



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

HIGH-TECH SECTOR

[bw] RESEARCH
PARTNERSHIP

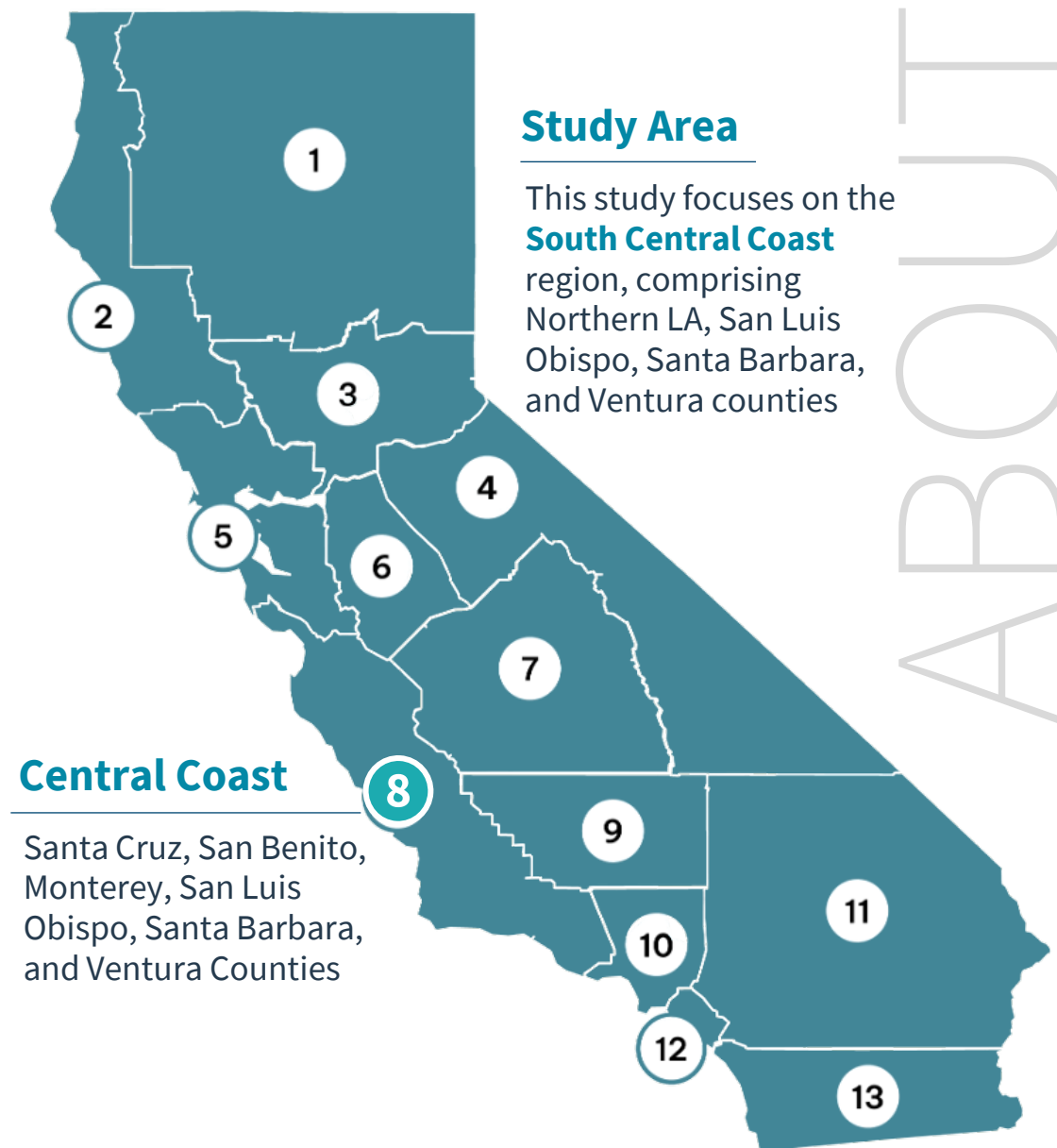
The High-Tech sector is a priority for the South Central Coast.

The State of California defines 13 **Jobs First** regions based on shared economic ties and local connections.

The **South Central Coast region** includes San Luis Obispo, Santa Barbara, Ventura, and Northern Los Angeles Counties.

