



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

AEROSPACE & DEFENSE SECTOR

[bw] RESEARCH
PARTNERSHIP

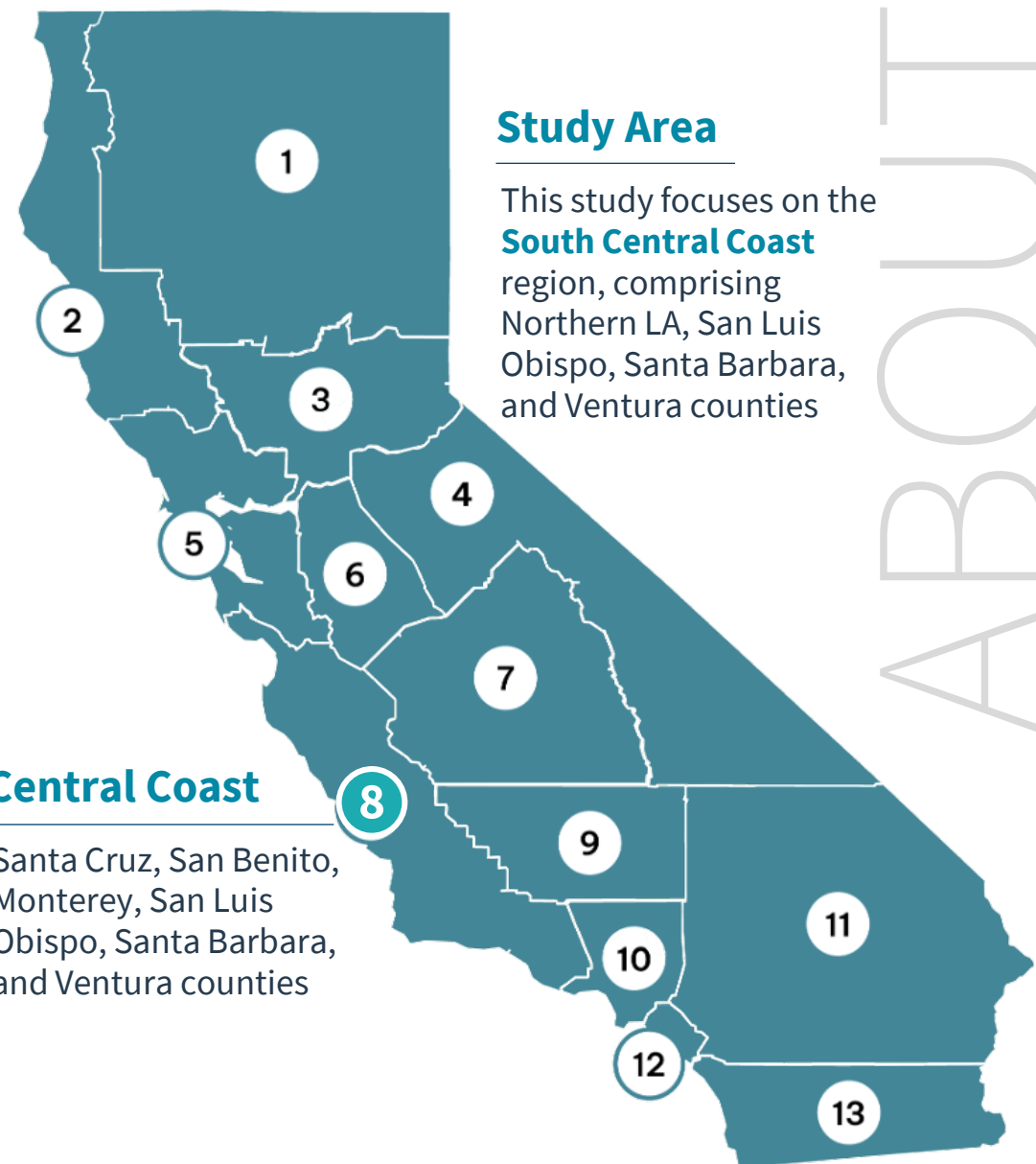
Aerospace & Defense is a priority for the South Central Coast.

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, **Aerospace & Defense** is an “Accelerate” sector in the South Central Coast due to its strong growth in aerospace and advanced defense technologies.

The “Accelerate” designation signals **state-level commitment** to expanding Aerospace & Defense industries and workforce pipelines.



