



2022

City of Carlsbad Business Report

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Executive Summary

Introduction

The 2022 Carlsbad Business Report is an update to the biennial survey of businesses in the City of Carlsbad. This historical data provides an understanding of specific attributes of Carlsbad's business climate, including workforce and hiring needs, access to clients and customers, and permitting and regulatory concerns, among other issues for Carlsbad's business community. In addition to business survey data, the report also includes an update to Carlsbad's key industry clusters, highlighting employment trends and wage data for each of the five industry clusters.

The 2022 Carlsbad Business Report includes survey data that was collected amid the global Coronavirus pandemic. As such, the report includes a special examination of the pandemic impacts on Carlsbad's businesses. This includes workforce impacts, current and projected recovery trends, and status of remote working. The research objectives for this study were to:

1. Identify workforce and hiring challenges for Carlsbad businesses
2. Profile new business growth and investment activity in Carlsbad
3. Examine Carlsbad's business climate, including strengths and challenges to conducting business operations in the City of Carlsbad
4. Understand the impacts of the Coronavirus pandemic on the businesses and the workforce

This year's survey was completed by a total of 414 businesses in the City of Carlsbad, resulting in a margin of error of +/- 4.65% at the 95% level of confidence. Survey responses were collected in September and October 2021. For more information on the survey methodology, please refer to Appendix A of this report.

Key Findings

OVERALL FINDINGS

Quality of life continues to be an important facet that draws businesses to locate their operations in Carlsbad. In 2019 and 2021, about three in 10 surveyed firms indicated that the quality of life in Carlsbad is one of the main reasons they located their company in Carlsbad. This response remained one of the top three responses in both years, along with the proximity to customers, collaborators, and vendors and the fact that the founders live in Carlsbad.

Businesses remain largely satisfied with Carlsbad’s overall business atmosphere. Roughly eight in 10 surveyed businesses (81.6%) gave the city high marks, indicating Carlsbad is either an “excellent” or “good” place to do business. This is roughly comparable to results from 2019, with a slight increase of less than half a percentage point. The proportion of businesses that rated Carlsbad as a “fair” place to do business has gone up by about five points since 2012—from 8.1% in 2012 to 13.5% in 2021.

Carlsbad businesses are most satisfied with their access to customers, vendors, and products. These business elements continue to remain in the top three in terms of satisfaction rankings. About 67 to 75% of surveyed businesses indicated they are either “very” or “somewhat” satisfied with their access to clients and customers (74.9%), ability to get products to and from their business location (68.9%), and access to relevant vendors and suppliers (66.9%).

Satisfaction with Carlsbad’s regulatory climate has increased over the last two years. In 2019, about four in ten surveyed firms (39.5%) indicated they were “very” or “somewhat” satisfied with the city’s zoning, permitting, and other local regulatory laws. This increased by almost 10 points to 49.3% of firms in 2021.

Fewer firms reported national or international customers in 2021, but there was a slight increase in regional product sourcing. Just over half of firms indicated that their customers are primarily within Carlsbad or San Diego County. The proportion of firms reporting local, regional, or national customers is largely unchanged compared to 2019. However, there were fewer firms that indicated having either national or international customers—a decline of six to seven percentage points from 2019 to 2021. With regards to suppliers and vendors, about a third (33.3%) of surveyed firms indicated that their suppliers are primarily regional, within Southern California; this represents a three-point increase compared to 2019.

2021 HIGHLIGHTS

Workforce Access & Availability

Workforce and talent availability continues to be a key concern for Carlsbad businesses. The ability to find and recruit, entry- to -mid-level employees and high-skill talent remained the bottom two in satisfaction rankings in both 2019 and 2021. In 2021, roughly 18 to 21% of surveyed firms indicated that they were either “very” or “somewhat” dissatisfied with their access to qualified talent in Carlsbad. The level of dissatisfaction with low talent availability increased by three to four percentage points between 2019 and 2021.

Difficulty finding qualified workers that meet hiring standards has increased over the last several years. Between 2019 and 2021, the proportion of firms that indicated they had either “great” or “some” difficulty finding qualified candidates increased by almost 13 percentage points, from 64.8% in 2019 to 77.5% in 2021. The number one reasons for reported hiring difficulty among surveyed was a small applicant pool or competition for workers; this was reported by 16.5% of respondents, an increase of just over one percentage point compared to 2019.

Firms exclusively seeking entry-level workers were slightly more likely to report hiring difficulty. About eight in ten firms (82.4%) that indicated they were expecting to add entry-level positions over the next 12 months reported some level of hiring difficulty, either “great” or “some”, compared to 71.4% of firms that reported they were only looking to hire for experienced positions over the next year. Of firms that indicated they were seeking a mix of both entry-level and experienced workers, 90.9% reported some level of hiring difficulty (“great” or “some”).

COVID-19 Impacts & Resilience

In general, the majority of surveyed firms indicated that COVID-19 impacted their business to some extent. About eight in ten firms (79.9%) reported that COVID-19 had negative impacts on or shut down their business. Of these firms, just under a quarter (24%) noted that COVID-19 shut down their organization, but they have since reopened. About two percent of surveyed firms reported that they shut down due to COVID-19 and have not yet re-opened. The largest group of firms (54.4%) reported that COVID-19 has somewhat impacted their organization negatively, but they did not shut down. Only about two in ten businesses (18.9%) reported that COVID-19 had little to no impact on their organization.

The majority of firms have brought back at least some of their employees that were laid off or furloughed during COVID-19. About four in ten firms (38.0%) reported that they had to lay off or furlough workers due to COVID-19 and the related stay-at-home orders. Of these firms, four in ten (42.6%) reported that they have since brought back all their employees and another

36.1% reported that they have brought back some of their employees. Roughly two in ten firms indicated that they have still not brought back any employees (19.4%).

Most businesses have either already fully recovered or expect to fully recover in the next few months. Altogether, about six in ten surveyed firms reported that they expect to either fully recover sometime in the next few months (39.7%) or that their business has already fully recovered (19.4%) from the impacts of COVID-19. Three in ten firms (30%) are uncertain of when their business will fully recover, and about one in 18 firms reported that they do not expect to fully recover as COVID-19 had a permanent impact on their business (6.1%).

The Hospitality and Tourism industry shed the most jobs during the pandemic, while Life Sciences, Cleantech, and ICT were fairly resilient. Overall, from 2018 through 2020, this industry cluster declined by 34%, losing just over 4,700 workers. Businesses in the Sports Innovation and Design industry cluster also saw the workforce shrink by roughly 16.3% or just over 350 jobs. By contrast, Life Sciences, Cleantech, and ICT all saw employment grow from 2018 through 2020, resulting in the creation of a collective 620 jobs during this time.

Despite the impacts of COVID-19, employers are optimistic about job growth over the next 12 months. Roughly four in ten surveyed businesses (37%) indicated that they expect to add more workers to their labor force over the next year. The majority of these firms are projected to hire a mix of both entry-level and experienced positions (64.5%). Just under a quarter (22.6%) expect to see growth only in senior-level or experienced positions, and 11% expect to hire entry-level positions.

New Business & Investment Activity

The proportion of new or “young” businesses in Carlsbad has seen steady increase since 2017. The 2021 survey indicated that almost four in ten (39.6%) of firms have had a business location in Carlsbad for less than five years. This represents an almost 20-point increase compared to 2017, when only 19.7% of businesses had a business location in the city for less than five years. Of the almost six percent of firms that reported they have had a business location in Carlsbad for less than one year, nearly half (47.8%) indicated they started this business in Carlsbad, 39.1% reported that they relocated to Carlsbad, and one in eight (13%) added a new location in Carlsbad.

Venture capital investments in the Life Sciences and ICT industry clusters account for the majority of dollars flowing into Carlsbad firms over the last decade. In total, Carlsbad businesses attracted \$23.36 billion in venture capital across 355 separate deals. Total investments increased by 21.6% between the three-year rolling averages of 2010 through 2012 and 2018 through 2020. Firms in the Life Sciences industry cluster represents 66% of total investments from 2010 through 2020, followed by ICT firms at 22.8% of total investment dollars.

Conclusions

Following on the heels of a global pandemic, this year's Carlsbad Business Report highlights important insights and interesting trends into the City's future world of work. In particular, three key themes emerge from this year's research: (1) workforce and talent availability; (2) long-term COVID-19 impacts; and (3) evolving industry clusters.

Access to and availability of workforce and skilled talent was a top-of-mind concern for Carlsbad businesses in 2021. Difficulty finding qualified job applicants that meet hiring standards increased significantly compared to 2019, by nearly 13 percentage points. In fact, just over a quarter of businesses reported "great difficulty" in finding qualified job applicants in this year's survey. Key talent concerns for businesses include: (a) the general lack of available talent in the region and (b) a mismatch in required technical skills, abilities, and industry knowledge. Of firms that reported hiring difficulty, roughly one in six highlighted a small applicant pool, competition, and lack of technical ability or industry knowledge to be the most significant challenges to finding qualified applicants.

The economy-wide changes imposed by the COVID-19 pandemic will also likely influence the future of how businesses search for and recruit talent. Carlsbad's business community has largely recovered from the pandemic-induced economic recession—eight in ten firms have brought back either all or some of their employees and six in ten have already fully recovered or expect to within the next few months. However, trends in this year's data suggest that the adaptations made during COVID-19 will likely continue to influence the City's future supply chain and workforce dynamics.

Between 2019 and 2021, there was a geographic shift in customer profiles and product sourcing. Carlsbad businesses indicated fewer national and international customers; there was also a decrease in national and local (within Carlsbad and San Diego County) suppliers and vendors, and an increase in regional vendors from within Southern California. At the same time, during the height of the pandemic, business closures, and social distancing measures, about six in ten firms indicated that their employees were able to work remotely. Looking ahead, the majority of employers indicated that most of their workforce will be able to work remotely even after public health orders have passed; most employers also indicated that their employees will be able to work remotely fairly frequently—at least half of the work week to nearly the entire work week. These changes to remote work access, availability, and frequency will likely impact Carlsbad business' hiring practices in the future. In particular, remote work availability could offer an expansion of the talent pool, as employers can broaden their search for qualified talent to areas outside of the region and perhaps even out-of-state.

Carlsbad's industry clusters play a vital role in the City's economic vitality. They are export-oriented, as they bring revenue in from outside the city, they are largely higher paying, with three of the five clusters providing an annual average wage above \$100,000, and they are at

least somewhat resilient, as the three clusters with higher wages all saw employment growth between 2018 and 2020, a challenging time for many businesses and industries. Over the next three to five years, the opportunities for these industry clusters are likely to evolve as Carlsbad's export-oriented businesses respond to the following trends:

- Energy generation, storage and smart grid technologies are likely to see considerable investment and change as California, the U.S., and the world transitions to a lower carbon economy. This will have a direct impact on cleantech businesses as well as more traditional industry sectors like transportation and building/construction, as transportation moves to cleaner fuels and buildings become more energy efficient.
- Technologies such as artificial intelligence, automation, machine learning, and cyber security continue to see a growing role in Information and Communications Technologies (ICT) and are also expected to grow as a supporting technology in industries such as finance, defense and aerospace, and healthcare.
- Genomics, DNA sequencing, and related RNA technologies will continue to play a growing role in medical innovation, and Carlsbad's life science firms could benefit from the continued investment and opportunities in this arena.

Carlsbad Business Profile

Overview

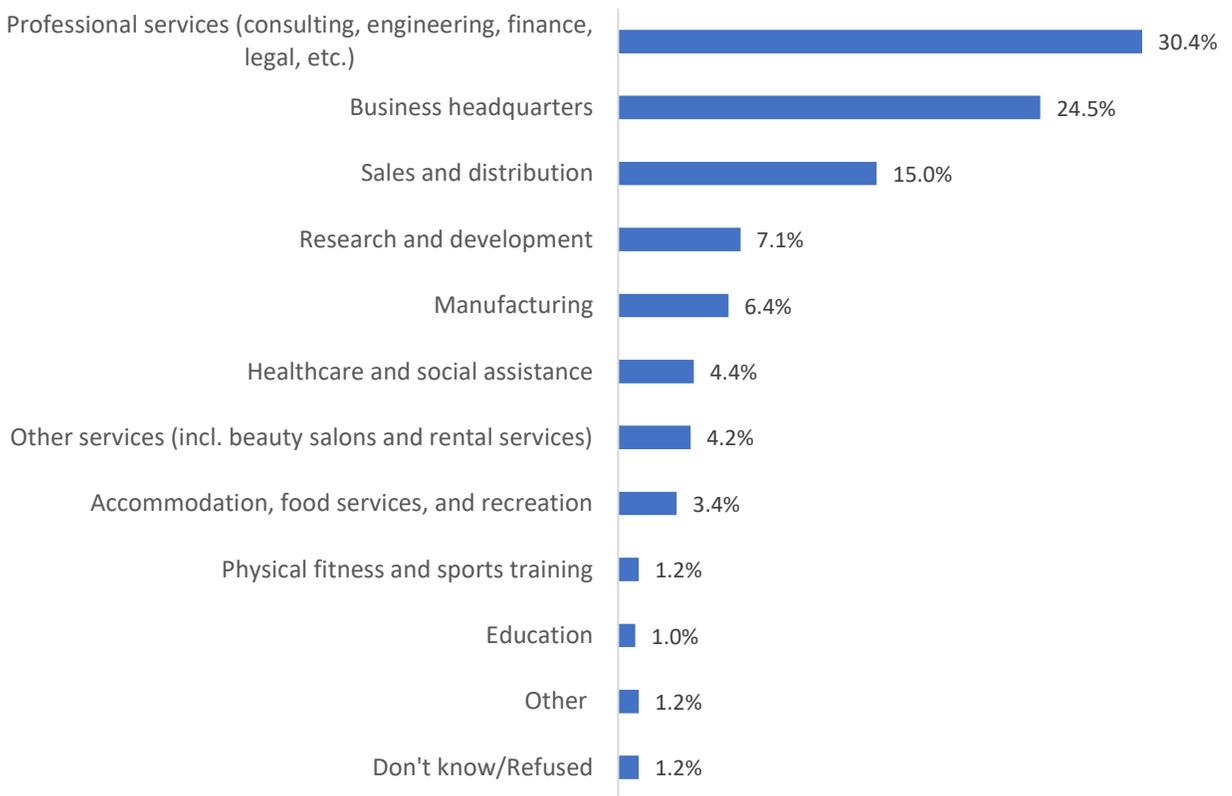
In 2021, the largest group of surveyed businesses was within the professional services industry. Just under a quarter (23.4%) of respondents indicated that their firm was most directly involved or connected to professional and business services. Healthcare firms accounted for roughly one in six respondents (16.2%), followed by retail or wholesale trade at 15.9% of respondents. The remaining industries comprised roughly 10% or less of total responses for the 2021 business survey.

FIGURE 1. SURVEYED INDUSTRIES, 2021



With regards to primary function, about three in 10 surveyed firms reported that their location’s primary function was related to professional services, such as consulting, engineering, finance, or legal services. A quarter of respondents (24.5%) indicated that their location operated as the firm’s business headquarters. Sales and distribution accounted for 15% of surveyed firms’ primary function, followed by research and development (7.1%), manufacturing (6.4%), healthcare and social assistance (4.4%), and other services (4.2%).