Under Jobs First, **High-Tech** is both a “Bet” and “Accelerate” sector due to its projected growth and strategic importance to the region’s innovation ecosystem.

This designation signals **state-level commitment** to expanding High-Tech industries and workforce pipelines.



However, the High-Tech sector faces structural and classification challenges.

- Over the past five years, California's high-tech sector has **underperformed** the nation, with employment declining by 2.8 percent.
- Since 2022, California's high-tech sector has faced layoffs driven by **cost-cutting, economic uncertainty, declining venture capital**, and **corrections to pandemic-era over-hiring**.
- The South Central Coast experienced an even **steeper decline**, with high-tech employment falling by 8.7 percent over the same period.
- The region also faces **competition** from neighboring regions, Bay Area and Orange County.
- **Talent gaps** remain in some entry-level roles like technician/operator occupations and in highly specialized advanced roles.



The High-Tech sector spans multiple industry elements.

- **Semiconductors and Advanced Electronics**, including manufacturing of integrated circuits, sensors, computers, and peripherals.
- **Software and Information Technology**, including consumer and enterprise software, cloud computing, and software as a service.
- **Digital Infrastructure** including telecommunications, data processing and hosting.
- **R&D and Emerging Technologies**, including AI and machine learning, advanced and quantum computing, and robotics.

The High-Tech sector offers high-wage opportunities across the region.

\$8.6B

High-Tech Sector Contribution
to South Central Coast Gross
Regional Product, 2025

