



# Oak Ridge Business Climate Survey Review

2021

## Summary of Oak Ridge Business Climate Surveys

Three studies have been conducted in recent years to assess the Oak Ridge and Greater Knoxville business climates. These analyses were performed by [Boyette Strategic Advisors](#) during the 2012 [Innovation Valley Initiative](#), by the [Knoxville Chamber of Commerce](#), and a 2021 Greater Knoxville survey performed by [TechStars](#). This document presents a brief overview of these studies' common findings as they pertain to the business environment of Oak Ridge.

### Significant Industry Partners

Each study identifies three major regional employers as the primary drivers of job growth, new technology, and talent pipeline: [Oak Ridge National Laboratory](#), [University of Tennessee](#), and the [Tennessee Valley Authority](#).<sup>1</sup>

From the TechStars report, “the university and Oak Ridge [National Laboratory] offer access to a lot of hardware that is not available in any other location in the country.”<sup>2</sup> The study credits these unique capabilities as attractors for tech startups and the origin of many existing diverse technology firms within the region.<sup>3</sup> The same report credits ORNL for putting Oak Ridge on an international map, granting the city prestige and recognition for its historic and cutting-edge research endeavors.<sup>4</sup> Furthermore, TechStars identifies [ORNL's Innovation Crossroads](#) program as a valuable support organization for prospective startup firms.<sup>5</sup>

One other major employer that is not really covered by the reports is [Y-12](#). Y-12 employs a significant number of talented workforce members and should be noted as another driver of growth and development of the local talent pipeline.

### Workforce/Talent

All three studies highlight what TechStars refers to as a “deep pool of technical talent” within the region<sup>6</sup>, stemming in particular from the ORNL/UT pipeline. Also, each study praised the diversity that exists within the local workforce. A respondent to the Innovation Valley survey was surprised by the large number of PhDs in the region<sup>7</sup>, and the Knoxville Chamber cites the 19,000 annual graduates from UT as another major source of skilled labor.<sup>8</sup>

Additionally, a respondent to the TechStars study commented that “the tech talent here is less expensive than in other cities<sup>6</sup>,” potentially lowering operating costs for regional employers, even in comparatively high-paying technical fields.

## Cost of Living/Quality of Life

Oak Ridge and the Greater Knoxville Region are unanimously praised by the studies for their high quality of life and low cost of living.<sup>9</sup> Per the Knoxville Chamber of Commerce, the area is 17.8% below the national cost-of-living average, with numerous outdoor recreational opportunities within the Great Smoky Mountains National Park, the area's waterways, and other camping and hiking outlets.<sup>8</sup>

Per the TechStars report, "these lower costs can make it easier to succeed as a tech entrepreneur..." allowing a startup company "more runway with the dollars they have,"<sup>10</sup> compared to expensive tech hubs like San Francisco. The low costs of living offer further advantage "when applying for national grants and competitions where the cash prizes are set at levels designed to support businesses in larger tech hubs," TechStars concludes.<sup>10</sup>

## Conclusions

Each survey finds Oak Ridge to be a unique center of exceptional talent and capabilities for an attractively low cost when compared to other tech innovation hubs like San Francisco. Both the TechStars report and the Innovation Valley survey stress the need to further leverage the strengths of UT and ORNL to continue driving innovation and support the growth of startup firms.<sup>11</sup> These organizations are highlighted by all three studies as the economic backbones of the region.

## Annotations

**Oak Ridge National Laboratory** is the largest U.S. Department of Energy science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy and security. The Laboratory's diverse capabilities span a broad range of scientific and engineering disciplines, enabling it to explore fundamental science challenges and to carry out the research needed to accelerate the delivery of solutions to the marketplace.

**The Tennessee Valley Authority** is a corporate agency of the United States that provides electricity for business customers and local power companies serving 10 million people in parts of seven southeastern states. TVA receives no taxpayer funding, deriving virtually all of its revenues from sales of electricity. In addition to operating and investing its revenues in its electric system, TVA provides flood control, navigation and land management for the Tennessee River system and assists local power companies and state and local governments with economic development and job creation.

**The University of Tennessee** is the state's oldest and largest public higher education institution, tracing its beginnings to the founding of Blount College in Knoxville in 1794, two years before Tennessee became a state. The UT System was formed in 1968. The UT System has a presence in each of Tennessee's 95 counties. Through the combined force of education, research and outreach, the University serves students, business and industry, schools, governments, organizations and citizens statewide.

<sup>1</sup> List of major Greater Knoxville organizations from TechStars report.

**#1. Large Research Institutions.** The University of Tennessee was the most commonly mentioned reason it was great to start a tech business in the Knoxville metro area. The Tennessee Valley Authority and Oak Ridge National Lab were also mentioned frequently as the graphic on the next page illustrates. As one founder noted “The university and Oak Ridge offer access to a lot of hardware that is not available in any other location in the country.” **Other leaders cited the fact that local research institutions collectively spend billions of dollars on cutting-edge research in many different fields.**

<sup>2</sup> TechStars summary of valuable and unique facilities in Oak Ridge.

Several interviewees also noted that many of the historic successes in the local technology industry, such as Ortec and CTI, emerged from research generated at these local research and innovation centers. They have also helped to attract other assets to the region, such as the Electric Power Research Institute, which has expanded its presence in East Tennessee due to the proximity to the Tennessee Valley Authority.

