AMAZON'S FEEDBACK

CHARLOTTE
USA.

SECTION I

I. AMAZON'S METRICS

Amazon evaluated each market on 34 metrics. During a brief conversation with a top Amazon official, Charlotte USA's submission received high praise on several aspects. The overall quality of the presentation and general approach of the submission was cited as a strong point, such that the representative shared the proposal with the executive team. The creativity and diversity displayed in Charlotte USA's submission was also celebrated. Amazon commented that the submission provided a comprehensive perspective of our market. The overall business climate of the Charlotte market also ranked highly. The Charlotte Regional Partnership did request feedback on two additional variables: public transportation/infrastructure and our airport – both were viewed favorably. From a tech talent perspective, Charlotte's tech growth received high marks. However, the Amazon representative, remarked that Charlotte's pool of tech talent is lacking compared to other markets.

II. ANALYSIS OF CHARLOTTE'S CURRENT POOL OF TECH TALENT

National real estate firm CBRE's 2017 Tech Talent scorecard is a comprehensive analysis of labor market conditions, cost and quality for highly skilled tech workers in the US and Canada. According to this report, Charlotte ranked 26th on a list of top ranked tech talent markets.

Depending on how tech occupations are defined, Charlotte's existing tech talent pool is approximately 47,150 (Figure 1). According to the CBRE report, the average tech talent pool of Amazon's candidate cities is more than 105,000 (Figure 2).

Further analysis done by the Charlotte Chamber corroborated the CBRE analysis. Given Charlotte's relatively small tech talent pool, the submission to Amazon relied heavily upon recent and future

II. ANALYSIS OF CHARLOTTE'S CURRENT POOL OF TECH TALENT CONTINUED

growth in tech occupations. To demonstrate this key metric, the submission highlighted Charlotte's standing as the #1 market for tech talent growth (CBRE) (Figure 3). In addition, Charlotte has an average time to fill rate for open software developer jobs of 37 days. The average among major metros surveyed is 49 days (Figure 4).

In CBRE's analysis of tech talent quality, Charlotte's quality is ranked "good." At least 14 of Amazon's candidate cities ranked "very high" for quality (Figure 5). According to data from the National Center for Education Statistics and highlighted in the CBRE report, Charlotte ranks #32 out of 40 markets by number of tech degrees awarded. Only

II. ANALYSIS OF CHARLOTTE'S CURRENT POOL OF TECH TALENT CONTINUED

two of Amazon's candidate cities ranked lower (Figure 6). In light of this, the regional proposal emphasized the proximity of leading universities in neighboring states. Further, the proposal included the support of industry leaders on their experiences in attracting and retaining tech talent.

In development of Charlotte USA's submission to Amazon, existing tech talent was a known obstacle. The proposal emphasized areas around tech talent where Charlotte is strongest, especially its rapid growth.

III. FUTURE OPTIMISM

Despite Charlotte not being a candidate city for Amazon, there is much reason for future optimism. While Charlotte's existing tech talent has room for growth, many companies considering investment in the region are confident the talent pool meets or exceeds their needs. Additionally, Charlotte continues to be a destination of choice for headquarters and large expansions and relocations. Just this past year All State made one of the largest announcements in North Carolina's history. The company announced plans to bring 2,250 jobs to Charlotte. NN, Inc. announced plans to relocate their headquarters form Johnson City, TN to Charlotte in a move that will bring another 200 high-paying jobs to the area.