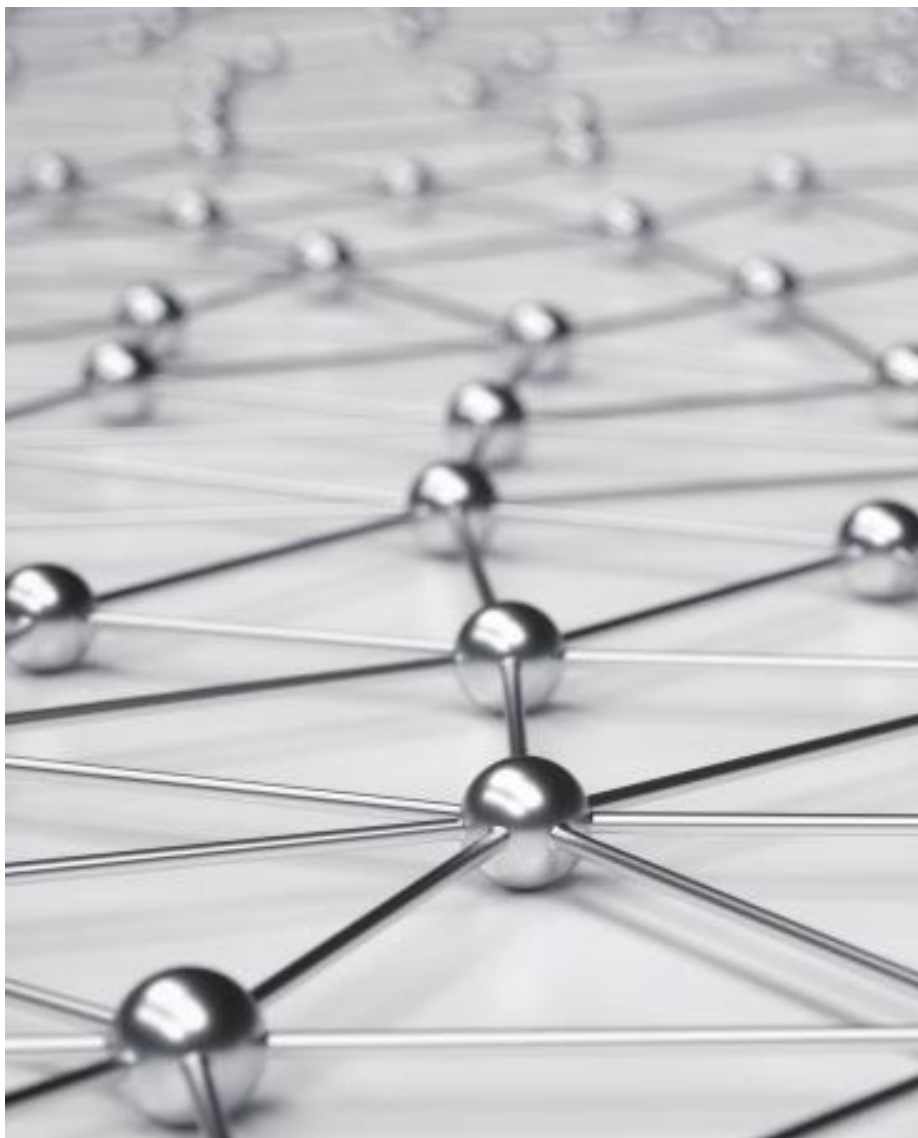
18,939

High-Tech Jobs in the
South Central Coast,
2025

\$154K

Average Annual Wages of
High-Tech Jobs in the South
Central Coast, 2025

- High-Tech is a historical growth sector with significant **local R&D and education assets** (Allan Hancock College, Santa Barbara City College, Google Quantum AI).
- Approximately 30% of High-Tech jobs are highly likely to be **impacted by automation**, versus a regional average of 20% across all industries.



The South Central Coast region has an established High-Tech employer ecosystem.

Semiconductors and
Advanced Electronics



Software and
Information Technology



Digital Infrastructure



R&D and Emerging
Technologies



* Employers listed are illustrative of major regional activity and list is not intended to be exhaustive.

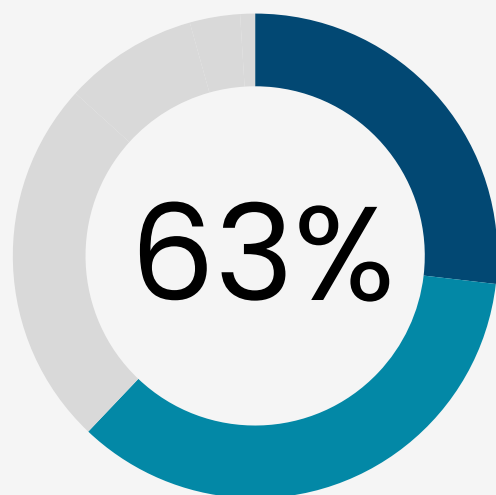
The High-Tech sector has a strong regional foothold.

- Advanced materials are a core regional strength, alongside **semiconductors**, **photonics**, and **batteries**.
- **UC Santa Barbara** and **Cal Poly** incubators support the region's growing startup and commercialization ecosystem.
- **Nano-fabrication** remains focused on early-stage R&D and scale-up, with the **OASIS** hub attracting companies such as **Beacon Photonics**.
- Growing **data center development** positions the region to support semiconductor and interconnection needs.



High-Tech employers expect to add jobs over the next 12-36 months.

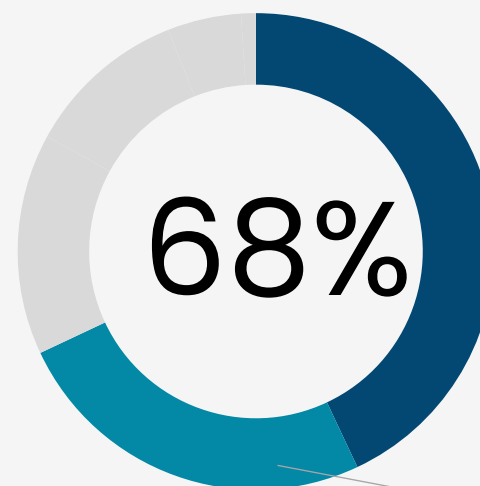
12-MONTH GROWTH EXPECTATIONS



Large Increase (10% and up) Predicted in 12-Month Headcount, 27%

Small Increase (<10%) Predicted in 12-Month Headcount, 35%

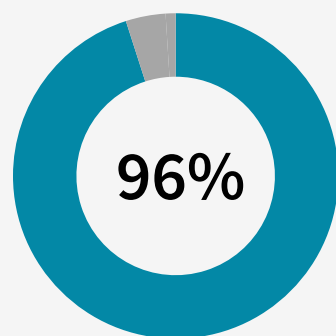
3-YEAR GROWTH EXPECTATIONS



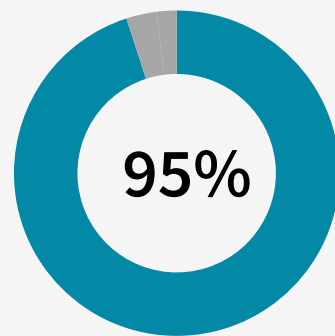
Large Increase (10% and up) Predicted in 3-Year Headcount, 43%

Small Increase (<10%) Predicted in 3-Year Headcount, 25%

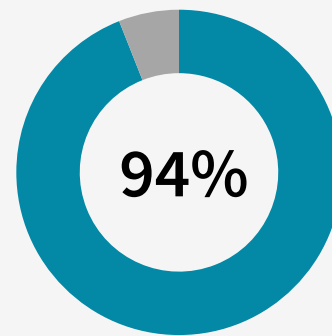
Employers express high levels of interest in internship, apprenticeship, mentorship, and job readiness programs.