However, the Aerospace & Defense sector faces structural and classification challenges.

- North American Industry Classification System (NAICS) codes capture most Aerospace & Defense activity, but **emerging R&D activities** in Aerospace & Defense are more difficult to quantify.
- **Federal contracting cycles** create volatility in hiring demand. Defense budgets, procurement timelines, and contract awards may change abruptly, complicating long-term workforce planning.
- **Security clearance requirements** limit the talent pool. Many roles require U.S. citizenship and extensive background checks, constraining workforce pipelines.
- **Rapid technological change** in aerospace systems, materials, and digital technologies requires continuous workforce upskilling.



The Aerospace & Defense sector spans multiple industry elements.

- **Aircraft, Space, and Marine Systems**, including aircraft, spacecraft, satellite systems, unmanned aerial systems and components manufacturing.
- **Defense Manufacturing**, including aeronautical systems manufacturing.
- **Defense Operations and Professional Services**, including national security, mission support, and R&D in advanced components, systems, and emerging technologies.
- **Maintenance and Support Services**, including aircraft and spacecraft maintenance, repair and operations services and air transportation support.

The Aerospace & Defense sector offers high-wage*, high-skill opportunities across the region.

\$7.5B

Aerospace & Defense Sector
Contribution to South Central Coast
Gross Regional Product, 2025

23,145

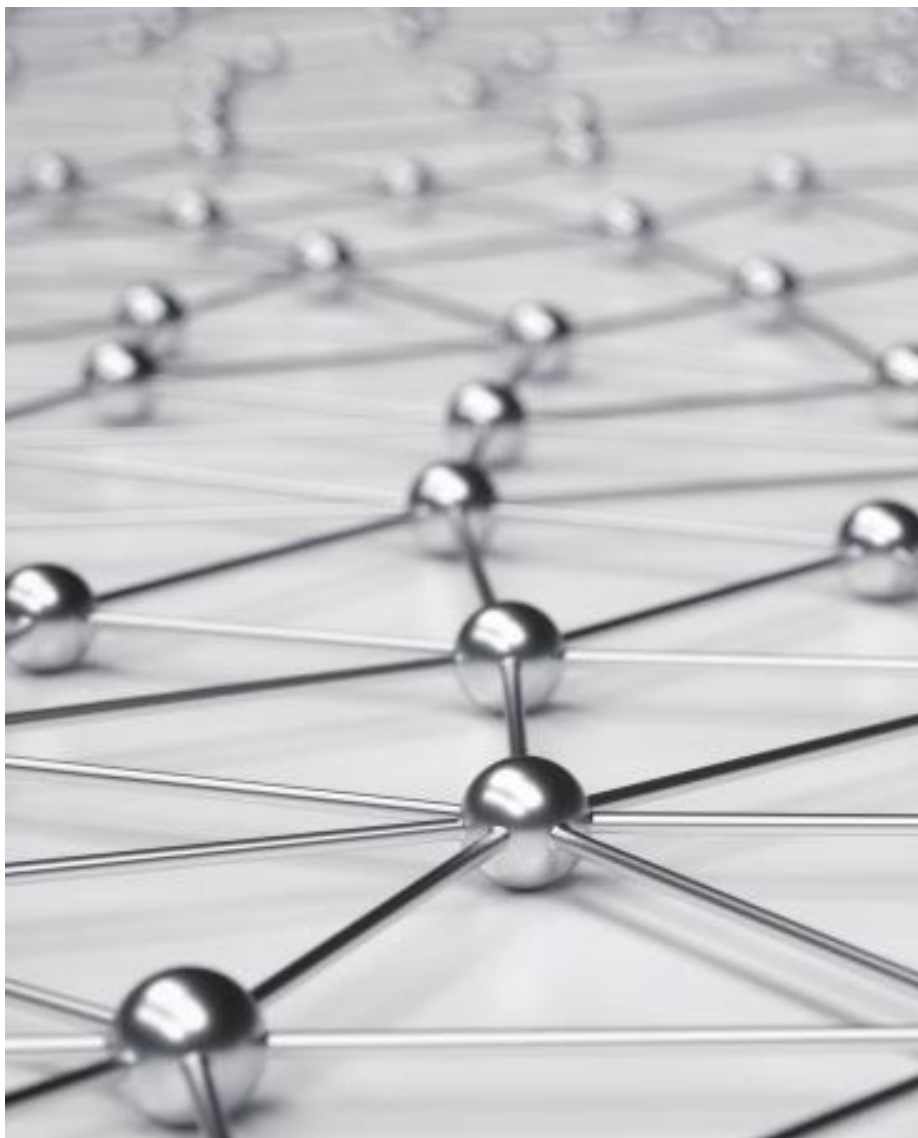
Aerospace & Defense
Jobs in the South Central
Coast, 2025