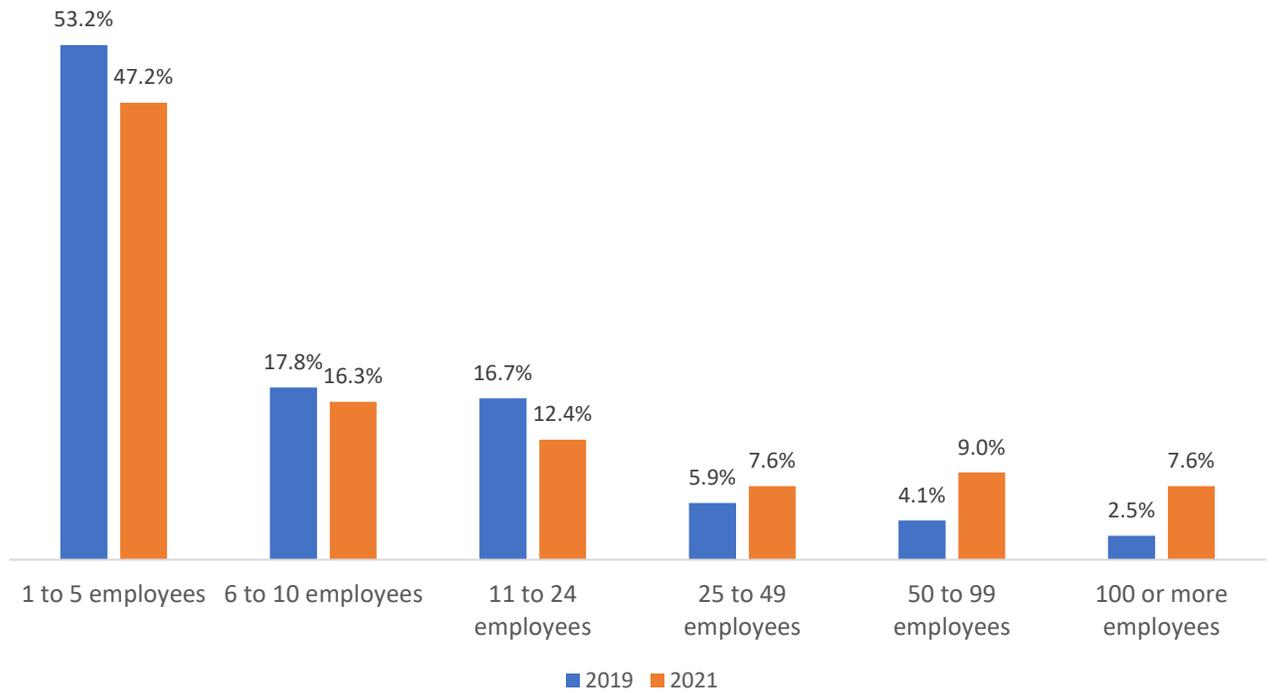
FIGURE 2. PRIMARY FUNCTION, 2021



Nearly half of all businesses surveyed in 2021 (47.1%) were small firms with one to five employees. In general, three-quarters (75.9%) of firms surveyed were smaller businesses with fewer than 25 total employees.

Compared to 2019, the number of businesses with fewer than 25 workers declined by 11.7 percentage points—from 87.6% in 2019 to 75.9% in 2021. At the same time, the proportion of larger businesses with 100 or more employees increased from 2.5% in 2019 to 7.6% in 2021.

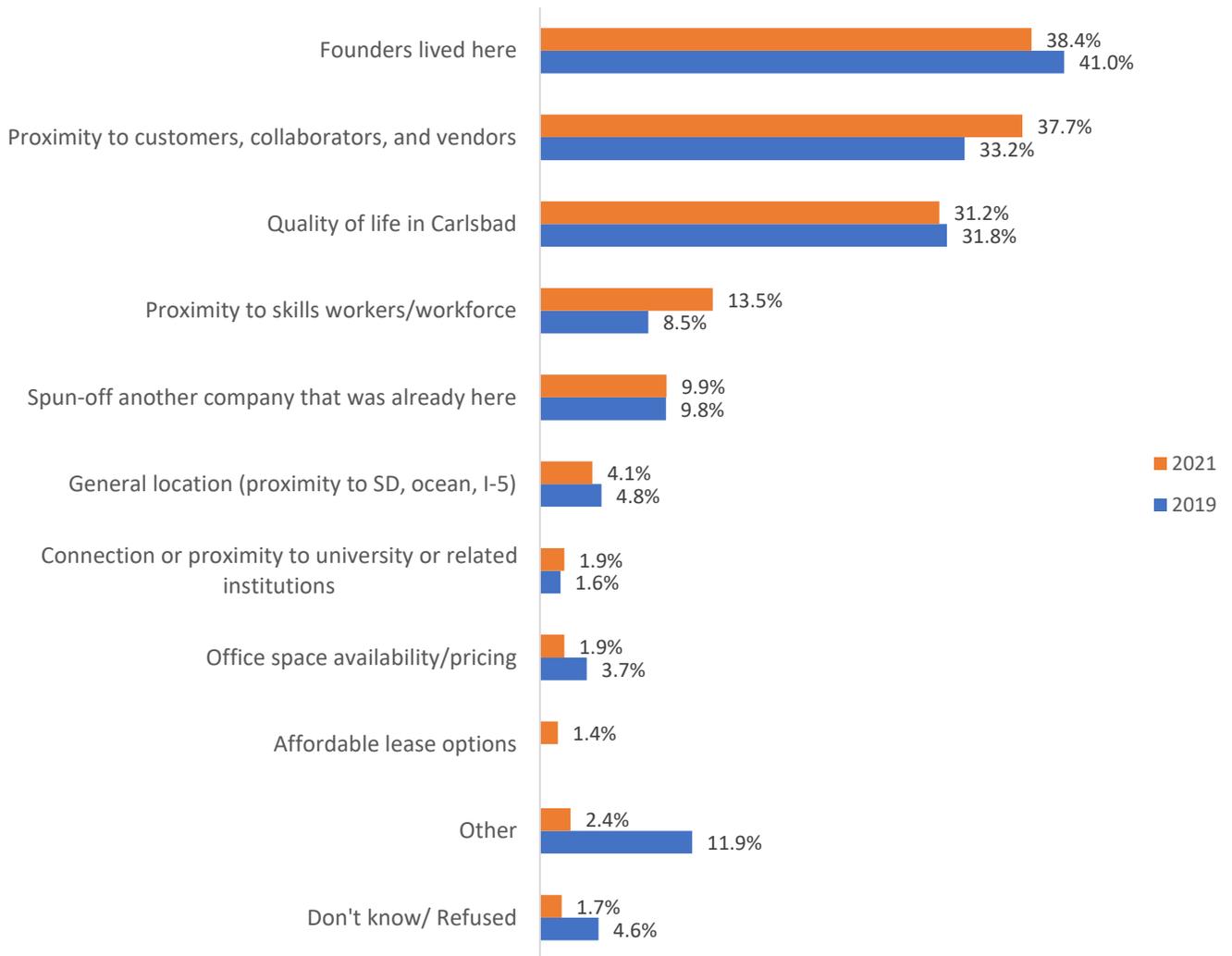
FIGURE 3. SURVEYED FIRM SIZE, 2019 & 2021



Similar to 2019, the top three reasons for businesses locating their operations in Carlsbad include: the founders live here; the proximity to customers, collaborators, and vendors; and the quality of life in Carlsbad. About three to four in 10 surveyed firms reported these as one of their main reasons for locating their business in Carlsbad.

The proportion of firms that indicated proximity to skilled workers was one of the reasons for locating their business in Carlsbad increased by five percentage points—from 8.5% in 2019 to 13.5% in 2021.

FIGURE 4. REASONS FOR LOCATING IN CARLSBAD, 2019 & 2021¹



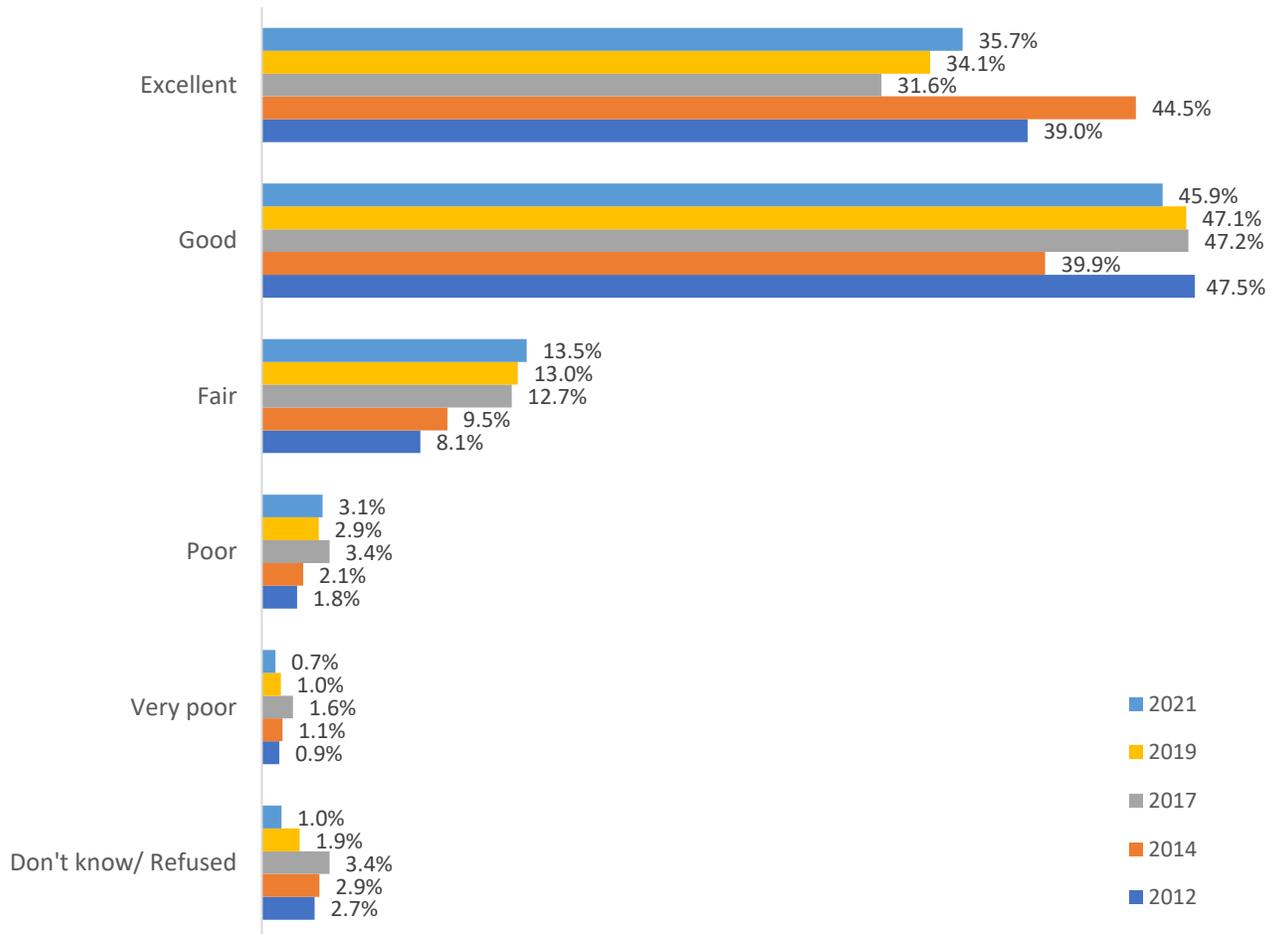
¹ There is no comparison for “affordable lease options” because it was not an answer provided in the 2019 survey effort.

Business Climate

Carlsbad’s business community continues to give high marks to the city as a place to do business. In 2021, eight in 10 survey respondents (81.6%) indicated that Carlsbad is either an “excellent” or “good” place to do business. This is comparable to the results from the 2019 survey, with a slight increase of just under half a percentage point.

In 2021, more than a third of businesses (35.7%) indicated that Carlsbad is an “excellent” place to do business. The proportion of individuals that rated Carlsbad as either fair, poor, or very poor remained steady between 2019 and 2021, fluctuating by about half a point or less each, though over the last several years the proportion of businesses that selected “fair” has increased from 8.1% in 2012 to 13.5% in 2021.

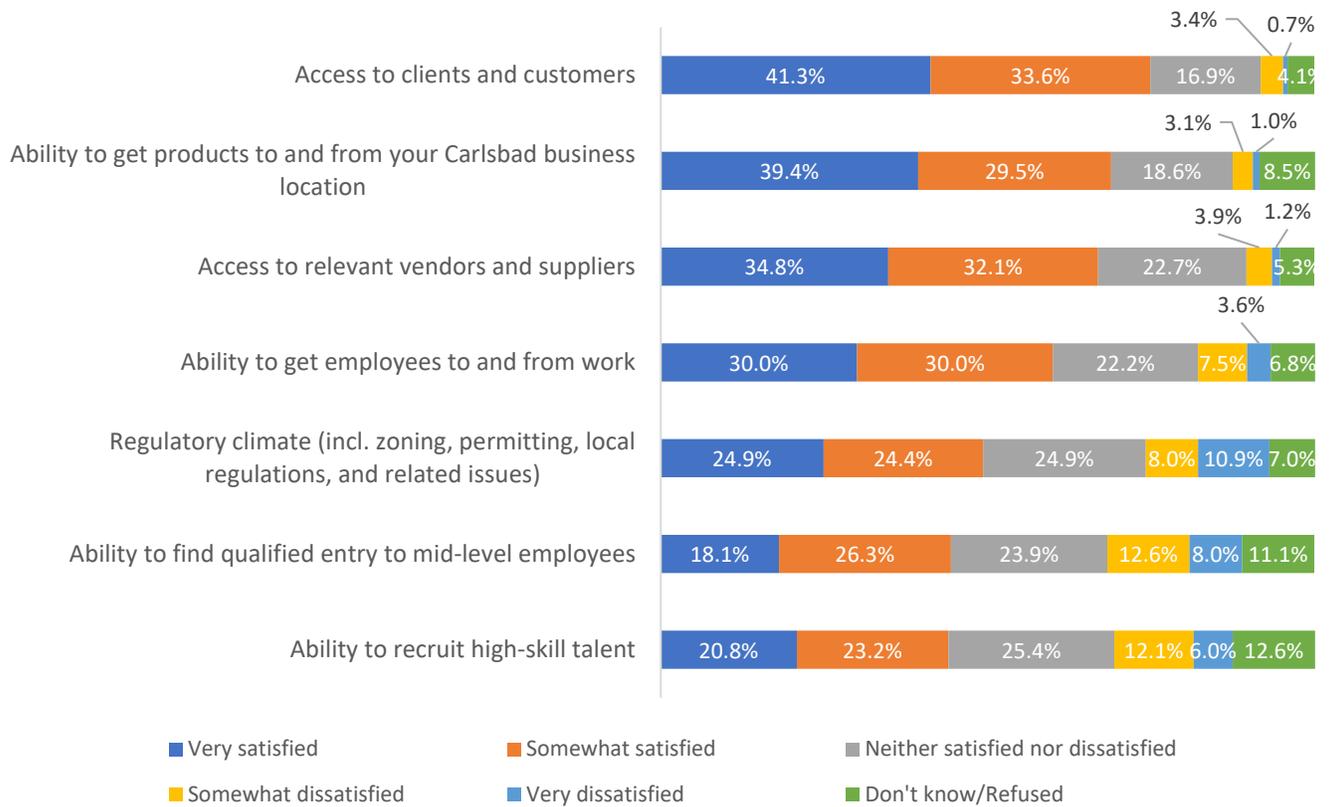
FIGURE 5. BUSINESS CLIMATE RATING, 2012 – 2021



Overall, Carlsbad businesses are most satisfied (both “very” and “somewhat”) with their access to clients and customers (74.9%), ability to get products to and from their location (68.9%), and access to relevant vendors and suppliers (66.9%). Six in ten employers were also “very” or “somewhat” satisfied (60%) with the ability to get employees to and from work.

Business elements that received the lowest satisfaction ratings were related to workforce and talent availability and the regulatory climate. About half (49.3%) of businesses indicated that they were “very” or “somewhat” satisfied with the city’s regulatory climate—including zoning, permitting, and other related regulatory laws—while 18.9% indicated that they were “very” or “somewhat” dissatisfied with this business element.

