better understand the sector so that they take advantage of these opportunities. In coming years, there may be opportunities to scale this program, as it currently only reaches a small number of students annually. Further, there may be opportunities to connect this work to the early college high school or other career and technical education dual-enrollment programs.

Manufacturing career awareness activities could also be a useful strategy to help more young people and their parents understand opportunities in the sector. In Houston, for example, education and workforce partners worked with a manufacturing employer to offer a week-long camp for middle school students with interactive, hands-on activities. At the end of the week, the young people demonstrated what they learned to their parents and the employer partner shared information on the sector, career pathways, and wages with parents. Such an approach could help mitigate challenges posed by anticipated retirements within the sector.

Deep Dive: Health Care

Sector Overview

Anchored by Novant Health (13,673 employees) and Wake Forest Baptist Health (12,563 employees), Winston-Salem's health care sector is the largest sector in the county. Employment is greatest in the hospital and ambulatory care subsectors,²⁹ which account for approximately 44 and 34 percent of those employed in the sector, respectively.³⁰

Recent growth within the health care sector has taken place within skilled nursing facilities, medical diagnostic laboratories, retirement communities, and assisted living facilities, each of which has experienced double-digit growth over the last three years.^{31,32} Looking ahead to 2021, particularly strong growth is projected within assisted living facilities, medical and diagnostic laboratories, and general medical and surgical hospitals, as indicated in the Data Chartbook.

Demographically, the sector has a workforce that is nearly 80 percent female and has a higher percentage of employees who are black or African American (27 percent) or Latino (3 percent). Approximately 21 percent of the county's health care workers are the over 55 years old, indicating that imminent retirements will not pose as great a challenge for health care as for manufacturing.³³ Overall, health care wages are higher in Forsyth County than statewide and there has been a steady increase in wages over the last decade; currently, the average annual wage for a health care worker is \$50,056.³⁴ In contrast to manufacturing, most health care occupations require a postsecondary degree or credential.

The top health care occupations, based upon employment in the sector, are highlighted in Table 3. The staffing patterns illustrate the dominance of nursing occupations, which account for over 30 percent of workers in the sector. Nevertheless, non-patient care roles such as medical secretaries, radiologic technologists, information clerks, and medical laboratory technicians also have significant employment and are projected to experience strong growth over the next five years.

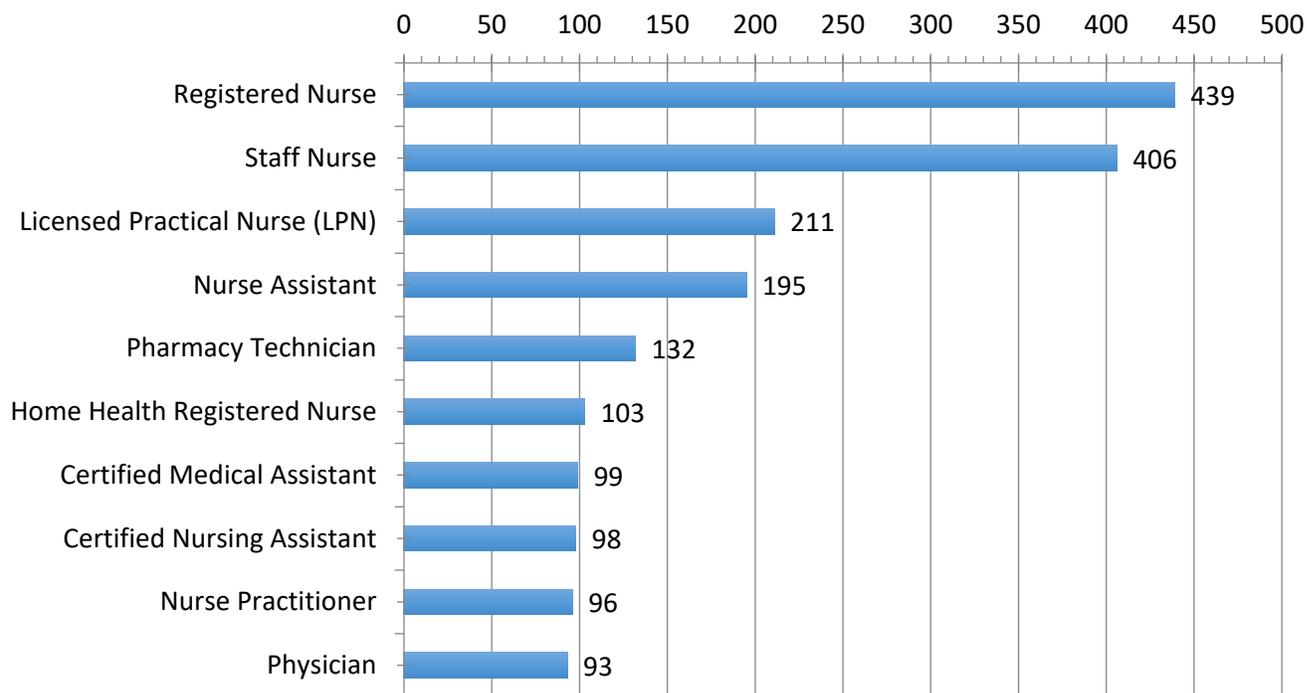
Table 3. Health Care Staffing Patterns and Projected Growth, Forsyth County³⁵

