2014 GREATER GREENSBORO – HIGH POINT AREA WORKFORCE DEVELOPMENT SURVEY

BY

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A Collaboration With:

The Greensboro Partnership: Chamber of Commerce
The Greensboro Partnership: Economic Development
Greensboro/High Point/Guilford County Workforce Development Board
High Point Chamber of Commerce
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ABOUT THE RESEARCHER

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EXECUTIVE SUMMARY

A. INTRODUCTION AND PURPOSE

- The 2014 Report highlights the number of difficult-to-fill jobs and the current workforce skills in short supply in the Greater Greensboro – High Point area based on company responses to a Survey sent out in May-June 2014. By providing a common voice for these employers, the goal is for the community to continue to work together in a timely manner to determine solutions that will help create and/or recruit more of these skills to the Greater Greensboro – High Point area.

- The 2014 Survey also focuses on updating many of the workforce development metrics first developed in the earlier 2012 study to help us better understand how these metrics have changed over time.

- Additionally, the geographic focus in the 2014 Survey was broadened by formally including both the High Point Chamber of Commerce and the High Point Economic Development Corporation as collaborators in the process.

- Part of the agenda is to stimulate discussion and to educate the general public about the overall performance of the Greensboro – High Point area in this crucially important arena. The long-term goal for the community is to see increased efficiency, progress and improvement over time for each of the selected workforce development metrics.

B. METHODOLOGY

- The workforce development metrics used in the 2014 Survey were chosen based on consultation with the Greensboro Partnership: Chamber of Commerce, the Greensboro Partnership: Economic Development, the Greensboro/High Point/Guilford County Workforce Development Board, the High Point Chamber of Commerce, the High Point Economic Development Corporation, and the Human Resource Management Association of Greensboro (HRMAG).

- The list of metrics included measures that capture the number of difficult-to-fill jobs, difficult-to-find soft skills, difficult-to-find hard skills, wage ranges for difficult-to-fill jobs, the time it took for companies to find candidates for difficult-to-fill jobs, where companies found candidates for difficult-to-fill jobs (locally in the Triad, from outside the Triad, or by outsourcing), potential future work skills likely to be required, whether the companies funded training in some way, and the rate of utilization of Guilford Technical Community College and the Greensboro/High Point/Guilford County Workforce Development Board training programs.
In total, 581 Greater Greensboro – High Point businesses/organizations were invited to participate in the survey for a six week period that extended from May 1st to June 13th, 2014. Emails were sent through HRMAG distributions and targeted industry cluster distributions via the Greensboro Chamber of Commerce, the Greensboro Economic Development Alliance, the High Point Chamber of Commerce and the High Point Economic Development Corporation. The response rate was 19% with 111 completed responses reflecting all the targeted growth industries and most of the major employers within the Greater Greensboro – High Point area.

C. MAJOR FINDINGS

- The overall takeaway is that many Greater Greensboro – High Point area employers are finding it difficult to find the workers they need. The “1,000 difficult-to-fill jobs” number that has been frequently quoted in our community remains an under-estimate. The 2014 Survey captured 1,561 difficult-to-fill jobs in 2013 although this was lower than the 1,775 difficult-to-fill jobs reported in 2011.

- Most of the difficult-to-fill jobs seemed to be geographically concentrated just south of the Piedmont Triad International Airport region especially between Greensboro and High Point, and also in southeastern Greensboro and the urban core areas of both Greensboro and High Point. Perhaps a more spatially targeted workforce development program is needed and additional collaboration is required between Greensboro and High Point if we are to solve these problems.

- Soft skills are a ubiquitous problem for all of the employers reporting that they have difficult-to-fill jobs. Key shortfalls seem to exist regarding critical and analytical thinking, problem solving, and communication. Similar shortfalls were reported in the 2012 Survey suggesting these are persistent problems facing our community. Key hard skills that are lacking included various manufacturing, engineering/project management, and broader based business/accounting/finance skills. These shortfalls also persisted from the 2012 Survey. Solving these challenges will take a concerted effort among business, education, government, economic development, and workforce development specialists to better understand how these soft and hard skills can be integrated in all educational and training programs.

- The most common length of time taken to fill difficult-to-fill jobs was between 3-6 months much like in the 2012 Survey suggesting this remains a stubborn problem for a large number of companies while the most commonly reported wage range for difficult-to-fill jobs was $30,000 to $50,000.

- Most of the difficult-to-fill jobs were ultimately filled by candidates located in the Triad, although many companies also reported using outsourcing and candidates from outside the Triad to remedy the problem.
Most of the respondents offered formal, on-the-job training for new employees and/or provided skill upgrades and retraining for current employees although the percentage of respondents reporting using these sorts of programs declined over time.

Most of the respondents also indicated that they had not utilized the services offered by the Guilford County Workforce Development Board or the local Community College system although these same companies expressed strong interest in learning more about these services, and this interest actually strengthened over time.

The key future work skills of tomorrow based on the survey responses included cognitive load management, novel and adaptive thinking, and social intelligence. Collectively, these three skills seem to place a premium on highly creative, flexible skills that are capable of effectively functioning in complex, hyper-flexible, and fast-changing environments.

Less of a premium was placed on the emerging digital and virtual skills that are frequently touted as key drivers of the emerging knowledge economy. Some of the least frequently listed future work skills included new media literacy (3% of all responses), creative digital literacy (8%), and virtual collaboration (9%).

Recommended solutions include continuing to focus on strengthening career and technical educational offerings, increasing the rigor of instruction especially at the Community College level, as well as increasing and strengthening partnerships between higher education and business, and between Greensboro and High Point, especially in the STEM disciplines.
INTRODUCTION AND BACKGROUND

“Greensboro has 1,000 available jobs that we cannot fill because we don’t have the skilled workforce.”