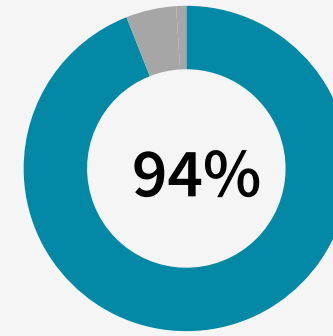
**INTERNSHIP
PROGRAMS**



**APPRENTICESHIP
PROGRAMS**



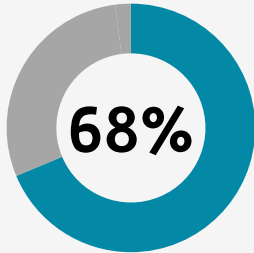
**MENTORSHIP
PROGRAMS**



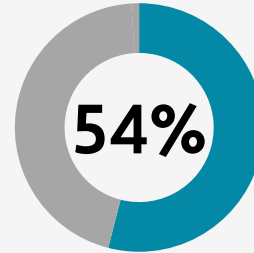
**JOB READINESS
PROGRAMS**

Share of Surveyed High-Tech Employers Expressing Interest in Partnerships

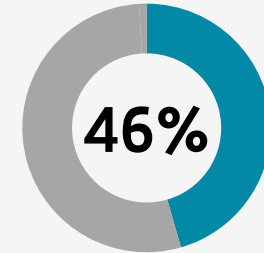
Just over half (54%) of employers surveyed partner with community colleges to recruit, hire, or train.



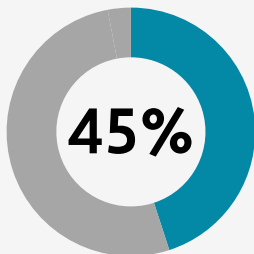
**FOUR-YEAR
COLLEGES OR
UNIVERSITIES**



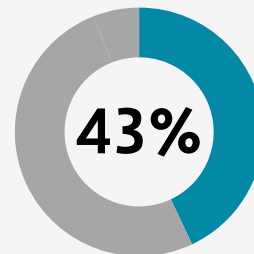
**COMMUNITY
COLLEGES**



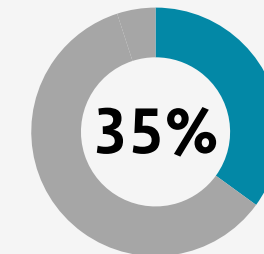
**HIGH SCHOOL,
TECHNICAL, OR
VOCATIONAL SCHOOLS**