III. FUTURE OPTIMISM

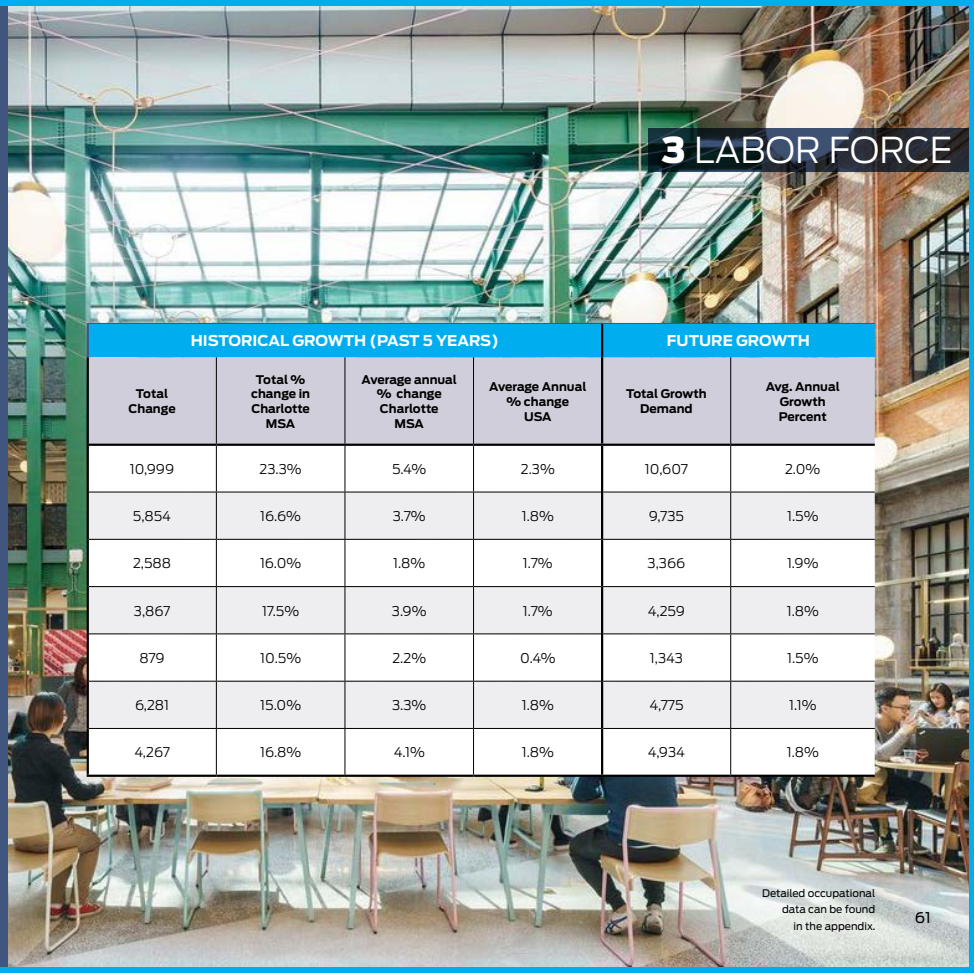
Now more than ever, the Charlotte region is well-positioned to capitalize on future tech opportunities because of valuable lessons learned from the submission to Amazon. The collaborative nature of this project facilitated an awareness and urgency in addressing obstacles to success across the Charlotte region. New partnerships have been formed and additional resources have been identified which make our region more competitive. The data and information gleaned from this process will be valuable well-beyond a one-time use.

FIGURE 1

Summary of Amazon's occupations of interest.

	OVERVIEW				
TITLE	Employment	Average Annual Wages[1]	Location Quotient	Unemployment	Unemployment Rate
IT	47,149	$94,000	1.17	1,228	2.7%
EXECUTIVE & MANAGEMENT	35,212	$147,400	1.10	614	1.8%
ACCOUNTING & FINANCE	16,167	$81,800	1.22	395	2.5%
SALES & MARKETING	22,160	$75,500	1.22	628	2.9%
LEGAL	8,363	$111,200	0.80	87	1.1%
ADMINISTRATIVE	41,917	$43,000	1.00	1,588	3.8%
OPERATIONS & HR	25,403	$82,600	1.15	907	3.6%

Source: JobsEQ®
Data as of 2017 Q2 unless noted otherwise
Note: Figures may not sum due to rounding.
1. Occupation wages are as of 2016 and should be taken as the average for all Covered Employment
2. Data represent found online ads active within the last thirty days in any zip code intersecting or within the selected region; data represents a sampling rather than the complete universe of postings.



	HISTORICAL GROWTH (PAST 5 YEARS)				FUTURE GROWTH	
Total Change	Total % change in Charlotte MSA	Average annual % change Charlotte MSA	Average Annual % change USA	Total Growth Demand	Avg. Annual Growth Percent
10,999	23.3%	5.4%	2.3%	10,607	2.0%
5,854	16.6%	3.7%	1.8%	9,735	1.5%
2,588	16.0%	1.8%	1.7%	3,366	1.9%
3,867	17.5%	3.9%	1.7%	4,259	1.8%
879	10.5%	2.2%	0.4%	1,343	1.5%
6,281	15.0%	3.3%	1.8%	4,775	1.1%
4,267	16.8%	4.1%	1.8%	4,934	1.8%

Detailed occupational data can be found in the appendix.