During 2011, the quote above illustrated a persistent mindset among human resource and economic development professionals in the Greensboro – High Point area that despite the lingering after-effects of the Great Recession and stubbornly high unemployment rates, the problem of matching skilled people with the right jobs remained a persistent problem in the community. Although it was not clear how the “1,000” jobs number was calculated or sourced, it represented an ongoing concern that the community was not successfully providing the needed labor in some key positions in the workforce.

In 2012, it became important to a coalition of organizations including the Greensboro Chamber of Commerce, the Human Resource Management Association of Greensboro (HRMAG), and the Greensboro/High Point/Guilford County Workforce Development Board that this matter be resolved to better understand this metric and better understand the underlying causes of the mismatch between jobs and job candidates.

These three groups utilized the North Carolina Association of Workforce Development Boards 2012 Skills Survey Study to act as the conceptual and organizational foundation of a study of “Difficult to Fill” jobs in the Greater Greensboro area. The survey was deployed for an 8-week timeframe and was sent to members of HRMAG, the Greensboro Chamber of Commerce, and members of key industry cluster councils through the Greensboro Economic Development Alliance. Of the approximate 400 surveys deployed, 136 employers responded reflecting all five of the targeted industry growth clusters and most of the large employers in the Greater Greensboro area.

The 2012 Report found that at least 1,775 difficult-to-fill jobs existed in the community for these 136 respondents and that 79% of these firms reported difficulties filling open positions. Additionally, a wide range of soft skills were considered difficult to find regardless of job, salary level or industry. The most difficult to find soft skills included Communication and Critical and Analytical Thinking skills while the most often cited hard skills needed in the Greensboro area included Skilled Trades.
PURPOSE AND RATIONALE

The overall purpose of this report is to provide an update to the 2012 Greater Greensboro Workforce Development Survey. The 2014 Survey focuses on many of the workforce development metrics first developed in the 2012 study to help us better understand how these metrics have changed over time. Additionally, the geographic focus in the 2014 Survey was broadened by formally including both the High Point Chamber of Commerce and the High Point Economic Development Corporation as collaborators in the process.

The 2014 Report is a summary of the key findings from the 2014 Survey and it highlights the current workforce skills needed in the Greater Greensboro – High Point area based on the 111 company respondents included in this analysis. By providing a common voice for these employers, the goal is for the community to continue to work together in a timely manner to determine solutions that will help create and/or recruit more of these skills to the Greater Greensboro – High Point area.

Part of the agenda is to stimulate discussion and to educate the general public and policy makers about the overall performance of Greensboro – High Point in this crucially important arena. The long-term goal for the community is to see increased efficiency, progress and improvement over time for each of the selected workforce development metrics.
PROJECT METHODOLOGY

A. DETERMINING THE SURVEY METRICS

The Greater Greensboro – High Point Workforce Development Survey was originally modeled after the North Carolina Association of Workforce Development Boards 2012 Skills Survey Study. Additional questions were also added that were deemed pertinent by the organizations that collaborated on the survey. It was agreed that the following data would be gathered from each respondent:

- Industry identification
- Current full-time and part-time workforce numbers
- Number of difficult-to-fill jobs in both 2013 and 2014
- Identification of hard skills (as listed in the North Carolina Association of Workforce Development Boards 2012 Skills Survey) that were difficult to fill in both 2013 and 2014
- Identification of soft skills (as listed in the North Carolina Association of Workforce Development Boards 2012 Skills Survey) that were difficult to fill in both 2013 and 2014
- Wage ranges for difficult-to-fill jobs
- Time it took companies to find candidates for difficult-to-fill jobs
- Where companies found candidates for difficult-to-fill jobs (locally in the Triad, from outside the Triad, or by outsourcing)
- Potential future work skills likely to be required
- Whether the companies funded training in some way
- Utilization of Guilford Technical Community College and the Greensboro/High Point/Guilford County Workforce Development Board training programs

While the survey did encompass responses for 2013 and 2014, the data from 2013 will be the primary focus of this report. After analysis, the 2014 data was considered incomplete due to the number of job positions still open at the time of this study, although the Report will make some limited comments regarding 2014 trends.

In total, 581 Greater Greensboro businesses/organizations were invited to participate in the survey for a six week period that extended from May 1st to June 13th, 2014. Emails were sent through HRMAG distributions and targeted industry cluster distributions via the Greensboro Chamber of Commerce, the Greensboro Economic Development Alliance, the High Point Chamber of Commerce and the High Point Economic Development Corporation. A concerted effort was taken to ensure that most of the major employers within the Greater Greensboro – High Point area were given the opportunity to respond.

The Survey was made available to the respondents on Formsite.com, a web-based software service that was one of the first online form building services to provide the
capacity to post Survey material based on an annual subscription fee. It is ranked as one of the top 5,000 websites in the world based on daily unique visitor counts. The overall response rate was 19% with 111 completed responses.

B. INDUSTRY CLUSTER DEFINITIONS

In 2011, the Greensboro Partnership commissioned a study by Gamer Economics to assess the industry clusters of the Greater Greensboro area. Their report identified 5 key industry growth clusters, which were subsequently utilized to help formulate the Greensboro Partnership’s Strategic Plan. Using these cluster definitions, effort was taken to ensure that the responses gathered for this survey would encompass all 5 industry growth clusters in addition to other key employers that do not necessarily fit within these industry cluster categories (Figure 1). Additionally, the furniture sector was also targeted in the survey mail-outs given the importance of the furniture industry as a major employer in High Point.