\$115K

Average Annual Wages of
Aerospace & Defense Jobs in the
South Central Coast, 2025

- High-growth sector anchored by **Vandenberg Space Force Base, Edwards Air Force Base, and NASA research centers.**
- Approximately 29% of Aerospace & Defense sector jobs are highly likely to be **impacted by automation**, versus a regional average of 20% across all industries.

* **\$70,054** average annual
wage across all sectors (2025)



The South Central Coast region has an established Aerospace & Defense employer ecosystem.

Aircraft, Space, and
Marine Systems



Defense Manufacturing



Defense Operations and
Professional Services



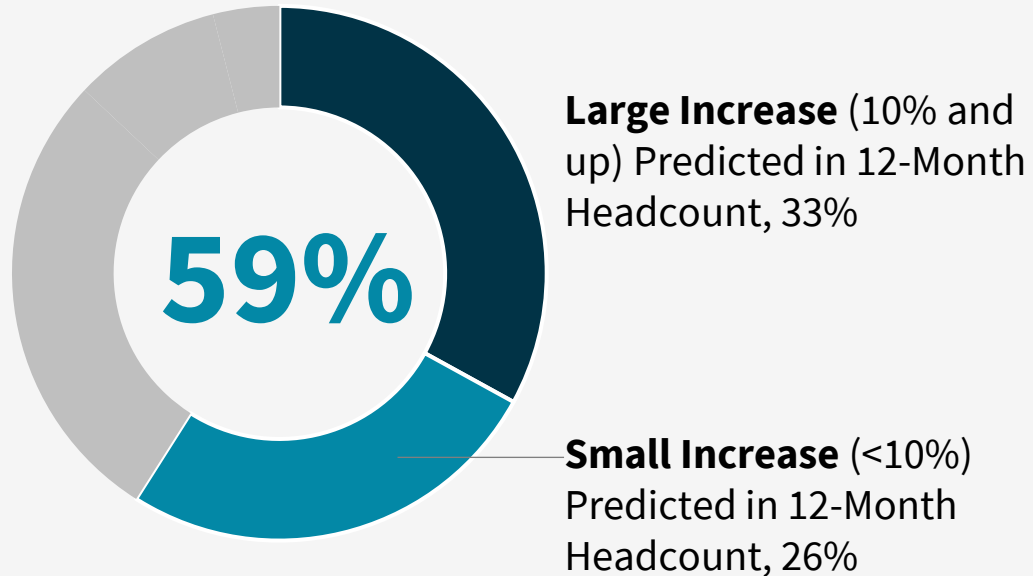
Maintenance and Support
Services



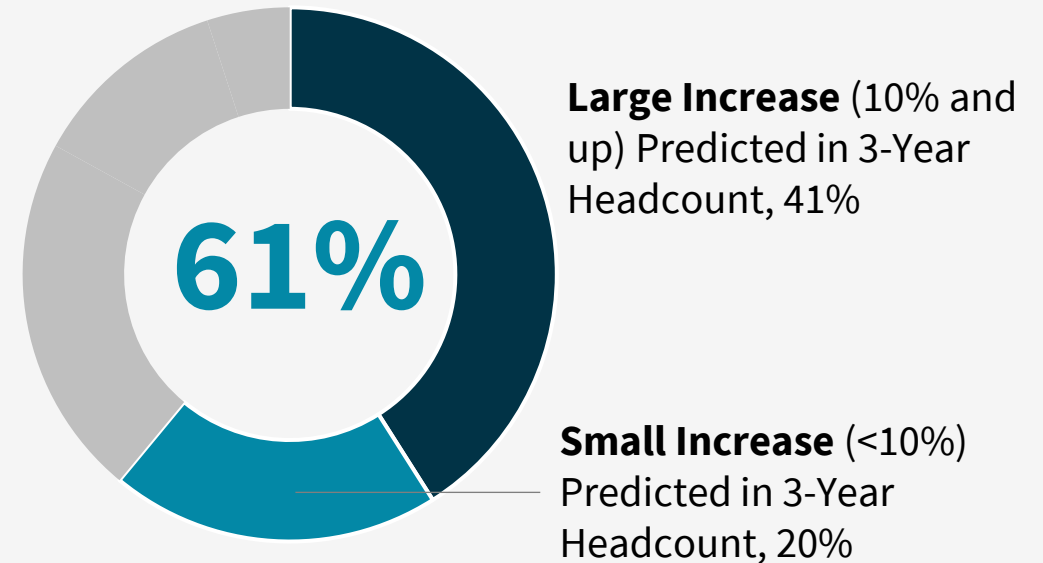
* Employers listed are illustrative of major regional activity; list is not intended to be exhaustive.