Source: Charlotte USA Submission to Amazon

FIGURE 2

FIGURE 3: TECH TALENT LABOR POOLS (2016)

Large Tech Talent Markets (>50,000 Labor Pools)

Market	Tech Talent Total	Percent Change[1]	by Volume[2]	Concentration[3]
SF Bay Area, CA	328,070	49.9%	109,280	10.3%
New York, NY	246,180	32.9%	60,962	3.7%
Washington, D.C.	243,360	9.6%	21,330	7.9%
Toronto, ON	212,500	31.8%	51,300	8.0%
Dallas/Ft. Worth, TX	161,150	33.4%	40,310	4.7%
Chicago, IL	143,190	32.8%	35,370	3.9%
Seattle, WA	136,910	33.4%	34,260	8.6%
Atlanta, GA	133,810	47.6%	43,180	5.2%
Los Angeles, CA	126,730	19.0%	20,230	3.0%
Boston, MA	115,560	11.4%	11,790	6.4%
Houston, TX	97,550	31.4%	23,320	3.3%
Minneapolis, MN	95,220	25.5%	19,340	5.0%
Phoenix, AZ	83,140	33.5%	20,870	4.3%
Detroit, MI	78,510	40.7%	22,710	4.1%
Philadelphia, PA	77,700	27.1%	16,550	4.1%
Denver, CO	77,310	29.0%	17,370	5.5%
Baltimore, MD	72,710	35.2%	18,940	5.4%
Austin, TX	68,810	28.3%	15,170	7.1%
Orange County, CA	68,220	23.2%	12,850	4.4%
San Diego, CA	66,340	27.7%	14,380	4.8%
Vancouver, BC	65,100	36.8%	17,500	5.7%
Raleigh-Durham, NC	60,900	51.3%	20,660	6.9%
Newark, NJ	52,600	16.5%	7,457	4.5%
St. Louis, MO	52,190	7.9%	3,830	3.9%
Kansas City, MO	51,770	39.1%	14,540	5.0%
Portland, OR	50,880	40.4%	14,650	4.5%

Small Tech Talent Markets (<50,000 Labor Pools)

Market	Tech Talent Total	Growth Rate[1]	by Volume[2]	Concentration[3]
Charlotte, NC	49,830	77.1%	21,690	4.3%
Columbus, OH	48,230	12.9%	5,510	4.7%
Tampa, FL	45,340	55.3%	16,140	3.6%
Pittsburgh, PA	42,130	23.9%	8,140	3.7%
Sacramento, CA	39,430	25.3%	7,970	4.3%
Cincinnati, OH	36,450	21.0%	6,330	3.5%
Orlando, FL	35,320	45.0%	10,960	3.0%
Indianapolis, IN	35,010	42.3%	10,400	3.5%
Cleveland, OH	32,120	18.3%	4,980	3.1%
Salt Lake City, UT	31,750	45.3%	9,900	4.7%
Milwaukee, WI	30,810	21.1%	5,370	3.7%
San Antonio, TX	30,510	32.5%	7,480	3.1%
Long Island, NY	29,870	24.0%	5,790	2.3%
Virginia Beach, VA	27,660	16.9%	3,990	3.7%
Nashville, TN	27,270	43.5%	8,270	3.0%
Richmond, VA	24,940	28.8%	5,570	3.9%
Hartford, CT	24,620	17.1%	3,590	4.2%
Miami, FL	24,180	46.8%	7,710	2.1%
Madison, WI	23,350	51.2%	7,910	6.1%
Ft. Lauderdale, FL	22,370	37.2%	6,060	2.8%
Rochester, NY	21,510	17.8%	3,250	4.2%
Omaha, NE	20,780	25.6%	4,240	4.3%
Jacksonville, FL	19,020	41.0%	5,530	2.9%
Oklahoma City, OK	18,970	46.6%	6,030	3.1%

[1] 2011-2016; [2] 2011-2016; [3] 2016.

Source: U.S. Bureau of Labor Statistics (Metro Area) April 2017; Statistics Canada (Metro Area), 2017.

Source: CBRE Scoring Tech Talent in North America 2017

FIGURE 3

Source: Charlotte USA Amazon Submission

FIGURE 4

BEST TIME-TO-FILL RATE
for software-developer job openings among major MSAs.

