



CBRE RESEARCH

# 2020 Scoring Tech Talent + Labor Analytics

Creating Customized Location Strategies  
for Tech Companies

**CBRE**



# Creating an actionable and sustainable location strategy for tech employers

Developing a talent-based location strategy is typically an exercise that optimizes between labor quality and cost. For tech employers in particular, access to highly trained and experienced people is both their greatest competitive advantage and cost center. CBRE Labor Analytics contributed to the 2020 “Scoring Tech Talent” report by creating an index that scores markets based on the quality of their tech labor force. This measure is based on the number and concentration of Software Engineers with three or more years of experience who graduated from a top 25 Computer Science program in North America.

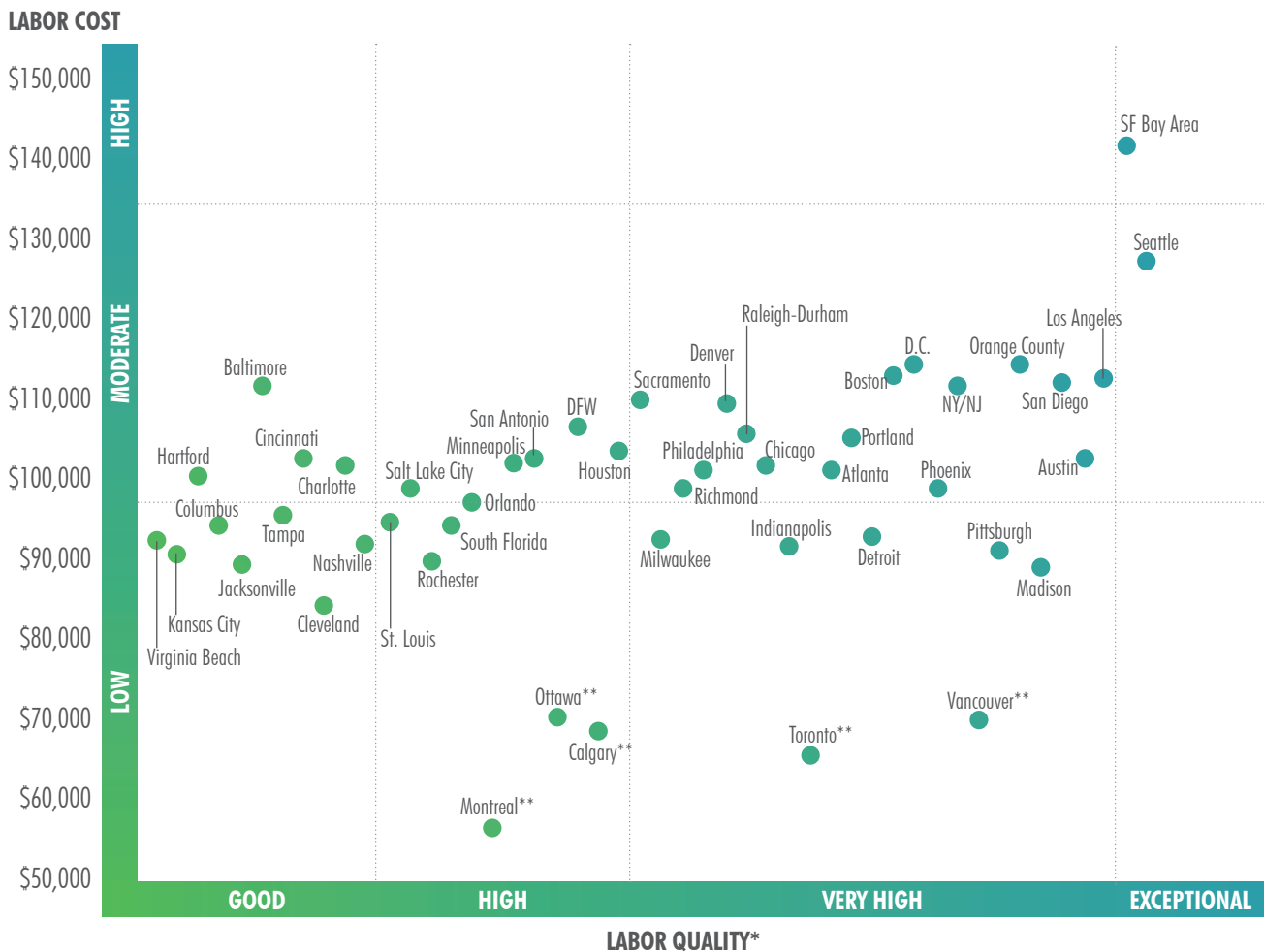
As demonstrated in Figure 1, there’s often a direct relationship between a market’s talent quality and its salary levels. When Labor Analytics assists tech clients with their site selection for new operations, we first help companies determine a preferred positioning along this continuum based on their unique hiring parameters, business objectives, and risk tolerance.