SOC	Description	Employed in Industry Group (2016)	Projected % Change (2016 – 2021)	% of Total Jobs in Industry Group (2016)	Median Hourly Earnings	Typical Entry-Level Education
29-1141	Registered Nurses	7,169	8%	21.1%	\$29.33	Bachelor's
31-1014	Nursing Assistants	2,984	6%	8.8%	\$11.19	Postsecondary non-degree credential
31-1011	Home Health Aides	2,223	(5%)	6.6%	\$9.30	No formal education
29-1069	Physicians and Surgeons, All Other	1,134	2%	3.3%	\$88.83	Doctoral or professional degree
29-2061	Licensed Practical and Licensed Vocational Nurses	889	2%	2.6%	\$20.27	Postsecondary non-degree credential
43-6013	Medical Secretaries	881	7%	2.6%	\$14.35	High school diploma
31-9092	Medical Assistants	853	6%	2.5%	\$14.99	Postsecondary non-degree credential
37-2012	Maids and Housekeeping Cleaners	776	8%	2.3%	\$8.75	No formal education credential
43-4171	Receptionists and Information Clerks	640	7%	1.9%	\$13.15	High school diploma
29-2034	Radiologic Technologists	570	6%	1.7%	\$28.87	Associate's degree
29-2012	Medical and Laboratory Technicians	458	9%	1.3%	\$19.53	Associate's degree

Current Health Care Demand Based Upon Job Posting Activity

Job posting activity was much higher in the health care sector than in manufacturing, with approximately 6,000 jobs listed during 2015. Of those, the greatest percentage were for registered nurses (16 percent), nursing assistants (5 percent), medical and health service managers (5 percent), and licensed vocational and practical nurses (4 percent) closely reflecting the overall employment in the sector. Figure 6 provides a snapshot of the top local job postings in health care during 2015.