The industry clusters, as defined, are as follows:

- **Aviation**: examples include aircraft manufacturing, aircraft engine and parts manufacturing, passenger and freight air transportation providers, and aviation support providers

- **Advanced Manufacturing**: examples include specialty chemicals manufacturing, instrument and controlling devices manufacturing, plastics manufacturing, and packaging manufacturing

- **Furniture**: examples include furniture manufacturing, furniture wholesalers, retail furniture, furniture design, and furniture showrooms

- **Life Sciences (including Healthcare)**: examples include medical and pharmaceutical manufacturing, analytical lab instrument manufacturing, surgical, dental, and ophthalmic goods manufacturing, biotechnology research and development, medical laboratories, and medical services

- **Specialized Business Services**: examples include data processing, financial transaction activities, insurance and pension administration, customer computer programming, corporate managing offices, and real estate

- **Supply Chain and Logistics**: examples include product design and development, materials sourcing and procurement, production management, conversion management, logistics management, brand and product management, freight transportation, general warehousing and storage, logistics consulting services, general freight trucking, and rail transportation support activities
Although the 2014 Survey targeted the six most prominent industry clusters in the Greater Greensboro – High Point area, it should be noted that a substantive proportion of the respondents were classified as “Other” (18%). A large number of these “Other” respondents included such things as government organizations, local schools and universities, assisted living facilities, service businesses, retailers, and staffing firms.

That said, the six targeted industry clusters accounted for 82% of all respondents in the 2014 Survey which compared to 65% of all such respondents in the 2012 Survey. The 2014 Survey included a greater share of respondents from both Advanced Manufacturers (i.e., 33% of all respondents in 2014 compared to 24% in 2012) and Supply Chain and Logistics companies (i.e., 12% in 2014 compared to 8% in 2012).
FINDINGS

Comparing the 2013/14 workforce development metrics back to the 2011/12 metrics it becomes possible to benchmark progress made over time. The following is a summary of the key findings from the 2014 Survey that highlights the current workforce skills needed in the Greater Greensboro – High Point area according to respondents.

A. TOTAL NUMBER OF DIFFICULT TO FILL JOBS

The initial piece of information to uncover was simple: how many jobs were difficult to fill in the Greater Greensboro – High Point area in 2013. Of the 111 responses, 63% reported a total of 1,561 difficult-to-fill jobs in 2013 (Figure 2), which was noticeably lower than the 79% of respondents that reported 1,775 difficult-to-fill jobs in 2011 just two years earlier.

Although the 2013 and 2011 sample sizes and list of respondents are not identical, many of the Survey participants overlapped and were largely comparable. The overall suggestion is that the mismatch between job openings and qualified job candidates is potentially diminishing over time in the Greensboro – High Point area from 1,775 in 2011 to 1,561 in 2013.

![Figure 2. Did Your Company Have Difficult to Fill Jobs in 2013?](image)
That said, most of the targeted industry growth cluster firms tended to be the respondents most likely to continue to experience difficulty filling open positions in 2013 including advanced manufacturers, aviation companies, furniture firms and the life sciences.

Most of the rest of this report will be focused on the 63% that responded “yes” to having difficult-to-fill jobs in 2013. However, it should be pointed out that the 37% of respondents that did not have problems filling jobs tended to be classified as Specialized Business Services or “Other” – relatively diffuse industries that cover the gamut of economic activities that can perhaps tap from a broad range of skill sets.

The spatial distribution of difficult-to-fill jobs in both 2013 and 2014 (Figure 3 and 4) tended to be geographically concentrated just south of the Piedmont Triad International Airport region especially between Greensboro and High Point, and also in both southeastern Greensboro and the urban core areas of both Greensboro and High Point. By contrast, those companies that experienced no problems filling jobs (37% of all respondents) were geographically scattered across the study area rather than being tightly clustered in any given area.

When it comes to resolving the problem of difficult-to-fill jobs, perhaps a more spatially targeted workforce development program is needed and additional collaboration is required between Greensboro and High Point if we are to solve these problems. It is possible that a public transit network that more explicitly links workers to companies with difficult-to-fills jobs might be helpful particularly if the potential employees are not car-owners and have limited mobilities.

It should also be noted that while the geography of difficult-to-fill jobs in 2014 (Figure 4) largely mimics the 2013 spatial distribution (Figure 3), it is at greatly reduced levels since the Survey only covered the first six months of 2014.
Figure 3. Spatial Distribution of Difficult to Fill Jobs, 2013
Figure 4. Spatial Distribution of Difficult to Fill Jobs, 2014
B. DIFFICULT TO FIND SOFT SKILLS

Figure 5 reveals that Critical and Analytical Thinking, Problem Solving, and Communication top the list of difficult-to-find soft skills in the Greater Greensboro – High Point area, which broadly mimics the results found in the North Carolina Association of Workforce Development Boards 2012 Skills Survey Study¹. Each of these three soft skill shortfalls featured prominently in the earlier 2012 study for the Greater Greensboro area suggesting the strong persistent nature of these deficiencies in our community.

In addition to the data below, many respondents wrote in open-ended responses in both the 2014 and 2012 Survey indicating the crucial role that soft skills can play in shaping workforce development problems and challenges.

One of the open responses from the 2012 Survey captured this frustration when the respondent indicated that:

- "the importance of potential candidates possessing soft skills (even in a technical environment) cannot be overstated. Unfortunately, many individuals are lacking in this area."

This particular response was not isolated, and many of the respondents wrote similar comments regarding the perceived disconnect between many candidates' work ethic and company expectations. In the 2014 Survey, one respondent indicated that:

- "we are struggling with issues such as work ethic, attendance, lack of customer service skills, and lack of interpersonal skills on employee and manager levels."