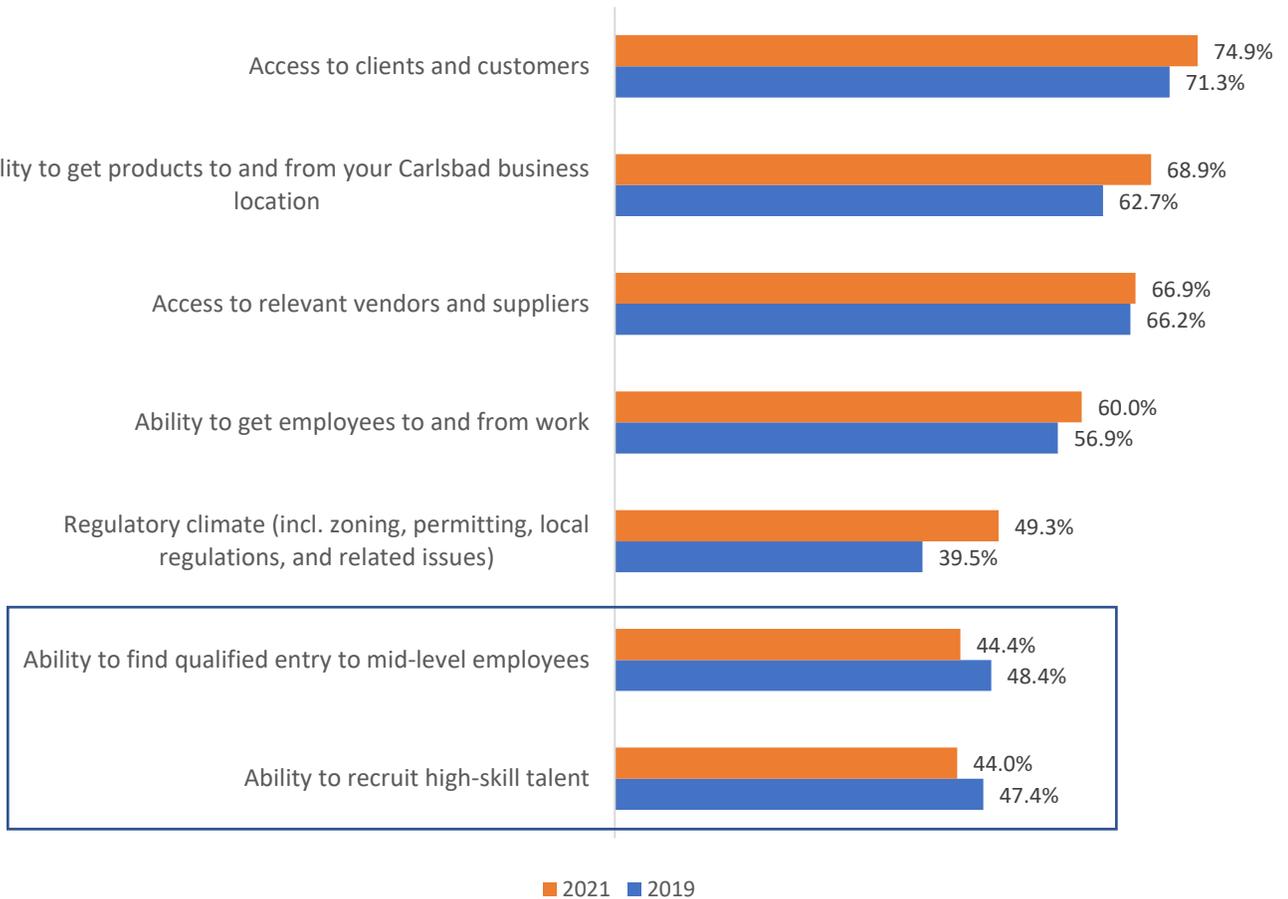
FIGURE 6. SATISFACTION WITH BUSINESS ELEMENTS, 2021



Workforce and talent availability was a greater concern for Carlsbad businesses in the 2021 survey. Only 44% of surveyed businesses indicated that they are “very” or “somewhat” satisfied with their ability to find qualified entry- to mid-level employees or their ability to recruit high-skill talent. Satisfaction for these two items declined by three to four percentage points compared to the 2019 survey. In terms of total satisfaction, access to workforce and talent remains in the bottom two of all issues tested in the survey.

For the other comparable items—such as access to clients, vendors, or products—also tested in the 2019 survey, all business elements saw an increase of about one to 10 percentage points in the 2021 survey. In particular, satisfaction with the city’s regulatory climate increased the most over the last two years—from 39.5% to 49.3%.

FIGURE 7. SATISFACTION WITH BUSINESS ELEMENTS COMPARISON (% VERY & SOMEWHAT SATISFIED), 2019 & 2021

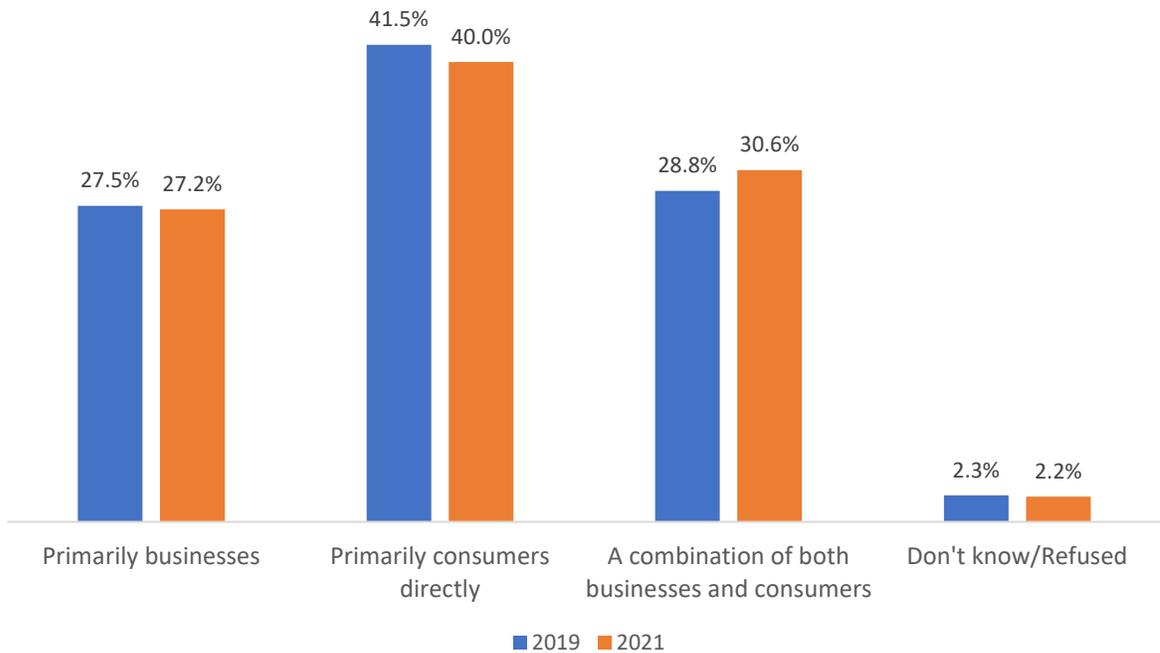


Customer & Supplier Profile

In 2021, Carlsbad firms reported primarily serving consumers directly (40%), followed by a combination of both businesses and consumers (30.6%) and business primarily (27.2%). In general, the proportion of firms serving a combination of both businesses and consumers increased by two points compared to 2019.

The majority—just over half (52%)—of surveyed Carlsbad firms indicated that their customers are primarily local, within Carlsbad and San Diego County. The distribution of local, regional, and statewide customers was largely unchanged compared to 2019. However, the proportion of firms that indicated national and international customers declined by 5.5 and 7.1 percentage points, respectively.

FIGURE 8. PREVALENT CUSTOMER TYPE, 2019 & 2021



Carlsbad businesses have suppliers across the nation and globe. The largest group of respondents—about four in ten (39.5%)—indicated that their firms’ suppliers and vendors are national, across the United States, followed by regional, within Southern California (33.3%), and local, within Carlsbad and San Diego County (27.5%). About one in seven surveyed firms indicated that their suppliers are primarily located within California (15.4%) or internationally (13.7%).

Between 2019 and 2021, the proportion of firms that indicated sourcing products regionally from within Southern California increased slightly, by about three percentage points.

FIGURE 9. CUSTOMER PRIMARY LOCATION, 2019 & 2021

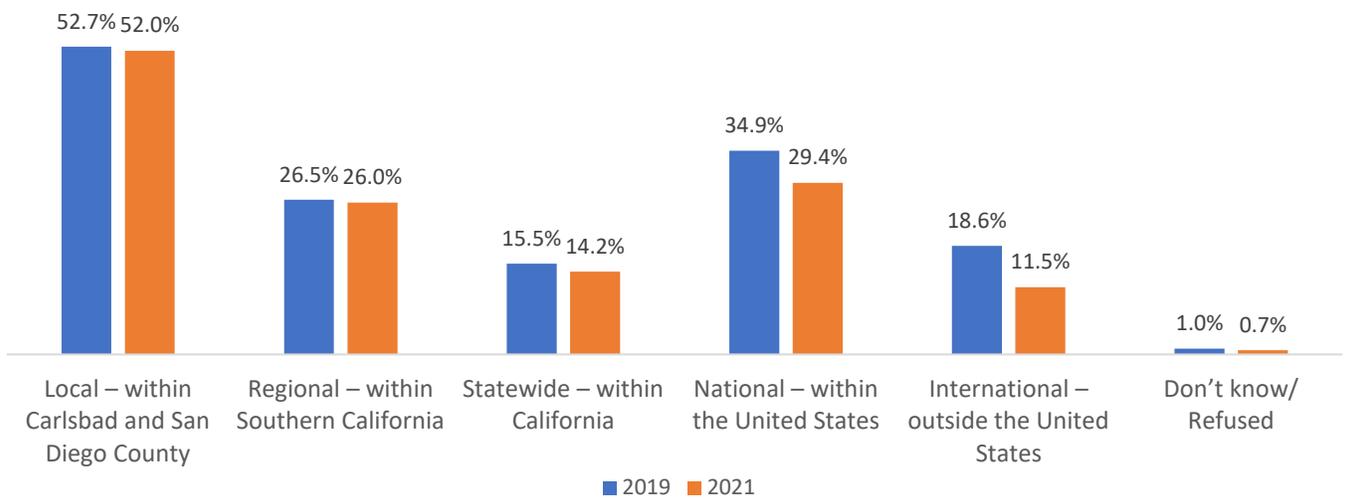
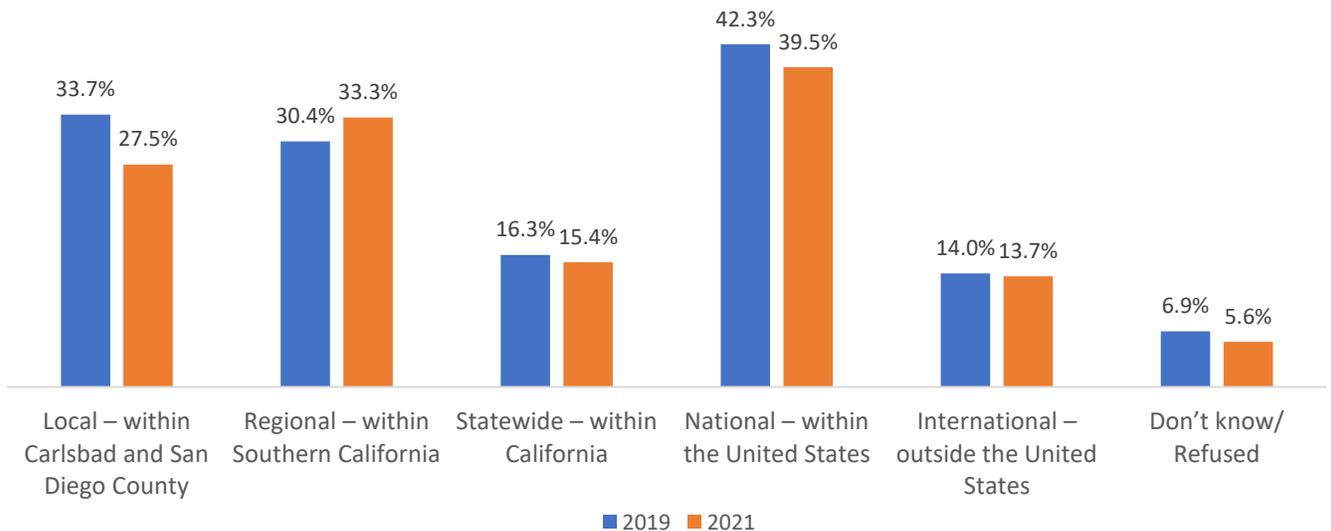


FIGURE 10. SUPPLIER PRIMARY LOCATION, 2019 & 2021

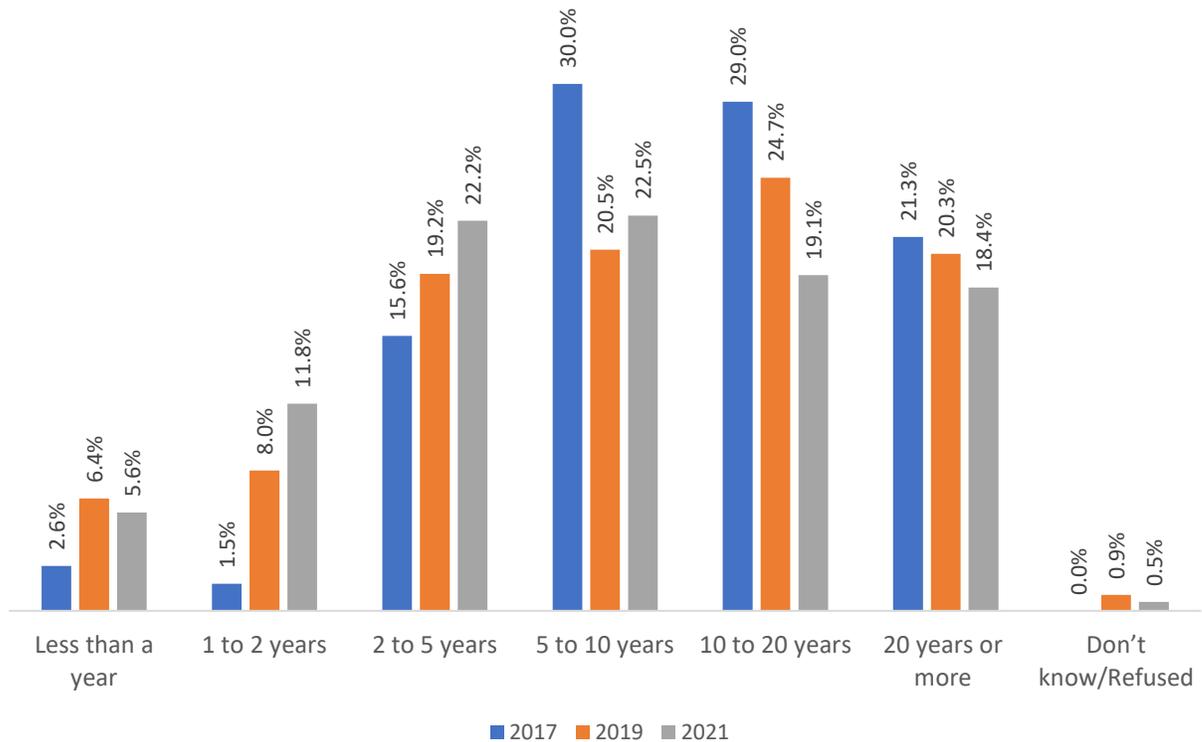


New Business & Investments Data

Most surveyed firms have been in Carlsbad for longer than five years. Six in ten firms indicated that they have had a business location in Carlsbad for five years or more, with 18.4% reporting that their business has been located in Carlsbad for 20 years or more.

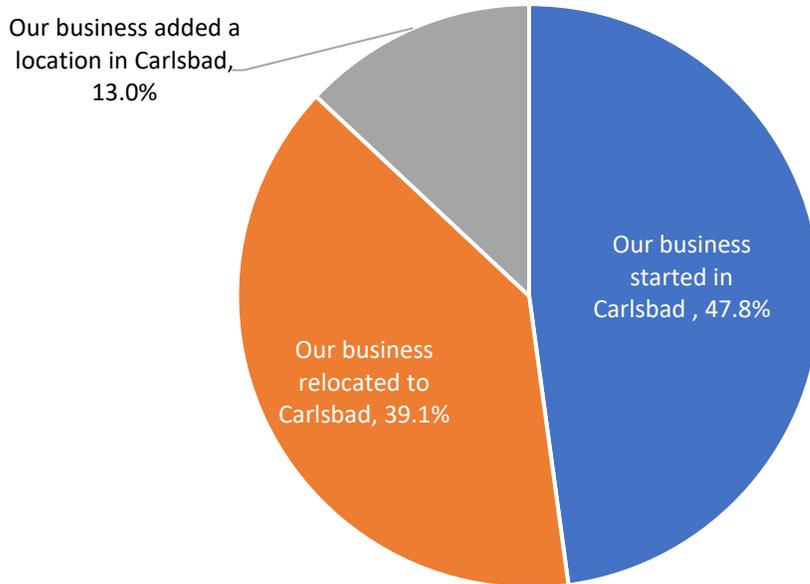
However, the proportion of new businesses has seen steady increase over the last several years. In 2017, only 19.7% indicated that they had a business located in Carlsbad for less than five years; this increased to 33.6% in 2019 and 39.6% in 2021. At the same time, the proportion of businesses 10 years or older has continuously declined—by 12.8 percentage points—from 2017 through 2021.