Figure 6. Top Health Care Jobs Based Upon Posting Activity, Forsyth County, 2015



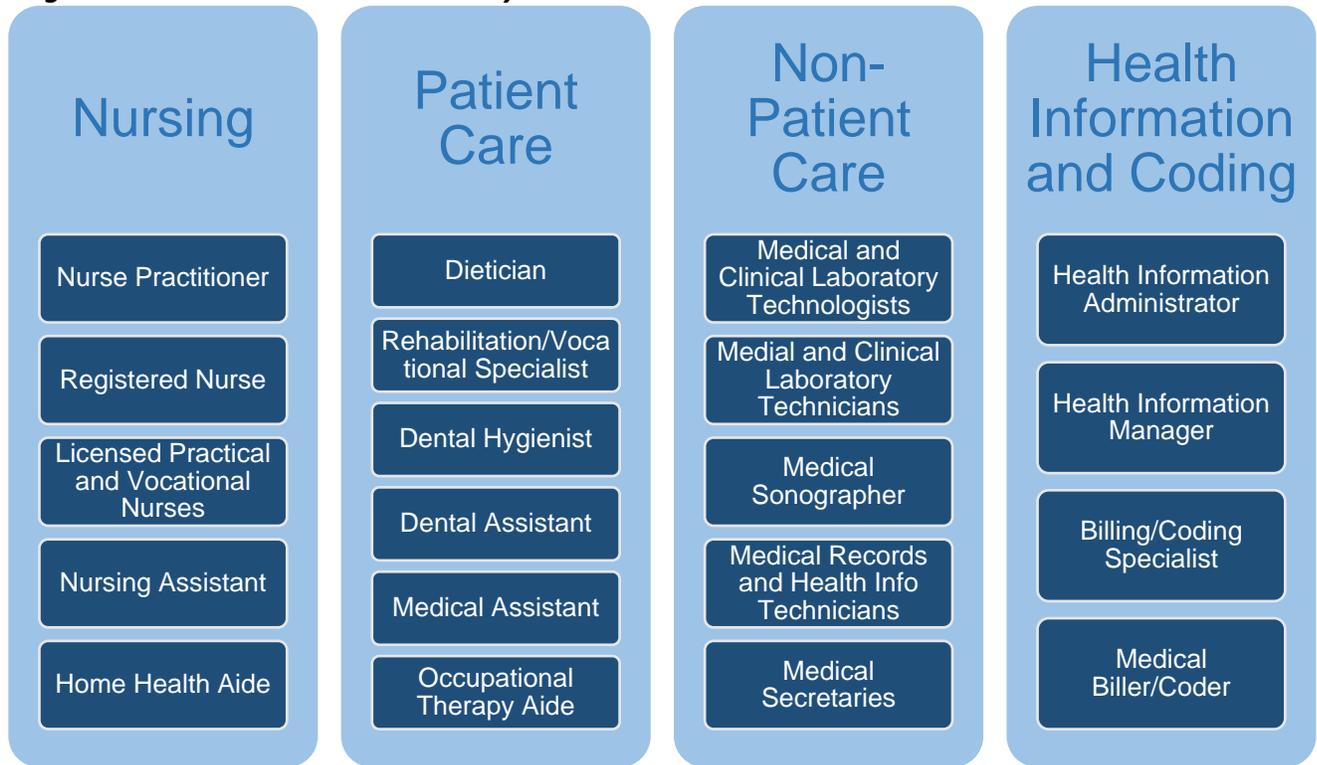
Over half of the posted positions (56 percent) were at Baptist Medical Center and 8 percent were for positions at Novant Health. A detailed listing of posting activity by employer is available in the Data Chartbook.

The real-time labor market information analysis also provides insight into the specific skills local employers seek for health care occupations. Across the sector, specialized skills such as patient care, scheduling, CPR, and advanced cardiac life support were in particularly high demand, based upon posting activity. In addition, workforce readiness skills such as communication, planning, writing, computer skills, and collaboration are also sought after by health care employers in new hires.³⁶

Potential Health Care Career Pathways Opportunities

Figure 5 highlights three potential career pathways in health care, based upon specific opportunities in Winston-Salem. As with manufacturing, each pathway illustrates the progression from entry-level to middle skills, and then on to more advanced occupations.

Figure 6. Health Care Career Pathways



Within non-patient care, the growth within administrative roles, such as receptionist and medical secretary, also offer effective entry points into the sector for those with only a high school diploma. Workers in non-patient care roles can move into roles as a medical assistant with a postsecondary credential or to medical technician roles with an associate’s degree.