Many of the 111 respondents in the 2014 Survey reported frustration and difficulty in finding candidates with the right soft skills - a problem that was pervasive regardless of the industry, type of job, or salary level.
C. DIFFICULT TO FIND HARD SKILLS

Using the hard skills categories developed in the North Carolina Association of Workforce Development Boards 2012 Skills Survey Study\(^1\), the 2014 Survey respondents were able to identify the types of hard skills that were difficult to find in the Greater Greensboro – High Point area. The respondents were also able to check “Other”, if the list of hard skills included in the 2014 Survey did not apply. As a result, there are 35 identifiable hard skills included in the Survey.

Although the list of hard skills provided in the Survey was extensive, the most commonly listed hard skill deficiency was “Other” suggesting that many of the respondents had a wide range of very detailed hard skill deficiencies not listed in the Survey (Figure 6). Beyond this, skilled trades/machining skills, industry specific certification, engineering technologies, electrical/electronics, general maintenance skills, and customer service/sales hard skills were the most often cited by the respondents. These results broadly coincided with the North Carolina Association of Workforce Development Boards 2012 Skills Survey Study\(^1\) and indicate this is not merely a local problem. The persistence of these problems in the Greater Greensboro – High Point area are reflected by the fact that the hard skill deficiencies listed in Figure 6 largely mimic the rankings uncovered in the earlier 2012 Survey.
Since the 35 hard skills were difficult to analyze individually, the skills were grouped into five categories of skills according to broad-based industry definitions:

- **Various Manufacturing Skills**: Skilled Trades, Industry Specific Machining Skills, General Maintenance, Machining, Integrated Systems Technology, Welding, Environmental/Hazmat, A/C, Heating and Refrigeration, Fork Lift Operation, Truck Drivers

- **Engineering/Project Management Skills**: Electrical/Electronics, Engineering Technologies, Mechanical Engineering, Lean/Six Sigma/Process Improvement, Project Management, Quality, Blueprint Reading
• **Information Technology Skills:** Computer Programming, Industry Specific Computer Programming Skills, Computer Aided Drafting and Design, Graphic Arts and Imaging

• **Various Healthcare and Life Science Skills:** Chemical/Biotech, Nursing, Health Information & Medical Records, Medical Assisting, Medical Laboratory Testing, Human Services, Physical Therapist

• **Business/Accounting/Finance Skills:** Customer Service/Sales, Business/Accounting, Financial analysis, Industry Specific License, Office Skills, Paralegal, Industry Specific Certification

Using these five classifications, it is easier to digest the types of hard skills employers have been looking for when they report needing to fill 1,561 difficult-to-fill jobs. As Figure 7 identifies, most of the difficult-to-fill job openings in 2013 required hard skills relating to various manufacturing hard skills (34% of the company responses), engineering/project management hard skills (25%), and broader based business/accounting/finance hard skills (22%).

![Figure 7. Difficult to Find Hard Skills by Industry Class](image-url)
Figure 7 largely matches the trends first uncovered in the 2012 Survey although the 2014 Survey saw a higher premium placed on various manufacturing and engineering/project management-related hard skills. However, this may be more a reflection of the fact that a greater share of the 2014 Survey respondents were classified as Advanced Manufacturers relative to the 2012 Survey (see Figure 1).

D. AVERAGE LENGTH OF TIME TO FILL DIFFICULT TO FILL JOBS

Although it appears that at least 1,561 difficult-to-fill jobs existed in the Greater Greensboro – High Point area in 2013, it is less clear how long a period of time it took for companies to successfully fill these sorts of job openings. Consequently, the respondents were asked to categorize the average length of time it took to fill these positions. Based on the frequency of response, the most common time taken to fill difficult-to-fill positions was between 3-6 months (Figure 8). Approximately two-thirds (67%) of the responses indicated such positions were filled in less than six months in 2013 compared to 69% in 2011 suggesting this remains a stubborn problem for a large number of companies.

However, the number of positions that took more than 18 months to fill appears to have diminished over time. In 2013, only 1% of all responses reported unfilled positions for over 18 months compared to 9% of all such responses in 2011 suggesting that this particular problem has eased over time. Quite the opposite sort of trend line appears to be happening regarding positions that take between 6-9 months to fill. In 2013, the percentage of responses that reported it took 6-9 months to fill such positions grew to 21% compared to just 11% in 2011.

![Figure 8. Average Length of Time to Fill Difficult to Fill Positions](image-url)
It is likely that some of the problems listed in the 2012 Survey continue to linger in 2013/14. For several occupations, it is possible that the hiring process is simply taking longer than it used to because of the necessity for background checks, licensing issues, reference checks, and the elevated mobility of some job candidates. Additionally, some industries and companies may be experiencing higher turnover rates. For instance, the Triad area has many employers in the healthcare and banking/finance industries. It is possible that candidates may be able to switch jobs more readily, thus creating a higher instance of open positions overall due to turnover – creating additional financial and time intensive burdens for employers. Recruiters may have to fill positions more often simply because of turnover and not necessarily because of a lack of skills in the market. Another possibility is that various soft skills deficiencies might be the primary cause of respondents considering jobs difficult-to-fill. In the 2012 Survey, follow-up discussions with an employer indicated that it was:

- "not that hard to find people with the qualifications or skills, but that it was really difficult to find people who are qualified, are easy to work with, and are team players."