Aerospace & Defense employers expect to add jobs over the next 12-36 months.

12-MONTH GROWTH EXPECTATIONS



3-YEAR GROWTH EXPECTATIONS



Surveyed employers report emerging technical skills gaps and growing skills needs over the last 12 months.



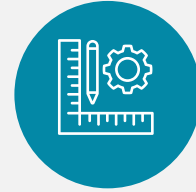
Data Analysis



Troubleshooting/Diagnostics



Precision Assembly



Precision Measurement

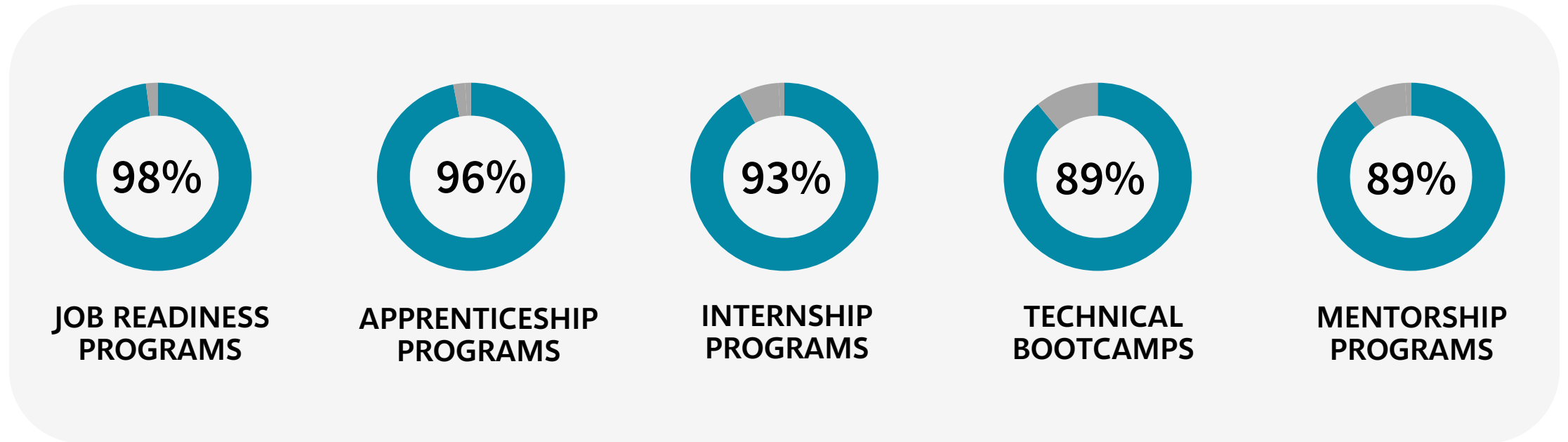


Blueprint Reading



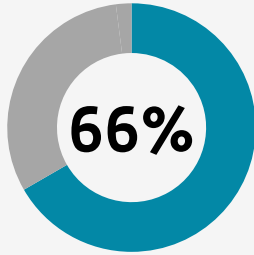
AI Literacy

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

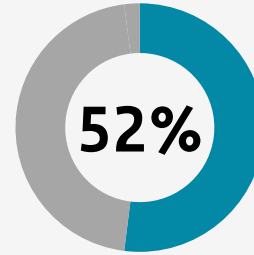


Share of Surveyed Aerospace & Defense Employers Expressing Interest in Partnerships

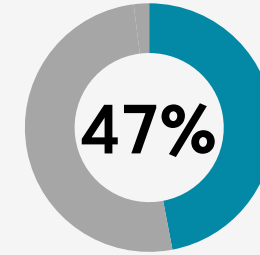
Less than half (47%) of employers surveyed partner with community colleges to recruit, hire, or train.