FIGURE 11. YEARS OF OPERATION IN CARLSBAD, 2017 – 2021



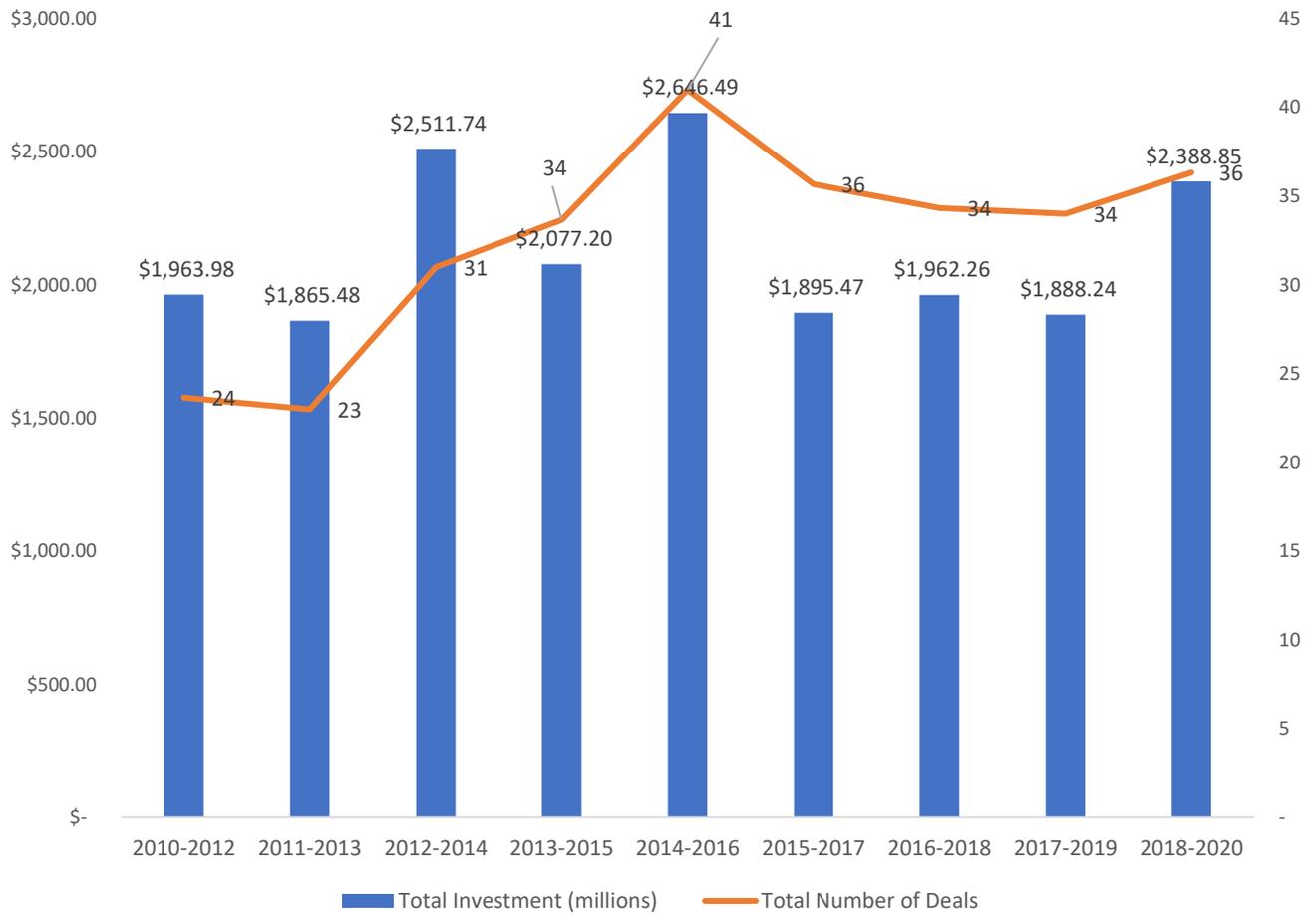
Of the firms that indicated they have had a business location in Carlsbad for “less than one year”, almost half (47.8%) reported that their business started in Carlsbad. Four in 10 firms (39.1%) indicated that their business relocated to Carlsbad, and roughly one in eight firms (13%) reported that their business added a new location in Carlsbad.

FIGURE 12. NEW STARTUPS IN CARLSBAD, 2021



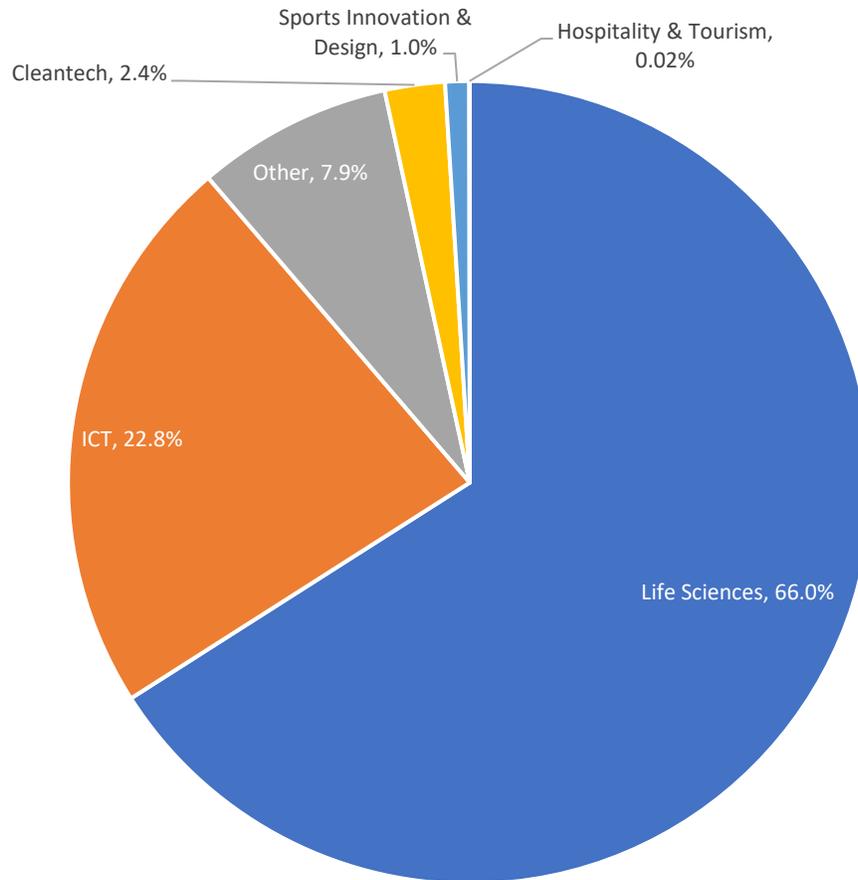
Between 2010 and 2020, Carlsbad businesses attracted a total of \$23.36 billion in venture capital across 355 separate deals. This represents a 21.6% increase in total investment dollars between the first three-year rolling average from 2010 through 2012 to the latest three-year rolling average of 2018 through 2020.

FIGURE 13. VENTURE CAPITAL INVESTMENTS IN CARLSBAD BUSINESSES, 2010-2020 THREE-YEAR ROLLING AVERAGES (MILLIONS)



These investments were largely won by firms engaged in Life Sciences or ICT research, development, innovation, production, and manufacturing. The Life Sciences industry cluster accounted 66% of total investments from 2010 through 2020, followed by the ICT industry cluster at 22.8% of total investments. Other industries² represented 7.9% of total investments, while Sports Innovation and Design firms garnered one percent of total investments and Hospitality and Tourism firms accounted for less than half a percent of total investments.

FIGURE 14. TOTAL VENTURE CAPITAL INVESTMENTS BY INDUSTRY CLUSTER, 2010-2020



² Other industries included beauty, cosmetics, and fashion; finance; food and agriculture; and real estate.

Workforce & Hiring Needs

Historical & Projected Growth

Over the last three years, the majority of Carlsbad firms indicated that their company’s workforce as either grown (39.1%) or stayed the same (41.8%). Roughly one in six surveyed firms reported that their company size has declined. Of these, the vast majority (85.1%) reported that this decline was a result of the impacts of the COVID-19 pandemic.

FIGURE 15. GROWTH OVER THE LAST THREE YEARS, 2021

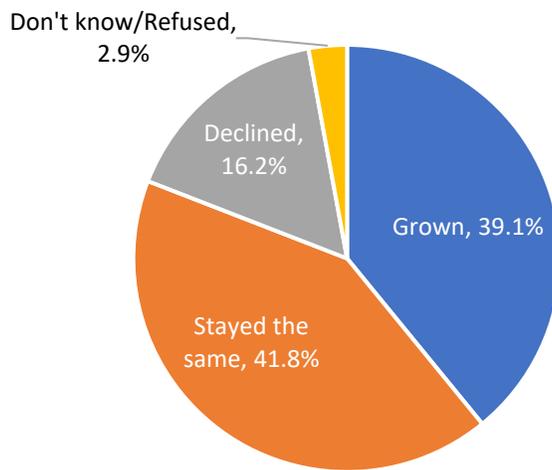
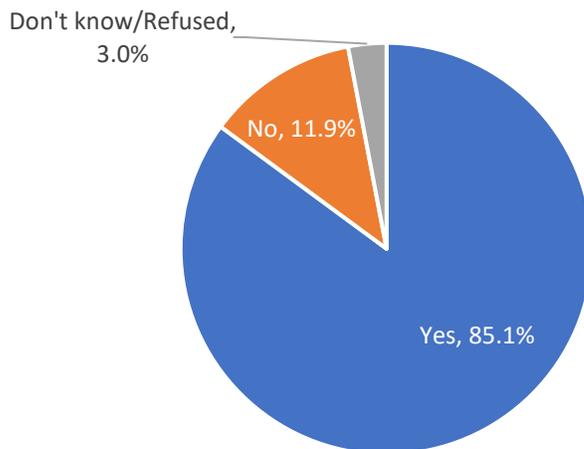


FIGURE 16. DECLINE DUE TO COVID-19, 2021



However, employers are largely optimistic about their growth over the next 12 months. Almost four in ten surveyed businesses (37%) expect to see employment growth, and more than half (53.4%) project their workforce to remain the same size over the next 12 months. Only about one percent predict a decline in workforce over the next year.

Of firms that projected growth over the next 12 months, the majority reported that they expect to see growth in both entry-level and experienced positions (64.5%). Just under a quarter (22.6%) expect to see growth only in senior-level or experienced positions, and 11% expect to hire entry-level positions.

FIGURE 17. PROJECTED GROWTH OVER THE NEXT 12 MONTHS, 2021

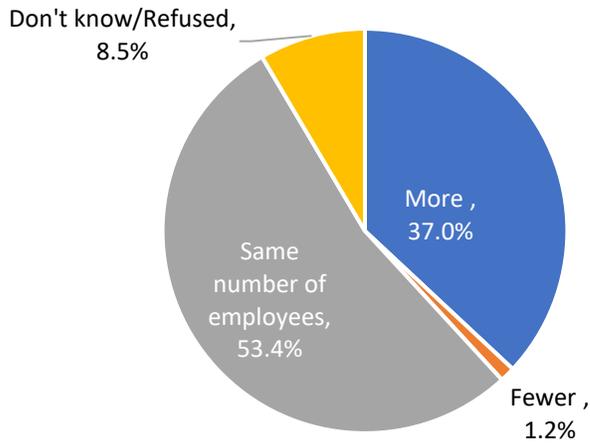
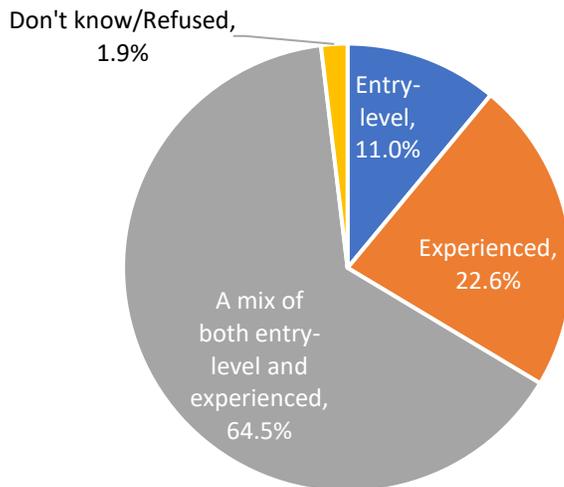


FIGURE 18. EXPECTED GROWTH BY POSITION LEVEL OVER THE NEXT 12 MONTHS, 2021



Hiring Difficulties

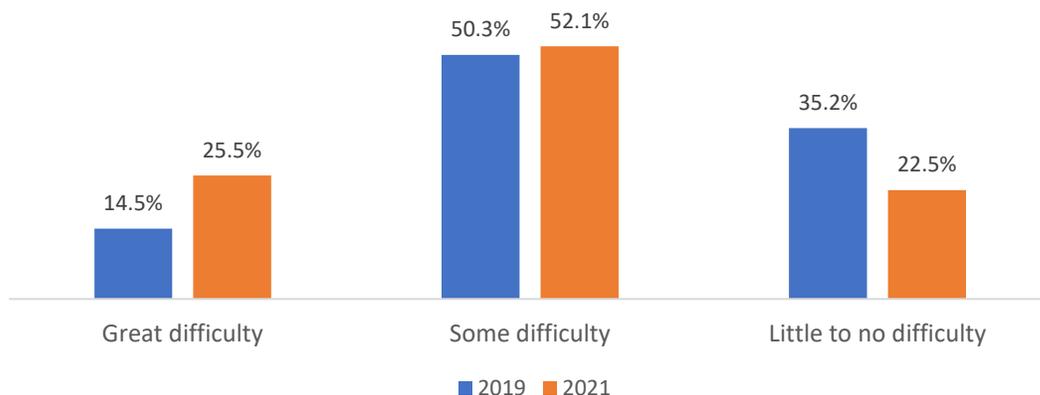
Between 2019 and 2021, reported hiring difficulty increased for Carlsbad businesses. In 2019, 64.8% of firms that reported some level of hiring difficulty (either “great” or “some”). This increased by almost 13 percentage points in 2021, with 77.5% of firms reporting difficulty finding qualified job applicants to meet their organization’s hiring standards. In fact, the greatest increase—11 percentage points—was in the proportion of businesses that indicated “great difficulty” in finding qualified applicants.

The reasons for hiring difficulty are largely due to a small applicant pool or competition for workers (16.5%). This was the number one reported reason for hiring difficulty in 2021, increasing by just over one percentage point compared to 2019. Additional reasons for reported hiring difficulty include lack of technical ability or industry knowledge, unsatisfactory work ethics, and lack of experience; these were all reported as reasons for hiring difficulty by at least 10% of respondents.

Firms that are exclusively seeking entry-level workers were slightly more likely to report some level of hiring difficulty (82.4%) compared to those seeking experienced workers (71.4%). Of firms that indicated they were seeking a mix of both entry-level and experienced workers, 90.9% reported some level of hiring difficulty (“great” or “some”).

In general, the following industries were among the highest in reported level of hiring difficulty: Tourism and Hospitality (83.3%), Cleantech (78.6%), Life Sciences, (76.9%), Construction (75.7%), ICT (75%), and Manufacturing (73.8%).