<sup>3</sup> TechStars summary of local companies that have arisen due to research facilities in the region.

The benefits of these institutions extend beyond the innovations they directly produce. In many cases, they have helped to bolster the reputation of the region. “ORNL has been a benefit to recruit people because it puts Knoxville on the international map,” a successful founder explained. “Whenever we are trying to recruit a scientist, they know about Knoxville because they have been involved with Oak Ridge or because someone they know has worked there in the past.”

<sup>4</sup> TechStars on ORNL’s international reach.



### #5. Existing Support Organizations for Startups.

In the last decade, a number of organizations and programs have been created to support entrepreneurs who lead companies at the “startup” stage, meaning they are in the process of developing their initial business plan and legally incorporating their business, or they are in the early years of growth with only a handful of employees. These new organizations and programs include the Knoxville Entrepreneur Center, the Anderson Center at the University of Tennessee, Innovation Crossroads at Oak Ridge, and the Propel program at the Knoxville Chamber of Commerce.

These initiatives have all been designed and launched by local stakeholders. The startup founders who have participated in them report they have been very satisfied with the quality of the support they have received to help them get their companies off the ground. “Entities like the Knoxville Entrepreneur Center are an invaluable resource for startups in Knoxville,” one early-stage entrepreneur reported. “I’ve appreciated how they’ve tried to bring together local entrepreneurs to learn from one another and help with networking and funding opportunities.”

**Together, these initiatives have helped to establish a sense of broad-based support for new companies.** As one founder noted, “The Knoxville startup community is small but very tight-knit and supportive. You can very quickly meet everyone in the community and build a network to help your company.”

The advantages represented in the five areas listed above provide the Knoxville region’s technology companies with a strong foundation that is based primarily on factors that are unlikely to change, such as the weather and topography, and the presence of federally funded institutions. Each is likely to continue to help shape the local tech entrepreneurship community in ways that make it distinct from those found in other cities.

<sup>5</sup> TechStars on support orgs for startup firms.

**#4. A Deep Pool of Technical Talent.** The primary resource today's technology companies need is talent. This is another area where many local founders believe the region excels. One entrepreneur spoke about the region's "good talent pool for technologists and operations specialists," while others linked the quality of potential employees to their cost. **"The tech talent here is less expensive than in other cities," a successful founder explained. "If you invest in training them they are loyal and less likely to go work somewhere else."**

Highly skilled talent is good for more than just the technology industry. A number of different research studies have found the proportion of workers with bachelor's and graduate degrees is closely related to the productivity of economic regions and the development of high-paying industries.<sup>4</sup>

<sup>6</sup> TechStars on local talent.

- Surprised by the creativity here
- The number of PhD's was a surprise

<sup>7</sup> Innovation Valley respondents on the local workforce.





<sup>8</sup> Knoxville Chamber quick stats on the educational pipeline; area quality of life.

**#2. Excellent Quality of Life.** News organizations, such as U.S. News & World Report, have consistently ranked Greater Knoxville as one of the top places to live in the United States.<sup>1</sup> The local entrepreneurs and leaders involved with supporting technology companies would seem to agree with this assessment.

**“Knoxville is a wonderful place to live. We have mountains and lakes nearby, and the weather is temperate,” according to one startup founder, echoing the sentiments of many others interviewed for this project.**

In addition to the nearby Smoky Mountains, many respondents cited other natural amenities, such as the large number of parks in the city of Knoxville. Others discussed the ability to participate in hiking, cycling, water sports, and other outdoor activities.

A number of founders also highlighted the benefits of living somewhere with many of the benefits of a city — such as major corporations and a large university — but without the drawbacks of larger metropolitan areas, including traffic. They

also spoke about the sense of community and ties to family members in the area.

These types of factors are very important for creating an environment that is conducive to the growth of entrepreneurial companies. Research conducted among leaders of the fastest growing companies in the country has found that “entrepreneurs at fast-growing firms usually decide where to live based on personal connections and quality of life factors many years before they start their firms.”<sup>2</sup> The fact that the Knoxville region excels in these areas is likely to continue to benefit the local technology sector.

**#3. Relatively Low Cost of Living.** Though East Tennessee is a great place to live, local tech entrepreneurs report the benefits it provides come at a very reasonable price. “When we came here, we just planned to stick around for a few years and then leave, but my wife and I just bought a house here and plan to stay. It is so much more cost effective to build a business here than in places like Boston or New York City,” a local tech founder reported.

<sup>9</sup> TechStars on quality of life.

**These lower costs can make it easier to succeed as a tech entrepreneur.** “The lower cost of living allows a startup company more runway with the dollars they have,” one tech CEO noted. Others explained that since the cost of operating their companies in the Knoxville area is less than what it would be in cities like San Francisco, it offers an advantage when applying for national grants and competitions where the cash prizes are set at levels designed to support businesses in larger tech hubs. In Knoxville, the dollars that entrepreneurs raise or win through competitions can be stretched much further.

<sup>10</sup> TechStars on lower CoL equating to lower startup costs.

- Make the connection to ORNL – help us make the argument on how that makes sense from a business perspective – help us make the business case

<sup>11</sup> Innovation Valley on ORNL significance.