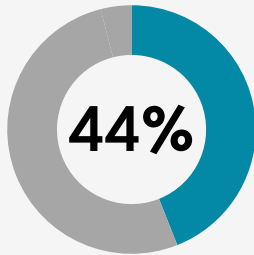
FOUR-YEAR
COLLEGES OR
UNIVERSITIES



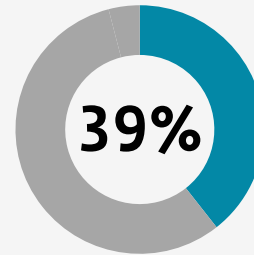
HIGH SCHOOL,
TECHNICAL, OR
VOCATIONAL SCHOOLS



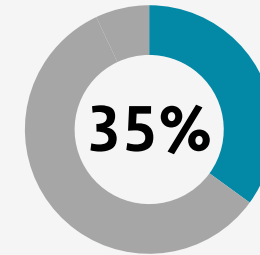
COMMUNITY
COLLEGES



UNIONS OR JOINT
APPRENTICESHIP AND
TRAINING CENTERS



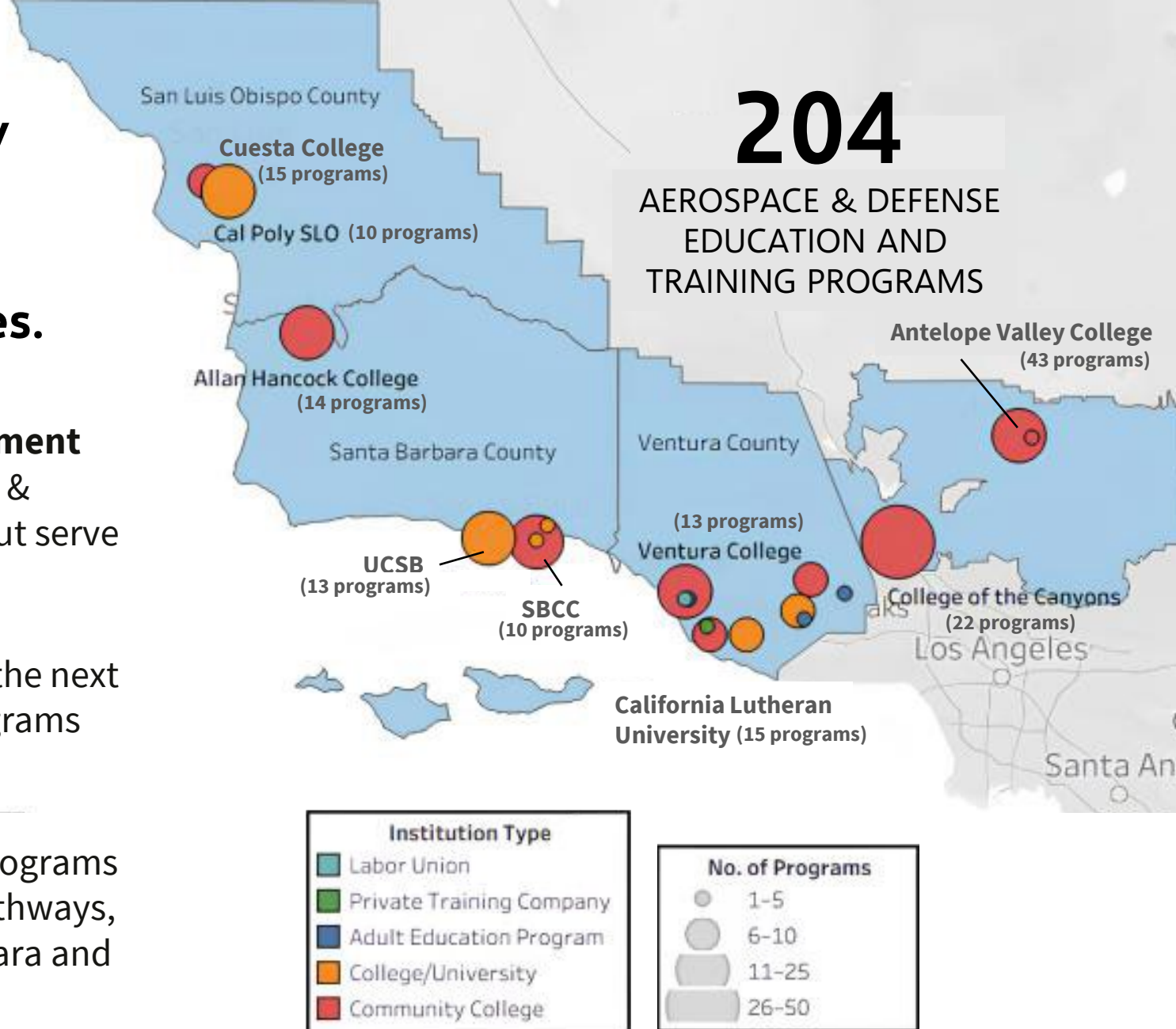
WORKFORCE
DEVELOPMENT
BOARDS



NONPROFITS OR
COMMUNITY
ORGANIZATIONS

Education programs serve key occupations and are highly concentrated in Ventura and Northern Los Angeles Counties.

- **General, operations, and project management programs** represent one-third of Aerospace & Defense education and training programs but serve multiple industries.
- **Welding certificate programs** account for the next largest share of education and training programs (approximately 1 in 8 programs).
- **Mechanical engineering** and **machining** programs support Aerospace & Defense technician pathways, with more limited availability in Santa Barbara and San Luis Obispo Counties.



Community colleges account for two-thirds of regional training programs and have strong capacity in core high-skill occupations.

Occupation	CC Programs	Purpose	Advancement Potential*	Automation Potential**	Skills Change***