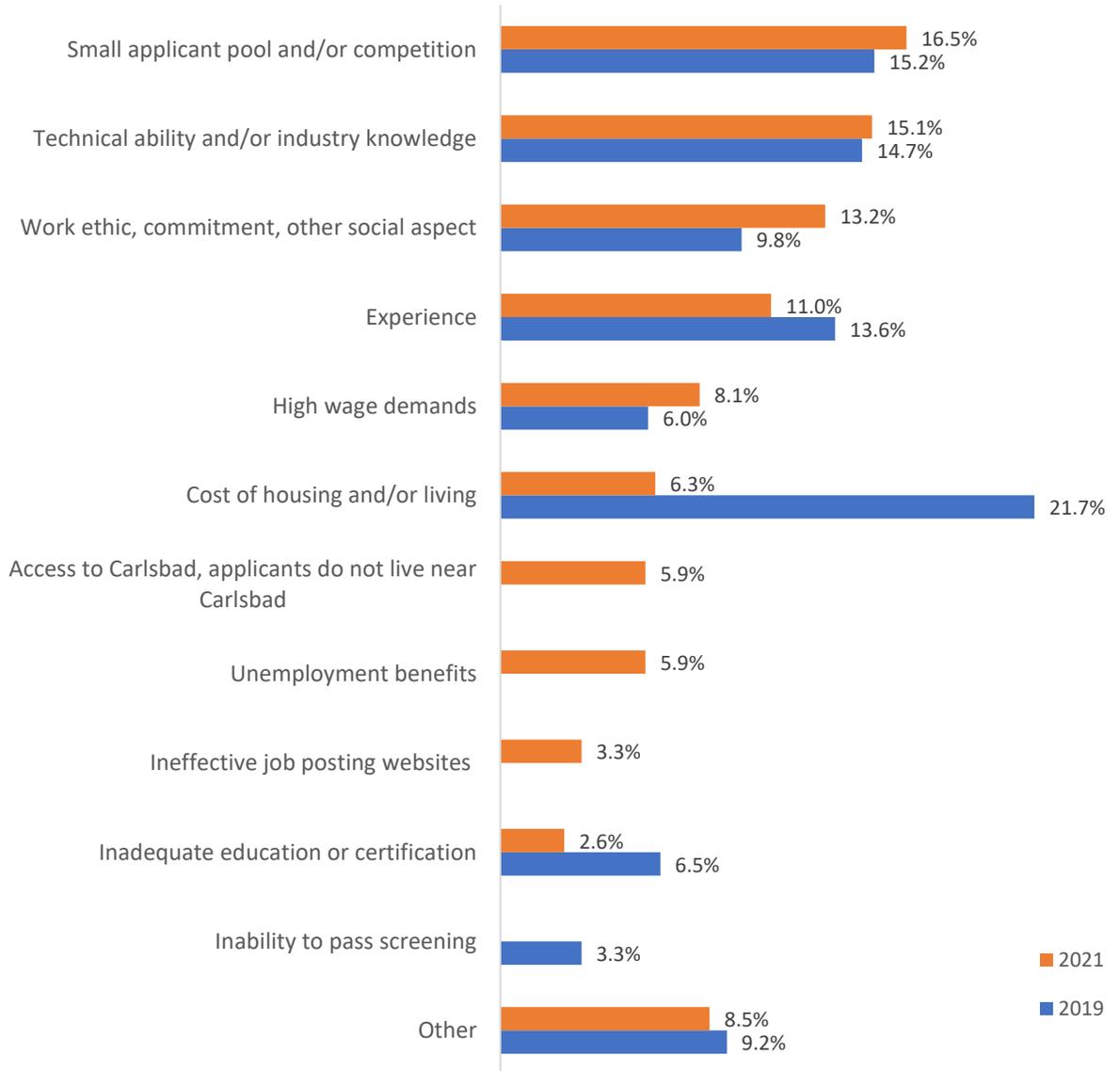
FIGURE 19. OVERALL HIRING DIFFICULTY, 2019 & 2021³



³ “Don’t know/ Refused” responses were factored out of this analysis.

The large decline in respondents that indicated Carlsbad’s cost of housing or living as a reason for hiring difficulty is likely attributable to the shifting economic conditions and business realities due to COVID-19. Business concerns shifted in 2021, with respondents noting new reasons for hiring difficulty, including unemployment benefits, the geographic location of applicants, and ineffective job posting websites.

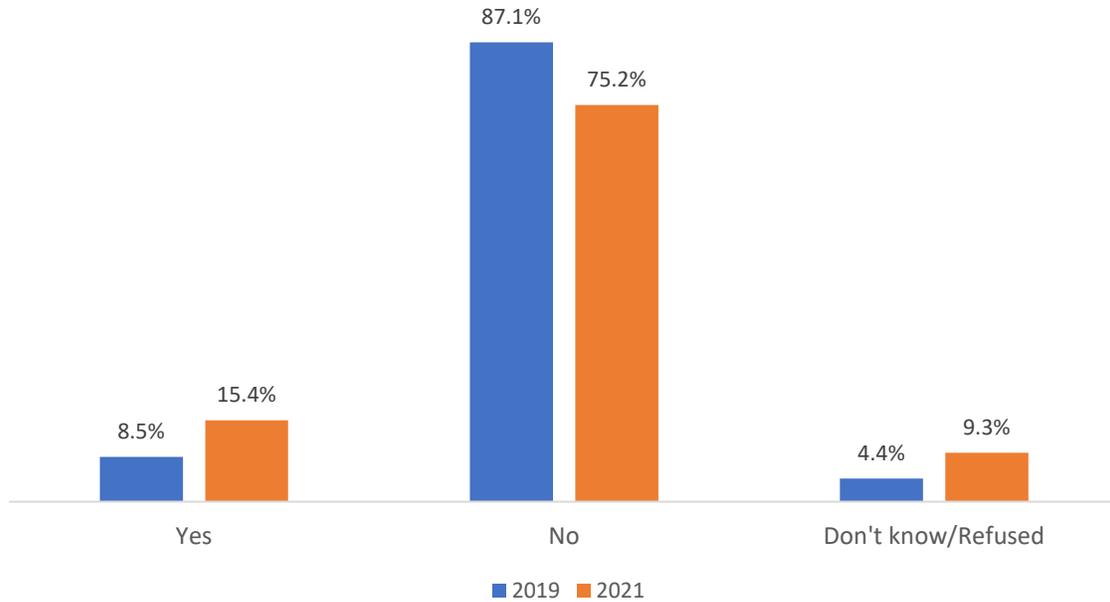
FIGURE 20. CHALLENGES TO FINDING QUALIFIED JOB APPLICANTS, 2021⁴



⁴ “Don’t know/ Refused” responses were factored out of this analysis. Comparisons between 2019 and 2021 are made where data is available. If a comparison is not featured, there were no responses for the category in either 2019 or 2021.

The proportion of Carlsbad businesses that reported awareness of “Life in Action”—the city’s program to attract talent—increased by almost seven percentage points between 2019 and 2021. In 2021, 15.4% of surveyed businesses reported awareness of “Life in Action”, compared to only 8.5% in 2019.

FIGURE 21. “LIFE IN ACTION” AWARENESS, 2019 & 2021



Impacts of COVID-19

EMPLOYMENT IMPACTS

About four in ten surveyed businesses (38%) reported that they had to lay off for furlough workers as a result of COVID-19 and related stay-at-home orders. Of these firms, the majority have either brought back all of their employees (42.6%) or at least some of their employees (36.1%). Two in ten surveyed firms (19.4%) indicated that they had not yet brought back any employees.

FIGURE 22. LAID OFF OR FURLOUGHED WORKERS DUE TO COVID-19, 2021

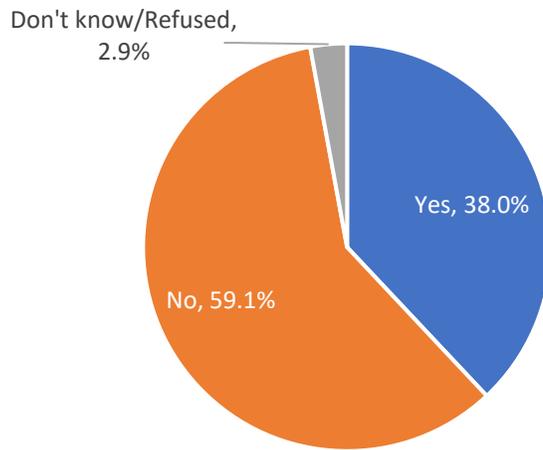
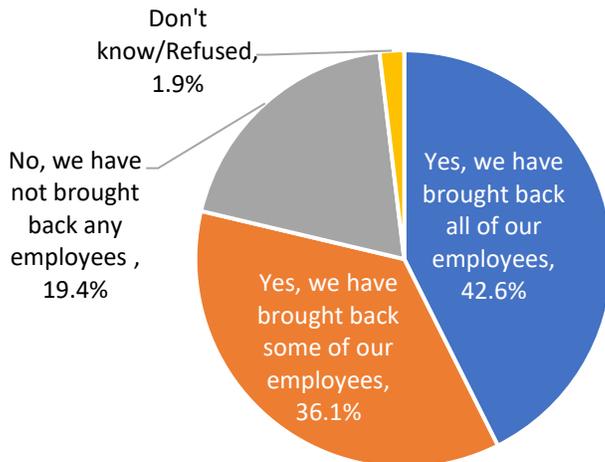


FIGURE 23. RE-HIRING STATUS, 2021



CURRENT / PROJECTED RECOVERY

Overall, the majority of surveyed firms indicated that COVID-19 impacted their business in some way. Only about two in ten businesses (18.9%) reported that COVID-19 had little to no impact on their organization. Just over half (54.4%) of businesses reported that COVID-19 had some negative impacts on their organization, while just under a quarter (24%) indicated that COVID-19 shut down their business, but they have since reopened. About two percent of surveyed firms reported that they shut down due to COVID-19 and have not yet re-opened.

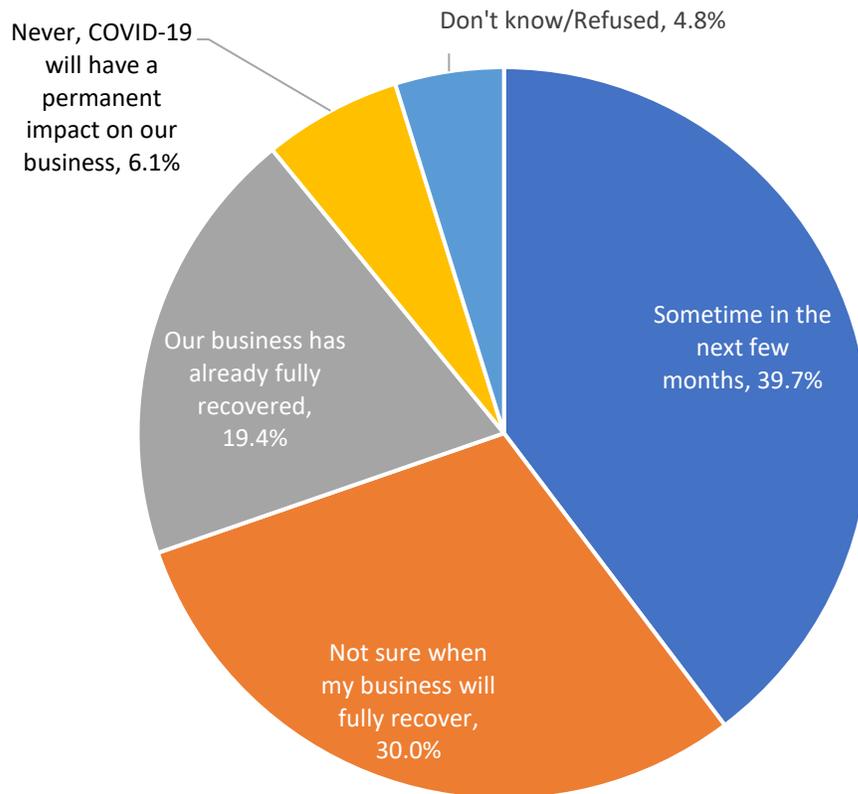
FIGURE 24. COVID-19 BUSINESS IMPACTS, 2021



Of all firms that indicated COVID-19 has had some level of negative impact on their business, only two in ten indicated that their organization has already recovered (19.4%). About four in ten (39.7%) expect their business to fully recover within the next few months, while three in ten (30%) are unsure of when their business will fully recover.

About one in 18 firms reported that they do not expect to fully recover as COVID-19 had a permanent impact on their business (6.1%).

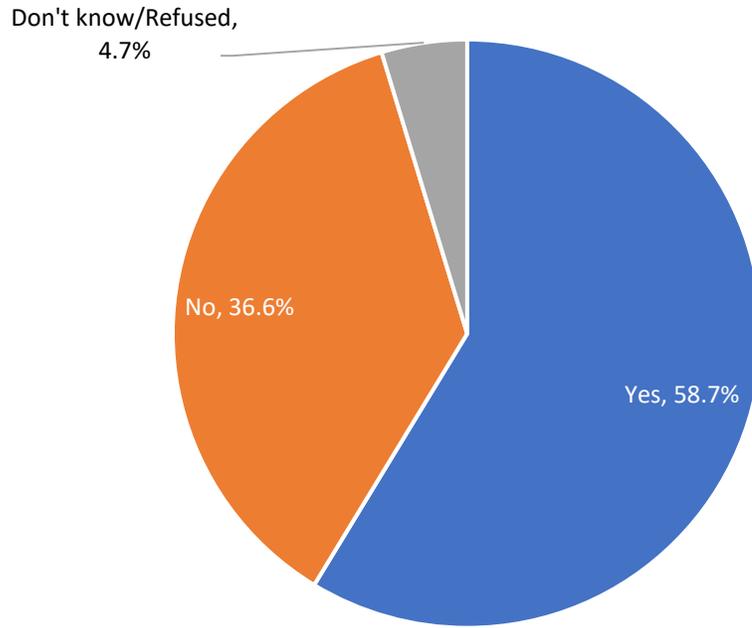
FIGURE 25. PROJECTED RECOVERY FROM COVID-19 IMPACTS, 2021



REMOTE WORK ACCESSIBILITY

More than half of surveyed businesses (58.7%) indicated that their employees were able to work remotely during the pandemic, while just over a third (36.6%) noted that their employees were not able to work remotely.

FIGURE 26. REMOTE WORK ACCESSIBILITY, 2021



Two in ten employers (18.8%) indicated that employees will be able to determine if they would prefer to continue working remotely once the public health orders no longer require such. Almost three in ten businesses (27.2%) reported that all or most of their employees will be able to work remotely following the removal of public health orders.

Just under a quarter (24.7%) of employers reported that frequency of remote work will be the employees decision.

