



INDUSTRY INSIDER
**TECHNOLOGY, MANUFACTURING
& LIFESTYLE PRODUCTS**

INDUSTRY REPORT

2019



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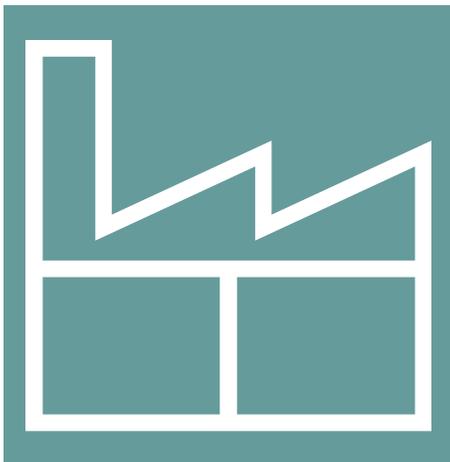


EXECUTIVE SUMMARY

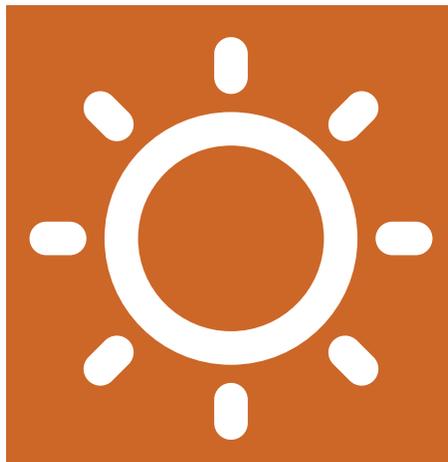
December 2018

The Sonoma County Economic Development Board (EDB), in partnership with the Sonoma County Workforce Investment Board (WIB), is pleased to present the 2019 Technology, Manufacturing, and Lifestyle Products Industry Insiders report. Our research partner, Moody's Analytics, provided the research for this report. For additional information, questions, comments, or suggestions please contact us at (707) 565-7170 or visit www.sonomaedb.org.

HIGHLIGHTS



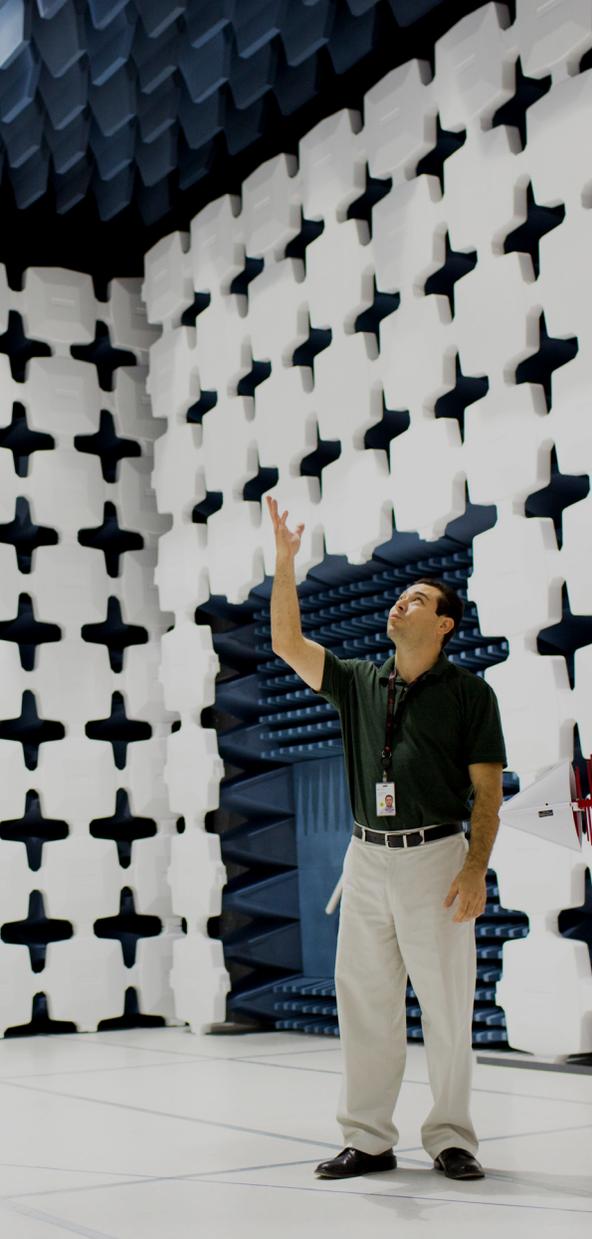
Three major trends in Sonoma County's manufacturing subsectors emerged over the course of 2018: high tech and medical device firms face challenges from an increasingly bifurcated manufacturing base; food and beverage manufacturing has seen a boost from consumer spending on organic and sustainably grown products; and outdoor recreation manufacturers have grown exponentially as incomes continue to grow on the national level. The first of these trends is largely due to automation and difficulty housing and training an adequate workforce for high-tech firms. Furthermore, despite banner years in anchor companies like Medtronic and Keysight, 2018 represented another year in which employment in technology firms remained fairly low, as a percentage of total employment.