Welders, Cutters, Solderers, and Brazers	21	Support aircraft and spacecraft manufacturing, assembly, maintenance, and repair.	Moderate	High	Moderate
Mechanical Engineers	15	Support aircraft and spacecraft and propulsion system design.	*	Moderate	Moderate
Heavy Equipment Mechanics	14	Support maintenance and repair of aerospace ground equipment and support vehicles.	High	Moderate	Low

Notes:

* 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.

Core occupations with moderate to high advancement potential or high wages have little to no regional training supply.

Occupation	CC Programs	Purpose	Advancement Potential*	Automation Potential**	Skills Change***
Avionics Technicians	0	Install, inspect, maintain, and repair aircraft electronic systems.	*	High	High
Electrical, Electronic, and Electromechanical Equipment Assemblers	3	Assemble, test, and troubleshoot electrical and electronic components used in aircraft and spacecraft.	Moderate	High	Low

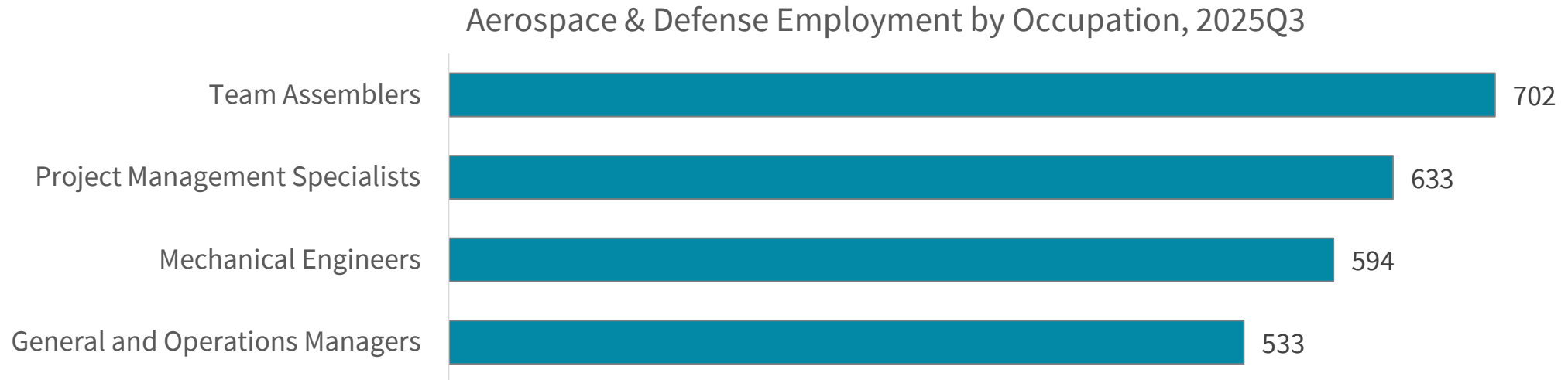
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High-employment (500+) Aerospace & Defense occupations and emerging needs define regional priorities.