FIGURE 27. REMOTE WORK POST-PANDEMIC, 2021

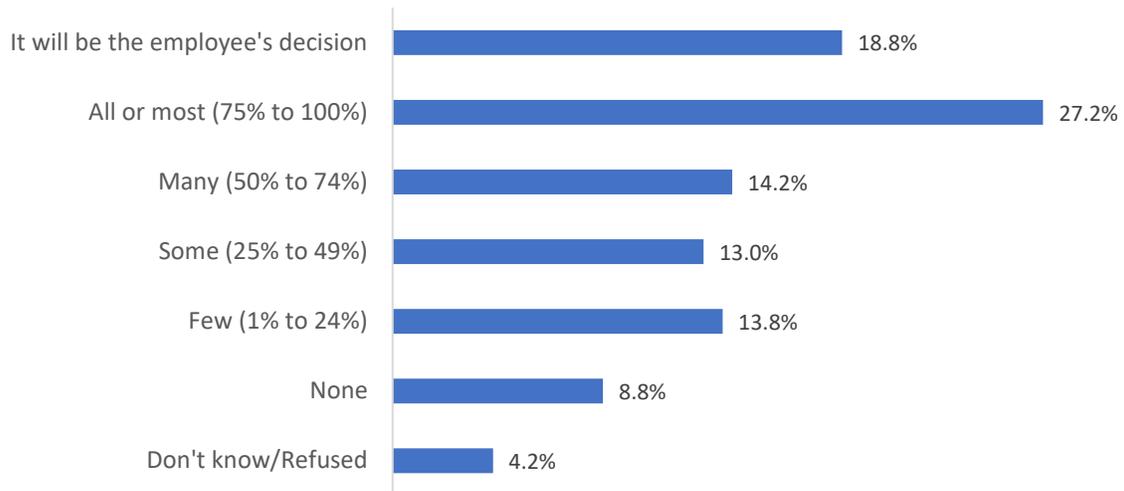
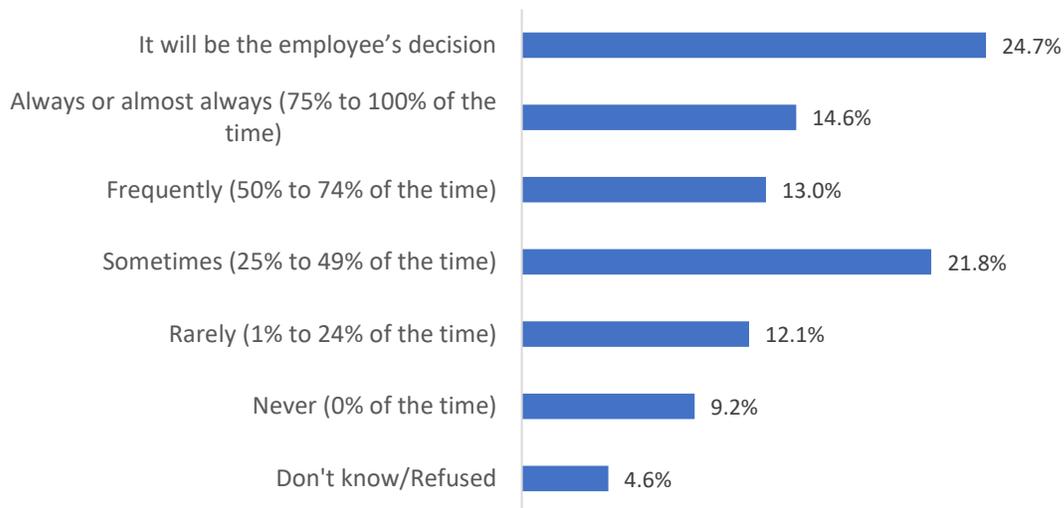


FIGURE 28. POST-PANDEMIC REMOTE WORK FREQUENCY, 2021



Carlsbad Industry Clusters

OVERVIEW

The following five industry clusters have been selected as most relevant to the City of Carlsbad due to the high overall concentration of these jobs in the city as well as their potential opportunity for continued growth in the region. Most of these industry clusters follow the same definitions outlined in the 2016 SANDAG report. However, several industry clusters required a more tailored approach and definition in order to best capture the specific industries that power these clusters in Carlsbad. For more detail on methodology and industry definitions, please refer to Appendix C of this report.

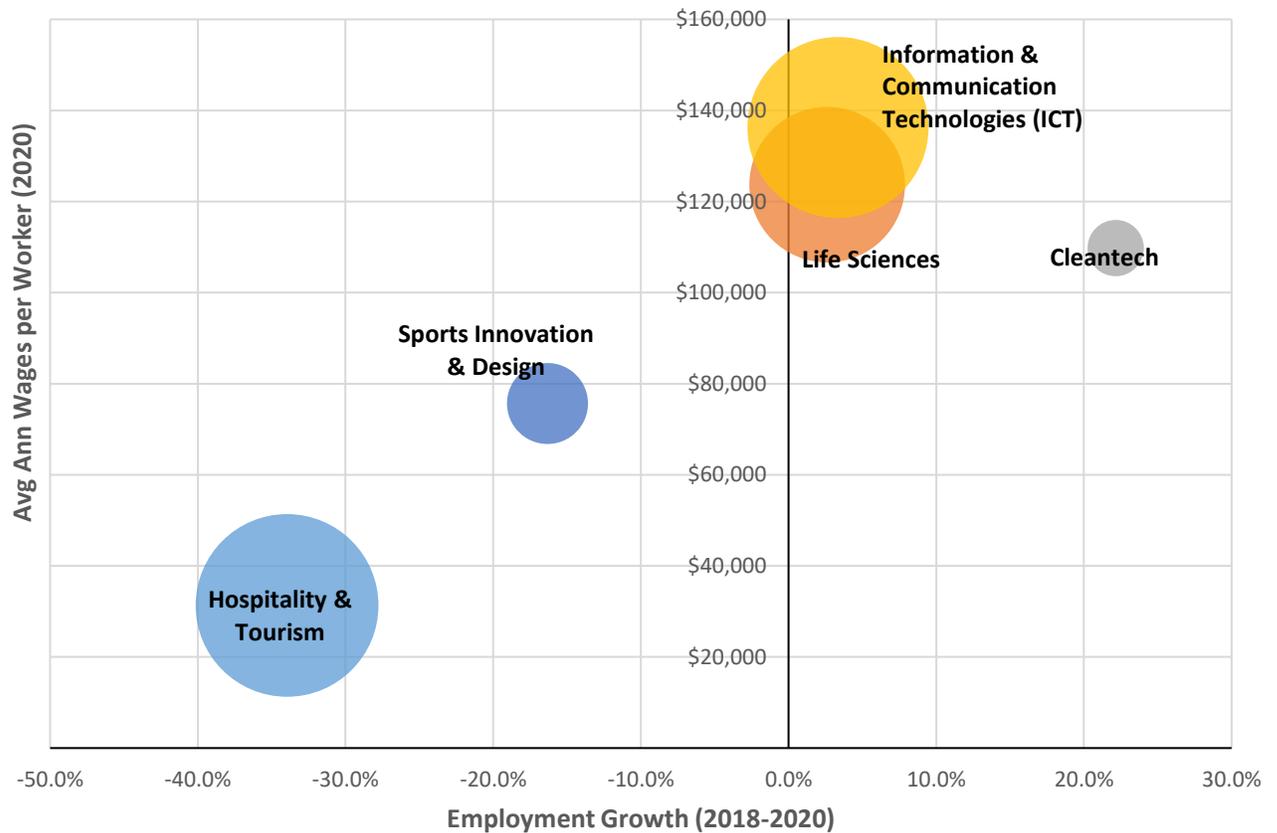
The industry clusters are as follows:

1. **Life Sciences** combines two of SANDAG's industry clusters, *Biomedical Devices and Products*, which includes the research, design, and production of medical devices and *Biotechnology and Pharmaceuticals*, which includes research and development related to biological technologies as well as the manufacturing of medicinal and diagnostic substances.
2. **Information, Communications, & Technologies (ICT)** includes cyber security, software and video game design, satellite communication, electronic device development, radio and wireless communication, and robotics.
3. **Cleantech** includes firms that are engaged in renewable energy (wind power, solar power, biomass, hydropower, biofuels), green transportation, electric motors, green chemistry, lighting, greywater, and many other appliances that are now more energy efficient.
4. **Sports Innovation & Design** includes firms that are engaged in the design, production, and sale of golf clubs, surfboards, diving equipment, and other recreational goods as well as the increasingly popular apparel and accessories that are closely tied to these products.
5. **Hospitality & Tourism** (SANDAG's *Entertainment & Hospitality*) includes hotels, transportation services, and restaurants, as well as entertainment attractions such as theme parks (LEGOLAND), golf courses, and country clubs.

Of Carlsbad’s five key industry clusters, the largest employers are ICT, with just over 9,000 jobs, and Hospitality and Tourism, with nearly 9,200 jobs. Annual average wages are highest among occupations within the ICT, Life Sciences, and Cleantech industry clusters, while growth from 2018 through 2020 was significantly high for the Cleantech cluster.

The two industry clusters that witnessed employment losses from 2018 through 2020 include Sports Innovation and Design and Hospitality and Tourism, the latter of which was largely impacted by social distancing measures and stay-at-home orders during the pandemic.

FIGURE 29. CARLSBAD INDUSTRY CLUSTERS BY GROWTH, ANNUAL WAGES, AND OVERALL EMPLOYMENT⁵



⁵ All industry cluster data in this chart and the following charts are taken from JobsEQ. The size of each bubble in this figure is representative of the total relative number of employees per industry cluster.

Life Sciences

For this analysis, two of SANDAG’s clusters—Biomedical Devices and Products & Biotechnology and Pharmaceuticals—have been combined into one industry cluster (Life Sciences) in the City of Carlsbad. More than half of the 134 Life Science firms in Carlsbad (54%), had fewer than 10 employees. This relatively high proportion of small life science firms suggests that the city is increasingly a hub for Life Science innovation, and entrepreneurs and experts in the field are intentionally seeking out Carlsbad as a place to start new ventures. Total establishments increased slightly over the last several years.

The Life Sciences industry cluster employs 6,657 workers across 134 firms and experienced a 2.6% increase in employment between 2018 and 2020. The cluster is 5.51 times more concentrated in Carlsbad than the national average and annual wages per worker average \$123,702.

San Diego County and California have experienced parallel employment growth in the Life Sciences cluster between 2010 and 2020. In the same ten-year period, employment in Carlsbad grew by 75%. Between 2016 and 2018, Carlsbad experienced over 40% growth. Over the past two years (2018-2020), however, employment growth tapered off compared to years prior.

Top 10 Life Sciences employers in Carlsbad:

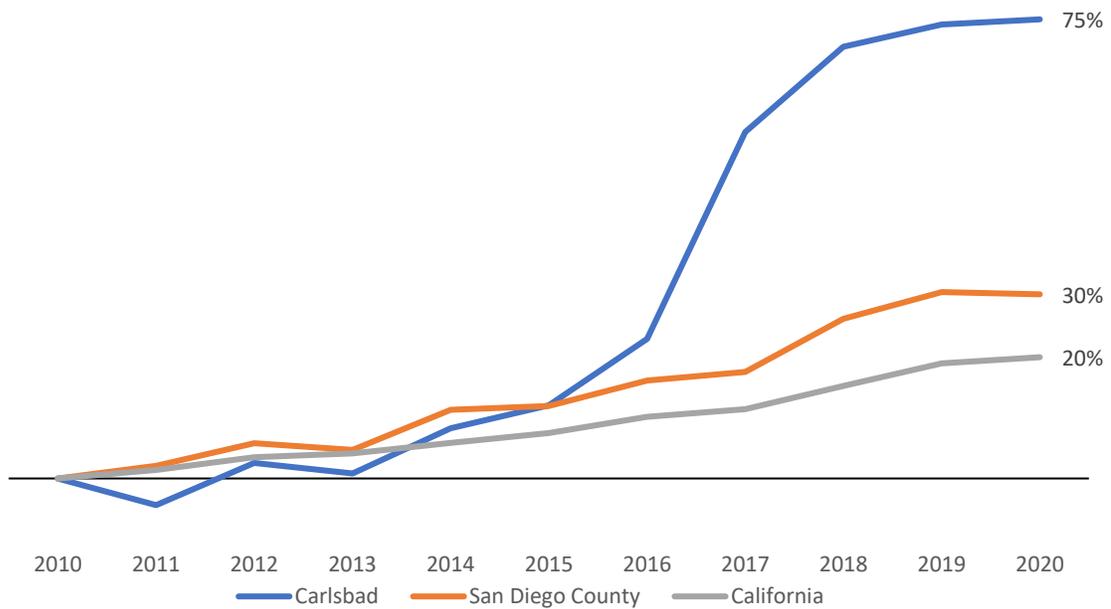
1. Life Technologies (acquired by Thermo Fisher Scientific)
2. Breg, Inc.
3. GenMark Diagnostics, Inc.
4. Alphatec Spine, Inc.
5. Beckman Coulter, Inc.
6. Plastic Engineering & Development, Inc.
7. Respiroics California
8. Ortho Organizers, Inc.
9. SeaSpine, Inc.
10. Thermo Fisher Scientific

Life Sciences

This cluster combines two of SANDAG’s industry clusters, *Biomedical Devices and Products* which includes the research, design, and production of medical devices and *Biotechnology and Pharmaceuticals* which includes research and development related to biological technologies as well as the manufacturing of medicinal and diagnostic substances.

<p><u>2020 Employment:</u> 6,657</p>	<p><u>Current Establishments:</u> 134</p>	<p><u>Change over the Last 2 Years:</u> A 2.6% increase in employment from 2018 to 2020 in Carlsbad.</p>
<p><u>Average Annual Wages per Worker:</u> \$123,702</p>	<p><u>Industry Concentration:</u> Employment in Carlsbad is 5.51 times the national average</p>	

FIGURE 30. LIFE SCIENCES EMPLOYMENT % CHANGE OVER TIME



Information & Communications Technologies (ICT)

The Information and Communications Technologies (ICT) cluster employs 9,008 workers across 343 firms in Carlsbad and is 2.75 times more concentrated in Carlsbad than the national average. Annual wages per worker average \$136,254, and the ICT industry cluster experienced a 3.3% increase in the number of jobs between 2018 and 2020.

San Diego County and California experienced steady parallel growth in the ICT cluster between 2010 and 2020. In the same ten-year period, Carlsbad experienced an initial decline in employment between 2012 and 2015; between 2015 and 2020, employment in the ICT cluster has steadily trended upwards.

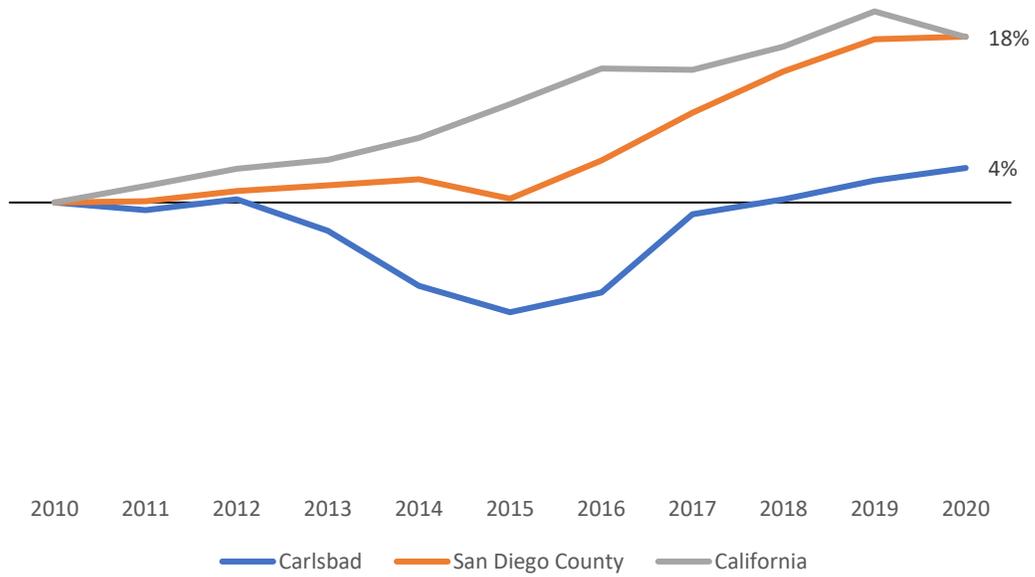
Top 10 ICT employers in Carlsbad:

1. Viasat
2. HM Electronics, Inc.
3. Nordson ASYMTEK
4. Rockstar San Diego
5. Sendx Medical, Inc.
6. Micro Probe, Inc.
7. Acutus Medical, Inc.
8. High Moon Studios
9. Clear-Com
10. CalAmp

Information & Communications Technologies		
This cluster includes communications, computer and electronics, and software industries.		
<u>2020 Employment:</u> ⁶ 9,008	<u>Current Establishments:</u> 343	<u>Change over the Last 2 Years:</u> A 3.3% increase in employment from 2018 to 2020
<u>Average Annual Wages per Worker:</u> \$136,254	<u>Industry Concentration:</u> Employment in Carlsbad is 2.75 times the national average	

⁶ JobsEQ and BLS QCEW Employment suppresses employment at the sub-county level, this total includes added ViaSat employment for 2020.

FIGURE 31. ICT EMPLOYMENT % CHANGE OVER TIME



Cleantech

Between 2018 and 2020, the number of workers employed at Cleantech firms increased by 22.2 percent. By 2019, the 48 Cleantech firms in Carlsbad employed more than 872 people. The average annual wage per worker is \$109,779, and the Cleantech industry cluster in Carlsbad is 4.66 times more concentrated than the national average.