**UNIONS OR JOINT
APPRENTICESHIP AND
TRAINING CENTERS**



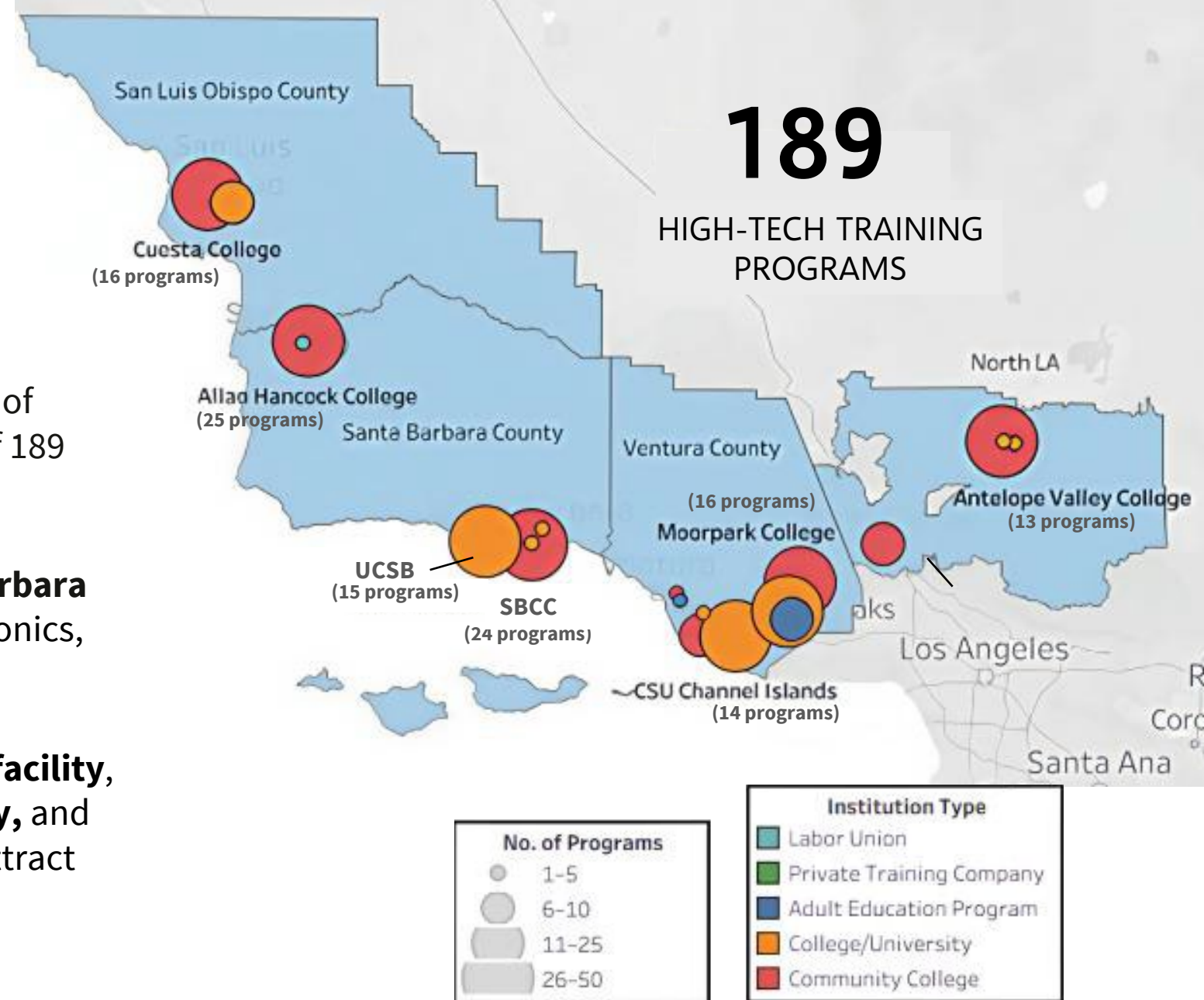
**WORKFORCE
DEVELOPMENT
BOARDS**



**NONPROFITS OR
COMMUNITY
ORGANIZATIONS**

High-Tech education programs already align with key occupations.

- **Community colleges** administer **57%** of High-Tech education programs (107 of 189 programs).
- Regional institutions like **UC Santa Barbara** support specialized engineering, photonics, and lab operations positions.
- UC Santa Barbara's **Nanofabrication facility**, **Quantum Foundry**, and **OASIS facility**, and **Cal Poly's Incubator Program** help attract high-tech companies into the region.



Community colleges support critical High-Tech occupations.

Occupation	Purpose	CC Programs	Advancement Potential*	Automation Potential**	Skills Change***
Software Developers	Develop computer and network programs	35	*	High	Moderate
Computer and Information Systems Managers	Coordinate activities in data processing and systems analysis	27	*	Moderate	High
Electrical and Electronic Engineering Technologists and Technicians	Design, build, and repair electrical components and machinery	14	*	Moderate	High
Computer User Support Specialists	Provide technical assistance to computer users	10	High	High	High
Network and Computer Systems Administrators	Manage computer networks	9	*	Moderate	Moderate

Notes:

* BW's Job Advancement Index measures workers' potential to advance to higher-paying job opportunities. Advancement potential is not applicable for occupations that already pay high wages.

** BW's Job Automation Index measures the proportion of skills and tasks that can be automated within a particular occupation. The most automatable occupations are characterized by high automation potential, while the least automatable occupations are characterized by low automation potential.