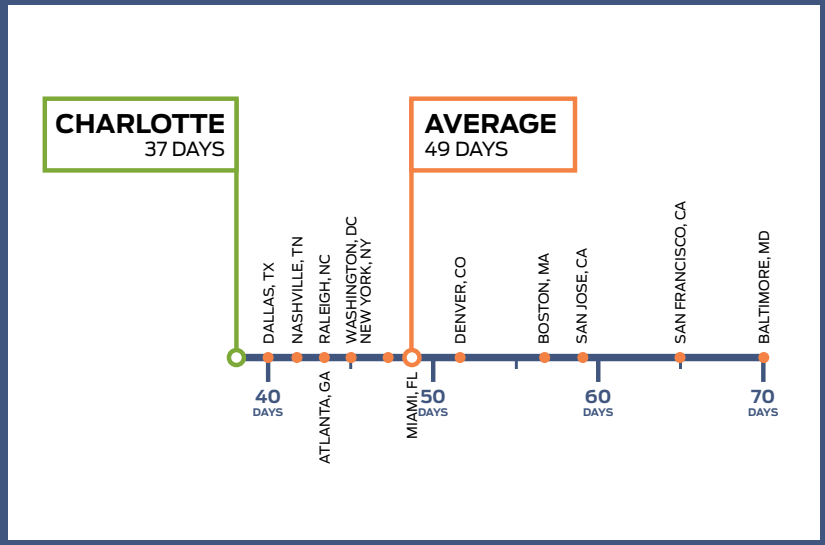
BURNING GLASS

24% PRIVATE-SECTOR
job growth since 2010.

US BUREAU OF LABOR STATISTICS

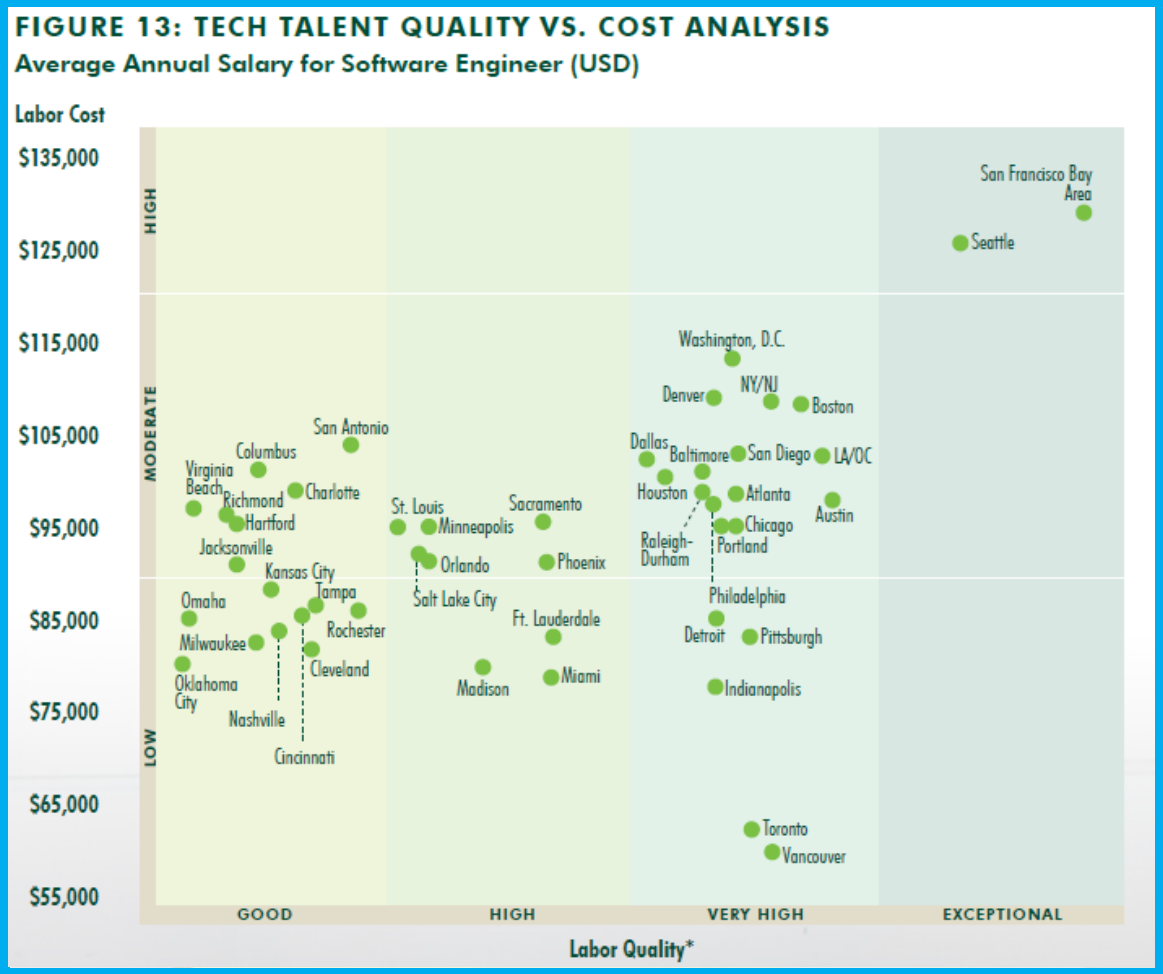
72% HIGHER
concentration of Computer Systems Analysts than the national average JOBSEQ