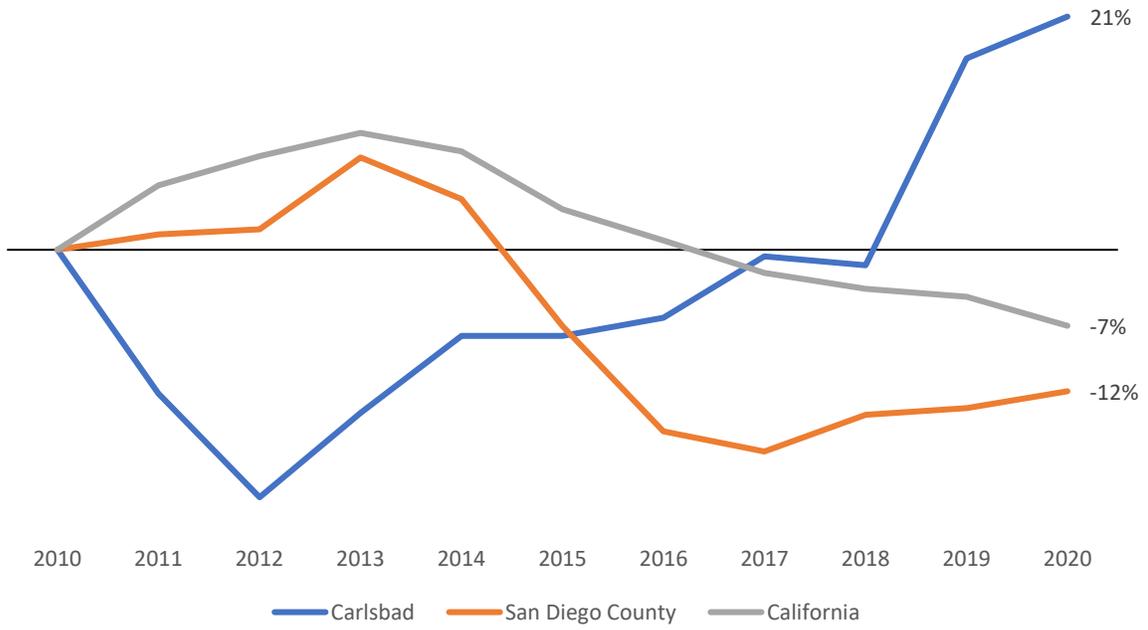
Between 2010 and 2012, Carlsbad experienced an initial employment drop for the Cleantech industry followed by steady growth between 2012 and 2020. Employment growth in California peaked in 2013 and has been on a steady decline since. Growth in San Diego County also peaked in 2013, dropping by over 25% between 2013 and 2017. Since 2017, employment in the Cleantech cluster for San Diego County has been on a steady increase.

Top 10 Cleantech employers in Carlsbad:

1. Glanbia Nutritionals
2. Luxtera, Inc. (acquired by Cisco Systems)
3. GoPro Carlsbad
4. Myron L Company
5. Palomar Technologies
6. Arlo Technologies, Inc.
7. IDE Technologies
8. Nemko USA, Inc.
9. DENSO International America, Inc.
10. Transchem, Inc.

<h3>Cleantech</h3> <p>This cluster includes firms that are engaged in advanced technologies including renewable energy, energy efficiency, and energy storage.</p>		
<p><u>2020 Employment:</u> 872</p>	<p><u>Current Establishments:</u> 48</p>	<p><u>Change over the Last 2 Years:</u> A 22.2% increase in employment from 2018 to 2020</p>
<p><u>Average Annual Wages per Worker:</u> \$109,779</p>	<p><u>Industry Concentration:</u> Employment in Carlsbad is 4.66 times the national average</p>	

FIGURE 32. CLEANTECH EMPLOYMENT % CHANGE OVER TIME



Sports Innovation & Design

The Sports Innovation & Design industry cluster employs 1,804 workers across 116 firms and experienced a 16.3% decrease in employment between 2018 and 2020. The cluster is 5.06 times more concentrated in Carlsbad than the national average and annual wages per worker average \$75,652.

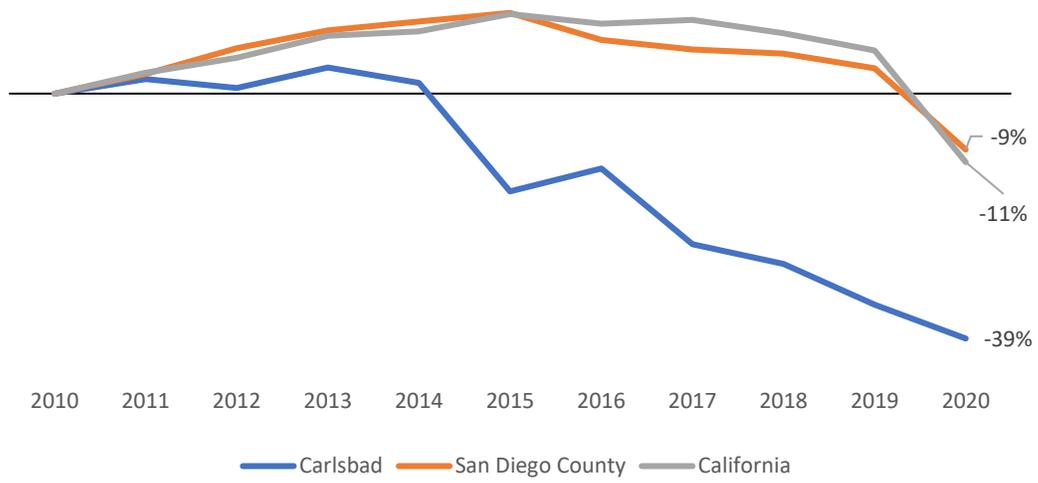
Employment in the Sports Innovation & Design cluster has steadily declined since 2013 in Carlsbad. Both San Diego County and California have declined steadily since 2015 and experienced sharp declines between 2019 and 2020, likely due to the COVID-19 pandemic.

Top 10 Sports Innovation and Design employers in Carlsbad:

1. Callaway Golf Co.
2. Fluidra North America
3. Cobra Golf
4. Vanguard Industries, Inc.
5. Product Slingshot, Inc.
6. Eagle Creek, Inc.
7. Blast Motion, Inc.
8. M2 Ingredients, Inc.
9. Nike Retail Services, Inc.
10. MCA Golf

Sports Innovation & Design		
<p>This cluster includes firms that are engaged in the design and production of recreational equipment, from golf clubs to surfboards, as well as the apparel and accessories as part of the growing athletic apparel and “athleisure” industry.</p>		
<p><u>2020 Employment:</u> 1,804</p>	<p><u>Current Establishments:</u> 116</p>	<p><u>Change over the Last 2 Years:</u> A 16.3% employment decline from 2018 through 2020</p>
<p><u>Average Annual Earnings per Worker:</u> \$75,652</p>	<p><u>Industry Concentration:</u> Employment in Carlsbad is 5.06 times the national average</p>	

FIGURE 33. SPORTS INNOVATION & DESIGN EMPLOYMENT % CHANGE OVER TIME



Hospitality & Tourism

Carlsbad’s Hospitality & Tourism cluster is about 1.35 more concentrated in Carlsbad than the national average and employs 9,179 people across 467 businesses. Hospitality & Tourism experienced a sharp 34% decrease in employment between 2018 and 2020, driven by the effects of the COVID-19 pandemic between 2019 and 2020. Average annual wages per worker remain low relative to other key industry clusters, with workers earning \$31,315 on average.

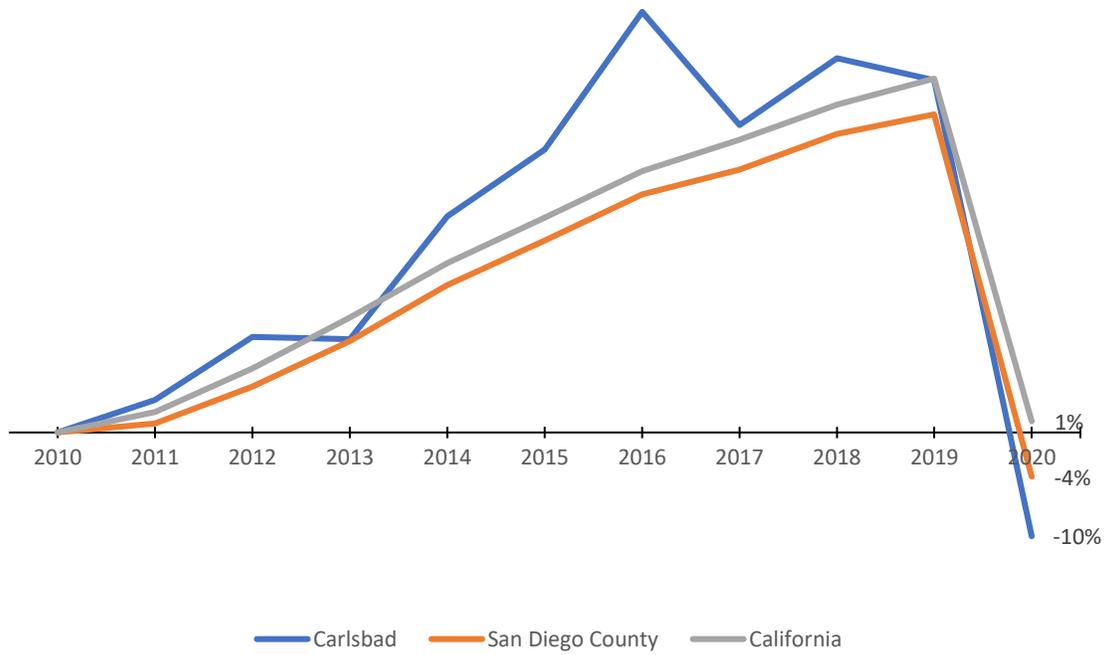
San Diego County and California have shown similar trends for the Hospitality & Tourism cluster, experiencing steady growth between 2010 and 2019. In comparison, Carlsbad has alternated between periods of growth, stagnation, and decline during the ten-year period. Carlsbad had the most growth between 2013 and 2016, peaking at 41% in 2016. Carlsbad, San Diego County, and California experienced sharp declines between 2019 and 2020, during which sub-clusters like Theater Companies and Dinner Theaters, Amusement and Theme Parks, and Amusement Arcades were shut down to mitigate the effects of the COVID-19 pandemic.

Top 10 Hospitality & Tourism employers in Carlsbad:

1. LEGOLAND California
2. Omni La Costa Resort & Spa
3. Park Hyatt Aviara Resort, Golf Club, & Spa
4. Sheraton Carlsbad Resort & Spa
5. The Westin Carlsbad Resort & Spa
6. Dave & Buster’s
7. Calvary Chapel Caffe (The Story Caffe)
8. Yard House
9. BJ’s Restaurant & Brewhouse
10. Norte Mexican Food

Hospitality & Tourism		
This cluster includes hotels, transportation services, and restaurants, as well as entertainment attractions such as theme parks (LEGOLAND), golf courses, and country clubs.		
<u>2020 Employment:</u> 9,179	<u>Current Establishments:</u> 467	<u>Change over the Last 2 Years:</u> A 34% decrease in employment from 2018 to 2020
<u>Average Annual Wages per Worker:</u> \$31,315	<u>Industry Concentration:</u> Employment in Carlsbad is 1.35 times the national average	

FIGURE 34. HOSPITALITY & TOURISM EMPLOYMENT % CHANGE OVER TIME



Appendix A: Survey Research Methodology

Data compiled for this report were drawn from both primary and secondary data sources. The table below provides a brief overview of the primary survey methodology utilized for the project.

TABLE 1. OVERVIEW OF PROJECT METHODOLOGY

Method	Web and telephone survey of Carlsbad Businesses.
Number of Survey Participants	414 Firms in Carlsbad completed a web or telephone survey.
Survey Field Dates	September 21 st to October 22 nd , 2021
Survey Universe	6,151 Firms in the City of Carlsbad
Survey Margin of Error	The margin of error for questions answered by all 414 respondents was +/- 4.65% at the 95% level of confidence.

Appendix B: Employer Survey Toplines



City of Carlsbad
Business Survey
n=414

Introduction:

[24 employees or less]

Hello, my name is _____. May I please speak to a manager or owner at [firm name]?

[25 employees or more]

Hello, my name is _____. May I please speak to a manager or a decision maker who is involved in strategic planning or human resources at [firm name]?

I am calling on behalf of BW Research, an independent research organization working on behalf of the City of Carlsbad. **[IF LETTER SENT]**

The survey will take approximately 10 minutes of your time and will help the City of Carlsbad to better serve those businesses located within Carlsbad.

[IF NEEDED]: This survey has been commissioned by the City of Carlsbad, which is committed to supporting the businesses in the City.

[IF NEEDED]: The survey is being conducted by BW Research, an independent research organization, and should take approximately 10 minutes of your time.

[IF NEEDED]: Your individual responses will **not** be published; only aggregate information will be used in the reporting of the survey results.

Part 1. Screener Questions

A. Are you involved or leading the strategic planning, hiring or location decisions at your firm?

- 100.0% Yes
- 0.0% No [TERMINATE]
- 0.0% Not Sure [TERMINATE]

B. Is your business located in Carlsbad? [IF YES] How many business locations does your firm have in Carlsbad?

- 94.2% Yes, we have one Carlsbad location
- 5.8% Yes, we have ___ Carlsbad locations:
- 0.0% No [TERMINATE]
- 0.0% Not Sure [TERMINATE]

Part 2. Profile & Growth Expectations

1. How many years have you had a business location in Carlsbad?

- 5.6% Less than a year
- 11.8% 1 to 2 years
- 22.2% 2 to 5 years
- 22.5% 5 to 10 years
- 19.1% 10 to 20 years
- 18.4% 20 years or more
- 0.5% Don't know/Refused

[IF Q1 = Less than a year, ASK Q2, OTHERWISE SKIP]

2. Did you relocate, add an additional location, or start your business in Carlsbad? (n=23)

- 47.8% Our business started in Carlsbad
- 39.1% Our business relocated to Carlsbad
- 13.0% Our business added a location in Carlsbad
- 0.0% Don't know/Refused

Next, I want to ask a few quick questions about your Carlsbad business location(s).

3. What were the main reasons your company located in Carlsbad? **[DO NOT READ – ALLOW MULTIPLE RESPONSES]**

- 38.4% Founders lived here
- 37.7% Proximity to customers, collaborators, and vendors
- 31.2% Quality of life in Carlsbad
- 13.5% Proximity to skill workers/workforce
- 9.9% Spun-off another company that was already here
- 4.1% General location (proximity to SD, ocean, I-5)
- 1.9% Connection or proximity to university or related institutions (please specify_____)
- 1.9% Office space availability
- 1.4% Affordable lease options
- 2.4% Other
- 1.7% Don't know/ Refused

4. What industry or industries best describes the work that your firm is involved in and connected to? **[DO NOT READ – ALLOW MULTIPLE RESPONSES]**

- 23.4% Professional or Business Services
- 16.2% Healthcare
- 15.9% Retail or Wholesale Trade
- 10.4% Finance, Insurance, Real Estate, or Property Management
- 10.1% Manufacturing
- 8.9% Construction or Building and Design
- 7.2% Tourism & Hospitality
- 6.8% Information and Communication Technologies (ICT)
- 6.3% Life Sciences
- 6.3% Research and Development
- 3.4% Cleantech
- 3.1% Public Sector or Education
- 2.9% Other services
- 2.2% Energy or Utilities
- 1.4% Physical fitness, Martial arts, sports training
- 1.2% Sports and Active Lifestyle Manufacturing
- 1.2% Accommodation, food services, and recreation
- 1.0% Non-profit
- 4.3% Other
- 0.2% Don't know/ Refused

[IF Q4 = Sports and Active Lifestyle manufacturing, Life Sciences, Information and Communication Technologies, Cleantech, SKIP Q5]

5. Is your firm involved in work related to Life Sciences; Cleantech; Information and Communication Technologies (ICT); or Sports and Active Lifestyle Manufacturing? *[ADD DEFINITIONS IF NEEDED]* **[ALLOW MULTIPLE RESPONSES]** (*n=303*)

8.6% Yes, Life Sciences
 5.6% Yes, Cleantech
 5.6% Yes, Information and Communication Technologies
 2.6% Yes, Sports and Active Lifestyle Manufacturing
 78.5% No
 1.0% Don't know/ Refused

I'd like to ask a few general questions about your employees at your Carlsbad location(s).