*** Skills change level based on % of surveyed employers indicating that an occupation exhibited "considerable" skills change over the last 12 months. However, since survey responses were limited, these findings should be interpreted directionally rather than as strict quantitative findings.

However, regional High-Tech training gaps remain.

Occupation	Purpose	CC Programs	Advancement Potential*	Automation Potential**	Skills Change***
Semiconductor Processing Technicians	Manufacture semiconductors	0	Low	High	High
Computer Programmers	Create and test code for computer applications	0	*	Moderate	High
Computer and Information Research Scientists	Research into computer and information science	0	*	Moderate	Moderate
Computer Network Architects	Implement computer networks	0	*	Moderate	High
Electrical and Electronics Engineers	Research and develop electrical equipment	2	*	Moderate	Moderate

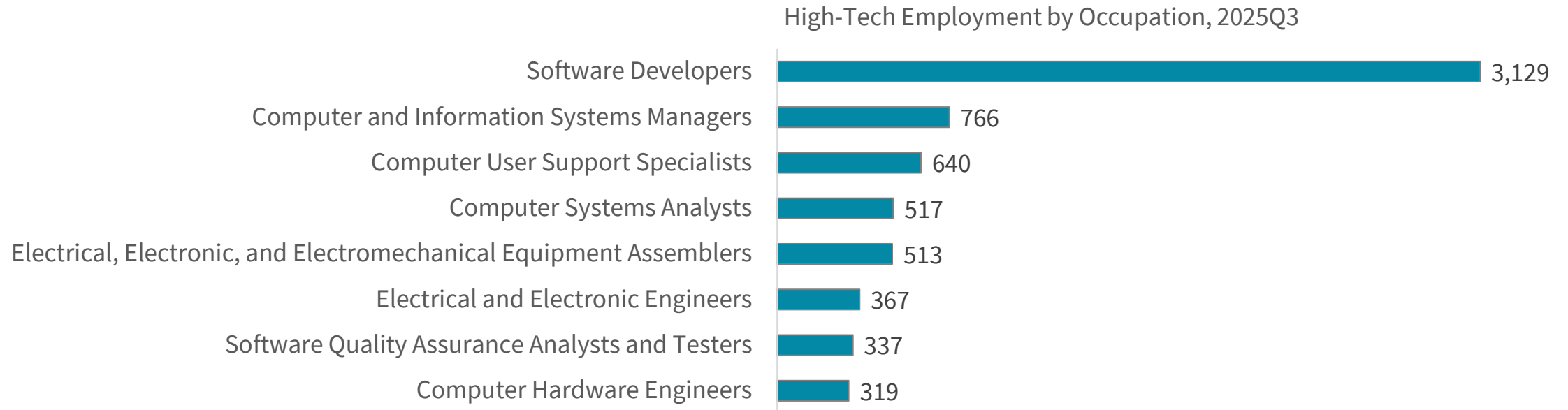
Notes:

* BW's Job Advancement Index measures workers' potential to advance to higher-paying job opportunities. Advancement potential is not applicable for occupations that already pay high wages

** BW's Job Automation Index measures the proportion of skills and tasks that can be automated within a particular occupation. The most automatable occupations are characterized by high automation potential, while the least automatable occupations are characterized by low automation potential..

*** Skills change level based on % of surveyed employers indicating that an occupation exhibited "considerable" skills change over the last 12 months. However, since survey responses were limited, these findings should be interpreted directionally rather than as strict quantitative findings.

High-employment (500+) High-Tech occupations and emerging needs define regional priorities.



Stakeholder-reported emerging occupations include:

- Software Developers
- Computer and Information Systems Managers
- Computer User Support Specialists
- Computer Systems Analysts
- Electrical, Electronic, and Electromechanical Equipment Assemblers
- Electrical and Electronics Engineers

Community colleges can accelerate High-Tech workforce growth in key occupations.

High-Priority Community College Occupation

- Computer User Support Specialists

This occupation has **high demand** (600+ workers), **high advancement potential**, requires less than a four-year degree at entry, and is crucial to the High-Tech sector.

Medium-Priority Community College Occupation

- Electrical, Electronic, and Electromechanical Assemblers

This occupation has **high demand** (500+ workers), **moderate advancement potential**, requires less than a four-year degree at entry, and is crucial to the High-Tech sector.

Emerging Community College Occupations

- Computer Network Support Specialists

This occupation has **entry-level hiring challenges** identified by employers and may benefit from expanded workforce development.