Interviews with Winston-Salem stakeholders highlighted that medical coding and information technology occupations are increasingly important to the city’s health care sector. For example, based upon a keyword analysis, medical coding was listed in over 500 Forsyth county job postings during 2015, including patient service representative, certified medical assistant, and medical coder.³⁷ Further, Forsyth Tech is working with local employers to develop medical coding academies, in collaboration with community groups such as Goler Community Development Corporation. While the program development is still underway, Wake Forest Baptist Medical Center anticipates hiring those who complete the program for medical coding positions, for which they had over 60 openings in the last year.³⁸

Major Themes and Takeaways: Health Care

Winston-Salem has a very strong health care sector that is projected to grow in coming years. The largest and fastest-growing occupations are in nursing; together, the occupational projections and the real-time labor market information highlight that there is both a short-term demand and a longer-term need for registered nurses in Forsyth County. Since approximately 65 percent of registered nursing occupations require a bachelor’s degree, there is an

opportunity for employers to partner with Forsyth Tech and local colleges to help upskill in incumbent workers to meet this need.

One potential challenge in health care that emerged from the stakeholder interviews is the capacity of training programs to meet future demand, especially for nursing roles. Winston-Salem Forsyth County School's Career Center offers a nursing program to high school juniors and seniors that allows them to complete coursework toward their nursing license; however, this program typically has twice as many applicants as it can accommodate in a given school year. There may be opportunities to build the capacity of this program to accommodate additional students and/or to offer additional counseling to students interested in nursing to help them learn about other roles within the health care sector.

Cross-Sector Opportunities and Challenges

The manufacturing and health care sector analyses surfaced several potential cross-sector opportunities in Winston-Salem. Both customer service and information technology career pathways have potential: there were approximately 750 job postings in 2015 for jobs in customer service and client support and nearly 400 postings for sub-bachelor's degree IT occupations.³⁹ Labor market projections signal that there also is likely to be growth within these occupations in coming years.

In the stakeholder interviews, individuals noted the many assets of the Winston-Salem community and the high-quality programs and initiatives that are offered across the city. However, knowledge of and uptake of these programs remains a challenge: both among residents and among certain segments of the business community. Residents may be unaware of available programs and may have challenges accessing opportunities because of transportation, child care, or other barriers. This challenge was discussed in detail during one of the focus groups, as stakeholders emphasized the challenge many residents face in balancing the often uncertain hours in low-wage work with the need to take classes or participate in upskilling programs. Within the business community, there is some concern that many of the city's small and mid-sized companies may not be well connected to the workforce and training programs that could help them access the talent they need. Critically, however, stakeholders believed that addressing these challenges could be a catalyst to mobilizing local action around addressing poverty and enabling residents to take advantage of new and emerging pathways.

STRATEGIC RECOMMENDATIONS FOR BUILDING CAREER PATHWAYS IN WINSTON-SALEM

Based upon the data presented in the first portion of this report, the current section highlights three key recommendations for Winston-Salem stakeholders to build a more highly skilled workforce and to provide opportunities for its underserved residents.

Create Alignment Between Programs and Initiatives

The Winston-Salem community faces a critical challenge in connecting lower-skilled young people and adults to career pathways. Nevertheless, the city has a set of highly engaged

stakeholders in the education, workforce, nonprofit, and business communities which offer important strengths that can be built upon. In order to do so, it is critical that stakeholders gain a better sense of what is currently working within the city and where strategic opportunities exist that can be built upon. Recommendations for the Winston-Salem community to achieve this include:

- Identifying citywide initiatives with shared workforce and education objectives. To the extent possible, stakeholders should work to align resources toward the shared outcomes of workforce development and poverty reduction.
- At the same time, aligning programming that serves similar populations, offers similar services, and/or has similar objectives could help reduce redundant services and potentially expand both the reach and impact of programs.