**E. Wage Ranges Of Difficult To Fill Positions**

Analyzing wage rates can provide a more detailed insight into the variation in skill levels of the various difficult-to-fill positions – assuming that higher wages are a reflection of more specialized skills that require higher levels of training and expertise. Consequently, respondents were asked to provide an indication of the wage ranges of their difficult-to-fill positions (Figure 9).
Figure 9 illustrates that the more commonly reported wage range in 2013 for difficult-to-fill positions was $30,000 to $50,000 (39% of all responses) compared to the $40,000 to $60,000 range in 2011 (41% of all responses). While the frequency of response is persistently higher in 2011 due to the larger sample size (n=136 versus n=111), the overall distribution in Figure 9 between 2011 and 2013 is remarkably stable. For example, the percentage of responses reporting difficult-to-fill positions that paid more than $70,000 was 17% in 2013 compared to 16% in 2011 even though the frequency of response was noticeably higher in 2011.

The overall suggestion is that while the total number of difficult-to-fill jobs may have declined from 2011 to 2013, the distribution of wages offered in these sorts of jobs is largely unchanged. One implication is that the skills deficiencies the community faced in 2011 are largely unchanged in 2013 although the absolute number of jobs left open over time has diminished.

The persistent nature of the overall distribution of the wage ranges of difficult-to-fill jobs in the Greater Greensboro – High Point area may point to an inability to effectively compete with neighboring communities especially in the Charlotte and Research Triangle areas. Approximately 45% of all the responses reported difficulty filling positions that paid over $50,000 in 2013 (compared to 50% of all such responses in 2011). It may be that much of this is driven by a salary disparity issue and that the highly skilled jobs that seem to go begging in the community are a consequence of not offering candidates competitive salaries with other neighboring metropolitan markets in Charlotte and the Research Triangle. We now turn to a closer examination of company recruiting methods when attempting to fill difficult-to-fill jobs.

F. RECRUITMENT METHODS USED TO FILL DIFFICULT TO FILL POSITIONS

The 2014 Workforce Development Survey asked the 111 respondents which recruiting methods they utilized when attempting to hire for their difficult-to-fill positions. These methods included filling those positions through outsourcing, through candidates located in the Triad, or through candidates located outside the Triad.

Figure 10 illustrates that the most of the difficult-to-fill jobs in the Greater Greensboro – High Point area were filled by candidates already located in the Triad and this was the case in both 2013 and 2011. More encouragingly, the proportion of companies that indicated they hired from within the Triad has risen over time from 43% of all responses in 2011 to 45% of all responses in 2013. Furthermore, the proportion of responses that reported filling these positions with candidates that had relocated to the Triad from outside the region had dropped even more noticeably from 25% in 2011 to 19% in 2013. Both trends suggest that the local community is doing a better job over time ultimately providing candidates for difficult-to-fill positions.
That said, this is no time for complacency. The proportion of company responses that reported resorting to outsourcing arrangements to fill difficult-to-fill positions has risen over time from 13% in 2011 to 17% in 2013 while the proportion of positions that have not yet been filled remains stubbornly high (i.e., 20% in 2011 and 19% in 2013) (Figure 10).

**G. INDUSTRY CLUSTERS**

Given that the largest number of respondents in the 2014 Workforce Development Survey were advanced manufacturers (see Figure 1), it behooves us to take a closer look at this industry. Following the significant decline in manufacturing jobs in the textile, apparel, and furniture industries during the 1990's and early 2000's, this key piece of our local economy has been transforming from traditional to advanced manufacturing through technology gains in more recent years. The Greensboro Partnership 2014 State of the City Report\(^{iii}\) has indicated that the percentage of the Greensboro labor force employed in manufacturing has steadily increased from 11.1% in 2009 to 13.1% of the workforce in 2012. Furthermore, manufacturing companies in Guilford County continue to experience robust wage growth offering the second highest average wage rate of any major industry in the county in 2012.

Based on the 2014 Survey, 27 of the 70 firm respondents that reported having difficult-to-fill jobs in 2013 were classified as advanced manufacturers accounting for nearly one-quarter of all the difficult-to-jobs (i.e., 370 jobs or 23.7% of the total). Some of the comments from the Advanced Manufacturing respondents included:

- Skilled trades like welding, tool maker, model maker, quality inspection and mechanical engineering design have all been difficult to fill.
- Our manufacturing process requires skilled workers such as welders, advanced machine operators, etc. In searching for job candidates, it appears that some skills we need are becoming less available.

 Regarding the average length of time to fill difficult-to-fill jobs and the wage ranges of these same jobs, the advanced manufacturing sector essentially mimicked the trends of the larger sample. Most advanced manufacturers commonly reported taking 3-6 months to fill difficult-to-fill jobs particularly in the $30,000 to $60,000 wage range.

 The same can be said for the sorts of recruitment methods and future work skills that are likely to be in demand in advanced manufacturing. Most advanced manufacturers commonly reported filling difficult-to-fill jobs with candidates located in the Triad and the sorts of future work skills that seemed to be in highest demand included cognitive load management and novel and adaptive thinking much like the larger sample of firm respondents.

 Similar trends are found for the other industry clusters featured in Figure 1 although it is more difficult to make unequivocal statements given the smaller number of respondents in these other industry sectors. Some of the key needs seem to be focused on the supply chain and logistics cluster (198 difficult-to-fill jobs), life sciences (including health care) (75 jobs) and the aviation cluster (70) although a large number of difficult-to-fill jobs were located in the more diffuse specialized business services and “other” category. One of the life science respondents commented that:

- As a non-profit healthcare agency, most of our recruiting issues are finding “experienced”, clinically trained candidates for our home based positions. We typically don’t hire people right out of college. Retraining clinical people to manage more data is also a growing need for us.

**H. TYPES OF EMPLOYER TRAINING PROGRAMS**

Each of the 2014 Workforce Development Survey respondents were asked to indicate what sort of job training programs they offered their employees, if any. The results suggested that a majority of companies offered formal, on-the-job training for new employees and/or provided skill upgrades and retraining for current employees (Figure 11). However, the percentage of company Survey responses reporting these sorts of employer training program options declined over time from 72% of all such responses in 2011 to just 67% in 2013.