Food and beverage manufacturing remains the most powerful driver of manufacturing growth in Sonoma County. Dairy and meat producers, even through recent woes in declining milk markets and competition abroad, have been important drivers in this growth, mainly due to consumer demand for organic products. More food and beverage manufacturers appeared in Sonoma County in 2018 than in any of the previous five years--which also translates to greater competition for local producers. Even so, Sonoma County's comparative advantage--including with its robust infrastructure for food and beverage manufacturers--will ensure that the sector remains strong in a maturing market.



Direct spending on outdoor recreation has increased 40% nationally in the last five years, representing a major boon for companies based in Sonoma County, like Camelbak, Marmot, and local manufacturers. Riding on the back of organic food consumption is a rising demand for organic and ethically sourced clothing, another growing sector in Sonoma County. Recreation spending is expected to last as incomes rise and corporations continue to invest in research and development--the most important role of outdoor recreation companies based in Sonoma County. While manufacturing of products remains outsourced to locations with cheaper labor costs, Sonoma County is still a major hub for marketing products to an ever-widening consumer base.



Recent Performance. Sonoma County's high-tech and specialty manufacturing cluster continues to grow more bifurcated. Non-durable manufacturing, which makes up nearly two-thirds of manufacturing payrolls compared with just over a third for California as a whole, is responsible for most of the growth in Sonoma's manufacturing cluster. Food, beverage and lifestyle product makers have pressed their advantage and are the key reason why manufacturing payrolls have surged since the latter half of 2017.

County dairies as well as produce and meat producers are responsible for the lion's share of growth in manufacturing in recent years, and have combined to propel overall industry growth at the third fastest rate in California over the past year. Robust demand for organic and artisanal food products has led to the nearly uninterrupted growth over the past few years. Sales figures from the Organic Trade Association illustrate the national trend toward organic products. In 2017, sales of organic-labeled food and beverages reached \$49.4 billion, up 6.4% from the previous year. The shifting national preference toward organic food purveyors has given an outsize lift to the county, and their increasing penetration in the total food market augurs favorably for Sonoma. According to the Quarterly Census of Employment and Wages, Sonoma-based food and beverage-producing establishments are sprouting up at the fastest pace since early 2014. Employment has followed suit, growing by more than a third in the past five years.

Sonoma's small cluster of design and apparel makers has struggled to grow following the relocation of Athleta's headquarters from Petaluma to San Francisco, and boutique cosmetics producers, which compose an even smaller share of the county's manufacturing base, have moved mostly sideways in recent years. However, remaining producers have drawn on consumer demand for ethically sourced and sustainably produced apparel to increase sales. Greater spending on outdoor recreation has spurred sales of sports equipment and Sonoma-designed accessories.

The cluster of once-dominant medical device, electronic testing and telecommunications industries is a shadow of its former self, but employment has stabilized and even begun to drift higher this year, lifting payrolls to a seven-year high. High-tech goods producers still play an integral role in the Sonoma economy, and two of its largest players, Keysight Technologies and Medtronic, are in the midst

of another banner year. Revenues are surging, and the firms' large research and development hubs ensure that Sonoma remains a preeminent destination for medical device makers.

Macro drivers. The U.S. economy is enjoying a banner year, and the good news will last at least another year. The combination of a strengthening labor market and fiscal stimulus has helped produce the strongest GDP growth of the nearly decade-long expansion. Concerns of a trade war remain elevated but have so far dealt little economic damage. That could quickly change should the president slap tariffs on all Chinese imports, and prospects could darken quickly if China retaliates.

Corporate tax cuts have juiced up consumer spending, and retail sales excluding vehicle and gasoline purchases are surging at their fastest rate of the expansion. This boost will likely prove temporary, and the decline in personal savings to pre-tax cut levels provides some evidence that households have burned through much of their tax savings. Fortunately, the labor market continues to churn out more new jobs than needed to keep up with population growth. Further, an increasingly tight labor market is paving the way for stronger wage growth. Given steady payroll gains, improvement in the prime-age employment rate, and relatively stable inflation, there is little sign that the economy has reached its full potential or is overheating.