The region faces both a shrinking statewide High-Tech sector and regional competition.

- California overall faces a shrinking High-Tech sector due to **post-pandemic sector restructuring** leading to layoffs, impacting the South Central Coast as a result.
- Regional competition from the **Bay Area** and **Orange County** as both have competitive ecosystems for High-Tech companies.
- Workforce skill gaps exist in the region especially for some **entry-level technician/operator roles** and **specialized advanced roles**.
- Workers often **lack foundational non-technical skills**, hands-on work experience, and comfort using **AI tools**.
- Jobseeker supports may be needed to support **workforce churn** spurred by industry automation.

The High-Tech sector offers opportunities for the region.

- Leveraging regional research strengths from **UC Santa Barbara** and **Cal Poly** can help support the growing regional quantum cluster.
- **Addressing workforce gaps** at both ends of the talent pipeline, including **technician and operator positions** within semiconductor companies and highly specialized **quantum and AI roles** requiring Ph.D.-level expertise, can strengthen the regional talent ecosystem.
- The region is well-positioned to **support growing demand** for **semiconductors, advanced computing infrastructure**, and **interconnection technologies**.
- The growth of AI presents an opportunity to attract additional investment and companies by **strengthening regional AI skills development and talent pathways**.



Regional collaboration can support workforce development.

- **Leverage the region's strong education ecosystem** to help translate regional innovation assets into workforce opportunities.
- **Strengthen talent pathways for both entry-level and advanced roles** to address gaps at both ends of the High-Tech talent pipeline.
- **Develop AI and automation readiness skills.** Prepare workers to use AI tools and build foundational technical and workplace skills.
- **Expand shared High-Tech research infrastructure.** Improve access to clean rooms, shared R&D facilities, and training spaces to support innovation.



Community colleges can help address High-Tech skills gaps.

- **Expand work-based learning opportunities.** Increase internships, co-ops, and other hands-on learning experiences to help future operators and technicians gain practical industry experience before entering the workforce.
- **Integrate AI skills into entry-level training.** Embed foundational AI competencies into workforce programs to prepare workers for increasingly AI-enabled roles and workplace technologies.
- **Support specialized talent development through stronger transfer and research partnerships.** Expand transfer pathways to universities to address skills gaps in occupations requiring specialized technical expertise.



SUMMARY

The High-Tech sector offers significant growth opportunities, particularly as automation and AI reshape many of its core occupations. **Expanding training pathways, supporting upskilling, and addressing workforce gaps** will help strengthen the sector's competitiveness and long-term presence in California.