Proposed Action: A cross-sector partnership led by a neutral convener (e.g., the Poverty Thought Force) could create an inventory of “What Works in Winston-Salem.” By cataloguing and highlighting the effective education and training programs and practices across the city, stakeholders could better understand which efforts or initiatives should be expanded and if there are ways existing programs could be improved to better serve the community. In addition, this catalogue could provide data on the programs that provide wraparound services (e.g., transportation, child care) most effectively so that other stakeholders can deploy and/or build upon these same strategies.

Upskill Winston-Salem’s Talent Pool

To address the high concentration of poverty within the city’s urban core, residents must have opportunities to access high-demand career pathways that allow them to move from entry-level positions into middle-skill jobs that offer a living wage. Recommendations for the Winston-Salem community to address this include:

- Expanding effective on-ramps and bridging programs to existing career pathways programs. Such programs can help connect city residents with low skills but high levels of motivation to train for high-demand occupations. Bridge programs offer developmental education to individuals who may have struggled in traditional education settings; they are a valuable strategy to prepare adults for entry into a postsecondary degree or credential program.
- Integrating employability skills development into secondary and postsecondary education and workforce training programs. Numerous stakeholders emphasized the importance of employability skills such as timeliness, communication, and teamwork in new hires. By intentionally integrating these skills into instruction across the education and training continuum, Winston-Salem residents will be better prepared to successfully enter and advance within the workforce.
- Leveraging the existing early college high school and Learn and Earn models to expand career pathways opportunities in the health care and manufacturing sectors.
- Expanding opportunities for youth and adults to participate in work-based learning experiences at varying levels of intensity. Job shadows, internships, and apprenticeships

offer extremely valuable opportunities to learn about a particular industry and occupation while gaining real work experience.

Proposed Action: A two-stage pilot project that first consists of an awareness campaign and, secondly, rolls out an employability skills pilot project. A broad array of local stakeholders, including the city, nonprofits, education, and employers should coordinate a social media campaign to raise awareness of the importance of employability skills among Winston-Salem residents and share tools and other resources for building these skills. Following this, Forsyth Tech and leading employers should develop an “Upskill Employability Skills” pilot that would review existing employability skills curricula, identify the strongest offering(s), and adapt it so that it can be piloted in programs for adult learners in both the education and workforce settings. The pilot should start with several programs and expand as the model is strengthened over time.

Diversify the Manufacturing and Health Care Sectors

Winston-Salem has clear opportunities to diversify both focal sectors highlighted in this report. Workers in the city’s manufacturing industry are predominantly male, white, and a full quarter of the workforce is 55 or over. The health care workforce is nearly 80 percent female, has a lower percentage of both African American and Hispanic/Latino workers than the city overall, and counts approximately 20 percent of its workers over age 55.⁴⁰ As both sectors prepare for a wave of retirements in the coming years, there is a clear opportunity to prepare Winston-Salem’s diverse community of youth and adults for entry into these sectors. There is an opportunity for the city’s educational institutions and employers to develop clear pathways to emerging “functional” positions within these two sectors. At the same time, the Winston-Salem community must expand career counseling efforts in both education and workforce to help recruit and prepare more diverse populations for occupations in these sectors.

Recommendations for the Winston-Salem community to address this include:

- Developing clear pathways for non-patient care roles in health care, such as medical technology and medical technicians. These positions are growing and offer strong wages and opportunities for progression within the sector.
- Ensuring that manufacturing pathways in production and maintenance/repair are aligned with industry needs, and that young people (and their parents) have opportunities to learn about these pathways as part of a broader career development and counseling strategy from a young age.
- Leveraging the demand for cross-sector skills and competencies. Information technology and customer service occupations can provide opportunities for advancement to both new entrants to the workforce and frontline incumbent workers.