Days to fill software developer openings by city:



Source: Charlotte USA Amazon Submission

FIGURE 5



Source: CBRE Scoring Tech Talent in North America 2017

FIGURE 6

FIGURE 7: WHERE ARE TALENT WORKERS COMING FROM AND WHERE ARE THEY HEADED?

Market	Tech Degrees (2011-2015)*	Tech Jobs Added (2012-2016)*	Brain Gain or Drain?
SF Bay Area, CA	28,804	109,280	80,476
Dallas/Ft. Worth, TX	17,750	40,310	22,560
Seattle, WA	12,043	34,260	22,217
Atlanta, GA	22,634	43,180	20,546
Charlotte, NC	4,639	21,690	17,051
Houston, TX	8,578	23,320	14,742
New York, NY	60,678	74,209	13,531
Kansas City, MO	3,192	14,540	11,348
Tampa, FL	5,808	16,140	10,332
Portland, OR	7,563	14,650	7,087
Raleigh-Durham, NC	13,738	20,660	6,922
Indianapolis, IN	3,514	10,400	6,886
Austin, TX	9,660	15,170	5,510
Minneapolis, MN	14,138	19,340	5,202
Nashville, TN	3,337	8,270	4,933
Chicago, IL	36,459	40,740	4,281
Miami, FL	9,817	13,770	3,953
Jacksonville, FL	1,612	5,530	3,918
San Antonio, TX	4,005	7,480	3,475
Denver, CO	13,918	17,370	3,452
Oklahoma City, OK	3,170	6,030	2,860
Richmond, VA	2,964	5,570	2,606
Orlando, FL	8,806	10,960	2,154
San Diego, CA	12,382	14,380	1,998
Sacramento, CA	5,977	7,970	1,993
Detroit, MI	21,155	22,710	1,555
Omaha, NE	2,916	4,240	1,324
Madison, WI	6,695	7,910	1,215

Market	Tech Degrees (2011-2015)*	Tech Jobs Added (2012-2016)*	Brain Gain or Drain?
Hartford, CT	5,150	3,590	-1,560
Columbus, OH	18,898	16,820	-2,078
St. Louis, MO	6,485	3,830	-2,655
Virginia Beach, VA	6,828	3,990	-2,838
Phoenix, AZ	23,969	20,870	-3,099
Salt Lake City, UT	13,155	9,900	-3,255
Philadelphia, PA	19,891	16,550	-3,341
Rochester, NY	8,953	3,250	-5,703
Pittsburgh, PA	17,795	8,140	-9,655
Los Angeles, CA	45,968	33,080	-12,888
Washington, D.C.	56,623	40,270	-16,353
Boston, MA	31,400	11,790	-19,610

Source: CBRE Research, U.S. Bureau of Labor Statistics, The National Center for Education Statistics (Region).

Los Angeles Metro Area includes Orange County
New York Metro Area includes Newark and Long Island
Miami Metro Area includes Ft. Lauderdale
Columbus Metro Area include Columbus, Cleveland and Cincinnati
Bay Area Metro Area includes San Francisco, Oakland and Silicon Valley
Chicago Metro Area includes Chicago and Milwaukee
Washington D.C. Metro Area includes Baltimore

*Tech degrees cover the most recent five-year period available (2011-2015) and tech jobs added cover the time period reflecting when most graduates would be counted in employment figures (2012-2016).

Source: CBRE Scoring Tech Talent in North America 2017