Though tax cuts have greased the wheels for consumer spending, the hoped-for increase in business investment has not yet materialized. Nonetheless, rising wages, strong profit margins, and firming business and consumer sentiment will support investment spending, some of it on labor-saving technologies. Greater investment in software and IT equipment will reinvigorate county electronics and broadband equipment makers.

The venture capital spigot is flowing freely as the U.S. economy marches into its longest expansion on record. The combination of maturing tech firms and rising U.S. interest rates, which increase the attractiveness of safer investments, has cooled investor appetites in riskier early-stage funding. Overall deal activity has declined to its lowest level since 2012 but still reflects a healthy startup ecosystem.

Industry drivers. Consumers' growing preference for organically and locally sourced artisanal food products will play to the advantage of Sonoma-based food and beverage producers. Despite the cost advantage that conventional offerings hold relative to organic

products, consumers are demonstrating a willingness to pay a price premium for organic produce, meat, dairy and snack foods. The growth of organic product sales will slow as the market matures, but it will still outpace the growth in the broader food market. The county's large constellation of food and beverage makers will benefit from a broader consumer base as more supermarkets stock their shelves with organic and artisanal goods. Still, the organic market will only grow more competitive and Sonoma producers must remain ahead of the curve to retain market share.

The strength of the national and regional economy will bolster recreation spending through the end of the decade, and Sonoma's sports and outdoor equipment makers are poised to take full advantage. Outdoor recreation is considered among the fastest-growing industries in the U.S., and direct spending has grown nearly 40% in the last five years, according to the Outdoor Industry Association. Though outdoor equipment giant CamelBak carries out most of its production overseas, greater spending on outdoor recreation and equipment will support design and product development teams within the county. Meanwhile, rising demand for ethically sourced clothing will bolster organic apparel producers such as Indigenous and Farm Fresh Clothing.

Sonoma County's technology firms are on solid footing. The continued push for faster internet and wireless connection speeds, as well as advances in a broad range of high-tech fields, will benefit local electronic testing and broadband equipment makers. Furthermore, the industry will be backed by strong efforts toward ongoing modification of the internet infrastructure and demand for smart-home and other household devices that rely on mobile connectivity. However, although sales at Keysight and broadband equipment maker Calix are on the rise, automation will limit the need for new labor. Rising smartphone penetration globally as well as the incorporation of additional computer and electronic components into automobiles, airplanes, and other transport vehicles will amplify sales of **Keysight's** next-generation signal analyzers and oscilloscopes.

Local medical device manufacturers will benefit from faster drug approvals by the Food and Drug Administration that will lift medicine sales and make research and development more attractive. The FDA is on pace to shatter last year's record for the number of new drug approvals, which will be

music to the ears of local tech firms. The aging of the global population and older workers who remain in the workforce for longer than did previous generations will sustain demand for advanced medical procedures and new medical equipment, including those produced by Medtronic, Claret Medical and Endologix. Still-low interest rates and a more favorable regulatory environment will keep the venture capital spigot flowing; Millipede received \$90 million in funding earlier this year and plans to eventually conduct full-scale clinical studies for commercial use of its IRIS transcatheter annuloplasty ring.

Pricing. The increasingly competitive organic food product market will hamper pricing power, but Sonoma's reputation for sustainable farming practices and ethically sourced materials will help differentiate county producers. More market offerings, especially as store brands by large supermarkets flood an increasingly saturated market, will force producers to either cut costs or double down on premium offerings. Consumers' demonstrated desire for ethically sourced materials gives an edge to county apparel makers and ensures only limited price-cutting pressures. Outdoor equipment makers face a more difficult road ahead. A strong dollar, coupled with efforts to shift supply chains to the lowest-cost locales, will make it difficult to pass on price increases.

Tech firms, on the other hand, will mostly hold on to their pricing power. Semiconductor prices continue their downward trend, and the dollar will appreciate only modestly moving through the end of the decade. This will safeguard against foreign tech competitors. Robust demand for health services from the aging global population augurs well for the county's medical device producers.

Operating expenses. Further tightening in the labor market and the corresponding increase in wage pressures ensure that labor costs, already the highest share of operating expenses across the county's various high-tech, food and beverage, and specialty manufacturing firms, will take up an increasing share through the end of the decade. Industrial vacancy rates have leveled off in recent quarters, but nonetheless will tick down as county firms whittle down available space.