Proposed Action: In collaboration, education/workforce and employers in health care should partner to develop a vertical and “latticed” career pathways model for non-patient care occupations in health care that integrate IT skills to provide training for these positions. This information should then be communicated to young people and adults through K-12 career awareness and counseling across the education and workforce continuum.

CONCLUSION

This analysis highlights key opportunities and career pathways for entry-level workers in Winston-Salem's health care and manufacturing sectors, as well as several cross-sector opportunities in customer service and in information technology. Within the health care and manufacturing sectors in particular, there is an anticipated wave of retirements, which will provide a critical opportunity to diversify the workforce by race/ethnicity and gender in the coming years. This report also recommends that the community should increase alignment between existing initiatives and programs to maximize their impact and that Winston-Salem make a concerted effort to upskill its talent pool through both employability skills development and work-based learning experiences. Winston-Salem has significant assets that can be leveraged and a highly committed group of stakeholders across the business, philanthropy, nonprofit, and education/workforce communities who are well poised to help low-income residents access and complete high-demand career pathways and to address the core challenge of poverty within the Winston-Salem community.

APPENDIX A: FOCUS GROUP ATTENDEES AND INTERVIEWEES

Eric Aft, United Way of Forsyth County
Gayle Anderson, Winston-Salem Chamber of Commerce
Michael Ayers, Forsyth Technical Community College
Dan Barbara, Forsyth Futures
Ritchie Brooks, director of community and business development
Carmen Caruth, human resources director
Carol Davis, S.G. Atkins Community Development Corporation
Kyle Haney, Forsyth County
Joseph Hamby, Winston-Salem Chamber of Commerce
Beverly Jones, North State Aviation
Sharon Joyner-Payne, Inmar
Dan Kornelis, Forsyth County Government
Bob Leak, Winston-Salem Business Inc.
Peter LaRoche, Financial Pathways of the Piedmont
Ken Millet, Business Development, City of Winston-Salem
Chris Nichols, Winston-Salem Forsyth County Schools
Ruth Owens, Goodwill
William Pass, Piedmont Triad Regional Council of Governments
Michael Suggs, Goler Community Development Corporation
Eric Tomlinson, Wake Forest Innovations
Twana Wellman, Experiment in Self-Reliance
JoAnna Williams, Herbalife

ENDNOTES

¹ National Resource Network. 2015. City Profile: Winston-Salem, NC. Draft not for distribution.

² Emsi Analyst. 2016.2 data series. Extracted by Sara Lamback. Data for Forsyth County by 2-digit NAICS code.

³ National Resource Network Initial Asset Mapping Report. 2015.

⁴ U.S. Census Bureau. 2010-2014 American Community Survey, 5-year estimates for the City of Winston-Salem. American Fact Finder. Available at: www.factfinder.census.gov

⁵ Kochhar, Rakesh. 2012. "Labor Force Growth Slows, Hispanic Share Grows." Pew Research Center Social and Demographic Trends. Available at: <http://www.pewsocialtrends.org/2012/02/13/labor-force-growth-slows-hispanic-share-grows-2/>

⁶ U.S. Bureau of Labor Statistics. Local Area Unemployment Statistics. Winston-Salem City.

⁷ U.S. Census Bureau. 2010-2014 American Community Survey, 5-year estimates for the City of Winston-Salem, North Carolina, and the United States. American Fact Finder. Percentages are rounded to the nearest whole number.

⁸ U.S. Census Bureau. 2010-2014 American Community Survey, 5-year estimates for the City of Winston-Salem. American Fact Finder. Note: on the Census, race/ethnicity is asked separately from Hispanic/Latino origin. As a result, percentages in Figure 2 do not sum to 100.

⁹ Forsyth Futures. 2016. Draft of Poverty Thought Force Report.

¹⁰ Glasmeier, Amy and Massachusetts Institute of Technology. 2016. "MIT Living Wage Calculator." Available at: <http://livingwage.mit.edu/metros/49180>

¹¹ Living wage listed is for a household with two adults (one of whom is working) and one child. The annualized wage equates to \$20.25 per hour.