Stakeholder-reported emerging occupational priorities include:

- Airframe and Powerplant Technicians (driven by aging and retirements of the existing workforce)
- Aviation Maintenance Technicians (driven by aging and retirements of the existing workforce)
- Avionics Technicians (driven by increased automation)

Community colleges can accelerate Aerospace & Defense workforce growth in key middle-skill occupations.

High-Priority Community College Occupations	Medium-Priority Community College Occupations	Emerging Community College Occupations
• Aircraft Mechanics and Service Technicians • CNC Tool Operators and Programmers • Electrical, Electronic, and Electromechanical Equipment Assemblers	• Aircraft Structure and Systems Assemblers • Industrial Machinery Mechanics • Machinists • Welders	• Airframe and Powerplant Technicians • Aviation Maintenance Technicians • Avionics Technicians
These occupations have high wages at entry, moderate demand (100+ workers), require less than a four-year degree at entry, and are central to Aerospace & Defense.	These occupations have moderate advancement potential, moderate to high demand (100+ workers), require less than a four-year degree at entry, and are central to Aerospace & Defense.	These occupations were cited as emerging short- to medium-term hiring needs according to stakeholder interviews and typically require less than a four-year degree at entry.

Aerospace & Defense workforce development is shaped by specific structural constraints.

- **Demographic shifts** pose a challenge, with a drastic shortage of airframe and power plant technicians anticipated as a large share of the current workforce approaches retirement age.
- **FAA-mandated training requirements and facility needs** can limit program capacity and make it difficult for community colleges to scale aviation maintenance programs.
- **Security clearance requirements** can limit the availability of the talent pool.
- **Talent follows capital**, with Aerospace & Defense activity concentrated in Silicon Valley (R&D), the Monterey Bay area (testing), and Los Angeles (early deployment), exacerbating SCC workforce retention challenges.
- **Rapid advances in propulsion and predictive maintenance technologies** are reshaping skills needs, underscoring the importance of strong feedback loops to maintain curriculum relevance.

Aerospace & Defense offers opportunities for the region.

- **Increased state funding** into Aerospace & Defense strengthens California's competitive advantage in the sector, creating opportunities for workforce development.
- **Strong growth in the Aircraft, Space and Marine Systems industry** (+22% five-year job growth) creates opportunities to expand training in avionics and precision manufacturing, even as traditional defense manufacturing has declined (-8% five-year job growth).
- The South Central Coast's location between major Aerospace & Defense hubs creates **opportunities for cross-regional collaboration**, including shared facilities and talent pipeline coordination.
- **Emerging technologies** in Aerospace & Defense support expansion of existing community college programs in welding, machining, and electrical and electronic equipment assembly.



Regional collaboration can support workforce development.

- **Coordinate Aerospace & Defense sector advisory structures with advanced and precision manufacturing** to help partners share technological and labor market insights and identify shared training priorities and resources.
- **Align curriculum development timelines for emerging technologies.** Early coordination between industry, education, and workforce partners can help identify transferable skills, sequence training investments, and build scalable curriculum models as industries and skills needs evolve.



Community colleges can help accelerate Aerospace & Defense workforce growth.

- **Expand and update the most high-value programs** especially in manufacturing and aircraft, space, and marine systems. Leverage and scale existing program strengths in project management, welding, pre-engineering, and advanced manufacturing, to support occupations with strong employer demand, changing skill requirements, and high advancement potential.
- **Close skills gaps through work-based learning.** Internships, short-term credentials, and job readiness programs can help address cross-cutting foundational and technical skills gaps across Aerospace & Defense.



SUMMARY

The Aerospace & Defense sector offers strong opportunities to support regional and statewide goals surrounding **innovation, national security, and high-wage job creation** while advancing the core mission of California's community colleges: to advance **economic growth** through **accessible workforce training and career education**.



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THANK YOU.



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.

Aerospace & Defense Employer Survey

Method	Online Survey (Email and Panel Respondents)
Universe	6,066 establishments in Santa Barbara, San Luis Obispo, Ventura, and Los Angeles Counties
Number of Respondents	99 total completes by Aerospace & Defense 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