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

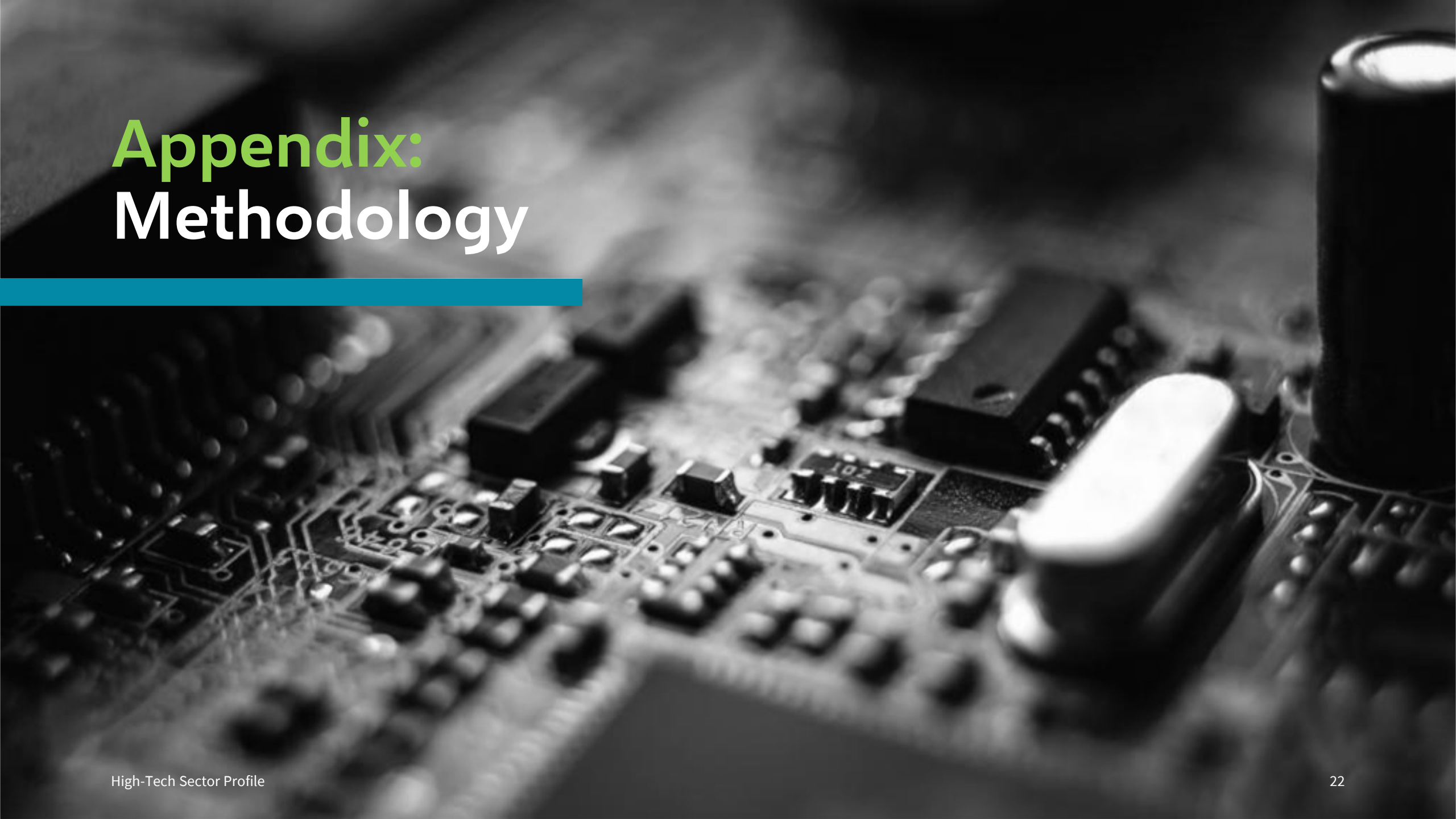
THANK YOU.



High-Tech Sector Profile
South Central Coast Center of Excellence for Labor Market Research

[bw] RESEARCH
PARTNERSHIP

Appendix: Methodology



Occupational Prioritization Criteria

Advancement Potential

- **High** – Occupations **most likely** to provide higher-paying job opportunities
- **Moderate** – Occupations that are **somewhat likely** to provide higher-paying job opportunities
- **Low** – Occupations **least likely** to provide higher-paying job opportunities

BW's Job Advancement Index measures **workers' potential to advance to higher-paying job opportunities** using longitudinal worker advancement data from [the U.S. Census Bureau's Current Population Survey \(CPS\) \(2000-2025\)](#).

Advancement potential is not applicable for occupations already paying high wages.

Automation Potential

- **High** – Most automatable occupations with the **highest proportion** of skills and tasks that can be automated
- **Moderate** – Somewhat automatable occupations with **some proportion** of skills and tasks that can be automated
- **Low** – Least automatable occupations with the **lowest proportion** of skills and tasks that can be automated

BW's Job Automation Index measures **the proportion of skills and tasks that can be automated within a particular occupation** using detailed knowledge, skills, and abilities (KSA) and work activity data from [O*NET OnLine, 30.0 Database \(2025\)](#).

Skills Change

- Skills change levels derived from employer survey responses indicating whether occupations had experienced “considerable,” “some,” or “little to no” skills change over the last 12 months.
- Occupations were grouped into high, medium, and low tertiles based on **relative reported levels of skills change**.

Skills change level is based on the percentage of surveyed employers indicating that an occupation exhibited **“considerable” skills change** over the last 12 months.

However, since survey responses were limited, these findings should be interpreted **directionally** rather than as strict quantitative findings.

High-Tech Employer Survey

Method	Online Survey (Email and Panel Respondents)
Universe	9,928 establishments in Santa Barbara, San Luis Obispo, Ventura, and Los Angeles Counties
Number of Respondents	180 total completes by High-Tech firms in Santa Barbara, San Luis Obispo, Ventura, and Los Angeles Counties
Average Length	Online Survey – 17 minutes
Field Dates	April 15, 2026 through May 11, 2026