Local R&D facilities have avoided most cost-cutting efforts, but the trend toward lower-cost tech spaces in the South and Mountain West will provide another avenue for firms looking to trim costs. County food and beverage makers

will benefit from lower prices for livestock feed and agricultural commodities, helping to offset the damage from a higher wage bill.

Profits. Fierce competition and a more saturated market will stress already-tight margins for county food and beverage producers. Organic and artisanal food producers are in great shape, as organic sales outpace the overall food market, but difficulty filling positions and rising wages will nonetheless provide a speed limit. Similarly, local sports and outdoor equipment makers will face squeezing profit margins given fierce competition among nationwide retailers and online platforms. Tech producers will likewise grapple with rising labor costs and pressure to preserve finances by opting for lower-cost expansions.

Long-term outlook. Sonoma's distinct comparative advantages in the organic food and beverage and lifestyle product manufacturing will sustain local producers even as the market matures and grows more competitive. The mainstreaming of the organic food movement will create new opportunities for county producers, especially as consumers prioritize environmental and ethical practices in the production of the food and clothing they purchase. The county's reputation as a haven for sustainable and organic farming practices will help burnish its advantage as organic food sales grow as a share of total food sales, but Sonoma brands must remain ahead of the curve, as mass-market organic brands at large food stores and supermarkets will pose a challenge.

Greater automation, and in general a push toward labor-saving technologies, will slow the pace of job additions even as county producers grow their operations. Thus, manufacturing's contribution to county-wide job and income growth will be contingent on entrepreneurs' ability to innovate across product lines and to pioneer new product segments.

Land and labor constraints that are rearing their head throughout the state are becoming even more apparent in coastal areas, and Sonoma is already bearing the brunt of waning housing affordability. In-migration has slowed for three consecutive years as rising home values price out more would-be residents, and the housing shortages have only grown more severe in the wake of the recent fires. The housing market will rebalance, but it is crucial that it does so quickly to ensure that the supply of workers continues to grow and help outrun labor supply shortages.

Robust growth of food and beverage manufacturing facilities within the county itself has

also cleared some of the inventory of industrial space, and it is imperative that county stakeholders develop new facilities to slow the rise in rents and enable further expansions.

Although Sonoma County will remain a regional hub for high-tech R&D, high-tech services face considerable barriers to growth. High business and living costs relative to those in emerging tech hubs and a shortage of new engineering graduates are structural challenges that outweigh advantages such as proximity to Bay Area tech centers and a high quality of life. As a result, county-based tech firms will continue to staff up at lower-cost destinations in the U.S. and in other countries.

Upside risks. Rising rents in neighboring Marin County could persuade more biotech firms to join the ranks of Sonoma's medical manufacturing cluster, driving growth in high-paying life-sciences research jobs. Rents are jumping in Marin County as vacancy rates dwindle, and firms looking to cut costs while remaining privy to much of the same strategic advantages—proximity to the Bay Area, a talented local workforce, and high quality of life—may incent more biotech firms to expand in Sonoma.

Continued deregulation in the medical device industry, as well as faster-than-expected progress in R&D and successful clinical trials, would accelerate hiring at existing tech firms in the county.

Downside risks. Though the temporary cease-fire in the U.S.-China trade war is welcome, uncertainty in financial markets and shaky business sentiment may weigh on investment decisions and future access to capital funding for Sonoma's high-tech cluster. Higher U.S. interest rates and financial market volatility will caution investors against riskier venture capital decisions as safe-haven investments become more attractive.

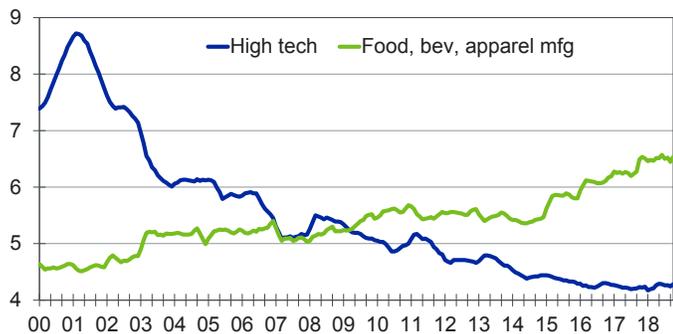
Medical device manufacturers will breathe easy for another year. The costly Affordable Care Act medical device tax has been suspended until the end of 2019, but local equipment makers may be forced to cut costs, and ultimately positions, should they face the full brunt of the tax at the start of 2020.