On a more positive note, the proportion of company responses that indicated they funded employees to access training rose from 20% in 2011 to 23% in 2013 although the proportion of survey responses that indicated they are seeking ways to fund training rose over time (from 8% in 2011 to 10% in 2013).
I. Familiarity With Local Community Workforce Or Training Programs

One potential remedy for many of the employment challenges facing our local companies is to take further advantage of the large variety of both workforce and training programs offered in our local community through the Guilford County Workforce Development Board and the Community College system. Consequently, survey respondents were asked if they utilized workforce development services or job training programs through Guilford County and/or the Community Colleges and whether or not they were interested in learning more about these services.

In both instances, the survey respondents indicated that they were more likely to have not utilized the services offered by the Guilford County Workforce Development Board or the local Community Colleges although more respondents reported some sort of engagement with the Community Colleges than they did with the County Workforce Development Board (Figure 12 and 13). In 2013, only 17% of the survey responses indicated that survey respondents had utilized the Guilford County Workforce Development Board compared to 32% for the Community College. However, these numbers rose over time for the Guilford County Workforce Development Board suggesting growing awareness over time of the sorts of services offered by the County.

Furthermore, a large majority of the survey respondents indicated that companies were more likely to want to learn more about the services offered by the County Workforce Development Board and the Community College system, and that this interest was
increasing over time. Such trends offer a potential opportunity for both institutions to conduct additional outreach and engagement with companies to discuss future collaborations that might help to mitigate the ongoing problems with filling difficult-to-fill positions in the local community.

Figure 12. Familiarity with Guilford County Workforce Training Programs

Figure 13. Familiarity with Community College Workforce Training Programs
J. Future Work Skills

The fast-changing social, economic, and technology environments will continue to drive employers to seek job applicants with skills to better deal with customers; work in fluid, and complex environments; and accommodate evolving organizational cultures and new tool sets. With this in mind, the 2014 Survey respondents were asked to classify the key future work skills most likely to be required for tomorrow’s best jobs. The classification of future work skills was largely derived from a 2020 Future Work Skills Report developed by the Institute for the Future affiliated with the University of Phoenix Research Institute based in Palo Alto, California. iv

These future work skills included the following:

- Cognitive Load Management – the ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques
- Computational Thinking – the ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning
- Creative Digital Literacy – the ability to effectively and critically navigate, evaluate and create information using a range of digital technologies
- Cross-Cultural Competency – the ability to operate in different cultural settings
- New Media Literacy – the ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication
- Novel and Adaptive Thinking – proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based
- Social Intelligence – the ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions
- Transdisciplinarity – literacy in and ability to understand concepts across multiple disciplines
- Virtual Collaboration – the ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team

In the 2014 Survey, the most frequently listed future work skills included cognitive load management (17% of all responses), novel and adaptive thinking (17%), and social intelligence (14%) (Figure 14). Collectively, these three skills seem to place a premium on highly creative, flexible skills that are capable of effectively functioning in complex, hyper- flexible, and fast-changing environments. In many respects, these sorts of skills
could be classified as softer skills given the emphasis on social intelligence and the need for employers that can think beyond already established rule-based protocols.

Somewhat surprisingly, less of a premium was placed on the emerging digital and virtual skills that are frequently touted as key drivers of the emerging knowledge economy. Some of the least frequently listed future work skills included new media literacy (3% of all responses), creative digital literacy (8%), and virtual collaboration (9%). Our survey respondents appeared to be placing less emphasis on hard technical skills that might help a company navigate a variety of digital technologies and virtual environments.

Figure 14. Potential Future Work Skills
CONCLUSION AND IMPLICATIONS

In summary, the overall takeaway is that many Greater Greensboro – High Point area employers are finding it difficult to find the workers they need. The “1,000 difficult-to-fill jobs” number that has been frequently quoted in our community remains an underestimate. The 2014 Survey captured 1,561 difficult-to-fill jobs in 2013 although this was lower than the 1,775 difficult-to-fill jobs reported in 2011. Some of the major findings included:

- Most of the difficult-to-fill jobs seemed to be geographically concentrated just south of the Piedmont Triad International Airport region especially between Greensboro and High Point, and also in southeastern Greensboro and the urban core areas of both Greensboro and High Point. Perhaps a more spatially targeted workforce development program is needed and additional collaboration is required between Greensboro and High Point if we are to solve these problems.

- Soft skills are a ubiquitous problem for all of the employers reporting that they have difficult-to-fill jobs. Key shortfalls seem to exist regarding critical and analytical thinking, problem solving, and communication. Similar shortfalls were reported in the 2012 Survey suggesting these are persistent problems facing our community. Key hard skills that are lacking included various manufacturing, engineering/project management, and broader based business/accounting/finance skills. These shortfalls also persisted from the 2012 Survey. Solving these challenges will take a concerted effort among business, education, government, economic development, and workforce development specialists to better understand how these soft and hard skills can be integrated in all educational and training programs.

- The most common length of time taken to fill difficult-to-fill jobs was between 3-6 months much like in the 2012 Survey suggesting this remains a stubborn problem for a large number of companies while the most commonly reported wage range for difficult-to-fill jobs was $30,000 to $50,000.

- Most of the difficult-to-fill jobs were ultimately filled by candidates located in the Triad, although many companies also reported using outsourcing and candidates from outside the Triad to remedy the problem.

- Most of the respondents offered formal, on-the-job training for new employees and/or provided skill upgrades and retraining for current employees although the percentage of respondents reporting using these sorts of programs declined over time.