6. Including all full-time and part-time employees, how many **permanent and temporary** employees work at your Carlsbad location(s)? **[DO NOT ACCEPT 0 AS A RESPONSE]**

28.99 Average
 6.0 Median

47.2% 1 to 5
 16.3% 6 to 10
 12.4% 11 to 24
 7.6% 25 to 49
 9.0% 50 to 99
 7.6% 100 or more

7. If you currently have **[INSERT Q6 #]** **permanent and temporary** employees at your location(s), how many more or how many fewer employees do you expect to have at your Carlsbad location(s) 12 months from now?

37.0% More
 1.2% Fewer
 53.4% Same Number of Employees
 8.5% Don't know/Refused

How many more employees?

9.96 Average
3.0 Median

How many fewer employees?

7.40 Average
4.0 Median

[IF AMOUNT DIFFERS BY 10% OR MORE IN EITHER DIRECTION, ASK]

Just to confirm, you currently have ____ employees and you expect to have ____ (more/less) employees, for a total of ____ employees 12 months from now.

[IF Q7 = "More", ASK Q8, OTHERWISE SKIP]

8. Which types of positions does your firm expect to add over the next 12 months? (*n*=155)

11.0% Entry-level
22.6% Experienced
64.5% A mix of both entry-level and experienced
1.9% Don't know/Refused

9. Over the last three years, has your company grown, declined or stayed about the same, in terms of employment at your Carlsbad location(s).

39.1% Grown
41.8% Stayed the same
16.2% Declined
2.9% Don't know/Refused

[IF Q9 = Declined, ASK Q10, OTHERWISE SKIP]

10. Is the decline a result of the impacts of COVID-19? (*n*=67)

85.1% Yes
11.9% No
3.0% Don't know/Refused

Part 3. Business Climate

Now, I would like to ask you about the general business climate in the City of Carlsbad.

11. Overall, how would you rate the City of Carlsbad as a place to do business?

- 35.7% Excellent
- 45.9% Good
- 13.5% Fair
- 3.1% Poor
- 0.7% Very Poor
- 1.0% Don't know/Refused

12. Please tell me how satisfied your company is with the following issues and attributes regarding Carlsbad’s business climate.

RANDOMIZE

	<u>Very satisfied</u>	<u>Somewhat satisfied</u>	<u>Neither satisfied nor dissatisfied</u>	<u>Somewhat dissatisfied</u>	<u>Very dissatisfied</u>	<u>Don't know/Refused</u>
A. Ability to get employees to and from work	30.0%	30.0%	22.2%	7.5%	3.6%	6.8%
B. Ability to get products to and from your Carlsbad business location	39.4%	29.5%	18.6%	3.1%	1.0%	8.5%
C. Access to clients and customers	41.3%	33.6%	16.9%	3.4%	0.7%	4.1%
D. Ability to recruit high-skill talent	20.8%	23.2%	25.4%	12.1%	6.0%	12.6%
E. Ability to find qualified entry to mid-level employees	18.1%	26.3%	23.9%	12.6%	8.0%	11.1%
F. Access to relevant vendors and suppliers	34.8%	32.1%	22.7%	3.9%	1.2%	5.3%
G. Regulatory climate (incl. zoning, permitting, local regulations, and related issues)	24.9%	24.4%	24.9%	8.0%	10.9%	7.0%

13. Thinking about the people for your Carlsbad location, how much difficulty does your company have finding qualified job applicants who meet the organization’s hiring standards? (n=413)

- 19.4% Little to no difficulty
- 45.0% Some difficulty
- 22.0% Great difficulty
- 13.6% Don't know/Refused

[IF Q13 = “Some difficulty” or Great difficulty, ASK Q14, OTHERWISE SKIP TO Q0]

14. What are the most significant challenges in finding qualified job applicants? (n=272)

- 16.5% Small applicant pool and/or competition
- 15.1% Technical ability and/or industry knowledge
- 13.2% Work ethic, commitment, other social aspect
- 11.0% Experience
- 8.1% High wage demands
- 6.3% Cost of housing and/or living
- 5.9% Unemployment benefits
- 5.9% Access to Carlsbad/ Applicants do not live near Carlsbad
- 3.3% Job posting websites
- 2.6% Inadequate education or certification
- 8.5% Other
- 3.7% Don't know/ Refused

15. Have you heard, read, or seen anything on the City of Carlsbad’s program to attract talent – Life In Action – which includes a new recruiter tool to match talent with innovation economy careers? (n=408)

- 15.4% Yes
- 75.2% No
- 9.3% Don't know/Refused

Part 4. Customer & Supplier Profile

Before we finish, I would like to ask the key industries, technologies and customers that drive your business.

Is your firm primarily focused on serving other businesses, consumers directly, or a combination of both businesses and consumers? (n=408)

27.2%	Primarily businesses
40.0%	Primarily consumers directly
30.6%	A combination of both businesses and consumers
2.2%	Don't know/Refused

What is your Carlsbad business location's primary function? (n=408)

30.4%	Professional services (consulting, engineering, finance, legal, etc.)
24.5%	Business headquarters
15.0%	Sales and distribution
7.1%	Research and development
6.4%	Manufacturing
4.4%	Healthcare and social assistance
4.2%	Other services (Beauty salons, rental services)
3.4%	Accommodation, food services, and recreation
1.2%	Physical fitness/sports training
1.0%	Education
1.2%	Other
1.2%	Don't know/Refused

Where are your customers primarily located? [ALLOW MULTIPLE RESPONSES] (n=408)

52.0%	Local – within Carlsbad and San Diego County
26.0%	Regional – within Southern California
14.2%	Statewide – within California
29.4%	National – within the United States
11.5%	International – outside the United States
0.7%	Don't know/ Refused

Where are your suppliers and vendors primarily located? **[ALLOW MULTIPLE RESPONSES]**
(*n*=408)

27.5%	Local – within Carlsbad and San Diego County
33.3%	Regional – within Southern California
15.4%	Statewide – within California
39.5%	National – within the United States
13.7%	International – outside the United States
5.6%	Don't know/ Refused

Part 5. COVID-19 Profile

Next, I want to ask a few questions about how COVID-19 has impacted your business.

16. Did your firm lay off or furlough any workers as a result of COVID-19 and related stay-at-home orders? (*n*=408)

38.0%	Yes
59.1%	No
2.9%	Don't know/Refused

[IF Q16 = "Yes", ASK Q17, OTHERWISE SKIP]

17. Has your firm brought back any laid off or furloughed employees? (*n*=155)

42.6%	Yes, we have brought back all of our employees
36.1%	Yes, we have brought back some of our employees
19.4%	No, we have not brought back any employees
1.9%	Don't know/Refused

18. Has COVID-19 had a negative impact on your organization? (*n*=408)

18.9%	No, COVID-19 has had little to no impact on my organization
54.4%	Somewhat, COVID-19 has had some negative impacts on my organization
24.0%	Yes, COVID-19 shut down my organization, but I have since re-opened
1.5%	Yes, COVID-19 shut down my organization, and I have not re-opened
1.2%	Don't know/Refused

[IF Q18 = "No", COVID-19 has had little to no impacts on my organization, SKIP Q19]

19. When do you expect your organization to fully recover from the impacts of COVID-19?
(n=330)

- 19.4% Our business has already fully recovered
- 39.7% Sometime in the next few months
- 6.1% Never, COVID-19 will have a permanent impact on our business
- 30.0% Not sure when my business will fully recover
- 4.8% Don't know/Refused

20. Were your employees able to work remotely during the pandemic? (n=407)

- 58.7% Yes
- 36.6% No
- 4.7% Don't know/Refused

[IF Q20 = "Yes", ASK Q21 AND Q22, OTHERWISE SKIP]

21. How many of your employees will be able to work remotely once public health orders no longer require them to do so? (n=239)

- 18.8% It will be the employee's decision
- 27.2% All or most (75% to 100%)
- 14.2% Many (50% to 74%)
- 13.0% Some (25% to 49%)
- 13.8% Few (1% to 24%)
- 8.8% None
- 4.2% Don't know/Refused

22. How often will your employees be able to work remotely once public health orders no longer require them to do so? (n=239)

- 24.7% It will be the employee's decision
- 14.6% Always or almost always (75% to 100% of the time)
- 13.0% Frequently (50% to 74% of the time)
- 21.8% Sometimes (25% to 49% of the time)
- 12.1% Rarely (1% to 24% of the time)
- 9.2% Never (0% of the time)
- 4.6% Don't know/Refused

Part 6. Closing & Demographics

P. What City do you reside in? (*n*=407)

- 43.5%** Carlsbad
- 14.7%** San Diego
- 12.0%** Oceanside
- 7.1%** Vista
- 5.4%** San Marcos
- 5.2%** Encinitas
- 2.0%** Escondido
- 1.2%** Fallbrook
- 0.2%** Solana Beach
- 5.7%** Other – *coding in progress*
- 2.9%** Don't know/Refused

Q. Would you be willing to participate in follow-up research, focused on better understanding the needs of Carlsbad's business community? (*n*=312)

- 55.8%** Yes
- 35.6%** No
- 8.7%** Don't know/Refused

R. Lastly, do we have your permission to provide your contact information to the City of Carlsbad, so that they may follow up on any issues or requests brought up during this survey? (*n*=295)

- 55.6%** Yes
- 41.4%** No
- 3.1%** Don't know/Refused

Those are all of the questions I have for you.

Thank you very much for participating!

- S. Company Name _____
- T. Company location _____
- U. Date and time of Interview _____
- V. Name of Interviewer _____
- W. Industry cluster _____
- X. Gender (VOICE) _____

Appendix C: Industry Cluster Definitions & Methodology

OVERVIEW

With the exception of Cleantech and Sports Innovation & Design, the cluster definitions below are the same as those outlined in the March 2016 SANDAG Traded Industry Clusters Update Report.⁷

To best capture Cleantech and Sports Innovation & Design activity in Carlsbad, the industry clusters were redefined. Any firms that were identified to belong to an industry cluster but accounted for less than 10% of the industry's (6-digit NAICS) footprint in Carlsbad had their employees count towards the final cluster employment numbers, but the NAICS code was not included in the final industry cluster definition. This was done to prevent industry cluster definitions from being inundated with industries that were mostly unrelated to the industry cluster in question.

The Cleantech industry definition is a combination of the Cleantech industry codes defined in the previously mentioned SANDAG report and the definitions used by Cleantech San Diego in their report to the San Diego Regional Economic Development Corporation. Any industries included in this definition that did not have employment within Carlsbad were then excluded.

The Sports Innovation & Design cluster is an expansion of the "Action Sports and Manufacturing" cluster used in previous reports by the City of Carlsbad. The Sports Innovation & Design cluster now includes clothing and shoe manufacturers and retailers as a deliberate effort to capture the growing "athleisure" and athletic apparel ecosystem in Carlsbad, in addition to the traditional design and manufacturing industries previously studied.

It should be noted that some changes in data may be due to the use of JobsEQ for the 2021 update. In previous years, EMSI was used to extrapolate employment and other data for sub-county level regions. JobsEQ classifies NAICS employment and ownership in accordance with the Bureau of Labor Statistics (BLS) and the Quarterly Census of Employment and Wages (QCEW) data series, whereas EMSI groups public ownership into separate categories.

⁷ https://www.sandag.org/uploads/publicationid/publicationid_2017_20489.pdf.

INDUSTRY CLUSTER DEFINITIONS (NAICS)

Industry Cluster	NAICS Code	NAICS Description
Sports Innovation & Design	339920	Sporting and Athletic Goods Mfg.
	339999	All Other Miscellaneous Manufacturing (20%)
	423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers
	448190	Other Clothing Stores (35%)
	448210	Shoe Stores (40%)
	451110	Sporting Goods Stores
Cleantech	221310	Water Supply and Irrigation Systems (20%)
	334413	Semiconductor and Related Device Mfg. (25%)
	334514	Totalizing Fluid Meter and Counting Device Mfg.
	334519	Other Measuring and Controlling Device Manufacturing
	423820	Farm and Garden Machinery and Equipment Merchant Wholesalers (25%)
	424690	Other Chemical and Allied Products Merchant Wholesalers (15%)
	541380	Testing Laboratories (10%)
	541620	Environmental Consulting Services
	541690	Other Scientific and Technical Consulting Services (25%)
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology Biotech) (5%)	
Hospitality & Tourism	114111	Finfish Fishing
	481111	Scheduled Passenger Air Transportation
	481211	Nonscheduled Chartered Passenger Air Transportation
	481212	Nonscheduled Chartered Freight Air Transportation
	481219	Other Nonscheduled Air Transportation
	487210	Scenic and Sightseeing Transportation, Water
	532292	Recreational Goods Rental
	711110	Theater Companies and Dinner Theaters
	711120	Dance Companies
	711130	Musical Groups and Artists
	711190	Other Performing Arts Companies
	711211	Sports Teams and Clubs
	711212	Racetracks
	711219	Other Spectator Sports
	711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities
	711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities
	711410	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
	711510	Independent Artists, Writers, and Performers
	712130	Zoos and Botanical Gardens
	713110	Amusement and Theme Parks
713120	Amusement Arcades	

	713290	Other Gambling Industries
	713910	Golf Courses and Country Clubs
	713930	Marinas
	713990	All Other Amusement and Recreation Industries
	721110	Hotels (except Casino Hotels) and Motels
	722310	Food Service Contractors
	722320	Caterers
	722330	Mobile Food Services
	722410	Drinking Places (Alcoholic Beverages)
	722511	Full-Service Restaurants
	722513	Limited-Service Restaurants
	722514	Cafeterias, Grill Buffets, and Buffets
	722515	Snack and Nonalcoholic Beverage Bars
Information & Communication Technologies (ICT)	323120	Support Activities for Printing
	334111	Electronic Computer Manufacturing
	334112	Computer Storage Device Manufacturing
	334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing
	334210	Telephone Apparatus Manufacturing
	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
	334290	Other Communications Equipment Manufacturing
	334310	Audio and Video Equipment Manufacturing
	334412	Bare Printed Circuit Board Manufacturing
	334413	Semiconductor and Related Device Manufacturing (75%)
	334417	Electronic Connector Manufacturing
	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
	334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
	334516	Analytical Laboratory Instrument Manufacturing
	334517	Irradiation Apparatus Manufacturing
	334519	Other Measuring and Controlling Device Manufacturing
	334614	Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing
	335311	Power, Distribution, and Specialty Transformer Manufacturing
	335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
	511210	Software Publishers
	512110	Motion Picture and Video Production
	512191	Teleproduction and Other Postproduction Services
	517311	Wired Telecommunications Carriers
	517312	Wireless Telecommunications Carriers (except Satellite)
	517410	Satellite Telecommunications
	517911	Telecommunications Resellers
	517919	All Other Telecommunications
	541330	Engineering Services

	541380	Testing Laboratories (35%)
	541511	Custom Computer Programming Services
	541515	Research and Development in Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (20%)
	423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
	443142	Electronics Stores
	541512	Computer Systems Design Services
	541513	Computer Facilities Management Services
Life Sciences	112000	Animal Production
	325120	Industrial Gas Mfg.
	325411	Medicinal and Botanical Mfg
	325412	Pharmaceutical Preparation Mfg
	325413	In-Vitro Diagnostic Substance Mfg.
	325414	Biological Product (except Diagnostic) Mfg.
	333314	Optical Instrument and Lens Mfg.
	339112	Surgical and Medical Instrument Mfg.
	339113	Surgical Appliance and Supplies Mfg.
	339114	Dental Equipment and Supplies Mfg.
	339115	Ophthalmic Goods Mfg.
	339116	Dental Laboratories
	423450	Medical, Dental, and Hospital Equipment Supplies Merchant Wholesalers Laboratories
	541380	Testing Laboratories (20%)
	541714	Research and Development in Biotechnology (except Nanotechnology)
	541715	Research and Development in the Physical, Engineering, and Life Sciences (except Biotech and Nanotechnology) (35%)
	621511	Medical Laboratories
	339999	All Other Miscellaneous Manufacturing (30%)
	811219	Other Electronic and Precision Equipment Repair and Maintenance