The increased feasibility of conducting R&D overseas could prompt Sonoma firms to expand in more cost-friendly destinations and chip away at the county's base of high-tech service positions.

*Colin Seitz
December 2018*

Manufacturing Base Is Evolving

% of total employment, Sonoma County

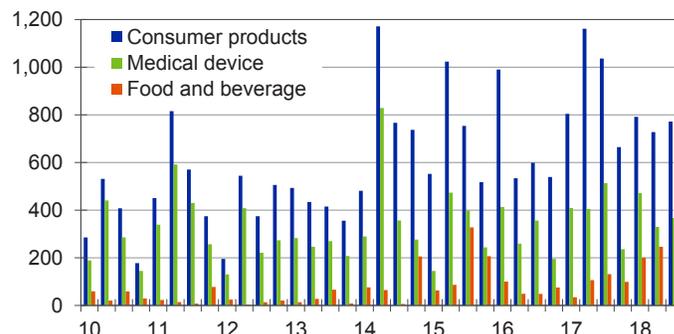


Sources: BLS, Moody's Analytics

Sonoma County's manufacturing base has grown even more bifurcated in recent years. The steady growth of food and beverage manufacturers stands in contrast to the performance of high-tech producers, who have only held on to their share of employment. The mainstreaming of the organic food movement will continue to create new opportunities for county producers as consumers prioritize environmental and ethical practices in the production of the food and clothing they purchase.

Venture Capital Remains Abundant

Venture capital placements, California, \$ mil

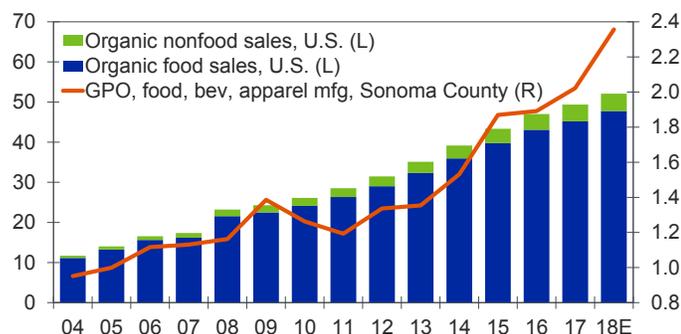


Sources: PwC, Moody's Analytics

Venture capital funding has reignited following a lull in late 2016, with total deal volumes in Sonoma's key industry clusters rising through this year. Despite cost pressures growing rapidly in California, the state has proven itself as the premier destination for startups and continues to attract the most venture capital outlays even as lower-cost states in the Mountain West and Pacific become more popular for high-tech firms. Total deal volumes indicate that California's dynamic startup scene is healthy.

Organic Sales Command Growing Share

\$ bil

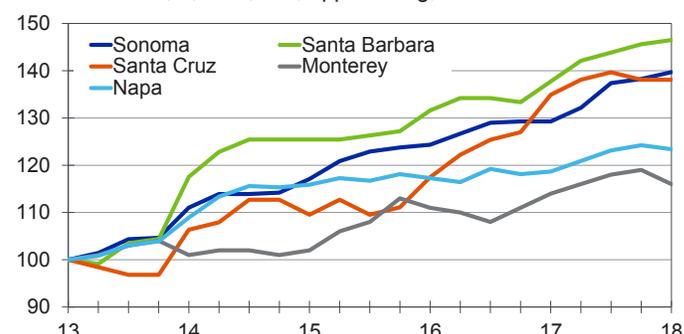


Sources: Organic Trade Assn., BEA, Moody's Analytics

Sales of organic food and nonfood products are rapidly outpacing those of their nonorganic counterparts. Organic products are commanding a growing share of the food and nonfood market, elevating local organic food and clothing makers. Sonoma's early adoption of organic and ethically sourced products has proven valuable in developing a renowned brand, has been crucial to the success of food and beverage producers, and augurs a favorable outlook for local producers.

Sonoma Remains a Regional Leader

Establishments, #, food, bev, apparel mfg, 2013Q1=100



Sources: BLS, Moody's Analytics

Food and beverage makers are surging no matter how you slice it. Sonoma found an extra gear in late 2017, and the growth in new establishments over the past five years trails only that in Santa Barbara. Abundant capital, local entrepreneurs' ability to pioneer and innovate, and the county's rich food and beverage culture are key advantages for Sonoma producers.



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