- Most of the respondents also indicated that they had not utilized the services offered by the Guilford County Workforce Development Board or the local Community College system although these same companies expressed strong
interest in learning more about these services, and this interest actually strengthened over time.

- The key future work skills of tomorrow based on the survey responses included cognitive load management, novel and adaptive thinking, and social intelligence. Collectively, these three skills seem to place a premium on highly creative, flexible skills that are capable of effectively functioning in complex, hyper-flexible, and fast-changing environments.

- Less of a premium was placed on the emerging digital and virtual skills that are frequently touted as key drivers of the emerging knowledge economy. Some of the least frequently listed future work skills included new media literacy (3% of all responses), creative digital literacy (8%), and virtual collaboration (9%).

- Recommended solutions include continuing to focus on strengthening career and technical educational offerings, increasing the rigor of instruction especially at the Community College level, as well as increasing and strengthening partnerships between higher education and business, and between Greensboro and High Point, especially in the STEM disciplines.
A. LETTER OF INVITATION

Dear HRMAG Colleagues,

Two years ago, the Human Resource Management Association of Greensboro collaborated with the Greensboro Chamber of Commerce and the Greensboro-High Point-Guilford County Workforce Development Board to conduct a workforce survey that would help us better understand this statement: “Greensboro has 1,000 available jobs that we cannot fill because we don’t have the skilled workforce.” Through survey responses from 136 companies, we learned the problem was even more serious with a total of 1,775 jobs being difficult to fill even as the local economy continued to emerge from the recession of 2008/9.

We are asking for your help again. The Human Resource Management Association of Greensboro, the Greensboro Chamber of Commerce, and the Greensboro-High Point-Guilford County Workforce Development Board, plus the Greensboro Partnership Economic Development, the High Point Chamber of Commerce and the High Point Economic Development Corporation are collaborating to conduct a 2014 update of this survey of businesses to help further identify the critical workforce development issues facing our community. By participating in this 10-minute survey, you can add to our understanding of how to evaluate the specific hard and soft skills that are missing in our workforce as well as provide information to help create improved solutions for our workforce issues.

We need your feedback! Please click the link below and complete the survey by Friday, June 13, 2014.


While your participation in this survey is completely voluntary, the success of this survey is dependent upon your participation. All information collected remains confidential and will only be used for the purpose of aggregating and reporting the data by industry cluster. We will provide a complete copy of the final Report to all those who fully responded to the Survey.

Thank you for your time and assistance. If you have any questions, please contact one of the following individuals: Deborah Hooper, Greensboro Chamber at dhooper@greensboro.org or 336-387-8320 and/or Nancy Vanstory at nvanstory@greensboro.org or 336-387-8321.
B. Workforce Development Survey 2014

Workforce Development Survey 2014

In the 2012 Greater Greensboro Workforce Development Survey, the 136 companies/organizations that responded to the survey indicated that a total of 1,775 jobs proved to be difficult to fill even as the local economy continued to emerge from the recession of 2008/9.

The Greensboro Partnership Chamber of Commerce, the Human Resource Management Association of Greensboro, and the Workforce Development Board of Greensboro/High Point/Guilford County, plus the Greensboro Partnership Economic Development, the High Point Chamber of Commerce and the High Point Economic Development Corporation are collaborating to conduct a 2014 update of this survey of businesses to help further identify the critical workforce development issues facing our community. By participating in this 10-minute survey, you can add to our understanding of how to evaluate the specific hard and soft skills that are missing in our workforce as well as provide information to help create improved solutions for our workforce issues. We need your feedback! Please complete the survey by Friday, June 13, 2014. While your participation in this survey is completely voluntary, the success of this survey is dependent upon your participation. All information collected remains confidential and will only be used for the purpose of aggregating and reporting the data by industry cluster. We will provide a complete copy of the final Report to all those who fully responded to the Survey.

Thank you for your time and assistance. If you have any questions, please contact one of the following individuals: Deborah Hooper, Greensboro Chamber at dhooper@greensboro.org or 336-387-8320 and/or Nancy Vanstory at nvanstory@greensboro.org or 336-387-8321.

What is your primary industry?

- Aviation
- Advanced Manufacturing
- Furniture
- Life Sciences (Including Healthcare)
- Specialized Business Services
- Supply Chain and Logistics
- Other [ ]

What is your total workforce here in the Triad region of North Carolina?

Please provide full-time and part-time position totals. (Please do not provide full time equivalents).
* Full-Time Employees

* Part-Time Employees

What is your address in the Triad Region of North Carolina with the most employees?

* Address:

* City:

* This survey is being sent to several individuals that might work for the same large organization. In order to ensure that we do not double count certain positions, please provide the name of your organization. (All responses will remain CONFIDENTIAL.)

* If you recruit for specific job openings within an organization (e.g. nursing, engineering, administrative), please identify the division or sub-group of the organization for which you recruit.

* Please indicate your role in the recruiting process for this organization.
  
  □ Third Party Recruiter  □ Internal Recruiter

* Did you have open positions during 2013 that were difficult to fill?
  
  ☐ Yes  ☐ No

* How many difficult-to-fill positions did you have during 2013? (Please provide total numbers instead of full time equivalents.)