***In addition to assessing the quality vs. cost tradeoff, there are numerous additional metrics that can be critical to a thoroughly executed location strategy including:***

- ***Competitive Landscape and Hiring/Retention Risk***
- ***Market Scalability and Longevity (market forecasting)***
- ***Demonstrated Workforce Diversity***
- ***New Talent Pipeline (i.e., graduate and talent migration trends)***
- ***Qualitative Local Workforce Characteristics (obtained through real-time primary research)***

FIGURE 1

# Tech Talent Quality vs. Cost Analysis



Source: U.S. Bureau of Labor Statistics, April 2019, Canada Statistics April 2019, U.S. News & World Report, CBRE Labor Analytics, CBRE Research, 2020.

\*Concentration of software engineers/developers with 3+ years of experience that have earned degrees from the top 25 computer information science programs in the U.S. and top 5 in Canada as rated by U.S. News & World Report, 2020.

\*\*Data in US\$.

Labor Cost Equals Average Annual Salary for Software Engineer US\$

# Identifying a Preferred Market for AI Engineers

## HYPOTHETICAL TECH TALENT LOCATION STRATEGY

Creating a location strategy based on tech talent is driven by a customized collection of metrics and research that will be unique to each company. To better understand the intricacies of this approach and how it can uncover stark differences between seemingly similar markets, we've presented a hypothetical market comparison below based on a recent client requirement.

Even though the four Midwestern markets shown below scored similarly to each other in Figure 1 on overall quality vs. cost metrics, when presented with a more specific hypothetical client requirement noticeable differences become apparent. By focusing on a specific tech skill set/job title (in this case, Artificial Intelligence Engineers) and solving for other factors including competition (hiring/attrition risk), wage inflation (future cost risk), growth of talent pool, etc. we are able to identify strengths, challenges, and risks that may have otherwise gone unnoticed. This hypothetical exercise demonstrates how executing a customized location strategy with CBRE Labor Analytics can help to uncover off-the-radar opportunities that will support each client's unique business and hiring objectives.

***In this scenario, Milwaukee is likely the preferred market for this client given that the company expects to hire a relatively smaller headcount (50 engineers). Here they will find the most favorable conditions to become an "employer of choice" where they can tap into a fast growing pool of specialized talent with a lower cost structure (both today and in the future).***

### Milwaukee's advantages:



Low Talent Costs  
with Limited  
Wage Inflation  
*(lower risk)*



Fastest AI  
Skill Growth  
*(Milwaukee was top in the  
US over the last 12 months)*



Strong  
Graduate  
Pipeline



Least  
Competitive Risk  
*(lowest turnover and  
hiring competition)*



Greatest  
Gender Parity  
Among the  
Four Markets



FIGURE 2

# Objectives

## HYPOTHETICAL CLIENT

- Identify location for new office in the Midwestern US
- 50 Software Engineers with Artificial Intelligence skills
- Access to high quality talent in a lower cost market
- Minimize competitive hiring/attrition risk

METRIC AI ENGINEER	CHICAGO ILLINOIS	DETROIT MICHIGAN	INDIANAPOLIS INDIANA	MILWAUKEE WISCONSIN
<b>Skill Density</b> Per 1,000 Labor Force	1.2	1.1	0.6	0.7
<b>Skill Growth</b> Annual Change in Talent Pool	69%	50%	59%	93%
<b>Labor Pipeline</b> CS Graduates as % of Total	4.8%	4.2%	4.0%	4.6%
<b>Labor Cost</b> Median Salary, 3yr Experience	\$106,293	\$101,290	\$94,848	\$97,424
<b>Wage Inflation</b> 3-YR Salary Growth Rate	10.4%	8.3%	10.8%	9.7%
<b>Hiring Risk</b> Candidates per Active Job Posting	41.6	27.4	30.1	80.9
<b>Turnover Risk</b> Annual Attrition Rate	30%	29%	28%	24%
<b>Gender Gap</b> Diff Male vs Female	60%	64%	62%	60%
<b>OPPORTUNITY RANKING</b>	#2	#3	#4	#1

# Contacts

Visit the [Scoring Tech Talent](#) website for an interactive report overview.

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