¹² U.S. Census Bureau. 2010-2014 American Community Survey, 5-year estimates for the City of Winston-Salem. American Fact Finder.

¹³ U.S. Census Bureau. 2010-2014 American Community Survey, 5-year estimates for each of the North Carolina cities listed in Figure 3. American Fact Finder.

¹⁴ In the labor market information that follows, data is provided for the City of Winston-Salem, wherever possible. However, occupational data and job posting data is provided at the county level for Forsyth County because that is the next smallest geographical unit available.

¹⁵ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan.

¹⁶ A location quotient measures the concentration of a particular industry, cluster, occupation, or demographic group, compared to the nation as a whole. A location quotient of 1.0 indicates the same concentration as the nation; a location quotient over 1.2 typically indicates a "high" concentration. More specifically, a region with a location quotient of 1.2 is an area with a concentration 20 percent greater than that of the nation as a whole. Definition modified slightly from Emsi.

¹⁷ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan.

¹⁸ Bureau of Labor Statistics. 2005-2015. Quarterly Census of Employment and Wages. Available at: http://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables

¹⁹ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan.

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- ²⁰ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan. Data by 3-digit NAICS code from 2013-2016 for Forsyth County.
- ²¹ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan. Data by 3-digit NAICS code from 2013-2016 for Forsyth County.
- ²² See the Data Chartbook for additional information on projected growth by manufacturing subsector.
- ²³ Emsi Analyst. 2016.2 data series. Extracted by Sara Lamback.
- ²⁴ Emsi Analyst. 2016.2 data series. Extracted by Sara Lamback.
- ²⁵ Based upon stakeholder interviews with North State Aviation and Herbalife. Jobs for the Future. Summer of 2016.
- ²⁶ Burning Glass Labor/Insight. Data for Forsyth County in 2015. Extracted by Myriam Sullivan.
- ²⁷ Burning Glass Labor/Insight. Data for Forsyth County in 2015 by 3-digit NAICS code. Extracted by Myriam Sullivan.
- ²⁸ Staff. 2016. "Forsyth Tech Recognized as a Leader in Manufacturing Training." *Forsyth Tech Magazine*. Available at: <http://www.forsythtech.edu/forsyth-tech-recognized-as-leader-in-manufacturing-training/>.
- ²⁹ The ambulatory care subsector (NAICS 621) includes businesses that provide outpatient services, such as physicians' offices, dentists, and medical and diagnostic laboratories.
- ³⁰ Emsi Analyst. 2016.2 data series for Forsyth County. Extracted by Sara Lamback.
- ³¹ Three-year growth trends for each 4-digit NAICS subsector are: skilled nursing facilities (17 percent), medical and diagnostic laboratories (15 percent), and assisted living facilities for the elderly (13 percent).
- ³² Emsi Analyst. 2016.2 data series. Extracted by Sara Lamback. Analysis of health care and social assistance sector by 4-digit NAICS codes in Forsyth County.
- ³³ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan.
- ³⁴ U.S. Bureau of Labor Statistics. 2005-2015. Quarterly Census of Employment and Wages. Available at: http://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables
- ³⁵ Emsi Analyst. 2016.2 data series. Extracted by Sara Lamback for Forsyth County.
- ³⁶ Burning Glass Labor/Insight. Data for Forsyth County in 2015. Extracted by Sara Lamback.
- ³⁷ Burning Glass Labor/Insight. Data for Forsyth County in 2015. Extracted by Sara Lamback.
- ³⁸ Interview with Eric Tomlinson. Fall 2016. Interviewed by Sara Lamback, Jobs for the Future.
- ³⁹ Burning Glass Labor/Insight. Data for Forsyth County in 2015. Extracted by Sara Lamback.
- ⁴⁰ Emsi Analyst. 2016.2 data series. Extracted by Myriam Sullivan.