* For these positions, please provide an indication of what types of hard skills you were seeking that proved difficult to find in our local workforce. (Check all that apply)
  
  □ A/C, Heating and Refrigeration
  □ Blueprint Reading
  □ Business/Accounting
  □ Chemical/Biotech
  □ Civil Engineering/Surveying
  □ Computer Aided Drafting and Design
  □ Computer Programming
  □ Customer Service/Sales
  □ Electrical/Electronics
  □ Engineering Technologies
  □ Environmental/Hazmat
☐ Financial analysis
☐ Fork Lift Operation
☐ General Maintenance
☐ Graphic Arts and Imaging
☐ Health Information & Medical Records
☐ Human Services
☐ Industry Specific Certification
☐ Industry Specific Computer Programming Skills
☐ Industry Specific License
☐ Industry Specific Machining Skills
☐ Integrated Systems Technology
☐ Lean/Six Sigma/Process Improvement
☐ Machining
☐ Mechanical Engineering
☐ Medical Assisting
☐ Medical Laboratory Testing
☐ Nursing
☐ Office Skills
☐ Paralegal
☐ Physical Therapist
☐ Project Management
☐ Skilled Trades
☐ Welding
☐ Other

* For these positions, please provide an indication of what types of soft skills you were seeking that proved difficult to find in our local workforce. (Check all that apply)

☐ Communication
☐ Critical and Analytical Thinking
☐ Customer Service
☐ Good Attendance
☐ Interpersonal
☐ Leadership
☐ Managerial
For these positions, please provide an indication of what wage ranges were difficult to fill. (Check all that apply) *This response is optional*

- Less than $20,000/year
- $20,000-$30,000/year
- $30,000-$40,000/year
- $40,000-$50,000/year
- $50,000-$60,000/year
- $60,000-$70,000/year
- More than $70,000/year

* For difficult to fill positions, what was the average length of time to fill these positions?

- Less than 30 days
- 30-60 Days
- 60-90 Days
- 3-6 Months
- 6-9 Months
- 9-12 Months
- 12-18 Months
- More than 18 Months

* For these difficult to fill positions, were they filled by:

- Position was filled by outsourcing
- Filled by candidate in the Triad
- Filled through candidate relocation outside the Triad
- Position has not yet been filled

* Are you experiencing problems with difficult to fill positions THIS YEAR (during 2014)?

- Yes
- No

* How many difficult-to-fill positions have you had so far in 2014? (Please provide total numbers instead of full time equivalents.)


* For these positions, please provide an indication of what types of hard skills you were seeking that proved difficult to find in our local workforce. (Check all that apply)

- A/C, Heating and Refrigeration
Box

Blueprint Reading

Business/Accounting

Chemical/Biotech

Civil Engineering/Surveying

Computer Aided Drafting and Design

Computer Programming

Customer Service/Sales

Electrical/Electronics

Engineering Technologies

Environmental/Hazmat

Financial Analysis

Fork Lift Operation

General Maintenance

Graphic Arts and Imaging

Health Information & Medical Records

Human Services

Industry Specific Certification

Industry Specific Computer Programming Skills

Industry Specific License

Industry Specific Machining Skills

Integrated Systems Technology

Lean/Six Sigma/Process Improvement

Machining

Mechanical Engineering

Medical Assisting

Medical Laboratory Testing

Nursing

Office Skills

Paralegal

Physical Therapist

Project Management

Skilled Trades
☐ Welding
☐ Other

* For these positions, please provide an indication of what types of soft skills you were seeking that are proving to be difficult to find in our local workforce. (Check all that apply)
  ☐ Communication
  ☐ Critical and Analytical Thinking
  ☐ Customer Service
  ☐ Good Attendance
  ☐ Interpersonal
  ☐ Leadership
  ☐ Managerial
  ☐ Problem Solving
  ☐ Other

For these positions, please provide an indication of what wage ranges were difficult to fill. (Check all that apply) *This response is optional*
  ☐ Less than $20,000/year
  ☐ $20,000-30,000/year
  ☐ $30,000-40,000/year
  ☐ $40,000-50,000/year
  ☐ $50,000-60,000/year
  ☐ $60,000-70,000/year
  ☐ More than $70,000/year

* For difficult to fill positions, what has been the average length of time to fill these positions so far this year?
  ☐ Less than 30 days
  ☐ 30-60 Days
  ☐ 60-90 Days
  ☐ 3-6 Months
  ☐ 6-9 Months
  ☐ 9-12 Months
  ☐ 12-18 Months
  ☐ More than 18 Months

* For these difficult to fill positions, were they filled by:
Position was filled by outsourcing
- Filled by candidate in the Triad
- Filled through candidate relocation outside the Triad
- Position has not yet been filled

* Which of the following potential future work skills are most likely to be required for tomorrow's best jobs in your company?:
- Cognitive Load Management - the ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques
- Computational Thinking - the ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning
- Creative Digital Literacy - the ability to effectively and critically navigate, evaluate and create information using a range of digital technologies
- Cross-Cultural Competency - the ability to operate in different cultural settings
- New Media Literacy - the ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication
- Novel and Adaptive Thinking - proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based
- Social Intelligence - the ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions
- Transdisciplinarity - literacy in and ability to understand concepts across multiple disciplines
- Virtual Collaboration - the ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team
- Other

* Please indicate statements which describe your organization (check all that apply):
- Our organization provides formal on-the-job training for new employees
- Our organization provides skill upgrades and retraining for current employees
- Our organization currently provide funds to help employees and new hires access training
- Our organization is seeking ways to provide funds to help employees access training

* Has your company utilized any workforce or training programs provided through the Guilford County Workforce Development Board?
- Yes
- No

* Would you like to learn more about workforce development services through Guilford County? (Please note: this survey will not be used for marketing purposes. Rather, we are interested in general levels of interest.)
- Yes
- No

* Has your company utilized any job training programs provided through the community college system?
Would you like to learn more about job training through the community college system? (Please note: this survey will not be used for marketing purposes. Rather, we are interested in general levels of interest.)

Is there anything else you would like to share about your workforce issues that would help us better understand the competitive environment in which you are operating?

* Indicates Response Required
REFERENCES


